

THE  
SCIENCE OF LANGUAGE

FOUNDED ON

LECTURES DELIVERED AT THE ROYAL INSTITUTION

IN 1861 AND 1863

BY

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*IN TWO VOLUMES.—VOL. I*

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DEDICATED

TO

THE MEMBERS OF THE UNIVERSITY OF OXFORD,

BOTH RESIDENT AND NON-RESIDENT,

TO WHOM I AM INDEBTED

FOR NUMEROUS PROOFS OF SYMPATHY AND ASSISTANCE

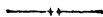
DURING THE LAST TWELVE YEARS,

IN GRATEFUL ACKNOWLEDGMENT OF THEIR GENEROUS SUPPORT

ON THE

7TH OF DECEMBER 1860.

# PREFACE.



## Changes in the New Edition.

**M**Y Lectures on the Science of Language were delivered at the Royal Institution in London in the years 1861 and 1863. They have since passed through many editions, and in every successive edition I have tried to remove whatever seemed to me either doubtful or wrong. But, after the two volumes had been stereotyped, I found it very troublesome to do this, except on a very limited scale, so that it became almost impossible to keep my lectures abreast with the advance of philological science which, particularly of late years, has been very rapid.

It is difficult indeed for an author who lives beyond the number of years generally allotted to scholars, to know what to do with his old books. After his death, they take their place on the peaceful shelves of a library, and he himself is no longer held responsible for defects which at the time when they were written were inevitable. But so long as he is alive, the author is expected to keep his books up to

the highest mark, and he is blamed if he lends the authority of his name to opinions which he himself has ceased to hold.

When therefore a new edition of my Lectures became necessary once more, I insisted on the destruction of the old stereotype plates, and I determined to make one more attempt to render these volumes as correct as I could. I found it necessary not only to strike out many things, but likewise to add, and, in some cases, to re-write many pages. I left out what was peculiar to the form of lectures, and in order to keep this new edition more clearly distinct from former editions, I have changed the title from 'Lectures on the Science of Language,' to 'The Science of Language, founded on Lectures delivered at the Royal Institution in the years 1861 and 1863.'

I did not attempt, however, to change altogether the original character of my book, and though I should gladly have written a new work on the Science of Language instead of remodelling the old, my age and my many occupations rendered such an idea impossible.

What will, I believe, strike my present and future readers as the most serious defect in this new edition of my Lectures on the Science of Language, is the elaborate character of many arguments in support of theories which are now accepted by almost everybody, but which thirty years ago were novel and startling, and required to be defended against numerous gainsayers. I shall mention a few of them.

**The Science of Language as different from Comparative  
Philology.**

The very idea that, by the side of Comparative Grammar, there was room for a Science of Language, treating not only of vowels and consonants and the laws of phonetic change, but of the nature, the origin, and development of human speech, was received very coldly at first. With the exception of Heyse's *System der Sprachwissenschaft*, 1856, no such attempt had been made before. My own teachers and friends, such as Professors Bopp, Benfey, Curtius and others, looked upon my attempt to establish the general principles of a Science of Language and to connect the discoveries of Comparative Philology with the great problems of philosophy, as at all events premature, while philosophers by profession resented most strongly the intrusion of a new Saul among the old prophets of Logic, Psychology, and Metaphysics.

All this is changed now. Book after book has been published on *Language and the Study of Language*, on *the Life and Growth of Language*, on *the Origin of Language*, on *the Principles of Comparative Philology*, on *the Principles of the History of Language*, in which many of the problems first mooted in my Lectures have been most ably and far more fully discussed. The Science of Language, as founded on Comparative Philology, will, I believe, hold its place for ever as an independent science, and some of the most eminent philosophers of the day have given it

the warmest welcome. That it is as essential to the critical philosopher as logic and psychology, is no longer doubted, while some of the more far-seeing thinkers have readily admitted that it will hereafter form the only solid basis of all sound philosophy. It may truly be said therefore that there was no longer any need for pleading so elaborately for the admission of the Science of Language, as a real science, among the most important of academic studies. All I can say is, *Forsan et haec olim meminisse juvabit.*

And if the title of a Physical Science has been less readily granted to the Science of Language, this is chiefly due to a radical difference of opinion among philosophers, who regard man either as the acme of nature, or as totally unconnected in his mental functions with the rest of the animal world. No one has insisted more strongly than I have on the line of demarcation that separates man and beast, namely language, but no one has been more anxious at all times to render unto nature the things which are of nature, and unto mind the things that are of the mind. No doubt nature may be defined so as to exclude the Science of Language from the narrower circle of the Physical Sciences. With the wider meaning assigned to nature in our days, however, I hold as strongly as ever that the study of human speech may claim not only admission to, but the highest place among the Physical Sciences.

## PREFACE.

### **Bow-wow and Pooh-pooh Theories.**

Though the problem of the origin of language was expressly excluded from my lectures (it has since been fully treated in my 'Science of Thought'), I had to explain what I considered to be the constituent elements of human speech, namely roots, and not the mere imitations of sounds or interjectional cries. I was told at the time that my repeated argumentations against what I called the Bow-wow and Pooh-pooh theories were only a slaying of the slain, and if that seemed to be so thirty years ago, how much more must it seem to be so at present. And yet I could not entirely suppress those portions of my book. It was a surprise to me when I delivered my lectures that the so-called onomatopœic theory should in our times still count a few, but very valiant supporters. But though it may be true that that theory in its crudest form is no longer held by anybody, yet, in a slightly modified form it has been broached again and again.

How little the real problem that has to be solved had been understood, was shown once more when my friend, Professor Noiré, now no longer among us, announced what I consider the best, if not the only possible solution of the problem of the origin of roots. He saw clearly that what had to be explained was not the origin of such imitative sounds as cuckoo or how-wow. Who could ever have been in doubt as to their origin? What had to be explained was the genesis of conceptual sounds, or, if you like,

of sonant concepts. Noiré showed that our first concepts arose by necessity from the consciousness of our own repeated or continuous acts. They could not be our acts, unless we were conscious of them, and our consciousness of them became conceptual as soon as we became conscious of many successive acts as one action. He further showed how these concepts of our own acts might become, so to say, sonant through the *clamor concomitans*, that is, the sounds which involuntarily accompany the simplest acts of man. If *mar*, for instance, was one of the many sounds that accompanied the act of rubbing or grinding, then it could serve as the sonant sign of our consciousness of that continuous or repeated act. It would be from the first a conceptual, not a merely perceptual sound.

No doubt, this may be called a mere theory, a mere possibility. Though language might have arisen in that way, it did not follow that it could not have arisen in any other way. But when it became clear to me that what we had obtained as the result of our scientific analysis of language, namely the roots, were exactly what Noiré postulated, sounds expressive of the simplest acts of man, I said both *εὔρηκας* and *εὔρηκα*. One of the oldest riddles of the world seemed to me solved, and solved without a residue.

Nothing could be simpler, nothing more convincing, to those who knew what the *punctum saliens* of our problem really was. But so completely was Noiré's theory, the Synergastic Theory, misunderstood that it was actually taken by some philosophers for a mere

repetition or subdivision of the onomatopœic theory. This convinced me that the old leaven was still at work, and that what seemed to myself also, while revising my lectures, an uncalled-for slaying of the slain, might nevertheless be useful even at present, if only as the record of a once hotly contested fight.

Starting from the conviction that the Science of Language should be treated as one of the Physical Sciences, I proceeded to explain in what sense it seemed to me to require a physiological foundation.

**Phonetics the Foundation of Comparative Philology.**

To many of my younger readers the elaborate arguments in favour of phonetic studies as the only safe foundation of philological studies, contained in the second volume of my lectures, may seem at present supererogatory. Here again it is now admitted by almost everybody that a knowledge of Phonetics is essential to a sound study of Comparative Philology. But when I tried for the first time to make the researches of Johannes Muller, Brücke, Czermak and others, subservient to the Science of Language, I was severely blamed by Professor Bensley, in his review of my Lectures (*Göttinger Gelehrte Anzeigen*, 1867), for this innovation, and for encumbering Comparative Philology with such heterogeneous subjects as Phonetics. Now all this is changed. Phonetic studies are not only recognised as an essential part of Comparative Philology, but they are cultivated for their own sake, and have often been



carried to such excess that we have lately been warned by our friends against the danger of 'trying to listen too much to the growth of phonetic grass.'

**Phonetic Laws invariable.**

It followed almost by necessity from my treatment of the Science of Language, or, at least, of one portion of it, as a Physical Science, that I had to insist so strongly and repeatedly in the course of my Lectures on the invariability of phonetic laws. Here it may seem that I spoke rather too dogmatically when I declared 'that we might as well think of changing the laws which control the circulation of our blood as of altering the laws of speech.' This statement aroused at the time strong opposition, and I do not mean to defend it now in all its crudity. The term 'law' as applied to the changes of language requires a more careful definition. These laws are not universal laws, like the law of gravitation. They belong to the class of empirical laws, 'uniformities which observation or experiment has shown to exist, but on which,' as Mill remarks, 'we hesitate to rely in cases varying much from those which have been actually observed, for want of seeing any reason why such a law should exist.'<sup>1</sup>

We know, for instance, that in Sanskrit no word can end in two consonants. Yet there are a few exceptions, such as *ûrk*, strength, or *amârt*, from *mrig*. There are eleven consonants only that can be

<sup>1</sup> Mill, *Logic*, iii. 16. 1.

final in Sanskrit, *k, ṅ, t, n, p, m, l, h, m*, while in Greek no more than three consonants can stand at the end of a word, *n, r, s*. But here again there is an exception, namely the *κ* in *οὐκ* and *ἐκ*. Now we cannot discover any reason why the Greeks should not have tolerated more than three consonants at the end of their words, considering how we ourselves use almost any consonant as final. But it can easily be imagined how much the whole character of a language is determined by these phonetic restrictions. There are other combinations of consonants to which the Greeks object, such as *mr, ml, ns*. Again, we cannot tell why, and we must remember that Argives and Cretans tolerated participles in *vs* such as *τιθείvs*, while all other Greeks rejected them, and changed *τιθείvs* or *τιθείvrs* into *τιθείs*.

These are therefore hardly to be called laws, for we cannot give any reason why they are obeyed in one place and defied in another; we cannot trace them back to more general, ultimate laws,—or at least we have not yet succeeded in doing so.

Curtius and those who followed him, though they insisted very strongly on a strict observance of phonetic laws, always allowed what they called sporadic cases, that is, exceptions not yet accounted for. These sporadic cases have formed of late years a favourite trysting-place for the old and the new schools. The new school maintains, as I did many years ago, that phonetic laws admit of no exceptions whatever, and that, if they did, language would not be

a subject fit for a really scientific treatment. These may seem brave words, but as a fundamental principle, they ought to be accepted by all students of language. But even the most extreme supporter of this general principle has to limit it, by adding, as Professor Brugmann does, that it is only within the same linguistic sphere and at the same time that phonetic change takes place with rigid consistency.<sup>1</sup> With this limitation the general principle would probably be excepted at present as almost a truism. And if in another place, Professor Brugmann says that all which he and his friends have been contending for is that 'all words undergo the same change, if the letters stand under the same conditions,' who would now deny this? The difficulty, however, remains, how to ascertain what letters stand under the same conditions, nay, how to discover what these conditions are in their endless variety. Each language has its own phonetic idiosyncrasies, the dialects of each language go their own way, nay, we know that even families and individuals have often their own peculiar pronunciation.

#### **Dialectic Growth.**

I tried to comprehend all these disturbing influences under the general name of *Dialectic Growth*, using Dialectic in a very wide, but, I believe, in its original sense. Dialects begin with the casual conversation of individuals. They continue as the conversational language of families, clans, villages, some-

<sup>1</sup> Brugmann, *Zum heutigen Stand der Sprachwissenschaft*, p 78.

times of tribes, confederacies, and states. Though for a time unobserved, they continue to be the feeders of language in ancient even more than in modern times. Having followed for a time their own independent course, many of these dialectic contributions differ of necessity from the general character of the broad stream of language into which they are absorbed. There are besides in every language what may be called survivals, old-fashioned words and forms which are retained unchanged in their time-honoured character, while all the rest follow the changing fashion of the day.

#### **Contact of different languages.**

Still more violent disturbances are caused by the historical contact and conflict between nations speaking different or distantly related languages. The wide difference between Old High-German and Gothic cannot be explained by the slow process of phonetic decay only, but must be accounted for by the contact between Low German and High German tribes, and finally by the political displacement of the former by the latter. The English of Alfred would never have become the English of Chaucer but for the misusage it received by Danish and Norman conquerors. Nor should we be able to account for the strange aspect of French, unless we knew how Latin, having suffered already by the ill-treatment of Roman legionaries and the Celtic inhabitants of Gaul, was

finally knocked to pieces by German Franks. It is when people accustomed to one language have to express themselves in another, as in the contact between Latin, Celtic, and Teutonic in Central Europe, or between English and Norman French in England, that the greatest phonetic disintegration takes place.

We may, no doubt, stand on our right and declare that all the disturbances caused by these events are themselves amenable to general rules, that exceptions cease to be exceptions, as soon as we can account for them, and that sporadic cases are no longer sporadic, if we can bring them under a new law. That is so; that is in fact the true meaning of *Exceptio probat regulam*.<sup>1</sup> The exception, if accounted for, proves the correctness of the law of which it forms an exception. On this point, therefore, the old and the new schools could hardly differ. Their real difference is one of scientific temper rather than of principle. The young enthusiast says, there must be a reason for everything that seems anomalous and sporadic in language; the old observer says, there may be. They both look for an explanation, and they both rejoice when it is found, just as Adams and Leverrier rejoiced when the anomalies in the movements of Uranos were accounted for by the discovery of the new planet, Neptune.

<sup>1</sup> What is thought to be an exception to a principle is always some other and distinct principle cutting into the former; some other force which impinges against the first force, and deflects it from its direction. Mill, *Logic*, iii. 10. 4.

### Causes of Phonetic Change.

But though exceptions to the laws of phonetic change can thus be accounted for by dialectic influences, there still remained the question why there should be any phonetic change at all. This question also I tried to answer from a physiological point of view, and perhaps in fuller detail than would be necessary at present

For a long time the usual phrase in linguistic works was, *k* becomes *g*, *t* becomes *d*, *s* becomes *r*; but how one letter could become another letter was never so much as asked. Then came the time when Curtius introduced the name *Verwitterung*, which means decay, or wear and tear, produced on stone by the influence of the weather. That again was a metaphorical expression, and did not give us a *vera causa*. I believe I was the first to suggest the prosaic reason that all phonetic change was due to laziness, to an economy of muscular effort required in pronouncing vowels and consonants. If this explanation should have been suggested before by others, I claim no priority, nor should I, at present, gain much credit for it. The chief objection raised against my explanation was that in many cases these phonetic changes could not possibly be said to facilitate pronunciation. In Grimm's Law, for instance, to put *th* for *t* could not be considered an alleviation, for to many people the pronunciation of *th* is by no means

easy. The transition of *th* into *d* might be called a relief, but the transition of *d* into *t* was the very opposite of an alleviation of utterance.

But this was the very point I wished to establish. There are phonetic changes due to laziness, as when we pronounce *night* for *knight*, *lord* for *hláford*, *Woosta* for *Worcester*. But there are others that require a very different explanation. The changes comprised under the name of 'Grimm's Law' could never be classed as due to phonetic decay. They are collateral, dialectic varieties, fixed among different German tribes, according to the phonetic idiosyncrasies of each, and determined by influences totally different from muscular economy. No one could say that it required a greater effort to pronounce a tenuis than an aspirata or a media, for we see that the Gothic speakers pronounced all these varieties with equal facility. I therefore entered very fully, perhaps too fully, into the question why each of these German tribes had fixed on tenuis, media, and aspirata in their own way, and in a way so different from Sanskrit, Greek, Latin, Celtic, and Slavonic. I am assured that this distinction also between phonetic decay and dialectic growth is now generally admitted and requires no further proof. But I must say that in several recent publications this distinction is by no means strictly observed. We are treated again and again to transitions of one consonant into another by what are called 'almost imperceptible changes.' With these almost imperceptible changes,

almost everything becomes possible in the history of language.

**False Analogy.**

Among the causes producing change in language, whether we call that change growth or decay, I had to point out one more, which I called *False Analogy*. In this case the facts themselves to which I appealed have never been contested, but the name itself has been strongly condemned. I am not one of those who consider that a name is of little consequence, and I quite see that False Analogy is an expression that may produce a wrong impression. When I appealed<sup>1</sup> to such forms as Ital. *essendo* from *essere*, like *credendo* from *credere*, Span. *somos*, *sois*, *son*, as if we had in Latin *sumus*, *sutis*, *sunt*, as the result of false analogy, I did not thereby wish to dispute the right of language to give birth to such grammatical monsters. We must admit that, in language, whatever is right, and that without the far-reaching influence of analogy, language would never have become what it is. I laid myself particular stress on the levelling influence exercised by children on the spoken, and afterwards on the written language. But though *bad*, *badder*, and *baddest*, *I goed*, *I coomed*, *I caught*, may in time become classical, I thought that for the present they might be put down as the result of a mistaken analogy on the part of our juvenile offenders. So far back as 1856 I had

<sup>1</sup> Last ed. i. p. 74; new ed. vol. ii. pp. 220, 221.



directed<sup>1</sup> attention to what may be called Germanisms in French. These also may be treated as the result of a mistaken analogy; for instance, in such words as *contrée*, *Gegend*, *avenir*, *Zukunft*, &c. If I was wrong, from the grammarian's point of view, in qualifying all such analogies as false, I am now quite prepared to recognise that even mistaken analogy is a legitimate principle in the development of language, though I must add that to appeal to it too often as a panacea for all etymological troubles may become a new source of danger to our studies.

**The lessons of Modern Languages.**

There is one more point which at the time when I published my lectures had to be established by the strongest arguments—I mean the true importance of the study of modern languages. There was then a strong prejudice against mixing up modern with ancient philology. The Comparative Grammar of the Romanic languages by Professor Dietz was read with a kind of patronising interest, but as to placing it by the side of Bopp's Comparative Grammar of the Aryan languages, that was not to be thought of. The principle of Geology which I applied to the Science of Language,<sup>2</sup> namely that we must begin with what is known and then proceed to what is unknown, was by no means accepted as a matter of course, whereas now, who is there to doubt it?

<sup>1</sup> Kuhn's *Zeitschrift*, vol. v. p. 11, *Über deutsche Schattirung Romanischer Worte*

<sup>2</sup> *Lectures*, vol. ii. p. 13.

I mention all this, not in order to claim the merit of having initiated these various theories, but simply in order to explain why much that must now seem superfluous and tedious in my Lectures was absolutely necessary thirty years ago. Whoever studies the history of any science, or whoever has been able himself to watch the progress of a science for a long number of years, knows but too well how little there is that can really be called original. Leibniz knew the importance of modern languages as well as any one of us. 'We must begin,' he wrote, 'with studying the modern languages which are within our reach, in order to compare them with one another, to discover their differences and affinities, and then to proceed to those which have preceded them in former ages, in order to show their filiation and their origin, and then to ascend step by step to the most ancient of tongues, the analysis of which must lead us to the only trustworthy conclusions'<sup>1</sup> But in the course of time many things that were known are forgotten again, what was accepted for a time is rejected and has to be re-established, and the progress of human knowledge seems often like the motion of a pendulum, or rather like a spiral movement, returning again and again to the same point, and yet, we may hope, attaining at each turn to a higher elevation.

<sup>1</sup> *Lectures on the Science of Language*, vol. ii. p. 13.

**Progress of Comparative Philology.**

There have been of late repeated complaints, chiefly on the part of classical scholars, that Comparative Philology has produced nothing really new since the days of Bopp, Pott, and Grimm, while on the other hand we have been told that new eras are constantly dawning upon us, and that everything written before each successive era is perfectly antiquated, prescientific, antediluvian. The truth lies, as usual, between the two extremes. Comparative philologists have not been idle, though, of course, after a new world has once been discovered, we must not expect immediately another Columbus. There has been neither stagnation, nor have there been any cataclysms. Like every vigorous science, the Science of Language has grown and is growing with that steady continuity which is the surest sign of a healthy life.

**Relationship of Languages.**

Let us look at some of the more important problems. The relationship of languages has not been much modified of late years, and the principles of classification have remained much the same. Thirty years ago, it was a recognised principle that languages must be classified according to their grammar, not according to their dictionary, because, though the dictionary might be mixed, the grammar could never be so. After a time this statement seemed too dogmatic, and very learned books were written to prove that no

language was entirely unmixcd, and that even grammatical forms might be borrowed from one language by another. But soon there followed a reaction, the pendulum swung back, and it was perceived that, though ready-made grammatical forms might in certain cases be borrowed, and new grammatical forms be created by analogy, yet there was this difference, that in every language the real grammatical elements are historical survivals of an earlier stage during which living elements became formal, and that such grammatical forms must grow, and can never be borrowed.

There has been no lack of new pedigrees for the Aryan family of speech by Schleicher, Schmidt, Fick, and others, but on this point also we seem to have come back to the conviction that beyond the broad fact of the bifurcation into a North-Western and South-Eastern division, it is impossible to determine how long after that event certain members of the North-Western branch remained united, before they became finally settled as independent national languages. The germs of the differences between the Aryan languages have in many cases been traced back to a period previous even to the first Aryan Separation.<sup>1</sup>

#### Home of the Áryas.

The question as to the *Original Home of the Áryas* is of small importance to the student of Comparative

<sup>1</sup> See Inaugural Lecture, *On the Results of Comparative Philology*, 1872 (*Selected Essays*, vol. i. p. 174)

Philology, but it is attractive in the eyes of the general reader. Much light has been shed on it by various scholars, much darkness also has been thrown over it by unscholarly writers. But how much the materials have increased, how much more is now known about it than formerly, may best be seen in Schrader's *Prehistoric Antiquities of the Aryan Race*, 1890, in which that question is very ably and carefully discussed.<sup>1</sup>

#### Phonetic Laws.

The greatest progress, however, has been made in the critical treatment of what are called *Phonetic Laws*. The discoveries in this department are less startling and attract less attention outside the narrow circle of scholars. But they are nevertheless of the greatest value, and give evidence, not only of minute accuracy in observation, but of brilliant genius in combination. We have been taught that many phonetic changes which were thought to be impossible are possible, and that many which we thought possible are impossible. Etymologies that were almost universally accepted have been rejected, others little dreamt of have been firmly established.

#### Three Periods of Comparative Philology.

In one sense it may truly be said that we have entered into a third period of Comparative Philology,

<sup>1</sup> See also, *Biographies of Words and the Home of the Aryan*, 1888.

a period by no means less important than the two which preceded it. It is necessary in every branch of scientific research to take stock from time to time, and all the more so in a new and constantly progressing science. There have been three such stock-takings in Comparative Philology. The first was represented by Bopp's Comparative Grammar, 1833 to 1852, third edition 1868-71; the second by Schleicher's *Compendium*, first edition 1862, fourth edition 1876; the third by Brugmann's *Grundriss der Vergleichenden Grammatik*, the first volume of which was published in 1886, the second in 1889.

A mere comparison of these three works will prove that the progress of Comparative Philology has been rapid, but, at the same time, continuous. Schleicher has not superseded Bopp, nor Brugmann Schleicher, but as Schleicher's work added not only to the strength of the foundations, but also to the height of the building, so has Brugmann's work increased its depth, its height, and its width. The disappointment which has been expressed at Brugmann's *Grundriss* seems to me hardly justified. If people expected an entirely new revelation, a temple built on the ruins of ancient systems, a complete annihilation of Bopp, Grimm, Pott, Benfey, Schleicher, Curtius, and all the rest, no doubt they have been disappointed. Brugmann's work is written in a critical, but at the same time in an historical spirit. The facts on which it rests are on the whole the same which had been brought

together by the industry of his predecessors, but their treatment shows a decided advance.

Nothing is more troublesome and more thankless than to prepare a complete and accurate survey of the work done by our predecessors and fellow-workers, and to award to friends and foes that amount of praise and blame which they and their labours seem to deserve in our own eyes. We should therefore be all the more grateful to those who, like Bopp, Schleicher, and Brugmann, undertake from time to time that laborious and often invidious task. If we consider that Brugmann's *Grundriss* represents the results of a period filled with the many original contributions of such men as Ascoli, Bartholomae, Bréal, Bugge, Collitz, Dowse, Fick, Henry, Hubschmann, Kluge, Merlo, Osthoff, Rhys, Saussure, Sayce, Schmidt, Schrader, Stokes, Sweet, Verner, Windisch and many others, while Brugmann himself has probably contributed more original research than any one else, we certainly have a right to place his work by the side of Bopp's and Schleicher's great works. But though it marks a new period, we may hope nevertheless that it may prove but a stepping-stone in the triumphant advance of the Science of Language.

As my lectures are chiefly concerned with the general principles of the Science of Language, I found it impossible to give so full an account of the labours of Brugmann and other more recent scholars as they deserve. When treating of purely phonetic questions, such as Grimm's Law for instance, I have tried to

supplement what I had formerly written by giving a short account of the later discoveries of Grassmann, Verner, Paul, and others. In other cases I have simply, in deference to more recent discoveries, left out etymologies no longer tenable, or supplied their place by others of a less doubtful character. But some of the most important discoveries, such as the original Aryan system of vowels, their influence on preceding consonants, the true meaning of nasalisation, of Guna and Vriddhi, names which I still venture to retain,<sup>1</sup> the different classes of gutturals, and the far-reaching action of the Aryan accent, could be but rarely alluded to in these lectures, which are chiefly intended to give results now generally accepted, to define the limits of the Science of Language, to determine its relation to other sciences, to exhibit its materials, to describe and justify its principles, and to point out the high aims of which we ought never to lose sight.

I cannot close this preface without expressing my gratitude for the kindness and indulgence with which these lectures have been received by scholars and students in every part of the world. They have more than realised the objects which I had in view in writing them. Again and again I have received letters from unknown friends, suggesting improvements, correcting mistakes, and furnishing new materials for my studies. To all of these I tender my warmest thanks. I ought to mention, however

<sup>1</sup> See Appendix to *Science of Thought*, p 619.



more particularly two scholars who have rendered me valuable assistance while I was carrying this new edition through the Press, the Rev. A. L. Mayhew and Dr. Joseph Wright. The former pointed out to me many etymologies, now antiquated or replaced by better ones; to the latter all the credit is due, if the ever-shifting and changing spelling of Anglo-Saxon and other Teutonic words has been rendered uniform in this new edition, according to the standard of spelling now generally approved in England.

F. MAX MULLER

IGHITHAM MOTE, KENT:

*Aug. 30, 1890.*

## PREFACE TO THE FIRST EDITION.

**M**Y Lectures on the Science of Language are here printed as I had prepared them in manuscript for the Royal Institution. When I came to deliver them, a considerable portion of what I had written had to be omitted, and, in now placing them before the public in a more complete form, I have gladly complied with a wish expressed by many of my hearers. As they are, they form only a short abstract of several courses delivered from time to time in Oxford, and they do not pretend to be more than an introduction to a science far too comprehensive to be treated successfully in so small a compass.

My object, however, will have been obtained, if I should succeed in attracting the attention, not only of the scholar, but of the philosopher, the historian, and the theologian, to a science which concerns them all; and which, though it professes to treat of words only, teaches us that there is more in words than is dreamt of in our philosophy. I quote from Bacon: 'Men believe that their reason is lord over their words, but it happens, too, that words exercise a reciprocal and reactionary power over our intellect.' 'Words, as a

Tartar's bow, shoot back upon the understanding of the wisest, and mightily entangle and pervert the judgment.'

M. M.

OXFORD · *June 11, 1861.*

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## PREFACE TO THE FIFTH EDITION.

THE fifth edition of my Lectures on the Science of Language has been carefully revised, but the main features of the work have not been altered. I have added some new facts that seemed to me essential for strengthening certain arguments, and I have omitted or altered what was really no longer tenable. But I have not attempted to re-write any portion of my Lectures, or to give to them that form which I should wish to give to them, if now, after the lapse of five years, I had to write them again.

In one or two cases only, where my meaning had been evidently misapprehended even by unprejudiced critics, I have tried to express myself more definitely and clearly. Thus in my last Lecture, where I had to speak of the origin of roots, I had quoted the opinion of the late Professor Heyse of Berlin, but I never meant to convey the impression that I adopted that opinion. I look upon it as a mere illustration, and

nothing more, and I never held myself in any way responsible for it.

Nor did I wish to attach any mysterious meaning to the purely preliminary definition which I gave of roots, by calling them 'phonetic types.' I might have called them phonetic moulds, or typical sounds, as well as phonetic types; and all that I wished to convey by this expression was that roots are like firm moulds in which all words are cast; that they are like sharply cut types of which numerous impressions have been taken; that, in fact, every consonant and every vowel in them is settled, and that therefore no etymology is admissible which does not account for every link in that long chain of changes which connects, for instance, the Sanskrit root *vid*, to know, with the English adverb *historically*. It is the definiteness of these roots which alone has imparted definiteness to etymological research, and it was this important characteristic, their definiteness, which I wished to impress on my hearers by using the name of phonetic types. In etymological researches it matters little what opinion we hold on the origin of roots, as long as we agree that, with the exception of a number of purely mimetic expressions, all words, such as we find them, whether in English or in Sanskrit, encumbered with prefixes and suffixes, and mouldering away under the action of phonetic corruption, must in the last instance be traced back, by means of definite phonetic laws, to these definite primary forms which we are accustomed to call roots. These roots stand like barriers between the chaos and the cosmos of human speech, and they alone prevent that 'ugly rush' which

would follow, and which has followed, wherever words have been derived straight from imitations of the sounds of nature or from interjections.

There is, no doubt, a higher interest which leads the philosopher to inquire into the nature of these phonetic types, and tempts him to transcend the narrow limits of the purely positive science of language. I value as much as any one the labours of Mr. Wedgwood and the Rev. F. W. Farrar in their endeavours to trace the origin of roots back to interjections, imitations, or so-called vocal gestures. I believe that both have thrown much light on a very difficult problem, and as long as such researches are confined to the genesis of roots, without trenching on etymology in the ordinary sense of that term, I mean, on the formation and the history of words, Mr. Farrar is quite right in counting me not as an opponent, but as a neutral, if not an ally.

M. M.

ST. IVES, CORNWALL:

20th Sept. 1866.

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## PREFACE TO THE SIXTH EDITION.

**I**N revising once more the two volumes of my Lectures on the Science of Language, I have fully availed myself of the help and counsel of my numerous reviewers and correspondents. As my Lectures were reprinted in America, and translated into German, French, Italian, Hungarian, and Russian, the number

of reviews, essays, and even independent books which they have elicited has become considerable, and the task of examining them all was not an easy, nor always a grateful one. Yet I have but seldom read a review, whether friendly or unfriendly, without being able to correct a mistake, or without feeling called upon to improve a sentence that had been misunderstood, to soften an expression that had given offence, to insert a new fact, or to allude to a new theory. Although my general views on the Science of Language have remained unchanged, the mere number of pages will show how many additions have been made, while a careful reader will easily discover how much has been changed, and, I hope, improved in my Lectures since they were first delivered at the Royal Institution in 1861 and 1863.

Though I have protested before, I must protest once more against the supposition that the theory on the origin of language which I explained at the end of my first course, and which I distinctly described as that of Professor Heyse of Berlin, was ever held by myself. It is a theory which, if properly understood, contains some truth, but it offers an illustration only, and in no way a real solution of the problem. I have abstained in my Lectures from propounding any theory on the origin of language, first, because I believe that the Science of Language may safely begin with roots as its ultimate facts, leaving what lies beyond to the psychologist and metaphysician; secondly, because I hold that a theory on the origin of language can only be thoroughly treated in close connection with the theory on the origin of thought, i. e. with the funda-

mental principles of mental philosophy. Although in treating of the history of the Science of Language I found it necessary in my Lectures to examine some of the former theories on the origin of language, and to show their insufficiency in the present state of our science, I carefully abstained from going beyond the limits which I had traced for myself. Much has been written during the last ten years on the origin of language, but the only writer who seems to me to have approached the problem in an independent, and at the same time a truly scientific spirit, is Dr. Bleek, in his essay *Über den Ursprung der Sprache*, published at the Cape in 1867. I am not surprised that his essay should have been received with marked favour by the most eminent physiologists, but I think, nevertheless, that in the minds of philosophical readers it will leave a strong conviction that researches into the origin of language transcend the domain of the physiologist as well as of the philologist, and require for their solution a complete mastery of the problems of psychology. At all events it seems now generally admitted that a mere revival of the mimetic or onomatopœic theory on the origin of words would be an anachronism in the history of our science. That Mr. Darwin in his fascinating work 'On the Descent of Man' should incline towards the mimetic theory is but natural, though it seems to me that even if it were possible to revive the theories of Demokritos and Epikuros, language, articulate and definite language, language derived, as it has been proved to be, not from shrieks, but from roots, i. e. from general ideas, would still remain what I called it in my first course of Lectures,

*our Rubicon which no brute will dare to cross* (vol. i. p. 403).

On other points I think that those who have done me the honour of carefully examining and freely criticising my Lectures will find that not one of their remarks has been neglected ; and I can honestly say that, where I have retained my own opinions against the arguments of other scholars, it has not been done without careful consideration. In some cases my critics will see that I have given up positions which they had proved to be no longer tenable ; in others, I have indicated, by a few additional words, that I was prepared for their objections, and able to meet them ; in others, again, the fact that I have left what I had written without any change must show that I consider their objections futile. It would have been easy to answer some of my rather over-confident critics, and I confess it was sometimes difficult to resist the temptation, particularly when one finds oneself blamed, as happens not unfrequently, for having followed Copernicus rather than Ptolemæus. *Ὀψιμαθéis quam sint insolentes non ignoras.* But controversy, particularly in public, is always barren of good results. I can now look back on five and twenty years of literary work, and whatever disappointment I may feel in seeing how little has been done and how much more remains to be done, and probably never will be done, I have at least this satisfaction, that I have never wasted one hour in personal controversy. I have grappled with opinions, but never with their pounders ; and, though I have carefully weighed what has been proved against me, I have never



minded mere words, mere assertions; still less, mere abuse.

If I may call attention to a few of the more important passages where the reader of this new edition will find new information, I should point out the following. In the first volume, p. 242 *seq.* [p. 281 of present edition], the statements on the relation of Pehlevi to Zend have been re-written in accordance with the new results that have been obtained by a more careful study of Pehlevi texts and inscriptions. In the second volume, pp. 15-23 [pp. 15-24], the question of the origin of the participle in *-ing* has been more fully treated. On p. 33 [p. 35] will be found an interesting letter on ceremonial pronouns in Chinese, by M. Stanislas Julien. The analysis and classification of vowels and consonants, on pp. 123-168 [pp. 108-136], has been carefully revised in accordance with the latest researches on this interesting subject. On pp. 139-141 [pp. 136-140] will be found my reply to Professor Czermak's important essay, *Ueber den Spiritus asper und lenis*. His independent testimony (p. 143, *note* 49) [p. 140, *note* 2], that the emissions of breath (the sibilants, etc.) are to be subdivided, exactly like the checks of breath (the *mutæ*), into *soft* and *hard*, will show that my own division of these sounds was not unfounded, while his experiment, described on pp. 159 and 160 [p. 147], explains, and to a certain extent justifies, the names of *hard* and *soft* by the side of *surd* and *sonant*.<sup>1</sup> In the Fifth Lecture, *On Grimm's*

<sup>1</sup> As a specimen of the over-confident and unimpartial criticism described above, I quote some extracts from the *North American*, in many respects, I believe, one of the best American reviews: 'But specially

*Law*, I have endeavoured to place my explanation of the causes which underlie that law in a clearer light, and I have answered some important arguments that had been advanced against my theory, particularly that founded on the historical changes in the names of places, such as *Strataburgum* and *Strazpuruc*.

Professor Max Muller's account of the *spiritus asper* and the *spiritus lenis*, and his explanation of the difference between such sounds as *z, r, b*, on the one hand, and *s, f, p*, on the other, is to be rejected. We have a right to be astonished that he revives for these two classes of letters the old names "soft" and "hard," which have happily for some time been going out of use, and fully adopts the distinction which they imply, although this distinction has been so many times exploded, and the difference of the two classes shown to consist in the intonation or non-intonation of the breath during their utterance. It is in vain that he appeals to the Hindu grammarians in his support—they are unanimous against him—not one of them fails to see and define correctly the difference between "sonant" and "surd" letters.'

I do not blame a writer in the *North American Review* for not knowing that I myself have run full tilt against the terminology of 'hard' and 'soft' consonants as unscientific (*unwissenschaftlich*), and that I was one of the first to publish and translate in 1856 the more scientific classification into 'surd' and 'sonant,' consonants as contained in the *Rigveda-prāṭisākhya*. But the Reviewer might surely have read the *Lecture* which he reviewed, where on page 130 (now page 144), I said: 'The distinction which, with regard to the first breathing or spiritus, is commonly called *asper* and *lenis*, is the same which, in other letters, is known by the names of *hard* and *soft*, *surd* and *sonant*, *tenuis* and *media*.'

The same Review says: 'The definition of the *wh* in *when*, as a simple whispered counterpart of *w* in *wen* instead of a *w* with a prefixed aspiration, is, we think, clearly false.' Now on a question concerning the correct pronunciation of English, it might seem impertinence in me were I not at once to bow to the authority of the *North American Review*. Still the writer might have suspected that on such a point a foreigner would not write at random, and if he had consulted the highest authorities on phonetics in England, and, I believe, in America too, he would have found that they agree with my own description of the two sounds of *w* and *wh*. See *Lectures*, vol. ii. p. 148, note 55 [p. 146, note 2].

My derivation of *Earl*, *Graf*, and *King*, which had been challenged, have been defended on pp. 280, 281, and 284 [pp. 317-322], and the question whether the reported initial digamma in the name of Helena renders a comparison between Helena and Saramâ impossible has been fully discussed on pp. 516 *seq.* [pp. 586 *seq.*]

Lastly, I wish to call attention to a letter with which I have been honoured by Mr. Gladstone (vol. ii. pp. 440-444) [pp. 507-511], and in which his opinions on the component elements of Greek Mythology, which I had somewhat misapprehended, will be found stated with great precision.

M. M.

OXFORD: *April* 1871.

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# THE SCIENCE OF LANGUAGE.



## CHAPTER I.

### THE SCIENCE OF LANGUAGE A PHYSICAL SCIENCE.

#### Name of the Science of Language.

THE SCIENCE OF LANGUAGE is a science of very modern date. We cannot trace its lineage much beyond the beginning of our century, and it is scarcely received as yet on a footing of equality by the elder branches of learning. Its very name is still unsettled, and the various titles that have been given to it in England, France, and Germany are so vague and varying that they have led to the most confused ideas among the public at large as to the real objects of this new science. We hear it spoken of as Comparative Philology, Scientific Etymology, Phonology, and Glossology. In France it has received the convenient, but somewhat barbarous, name of *Linguistique*. If we must have a Greek title for our science, we might derive it either from *mythos*, word, or from *logos*, speech. But the title of *Mythology* is already occupied, and *Logology* would jar too much on classical ears. We need not waste our time in criticising these names, as none of them has as yet received that universal sanction which belongs to the titles of

other modern sciences, such as Geology or Comparative Anatomy; nor will there be much difficulty in christening our young science after we have once ascertained its birth, its parentage, and its character. I myself prefer the simple designation of the Science of Language. though I fear that in these days of high-sounding titles, this plain name will hardly meet with general acceptance.

#### **The Physical Sciences.**

From the name we now turn to the meaning of our science. But before we enter upon a definition of its subject-matter, and determine the method which ought to be followed in our researches, it will be useful to cast a glance at the history of the other sciences, among which the science of language now for the first time, claims her place. The history of a science is, as it were, its biography; and as we buy experience cheapest in studying the lives of others. we may, perhaps, guard our young science from some of the follies and extravagances inherent in youth by learning a lesson for which other branches of human knowledge have had to pay more dearly.

#### **The Three Stages, Empirical, Classificatory, Theoretical.**

There is a certain uniformity in the history of most sciences. If we read such works as Whewell's *History of the Inductive Sciences* or Humboldt's *Kosmos*, we find that the origin, the progress, the causes of failure and success have been the same for almost every branch of human knowledge. There are three marked periods or stages in the history of every one of them. which we may call the *Empirical*,

the *Classificatory*, and the *Theoretical*. However humiliating it may sound, every one of our sciences, however grand their present titles, can be traced back to the most humble and homely occupations of half-savage tribes. It was not the true, the good, and the beautiful which spurred the early philosophers to deep researches and bold discoveries.

#### The Empirical Stage.

The foundation-stone of the most glorious structures of human ingenuity in ages to come was supplied by the pressing wants of a patriarchal and semi-barbarous society. The names of some of the most ancient departments of human knowledge tell their own tale. Geometry, which at present declares itself free from all sensuous impressions, and treats of its points and lines and planes as purely ideal conceptions, not to be confounded with the coarse and imperfect representations as they appear on paper to the human eye—geometry, as its very name declares, began with measuring a garden or a field. It is derived from the Greek *gê*, land, ground, earth, and *mélron*, measure. Botany, the science of plants, was originally the science of *bolánē*, which in Greek does not mean a plant in general, but fodder, from *bóskēin*, to feed. The science of plants would have been called Phytology, from the Greek *phylón*, a plant.<sup>1</sup> The founders of Astronomy were not the poet or the philosopher, but the sailor and the farmer. The early poet may have admired the ‘mazy dance of planets,’ and the philosopher may have speculated on the heavenly

<sup>1</sup> See Jessen, *Was heisst Botanik?* 1861.

harmonies; but it was to the sailor alone that a knowledge of the glittering guides of heaven became a question of life and death. It was he who calculated their risings and settings with the accuracy of a merchant and the shrewdness of an adventurer; and the names that were given to single stars or constellations clearly show that they were invented by the ploughers of the sea and of the land. The moon, for instance, the golden hand on the dark dial of heaven, was called by them the Measurer—the measurer of time; for time was measured by nights, and moons, and winters, long before it was reckoned by days, and suns, and years.

Moon<sup>1</sup> is a very old word. It was *mōna* in Anglo-Saxon, and was used there, not as a feminine, but as a masculine; for the moon was originally a masculine, and the sun a feminine, in all Teutonic languages; and it is only through the influence of classical models that in English moon has been changed into a feminine, and sun into a masculine. It was a most unlucky assertion which Mr. Harris made in his *Hermes*, that all nations ascribe to the sun a masculine, and to the moon a feminine gender.<sup>2</sup> The fact is that in all Teutonic languages the sun was originally a feminine, the moon a masculine. In the mythology of the Edda, *Máni*, the moon, is the son,

<sup>1</sup> Kuhn's *Zeitschrift für vergleichende Sprachforschung*, b. ix. s. 140. In the Edda the moon is called *ártali*, year-teller; a Bask name for moon is *agi-zavi*, light-measure. See *Dissertation critique et apologétique sur la Langue basque*, p. 28.

<sup>2</sup> Horne Tooke, p. 27, note. Pott, *Studien zur griechischen Mythologie*, 1859, p. 304. Grimm, *Deutsche Grammatik*, iii. p. 349. Bleek, *Ueber den Ursprung der Sprache*, p. xviii. (Kapstadt, 1867.) Schultze, *Fetischismus* (1871), pp. 242-252.

*Sól*, the sun, the daughter of *Mundilföri*. In Gothic *ména*, the moon, is masculine; *sunno*, the sun, feminine.<sup>1</sup> In Anglo-Saxon *mōna*, gen. *mōnan*, the moon, is masculine; *sunne*, gen. *sunnan*, the sun, feminine. As late as the fourteenth century we find Chaucer alluding to the sun as feminine in the rubric to his first conclusion of the Astrolabe, 'to fynde the degree in which the sonne is day by day, after *hir* cours abowte.'<sup>2</sup> In Old Saxon, too, *sunna* is feminine, *māno* masculine, and in Swedish and Danish *sol* and *māna* retain the same gender. The Lithuanians also give the masculine gender to the moon, *mėnū*; the feminine gender to the sun, *saule*: and in Sanskrit, though the sun is ordinarily looked upon as a male power, the most current names for the moon, such as *Kandra*, *Soma*, *Indu*, *Vidhu*, are masculine. We are told<sup>3</sup> that, according to Accadian views, the moon existed before the sun, and was called the father of the gods, while, according to Semitic views, the sun came first and held the most prominent place among the gods. Hence in Accadian the moon was conceived as a man, the sun as a woman, while in Babylonian the sun was masculine, and the moon feminine. The names of the moon are frequently used in the sense of month, and these and other names for month retain the same gender. Thus *mēnōths* in Gothic, *mōnað* in Anglo-Saxon are both masculine. In Greek we find *mēn*, and the Ionic *meis*, for month, always used in the masculine gender. In Latin we have the deri-

<sup>1</sup> Ulfilas uses besides, *saiul*, probably neuter, and *sunna*, masculine. See Grimm, *Deutsche Grammatik*, iii. p. 350.

<sup>2</sup> Chaucer's *Treatise on the Astrolabe*, ed Skeat, p. 14.

<sup>3</sup> Sayce, *Hibbert Lectures*, pp. 156, 165.

vative *mēnsis*, month, and in Sanskrit we find *mâs* for moon, and *mâsa* for month, both masculine.<sup>1</sup>

Now, this *mâs* in Sanskrit is clearly derived from a root *MÂ*, to measure, to mete. In Sanskrit, I measure is *mâ-mi*; thou measurest, *mâ-si*; he measures, *mâ-ti* (or *mimî-te*). An instrument of measuring is called in Sanskrit *mâ-tram*, the Greek *méltron*, our metre. Now, if the moon was originally called by the farmer the measurer, the ruler of days and weeks and seasons, the regulator of the tides, the lord of their festivals, and the herald of their public assemblies, it is but natural that he should have been conceived as a man, and not as the love-sick maiden which our modern sentimental poetry has put in his place.

It was the sailor who, before entrusting his life and goods to the winds and the waves of the ocean, watched for the rising of those stars which he called the Sailing-stars or *Pleiádes*,<sup>2</sup> from *plein*, to sail<sup>3</sup> Navigation in the Greek waters was considered safe after the return of the Pleiades; and it closed when they disappeared. The Latin name for the *Pleutides* is *Vergulice*,<sup>4</sup> from *virgula*, a sprout or twig. This name

<sup>1</sup> See Curtius, *Grundzüge der griechischen Etymologie*, No. 47L.

<sup>2</sup> Ideler, *Handbuch der Chronologie*, b. i. s. 211, 212. H. F. Perthes, *De Plejaden*, p. 14, note.

<sup>3</sup> See, however, Pott, *Etymologische Forschungen*, vol. ii. 1, p. 892 Πληιάδες, wild doves.

<sup>4</sup> In the Oscan Inscription of Agnone we find a Jupiter Verginius (djuves verchasiuf, dat. sing.), a name which Professor Aufrecht compares with that of Jupiter Viminus, Jupiter who fosters the growth of twigs (Kuhn's *Zeitschrift*, i. s. 89).—See, however, on Jupiter Viminus and his altars near the Porta Viminalis, Hartung, *Religion der Römer*, ii. 61. The Zulus called the Pleiades the *Isilimula*, the dove-stars, because, when they appear, the people begin to dig. See Calaway, *The Religious System of the Amazulu*, part iii. p. 397.

was given to them by the Italian husbandmen, because in Italy, where they became visible about May, they marked the return of summer.<sup>1</sup> Another constellation, the seven stars in the head of Taurus, received the name of *Hyades* or *Pluivie* in Latin, because at the time when they rose with the sun they were supposed to announce rain. The astronomer retains these and many other names; he still speaks of the pole of heaven, of wandering and fixed stars<sup>2</sup> yet he is apt to forget that these terms were not originally the result of scientific observation and classification, but borrowed from the language of those who were themselves wanderers on the sea or in the desert, and to whom the fixed stars were in full reality what their name implies, stars driven in and fixed, by which they might hold fast on the deep, as by heavenly anchors.

But although historically we are justified in saying that the first geometrician was a ploughman, the first botanist a gardener, the first mineralogist a miner, it may reasonably be objected that in this early stage a science is hardly a science yet: that measuring a field is not geometry, that growing cabbages is very far from botany, and that a butcher has no claim to the title of comparative anatomist. This is perfectly true, yet it is but right that each science should be

<sup>1</sup> As to their number, see M. M., *Introduction to Rudveda*, vol. iv. p. xxxvii, and Whitney, *Journ. American Orient. Soc.* vii. p. 79.

<sup>2</sup> As early as the times of Anaximenes of the Ionic, and Alcmaeon of the Pythagorean, schools, the stars had been divided into travelling (*ἀστρα πλανώμενα* or *πλανητά*), and non-travelling stars (*ἀπλανεῖς ἀστέρες* or *ἀπλανῆ ἀστρα*). Aristotle first used *ἀστρα ἐνδεδεμένα*, or fixed stars. (See Humboldt, *Κosmos*, vol. iii. p. 28.) *Πόλος*, the pivot, hinge, or the pole of heaven.

reminded of these its more humble beginnings, and of the practical requirements which it was originally intended to answer. A science, as Bacon says, should be a rich storehouse for the glory of God, and the relief of man's estate.<sup>2</sup> Now, although it may seem as if in the present high state of our society students were enabled to devote their time to the investigation of the facts and laws of nature, or to the contemplation of the mysteries of the world of thought, without any side-glance at the practical results of their labours, no science and no art have ever prospered and flourished among us, unless they were in some way subservient to the practical interests of society. It is true that a Lyell collects and arranges, a Faraday weighs and analyses, an Owen dissects and compares, a Herschel observes and calculates, without any thought of the immediate marketable results of their labours. But there is a general interest which supports and enlivens their researches, and that interest depends on the practical advantages which society at large derives from these scientific studies. Let it be known that the successive strata of the geologist are a deception to the miner, that the astronomical tables are useless to the navigator, that chemistry is nothing but an expensive amusement, of no use to the manufacturer and the farmer — and astronomy, chemistry, and geology would soon share the fate of alchemy and astrology. As long as the Egyptian science excited the hopes of the invalid by mysterious prescriptions (I may observe by the way that the hieroglyphic signs of our modern prescriptions have been traced back by Champollion to the



real hieroglyphics of Egypt<sup>1</sup>)—and as long as it instigated the avarice of its patrons by the promise of the discovery of gold, it enjoyed a liberal support at the courts of princes, and under the roofs of monasteries. Though alchemy did not lead to the discovery of gold, it prepared the way to discoveries more valuable. The same with astrology. Astrology was not such mere imposition as it is generally supposed to have been. It is counted a science by so sound and sober a scholar as Melancthon, and even Bacon allows it a place among the sciences, though admitting that ‘it had better intelligence and confederacy with the imagination of man than with his reason.’ In spite of the strong condemnation which Luther pronounced against it, astrology continued to sway the destinies of Europe; and a hundred years after Luther, the astrologer was the counsellor of princes and generals, while the founder of modern astronomy died in poverty and despair. In our time the very rudiments of astrology are lost and forgotten.<sup>2</sup>

Even real and useful arts, as soon as they cease to be useful, die away, and their secrets are sometimes lost beyond the hope of recovery. When after the Reformation our churches and chapels were divested

<sup>1</sup> Bunsen's *Egypt*, vol. iv. p. 108.

<sup>2</sup> According to a writer in *Notes and Queries* (2nd Series, vol. x. p. 500), astrology is not so entirely extinct as we suppose. ‘One of our principal writers,’ he states, ‘one of our leading barristers, and several members of the various antiquarian societies, are practised astrologers at this hour. But no one cares to let his studies be known, so great is the prejudice that confounds an art requiring the highest education with the jargon of the glib fortune-teller.’ See also H. Phillips, Jr., *Medicine and Astrology*, a paper read before the Numismatic and Antiquarian Society of Philadelphia, June 7, 1866.

of their artistic ornaments, in order to restore, in outward appearance also, the simplicity and purity of the Christian church, the colours of the painted windows began to fade away, and have never regained their former depth and harmony. The invention of printing gave the death-blow to the art of ornamental writing and of miniature-painting employed in the illumination of manuscripts; and the best artists of the present day despair of rivalling the minuteness, softness, and brilliancy combined by the humble manufacturer of the mediæval missal.

#### **Practical Character of the Science of Language.**

I speak somewhat feelingly on the necessity that every science should answer some practical purpose, because I am aware that the science of language has but little to offer to the utilitarian spirit of our age. It does not profess to help us in learning languages more expeditiously, nor does it hold out any hope of our ever realising the dream of one universal language. It simply professes to teach what language is; and this would hardly seem sufficient to secure for a new science the sympathy and support of the public at large. There are problems, however, which, though apparently of an abstruse and merely speculative character, have exercised a powerful influence for good or evil in the history of mankind. Men before now have fought for an idea, and have laid down their lives for a word; and many of the problems which have agitated the world from the earliest to our own times, belong properly to the science of language.

Much of what we now call mythology was in truth

a disease or affection (*πάθος*) of language. A myth means a word, but a word which, from being a name or an attribute, has been allowed to assume a more substantial existence. Many of the Greek, the Roman, the Indian, and other heathen gods are nothing but poetical names, which were gradually allowed to assume a divine personality never contemplated by their original inventors. *Eos* was a name of the dawn before she became a goddess, the wife of *Tithonos*, or the dying day. *Fatum*, or fate, meant originally what had been spoken; and before Fate became a power, even greater than Jupiter, it meant that which had once been spoken by Jupiter, and could never be changed, not even by Jupiter himself. *Zeus* originally meant the bright heaven, in Sanskrit *Dyaus*; and many of the stories told of him as the supreme god, had a meaning only as told originally of the bright heaven, whose rays, like golden rain, descend on the lap of the earth, the *Danaë* of old, kept by her father in the dark prison of winter. No one doubts that *Luna*, for *losna*, originally *lou-na*, was simply a name of the moon; but so was likewise *Lucina*.<sup>1</sup> *Hekate*, too, was an old name of the moon, the feminine of *Hekatos* and *Hekatebolos*, the far-darting sun; and *Pyrrha*, the Eve of the Greeks, was nothing but a name of the red earth, and in particular of Thessaly. This mythological disease, though less virulent in modern languages, is by no means extinct even now.

<sup>1</sup> *Luna* is not, as commonly supposed, a contraction of *lucna*, but, as is shown by the dialectic form *losna*, it must be derived from *lou-na*, like Zend *raokhshna*; cf. *volustris*, for *inulustris*. Hegmann, *Das Lid der indogerm Sprachen*, 1873, p. 33.

During the middle ages the controversy between Nominalism and Realism, which agitated the church for centuries, and finally prepared the way for the Reformation, was again, as its very name shows, a controversy on names, on the nature of language, and on the relation of words to our conceptions on one side, and to the realities of the outer world on the other. Men were called heretics for believing that words such as *justice* or *truth* expressed only conceptions of our mind, not real things walking about in broad daylight.

In modern times the science of language has been called in to settle some of the most perplexing political and social questions. 'Nations and languages against dynasties and treaties,' this is what has remodelled, and will remodel still more, the map of Europe. There was a time when comparative philologists in America have been encouraged to prove the impossibility of a common origin of languages and races, in order to justify, by scientific arguments, the unhallowed theory of slavery. Never do I remember to have seen science more degraded than on the title-page of an American publication in which, among the profiles of the different races of man, the profile of the ape was made to look more human than that of the negro.

#### **Language the Barrier between Man and Beast.**

Lastly, the problem of the position of man on the threshold between the worlds of matter and spirit has of late assumed a very marked prominence among the problems of the physical and mental sciences. It has absorbed the thoughts of men who,

after a long life spent in collecting, observing, and analysing, have brought to its solution qualifications unrivalled in any previous age; and if we may judge from the greater warmth displayed in discussions ordinarily conducted with the calmness of judges and not with the passion of pleaders, it might seem, after all, as if the great problems of our being, of the true nobility of our blood, of our descent from heaven or earth, though unconnected with anything that is commonly called practical, have still retained a charm of their own—a charm that will never lose its power on the mind and on the heart of man. Now, however much the frontiers of the animal kingdom have been pushed forward, so that at one time the line of demarcation between animal and man seemed to depend on a mere fold in the brain, there is *one* barrier which no one has yet ventured to touch—the barrier of language. Even those philosophers with whom *penser est sentir*,<sup>1</sup> who reduce all thought to feeling, and maintain that we share the faculties which are the productive causes of thought in common with beasts, are bound to confess that *as yet* no race of animals has produced a language. Lord Monboddo, for instance, admits that *as yet* no animal has been discovered in the possession of language, ‘not even the beaver, who

<sup>1</sup> ‘Man has two faculties, or two passive powers, the existence of which is generally acknowledged. 1, the faculty of receiving the different impressions caused by external objects, physical sensibility; and 2, the faculty of preserving the impressions caused by these objects, called memory, or weakened sensation. These faculties, the productive causes of thought, we have in common with beasts. . . . Everything is reducible to feeling.’—*Helictus*.

of all the animals we know, that are not, like the orang-outangs, of our own species, comes nearest to us in sagacity.'

Locke, who is generally classed together with these materialistic philosophers, and who certainly vindicated a large share of what had been claimed for the intellect as the property of the senses, recognised most fully the barrier which language, as such, placed between man and brutes. 'This I may be positive in,' he writes, 'that the power of abstracting is not at all in brutes, and that the having of general ideas is that which puts a perfect distinction between man and brutes. For it is evident we observe no footsteps in these of making use of general signs for universal ideas; from which we have reason to imagine that they have not the faculty of abstracting or making general ideas, since they have no use of *words* or any other general signs.'

If, therefore, the science of language gives us an insight into that which, by common consent distinguishes man from all other living beings; if it establishes a frontier between man and the brute, which can never be removed, it would seem to possess at the present moment peculiar claims on the attention of all who, while watching with sincere admiration the progress of comparative physiology, yet consider it their duty to enter their manly protest against a revival of the shallow theories of Lord Monboddo.

#### **The Classificatory Stage.**

But to return to our survey of the history of the physical sciences. We had examined the empirical

stage through which every science has to pass. We saw that, for instance, in botany, a man who has travelled through distant countries, who has collected a vast number of plants, who knows their names, their peculiarities, and their medicinal qualities, is not yet a botanist, but only a herbalist, a lover of plants, or what the Italians call a *dilettante*, from *diletture*, to delight in a subject. The real science of plants, like every other science begins with the work of classification. An empirical acquaintance with facts rises to a scientific knowledge of facts as soon as the mind discovers beneath the multiplicity of single productions the unity of an organic system. This discovery is made by means of comparison and classification. We cease to study each flower for its own sake; and by continually enlarging the sphere of our observation we try to discover what is common to many and offers those essential points on which groups or natural classes may be established. These classes again, in their more general features, are mutually compared; new points of difference, or of similarity of a more general and higher character, spring to view, and enable us to discover classes of classes, or families. And when the whole kingdom of plants has thus been surveyed, and a simple tissue of names been thrown over the garden of nature; when we can lift it up, as it were, and view it in our mind as a whole, as a system well defined and complete, we then speak of the science of plants, or botany. We have entered into altogether a new sphere of knowledge, where the individual is subject to the general, facts to law; we discover thought, order, and purpose pervading the





Although the Ptolemaean system was a wrong one, yet even from its eccentric point of view, laws were discovered determining the true movements of the heavenly bodies. The conviction that there remains something unexplained is sure to lead to the discovery of our error. There can be no error in nature; the error must be with us. This conviction lived in the heart of Aristotle when, in spite of his imperfect knowledge of nature, he declared 'that there is in nature nothing interpolated or without connection, as in a bad tragedy;' and from his time forward every new fact and every new system have confirmed his faith.

The object of classification is clear. We understand things if we can comprehend them; that is to say, if we can grasp and hold together single facts, connect isolated impressions, distinguish between what is essential and what is merely accidental, and thus predicate the general of the individual, and class the individual under the general. This is the secret of all scientific knowledge. Many sciences, while passing through this second or classificatory stage, assume the title of comparative. When the anatomist has finished the dissection of numerous bodies, when he has given names to every organ, and discovered the distinctive functions of each, he is led to perceive similarity where at first he saw dissimilarity only. He discovers in the lower animals rudimentary indications of the more perfect organisation of the higher; and he becomes impressed with the conviction that there is in the animal kingdom the same order and purpose which pervades the endless

variety of plants or any other realm of nature. He learns, if he did not know it before, that things were not created at random or in a lump, but that there is a scale which leads, by imperceptible degrees, from the lowest infusoria to the crowning work of nature—man.

**The Theoretical Stage.**

In this way the second or classificatory leads us naturally to the third or final stage—the theoretical, or metaphysical. If the work of classification is properly carried out, it teaches us that nothing exists in nature by accident; that each individual belongs to a species, each species to a genus; and that there are laws which underlie the apparent freedom and variety of all created things. This has given to the study of nature a new character. After the observer has collected his facts, and after the classifier has placed them in order, the student asks what is the origin and what is the purpose of all this? and he tries to soar, by means of induction, or sometimes even of divination, into regions not accessible to the mere collector. In this attempt the mind of man no doubt has frequently met with the fate of Phaeton; but, undismayed by failure, he asks again and again for his father's steeds. Physical science would never have been what it is without the impulses which it received from the philosopher, nay, even from the poet and the dreamer.

Copernicus, in the dedication of his work to Pope Paul III. (it was commenced in 1517, finished 1530, published 1543), confesses that he was brought to the discovery of the sun's central position, and of the

diurnal motion of the earth, not by observation or analysis, but by what he calls the feeling of a want of symmetry in the Ptolemaic system. But who had told him that there *must* be symmetry in all the movements of the celestial bodies, or that complication was not more sublime than simplicity? And the solution of his perplexities was suggested to Copernicus, as he tells us himself, by an ancient Greek philosopher, by Philolaos, the Pythagorean. No doubt with Philolaos the motion of the earth was only a guess, or, if you like, a happy intuition, not, as it was with Tycho de Brahe and his friend Kepler, the result of wearisome observations of the orbits of the planet Mars. Nevertheless, if we may trust the words of Copernicus, it is quite possible that without that guess we should never have heard of the Copernican system. Truth is not found by addition and multiplication only. When speaking of Kepler, whose method of reasoning has been considered as unsafe and fantastic by his contemporaries as well as by later astronomers, Sir David Brewster remarks very truly, 'that, as an instrument of research, the influence of imagination has been much overlooked by those who have ventured to give laws to philosophy.' The torch of imagination is as necessary to him who looks for truth, as the lamp of study. Kepler held both, and more than that, he had the star of faith to guide him.

Let us quote in conclusion the testimony of Alexander von Humboldt as to the value of imagination, or even of faith and superstition, in the progress of human knowledge. 'At the limits of exact knowledge,' he writes, 'as from a lofty island-shore, the

eye loves to glance towards distant regions. The images which it sees may be illusive; but like the illusive images which people imagined they had seen from the Canaries or the Azores, long before the time of Columbus, they may lead to the discovery of a new world.'

In the history of the physical sciences, the three stages which we have just described as the empirical, the classificatory, and the theoretical, appear generally in chronological order. I say, generally, for there have been instances, as in the case just quoted of Philolaos, where the results properly belonging to the third have been anticipated in the first stage. To the quick eye of genius one case may be like a thousand, and one experiment, well chosen, may lead to the discovery of an absolute law. Besides, there are great chasms in the history of science. The tradition of generations is broken by political or ethnic earthquakes, and the work that was nearly finished has frequently had to be done again from the beginning, when a new surface had been formed for the growth of a new civilisation. The succession, however, of these three stages is no doubt the natural one, and it is very properly observed in the study of every science. The student of botany begins as a collector of plants. Taking each plant by itself, he observes its peculiar character, its habitat, its proper season, its popular or unscientific name. He learns to distinguish between the roots, the stem, the leaves, the flower, the calyx, the stamina, and pistils. He learns, so to say, the practical grammar of the plant before he can begin to compare, to arrange, and

classify. Again, no one can enter with advantage on the third stage of any physical science without having passed through the second. No one can study *the* plant, no one can understand the bearing of such a work as, for instance, Professor Schleiden's *Life of the Plant*,<sup>1</sup> who has not studied the life of plants in the wonderful variety, and in the still more wonderful order, of nature. These last and highest achievements of inductive philosophy are possible only after the way has been cleared by previous classification. The philosopher must command his classes like regiments which obey the order of their general. Thus alone can the battle be fought and truth be conquered.

**The Science of Language a Physical Science.**

After this rapid glance at the history of the other physical sciences, we now return to our own, the science of language, in order to see whether it really is a science, whether it may be classed as one of the physical sciences, and whether it can be brought back to the standard of the inductive sciences. We want to know whether it has passed, or is still passing, through the three phases of physical research; whether its progress has been systematic or desultory, whether its method has been appropriate or not. But before we do this, we shall, I think, have to do something else. You may have observed that I always took it for granted that the science of language, which is best known in this country by the name of Comparative Philology, is one of the physical sciences, and that therefore its method ought

<sup>1</sup> *Die Pflanze und ihr Leben*, von M. J. Schleiden, Leipzig, 1858.

to be the same as that which has been followed with so much success in botany, geology, anatomy, and other branches of the study of nature. In the history of the physical sciences, however, we look in vain for a place assigned to comparative philology, and its very name would seem to show that it belongs to quite a different sphere of human knowledge.

There are two great divisions of human knowledge, which, according to their subject-matter, may be called *physical* and *historical*. Physical science, it has been said, deals with the works of God, historical science with the works of man. Thus the science of optics, including all the laws of light and colour, is a physical science, whereas the science of painting, with all its laws of manipulation and colouring, being that of a man-created art, is a purely historical science.<sup>1</sup> Now if we were to judge by its name, comparative philology, like classical philology, would seem to take rank, not as a physical, but as an historical science, and the proper method to be applied to it would be that which is followed in the history of art, of law, of politics, and religion. However, the title of comparative philology must not be allowed to mislead us. It is difficult to say by whom that title was invented, but all that can be said in defence of it is, that the founders of the science of language were chiefly scholars or philologists, and that they based their inquiries into the nature and laws of language on a comparison of as many facts as they could collect within their own special spheres of study. Neither in Germany, which may well be called the birthplace of

<sup>1</sup> *Intellectual Repository*, June 2, 1862, p. 217.

this science, nor in France, where it has been cultivated with brilliant success, has that title been adopted. It will not be difficult to show that, although the science of language owes much to the classical scholar, and though in return it has proved of great use to him, yet comparative philology has really nothing whatever in common with philology, in the usual meaning of the word. Philology, whether classical or oriental, whether treating of ancient or modern, of cultivated or barbarous languages, is no doubt an historical science, in the strictest sense of the word. Language is here treated simply as a means. The classical scholar uses Greek or Latin, the oriental scholar Hebrew or Sanskrit, or any other language, as a key to an understanding of the literary monuments which bygone ages have bequeathed to us, as a spell to raise from the tomb of time the thoughts of great men in different ages and different countries, and as a means ultimately to trace the social, moral, intellectual, and religious progress of the human race. In the same manner, if we study living languages, it is not for their own sake that we study grammars and vocabularies. We do so on account of their practical usefulness. We use them as letters of introduction to the best society or to the best literature of the leading nations of Europe. In comparative philology the case is totally different. In the science of language, languages are not treated as a means; language itself becomes the sole object of scientific inquiry. Dialects which have never produced any literature at all, the jargons of savage tribes, the clicks of the Hottentots, and the vocal

modulations of the Indo-Chinese are as important, nay, for the solution of some of our problems, more important, than the poetry of Homer, or the prose of Cicero. We do not want to know languages, we want to know language; what language is, how it can form an instrument or an organ of thought; we want to know its origin, its nature, its laws; and it is only in order to arrive at that knowledge that we collect, arrange, and classify all the facts of language that are within our reach.

And here I must protest, at the very outset of these lectures, against the supposition that the student of language must necessarily be a great linguist. How is he to find time for acquiring what is called a practical knowledge of the hundreds of languages with which he has to deal? He does not aspire to be a Mithridates or Mezzofanti. His knowledge should be accurate, but it cannot possibly be that familiar knowledge which we can acquire in a life-time of six or seven languages, whether dead or living.

It is the grammar and the dictionary, not the literature, which form the subject of his inquiries. These he consults and subjects to a careful analysis, but he does not encumber his memory with paradigms of nouns and verbs, or with long lists of words which have never been used for the purposes of literature. It is true, no doubt, that no language will unveil the whole of its wonderful structure except to the scholar who has studied it thoroughly and critically in a number of literary works representing the various periods of its growth. Nevertheless, short lists of vocables, and imperfect sketches of a gram-



mar, are in many instances all that the student can expect to obtain, or can hope to master and to use for the purposes he has in view. He must learn to make the best of this fragmentary information, like the comparative anatomist, who frequently learns his lessons from the smallest fragments of fossil bones, or the vague pictures of animals brought home by unscientific travellers. If it were necessary for the comparative philologist to acquire a critical or practical acquaintance with all the languages which form the subject of his inquiries, the science of language would simply be an impossibility. But we do not expect the botanist to be an experienced gardener, or the geologist a miner, or the ichthyologist a practical fisherman. Nor would it be reasonable to object in the science of language to the same division of labour which is necessary for the successful cultivation of subjects much less comprehensive. Though much of what we might call the realm of language is lost to us for ever, though whole periods in the history of language are by necessity withdrawn from our observation, yet the mass of human speech that lies before us, whether in the petrified strata of ancient literature or in the countless variety of living languages and dialects, offers a field as large, if not larger, than any other branch of physical research. It is impossible to fix the exact number of known languages, but their number can hardly be less than nine hundred.<sup>1</sup>

That, before the beginning of our century, this vast field should never have excited the curiosity of the

<sup>1</sup> Balbi in his *Atlas* counts 860. Cf. Pott, *Rassen*, p. 230, *Etymologische Forschungen*, II 83. (Second Edition.)

natural philosopher may seem surprising, more surprising even than the indifference with which former generations treated the lessons which the very stones seemed to teach of the life still throbbing in the veins and on the very surface of the earth. The saying that 'familiarity breeds contempt' would seem applicable to the subjects of both these sciences. The gravel of our walks hardly seemed to deserve a scientific treatment, and the language which every ploughboy can speak could not be raised without an effort to the dignity of a scientific problem. Man had studied every part of nature, the mineral treasures in the bowels of the earth, the flowers of each season, the animals of every continent, the laws of storms, and the movements of the heavenly bodies; he had analysed every substance, dissected every organism, he knew every bone and muscle, every nerve and fibre of his own body to the ultimate elements which compose his flesh and blood; he had meditated on the nature of his soul, on the laws of his mind, and tried to penetrate into the last causes of all being—and yet language, without the aid of which not even the first step in this glorious career could have been made, remained unnoticed. Like a veil that hung too close over the eye of the human mind, it was hardly perceived. In an age when the study of antiquity attracted the most energetic minds, when the ashes of Pompeii were sifted for the playthings of Roman life; when parchments were made to disclose, by chemical means, the crased thoughts of Grecian thinkers; when the tombs of Egypt were ransacked for their sacred contents, and the palaces of Babylon

and Nineveh forced to surrender the clay diaries of Nebuchadnezzar; when everything, in fact, that seemed to contain a vestige of the early life of man was anxiously searched for and carefully preserved in our libraries and museums—language, which in itself carries us back far beyond the cuneiform literature of Assyria and Babylonia and the hieroglyphic documents of Egypt; which connects ourselves through an unbroken chain of speech, with the very ancestors of our race, and still draws its life from the first utterances of the human mind—language, the living and speaking witness of the whole history of our race, was never cross-examined by the student of history, was never made to disclose its secrets until questioned, and so to say, brought back to itself within the last fifty years, by the genius of a Humboldt, Bopp, Grimm, Bunsen, and others. If we consider that, whatever view we take of the origin and growth of language, nothing new has ever been added to the substance of language,<sup>1</sup> that all its changes have been changes of form, that no new root or radical has ever been invented by later generations, as little as one single element has ever been added to the material world in which we live, if we bear in mind that in one sense, and in a very just sense, we may be said to handle the very words which issued from the mouth of man, when he gave names to ‘all cattle, and to the fowl of the air, and to every beast of the field,’ we shall perceive, I believe, that the science of language has claims on our attention, such as few sciences can rival or excel.

<sup>1</sup> Pott, *Etym Forsch.* ii 220.

## CHAPTER II.

### THE GROWTH OF LANGUAGE IN CONTRADISTINCTION TO THE HISTORY OF LANGUAGE.

#### Objections.

IN claiming for the science of language a place among the physical sciences,<sup>1</sup> I was prepared to meet with many objections. The circle of the physical sciences seemed closed, and it was not likely that a new claimant should at once be welcomed among the established branches and scions of the ancient aristocracy of learning.<sup>2</sup>

<sup>1</sup> Schleicher, *Die Darwinische Theorie*, 1863, p. 7, has since adopted the same view. '*Glottic*,' he says, 'or the Science of Language, is therefore one of the natural sciences; its method is on the whole the same as that of the other natural sciences.'

<sup>2</sup> Dr. Whewell classes the science of language as one of the palæontological sciences, but he makes a distinction between palæontological sciences treating of material things, for instance, geology, and others respecting the products which result from man's imaginative and social endowments, for instance, comparative philology. He excludes the latter from the circle of the physical sciences, properly so called, but he adds: 'We began our inquiry with the trust that any sound views which we should be able to obtain respecting the nature of truth in the physical sciences, and the mode of discovering it, must also tend to throw light upon the nature and prospects of knowledge of all other kinds—must be useful to us in moral, political, and philological researches. We stated this as a confident anticipation; and the evidence of the justice of our belief already begins to appear. We have seen that biology leads us to psychology, if we choose to follow the path, and thus the passage from the material to the immaterial has already unfolded itself at one point; and we now perceive that there are several large provinces of speculation which concern subjects belonging to man's immaterial nature, and which are governed by the same laws as sciences altogether physical. It is not our business to dwell on the

**Language the Work of Man**

The first objection which was sure to be raised on the part of such sciences as botany, geology, or physiology is this:—Language is the work of man: it was invented by man as a means of communicating his thoughts, when mere looks and gestures proved inefficient; and it was gradually, by the combined efforts of succeeding generations, brought to that perfection which we admire in the Veda, the Bible, the Koran, and in the poetry of Homer, Dante, Shakespeare, and Goethe. Now it is perfectly true that if language be the work of man, in the same sense in which a statue, or a temple, or a poem, or a law are properly called the works of man, the science of language would have to be classed as an historical science. We should have a history of language as we have a history of art, of poetry, and of jurisprudence, but we could not claim for it a place side by side with the various branches of natural science. It is true, also, that if you consult the works of some of the most distinguished modern philosophers you will find that whenever they speak of language, they take it for granted that language is a human invention, that words are artificial signs, and that the varieties of human speech arose from different nations agreeing on

prospects which our philosophy thus opens to our contemplation; but we may allow ourselves, in this last stage of our pilgrimage among the foundations of the physical sciences, to be cheered and animated by the ray that thus beams upon us, however dimly, from a higher and brighter region.'—*Indications of the Creator*, p. 146. See also *Darwinism tested by the Science of Language*, translated from the German of Professor A. Schleicher by Dr. Al. V. W. H. Bickers (London: Hotten, 1869), and my review of this work in 'Nature,' No. 10, Jan. 6, 1870.

different sounds as the most appropriate signs of their different ideas. This view of the origin of language was so powerfully advocated by the leading philosophers of the last century, that it has retained an undisputed currency even among those who, on almost every other point, are strongly opposed to their teaching.

A few voices have, indeed, been raised to protest against the theory of language being originally invented by man. But they were chiefly the protests of theologians who, in their zeal to vindicate the divine origin of language, were carried away far beyond the teaching of the Bible which they were anxious to defend. For in the Bible it is not the Creator who gives names to all things, but Adam. 'Out of the ground,' we read, 'the Lord God formed every beast of the field, and every fowl of the air; and brought them unto Adam to see what he would call them: and whatsoever Adam called every living creature that was the name thereof.'<sup>1</sup>

With the exception of this small class of philosophers, more orthodox even than the Bible,<sup>2</sup> the

<sup>1</sup> Genesis ii. 19.

<sup>2</sup> St. Basil was accused by Eunomius of denying Divine Providence, because he would not admit that God had created the names of all things, but ascribed the invention of language to the faculties which God had implanted in man. St. Gregory, bishop of Nyssa in Cappadocia (331-396), defended St. Basil. 'Though God has given to human nature its faculties,' he writes, 'it does not follow that therefore He produces all the actions which we perform. He has given us the faculty of building a house and doing any other work; but we, surely, are the builders, and not He. In the same manner our faculty of speaking is the work of Him who has so framed our nature; but the invention of words for naming each object is the work of our mind.' See Ladevi-Roché, *De l'Origine du Langage*, Bordeaux, 1860, p. 14; also Horne Tooke, *Diversions of Parley*, p. 19.

generally received opinion on the origin of language is that which was held by Locke, which was powerfully advocated by Adam Smith in his *Essay on the Origin of Language*, appended to his *Treatise on Moral Sentiments*, and which was adopted with slight modifications by Dugald Stewart. According to them, man must have lived for a time in a state of mutism, his only means of communication consisting in gestures of the body, and in changes of the countenance, till at last, when ideas multiplied that could no longer be pointed at with the fingers, 'they found it necessary to invent artificial signs of which the meaning was fixed by mutual agreement.'

We need not dwell on minor differences of opinion as to the exact process by which this artificial language is supposed to have been formed. Adam Smith would wish us to believe that the first artificial words were *verbs*. Nouns, he thinks, were of less urgent necessity because things could be pointed at or imitated, whereas mere actions, such as are expressed by verbs, could not. He therefore supposes that when people saw a wolf coming, they pointed at him, and simply cried out 'He comes.' Dugald Stewart, on the contrary, thinks that the first artificial words were nouns, and that the verbs were supplied by gesture; that, therefore, when people saw a wolf coming, they did not cry 'He comes,' but 'Wolf, Wolf,' leaving the rest to be imagined.<sup>1</sup>

But whether the verb or the noun was the first to be invented is of little importance; nor is it possible for us, at the very beginning of our inquiry into the

<sup>1</sup> Dugald Stewart, *Works*, vol. iii. p. 27.

nature of language, to enter upon a minute examination of a theory which represents language as a work of human art, and as established by mutual agreement as a medium of communication. While fully admitting that if this theory were true, the science of language would not come within the pale of the physical sciences, I must content myself for the present with pointing out that no one has yet explained how, without language, a discussion, however imperfect, on the merits of each word, such as must needs have preceded a mutual agreement, could have been carried on. But as it is my chief object to prove that language is not a work of human art, in the same sense as painting, or building, or writing, I must ask to be allowed, in this preliminary stage, simply to enter my protest against a theory, which, though still taught in the schools, is nevertheless, I believe, without a single fact to support its truth.

#### Has Language a History?

There are other objections, however, besides this, which would seem to bar the admission of the science of language to the circle of the physical sciences. Whatever the origin of language may have been, it has been remarked with a strong appearance of truth, that language has a history of its own, like art, like law, like religion; and that, therefore, the science of language belongs to the circle of the *historical*, or, as they used to be called, the *moral*, in contradistinction to the *physical* sciences. It is a well-known fact, which recent researches have not shaken, that nature is incapable of progress or improvement. The flower which the botanist observes to-day was as perfect



from the beginning as it is to-day. Animals which are endowed with what is called an artistic instinct, have never brought that instinct to a higher degree of perfection. The hexagonal cells of the bee are not more regular in the nineteenth century than at any earlier period, and the gift of song has never, as far as we know, been brought to a higher perfection by our nightingale than by the Philomela of the Greeks. 'Natural History,' to quote Dr. Whewell's words, 'when systematically treated, excludes all that is historical, for it classes objects by their permanent and universal properties, and has nothing to do with the narration of particular or casual facts' Now, if we consider the large number of tongues spoken in different parts of the world with all their dialectic and provincial varieties, if we observe the great changes which each of these tongues has undergone in the course of centuries, how Latin was changed into Italian, Spanish, Portuguese, Provençal, French, Roumanian, and Roumansch; how Latin again, together with Greek, the Celtic, the Teutonic, and Slavonic languages, together likewise with the ancient dialects of India and Persia, points back to an earlier language, the mother, if we may so call it, of the whole Indo-European or Aryan family of speech; if we see how Hebrew, Arabic, and Syriac, with several minor dialects, are but different impressions of one and the same common type, and must all have flowed from the same source, the original language of the Semitic race; and if we add to these two, the Aryan and Semitic, at least one more well-established class

<sup>a</sup> *History of Inductive Sciences*, vol. iii. p. 531.

of languages, the Turanian, comprising the dialects of the nomad races scattered over Central and Northern Asia, the Tungusic, Mongolic, Turkic, Samoyedic, and Finnic,<sup>1</sup> all radii from one common centre of speech: if we watch this stream of language rolling on through centuries in three mighty arms, which, before they disappear from our sight in the far distance, may possibly show a convergence towards one common source: it would seem, indeed, as if there were an historical life inherent in language, and as if both the will of man and the power of time could tell, if not on its substance, at least on its form.

#### Changes in Language

And even if the more local varieties of speech were not considered sufficient ground for excluding language from the domain of natural science, there would still remain the greater difficulty of reconciling the historical changes affecting every one of these varieties with the recognised principles of physical science. Every part of nature, whether mineral, plant, or animal, is the same in kind from the beginning to the end of its existence, whereas few languages could be recognised as the same after the lapse of but a thousand years. The language of Alfred is so different from the English of the present day that we have to study it in the same manner as we study Greek and Latin. We can read Milton and Bacon, Shakespeare and Hooker; we can make out Wycliffe and Chaucer; but when we come to the

<sup>1</sup> Names in *it* are names of classes, as distinct from the names of single languages.

English of the thirteenth century, we can but guess its meaning, and we fail even in this with works previous to Orm and Layamon. The historical changes of language may be more or less rapid, but they take place at all times and in all countries. They have reduced the rich and powerful idiom of the poets of the Veda to the meagre and impure jargon of the modern Sepoy. They have transformed the language of the Zend-Avesta and of the mountain records of Behistún into that of Firdûsi and the modern Persians; the language of Virgil into that of Dante, the language of Ulfilas into that of Charlemagne, the language of Charlemagne into that of Goethe. We have reason to believe that the same changes take place with even greater violence and rapidity in the dialects of savage tribes, although, in the absence of a written literature, it is extremely difficult to obtain trustworthy information. But in the few instances where careful observations have been made on this interesting subject, it has been found that among the wild and illiterate tribes of Siberia, Africa, and Siam, two or three generations are sufficient to change the whole aspect of their dialects. The languages of highly civilised nations, on the contrary, become more and more stationary, and sometimes seem almost to lose their power of change. Where there is a classical literature, and where its language has spread to every town and village, we can hardly understand how any further changes should take place. Nevertheless, the language of Rome, for so many centuries the queen of the whole civilised world, was deposed by the modern

Romance dialects, and the ancient Greek was supplanted in the end by the modern Romaic. And though the art of printing and the wide diffusion of Bibles and Prayer-books and newspapers have acted as still more powerful barriers to arrest the constant flow of human speech, we may see that the language of the authorised version of the Bible, though perfectly intelligible, is no longer the spoken language of England. In Booker's *Scripture and Prayer-book Glossary*<sup>1</sup> the number of words or senses of words which have become obsolete since 1611, amount to 388,<sup>2</sup> or nearly one fifteenth part of the whole number of words used in the Bible. Smaller changes, changes of accent and meaning, the reception of new, and the dropping of old words, we may watch as taking place under our own eyes. Rogers<sup>3</sup> said that '*cóntemplate* is had enough, but *bálcóny* makes me sick,' whereas at present no one is startled by *cóntemplate* instead of *con-témplate*, and *bálcóny* has become more usual than *balcóny*. Thus *Roome* and *chaney*, *laylor* and *gold*, have but lately been driven from the stage by *Rome*, *china*, *lilac*, and *gold*; and some courteous gentlemen of the old school still continue to be *oblaye*

<sup>1</sup> *A Scripture and Prayer-Book Glossary: being an explanation of obsolete words and phrases in the English Bible, Apocrypha, and Book of Common Prayer, by the Rev J. Booker: Dublin, 1862. The Bible Word-book, a glossary of Old English Bible words, by J. Fawcett and W. Aldis Wright: Cambridge, 1866.*

<sup>2</sup> *Lectures on the English Language, by G. P. Marsh, New York, 1860, pp. 263 and 630.* These lectures embody the result of much careful research, and are full of valuable observations. They have lately been published in England, with useful omissions and additions by Dr Smith, under the title of *Handbook of the English Language.*

<sup>3</sup> Marsh, p. 532, note.

instead of being *obliged*.<sup>1</sup> *Force*,<sup>2</sup> in the sense of a waterfall, and *gill*, in the sense of a rocky ravine, were not used in classical English before Wordsworth. *Handbook*,<sup>3</sup> though an old Anglo-Saxon word, has but lately taken the place of *manual*; and a number of words such as *cab* for cabriolet, *buss* for omnibus, and even a verb such as *to shunt*<sup>4</sup> tremble still on the boundary line between the vulgar and the literary idioms. Though the grammatical changes that have taken place since the publication of the authorised version are yet fewer in number, still we may point out some. The termination of the third person singular in *th* is now entirely replaced by *s*. No one now says *he liveth*, but only *he lives*. Several of the strong imperfects and participles have assumed a new form. No one now uses *he spake*, and *he drove*, instead of *he spoke*, and *he drove*; *holpen* is replaced by *helped*; *holden* by *held*; *shapen* by *shaped*. The distinction between *ye* and *you*, the former being

<sup>1</sup> Trench, *English Past and Present*, p. 210, mentions *great*, which was pronounced *greet* in Johnson's time, and *tea*, which Pope rhymes with *obey*.

<sup>2</sup> Marsh, p. 589.

<sup>3</sup> Sir J. Stoddart, *Glossology*, p. 60.

<sup>4</sup> In Halliwell's *Dictionary of Archaisms* 'to shunte' is given in the sense of to delay, to put off:—

'Schape us an ansuere, and *schunte* yow no lengere.'

*Morte Arthure*; MS Lincoln, f. 67.

Also in the sense of to shun, to move from (North):—

'Then I drew me down into a dale, whereas the dumb deer  
Did shiver for a shower; but I shunted from a freyke.'

*Little John Nobody*, c. 1550.

In *Sir Gawayne and the Green Knight*, ed. R. Morris, Sir Gawayne is said to have shunt, i.e. to have shrunk from a blow (v. 2280; see also 2268, 1902). In the *Early English Alliterative Poems*, ed. R. Morris, Abraham is said to sit *sohunt*, i.e. a-skant or a-plant (B. 605, p. 56). See Mr. R. Morris' remarks in the Glossary, p. 190; and Herbert ('le-ridge, Glossary, s.v.

reserved for the nominative, the latter for the other cases, is given up in modern English; and what is apparently a new grammatical form, the possessive pronoun *its*, has sprung into life since the beginning of the seventeenth century. It never occurs in the authorised version of the Bible;<sup>1</sup> and though it is used ten times by Shakespeare, Ben Jonson does not recognise it as yet in his *English Grammar*.<sup>2</sup>

It is argued, therefore, that as language, differing thereby from all other productions of nature, is liable to historical alterations, it is not fit to be treated in the same manner as the subject-matter of all the other physical sciences.

There is something very plausible in this objection, but if we examine it more carefully, we shall find that it rests entirely on a confusion of terms. We must distinguish between historical change and natural growth. Art, science, philosophy, and religion all have a history; language, or any other production of nature, admits, strictly speaking, of growth only.

<sup>1</sup> It was supposed to occur in the authorised version of 1611, in Leviticus xxv. 5, but the right reading here was *it*, as may be seen from the following extracts given by Lord Carysfort:

Wickliffe.—Thingis that the erthe frely bryngith forth, thou shalt not reepe

Coverdale, 1535 —Loke what groweth of *it* self after thy harvest, &c.

Cranmer, 1541 —That whiche groweth of *the* owne accorde, &c.

Genevan, 1560 —That which groweth of *it* owne accorde of thy harvest, &c.

The Bishops', 1568 —That which groweth of *the* owne accorde of thy harvest, &c.

King James's, 1611.—That which groweth of *it* owne accord of thy harvest, &c

<sup>2</sup> 'Four Possessives: My, or Myne; Plurall, Our, ours. Thy, thine; Plurall, Your, yours. His, Hers, both in the plurall making, Their, theirs.' See *The English Grammar made by Ben Jonson*, 1640, chap. xv.

**Growth of Language, not History.**

Let us consider, first, that although there is a continuous change in language, it is not in the power of any man either to produce or to prevent it. We might think as well of changing the laws which control the circulation of our blood, or of adding one cubit to our stature, as of altering the laws of speech, or inventing new words according to our own pleasure. As man is the lord of nature only if he knows her laws and submits to them, the poet and the philosopher become the lords of language only if they know its laws and obey them.

When the Emperor Tiberius had made a mistake and was reproved for it by Marcellus, another grammarian of the name of Capito, who happened to be present, remarked that what the emperor said was good Latin, or, if it were not, it would soon be so. Marcellus, more of a grammarian than a courtier, replied, 'Capito is a liar; for, Caesar, thou canst give the Roman citizenship to men, but not to words.' A similar anecdote is told of the German Emperor Sigismund. When presiding at the Council of Constance, he addressed the assembly in a Latin speech, exhorting them to eradicate the schism of the Hussites. 'Videte Patres,' he said, 'ut eradicetis schismam Hussitarum.' He was very unceremoniously called to order by a monk, who called out, 'Serenissime Rex, schisma est generis neutri.'<sup>1</sup> The emperor, however, without losing his presence of mind, asked the impertinent monk, 'How do you know it?' The old

<sup>1</sup> As several of my reviewers have found fault with the monk for using the genitive *neutri*, instead of *neutrius*, I beg to refer them to Priscianus, lib. vi. cap. 1. 220; and cap. vii. 243. The expression

Bohemian schoolmaster replied, 'Alexander Gallus says so.' 'And who is Alexander Gallus?' the emperor rejoined. The monk replied, 'He was a monk.' 'Well,' said the emperor, 'and I am emperor of Rome; and my word, I trust, will be as good as the word of any monk.' No doubt the laughs were with the emperor; but for all that, *schisma* remained a neuter, and not even an emperor could change its gender or termination.

The idea that language can be changed and improved by man is by no means a new one. We know that Protagoras, an ancient Greek philosopher, after laying down some laws on gender, actually began to find fault with the text of Homer, because it did not agree with his rules. But here, as in every other instance, the attempt proved unavailing. Try to alter the smallest rule of English, and you will find that it is physically impossible. There is apparently a very small difference between *much* and *very*, but you can hardly ever put one in the place of the other. You can say 'I am very happy,' but not 'I am much happy,' though you may say 'I am most happy.' On the contrary, you can say 'I am much misunderstood,' but not 'I am very misunderstood.' Thus the western Romance dialects, Spanish and Portuguese, together with Walachian, can only employ the Latin word *magis* for forming comparatives:-- Sp. *mas dulce*; Port. *mais doce*; Wal. *mai dulce*: while French, Provençal, and Italian only allow of *plus* for the same

*genus neutrius*, though frequently used by modern editors, has no authority, I believe, in ancient Latin. See Ausonius, *Epig.* 50. Servius, *ad Aen.*, i. 703.



purpose; Ital. *più dolce*; Prov. *plus doux*; Fr. *plus doux*. It is by no means impossible, however, that this distinction between *very*, which is now used with adjectives only, and *much*, which precedes participles, should disappear in time. In fact, 'very pleased' and 'very delighted' are expressions which may be heard in many drawing-rooms. But if that change take place, it will not be by *the will* of any individual, nor by *the mutual agreement* of any large number of men, but rather in spite of the exertions of grammarians and academies.

And here you perceive the first difference between history and growth. An emperor may change the laws of society, the forms of religion, the rules of art: it is in the power of one generation, or even of one individual, to raise an art to the highest pitch of perfection, while the next may allow it to lapse, till a new genius takes it up again with renewed ardour. In all this we have to deal with the conscious and intentional acts of individuals, and we therefore move on historical ground. If we compare the creations of Michael Angelo or Raphael with the statues and frescoes of ancient Rome, we can speak of a history of art. We can connect two periods separated by thousands of years through the works of those who handed on the traditions of art from century to century; but we shall never meet here with the same continuous and unconscious growth which connects the language of Plautus with that of Dante. The process through which language is settled and unsettled combines in one the two opposite elements of necessity and free will. Though the individual seems to be the

prime agent in producing new words and new grammatical forms, he is so only after his individuality has been merged in the common action of the family, tribe or nation to which he belongs. He can do nothing by himself, and the first impulse to a new formation in language, though always given by an individual, is mostly, if not always, given without premeditation, nay, unconsciously. The individual, as such, is powerless, and the results apparently produced by him depend on laws beyond his control, and on the co-operation of all those who form together with him one class, one body, or one organic whole.

**Language independent of Political History.**

There is another objection which we have to consider, and the consideration of which will again help us to understand more clearly the real character of language. It has been said that although language may not be merely a work of art, it would, nevertheless, be impossible to understand the life and growth of any language without an historical knowledge of the times in which that language grew up. We ought to know, it is said, whether a language which is to be analysed under the microscope of comparative grammar, has been growing up wild, among wild tribes without a literature, oral or written, in poetry or in prose; or whether it has received the cultivation of poets, priests, and orators, and retained the impress of a classical age. Again, it is only from the annals of political history that we can learn whether one language has come in contact with another, how long this contact has lasted, which of the two nations stood higher in civilisation,

which was the conquering and which the conquered, which of the two established the laws, the religion, and the arts of the country, and which produced the greatest number of national teachers, popular poets, and successful demagogues. All these questions are of a purely historical character, and the science which has to borrow so much from historical sources, might well be considered an anomaly in the sphere of the physical sciences.

Now, in answer to this, it cannot be denied that among the physical sciences none is so intimately connected with the history of man as the science of language. But a similar connection, though in a less degree, can be shown to exist between other branches of physical research and the history of man. In zoology, for instance, it is of some importance to know at what particular period of history, in what country, and for what purposes certain animals were tamed and domesticated. In ethnology, a science, we may remark in passing, quite distinct from the science of language, it would be difficult to account for the Caucasian stamp impressed on the Mongolian race in Hungary, or on the Tatar race in Turkey, unless we knew from written documents the migrations and settlements of the Mongolic and Tataric tribes in Europe. A botanist, again, comparing several specimens of rye, would find it difficult to account for their respective peculiarities, unless he knew that in some parts of the world this plant has been cultivated for centuries, whereas in other regions, as for instance in Mount Caucasus, it is still allowed to grow wild. Plants have their own countries, like races; and the

presence of the cucumber in Greece, the orange and cherry in Italy, the potato in England, and the vine at the Cape, can be fully explained by the historian only. The more intimate relation, therefore, between the history of language and the history of man is not sufficient to exclude the science of language from the circle of the physical sciences.

Nay, it might be shown that, if strictly defined, the science of language can declare itself completely independent of history. If we speak of the language of England, we ought, no doubt, to know something of the political history of the British Isles, in order to understand the present state of that language. Its history begins with the early Britons, who spoke a Celtic dialect; it carries us on to the Saxon settlements, the Danish invasions, the Norman conquest. and we see how each of these political events contributed to the formation of the character of the language. The language of England may be said to have been in succession Celtic, Saxon, Norman, and English. But if we speak of the history of the English language, we enter on totally different ground. The English language was never Celtic, the Celtic never grew into Saxon, nor the Saxon into Norman, nor the Norman into English. The history of the Celtic language runs on to the present day. It matters not whether it be spoken by all the inhabitants of the British Isles, or only by a small minority in Wales, Ireland, and Scotland. A language, as long as it is spoken by anybody, lives and has its substantive existence. The last old woman that spoke Cornish, and to whose memory a monument has been raised at Paul, represented by

herself alone the ancient language of Cornwall. A Celt may become an Englishman, Celtic and English blood may be mixed: and who could tell at the present day the exact proportion of Celtic and Saxon blood in the population of England? But languages are never mixed. It is indifferent by what name the language spoken in the British Islands be called, whether English or British or Saxon; to the student of language English is Teutonic, and nothing but Teutonic. The physiologist may protest, and point out that in many instances the skull, or the bodily habitat of the English language, is of a Celtic type; the genealogist may protest and prove that the arms of many an English family are of Norman origin; the student of language must follow his own way. Historical information as to an early substratum of Celtic inhabitants in Britain, as to Saxon, Danish, and Norman invasions, may be useful to him. But though every record were burnt, and every skull mouldered, the English language, as spoken by any ploughboy, would reveal its own history, if analysed according to the rules of comparative grammar. Without the help of history, we should see that English is Teutonic, that like Dutch and Frisian it belongs to the Low-German branch; that this branch, together with the High-German, Gothic, and Scandinavian branches, constitute the Teutonic class; that this Teutonic class, together with the Celtic, Slavonic, the Hellenic, Italic, Iranic, and Indic classes, constitute the great Indo-European or Aryan family of speech. In the English dictionary the student of the science of language can detect, by his own tests,

Celtic, Norman, Greek, and Latin ingredients, but not a single drop of foreign blood has entered into the organic system of English speech. The grammar, the blood and soul of the language, is as pure and unmixed in English as spoken in the British Isles, as it was when spoken on the shores of the German Ocean by the Angles, Saxons, and Juts of the continent.

#### Causes of change in Language.

But if the changes in language are not produced, like the changes in politics or art, by the deliberate acts of free individuals, and if they can be studied, and ought to be studied, quite independently of the history of the times during which they take place, the question that has to be answered is, What is the cause of these changes? Though it may be quite true that language cannot be changed or moulded by the taste, the fancy, or genius of any individual man, it is equally true that it is through the instrumentality of man alone that language can be changed. If language grows, it can grow on one soil only, and that soil is man. Language cannot exist by itself. To speak of language, as Frederick Schlegel did, as a tree sending forth buds and shoots in the shape of terminations of nouns and verbs,<sup>1</sup> or, as Schleicher did, as a thing by itself, as an organic thing living a life of its own, as growing to maturity, producing offspring, and dying away, is sheer mythology; and though we cannot help using metaphorical expressions, we should

<sup>1</sup> Horne Tooke, p. 629, *note*, ascribes this opinion to Castelvetro, without, however, giving any proof that the Italian scholar really held this view. In its most extreme form this view was supported by Frederick Schlegel.

always be on our guard against being carried away by the very words which we are using.

The changes of language, which no one can deny, which take place before our eyes, and have taken place during all periods of history, are due to two principal causes,

1. *Dialectic Regeneration.*
2. *Phonetic Decay.*

#### Phonetic Decay.

I begin with the second as the more obvious, though in reality its operations are mostly subsequent to the operations of dialectic regeneration, and in some cases may even be traced back to it. I think it may be taken for granted that everything in language had originally a meaning. As language can have no other object but to express our meaning, it might seem to follow almost by necessity that language could originally contain neither more nor less than what was required for that purpose. It would also seem to follow that if language contains no more than what is necessary for conveying a certain meaning, it would be impossible to modify any part of it without defeating its very purpose. This is really the case in some languages which for this, if for no other reasons, form a class by themselves, sometimes called *isolating*, or distinguished from *agglutinative* and *inflectional* languages. In Chinese, for instance, *ten* is expressed by *shí*.

#### No Phonetic Decay in Chinese.

It would be impossible to change *shí* in the slightest way without making it unfit to express *ten*. If instead of *shí* we pronounced *t'sí*, this would mean

*seven*, but not *ten*. But now, suppose we wished to express double the quantity of ten, twice ten, or twenty. We should in Chinese take *eúl*, which is two, put it before *shǐ*, and say *eúl shǐ*, twenty. The same caution which applied to *shǐ*, applies again to *eúl-shǐ*. As soon as you change it, by adding or dropping a single letter, it is no longer twenty, but either something else or nothing. We find exactly the same in other languages which, like Chinese, are called monosyllabic. In Tibetan, *chu* is ten, *nyi* two; *nyi-chu*, twenty. In Burmese *she* is ten, *nhit* two; *nhit-she*, twenty.

#### Phonetic Decay in Sanskrit.

But how is it in English, or in Gothic, or in Greek and Latin, or in Sanskrit? We do not say *two-ten* in English, nor *duo-decem* in Latin, nor *dvi-dasa* in Sanskrit.

We find<sup>1</sup> in

Sanskrit	Greek <sup>2</sup>	Latin	English
vimsati	veikati	viginti	twenty.

Now here we see, first, that the Sanskrit, Greek, and Latin are only local modifications of one and the same original word; whereas the English *twenty* is a new compound, and like the Gothic *twai tigjus* (two decads), the Anglo-Saxon *twen-tig*, framed from Teutonic materials; products, in fact, of what I call dialectic regeneration.

We next observe that the first part of the Latin *viginti* and of the Sanskrit *vimsati* contains the same number, which from *dvi* has been reduced to

<sup>1</sup> Bopp, *Comparative Grammar*, § 320. Schleicher, *Deutsche Sprache*, s. 233.

<sup>2</sup> Lakonic form for *eikusi*.



*vi* This is not very extraordinary. *Dvi* is not easy to pronounce; at all events *vi* is easier. In Latin *bis*, twice, stands likewise for an original *dis*, and that corresponds to the English *twice*, the Greek *dis*. This *dis* appears again as a Latin preposition, meaning *a-two*; so that, for instance, *discussion* means, originally, striking a-two, different from *percussion*, which means striking through and through. Well, the same word, *dvi* or *vi*, we have in the Latin word for twenty, which is *vi-ginti*, the Sanskrit *vimsati*.

The second part of *vi-ginti* can hardly be anything else but a remnant of a word for ten, Sanskrit *dasan*, or for decad, Sanskrit *dasat* or *dasati*. But the loss of the first syllable *da* is anomalous, and so is the nasal in the first syllable of Sanskrit *vimsati*, and in the second syllable of Latin *vi-ginti*, confirmed by the *a* in Greek *εἰκάρη*. This *ginti* cannot well be taken as a dual, because the dual weakens rather than strengthens its base;<sup>1</sup> still, *vi-ginti*, twenty, must be accepted as a corruption, and a very old corruption, of two words meaning *two* and *ten*.

Now there is an immense difference—I do not mean in sound, but in character—between two such words as the Chinese *éül-shé*, two-ten, or twenty, and those mere cripples of words which we meet with in Sanskrit, Greek, and Latin. In Chinese there is neither too much, nor too little. The word speaks for itself, and requires no commentary. In Sanskrit, on the contrary, the most essential parts of the two component elements are gone, and what remains is a

<sup>1</sup> See Benfey, *Vocalis*, p. 9; *Das Zahlwort Zwei*, p. 27; Corssen, *Krit. Ntr.* 96. In Sanskrit the Nom. Dual is *nā mānī*, the Nom. Plur. *nā mānī*.

kind of metamorphic agglomerate which cannot be explained without a most minute microscopic analysis. Here, then, we have an instance of what is meant by *phonetic corruption*; and you will perceive how, not only the form, but the whole nature of language can be affected by it. As soon as phonetic corruption shows itself in a language, that language has lost what we considered to be the most essential character of all human speech, namely, that every part of it should have a meaning. The people who spoke Sanskrit were as little aware that *vimsati* meant *twice ten* as a Frenchman is that *vingt* contains somehow the remains of what is now *deux* and *diez*. Language, therefore, has entered into a new stage as soon as it submits to the attacks of phonetic change. The life of language has become benumbed and extinct in those words or portions of words which show the first traces of this phonetic mould. Henceforth those words or portions of words can be kept up artificially or by traditions only; and, what is important, a distinction is henceforth established between what is substantial or radical, and what is merely formal or grammatical in words.

#### **Grammatical Forms produced by Phonetic Decay.**

For let us now take another instance, which will make it clearer how phonetic corruption leads to the first appearance of so-called grammatical forms. We are not in the habit of looking on *twenty* or German *zwanzig* as the plural of a word for ten. But how was a plural originally formed? In Chinese, which from the first has guarded most carefully against the taint of phonetic

corruption, the plural is formed in the most sensible manner. Thus, man in Chinese is *ġin*; *kiai* means the whole or totality. This added to *ġin* gives *ġin-kiai*, which is the plural of man. There are other words which are used for the same purpose in Chinese; for instance, *péi*, which means a class. Hence *ì*, a stranger, followed by *péi*, class, gives *ì-péi*, strangers. The same process is followed in other cognate languages. In Tibetan the plural is formed by the addition of such words as *kun*, all and *t'sogs*, multitude.<sup>1</sup> Even the numerals, *nine* and *hundred*, are used for the same purpose. We have similar plurals in English, but we do not reckon them as grammatical forms. Thus, *man-kind* is formed exactly like *ì-péi*, stranger-kind; *Christendom* is the same as all Christians, and *clergy* is synonymous with *clerici*. In Bengali we find *dig*<sup>2</sup> added to a noun to give it plural meaning, in Hindi *lok* or *loj*, world, and similar words.<sup>3</sup> And here again, as long as these words are fully understood and kept alive, they resist phonetic corruption; but the moment they lose, so to say, their presence of mind, phonetic corruption is apt to set in, and as soon as phonetic corruption has commenced its ravages, those portions of a word which it affects retain a merely artificial or conventional existence, and may dwindle down to grammatical terminations.

Phonetic decay may therefore be considered as one of the principal agents which change isolating into agglutinative, and agglutinative into inflectional languages.

<sup>1</sup> Foucaux, *Grammaire Tibétaine*, p. 27, and Preface, p. x.

<sup>2</sup> On the origin of this *dig*, see my essay on Bengali in the *Transact. of the Brit. Assoc.* for 1847, p. 337.

<sup>3</sup> Kellog, *Grammar of Hindi*, p. 74.

But in order to explain how the principle of phonetic decay leads to the formation of grammatical terminations, let us look to languages with which we are more familiar. Let us take the French adverb. We are told by French grammarians<sup>1</sup> that in order to form adverbs we have to add the termination *ment*. Thus from *bon*, good, we form *bonnement*; from *vrai*, true, *vraiment*. This termination does not exist in Latin. But we meet in Latin<sup>2</sup> with expressions such as *bonâ mente* in good faith. We read in Ovid, 'Insistam forti mente,' I shall insist with a strong mind or will, I shall insist strongly; in French, 'J'insisterai fortement' Glosses in mediæval MSS. are introduced by *aut, vel, seu, id est, hoc est*, or by *in aliâ mente*, and this comes to mean *autrement* or *otherwise*.<sup>3</sup> Therefore, what has happened in the growth of Latin, or in the change of Latin into French, is simply this: in phrases such as *forti mente*, the last word was no longer felt as a distinct word, it lost its independent accent, and at the same time its distinct pronunciation. *Mente*, the ablative of *mens*, was changed into *ment*, and was preserved as a merely formal element, as the termination of adverbs, even in cases where a recollection of the original meaning of *mente* (with a mind), would have rendered its employment perfectly impossible. If we say in French that a hammer falls *lourdement*, we little suspect that we ascribe to a piece of iron a heavy mind. In Italian, though the adverbial termination *mente* in *chiaramente*

<sup>1</sup> Fuchs, *Romanische Sprachen*, s. 355.

<sup>2</sup> Quintilian, v. 10, 52 'Bonâ mente factum, ideo palam, mali, ideo ex insidus'

<sup>3</sup> Grimm, *Rechtsalterthümer*, p. 2.

is no longer felt as a distinct word, it has not as yet been affected by phonetic corruption; and in Spanish it is sometimes used as a distinct word, though even then it cannot be said to have retained its distinct meaning. Thus, instead of saying, 'claramente, concisamente y elegantemente,' it is more elegant to say in Spanish, 'clara, concisa y elegante mente.'

It is difficult to form any conception of the extent to which the whole surface of a language may be altered by what we have just described as phonetic change. Think that in the French *vingt* you have the same elements which exist in *deux* and *die*; that the second part of the French *douze*, twelve, represents the Latin *decim* in *duodecim*; that the final *ente* of *trente* was originally the Latin *ginta* in *triginta*, Spanish *treinta*, which *ginta* was again a derivation and abbreviation of the Sanskrit *dasa* or *dasat*, ten. Then consider how early this phonetic disease must have broken out. For in the same manner as *vingt* in French, *veinte* in Spanish, and *venti* in Italian presuppose the more primitive *vîgintî* which we find in Latin, so does this Latin *vîgintî*, together with the Greek *eikosi*, and the Sanskrit *vimsati* presuppose an earlier language from which they are in turn derived, and in which, previous to *vîgintî*, there must have been a more primitive form *dvî-gintî*, and previous to this again, another compound as clear and intelligible as the Chinese *éil-shî*, consisting of the ancient Aryan names for two, *dvî*, and ten, *dasati*. Such is the virulence of this phonetic change, that it will sometimes eat away the whole body of a word, and leave nothing behind but decayed fragments. Thus *sister*,

which in Sanskrit is *svasar*,<sup>1</sup> appears in Pehlvi and in Ossetian as *cho*. *Daughter*, which in Sanskrit is *duhitar*, has dwindled down in Bohemian to *dei* (pronounced *tsi*).<sup>2</sup> Who would believe that *tear* and *larme* are derived from the same source; that the French *même* contains the Latin *semetipsissimus*; that in *aujourd'hui* we have the Latin word *dies* twice;<sup>3</sup> or that *to doval*, a verb in ordinary use among the joiners in Yorkshire, is the same as the English *to dovetail*? Who would recognise the Latin *pater* in the Armenian *hayr*? Yet there is no difficulty in identifying *père* and *řater*; and as several initial *h*'s in Armenian correspond to an original *p* (*het* = *pes*, *pedis*; *hing* = Greek *pente*, five; *hour* = Greek *πυρ*, fire), we can easily understand how the Armenian *hayr* is really a parallel form of the Latin *pater*.<sup>4</sup>

#### Dialects.

We have now to consider the influence of Dialectic Regeneration on the growth or change of language. But before we can do this we must first try to understand clearly what we mean by dialect. We saw that language has no independent substantial existence. Language exists in man, it lives in being spoken, it dies with each word that is pronounced, and is forgotten. It is really a mere accident that language should ever

<sup>1</sup> Sanskrit *s* = Persian *h*; therefore *svasar* = *hāhar*. This becomes *chohar*, *chor*, and *cho*. Zend, *qanha*, acc *qanharem*; Persian, *khāhar*. Bopp, *Comp Gram.* § 35.

<sup>2</sup> Schleicher, *Beitrage*, b. ii. s. 392: *dei* = *děgte*; gen *deire* - *dēgtere*. See Poncel, *Du Langage*, p. 208.

<sup>3</sup> *Hui* = *hodie*, Ital. *oggi* and *oggiđ*, *jour* = *diurnum*, from *dies*.

<sup>4</sup> See M. M.'s *Letter to Cherahel Bunsen*, On the Turanian Languages, p. 67.

have been reduced to writing, and have been made the vehicle of a written literature. Even now the largest number of languages are unwritten, and have produced no literature. Among the numerous tribes of Central Asia, Africa, America, and Polynesia, language still lives in its natural state, in a state of continual combustion; and it is there that we must go if we wish to gain an insight into the growth of human speech previous to its being arrested by any literary interference. What we are accustomed to call languages, the literary idioms of Greece and Rome and India, of Italy, France and Spain, must be considered as artificial, rather than as natural forms of speech. The real and natural life of language is in its dialects, a name which in its widest sense comprises provincialisms, brogue, *patois*, *jargon*, or any other variety that affects the general progress of language, down to the idiom of families and individuals; and in spite of the tyranny exercised by the classical or literary idioms, the day is still very far off which is to see the dialects, even of classical languages, such as Italian and French, entirely eradicated. About twenty of the Italian dialects have been reduced to writing, and made known by the press.<sup>1</sup> Formerly four varieties of French were recognised, *Norman*, *Picard*, *Burgundian*, and *French* of Ile de France. But Champollion-Figeac reckoned the most distinguishable dialects of France as fourteen.<sup>2</sup> Along the Italian Riviera nearly every bay has its own dialect; in Norway every valley speaks its own Norse.<sup>3</sup> The number of

<sup>1</sup> See Marsh, p. 678; Sir John Stoddart's *Glossology*, s. 31.

<sup>2</sup> *Glossology*, p. 33.

<sup>3</sup> Ellis, *Annual Address*, 1877.

modern Greek dialects<sup>1</sup> is carried by some as high as seventy, and though many of these are hardly more than local varieties, yet some, like the Tzaconic, differ from the literary language as much as Doric differed from Attic. In the island of Lesbos, villages distant from each other not more than two or three hours have frequently peculiar words of their own, and their own peculiar pronunciation.<sup>2</sup>

But let us take a language which, though not without a literature, has been less under the influence of classical writers than Italian or French, and we shall then see at once how abundant the growth of dialects. The Frisian, which is spoken on a small area on the north-western coast of Germany, between the Scheldt and Jutland, and on the islands near the shore, which has been spoken there for at least two thousand years,<sup>3</sup> and which possesses literary documents as old as the twelfth century, is broken up into endless local dialects. I quote from Kohl's *Travels*. 'The commonest things,' he writes, 'which are named almost alike all over Europe, receive quite different names in the different Frisian Islands. Thus, in Amrum, *father* is called *aatj*; on the Halligs, *baba* or *bube*; in Sylt, *foder* or *vaur*; in many districts on the mainland, *täte*; in the eastern part of Föhr, *oti* or *ohitj*. Although these people live within a couple of German miles from each other, these words differ more than the Italian *padre* and the English *father*. Even the names of their districts and islands are

<sup>1</sup> *Glossology*, p. 29

<sup>2</sup> *Nea Pandora*, 1859, Nos. 227, 229; *Zeitschrift für vergleichende Sprachforschung*, x s. 190.

<sup>3</sup> Grimm, *Geschichte der Deutschen Sprache*, s. 668; Marsh, p. 379.



totally different in different dialects. The island of *Sylt* is called *Sol*, *Sol*, and *Sul*.<sup>1</sup> Each of these dialects, though it might be made out by a Frisian scholar, is unintelligible except to the peasants of each narrow district in which it prevails. What is therefore generally called the Frisian language, and described as such in Frisian grammars, is in reality but one out of many dialects, though, no doubt, the most important; and the same holds good with regard to all so-called literary languages.<sup>1</sup>

Klaus Groth writes 'The island of Frisian speech on the continent of Schleswig, between Husum and Tondern, is a very riddle and miracle in the history of language, which has not been sufficiently noticed and considered. Why should the two extreme ends only of the whole Frisian coast between Belgium and Jutland have retained their mother-speech? For the Ost-Frisians in Oldenburg speak simply Platt-Deutsch like the Westphalians and ourselves. (Link Hinrich Sturemburg's so called Ost-Frisian dictionary has no more right to call itself Frisian than the Bremen dictionary. Unless the whole coast has sunk into the sea, who can explain that close behind Husum, in a flat country as monotonous as a Hungarian Pussta, without any natural frontier or division, the traveller on entering the next inn may indeed be understood if he speaks High or Low German, nay, may receive to either an answer in pure German, but hears the host and his servants speak in words that sound quite strange to him? Equally strange is the

<sup>1</sup> See *De Friske Fündlung, dat sen fréske sprichwurde*, von M. Nissen; Stedesand, 1873-83.

frontier north of the Wiede-au, where Danish takes the place of Frisian. Who can explain by what process the language has maintained itself so far and no farther, a language with which one cannot travel above eight or ten square miles? Why should not these few thousand people have surrendered long ago this "useless remnant of an unschooled dialect," considering they learn at the same time Low and High German, or Low German and Danish! In the far-stretching straggling villages a Low German house stands sometimes alone among Frisian houses, and *vice versa*, and that has been going on for generations. In the Saxon families they do not find it necessary to learn Frisian, for all the neighbours can speak Low German; but in the Frisian families one does not hear German spoken except when there are German visitors. Since the seventeenth century German has hardly conquered a single house, certainly not a village.'<sup>1</sup>

It has been one of the most fatal mistakes in the science of language to imagine that dialects are everywhere corruptions of the literary language. Even where there has been a literary language, dialects are by no means mere modifications of it. In England,<sup>2</sup>

<sup>1</sup> *Illustrirte Deutsche Monatshefte*, 1869, p. 330.

<sup>2</sup> 'Some people, who may have been taught to consider the Dorset dialect as having originated from corruption of the written English, may not be prepared to hear that it is not only a separate offspring from the Anglo-Saxon tongue, but purer, and in some cases richer, than the dialect which is chosen as the national speech.'—Barne, *Poems in Dorset Dialect*, Preface, p. xiv.

'En général, l'hébreu a beaucoup plus de rapports avec l'arabe vulgaire qu'avec l'arabe littéral, comme j'aurai peut-être l'occasion de le montrer ailleurs, et il en résulte que ce que nous appelons l'arabe vulgaire est également un dialecte fort ancien.'—Munk, *Journal asiatique*, 1850, p. 229, *note*.

the local patois have many forms which are more primitive than the language of Shakespeare, and the richness of their vocabulary surpasses, on many points, that of the classical writers of any period. Dialects have always been the feeders rather than the channels of a literary language; anyhow, they are parallel streams which existed long before the time when one of them was raised to that temporary eminence which is the result of literary cultivation.

#### Two Kinds of Dialects.

What Grimm says of the origin of dialects in general applies only to such as are produced by phonetic corruption, and even to them partially only. 'Dialects,' he writes,<sup>1</sup> 'develop themselves progressively, and the more we look back in the history of language the smaller is their number, and the less definite their features. All multiplicity arises gradually from an original unity.' So it seems, indeed, if we build our theories of language exclusively on the materials supplied by literary idioms, such as Sanskrit, Greek, Latin, and Gothic.<sup>2</sup> But what were these very languages before they had been fixed by literary cultivation? Are we to suppose that in India,—a country as large almost as Europe, and divided by mountains, forests, and deserts,—one and the same language was spoken when the poets of the Veda sang their first hymns to cele-

<sup>1</sup> *Geschichte der Deutschen Sprache*, s. 833

<sup>2</sup> How much truer is Grimm's account of the dialects of Marchen:—Vorrede, p. xv. 'Diese Abweichungen erscheinen mir merkwürdiger als denen, welche darin bloß Abänderungen und Entstellungen eines einmal dagewesenen Urbildes sehen, da es im Gegentheil vielleicht nur Versuche sind, einem im Geist bloß vorhandenen Unererschöpflichen auf mannigfachen Wegen sich zu nähern.'

brate the power of their gods? Does not Greece show us, even in its literature, a variety of local dialects? and does what we call the classical Latin pretend to be anything but one out of the many dialects of Latium, spoken by the patrician families of Rome? Mehlhorn, one of the most thoughtful of Greek grammarians, says very truly (*Greek Grammar*, § 40): 'that it is unscientific to treat dialects as deviations from the Attic *κοινή*. Each race had its own right, and if the Lacedaemonian said *παρσένος* we may say, for the sake of brevity, that it stands for *παρθένος*, but both forms have the same right and must be classed as co-ordinate. The word *πέλεθρον* has the same right as *πλέθρον*, and the latter may as rightly be called a shortening of the former, as the former a development of the latter. Certain combinations of consonants are avoided by all Greeks, such as *μρ*, *μβ*, *μλ*, but *εψ* in *τιθέψ*, etc., was tolerated by Argives and Cretans, though rejected by all other Greeks. To Attic ears *φιλέουσι* sounded too soft, not so to Ionic.'<sup>1</sup>

Wherever we have an opportunity of watching the growth of literary languages, we find that dialects existed previous to their formation. Every literary language is but one out of many dialects; nor does it at all follow that, after one of them has thus been raised to the dignity of a literary language, the others should suddenly be silenced or strangled like the brothers and play-fellows of a Turkish Sultan. On the contrary, they live on

<sup>1</sup> All the changes which Greek grammarians comprehend under *Metalepsis* (§ 108), are treated as dialectical by Mehlhorn, while Curtius and others prefer to look on labialism (*k* and *p*) and dentalism (*t* and *p*) as successive modifications.

in full vigour, though in comparative obscurity; and unless the literary and courtly languages invigorate themselves by a constantly renewed intercourse with their former companions, the popular dialects will sooner or later assert their ascendancy. Literary languages, such as Sanskrit, Greek, and Latin, are the royal heads in the history of language. But as political history ought to be more than a chronicle of royal dynasties, so the historian of language ought never to lose sight of those lower and popular strata of speech from which these dynasties originally sprang, and by which alone they are supported.

**Dialect, the Natural State of Language.**

Here, however, lies the difficulty. How are we to prove the existence of these prehistoric dialects? We may indeed argue *a priori* and show how it stands to reason that dialects must have existed before uniform literary languages. Language existed at first in individuals, in families, in clans, and in tribes, and though in order to understand and to be understood, each individual had to adapt his language to that of his neighbours, yet a far more considerable liberty was probably allowed to every speaker in choosing his own way of expressing himself. Hardly any one even now speaks like everybody else. Individuals, families, towns, provinces, have their own peculiarities, and nothing betrays a man so easily as his language. I cannot tell what it is, but having been away for fifty years from my native town of Dessau, I quickly recognise a German who comes from that small town. In each family, even now, a father's language differs from that of the mother, that of the

children, particularly of young children, from that of their parents. The very nature of speech therefore would lead to dialectic variety; and this in early times, when language moved within very narrow bounds, might soon change the whole surface of language. So far even *a priori* arguments would lead us to admit that from its very first beginning language existed in the form of dialects.

But history also tells us of the large number of dialects spoken in countries where we imagine that one language only prevailed.

We are told by Pliny,<sup>1</sup> that in Colchis there were more than three hundred tribes speaking different dialects; and that the Romans, in order to carry on any intercourse with the natives had to employ a hundred and thirty interpreters. This is probably an exaggeration; but we have no reason to doubt the statement of Strabo,<sup>2</sup> who speaks of seventy tribes living together in that country, which, even now, is called 'the mountain of languages.'

Our chief dependance, however, must be placed on the accounts which missionaries give us of languages which were still, so to say, in a state of nature, spoken, not written, and which they could watch in their transition to a literary stage. I asked Mr. W. Gill, who had spent all his life among tribes still being in a dialectic stage of language, to observe the changes which were taking place before his eyes. The following are some

<sup>1</sup> Pliny, vi. 5; Hervas, *Catálogo*, i. 118.

<sup>2</sup> Pliny depends on Timosthenes, whom Strabo declares untrustworthy (ii. p. 93, ed. (Lisau). Strabo himself says of Dioskurios, *συνέρχεσθαι ἐς αὐτὴν ἑβδομήκοντα, αἱ δὲ καὶ τρισκόσια ζῶνι φασὶν οἷς οὐδὲν τῶν ὄντων μέλει* (x. p. 498). The last words refer probably to Timosthenes.

of the remarks he sent me, curiously confirming what had been anticipated :

‘When a chief or priest uttered a witticism or invented a new phrase it was at once caught up and passed current, at first with the addition of “na mea e!” = “as so-and-so says.” As time passed on, the addition was dropped, and the saying was incorporated with the language. This process is still going on. Mispronunciations, imperfect articulations of words arising from loss of teeth in old men who from their former rank or prowess are entitled to respect, sometimes give rise to similar changes. In the olden times the desire on the part of the priests to conceal their oracles from the vulgar tended to corrupt the language. A frequent source of change was the arrival of drift natives. Scarcely ever did a drift canoe touch at Mangaua, but it left permanent traces upon the language of the islanders. In translating ancient songs, it sometimes happens that words now perfectly obsolete are found in cognate dialects. When visiting the Ellice Islanders, confessedly descendants of the Samoans, I found that their dialect is much nearer to that of the Hervey Group than the parent stock. This is to be accounted for by the fact that in a large body of natives intertribal wars, the ever-increasing ceremonial of heathen worship, the aspiring of chiefs to distinction, and especially their passion for great public assemblies, at which professed orators are pitted one against another—all occasioned divergence from the original tongue and refinements upon it. In smaller communities there were necessarily fewer inducements to changes of any sort, just as we know that the old Saxon plural (house~~n~~) yet lingers amongst the villagers of our own land.

‘Your remarks on the rapid changes taking place in the dialects of illiterate tribes (*Science of Language*, vol. i p. 37; also vol. ii, pp. 36, 37) are strikingly confirmed by the changes now going on in the dialects spoken at Tahiti and other islands in Eastern Polynesia. The language spoken at Tahiti at the commencement of the present century varies considerably from that spoken to-day. In numerous smaller islands, christianised by teachers from Tahiti, the original dialects have been swept away. In the Ellice Group the Samoan is superseding the original tongue. So, too, of several islands which have been

instructed by teachers from Rarotonga. If the race should exist a century hence, very few dialects will survive the wholesale destruction now going on. The dialects that will live are those in which the Bible has been translated. It is for this reason that I desiderate a careful collection of words in ALL the known dialects of the great Polynesian family, for the purposes of science.'

The same excellent missionary in Mangaia, told me how, at the time of his arrival in that island, several local different dialects were spoken there, but that through his learning one of them and using it for his translations and in his schools, this so-called missionary dialect has become the recognised language of the whole population.

Mr. Trumbull,<sup>1</sup> in his Preface to Roger Williams' *Key* (p. 7) into the *Language of America*, writes, 'And this special value of Roger Williams's *Key* is enhanced by the fact that it was compiled before the language of the Narragansetts had been essentially modified by intercourse with the English, or by the influence of Eliot's and other printed translations into Massachusetts dialect. To such modifications all unwritten languages are subject, and the Indian languages of America were, from their structure, peculiarly so. That it did in fact take place in New England, and as a consequence of the printing of the Indian Bible, is not doubtful, though we have no means of ascertaining whether or not it extended to the Narragansett tribe. Experience Mayhew, writing from Martha's Vineyard in 1722, states that the language of that island and that of Natick were then "very much alike," but adds,

<sup>1</sup> *A Key into the Language of America*, in Publications of the Narragansett Club, Providence 1866.



“indeed the difference *was* something greater than, now it is, before our Indians had the use of the Bible and other books translated by Mr. Eliot, but since that the most of the little differences that were betwixt them, have been happily lost, and our Indians speak, but especially write, much as those of Natick do.”

Gabriel Sagard, who was sent as a missionary to the Hurons in 1626, and published his *Grand Voyage du Pays des Hurons*, at Paris, in 1631, states that among these North American tribes hardly one village speaks the same language as another; nay, that two families of the same village do not speak exactly the same language. And he adds what is important that their language is changing every day, and is already so much changed that the ancient Huron language is almost entirely different from the present. During the last two hundred years, on the contrary, the languages of the Hurons and Iroquois are said not to have changed at all.<sup>1</sup> We read of missionaries<sup>2</sup> in

<sup>1</sup> *Du Ponceau*, p. 110. Mr. Horatio Hale, who has lately obtained a vocabulary of a remnant of the Hurons, the Wyandot tribe, declares it to be the oldest branch of the primitive language from which the Iroquois dialects are derived.

<sup>2</sup> S. F. Waldeck, *Lettre à M. Jomard des Environs de Palenque, Amérique centrale*. (‘Il ne pouvait se servir, en 1833, d’un vocabulaire composé avec beaucoup de soin dix ans auparavant.’) ‘But such is the tendency of languages, amongst nations in the hunter state, rapidly to diverge from each other, that, apart from those primitive words, a much greater diversity is found in Indian languages, well known to have sprung from a common source, than in kindred European tongues. Thus, although the Minsi were only a tribe of the Delawares, and adjacent to them, even some of their numerals differed.’—*Archæologia Americana*, vol. ii. p. 160.

‘Most men of mark have a style of their own. If the community be large, and there be many who have made language their study, it is only such innovations as have real merit that become permanent. If it be small, a single eminent man, especially where writing is unknown,

Central America who attempted to write down the language of savage tribes, and who compiled with great care a dictionary of all the words they could lay hold of. Returning to the same tribe after the lapse of only ten years, they found that this dictionary had become antiquated and useless. Old words had sunk to the ground, and new ones had risen to the surface: and to all outward appearance the language was completely changed.

Nothing surprised the Jesuit missionaries so much as the immense number of languages spoken by the natives of America. But this, far from being a proof of a high state of civilisation, rather showed that the various races of America had never submitted, for any length of time, to a powerful political concentration, and that they had never succeeded in founding great national empires. Hervas reduces, indeed, all the dialects of America to eleven families<sup>1</sup>—four for the

may make great changes: There being no one to challenge the propriety of his innovations, they become first fashionable and then lasting. The old and better vocabulary drops. If, for instance, England had been a small country, and scarce a writer of distinction in it but Chaucer, he without doubt would have much altered the language. As it is, though he has his imitators, it is little probable that he will have a perceptible influence over the common diction. Hence, where writing is unknown, if the community be broken up into small tribes, the language very rapidly changes, and for the worse. An offset from an Indian tribe in a few generations has a language unintelligible to the parent-stock. Hence the vast number of languages among the small hunting tribes of Indians in North and South America, which yet are all evidently of a common origin, for their principles are identical. The larger, therefore, the community, the more permanent the language; the smaller, the less it is permanent, and the greater the degeneracy. The smaller the community, the more confined the range of ideas, consequently the smaller the vocabulary necessary, and the falling into abeyance of many words'—Dr. Rae, *The Polynesian*, No. 23, 1862.

<sup>1</sup> *Catalogo*, i. 393.

south, and seven for the north ; but this could be done only by the same careful and minute comparison which enables us to class the idioms spoken in Iceland and Ceylon as cognate dialects. For practical purposes the dialects of America are distinct dialects, and the people who speak them are mutually unintelligible.

This is confirmed by one of the latest and most competent observers, Dr. Brinton. In his *Myths of the New World* (p. 8), he writes 'The American Indians exhibit an almost incredible laxity. It is nothing uncommon for the two sexes to use different names for the same object, and for nobles and vulgar, priests and people, the old and the young, nay, even the married and single, to observe what seem to the European ear quite different modes of expression. Families and whole villages suddenly drop words and manufacture others in their places out of mere caprice or superstition, and a few years separation suffice to produce a marked dialectic difference.' And Mr. Leland, who has been spending several years among the woods and lakes of Main, tells the same story, namely, that 'when the old men talk together the younger only understand half of what they say. The earlier language had interminably long names, the generation which comes shorten them. Old Passamaquoddy Indians still use "chew-dech-a-lôh" for yes; their sons say "A-ha."'<sup>1</sup>

We hear the same observations everywhere where the rank growth of dialects has been watched by intelligent observers. If we turn our eyes to Burmah,

<sup>1</sup> *The American*, 22 Dec. 1883, p. 169

we find that the Burmese language has produced a considerable literature, and is the recognised medium of communication not only in Burmah, but likewise in Pegu and Arakan. But the intricate mountain ranges of the peninsula of the Irawaddy<sup>1</sup> afford a safe refuge to many independent tribes, speaking their own independent dialects; and in the neighbourhood of Manipura alone, Captain Gordon collected no less than twelve dialects. 'Some of them,' he says, 'are spoken by no more than thirty or forty families, yet so different from the rest as to be unintelligible to the nearest neighbourhood.' The Rev. N. Brown, the excellent American missionary, who has spent his whole life in preaching the Gospel in that part of the world, tells us that some tribes who left their native village to settle in another valley became unintelligible to their forefathers in two or three generations.<sup>2</sup>

In the North of Asia the Ostiakes, as Messerschmidt informs us, though really speaking the same language everywhere, have produced so many words and forms peculiar to each tribe, that even within the limits of twelve or twenty German miles, communication among them becomes extremely difficult. Castrén, the heroic explorer of the languages of northern and central Asia,<sup>3</sup> assures us that some of the Mongolian dialects are actually entering into a new phase of grammatical life; and that while the literary language of the Mongolians has no terminations for the persons of the verb, that characteristic

<sup>1</sup> *Turanian Languages*, p. 114.

<sup>2</sup> *Ibid.* p. 233.

<sup>3</sup> *Ibid.* p. 30.

feature of Turanian speech had lately broken out in the spoken dialects of the Buriates and in the Tungusic idioms near Njertschinsk in Siberia.

One more observation of the same character from the pen of Robert Moffat, in his *Missionary Scenes and Labours in Southern Africa*. 'The purity and harmony of language,' he writes, 'is kept up by their pitches or public meetings, by their festivals and ceremonies, as well as by their songs and their constant intercourse. With the isolated villagers of the desert it is far otherwise; they have no such meetings; they are compelled to traverse the wilds, often to a great distance from their native village. On such occasions fathers and mothers, and all who can bear a burden, often set out for weeks at a time, and leave their children to the care of two or three infirm old people. The infant progeny, some of whom are beginning to lisp, while others can just master a whole sentence, and those still further advanced, romping and playing together, the children of nature, through their live-long day, *become habituated to a language of their own*. The more voluble condescend to the less precocious; and thus, from this infant Babel, proceeds a dialect of a host of mongrel words and phrases, joined together without rule, and *in the course of one generation the entire character of the language is changed.*'

#### Wealth of Dialects.

Such is the life of language in a state of nature; <sup>1</sup> and, in a similar manner, we have a right to conclude

<sup>1</sup> See Schelling, *Works*, vol. i. p. 114. On Lithuanian dialects see *Mittheilungen der Luth. Lit. Gesellschaft*, 1885, 5 Heft.

languages grew up which we only know after the bit and bridle of literature were thrown over their necks. It need not be a written or classical literature to give an ascendancy to one out of many dialects, and to impart to its peculiarities an undisputed legitimacy. Speeches at pitches or public meetings, popular ballads, national laws, religious oracles, exercise, though to a smaller extent, the same influence. They will arrest the natural flow of language in the countless rivulets of its dialects, and give a permanency to certain formations of speech which, without these external influences, could have enjoyed but an ephemeral existence. Though we cannot fully enter, at present, on the problem of the origin of language, yet this we can clearly see, that whatever the origin of language, its first tendency must have been towards an unbounded dialectic variety. To this there was, however, a natural check, which prepared from the very beginning the growth of national and literary languages. The language of the father became the language of a family; the language of a family that of a clan.<sup>1</sup> In one and the same clan different families would preserve among themselves their own familiar forms and expressions. They would add new words, some so fanciful and quaint as to be hardly intelligible to other members of the same clan. Such expressions would naturally be suppressed, as we

<sup>1</sup> Derham mentions the case of a lady who died at the age of 93, and had given birth to 16 children, of whom 11 married. Upon her death she had 114 grandchildren, 228 great-grandchildren, and 900 great-great-grandchildren. If we take the age of the lady upon her first marriage at 17, then she had within 76 years, 1258 descendants. Lobscheid, *Engl. and Chin. Dictionary*, 1866.

suppress provincial peculiarities and pet words of our own, at large assemblies where all clansmen meet and are expected to take part in general discussions. But they would be cherished all the more round the fire of each tent, in proportion as the general dialect of the clan assumed a more formal character. Class dialects, too, would spring up; the dialects of servants, grooms, shepherds, and soldiers. Women would have their own household words: and the rising generation would not be long without a more racy phraseology of their own. Even we, in this literary age, and at a distance of thousands of years from those early fathers of language, do not speak at home as we speak in public.

We can hardly form an idea of the unbounded resources of dialects. When literary languages have stereotyped one general term, their dialects will supply fifty, though each with its own special shade of meaning. If new combinations of thought are evolved in the progress of society, dialects will readily supply the required names from the store of their so-called superfluous words. There are not only local and provincial, but also class dialects. There is a dialect of shepherds, of sportsmen, of soldiers, of farmers.<sup>1</sup>

<sup>1</sup> "Our fine dictionary words are mere dead sounds to the uneducated, which fail to awaken in *their* minds any living and breathing reality. So they call up new ones for themselves, mostly of a grotesque order, certainly, but as full of life and spirit as a brigade of shoe-blacks. With them a thing is not "overpowering," but it is a "stunner;" it is not "excellent," but "a regular fizzer;" and it does not "proceed satisfactorily," but it "goes like *one o'clock*" (i.e. with as little delay as a workman gets off to dinner when the clock strikes *one*). With the same love of grotesque imagery, the navy calls hawon with streaks in it "*tiger*;" and the Parisian cabman speaks of taking a glass of absinthe, in allu-

I suppose there are few persons who could tell the exact meaning of a horse's poll, crest, withers, dock, hamstring, cannon, pastern, coronet, arm, jowl, and muzzle. Where the literary language speaks of the young of all sorts of animals, farmers, shepherds, and sportsmen would be ashamed to use so general a term.<sup>1</sup> 'The idiom of nomads,' as Grimm says, 'contains an abundant wealth of manifold expressions for sword and weapons, and for the different stages in the life of their cattle. In a more highly cultivated language these expressions become burthensome and superfluous. But in a peasant's mouth, the bearing, calving, falling, and killing of almost every animal has its own peculiar term, as the sportsman delights in calling the gait and members of game by different names. The eye of these shepherds, who live in the free air, sees further, their ear hears more sharply—why should their speech not have gained that living truth and variety?'<sup>2</sup>

Thus Dame Juliana Berners, lady prioress of the nunnery of Sopwell in the fifteenth century, the sion to its green tinge, as "*choking a parrot*" To say that this is not poetry, because it is vulgar, is very much like saying that a block of coal isn't carbon, because it is not a diamond. A great deal of the imagery in the Old Norse Sagas is as really slang as anything in the speech of a London street boy or a member of Congress. To take a single instance, an Icelandic poet speaks of the beginning of battle as the time "when the *black legs begin to swing*;" the said black legs being nothing more or less than the handles of the battle-axes.

<sup>1</sup> See A. B. Meyer, *Mufoor und andere Papua Dialecte*, p. 6.

<sup>2</sup> Many instances are given in Pott's *Etym. Forsch.* pp. 128 169. Grimm *Geschichte der Deutschen Sprache*, p. 25, 'Wn sagen. die stute fohlt, die kuh kalbt, das schaf lammt, die geiss zickelt, die sau frucht (von frischung, frischling), die hundin welft (M. II. 1). erwurfet das welf); nicht anders heisst es französisch la chèvre chèviote, la brebis agnèle, la truie porcèle, la louve louvète, etc.'



reputed author of the *Book of St. Albans*,<sup>1</sup> informs us that we must not use names of multitudes promiscuously, but we are to say, 'a congregacyon of people, a hoost of men, a felyshyppyng of yomen, and a bevy of ladyes; we must speak of a herde of hartys, swannys, cranys, or wrennys, a sege of herous or bytourys, a muster of pecockys, a watche of nyghtyngalys, a flyghte of doves, a claterynge of choughes, a pryde of lyons, a slewthe of beerys. a gagle of geys, a skulke of foxes, a sculle of fierys. a pontifycalyte of prelates, a bomynable syght of monkes, a dronkenshyp of coblers,' and so of other human and brute assemblages. In like manner in dividing game for the table, the animals were not carved, but 'a dere was broken, a gose reryd, chekyn frusshed, a cony unlacyd, a crane dysplayed, a curlewe unioyntyd, a quayle wynggyd, a swanne lyfte, a lambe sholderyd, a heron dysmembryd, a peocke dysfygured, a samon chynyd, a hadoke sydyd, a sole loynyd, and a breme splayed.'

#### Growth versus History of Language.

Let us now look again at what is commonly called the history, but what ought to be called, the natural growth of language, and we shall easily see that it consists chiefly in the play of the two principles which we have just examined, *phonetic decay* and *dialectic regeneration or growth*.

<sup>1</sup> 'The Book containing the Treatises of Hawking, Hunting, Coat-Armour, Fishing, and Blasing of Arms, as printed at Westminster by Wynkyn de Worde; the year of the incarnation of our Lord 1486.' (Reprinted by Harding and Wright: London, 1810.)

**Latin and Neo-Latin.**

Let us take the six Romanic languages. It is usual to call these the daughters of Latin. I do not object to the names of parent and daughter as applied to languages; only we must not allow such apparently clear and simple terms to cover obscure and vague conceptions. Now if we call Italian the daughter of Latin, we do not mean to ascribe to Italian a new vital principle. Not a single radical element was newly created for the formation of Italian. Italian is Latin in a new form. Italian is modern Latin, or Latin ancient Italian. The names *mother* and *daughter* only mark different periods in the growth of a language substantially the same. To speak of Latin dying in giving birth to her offspring is again pure mythology, and it would be easy to prove that Latin was a living language long after Italian had learnt to run alone. Only let us clearly see what we mean by Latin. The classical Latin is one out of many dialects spoken by the Aryan inhabitants of Italy. It was the dialect of Latium, in Latium the dialect of Rome, at Rome the dialect of the patricians. It was fixed by Livius Andronicus, Ennius, Naevius, Cato, and Lucretius, polished by the Scipios, Montensius, and Cicero. It was the language of a restricted class, of a political party, of a literary set. Before their time, the language of Rome must have changed and fluctuated considerably. Polybius tells us (iii. 22), that the best-informed Romans could not make out without difficulty the language of the ancient treaties between Rome and Carthage. Horace admits (*Ep.* ii. 1, 86), that he could not understand the old Salian poems, and he hints

that no one else could. Quintilian (i. 6, 40) says, that the Salian priests themselves could hardly understand their sacred hymns. If the plebeians had obtained the upperhand instead of the patricians, Latin would have been very different from what it is in Cicero; and we know that even Cicero, having been brought up at Arpinum, had to give up some of his provincial peculiarities, such as the dropping of the final *s*, when he began to mix in fashionable society, and had to write for his new patrician friends.<sup>1</sup> After having been established as the language of legislation, religion, literature, and general civilisation, the classical Latin dialect became stationary and stagnant. It could not grow, because it was not allowed to change or to deviate from its classical correctness. It was haunted by its own ghost. Literary dialects, or what are commonly called classical languages, pay for their temporary greatness by inevitable decay. They are like artificial lakes at the side of great rivers. They form reservoirs of what was once living and running speech, but they are no longer carried on by the main current. At times it may seem as if the whole stream of language was absorbed by these lakes, and we can hardly trace the small rivulets which run on in the main bed. But if lower down, that is to say, later in history, we meet again with a new body of stationary language, forming or formed, we may be sure that its tributaries were those very rivulets which for a time

<sup>1</sup> Quintilian, ix. 4. 'Nam neque Luculum putant uti eadem (s) ultima, cum dicit Serenu fuit, et Dignu loco. Quin etiam Cicero in Oratore plures antiquorum tradit sic locutos' In some phrases the final *s* was omitted in conversation; e. g. *abim* for *abisne*, *viden* for *videsne*, *opu'st* for *opus est*, *conabere* for *conaberis*.

were almost lost from our sight. Or it may be more accurate to compare a classical literary idiom to the frozen surface of a river, brilliant and smooth, but stiff and cold. It is mostly by political commotions that this surface of the more polite and cultivated speech is broken and carried away by the waters rising underneath. It is during times when the higher classes are either crushed in religious and social struggles, or mix again with the lower classes to repel foreign invasion; when literary occupations are discouraged, palaces burnt, monasteries pillaged, and seats of learning destroyed—it is then that the popular, or, as they are called, the vulgar dialects, which had formed a kind of undercurrent, rise beneath the crystal surface of the literary language, and sweep away, like the waters in spring, the cumbrous formations of a bygone age. In more peaceful times, a new and popular literature springs up in a language which *seems* to have been formed by conquests or revolutions, but which, in reality, had been growing up long before, and was only brought out, ready made, by historical events. From this point of view we can see that no literary language can ever be said to have been the mother of another language. As soon as a language loses its unbounded capability of change, its carelessness about what it throws away, and its readiness in always supplying instantaneously the wants of mind and heart, its natural life is changed into a merely artificial existence. It may still live on for a long time, but while it seems to be the leading shoot, it is in reality but a broken and withering branch, slowly falling from the stock from which it sprang.

The sources of Italian are not to be found in the classical literature of Rome, but in the popular dialects of Italy. English did not spring from the Anglo-Saxon of Wessex only, but from the dialects spoken in every part of Great Britain, distinguished by local peculiarities and modified at different times by the influence of Latin, Danish, Norman, French, and other foreign elements. Some of the local dialects of England, as spoken at the present day, are of the greatest importance for a critical study of English; and a French prince, now living in this country, deserves great credit for collecting what can still be saved of them. Hindustani is not the daughter of Sanskrit as we find it in the Vedas, or in the later literature of the Brahmans. It is a branch of the living speech of India, springing from the same stem from which Sanskrit sprang, when it first assumed its literary independence.

#### **Influence of Literature.**

While thus endeavouring to place the character of dialects, as the feeders of language, in a clear light, I may appear to some of my readers to have exaggerated their importance. No doubt, if my object had been different, I might easily have shown that, without some kind of literary cultivation, language would never have acquired that settled character which is essential for the communication of thought; that it would never have fulfilled its highest purpose, but have remained the mere jargon of shy troglodytes. But as the importance of literary languages is not likely to be overlooked, whereas the importance of dialects, as far as they sustain the growth of language,

had never been pointed out, I thought it better to dwell on the advantages which literary languages derive from dialects, rather than on the benefits which dialects owe to literary languages. For a proper understanding of the growth of language, it is impossible to exaggerate the importance of the constant undergrowth of dialects. Remove a language from its native soil, tear it away from the dialects which are its feeders, and you arrest at once its natural growth. There will still be the progress of phonetic corruption, but no longer the restoring influence of dialectic regeneration. The French of Canada has preserved peculiarities which were recognised at the time of Molière, but have long vanished from Parisian French. If Canadians pronounce *loi* and *roi* like *loué* and *roué*, so did Molière, nay so did Lafayette as late as 1830.<sup>1</sup> The language which the Norwegian refugees brought to Iceland has remained almost the same for seven centuries, whereas, on its native soil, and surrounded by local dialects, it has grown into two distinct languages, the Swedish and Danish. In the eleventh century the languages of Sweden, Denmark, and Iceland are supposed<sup>2</sup> to have been identical; nor can we appeal to foreign conquest, or to the mixture of foreign with native blood, in order to account for the changes which the language underwent in Sweden and Denmark, but not in Iceland.<sup>3</sup>

<sup>1</sup> See Brachet, *Etymol. Dictionary*, p. lix.

<sup>2</sup> Marsh, *Lectures*, pp. 133, 368.

<sup>3</sup> 'There are fewer local peculiarities of form and articulation in our vast extent of territory (U.S.), than on the comparatively narrow soil of Great Britain.'—Marsh, *Lectures*, p. 667.

**Growth of Language, its true meaning.**

We now have to consider once more that important principle which underlies the growth of language, whether it takes place by phonetic decay or by dialectic regeneration, namely that such growth is entirely beyond the control of individual speakers. When we speak of laws, or rules, or tendencies which control the growth of language, what we really mean is simply that they control those who speak the language, and that their sway is often as irresistible as the sway of natural laws.

**History of Language, its true meaning.**

But though it is wrong to speak of a history of language, if we take history in its strict sense, as referring always to the actions of free agents, I am quite ready to admit that growth also is by no means free from objections, if we take it in its proper sense, as applying to the development of organic beings only. We speak, however, of the growth of the successive strata of the earth, and we know what we mean by it; and it is in this sense, but not in the sense of growth as applied to a tree, that we have a right to speak of the growth of language. If that modification which takes place in time by continually new combinations of given elements, which withdraws itself from the control of free agents, and can in the end be recognised as the result of natural agencies, may be called growth; and if so defined we may apply it to the growth of the crust of the earth, the same word in the same sense will be applicable to language, and will justify us, I think, in removing

the science of language from the pale of the historical to that of the physical sciences.

**Recapitulation.**

In thus considering and refuting the objections which have been, or might be, made against the admission of the science of language into the circle of the physical sciences, we have arrived at some results which it may be useful to recapitulate before we proceed further. We saw that whereas philology treats language only as a means, comparative philology chooses language as the object of scientific inquiry. It is not the study of one language, but of many, and in the end of all, which forms the aim of this new science. Nor is the language of Homer of greater interest, in the scientific treatment of human speech, than the dialect of the Hottentots.

We saw, secondly, that after the first practical acquisition and careful analysis of the facts and forms of any language, the next and most important step is the classification of all the varieties of human speech, and that only after this has been accomplished, would it be safe to venture on the great questions which underlie all physical research, the questions as to the what, the whence, and the why of language.

We saw, thirdly, that there is a distinction between what is called history and growth. We determined the true meaning of growth, as applied to language, and perceived how it was independent of the caprice of man, and governed by laws that could be discovered by careful observation. Though admitting that the science of language was more intimately



connected than any other physical science with what is called the political history of man, we found that, strictly speaking, our science might well dispense with that auxiliary, and that languages can be analysed and classified on their own evidence, particularly on the strength of their grammatical articulation, without any reference to the individuals, families, clans, tribes, nations, or races by whom they are or have been spoken.

**Grammar, the principle of classification.**

In the course of these considerations, we had to lay down two axioms, to which we shall frequently have to appeal in the progress of our investigations. The first declares grammar to be the most essential element, and therefore the ground of classification in all languages which have produced a definite grammatical articulation; the second denies the possibility of a mixed language.

**No Mixed Language.**

These two axioms are, in reality, but one, as we shall see when we examine them more closely. There is hardly a language which in one sense may not be called a mixed language. No nation or tribe was ever so completely isolated as not to admit the importation of a certain number of foreign words. In some instances these imported words have changed the whole native aspect of the language, and have even acquired a majority over the native element. Thus Turkish is a Turanian dialect; its grammar is purely Tataric or Turanian;—yet at the present moment the Turkish language, as spoken by the higher ranks at Constantinople, is so entirely over-

grown with Persian and Arabic words, that a common clod from the country understands but little of the so-called Osmanli, though its grammar is the same as the grammar which he uses in his Tataric utterance. The presence of these Persian and Arabic words in Turkish is to be accounted for by literary and political even more than by religious influences. Persian civilisation began to tell on the Arabs from the first days of their religious and military conquests, and although the conquered and converted Persians had necessarily to accept a large number of religious and political terms of Arabic, i. e. Semitic, origin, it would appear from a more careful examination of the several Persian words admitted into Arabic, that the ancient Aryan civilisation of Persia, reinvigorated by the Sassanian princes, reacted powerfully, though more silently, on the primitive nomadism of Arabia.<sup>1</sup> The Koran itself is not free from Persian expressions, and it contains even a denunciation of the Persian romances which circulated among the more educated followers of Mohammed.<sup>2</sup> Now the Turks, though accepting a Semitic religion, and with it necessarily a Semitic religious terminology, did not accept that religion till after it had passed through a Persian channel. Hence the large number of Persian words in Turkish, and the clear traces of Persian construction and idiom even in Arabic words as used in Turkish. Such Aryan words as *din*, faith, *gaur*, an

<sup>1</sup> Reinaud, *Mémoire sur l'Inde*, p. 310. Renan, *Histoire des Langues sémitiques*, pp. 292, 379, &c. Spiegel, *Avesta* (Uebersetzung), vol. 1, p. 39.

<sup>2</sup> *U. Über die Fremdwörter im Korán*, by Dr. R. Dvorák, Wien, *Academy*, Aug. 3, 1886, p. 212.

infidel, *oruj*, a fast, *namáz*, prayers, used by a Turanian race, worshipping according to the formularies of a Semitic religion, are more instructive in the history of civilisation than coins, inscriptions, or chronicles.<sup>1</sup>

There is, perhaps, no language so full of words evidently derived from the most distant sources, as English. Every country of the globe seems to have brought some of its verbal manufactures to the intellectual market of England—Latin, Greek, Hebrew, Celtic, Saxon, Danish, French, Spanish, Italian, German—nay, even Hindustani, Malay, and Chinese words—lie mixed together in the English dictionary.<sup>2</sup> On the evidence of words alone it would be impossible to classify English with any other of the established stocks and stems of human speech. Leaving out of consideration the smaller ingredients, we find, on comparing the Teutonic with the Latin, or Neo-Latin or Norman-French elements in English, that the latter have a decided majority over the home-grown Saxon terms. This may seem incredible; and if we simply took a page of any English book, and counted therein the words of purely Saxon and Latin origin, the majority would be no doubt on the Saxon side.

<sup>1</sup> 'It is doubtful whether the Arabs, in their low state of civilisation, would have made such rapid progress, and the fact that most, and the most famous of their learned men were of foreign or mostly of Persian origin, as well as the coincidence of the beginning of Arabic literature with the victory of the Abbassides, the supporters of the Semitic element in the Islam, speaks against it.'—Weil, *Geschichte der Chalifen*, ii. p. 83. Ibn Chaldun, in Slane's Preface to *Ibn Chalikhan*, vol. ii. English translation.

<sup>2</sup> For a complete analysis of native and foreign elements in English, see Skat's *Etymological Dictionary*, pp. 747-761.

The articles, pronouns, prepositions, and auxiliary verbs, all of which are of Saxon growth, occur over and over again in one and the same page. Thus, Hickes maintained that nine-tenths of the English dictionary were Saxon, because there were only three words of Latin origin in the Lord's prayer. Sharon Turner, who extended his observations over a larger field, came to the conclusion that the relation of Norman to Saxon was as four to six. Another writer, who estimated the whole number of English words at 38,000, assigned 23,000 to a Saxon, and 15,000 to a classical source. On taking, however, a more accurate inventory, and counting every word in the dictionaries of Robertson and Webster, M. Thommerel established the fact that of the sum total of 43,566 words, 29,853 came from classical, 13,230 from Teutonic, and the rest from miscellaneous sources.<sup>1</sup> On the evi-

<sup>1</sup> Some excellent statistics on the exact proportion of Saxon and Latin in various English writers, are to be found in Marsh's *Lectures on the English Language*, pp. 120 seq. and 181 seq. Dr. J. M. Weiss adds the following statistics :

Averaging the words in Noah Webster's *Dictionary*, 1861, he found:—

55,524	Græco-Latin words.
22,220	Gotho-Germanic (mostly Anglo-Saxon).
443	Celtic.
98	Slavonic.
1,724	Semitic (Hebrew and Arab.).
<hr/>	
80,009	

Averaging the words in Walker's *Pronouncing Dictionary*, 1852, he found:—

56,108	Græco-Latin.
21,777	Gotho-Germanic (mostly Anglo-Saxon).
461	Celtic.
768	Semitic.
<hr/>	
79,114	

Thomas Shaw, in his *Outlines of English Literature*, p. 44, says,

dence of its dictionary, therefore, and treating English as a mixed language, it would have to be classified, together with French, Italian, and Spanish, as one of the Romanic or Neo-Latin dialects. Languages, however, though mixed in their dictionary, can never be mixed in their grammar. Hervas was told by missionaries that, in the middle of the eighteenth century, the Araucans used hardly a single word which was not Spanish, though they preserved both the grammar and the syntax of their own native speech.<sup>1</sup>

This is the reason why grammar is made the criterion of the relationship and the base of the classification in almost all languages; and it follows.

'The English now consists of 38,000 words.' An anonymous writer observes: There are in the English language:

20,500 nouns.
40 pronouns.
9,200 adjectives.
8,000 verbs.
2,600 adverbs
69 prepositions.
19 conjunctions.
68 interjections.
2 articles.
40,498

All these calculations, however, have now become antiquated, considering that the new *Oxford Dictionary* promises to bring the number of words in the English Language to 250,000.

<sup>1</sup> 'En este estado, que es el primer paso que las naciones dan para mudar de lengua, estaba quarenta años ha la araucana en las islas de Chiloue (como lo ordo á los jesuitas sus misioneros, en donde los araucanos apenas profrian palabra que no fuese española; mas la profrian con el artificio y orden de su lengua natava, llamada araucana.'—Hervas, *Catalogo*, tom 1 p 16. 'Este artificio ha sido en mi observacion el principal medio de que me he valido para conocer la afinidad ó diferencia de las lenguas conocidas, y reducir las á determinadas clases'—*Ibid.* p. 23.

therefore, as a matter of course, that, according to the strict principles of the science of language, it is impossible to admit the existence of a mixed idiom. The fact that some languages, such as Turkish and even German have sometimes adopted foreign words with their own grammatical terminations, does not in the least affect the principle here laid down, not even, if by a kind of false analogy, such terminations were attached to native words. Because we can say in German *à la Bismarek*, it does not follow that *à la* has become part and parcel of the German language. Because in English we can say *bearable* as well as *tolerable*, it does not follow that *able* is a Teutonic suffix. We may form whole sentences in English consisting entirely of Latin or Romance words; yet whatever there is left of grammar in English bears unmistakable traces of Teutonic workmanship. What may now be called grammar in English is little more than the terminations of the genitive singular and nominative plural of nouns, the degrees of comparison, and a few of the persons and tenses of the verb. Yet the single *s*, used as the exponent of the third person singular of the indicative present, is irrefragable evidence that, in a scientific classification of languages, English, though it did not retain a single word of Saxon origin, would have to be classed as Saxon, and as a branch of the great Teutonic stem of the Aryan family of speech.

In ancient and less matured languages, grammar, or the formal part of human speech, is far more abundantly developed than in English; and it is, therefore, a much safer guide for discovering a family

likeness in scattered members of the same family. There are languages in which there is no trace of what we are accustomed to call grammar; for instance, ancient Chinese; there are others in which we can still watch the growth of grammar, or, more correctly, the gradual lapse of material into merely formal elements. In these languages new principles of classification will have to be applied, such as are suggested by the study of natural history; and we shall have to be satisfied with the criteria of a morphological affinity, instead of those of a genealogical relationship.

I have thus answered, I hope, some of the objections which threatened to deprive the science of language of that place which she claims in the circle of the physical sciences. We shall now see what the history of our science has been from its beginning to the present day, and how far it may be said to have passed through the three stages, the empirical, the classificatory, and the theoretical, which mark the childhood, the youth, and the manhood of every one of the natural sciences.

## CHAPTER III.

### THE EMPIRICAL STAGE.

#### Language studied in India and Greece.

**T**HOUGH as a general rule each physical science begins with analysis, proceeds to classification, and ends with theory, yet, as I pointed out before, there are exceptions to this rule, and it is by no means uncommon to find that philosophical speculations, which properly belong to the last or theoretical stage, were attempted in physical sciences long before the necessary evidence had been collected or arranged. Thus, we find that the science of language also, in the only two countries where we can watch its origin and history—in India and Greece—rushes at once into theories about the mysterious nature of speech, and cares as little for facts as the man who wrote an account of the camel without ever having seen the animal or the desert. The Brahmans, in the hymns of the Veda, raised language to the rank of a deity, as they did with all things of which they knew not what they were. They addressed hymns to her, in which she is said to have been with the gods from the beginning, achieving wondrous things, and never revealed to man except in part. In the Brâhmanas, language is called the cow, breath the bull, and their



young is said to be the mind of man.<sup>1</sup> Brahman, the highest being, is said to be known through speech, nay, speech itself is called the Supreme Brahman.<sup>2</sup> At a very early period, however, the Brahmans recovered from their raptures about language, and set to work with wonderful skill dissecting her sacred body. Their achievements in grammatical analysis (*vyākaraṇa*), which date from the sixth century B.C., are still unsurpassed in the grammatical literature of any nation. The idea of reducing a whole language to a small number of roots, which in Europe was not attempted before the sixteenth century by Henry Estienne,<sup>3</sup> was perfectly familiar to the Brahmans at least 500 B.C.

The Greeks, though they did not raise language to the rank of a deity, paid her, nevertheless, the

<sup>1</sup> Colbrooke, *Miscellaneous Essays*, i. 32. The following verses are pronounced by Vāk, the goddess of speech, in the 125th hymn of the 10th book of the Rīg-veda: "Even I myself say this (what is) welcome to gods and to men: "Whom I love, him I make strong, him I make a Brahman, him a great prophet, him I make wise. For Rudra (the god of thunder) I bend the bow, to slay the enemy, the hater of the Brahmans. For the people I make war; I pervade heaven and earth. I bear the father on the summit of this world; my origin is in the water in the sea, from thence I go forth among all beings, and touch this heaven with my height. I myself breathe forth like the wind, embracing all beings, above this heaven, beyond this earth, such am I in greatness." See also Atharva-veda, iv. 30; xix. 9, 3. Mun, *Sanskrit Texts*, part iii pp 108, 150.

<sup>2</sup> *Brh* in *Brha-spati*, the same as *Vākas-pati*, lord of speech, is the root of the Lat *verbum* and of the English *word*. The Vedic *brh* represents *vralh*, from which the nominal base *vralha*, i. e. Gothic *waird*, Lat *varius*, name. *Brah-man* comes from the same root.

<sup>3</sup> Sir John Stoddart, *Glossology*, p. 276. The first complete Hebrew Grammar and Dictionary of the Bible were the work of Rabbi Jonā, or Abul Walid Merwān Ibn Djanāh, in the middle of the eleventh century. The idea of Hebrew roots was explained even before him by Abu Zacariyya 'Hayyudj, who is called the first Grammarian by Ibn Ezra. Cf. Munk, *Notice sur Aboul Walid*, *Journal asiatique*, 1850, avril.

greatest honours in their ancient schools of philosophy. There is hardly one of their representative philosophers who has not left some saying on the nature of language. The world without, or nature, and the world within, or mind, did not excite more wonder and elicit deeper oracles of wisdom from the ancient sages of Greece than language, the image of both, of nature and of mind. 'What is language?' was a question asked quite as early as 'What am I?' and 'What is all this world around me?' The problem of language was in fact a recognised battle-field for the different schools of ancient Greek philosophy, and we shall have to glance at their early guesses on the nature of human speech, when we come to consider the third or theoretical stage in the science of language.

#### **Empirical Stage.**

At present, we have to look for the early traces of the first or empirical stage. And here it might seem doubtful what was the real work to be assigned to this stage. What can be meant by the empirical treatment of language? Who were the men that did for language what the sailor did for his stars, the miner for his minerals, the gardener for his flowers? Who was the first to give any thought to language? —to distinguish between its component parts, between nouns and verbs, between articles and pronouns, between the nominative and accusative, the active and passive? Who invented these terms, and for what purpose were they invented?

We must be careful in answering these questions,

for, as I said before, the merely empirical analysis of language was preceded in Greece by more general inquiries into the nature of thought and language; and the result has been that many of the technical terms which form the nomenclature of empirical grammar, existed in the schools of philosophy long before they were handed over, ready made, to the grammarian. The distinction of noun and verb, or more correctly, of subject and predicate, was the work of philosophers. Even the technical terms for case, number, and gender were coined at a very early time for the purpose of entering into the mysteries of thought; not for the practical purpose of analysing the form of language. This, their practical application to the spoken language of Greece, was the work of a later generation. It was the teacher of languages who first compared the categories of thought with the realities of the Greek language. Aristotle himself may have learnt many of his lessons from language, but it was the grammarian who transferred the terminology of Aristotle and the Stoics back from thought to speech, from logic to grammar; and thus opened the first roads into the impervious wilderness of spoken speech. In doing this, the grammarian had to alter the strict acceptation of many of the terms which he borrowed from the philosopher, and he had to coin others before he could lay hold of all the facts of language even in the roughest manner. For, indeed, the distinction between noun and verb, between active and passive, between nominative and accusative, does not help us much towards a scientific analysis of language. It is no more than a first grasp, and it

can only be compared with the most elementary terminology in other branches of human knowledge. Nevertheless, it was a beginning, a very important beginning; and if we preserve in our histories of the world the names of those who are said to have discovered the physical elements, the names of Thales and Anaximenes and Empedocles, we ought not to forget the names of the discoverers of the elements of language—the founders of one of the most useful and most successful branches of philosophy—the first Grammarians.

#### Grammar.

Grammar then, in the usual sense of the word, or the merely formal and empirical analysis of language, owes its origin, like all other sciences, to a very natural and practical want. The first practical grammarian was the first practical teacher of languages, and if we want to know the beginnings of the science of language, we must try to find out at what time in the history of the world, and under what circumstances, people first thought of learning any language besides their own. At *that* time we shall find the first practical grammar, and not till then. Much may have been ready at hand through the less interested researches of philosophers, and likewise through the critical studies of the scholars of Alexandria on the ancient forms of their language as preserved in the Homeric poems. But rules of declension and conjugation, paradigms of regular and irregular nouns and verbs, observations on syntax, and the like, these are the work of the teachers of languages, and of no one else.

Now, the teaching of languages, though at present so large a profession, is comparatively a very modern invention. No ancient Greek ever thought of learning a foreign language. Why should he? He divided the whole world into Greeks and Barbarians, and he would have felt himself degraded by adopting either the dress or the manners or the language of his barbarian neighbours. He considered it a privilege to speak Greek, and even dialects closely related to his own were treated by him as mere jargons. It takes time before people conceive the idea that it is possible to express oneself in any but one's own language. The Poles called their neighbours, the Germans, *Niemiec*, *niemyi* meaning *dumb*;<sup>1</sup> just as the Greeks called the barbarians *Agloussoi*, or speechless. The name which the Germans gave to their neighbours, *walth* in Old High-German, *wealh* in Anglo-Saxon, from which the modern *Welsh* (AS. *waldisc*), is supposed to be the same as the Sanskrit *mlekhla*, and, if so, it meant originally a person who talks indistinctly.<sup>2</sup>

#### Study of Foreign Languages.

Even when the Greeks began to feel the necessity

<sup>1</sup> The Turks applied the Polish name *Niemic* to the Austrians. As early as Constantinus Porphyrogeneta, cap. 30, *Νεμάρτων* was used for the German race of the Bavarians (Pott, *Indo-Germ. Sp.* s. 44; Leo, *Zeitschrift für vergleichende Sprachforschung*, b ii s. 258). Russian, *njemcz*; Slovenian, *némec*; Bulgarian, *nimer*; Polish, *nemiec*; Lusatian, *njemc*, mean German; Russian, *njemo*, indistinct; *njemyi*, dumb; Slovenian, *nēm*, dumb; Bulgarian, *nēm*, dumb; Polish, *njemy*, dumb; Lusatian, *njemy*, dumb.

<sup>2</sup> Leo, *Zeitschrift für vergl. Sprachf.* b ii s. 252. Beluch, the name given to the tribes on the western borders of India, south of Afghanistan, has likewise been identified with the Sanskrit *mlekhla*.

of communicating with foreign nations, when they felt a desire of learning their idioms, the problem was by no means solved. For how was a foreign language to be learnt as long as either party could only speak their own? The problem was almost as difficult as when, as we are told by some persons, the first men, as yet speechless, came together in order to invent speech, and to discuss the most appropriate names that should be given to the perceptions of the senses and the abstractions of the mind. At first it must be supposed that the Greeks learned foreign languages very much as children learn their own. The interpreters mentioned by ancient historians were probably children of parents speaking different languages. Cyaxares, the king of Media, on the arrival of a tribe of Scythians in his country, sent some children to them that they might learn their language and the art of archery.<sup>1</sup> The son of a barbarian and a Greek would naturally learn the utterances both of his father and mother, and the lucrative nature of his services would not fail to increase the supply. We are told, though on rather mythical authority, that the Greeks were astonished at the multiplicity of languages which they encountered during the Argonautic expedition, and that they were much inconvenienced by the want of skilful interpreters.<sup>2</sup> We need not wonder at this, for the English army in the Crimea was hardly better off than the army of Jason; and such is the variety of dialects spoken in the Caucasian Isthmus, that it is still called by the inhabitants 'the Mountain of Languages.'

<sup>1</sup> Herod. lib. i. cap. 73.

<sup>2</sup> Humboldt's *Kosmos*, vol. ii. p. 141.

**Interpreters.**

If we turn our eyes from these mythical ages to the historical times of Greece, we find that trade gave the first encouragement to the profession of interpreters. Herodotus tells us (iv. 24), that caravans of Greek merchants, following the course of the Volga upwards to the Ural mountains, were accompanied by seven interpreters, speaking seven different languages. These must have comprised Slavonic, Tataric and Finnic dialects spoken in those countries in the time of Herodotus, as they are at the present day. The wars with Persia first familiarised the Greeks with the idea that other nations also possessed real languages. Themistocles studied Persian, and is said to have spoken it fluently. The expedition of Alexander contributed still more powerfully to a knowledge of other nations and languages. But when Alexander went to converse with the Brahmans, who were even then considered by the Greeks as the guardians of a most ancient and mysterious wisdom, their answers had to be translated by so many interpreters that one of the Brahmans themselves remarked, they must become like water that had passed through many impure channels.<sup>1</sup>

<sup>1</sup> This shows how difficult it would be to admit that any influence was exercised by Indian on Greek philosophers. Pyrrhon, if we may believe Alexander Polyhistor, seems indeed to have accompanied Alexander on his expedition to India, and one feels tempted to connect the scepticism of Pyrrhon with the system of Buddhist philosophy then current in India. But the ignorance of the language on both sides must have been an almost insurmountable barrier between the Greek and the Indian thinkers. (*Fragmenta Histor. Græc.* ed. Muller, tom. iii. p. 243 b, Lassen, *Indische Alterthumskunde*, b. iii. s. 380.)

**Travels of Greek Philosophers.**

We hear, indeed, of more ancient Greek travellers, and it is difficult to understand how, in those early times, anybody could have travelled without a certain knowledge of the language of the people through whose camps and villages and towns he had to pass. Many of these travels, however, particularly those which are said to have extended as far as India, are mere inventions of later writers.<sup>1</sup> Lycurgus may have travelled to Spain and Africa, he certainly did not proceed to India, nor is there any mention of his intercourse with the Indian Gymnosophists before Aristocrates, who lived about 100 B.C. The travels of Pythagoras are equally mythical; they are inventions of Alexandrian writers, who believed that all wisdom must have flowed from the East. There is better authority for believing that Democritus went to Egypt and Babylon, but his more distant travels to India are likewise legendary. Even Herodotus, though he travelled in Egypt and Persia, never gives us to understand that he was able to converse in any but his own language.

**Barbarians learning Greek.**

As far as we can tell, the barbarians seem to have possessed a greater facility for acquiring languages than either Greeks or Romans. Soon after the

<sup>1</sup> On the supposed travels of Greek philosophers to India, see Lassen, *Indische Alterthumskunde*, b. iii. s. 379; Brandis, *Handbuch der Geschichte der Philosophie*, b. i. s. 425. The opinion of Dugald Stewart and Niebuhr that the Indian philosophers borrowed from the Greeks, and that of Gorties and others that the Greeks borrowed from the Brahmins, are examined in my *Essay on Indian Logic*, in Dr. Thomson's *Laws of Thought*.



Macedonian conquest we find<sup>1</sup> Berosus in Babylon, Menander in Tyre, and Manetho in Egypt, compiling, from original sources, the annals of their countries.<sup>2</sup> Their works were written in Greek, and for the Greeks. The native language of Berosus was Babylonian, of Menander Phenician, of Manetho Egyptian.

**Berosus, Menander, Manetho.**

Berosus was able to read the cuneiform documents of Babylonia with the same ease with which Manetho read the papyri of Egypt. The almost contemporaneous appearance of three such men, barbarians by birth and language, who were anxious to save the histories of their countries from total oblivion, by entrusting them to the keeping of their conquerors, the Greeks, is highly significant. But what is likewise significant, and by no means creditable to the Greek or Macedonian conquerors, is the small value which they seem to have set on these works. They have all been lost, and are known to us by fragments only, though there can be little doubt that the work of Berosus would have been an invaluable guide to

<sup>1</sup> See Niebuhr, *Vorlesungen über alle Geschichte*, b. i. s. 17.

<sup>2</sup> The translation of Mago's work on agriculture belongs to a later time. There is no proof that Mago, who wrote twenty-eight books on agriculture in the Punic language, lived, as Humboldt supposes (*Kosmos*, vol. ii p. 181), 500 B.C. Varro, *de R. R.* i. 1, says: 'Hos nobilitate Mago Carthaginiensis præterit Pænica lingua, quod res dispersas comprehendit libris xxix, quos Cassius Dionysius Uticensis vertit libris xx., Græca lingua, ac Sextilio prætori misit in quæ volumina de Græcis libris eorum quos dixi adiecit non pauca, et de Magonis dempsit instar librorum viii. Hosce ipsos utiliter ad vi. libros redegit Diophanes in Bithynia, et misit Deiotaro regi.' This Cassius Dionysius Uticensis lived about 40 B.C. The translation into Latin was made at the command of the Senate, shortly after the third Punic war.

the student of the cuneiform inscriptions and of Babylonian history, and that Manetho, if preserved complete, would have saved us volumes of controversy on Egyptian chronology. We learn, however, from the almost simultaneous appearance of these works that soon after the epoch marked by Alexander's conquests in the East, the Greek language was studied and cultivated by literary men of barbarian origin though we should look in vain for any Greek learning or employing for literary purposes any but his own tongue. We hear of no intellectual intercourse between Greeks and Barbarians before the days of Alexander and Alexandria. At Alexandria, various nations, speaking different languages, and believing in different gods, were brought together. Though primarily engaged in mercantile speculations, it was but natural that in their moments of leisure they should hold discourse on their native countries, their gods, their kings, their lawgivers, and poets. Besides, there were Greeks at Alexandria who were engaged in the study of antiquity, and who knew how to ask questions from men coming from any country of the world. The pretension of the Egyptians to a fabulous antiquity, the belief of the Jews in the sacred character of their law, the faith of the Persians in the writing of Zoroaster, all these were fit subjects for discussion in the halls and libraries of Alexandria. We probably owe the translation of the Old Testament, the Septuagint, to this spirit of literary inquiry which was patronised at Alexandria by the Ptolemies.<sup>1</sup> The writings of Zoroaster also, the Zend-

<sup>1</sup> Ptolemæus Philadelphus (287-246 B. C.), on the recommendation of

Avesta, would seem to have been rendered into Greek about the same time. For Hermippus, who is said by Pliny to have translated the writings of Zoroaster, was in all probability Hermippus,<sup>1</sup> the Peripatetic philosopher, the pupil of Callimachus, one of the most learned scholars at Alexandria.

#### Scholars at Alexandria.

But although we find at Alexandria these and similar traces of a general interest having been excited by the literatures of other nations, there is no evidence which would lead us to suppose that their languages also had become the subject of scientific inquiry. It was not through the study of other languages, but through the study of the ancient dialects of their own language, that the Greeks at Alexandria were first led to what we should call critical and philological studies. The critical study of Greek took its origin at Alexandria, and it was chiefly based on

his chief librarian (Demetrius Phalerous), is said to have sent a Jew of the name of Aristas, to Jerusalem, to ask the high priest for a MS. of the Bible, and for seventy interpreters. Others maintain that the Hellenistic Jews who lived at Alexandria, and who had almost forgotten their native language, had this translation made for their own benefit. Certain it is, that about the beginning of the third century B.C. (285), we find large portions of the Hebrew Bible translated into Greek by different hands. See, however, Kuenen, *Religion of Israel*, iii. p. 207.

<sup>1</sup> Pliny, xxx. 2. 'Sine dubio illa orta in Perside a Zoroastre, ut inter auctores convenit. Sed unus hic fuerit, an postea et alius, non satis constat. Eudoxus qui inter sapientie sectas clarissimam utilissimamque eam intelligi voluit, Zoroastrem hunc sex millibus annorum ante Platonis mortem fuisse prodidit. Sic et Aristoteles. Hermippus qui de tota ea arte diligentissime scripsit, et vicies centum nullia veruum a Zoroastre condita, indicibus quoque voluminum ejus positis explanavit, præceptorem a quo institutum disceret, tradidit Azonacem, ipsum vero quinque millibus annorum ante Trojanum bellum fuisse.' See Bunsen's *Egypten*, Va, 101.

the text of Homer. The general outline of grammar existed, as I remarked before, at an earlier period. It grew up in the schools of Greek philosophers.<sup>1</sup> Plato knew of noun and verb as the two component parts of speech. Aristotle added conjunctions and articles. He likewise observed the distinctions of number and case. But neither Plato nor Aristotle paid much attention to the forms of language which corresponded to these forms of thought, nor had they any inducement to reduce them to any practical rules. With Aristotle the verb or *rhéma* is hardly more than predicate, and in sentences such as 'the snow is white,' he would have called 'white' a *rhéma*. The first who reduced the actual forms of language to something like order were the scholars of Alexandria. Their chief occupation was to publish correct texts of the Greek classics, and particularly of Homer. They were forced, therefore, to pay attention to the exact forms of Greek grammar. The MSS. sent to Alexandria and Pergamus from different parts of Greece varied considerably, and it could only be determined by careful observation which forms were to be tolerated in Homer and which were not. Their editions of Homer were not only *ekdosis*, a Greek word literally rendered in Latin by *editio*, i. e. issues of books, but *dióρθῶσις*, that is to say, critical editions. There were different schools, opposed to each other in their views of the language of Homer. Each reading that was adopted by Zenodotus or Aristarchus had to be defended, and this could only be done by establishing general rules on the grammar of the Homeric poems.

<sup>1</sup> M. M.'s *History of Ancient Sanskrit Literature*, p. 163.

## The Article in Greek.

Did Homer use the article? Did he use it before proper names? These and similar questions had to be settled, and as one or the other view was adopted by the editors, the text of these ancient poems was changed by more or less violent emendations. New technical terms were required for distinguishing, for instance, the article, if once recognised, from the demonstrative pronoun. *Article* is a literal translation of the Greek word *arthron*. *Arthron* (lat *artus*) means the socket of a joint. The word was first used by Aristotle, and with him it could only mean words which formed, as it were, the sockets in which the members of a sentence moved. In such a sentence as 'Whoever did it, he shall suffer for it,' Greek grammarians would have called the demonstrative pronoun *he* the first socket, and the relative pronoun *who* the second socket;<sup>1</sup> and before Zenodotus, the first librarian of Alexandria, 250 B.C., all pronouns were simply classed as sockets or articles of speech. It was he who first introduced a distinction between personal pronouns or *antōnymiai*, and the mere articles or articulations of speech, which henceforth retained the name of *arthra*. This distinction was very necessary, and it was, no doubt, suggested to him by his emendations of the text of Homer, Zenodotus being the first who restored the article before proper names in the Iliad and Odyssey. Who, in speaking now of the definite or indefinite article, thinks of the origin and original meaning of the word, and of the time

<sup>1</sup> ἄρθρον προτασσόμενον, ἄρθρον ὑποτασσόμενον.



guage. But there was still a step to be made before we can expect to meet with a real practical or elementary grammar of the Greek language. The first real Greek grammar was that of Dionysius Thrax. It is still in existence, and though its genuineness has been doubted, these doubts have been completely disposed of.

#### Dionysius Thrax.

But who was Dionysius Thrax? His father, as we learn from his name, was a Thracian; but Dionysius himself lived at Alexandria, and was a pupil of the famous critic and editor of Homer, Aristarchus.<sup>1</sup> Dionysius afterwards went to Rome, where he taught about the time of Pompey. Now here we see a new feature in the history of mankind. A Greek, a pupil of Aristarchus, settles at Rome, and writes a practical grammar of the Greek language—of course, for the benefit of his young Roman pupils. He was not the inventor of grammatical science. Nearly all the framework of grammar, as we saw, was supplied to him through the labours of his predecessors, from Plato to Aristarchus. But he was the first who applied the results of former philosophers and critics to the practical purpose of teaching Greek; and, what is most important, of teaching Greek, not to Greeks, who knew Greek and only wanted the theory of their language, but to Romans, who had to be taught the declensions and conjugations, regular and irregular. His work thus became one of the principal channels

<sup>1</sup> Suidas, s. v. Διονύσιος. Διονύσιος Ἀλεξανδρείου, Θραξ δὲ ἀπὸ πατρὸς τοῦνομα κληθεὶς, Ἀριστάρχου μαθητῆς, γραμματικὸς δε ἐσφίστευσεν ἐν Ῥώμῃ ἐπὶ Πομπηίου τοῦ Μεγάλου.

through which the grammatical terminology, which had been carried from Athens to Alexandria, flowed back to Rome, to spread from thence over the whole civilised world.

#### Teachers of Greek at Rome.

Dionysius, however, though the author of the first practical grammar, was by no means the first '*professeur de langue*' who settled at Rome. At his time Greek was more generally spoken at Rome than French is now spoken in London. The children of gentlemen learnt Greek before they learnt Latin, and though Quintilian in his work on education does not approve of a boy learning nothing but Greek for any length of time,—'as is now the fashion,' he says, 'with most people'—yet he too recommends that a boy should be taught Greek first, and Latin afterwards.<sup>1</sup> This may seem strange, but the fact is, that as long as we know anything of Italy, the Greek language was as much at home there as Latin. Italy owed almost everything to Greece, not only in later days when the setting sun of Greek civilisation mingled its rays with the dawn of Roman greatness; but ever since the first Greek colonists started Westward Ho! in search of new homes. It was from the Greeks that the Italians received their alphabet; it was by them they were taught to read and to write.<sup>2</sup> The names for balance, for measuring-rod, for engines

<sup>1</sup> Quintilian, i 1, 12.

<sup>2</sup> See Mommsen, *Römische Geschichte*, b. i. s. 197. 'The Latin alphabet is the same as the modern alphabet of Sicily, the Etruscan is the same as the old Attic alphabet. *Epistola*, letter, *charta*, paper, and *stilus* (?), are words borrowed from Greek.'—*Mommsen*, b. i. s. 184. *M. M., Biographies of Words*, p. 50.



in general, for coined money,<sup>1</sup> many terms connected with sea-faring,<sup>2</sup> not excepting *nausea* or sea-sickness, are all borrowed from Greek, and show the extent to which the Italians were indebted to the Greeks for the very rudiments of civilisation. The Italians, no doubt, had their own religion; and some of the names of their deities, being the common property of the Aryan nations, are nearly the same in Latin and in Greek. But there are other names in Latin and in Oscan, though not in Umbrian and Sabellian, which were clearly adopted from Greek. Such are *Apollo* (the Oscan Ἀπελλοῶν), and *Hercules* (the Oscan *Heraklo*). According to Mommsen there was an Italian god called *Hercelus*, and he was afterwards identified with the Greek *Herakles*. His name was supposed to be derived from *herēre*, and to express the same idea as the Greek ἐρκείως, the protector of the boundaries. But this hypothesis is full of difficulties. *Herēre* does not exist in Latin; if it did, it would not come from the same root as ἔρκος; lastly, the diminutive suffix *lus* would give us *herculus* or

<sup>1</sup> Mommsen, *Römische Geschichte*, b. i. s. 186. *Statēra*, the balance, from the Greek στατήρ, a weight, *machina*, an engine, μηχανή, *nummus*, or *nummus*, a silver coin, νόμος, the Sicilian νοῦμος; *groma*, measuring-rod, the Greek γρόμων or γρόμα; *clathri*, a trellis, a grate, the Greek κλήθρα, the native Italian word for lock being *claustra*. See also Coisssen, *Ausgrabungen*, n. p. 813. *Libra* cannot be called a Latin corruption of λίτρα, although the two words have the same origin. See Kuhn's *Zeitschrift*, xvi. 119

<sup>2</sup> *Gubernare*, to steer, from κυβερνᾶν; *anchora*, anchor, from ἄγκυρα; *pora*, the forepart, from πῶρα. *Navis*, *remus*, *velum*, &c., are real Latin words, not borrowed by the Romans from the Greeks, and they show that the Italians were acquainted with navigation before the discovery of Italy by the Phœnicians. See Lottner, in Kuhn's *Zeitschrift*, vii. 267.

*herclus*, but not, in purely Latin words, *hereclus*.<sup>1</sup> *Castor and Pollux*, both of purely Greek origin, were readily believed in as nautical deities by the Italian sailors, and they were the first Greek gods to whom, after the battle on the Lake Regillus (485) a temple was erected at Rome.<sup>2</sup> In 431 another temple was erected at Rome to Apollo, whose oracle at Delphi had been consulted by Italians ever since Greek colonists had settled on their soil. The oracles of the famous Sibylla of Cumæ were written in Greek,<sup>3</sup> and the priests (*duoviri sacris faciundis*) were allowed to keep two Greek slaves for the purpose of translating these oracles.<sup>4</sup>

In other cases Greek gods were identified with Italian gods. As *Jupiter* was clearly the same Aryan deity as *Zeus*, *Juno*, his wife, was identified with *Hera*. *Ares* was recognised in *Mars*; *Hephestos* in *Vulcanus*; *Athene* in *Minerva*, &c ; nay, even *Satur-nus* (*Sæturnus*), originally, it would seem an Italian agricultural deity,<sup>5</sup> was identified with *Kronos*; and, as

<sup>1</sup> See Grassmann in Kuhn's *Zeitschrift*, xvi p. 103. If *Herculus* were a purely Latin word, it might be identified with *For-culus*.

<sup>2</sup> Mommsen, i. 408.

<sup>3</sup> *Ibid.* i. 165.

<sup>4</sup> In Latin, *Sibylla* may have been taken as a diminutive of *sibus* or *sabius*, words which, though not found in classical writers, must have existed in the Italian dialects. The French *sage* presupposes an Italian *sabius*, for it cannot be derived either from *sapiens* or from *sapius*. — Diez, *Lexicon Etymologicum*, p. 300. *Sapius* has been preserved in *nesapius*, foolish; *sibus* in *persibus*, wise.

<sup>5</sup> See, however, Schweizer-Siedler, in Kuhn's *Zeitschrift*, iv. 68; xvi. 139, who sees in *Sæturnus* an Italian development of the Vedic *Savitā*, the Sun, as a generative power. At Rome Saturnus was considered as an agricultural deity, and the sickle in his hand may possibly have recalled the sickle which Kronos used against his father. See Plutarch, *Annol. Roman.* 42. \*Ἡ ὄτι καρπῶν ἀρετῆς ἢ γεωργίας ἡγεμῶν δ

*Kronos* was the son of *Uranos*, a new deity was easily invented, and *Saturnus* fabled to be the son of *Calus*.

When the Romans, in 454 B.C., wanted to establish a code of laws, the first thing they did was to send commissioners to Greece, to report on the laws of Solon at Athens and the laws of other Greek towns.<sup>1</sup> As Rome rose in political power, Greek manners, Greek art, Greek language and literature found ready admittance.<sup>2</sup> Before the beginning of the Punic wars, many of the Roman statesmen were able to understand, and even to speak Greek. Boys were not only taught the Roman letters by their masters, the *litteratores*, but they had to learn at the same time the Greek alphabet. Those who taught Greek at Rome were then called *grammatici*, and they were mostly Greek slaves or *Liberti*.

Among the young men whom Cato saw growing up at Rome, to know Greek was the same as to be a gentleman. They read Greek books, they conversed in Greek, they even wrote in Greek. Tiberius Gracchus, consul in 177, made a speech in Greek at Rhodes, which he afterwards published.<sup>3</sup> Flaminius, when addressed by the Greeks in Latin, returned the compliment by writing Greek verses in honour of their gods. The first history of Rome was written at Rome in Greek, by Fabius Pictor,<sup>4</sup> about 200 B.C.; and it was probably in opposition to this work and to those of Lucius Cincius Alimentus, and Publius Scipio,

θεός; ἢ γὰρ ἄρη τοῦτο σημαίνει καὶ οὐχ, ὡς γέγραπεν Ἀντίμαχος, Ἡσιόδῳ περὶθύμενος.

<sup>1</sup> Mommsen, i. 256.

<sup>2</sup> Ibid. i. 425, 441.

<sup>3</sup> Ibid. i. 857.

<sup>4</sup> Ibid. i. 902.

that Cato wrote his own history of Rome in Latin. The example of the higher classes was eagerly followed by the lowest. The plays of Plautus are the best proof. The subjects are Greek, and though the language is Latin, yet the affectation of using Greek words is as evident in some of his characters as the foolish display of French in the German writers of the eighteenth century.

#### **Greek influences at Rome.**

There was both loss and gain in the inheritance which Rome received from Greece; but what would Rome have been without her Greek masters? The very fathers of Roman literature were Greeks private teachers, men who made a living by translating school-books and plays. Livius Andronicus, sent as prisoner of war from Tarentum (272 B.C.), established himself at Rome as professor of Greek. His translation of the *Odyssey* into Latin verse, which marks the beginning of Roman literature, was evidently written by him for the use of his private classes. His style, though clumsy and wooden in the extreme, was looked upon as a model of perfection by the rising poets of the capital. Nævius and Plautus were his contemporaries and immediate successors. All the plays of Plautus were translations and adaptations of Greek originals; and Plautus was not even allowed to transfer the scene from Greece to Rome. The Roman public wanted to see Greek life and Greek depravity; it would have punished the poet who had ventured to bring on the stage a Roman patrician or a Roman matron. Greek trage-

dies, also, were translated into Latin. Ennius, the contemporary of Nævius and Plautus, though somewhat younger (239-169), was the first to translate Euripides. Ennius, like Andronicus, was an Italian Greek, who settled at Rome as a teacher of languages and translator of Greek. He was patronised by the liberal party, by Publius Scipio, Titus Flamininus, and Marcus Fulvius Nobilior.<sup>1</sup> He became a Roman citizen. But Ennius was more than a poet, more than a teacher of languages. He has been called a neologian, and to a certain extent he deserved that name. Two works written in the most hostile spirit against the religion of Greece, and against the very existence of the Greek gods, were translated by him into Latin.<sup>2</sup> One was the philosophy of Epicharmus (470 B.C., in Megara), who taught that Zeus was nothing but the air, and other gods but names of the powers of nature; the other the work of Euhemerus of Messene (300 B.C.), who proved, in the form of a novel, that the Greek gods had never existed, and that those who were believed in as gods had been men. These two works were not translated without a purpose; and though themselves shallow in the extreme, they proved destructive to the still shallower systems of Roman theology. Greek became synonymous with infidel; and Ennius would hardly have escaped the punishment inflicted on Nævius for his political satires, had he not enjoyed

<sup>1</sup> Mommsen, i. 892.

<sup>2</sup> Ibid. i. 843, 194. It has been doubted whether the work of Ennius was a translation of Epicharmus. See Ennius, ed. Vahlen, p. xciii. On Epicharmus, see Bernays, *Rheinisches Museum*, viii. s. 280 (1853).

the patronage and esteem of the most influential statesmen at Rome. Even Cato, the stubborn enemy of Greek philosophy<sup>1</sup> and rhetoric, was a friend of the dangerous Ennius, and such was the growing influence of Greek at Rome, that Cato himself had to learn it in his old age, in order to teach his boy what he considered, if not useful, at least harmless in Greek literature. It has been the custom to laugh at Cato for his dogged opposition to everything Greek, but there was much truth in his denunciations. We have heard much of young Bengal--young Hindus who read Byron and Voltaire, play at billiards, drive tandems, laugh at their priests, patronise missionaries, and believe nothing. The description which Cato gives of the young idlers at Rome reminds us very much of young Bengal.

When Rome took the torch of knowledge from the dying hands of Greece, that torch was not burning with its brightest light. Plato and Aristotle had been succeeded by Chrysippus and Carneades; Euripides and Menander had taken the place of *Æschylus* and *Aristophanes*. In becoming the guardian of the Promethean spark first lighted in Greece, and intended hereafter to illuminate not only Italy, but every country of Europe, Rome lost much of that native virtue to which she owed her greatness. Roman frugality and gravity, Roman citizenship and patriotism, Roman purity and piety, were driven away by Greek luxury and levity, Greek intriguing and self-seeking, Greek vice and infidelity. Restrictions and anathemas were of no avail; and Greek ideas were never so at-

<sup>1</sup> Mommsen, i. 911.

tractive as when they had been reprobated by Cato and his friends. Every new generation became more and more impregnated with Greek. In 131<sup>1</sup> we hear of a consul (Publius Crassus) who, like another Mezzofanti, was able to converse in the various dialects of Greek. Sulla allowed foreign ambassadors to speak in Greek before the Roman senate.<sup>2</sup> The Stoic philosopher Panætius<sup>3</sup> lived in the house of the Scipios, which was for a long time the rendezvous of all the literary celebrities at Rome. Here the Greek historian Polybius, and the philosopher Clitomachus, Lucilius the satirist Terence, the African poet (196-159), and the improvisatore Archias (102 B.C.), were welcome guests.<sup>4</sup> In this select circle the master-works of Greek literature were read and criticised; the problems of Greek philosophy were discussed; and the highest interests of human life became the subject of thoughtful conversation. Though no poet of original genius arose from this society, it exercised a most powerful influence on the progress of Roman literature. It formed a tribunal of good taste; and

<sup>1</sup> Mommsen, ii. 407.

<sup>2</sup> *Ibid.* n. 110. Valerius Maximus, at the time of Tiberius, asks 'Quis ergo hunc consuetudini, quâ nunc Græcis actionibus aures curiæ exauriantur, januam patitur?' (*Ibid.* ii. cap. ii. 3). Dio Cassius (*Ibid.* lvi. cap. 15) relates that Tiberius heard cases argued, and asked questions himself, in Greek. Πολλὰς μὲν δίκας ἐν τῇ διαλέκτῳ ταύτῃ καὶ ἐκεί λεγομένας ἀκούων, πολλὰς δὲ καὶ αὐτὸς ἐπερωτῶν. Cf. Roberts, *Discussions on the Græcisms*, p. 29. Suetonius remarks, however, of Tiberius. 'Seruone Græco, quamquam alias promptus et facilis, non tamen usquequaque usus est, abstinuitque maxime in senatu, adeo quidem, ut "monopolium" nominatus, prius veniam postulârit, quod sibi verbo peregrino utendum esset.' 'Militem quoque Græce interrogatum, nisi Latine respondere vetuit.'—*Suet. Tib.* cap. 71.

<sup>3</sup> Mommsen, n. 408.

<sup>4</sup> *Ibid.* ii. 437, note; ii. 430.

much of the correctness, simplicity, and manliness of the classical Latin is due to that 'Cosmopolitan Club,' which met under the hospitable roof of the Scipios. With every succeeding generation the knowledge of Greek became more general at Rome. Cicero spoke Greek in the senate of Syracuse. Augustus in the town of Alexandria. Boys and girls, as Ovid relates, used to read the plays of Menander—'solet pueris virginibusque legi'; and Juvenal (*Sat.* vi. 186 seq.) exclaims:—

'Omnia Græce,  
Cum sit turpe magis nostris nescire Latine.  
Hoc sermone pavent, hoc nam, gaudia, curas,  
Hoc cuncta effundunt animi secreta.'

The religious life of the higher Roman society at the close of the Punic wars was more Greek than Roman. All who had learnt to think seriously on religious questions were either Stoics or followers of Epicurus; or they embraced the doctrines of the New Academy, denying the possibility of any knowledge of the Infinite, and putting opinion in the place of truth.<sup>1</sup> Though the doctrines of Epicurus and of the New Academy were always considered dangerous and heretical, the philosophy of the Stoics was tolerated, and a kind of compromise effected between philosophy and religion. There was a state-philosophy as well as a state-religion. The Roman priesthood, though they had succeeded, in 161, in getting all Greek rhetors and philosophers expelled from Rome, perceived that a compromise was necessary. It was openly avowed

<sup>1</sup> Zeno died 263; Epicurus died 270; Archesilaus died 241, Carneades died 129.



that in the enlightened classes<sup>1</sup> philosophy must take the place of religion, but that a belief in miracles and oracles was necessary for keeping the large masses in order. Even Cato,<sup>2</sup> the leader of the orthodox, national, and conservative party, expressed his surprise that a haruspex, when meeting a colleague, did not burst out laughing. Men like Scipio Æmilianus and Lælius professed to believe in the popular gods; but with them Jupiter was the soul of the universe, the statues of the gods mere works of art.<sup>3</sup> Their gods, as the people complained, had neither body, parts, nor passions. Peace, however, was preserved between the Stoic philosopher and the orthodox priest. Both parties professed to believe in the same gods, but they claimed the liberty to believe in them in their own way.

I have dwelt at some length on the changes in the intellectual atmosphere of Rome at the end of the Punic wars, and I have endeavoured to show how completely it was impregnated with Greek ideas, in order to explain, what otherwise would seem almost inexplicable, the zeal and earnestness with which the study of Greek grammar was taken up at Rome, not only by a few scholars and philosophers, but by the leading statesmen of the time. To our minds, discussions on nouns and verbs, on cases and gender, on regular and irregular conjugation, retain always something of the tedious character which these sub-

<sup>1</sup> Mommsen, ii. 417, 418.

<sup>2</sup> Ibid. i. 845. Cicero, *De Divinatione*, ii. 24: 'Mirari se ajebat (Cato) quod non rideret haruspex haruspicem cum vidisset.'

<sup>3</sup> Ibid. ii. 415, 417.

jects had at school, and we can hardly understand how at Rome, grammar—pure and simple grammar—should have formed a subject of general interest, and a topic of fashionable conversation. Although the grammatical studies of the Romans may have been enlivened by illustrations from the classical authors of Greece, yet their main object was language as such

#### Crates of Pergamus.

When one of the first grammarians of the day, Crates of Pergamus, was sent to Rome as ambassador of king Attalus, he was received with the greatest distinction by all the literary statesmen of the capital. He was the pupil of Diogenes Babylonius, who had been the pupil of Chrysippus; and as Chrysippus was a staunch supporter of the theory of ‘Anomaly,’ the philosophy of language, taught by Crates (*ἀρεσις Κρατήτειος*), was of the same character.<sup>1</sup> It so happened that when walking one day on the Palatian hill, Crates caught his foot in the grating of a sewer, fell and broke his leg.<sup>2</sup> Being thereby detained at

<sup>1</sup> ‘In quo fuit Crates nobilis grammaticus, qui factus Chrysippo, homine acutissimo, qui reliquit sex libros *περὶ ἀνωμαλίας*, his libris contra *ἀναλογίαν* atque Aristarchum est mixtus, sed ita ut scripta indicarent ejus, ut neutrius videretur pervidisse voluntatem; quod et Chrysippus de inæqualitate cum scribit sermone, propositum habet ostendere similes res dissimilibus verbis et dissimilibus similes esse vocabulis notatis (id quod est verum); et quod Aristarchus, de æqualitate cum scribit et de verborum similitudine, quorundam inclinationes sequi jubet, quoad patitur consuetudo.’—Varro, *De Lingua Latina*, ed. O. Muller, lib. ix. cap. 1.

<sup>2</sup> ‘Primus igitur quantum optimum studium grammaticæ in urbem intulit Crates Mallotes, Aristarchi æqualis, qui missus ad senatum ab Attalo rege inter secundum et tertium Punicum bellum sub ipsam Ænnii mortem, cum regione Palati prolapsus in cloacæ foramen erus fregisset, per omne legationis simul et valetudinis tempus plurimas acroasis

Rome longer than he intended, he was persuaded to give some public lectures, or *akroaseis*, on grammar; and from these lectures, says Suetonius, dates the study of grammar at Rome. This took place about 159 B.C., between the second and third Punic wars, shortly after the death of Ennius, and two years after the famous expulsion of the Greek rhetors and philosophers (161).

#### Carneades.

Four years later Carneades, likewise sent as ambassador to Rome, was prohibited from lecturing by Cato. After these lectures of Crates, grammatical and philological studies became extremely popular at Rome.

#### Alexander Polyhistor.

His pupil, Alexander Polyhistor, flourished under Sulla. We hear of Lucius Ælius Stilo,<sup>1</sup> who lectured on Latin as Crates had lectured on Greek.

#### Varro, Lucilius, Cicero.

Among his pupils were Varro, Lucilius, and Cicero. Varro composed twenty-four books on the Latin language, four of which were dedicated to Cicero. Cicero, himself, is quoted as an authority on grammatical questions, though we know of no special work

subinde fiet assidueque disseruit, ac nostris exemplum fuit ad imitandum.—Suetonius, *De viris illustribus, De grammaticis et rhetoribus*, cap 2, ed. Reifferscheid: Lipsia, 1860. Scioppus, in the introduction to his *Grammatica philosophica* (1628), writes: ‘Hæc ergo ut legi, minime jam mirandum mihi visum est, tanti flagiti erroribus inquinatam esse veterem Grammaticam, quæ ex cloacæ foramine una cum claudo magistro emerisset.’

<sup>1</sup> Mommsen, ii. 413, 426, 445, 457. Lucius Ælius Stilo wrote a work on etymology, and an index to Plautus.—Lersch, *Die Sprachphilosophie der Alten*, ii. 111.

of his on grammar. Lucilius devoted the ninth book of his satires to the reform of spelling.<sup>1</sup>

**Cæsar, De Analogiâ.**

But nothing shows more clearly the wide interest which grammatical studies had then excited in the foremost ranks of Roman society than Cæsar's work on Latin grammar. It was composed by him during the Gallic war, and dedicated to Cicero, who might well be proud of the compliment thus paid him by the great general and statesman.<sup>2</sup> Most of these works are lost to us, and we can judge of them by means of casual quotations only. Thus we learn from a fragment of Cæsar's work, *De Analogiâ*, that he was the inventor of the term *ablative* in Latin. The word never occurs before, and, of course, could not be borrowed, like the names of the other cases, from Greek grammarians, as no ablative had been admitted in Greek grammar. To think of Cæsar fighting the barbarians of Gaul and Germany, and watching from a distance the political complications at Rome, ready to grasp the sceptre of the world, and at the same time carrying on his philological and grammatical studies together with his secretary, the Greek Didymus,<sup>3</sup> gives us a new view both of that extraordinary man, and of the time in which he lived. After Cæsar had triumphed, one of his favourite plans was to found a Greek and Latin library at Rome, and he offered the librarianship to the best scholar of the day, to Varro, though Varro had fought against him on the side of Pompey.<sup>4</sup>

<sup>1</sup> Lersch, ii. 113, 114, 143

<sup>2</sup> Cicero, *Brut* cap. 72

<sup>3</sup> Lersch, iii. 144.

<sup>4</sup> Mommsen, iii. 557. 48 B. C.

**Grammatical Terminology.**

We have thus arrived at a time when, as we saw before, Dionysius Thrax published the first elementary grammar of Greek at Rome. Dionysius, as a pupil of Aristarchus, was a believer in 'Analogy,' and therefore opposed to the views propounded by Crates on the anomalous character of language. His influence, however, was chiefly felt as a practical teacher. Through him empirical grammar became transplanted to Rome, the Greek grammatical terminology was translated into Latin, and in this new Latin garb it has travelled for nearly two thousand years over the whole civilised world. Even in India, where a different terminology had grown up in the grammatical schools of the Brahmans, a terminology in some respects more perfect than that of Alexandria and Rome, we may now hear such words as *case*, and *gender*, and *active*, and *passive*, explained by European teachers to their native pupils. The fates of words are curious indeed, and when I looked the other day at some of the examination papers of the government schools in India, such questions as—'What is the genitive case of Siva?' seemed to reduce whole volumes of history into a single sentence. How did these words, genitive case, come to India? They came from England, they had come to England from Rome, to Rome from Alexandria, to Alexandria from Athens. At Athens, the term *case* or *ptōsis* had a philosophical meaning; at Rome, *casus* was merely a literal translation; the original meaning of *fall* was lost, and the word had dwindled down to a mere technical term. At Athens, the philosophy of language was a counter-

part of the philosophy of the mind. The terminology of formal logic and formal grammar was the same. The logic of the Stoics was divided into two parts,<sup>1</sup> called *rhetoric* and *dialectic*, and the latter treated, first, 'On that which signifies, or language;' secondly, 'On that which is signified, or things.' In their philosophical language *ptōsis*, which the Romans translated by *casus*, really meant fall, that is to say, the inclination or relation of one idea to another, the falling or resting of one word on another. Long and angry discussions were carried on as to whether the name of *ptōsis*, or fall, was applicable to the nominative; and every true Stoic would have scouted the expression of *casus rectus*, because the subject or the nominative, as they argued, did not fall or rest on anything else, but stood erect, the other words of a sentence leaning or depending on it. All this is lost to us when we speak of cases. Cobbett in his English Grammar ventures on his own explanation of the term *case*, stating:—'The word *case*, as applied to the concerns of life, has a variety of meanings, or of different shades of meaning; but its general meaning is, *state of things*, or *state of something*. Thus we say, "*in that case*, I agree with you." Meaning "that being *the state of things*, or that being *the state of the matter*, I agree with you." Lawyers are said, "to make out *their case*; or not to make out *their case*:" meaning the *state of the matter*, which they have undertaken to prove. So, when we say that a horse is *in a good case*, we mean that he is *in a good state*.

<sup>1</sup> Lersch, ii 25. Περὶ σημαίνοντων, or περὶ φωνῆς; and περὶ σημαυομένων, or περὶ πραγμάτων.

Nouns may be in different *states*, or *situations*, as to other nouns, or other words. For instance, a noun may be the name of a person who *strikes* a horse, or of a person who *possesses* a horse, or of a person whom a horse *kicks*. And these different situations, or states, are, therefore, called *cases*.<sup>1</sup>

#### Genitive Case.

And how are the dark scholars in the government schools of India to guess the meaning of *genitive case*? The Latin *genitivus* is a mere blunder, for the Greek word *genikē* could never mean *genitivus*. *Genitivus*, if it is meant to express the case of origin or birth, would in Greek have been called *gennētikē*, not *genikē*. Nor does the genitive express the relation of son to father. For though we may say, 'the son of the father,' we may likewise say, 'the father of the son.' *Genikē*, in Greek, had a much wider, a much more philosophical meaning.<sup>2</sup> It meant *casus generalis*, the general case, or rather, the case which expresses the genus or kind. This is the real power of the genitive. If I say, 'a bird of the water,' 'of the water' defines the genus to which a certain bird belongs; it refers it to the genus of water-birds. 'Man of the mountains' means a mountaineer. In phrases such as 'son of the father,' or 'father of the son,' the genitives have the same effect. They predicate something of the son or of the father; and if we distinguish

<sup>1</sup> William Cobbett, *A Grammar of the English Language*, Letter V. § 41.

<sup>2</sup> Schomann, Was bedeutet γενική πᾶσις, in Hofer's *Zeitschrift für die Wissenschaft der Sprache*, 1846, i. 4. 83; ii. 8. 126. *Beiträge zur Geschichte der Grammatik*, von Dr. K. E. A. Schmidt, Halle, 1859 Ueber den Begriff der γενική πᾶσις, s. 320.

between the sons of the father, and the sons of the mother, the genitives would mark the class or genus to which the sons respectively belonged. They would answer the same purpose as the adjectives, paternal and maternal. It can be proved etymologically that the termination of the genitive is, in many cases, identical with those derivative suffixes by which substantives are changed into adjectives.<sup>1</sup>

<sup>1</sup> In the Tibetan languages the rule is, 'Adjectives are formed from substantives by the addition of the genitive sign,' which might be inverted into, 'The genitive is formed from the nominative by the addition of the adjective sign.' For instance, *shing*, wood; *shing gr.*, of wood, or wooden; *ser*, gold; *ser-gyi*, of gold, or golden. *mi*, man; *mi-gi*, of man, or human. The same in Garo, where the sign of the genitive is *ni*, we have. *mānde-ni jak*, the hand of man, or the human hand; *ambal-ni kethdi*, a wooden knife, or a knife of wood. In the Dravidian languages adjectives are formed by the same suffixes which occur among the terminations of the genitive, and in Africa the same peculiarity has been pointed out in the Congo language. (Terrien Poncelet, *Du Langage*, p. 109; Caldwell, *Dravidian Grammar*, p. 230; see also Boller, *Declination in den Finnischen Sprachen*, p. 167.) In Hindustani, Marāthi, etc., the genitive is so clearly an adjective, that it actually takes the marks of gender according to the words to which it refers. But how is it in Sanskrit and Greek? In Sanskrit we may form adjectives by the addition of *tya*. (*Turanian Languages*, p. 41 seq.; *Essay on Bengali*, p. 333.) For instance, *dakshinā*, south; *dakshinā-tya*, southern. This *tya* is clearly a demonstrative pronoun, the same as the Sanskrit *syas*, *syā*, *tyad*, this or that. *Tya* is a pronominal base, and therefore such adjectives as *dakshinā-tya*, southern, or *āp-tya*, aquatic, from *āp*, water, must have been conceived originally as 'water-there,' or 'south-there.' Followed by the terminations of the nominative singular, which was again an original pronoun, *āptyas* would mean *āp-tya-s*, i. e. water-there-he. Now, it makes little difference whether I say an aquatic bird, or a bird of the water. In Sanskrit the genitive of water would be, if we take *udaka*, *udaka-sya*. This *sya* is the same pronominal base as the adjective termination *tya*, only that the former does not, like the adjective, take any sign for the gender. The genitive *udaka-sya* is therefore the same as an adjective without gender. Now let us look to Greek. We there form adjectives by *στος*, which is the same as the Sanskrit suffix *tyas*. For instance, from *δῆμος*, people, the Greeks formed *δημόσιος*, belonging to the people. Here *ος*, *α*, *ον*,



It is hardly necessary to trace the history of what I call the empirical study, or the grammatical analysis of language, beyond Rome. With Dionysius Thrax the framework of grammar was finished. Later writers have improved and completed it, but they have added nothing really new and original. We can follow the stream of grammatical science from Dionysius Thrax to our own time in an almost uninterrupted chain of Greek and Roman writers. We find M. Verrius Flaccus, the tutor of the grandsons of Augustus, and Quintilian in the first century; Scamius, Apollonius Dyscolus, and his son, Herodianus, in the second; Probus and Donatus, the teacher of St. Jerome, in the fourth. After Constantine had moved the seat of government from Rome, grammatical science received a new home in the academy of Constantinople. There were no less than twenty Greek and Latin grammarians who held professorships at Constantinople. Under Justinian, in the sixth century, the name of Priscianus gave a new lustre to grammatical studies, and his work remained an authority during the Middle Ages to nearly our own times. We ourselves have been taught grammar

mark the gender. Leave the gender out, and you get *δημοσιο*. Now, there is a rule in Greek that an *s* between two vowels, in grammatical terminations, is elided. Thus the genitive of *γένος* is not *γένεσος*, but *γένεος*, or *γένους*; hence *δημοσιο* would necessarily become *δημοιο* (cf. *ἡόσιος = ἡοίος*). And what is *δημοιο* but the regular Homeric genitive of *δῆμος*, which in later Greek was replaced by *δήμων*? Thus we see that the same principles which governed the formation of adjectives and genitives in Tibetan, in Garo, and Hindustani, were at work in the primitive stages of Sanskrit and Greek; and we perceive how accurately the real power of the genitive was determined by the ancient Greek grammarians, who called it the general or predicative case, whereas the Romans spoiled the term by wrongly translating it into *genitivus*.

according to the plan which was followed by Dionysius at Rome, by Priscianus at Constantinople, by Alcuin at York ; and whatever may be said of the improvements introduced into our system of education, the Greek and Latin grammars used at our public schools are mainly founded on the first empirical analysis of language, prepared by the philosophers of Athens, applied by the scholars of Alexandria, and transferred to the practical purpose of teaching a foreign tongue by the Greek professors at Rome.

## CHAPTER IV.

### THE CLASSIFICATORY STAGE.

**WE** traced, in our last chapter, the origin and progress of the empirical study of languages from the time of Plato and Aristotle to our own school-boy days. We saw at what time, and under what circumstances, the first grammatical analysis of language took place; how its component parts, the parts of speech, were named; and how, with the aid of a terminology, half philosophical and half empirical, a system of teaching languages was established, which, whatever we may think of its intrinsic value, has certainly answered that purpose for which it was chiefly intended.

#### **Grammatical Study of Sanskrit.**

Considering the process by which this system of grammatical science was elaborated, it could not be expected to give us an insight into the nature of language. The division into nouns and verbs, articles and conjunctions, the schemes of declension and conjugation, were a merely artificial network thrown over the living body of language. We must not look in the grammar of Dionysius Thrax for a correct and well-articulated skeleton of human speech. But it is all the more curious, to observe the striking coincidences between the grammatical terminology of the

Greeks and the Hindus, which would seem to prove that there must be some true and natural foundation for the much-abused grammatical system of the schools. The Hindus are the only nation that cultivated the science of grammar without having received any impulse, directly or indirectly, from the Greeks. Yet we find in Sanskrit too the same system of cases, called *vibhakti*, or inflections, the active, passive, and middle voices, the tenses, moods, and persons, divided not exactly, but very nearly, in the same manner as in Greek.<sup>1</sup> In Sanskrit, grammar is called *Vyākaraṇa*, which means analysis or taking to pieces. As Greek grammar owed its origin to the critical study of Homer, Sanskrit grammar arose from the study of the Vedas, the most ancient poetry of the Brahmans. The differences between the dialect of these sacred hymns and the literary Sanskrit of later ages were noted and preserved with a religious care. We still possess the first essays in the grammatical science of the Brahmans, the so-called *Prātisākhya*s. These works, though they merely profess to give rules on the proper pronunciation of the ancient dialect of the Vedas, furnish us at the same time with observations of a grammatical character, and particularly with those valuable lists of words, irregular or in any other way remarkable, the *Gaṇas*. These supplied the solid basis on which successive generations of scholars erected that astounding structure which reached its perfection in the grammar of *Pāṇini*. There is no form, regular or irregular, in the whole Sanskrit language, which is not provided

<sup>1</sup> See M. M.'s *History of Ancient Sanskrit Literature*, p. 158.

for in the grammar of Pāṇini and his commentators it is the perfection of a merely empirical analysis of language, unsurpassed, nay even unapproached, by anything in the grammatical literature of other nations. Yet of the real nature, and natural growth of language, it teaches us nothing.

What then do we know of language after we have learnt the grammar of Greek or Sanskrit, or after we have transferred the network of classical grammar to our own tongue?

#### The Facts of Grammar.

We know certain forms of language which correspond to certain forms of thought. We know that the subject must assume the form of the nominative, the object that of the accusative. We know that the more remote object may be put in the dative, and that the predicate, in its most general form, may be rendered by the genitive. We are taught that whereas in English the genitive is marked by a final *s*, or by the preposition *of*, it is in Greek expressed by a final *os*, in Latin by *is*. But what this *os* and *is* represent, why they should have the power of changing a nominative into a genitive, a subject into a predicate, remains a riddle. It is self-evident that each language, in order to be a language, must be able to distinguish by some means or other the subject from the object, the nominative from the accusative. But how a mere change of termination should suffice to convey so material a distinction would seem almost incomprehensible. If we look for a moment beyond Greek and Latin, we see that there are in reality but few languages which have distinct forms for these

two categories of thought. Even in Greek and Latin there is no outward distinction between the nominative and accusative of neuters. The Chinese language, it is commonly said, has no grammar at all; that is to say, it has no inflections, no declension and conjugation, in our sense of these words; it makes no formal distinction of the various parts of speech. noun, verb, adjective, adverb, &c. Yet there is no shade of thought that cannot be rendered in Chinese. The Chinese have no more difficulty in distinguishing between 'James beats John,' and 'John beats James,' than the Greeks and Romans or we ourselves. They have no termination for the accusative, but they attain the same by always placing the subject before, and the object after the verb, or by employing words, before or after the noun, which clearly indicate that it is to be taken as the object of the verb.

#### Grammar in Chinese.

The Chinese<sup>1</sup> do not decline their substantives, but they indicate the cases distinctly—

- A. By means of particles.
- B. By means of position.

1. The nominative or the subject of a sentence is always placed at the beginning.

2. The genitive may be marked—

(a) By the particle *tchi* placed between the two nouns, of which the first is in the genitive, the second in the nominative. Example, *jin tchi kium* (hominum princeps, literally, man, sign of the genitive, prince).

<sup>1</sup> The statements are made on the authority of Stanislas Julien, the greatest Chinese scholar in Europe (died 1873).



5. The ablative is expressed—

(a) By means of prepositions, such as *thsong*, *yeou*, *tseu*, *hou*. Ex. *thsong* (ex) *thien* (cœlo) *lai* (venire); *te* (obtinere) *hou* (ab) *thien* (cœlo).

(b) By means of position, so that the word in the ablative is placed before the verb. Ex. *thien* (heaven) *hiang-tchi* (descended, *tchi* being the relative particle or sign of the genitive) *tsai* (calamities), i. e. the calamities which Heaven sends to men.

6. The instrumental is expressed—

(a) By the preposition *yu*, with. Ex. *yu* (with) *kien* (the sword) *cha* (to kill) *jin* (a man).

(b) By position, the substantive which stands in the instrumental case being placed before the verb, which is followed again by the noun in the accusative. Ex. *i* (by hanging) *chu* (he killed) *tchi* (him)

7. The locative may be expressed by simply placing the noun before the verb. Ex. *si* (in the East or East) *yeou* (there is) *suo-tou-po* (a sthúpa); or by prepositions as described in the text.

The adjective is always placed before the substantive to which it belongs. Ex. *mei jin*, a beautiful woman.

The adverb is generally followed by a particle which produces the same effect as *e* in bene, or *ter* in celeriter. Ex. *cho-jen*, in silence, silently; *ngeou-jen*, perchance; *kiu-jen*, with fear.

Sometimes an adjective becomes an adverb through position. Ex. *chen*, good; but *chen ko*, to sing well.

#### Grammar in Finnish.

But there are other languages also which have more terminations even than Greek and Latin. In Finnish



there are fifteen cases, expressive of every possible relation between the subject and the object; but there is no accusative, no purely objective case.<sup>1</sup> In English and French the distinctive terminations of the nominative and accusative have been worn off by phonetic corruption, and these languages are obliged, like Chinese, to mark the subject and object by the collocation of words.

What we learn therefore at school in being taught that *rex* in the nominative becomes *regem* in the accusative, is simply a practical rule. We know when to say *rex*, and when to say *regem*. But why the king as a subject should be called *rex*, and as an object *regem*, remains entirely unexplained. In the same manner we learn that *amo* means I love, *amavi* I loved; but why that tragical change from *love* to *no love* should be represented by the simple change of *o* to *avi*, or, in English, by the addition of a mere *d*, is neither asked nor answered.

#### The Origin of Grammatical Forms.

Now if there is a science of language, these are the questions which it will have to answer. If they cannot be answered, if we must be content with paradigms and rules, if the terminations of nouns and verbs must be looked upon either as conventional contrivances or as mysterious excrescences, there is no such thing as a science of language, and we must be satisfied

<sup>1</sup> From a similar cause the North-Indians have innumerable verbs to express every shade of action; they have different words for eating as applied to fish, flesh, animal or human, soup, vegetables, &c. But they cannot say either *I am* or *I have*. Cf. Du Ronceau, *Memoire sur le Systeme grammatical des langues de quelques nations indiennes de l'Amérique du Nord*, Paris, 1838, pp. 195, 200.

with what has been called the art (*τέχνη*) of language or grammar.

#### Historical Study of Languages.

Before we either accept or decline the solution of any problem, it is right to determine what means there are for solving it. Beginning with English we should ask, what means have we for finding out why *I love* should mean I am actually loving, whereas *I loved* indicates that that feeling is past and gone? Or, if we look to languages richer in inflections than English, we should try to discover by what process, and under what circumstances, *amo*, I love, was changed in Latin, through the mere addition of an *r*, into *amor*, expressing no longer, *I love*, but *I am loved*. Did declensions and conjugations bud forth like the blossoms of a tree? Were they imparted to man ready-made by some mysterious power? Or did some wise people invent them, assigning certain letters to certain phases of thought, as mathematicians express unknown quantities by freely chosen algebraic exponents? We are here brought at once face to face with the highest and most difficult problem of our science, the origin of language. But it will be well for the present to turn our eyes away from theories, and fix our attention at first entirely on facts.

#### Lineal Relationship.

Let us keep to the English perfect, *I loved*, as compared with the present, *I love*. We cannot embrace at once the whole English grammar, but if we can track one form to its true lair, we shall probably have no difficulty in digging out the rest of the brood.

Now if we ask how the addition of a final *ɔ* could express the momentous transition from being in love to being indifferent, the first thing we have to do, before attempting any explanation, would be to establish the earliest and most original form of *I loved*. This is a rule which even Plato recognised in his philosophy of language, though, we must confess, he seldom obeyed it. We know what havoc phonetic corruption may make both in the dictionary and the grammar of a language, and it would be a pity to waste our conjectures on formations which a mere reference to the history of language would suffice to explain. Now a very slight acquaintance with the history of the English language teaches us that the grammar of modern English is not the same as the grammar of Wycliffe. Wycliffe's English, again, may be traced back to what, with Sir Frederick Madden, we may call, Middle English, from 1500 to 1330; Middle English to Early English, from 1330 to 1230; Early English to Semi-Saxon, from 1230 to 1100; and Semi-Saxon to Anglo-Saxon.<sup>1</sup> It is evident that if we are to discover the original intention of the syllable which changes *I love* into *I loved*, we must consult the original form of that syllable wherever we can find it. We should never have known that *priest* meant originally *an elder*, unless we had traced it back to its original form *presbyter*, in which a Greek

<sup>1</sup> See some criticisms on this division in Marsh's *Lectures on the English Language*, p. 48. In the *Specimens of Early English* edited by Morris and Skeat, the first volume gives specimens from 1150 to 1300 (Old English Homilies to King Horn); the second from 1298 to 1393 (Robert of Gloucester to John Gower); the third from 1394 to 1579 (Piers the Ploughman to the Shepherdes Calendar, by Edmund Spenser).

scholar at once recognises the comparative of *presbys*, old.<sup>1</sup> If left to modern English alone, we might attempt to connect *priest* with *praying* or *preaching*, but we should not thus arrive at its true derivation. The modern word *Gospel* conveys no meaning at all. As soon as we trace it back to the original Anglo-Saxon *godspell*, and to *goddspell* in the *Ormulum*, we see that in Anglo-Saxon, if meant for *gôd-spell*, it may be a translation of *Evangelium*, good tidings, while the author of the *Ormulum* took it for God's word, with short, not with long *o*.<sup>2</sup> *Lord* would be nothing but an empty title in English, unless its original form and meaning had been discovered in the Anglo-Saxon *hláford*, which stands for *hláf-weard*, from *hláf*, a loaf, and *weard*, warden, keeper. In like manner *lady* has to be traced back to Anglo-Saxon *hláf-dige*, supposed to be a contraction of *hláf-weur-dige*, or better, of *hláf*, loaf, and Anglo-Saxon *dæge*, kneader.<sup>3</sup>

But even after this is done, after we have traced a

<sup>1</sup> In a Greek charter of 1121 we find *πρεσβύτερος* changed into *πρεβιτε*, from which the modern Italian *prete*. See Truchera, *Syllabus Græcarum Membranarum*, p. 136.

<sup>2</sup> 'Goddspell onn Ænglissch nemunodl isz God word, andd god tijennde, God errnde,' &c.—*Ormulum*, ed. White, Dedication, v. 157. 'And beode þer godes godd-spel.'—*Layamon's Brut*, ed. Sir F. Madden, vol. iii p. 182, v. 29,507.

<sup>3</sup> See Skeat, *Etymological Dictionary*, s. v. For other etymologies see Grimm, *Deutsche Grammatik*, i p. 229; ii. pp. 339-405; also *Rechtalterthümer*, p. 230, note.

In Flemish, as I learn from the Rev. Guido Gezelle, children, servants, in fact the *familiars* of a fumer are called *broodaten*, literally bread-eaters. Historically, the giving of bread, as one of the attributes of a sovereign, may be traced back to the *panes palatini* or *gradus*, the loaves distributed daily from the steps of the imperial palace by Constantine the Great, and even before him, by the Emperor Aurelian, our daily bread.—See Paulus Cassel, *Der Gradl und sein Name*, Berlin, 1865, s. 18.

modern English word back to Anglo-Saxon, it follows by no means that we should there find it in its original form, or that we should succeed in forcing it to disclose its original intention. Anglo-Saxon is not an original or aboriginal language. It points by its very name to the Saxons and Angles of the continent. We have, therefore, to follow our word from Anglo-Saxon through the various Saxon and Low-German dialects, till we arrive at last at the earliest stage of German which is within our reach, the Gothic of the fourth century after Christ. Even here we cannot rest. For, although we cannot trace Gothic back to any earlier Teutonic language, we see at once that Gothic, too, is a modern language, and that it must have passed through numerous phases of growth before it became what it is in the mouth of Bishop Ulfilas.

#### Collateral Relationship.

What then are we to do?—We must try to do what is done when we have to deal with the modern Romance languages. If we could not trace a French word back to Latin, we should look for its corresponding form in Italian, and endeavour to trace the Italian to its Latin source. If, for instance, we were doubtful about the origin of the French word for fire, *feu*, we have but to look to the Italian *fuoco*, in order to see at once that both *fuoco* and *feu* are derived from the Latin *focus*. We can do this because we know that French and Italian are cognate dialects, and because we have ascertained beforehand the exact degree of relationship in which they stand to

each other. Had we, instead of looking to Italian, looked to German for an explanation of the French *feu*, we should have missed the right track; for the German *feuer*, though more like *feu* than the Italian *fuoco*, could never have assumed in French the form *feu*.

Again, in the case of the preposition *hors*, which in French means *without*, we can more easily determine its derivation from the Latin *foris*, outside, after we have found that *hors* corresponds with the Italian *fuora*, the Spanish *fuera*. The French *fromage*, cheese, derives no light from Latin. But as soon as we compare the Italian *formaggio*,<sup>1</sup> we see that *formaggio* and *fromage* are derived from *forma*; cheese being made in Italy by keeping the milk in small baskets or forms. *Feeble*, the French *faible*, is clearly derived from Latin; but it is not till we see the Italian *fiacole* that we are reminded of the Latin *febilis*, tearful. We should never have found the etymology, that is to say the origin of the French *payer*, the English *to pay*, if we did not consult the dictionary of the cognate dialects, such as Italian and Spanish. Here we find that *to pay* is expressed in Italian by *pagare*, in Spanish by *pagar*, whereas in Provençal we actually find the two forms *pagar* and *pajar*. Now *pagar* clearly points back to Latin *pacare*, which means *to pacify*, *to appease*. Joinville uses *payer* in the sense both of pacifying and of paying.<sup>2</sup> To pacify a creditor meant to pay him; in the

<sup>1</sup> Diz, *Lexicon Comparativum*. Columella, vii 8.

<sup>2</sup> *Journalle*, ed Nat. de Wailly, p. 34, 'Il s'agenoilla devant l'evê que se tant bien pour poiez;' p 256, 'que se les dix mille livres ne sont païées, que vous les facez paier'

same manner as *une quittance*, a quittance or receipt, was originally *quietantia*, a quieting, from *quietus*, quiet.<sup>1</sup>

If, therefore, we wish to follow up our researches—if, not satisfied with having traced an English word back to Gothic, we want to know what it was at a still earlier period of its growth—we must determine whether there are any languages that stand to Gothic in the same relation in which Italian and Spanish stand to French—we must restore, as far as possible, the genealogical tree of the various families of human speech. In doing this we enter on the second or classificatory stage of our science; for genealogy, where it is applicable, is the most perfect form of classification.<sup>2</sup>

<sup>1</sup> In mediæval Latin *fredum* is 'compositio qua fisco exoluta reus pacem a principe acquirit.' It is the German *frida*, peace, Latinised. From it the French *les frais*, expense, and *de frayer*, to pay. Cf. Scheler, *Dictionnaire d'Étymologie française*, s. v.

<sup>2</sup> 'If we possessed a perfect pedigree of mankind, a genealogical arrangement of the races of men would afford the best classification of the various languages now spoken throughout the world, and if all extinct languages, and all intermediate and slowly-changing dialects had to be included, such an arrangement would, I think, be the only possible one. Yet it might be, that some very ancient language had altered little, and had given rise to few new languages, whilst others (owing to the spreading and subsequent isolation and decay of civilisation of the several races descended from a common race) had altered much, and had given rise to many new languages and dialects. The various degrees of difference in the languages from the same stock, would have to be expressed by groups subordinate to groups; but the proper or even only possible arrangement would still be genealogical; and this would be strictly natural, as it would connect together all languages, extinct and modern, by the closest affinities, and would give the filiation and origin of each tongue.'—Darwin, *Origin of Species*, p. 422.

**Classification of Languages.**

Before, however, we proceed to examine the results which have been obtained by the combined labours of Schlegel, Humboldt, Pritchard, Bopp, Burnouf, Grimm, Pott, Benfey, Kuhn, Curtius, Schleicher, and others in this branch of the science of language, it will be well to glance at what had been achieved before their time in the classification of the numberless dialects of mankind.

The Greeks never thought of applying the principle of classification to the varieties of human speech. They only distinguished between Greek on one side, and all other languages on the other, comprehended under the convenient name of 'barbarous.' They succeeded, indeed, in classifying four of their own dialects with tolerable correctness,<sup>1</sup> but they applied the term 'barbarous' so promiscuously to the other more distant relatives of Greek (the dialects of the Pelasgians,<sup>2</sup> Karians, Macedonians, Thracians, and Illyrians), that, for the purposes of scientific classification, it is almost impossible to make any use of the statements of ancient writers about these so-called barbarous idioms.<sup>3</sup>

<sup>1</sup> Strabo, ed. Muller et Dubner, p. 286, l. 10. Τὴν μὲν Ἰάδα τῇ παλαιᾷ Ἀθηίδι τὴν αὐτὴν φασί, τὴν δὲ Δωρίδα τῇ Αἰολίδι. The same writer, at the commencement of the Christian era, has the following remark on the numerous spoken dialects of Greece: ἄλλοι ἄλλως διαλέγονται· σχεδὸν δὲ τι καὶ νῦν, κατὰ πόλεις, ἄλλοι ἄλλως διαλέγονται· δοκοῦσι δὲ διαρίξειν ἅπαντες διὰ τὴν συμβᾶσαν ἐπικράτειαν (ibid. p. 286, l. 45). See *Romans and Modern Greek*, by James Clyde, 1855, p. 28.

<sup>2</sup> Über den Namen Pelasgos, see Pischel in Kuhn's *Zeitschrift*, x. p. 369. He derives it from *paras-ga*, 'going across into a distant country,' which he supports by the name of the פַּרְגֵּי. The phonetic difficulties of this derivation are very serious.

<sup>3</sup> Herodotus (vii. 94 and 95) gives *Pelasgi* as the old name of the



Plato, indeed, in his *Cratylus* (cap. 36), throws out a hint that the Greeks might have received their own

Ionians in the Peloponnesus and the islands, and of the Æolians. Nevertheless he argues (i. 57) from the dialect spoken in his time by the Pelasgi of the towns of Kreston, Plakia, and Skylake, that the old Pelasgi spoke a barbarous tongue (*βάρβαρον τὴν γλῶσσαν ἰέντες*). He has, therefore, to admit that the Attic race, being originally Pelasgic, unlearned its language (*τὸ Ἀττικὸν ἔθνος ἐὶν Πελασγικὸν ἄμα τῇ μεταβολῇ τῇ ἐς Ἑλλάδας, καὶ τὴν γλῶσσαν μετέμαθε*). See Dieffenbach, *Origines Europææ*, p. 59. Dionysius of Halicarnassus (i. 17), avoids this difficulty by declaring the Pelasgi to have been from the beginning a Hellenic race, coming originally from the Peloponnesus, then settled in Thessaly, which was occupied by barbarians, and lastly expelled from Thessaly by Kurtes and Lekges, who are now called Ætolians and Lokrians. Both views, however, are merely individual theories.

The *Karians* are called *βαρβαρόφωνοι* by Homer (*Il.* v. 867); but Strabo (p. 565, l. 12) takes particular care to show that this was only intended to express the rough sound of their speech, and that Homer did not yet use barbarian as opposed to Hellenic. Strabo himself, however, considers the Karians as originally barbarians. He says that the Karians were formerly called *Δάκτες* (p. 267, l. 15; p. 564, l. 20), and these, together with Pelasgians, Kaukonos, and others, are reckoned by him (p. 266, l. 47; p. 267, l. 24) as the earlier *barbarous* inhabitants of Hellas. Again, he (p. 267, l. 30), as well as Aristotle and Dionysius of Halicarnassus (i. 17), considers the Lokrians as descendants of the *Leleges*, though they would hardly call the later Lokrians barbarians.

The *Macedonians* are mentioned by Strabo (p. 395, l. 45) together with 'the other Hellenes'. Demosthenes speaks of Alexander as a barbarian; Isokrates as a Heraklide. To judge from a few extant words, Macedonian might have been a Greek dialect. (Dieffenbach, *Origines Europææ*, p. 62.) Justin (vii. 1) says of the Macedonians, 'Populus Pelasgi, regio Paonia dicebatur.' There was a tradition that the country occupied by the Macedonians belonged formerly to Thracians, whom Strabo treats as barbarians, or Pierians (Thuc. ii. 99; Strabo, p. 267, l. 10); part of it to Thesalians (Strabo, p. 369, l. 44). Livius (31, 29) speaks of Ætolians, Akarnanians, and Macedonians as *ejusdem Linguae homines*.

The *Thracians* are called by Herodotus (v. 3) the greatest people after the Indians. They are distinguished by Strabo from Illyrians (Strabo, p. 260, l. 30; Dieffenbach, p. 65), from Celts (Strabo, p. 252, l. 27), and by Thucydides from the Getæ and Scythians (Thuc. ii. 96). What we know of their language rests on a statement of Strabo, that the Thracians

words from the barbarians, the barbarians being older than the Greeks. But he was not able to see the full bearing of this remark. He only points out that some words, such as the names of *fire*, *water*, and *dog*, were the same in Phrygian and Greek; and he supposes that the Greeks borrowed them from the Phrygians (§ 26). The idea that the Greek language and that of the barbarians could have had a common source never entered his mind. It is strange that even so comprehensive a mind as that of Aristotle should have failed to perceive in languages some of that law and order which he tried to discover in other realms of nature. As Aristotle, however, did not attempt this, we need not wonder that it was not attempted by any one else for the next two thousand years. The Romans, in all scientific matters, were merely the parrots of the Greeks. Having themselves

spoke the same language as the Getæ (Strabo, p. 252, l. 9), and the Getæ the same as the Dacians (Strabo, p. 253, l. 15). We possess fragments of Dacian speech in the botanical names collected by Dioscorides, and these, as interpreted by Gumm, are clearly Aryan, though not Greek. The Thracians are called barbarians by Strabo, together with Illyrians and Epirotæ (Strabo, p. 267, l. 6).

The *Illyrians* were barbarians in the eyes of the Greeks. They are now considered as an independent branch of the Aryan family. Herodotus refers the Veneti to the Illyrians (i. 196); and the Veneti, according to Polybius (ii. 17), who knew them, spoke a language different from that of the Celts. He adds that they were an old race, and in their manner and dress like the Celts. Hence many writers have mistaken them for Celts, neglecting the criterion of language, on which Polybius lays proper stress. The Illyrians were a widely extended race; the Pannonians, the Dalmatians, and the Dardaniæns (from whom the Dardanelles were called), are all spoken of as Illyrians (Diefenbach, *Oryzium Europææ*, pp. 74, 75).

It is lost labour to try to extract anything positive from these statements of the Greeks and Romans on the race and the language of their barbarian neighbours.

been called barbarians, they soon learnt to apply the same name to all other nations, except, of course, to their masters, the Greeks.

#### Barbarians.

Now *barbarian* is one of those lazy expressions which seem to say everything, but in reality say nothing. It was applied as recklessly as the word *heretic* during the Middle Ages. If the Romans had not received this convenient name of barbarian ready-made for them, they would have treated their neighbours, the Celts and Germans, with more respect and sympathy. They would, at all events, have looked at them with a more discriminating eye. And, if they had done so, they would have discovered, in spite of outward differences, that these barbarians were, after all, not very distant cousins. There was as much similarity between the language of Caesar and the barbarians against whom he fought in Gaul and Germany as there was between his language and that of Homer. A man of Caesar's sagacity would have seen this, if he had not been blinded by traditional phraseology. I am not exaggerating. For let us look at one instance only. If we take a verb of such constant occurrence as *to have*, we shall find the paradigms almost identical in sound in Latin and Gothic:—

English	Latin	Gothic <sup>1</sup>
I have	habeo	habu
Thou hast	habet	habais
He has	habet	habaiþ
We have	habemus	habam
You have	habetis	habaiþ
They have	habent	haband.

<sup>1</sup> Leo Meyer, *Die Gotische Sprache*, p. 38.

It surely required a certain amount of blindness, or rather of deafness, not to perceive such similarity, and that blindness or deafness arose, I believe, entirely from the single word *barbarian*. Not till that word barbarian was struck out of the dictionary of mankind, and replaced by brother, not till the right of all nations of the world to be classed as members of one genus or kind was recognised, can we look even for the first beginnings of our science.

#### **Influence of Christianity.**

This change was chiefly effected by Christianity. To the Hindu, every man not twice-born was a *Mlekkha*; to the Greek, every man not speaking Greek was a barbarian; to the Jew, every person not circumcised was a Gentile; to the Mohammedan, every man not believing in the Prophet is a *Kâfir*, an unbeliever, or a Gaur, a fire-worshipping infidel. It was Christianity which first broke down the barriers between Jew and Gentile, between Greek and Barbarian, between the white and the black. *Humanity* is a word which you look for in vain in Plato or Aristotle<sup>1</sup>; the idea of mankind as one family, as the children of one God, is an idea of Christian growth; and the science of mankind, and of the languages of mankind, is a science which, without Christianity, would never have sprung into life. When people had been taught to look upon all men as brethren, then, and then only, did the variety of human speech present itself as a problem that called

<sup>1</sup> See some qualifying remarks by Mr Higginson, in the *Proceedings of American Philological Associations*, 1874, p. 21.

for a solution in the eyes of thoughtful observers; and from an historical point of view it is not too much to say that the first day of Pentecost marks the real beginning of the science of language. After that day of cloven tongues a new light is spreading over the world, and objects rise into view which had been hidden from the eyes of the nations of antiquity. Old words assume a new meaning, old problems a new interest, old sciences a new purpose. The common origin of mankind, the differences of race and language, the susceptibility of all nations of the highest mental culture—these become, in the new world in which we live, problems of scientific, because of more than scientific, interest. It is no valid objection that so many centuries should have elapsed before the spirit which Christianity infused into every branch of scientific inquiry produced visible results. We see in the oaken fleet which rides the ocean the small acorn which was buried in the ground hundreds of years ago, and we recognise in the philosophy of Albertus Magnus,<sup>1</sup> though nearly 1200 years after the death of Christ, in the aspirations of Kepler,<sup>2</sup>

<sup>1</sup> Albert, Count of Bollstaden, or, as he is more generally called, Albertus Magnus, the pioneer of modern physical science, wrote:—‘God has given to man His spirit, and with it also intellect, that man might use it for to know God. And God is known through the soul and by faith from the Bible, through the intellect from nature.’ And again: ‘It is to the praise and glory of God, and for the benefit of our brethren, that we study the nature of created things. In all of them, not only in the harmonious formation of every single creature, but likewise in the variety of different forms, we can and we ought to admire the majesty and wisdom of God.’

<sup>2</sup> These are the last words in Kepler’s *Harmony of the Worlds*:—‘Thou who by the light of nature hast kindled in us the longing after the light of Thy grace, in order to raise us to the light of Thy glory, thanks to

and in the researches of the greatest philosophers of our own age, the sound of that key-note of thought which had been struck for the first time by the

Thee, Creator and Lord, that Thou lettest me rejoice in Thy works. Lo, I have done the work of my life with that power of intellect which Thou hast given. I have recorded to men the glory of Thy works, as far as my mind could comprehend their infinite majesty. My senses were awake to search as far as I could, with purity and faithfulness. If I, a worm before Thine eyes, and born in the bonds of sin, have brought forth anything that is unworthy of Thy counsels, inspire me with Thy spirit, that I may correct it. If, by the wonderful beauty of Thy works, I have been led into boldness, if I have sought my own honour among men as I advanced in the work which was destined to Thine honour, pardon me in kindness and charity, and by Thy grace grant that my teaching may be to Thy glory, and the welfare of all men. Praise ye the Lord, ye heavenly Harmonies, and ye that understand the new harmonies, praise the Lord. Praise God, O my soul, as long as I live. From Him, through Him, and in Him is all, the material as well as the spiritual—all that we know and all that we know not yet—for there is much to do that is yet undone.'

These words are all the more remarkable, because written by a man who was persecuted by Christian theologians, as a heretic, but who nevertheless was not ashamed to profess himself a Christian.

I end with an extract from one of the most distinguished of living naturalists:—'The antiquarian recognises at once the workings of intelligence in the remains of an ancient civilisation. He may fail to ascertain their age correctly, he may remain doubtful as to the order in which they were successively constructed, but the character of the whole tells him they are works of art, and that men like himself originated these relics of bygone ages. So shall the intelligent naturalist read at once in the pictures which nature presents to him, the works of a higher Intelligence, he shall recognise in the minute perforated cells of the conifer, which differ so wonderfully from those of other plants, the hieroglyphics of a peculiar age, in their needle-like leaves, the escacheon of a peculiar dynasty, in their repeated appearance under most diversified circumstances, a thoughtful and thought-eliciting adaptation. He beholds, indeed, the works of a being *thinking* like himself, but he feels, at the same time, that he stands as much below the Supreme Intelligence, in wisdom, power, and goodness as the works of art are inferior to the wonders of nature. Let naturalists look at the world under such impressions, and evidence will pour in upon us that all creatures are expressions of the thoughts of Him whom we know, love, and adore unseen.'

apostle of the Gentiles:<sup>1</sup> 'For the invisible things of Him from the creation of the world are clearly seen, being understood by the things that are made, even His eternal power and Godhead.'

#### Work done by Missionaries.

But we shall see that the science of language owes more than its first impulse to Christianity. The pioneers of our science were those very apostles who were commanded 'to go into all the world, and preach the gospel to every creature,' and their true successors, the missionaries of the whole Christian Church. Translations of the Lord's Prayer or of the Bible into every dialect of the world, form even now the most valuable materials for the comparative philologist. As long as the number of known languages was small, the idea of classification hardly suggested itself. The mind must be bewildered by the multiplicity of facts before it has recourse to revision. As long as the only languages studied were Greek, Latin, and Hebrew, the simple division into sacred and profane, or classical and oriental, sufficed.

#### Semitic Languages.

But when theologians extended their studies to Arabic, Chaldee, and Syriac, a step, and a very important step, was made towards the establishment of a class or family of languages.<sup>2</sup> No one could help

<sup>1</sup> Romans i. 20. Locke, *Essay concerning Human Understanding*, iv 10, 7.

<sup>2</sup> Hervæus (*Catalogo*, i 37) mentions the following works, published during the sixteenth century, bearing on the science of language:—*Introductio in Chaldaicam Linguam, Syriacam, atque Armenicam, et decem alias Linguas*, à Thesæo Ambrosio, Papiæ, 1539, 4to. *De Ratione com-*

seeing that these languages were most intimately related to each other, and that they differed from Greek and Latin on all points on which they agreed among themselves. As early as 1606 we find *Guichard*,<sup>1</sup> in his *Harmonie étymologique*, placing Hebrew,

*num omnium Linguarum et Litterarum Commentarius*, à Theodoro Bibliandro, Tiguri, 1548, 4to. It contains the Lord's Prayer in fourteen languages. Bibliander derives Welsh and Cornish from Greek, Greek having been carried there from Marseilles, through France. He states that Armenian differs little from Chaldee, and cites Postel, who derived the Turks from the Armenians, because Turkish was spoken in Armenia. He treats the Persians as descendants of Shem, and connects their language with Syriac and Hebrew. Servian and Georgian are, according to him, dialects of Greek.

Other works on language published during the sixteenth century are:—Perion, *Dialogorum de Lingua Gallica Origine ejusque cum Græcâ Cognatione, libri quatuor*, Parisiis, 1554. He says that as French is not mentioned among the seventy-two languages which sprang from the tower of Babel, it must be derived from Greek. He quotes Casau (*De Bello Gallico*, vi. 14) to prove that the Druids spoke Greek, and then derives from it the modern French language!

The works of Henri Estienne (1528–1598) stand on a much sounder basis. He has been unjustly accused of having derived French from Greek. See his *Traicté de la Conformité du Langage françois avec le grec*, about 1566. It contains chiefly syntactical and grammatical remarks, and its object is to show that modes of expression in Greek, which sound anomalous and difficult, can be rendered easy by a comparison of analogous expressions in French.

The Lord's prayer was published in 1548 in fourteen languages, by Bibliander; in 1591 in twenty-six languages, by Roccha (*Bibliotheca Apostolica Vaticana*, à fratre Angelo Roccha, Romæ, 1591, 4to.); in 1592 in forty languages, by Megiserus (*Specimen XL Linguarum et Dialectorum ab Hieronymo Megisero à diversis auctoribus collectarum quibus Oratio Dominica est expressa*, Francofurti, 1592); in 1593 in fifty languages, by the same author (*Oratio Dominica L diversis linguis*, cura H. Megiseri, Francofurti, 1593, 8vo.).

<sup>1</sup> At the beginning of the seventeenth century was published *Treſor de l'Histoure des Langues de cet Univers*, par Claude Duret, seconde édition, Iverdun, 1619, 4to. Hervæus says that Duret repents the mistakes of Postel, Bibliander, and other writers of the sixteenth century.

Before Duret came Estienne Guichard, *L'Harmonie étymologique*



Chaldee. and Syriac as a class of languages by themselves, and distinguishing besides between the Romance and Teutonic dialects.

#### Hebrew the Primitive Language.

What prevented however, for a long time, the progress of the science of language was the idea that Hebrew was the primitive language of mankind, and that therefore all languages must be derived from Hebrew. The fathers of the Church never expressed any doubt on this point. St. Jerome in one of his epistles to Damasus,<sup>1</sup> writes: 'The whole of antiquity (*universa antiquitas*) affirms that Hebrew, in which the Old Testament is written, was the beginning of all human speech.' Origen, in his eleventh Homily on the book of Numbers, expresses his belief that the Hebrew language, originally given through Adam, remained in that part of the world which was the chosen

*des Langues hébraïque, chaldéenne, syriaque—grecque—latine, française, italienne, espagnole—allemande, flamande, angloise, &c., Paris, 1606.*

Hervas only knows the second edition, Paris, 1618, and thinks the first was published in 1608. The title of his book shows that Guichard distinguished between four classes of languages, which we should now call the Semitic, the Hellenic, Italic, and Teutonic: he derives, however, Greek from Hebrew.

I. I Scaliger, in his *Diatriba de Europæorum Linguis (Opusculum varium*, Parisus, 1610), p. 119, distinguishes eleven classes: Latin, Greek, Teutonic, Slavonic, Epirotic or Albanian, Tataric, Hungarian, Finnic, Irish, British in Wales and Brittany, and Irok or Cantabrian.

<sup>1</sup> 'Initium oris et communis eloquii, et hoc omne quod loquimur, Hebræam esse linguam qua vetus Testamentum scriptum est, universa antiquitas tradidit.' In another place (Isaia, cap. 7) he writes:—'Omnium enim fere linguarum verbis utuntur Hebræi.' See also *Journal Asiatique*, 1850, juillet, p. 20.

portion of God, not, like the rest, left to one of His angels.<sup>1</sup>

The language of their sacred writings is by many people taken either for the most ancient language or for the natural language of mankind. With the Brahmans Sanskrit is the language of the gods, and, even with the Buddhists, Pâli or Mâgadhi, the language of Buddha and of their sacred canon, the Tripitaka, a language as clearly derived from Sanskrit as Italian is from Latin, is considered as the root of all languages. The Pâli grammarian Kâtyâyana says: 'There is a language which is the root (of all languages); men and Brahmans spoke it at the commencement of the Kalpa, who never before uttered a human accent, and even the superior Buddha spoke it: it is Mâgadhi.'<sup>2</sup>

<sup>1</sup> 'Mansit lingua per Adam primitus data, ut putamus, Hebræa, in ea parte hominum, quæ non pars alicujus angel, sed quæ Dei portio permanst.'

<sup>2</sup> See Spence Hardy, *Legends of the Buddhists*, p. 23, quoted from Alwis, *Lectures on Buddhism*, p. 55. The following extract is from the *Wibhanga Atwâna*.—'Parents place their children when young either on a cot or a chair, and speak different things, or perform different actions. Their words are thus distinctly fixed by their children (on their minds), thinking that such was said by him, and such by the other, and in process of time they learn the entire language. If a child, born of a Damila mother and an Andhaka father, should hear his mother speak first, he would speak the Damila language; but if he should hear his father first, he would speak the Andhaka. If, however, he should not hear either of them, he would speak the Mâgadhi. If, again, a person in an uninhabited forest, in which no speech (is heard), should intuitively attempt to articulate words, he would speak the very Mâgadhi. It predominates in all regions, such as hell, the animal kingdom, the petta (preta) sphere, the human world, and the world of the devas (gods). The remaining eighteen languages, Kirâta, Andhaka, Yonaka, Damila, etc. undergo changes, but not the Mâgadhi, which alone is stationary, as it is said to be the language of Brahman and

When, therefore, the first attempts at a classification of languages were made, the problem, as it presented itself to scholars such as Guichard and Thomassin, was this. 'As Hebrew is undoubtedly the mother of all languages, how are we to explain the process by which Hebrew became split into so many dialects; and how can these numerous dialects, such as Greek and Latin, Coptic, Persian, Turkish, be traced back to their common source, the Hebrew?'

It is astonishing what an amount of real learning and ingenuity was wasted on this question during the seventeenth and eighteenth centuries. It finds, perhaps, but one parallel in the laborious calculations and constructions of early astronomers, who had to account for the movements of the heavenly bodies, always taking it for granted that the earth must be the fixed centre of our planetary system. But, although we know now that the labours of such scholars as Thomassin were and could not be otherwise than fruitless, it would be a most discouraging view to take of the progress of the human race, were we to look upon the exertions of eminent men in former ages, though they may have been in a wrong direction, as mere vanity and vexation of spirit. We must not forget that the very fact of the failure of such men contributed powerfully to a general conviction that there must be something wrong in the problem itself, till at last a bolder genius inverted the problem and thereby solved it. When books after

Aryas Even Buddha, who rendered his *Tapi taka* words into doctrines, did so by means of the very *Māgadhī*, and why? Because, by doing so, it was easy to acquire their true signification.'

books had been written to show how Greek and Latin and all other languages were derived from Hebrew,<sup>1</sup> and when not one single system proved satisfactory, people asked at last—‘Why then *should* all languages be derived from Hebrew?’—and this very question solved the problem. It might have been natural for theologians in the fourth and fifth centuries, many of whom knew neither Hebrew nor any language except their own, to take it for granted that Hebrew was the source of all languages, but there is neither in the Old nor the New Testament a single word to necessitate this view. Of the language of Adam we know nothing; but if theologians hold that Hebrew was one of the languages that sprang from the confusion of tongues at Babel, it could not well have been the language of Adam, or of the whole earth, ‘when the whole earth was still of one speech.’<sup>2</sup>

Although, therefore, a certain advance was made towards a classification of languages by the Semitic scholars of the seventeenth century, yet this partial advance became in other respects an impediment. The purely scientific interest in arranging languages according to their characteristic features was lost sight

<sup>1</sup> Guichard went so far as to maintain that, as Hebrew was written from right to left, and Greek from left to right, Greek words might be traced back to Hebrew by being simply read from right to left.

<sup>2</sup> Among the different systems of Rabbinical exegesis, there is one according to which every letter in Hebrew is reduced to its numerical value, and the word is explained by another of the same quantity; thus, from the passage, ‘And all the inhabitants of the earth were of one language’ (Genesis xi. 1), is deduced that they all spoke Hebrew,  $\text{הָאָדָם}$  being changed for its synonym  $\text{הָאָדָם}$ , and  $\text{שְׂפָרָה}$  ( $5 + 100 + 4 + 300 = 409$ ) is substituted for its equivalent  $\text{אָרְבָּע}$  ( $1 + 8 + 400 = 409$ ). *Cohélet*, ed. Ginsburg, p. 31. Cf. Quatremère, *Mélanges*, p. 138.

of, and erroneous ideas were propagated, the influence of which has even now not quite subsided.

### Leibniz.

The first who really conquered the prejudice that Hebrew was the source of all language was Leibniz<sup>1</sup> the contemporary and rival of Newton. 'There is as much reason,' he said, 'for supposing Hebrew to have been the primitive language of mankind, as there is for adopting the view of Goropius, who published a work at Antwerp, in 1580, to prove that Dutch was the language spoken in Paradise.'<sup>2</sup> In a letter to

<sup>1</sup> As I have repeatedly been taken to task for writing Leibniz without a t, I may state in self-defence that I did so, neither from negligence nor from ignorance, nor from affectation, with all of which I have been charged, but for the simple reason that Leibniz himself never, either in his printed works or in his letters, spelt his name Leibnitz. See *Die Werke von Leibniz*, ed. Onno Klopp, Hanover, 1861, vol. i. p. xxiv.

<sup>2</sup> *Hermathena Joannis Goropii Becani*. Antwerp, 1580. *Origine Antwerpiane*, 1569. André Kempe, in his work on the language of Paradise, maintains that God spoke to Adam in Swedish, Adam answered in Danish, and the serpent spoke to Eve in French.

Chardin relates that the Persians believe three languages to have been spoken in Paradise; Arabic by the Serpent, Persian by Adam and Eve, and Turkish by Gabriel.

J. B. Eiro, in his *El Mundo primitivo*, Madrid, 1814, claims Basque as the language spoken by Adam.

A curious discussion took place about two hundred years ago in the Metropolitan chapter of Pampluna. The decision, as entered in the minutes of the chapter, is as follows.—1. Was Basque the primitive language of mankind? The learned members confess that, in spite of their strong conviction on the subject, they dare not give an affirmative answer. 2. Was Basque the only language spoken by Adam and Eve in Paradise? On this point the chapter declares that no doubt can exist in their minds, and that 'it is impossible to bring forward any serious or rational objection.' See Hennequin, *Essai sur l'Analogie des Langues* Bordeaux, 1838, p. 60.

I feel bound to add a note from M. Bludé's *Études sur l'Origine des Basques*, Paris, 1859, p. 533:—'Les archives civiles et religieuses

Tenzel, Leibniz writes—'To call Hebrew the primitive language, is like calling branches of a tree primitive branches, or like imagining that in some country hewn trunks could grow instead of trees. Such ideas may be conceived, but they do not agree with the laws of nature, and with the harmony of the universe, that is to say, with the Divine Wisdom.'<sup>1</sup>

**Leibniz collects materials.**

But Leibniz did more than remove this one great stumbling-block from the threshold of the science of language. He was the first to apply the principle of sound inductive reasoning to a subject which before him had only been treated at random. He pointed out the necessity of collecting, first of all, as large a number of facts as possible.<sup>2</sup> He appealed to missionaries, travellers, ambassadors, princes, and emperors, to help him in a work which he had so much at heart. The Jesuits in China had to work

de Pampelune ont été explorées minutieusement par des savants tels que Garibay, le P. de Morct, Yanguas y Miranda, etc ; et pas un ne confirme, que je sache, le dire de M. Hennequin. J'ai fait moi-même, et j'ai fait faire, sur ce point, des recherches demeurées sans résultat.'

<sup>1</sup> Guhrauer's *Life of Leibniz*, vol. ii. p. 129.

<sup>2</sup> Guhrauer, vol. ii. p. 127. In his *Dissertation on the Origin of Nations*, 1710, Leibniz says—'The study of languages must not be conducted according to any other principles but those of the exact sciences. Why begin with the unknown instead of the known? It stands to reason that we ought to begin with studying the modern languages which are within our reach, in order to compare them with one another, to discover their differences and affinities, and then to proceed to those which have preceded them in former ages, in order to show their filiation and their origin, and then to ascend step by step to the most ancient tongues, the analysis of which must lead us to the only trustworthy conclusions.'

for him. Witsen,<sup>1</sup> the traveller, sent him a most precious present, a translation of the Lord's Prayer into the jargon of the Hottentots. 'My friend,' writes Leibniz in thanking him, 'remember, I implore you, and remind your Muscovite friends, to make researches in order to procure specimens of the Scythian languages, the Samoyedes, Siberians, Bashkirs, Kalmuks, Tungusians, and others.'

Having made the acquaintance of Peter the Great, Leibniz wrote to him the following letter, dated Vienna, October the 26th, 1713:—

'I have suggested that the numerous languages, hitherto almost entirely unknown and unstudied, which are current in the empire of Your Majesty and on its frontiers, should be reduced to writing; also that dictionaries, or at least small vocabularies, should be collected, and translations be procured in such languages of the Ten Commandments, the Lord's Prayer, the Apostolic Symbolum, and other parts of the Catechism, *ut omnis lingua laudet Dominum*. This would increase the glory of Your Majesty, who reigns over so many nations, and is so anxious to improve them; and it would, likewise, by means of a comparison of languages, enable us to discover the origin of those nations who from Scythia, which is subject to Your Majesty, advanced into other countries. But principally it would help to plant Christianity among the nations speaking those dialects, and I have,

<sup>1</sup> Nicolaes Witsen, Burgomaster of Amsterdam, travelled in Russia, 1666-1672; published his travels in 1677, dedicated to Peter the Great. Second edition, 1705. It contains many collections of words.

therefore, addressed the Most Rev. Metropolitan on the same subject.'<sup>1</sup>

Leibniz drew up a list of the most simple and necessary terms which should be selected for comparison in various languages. At home, while engaged in historical researches, he collected whatever could throw light on the origin of the German language, and he encouraged others, such as Eccard, to do the same. He pointed out the importance of dialects, and even of provincial and local terms, for elucidating the etymological structure of languages.<sup>2</sup> Leibniz never undertook a systematic classification of the whole realm of language, nor was he successful in classing the dialects with which he had become acquainted. He distinguished between a Japhetic and Aramaic class, the former occupying the north, the latter the south, of the continent of Asia and Europe. He believed in a common origin of languages, and in a migration of the human race from east to west. But he failed to distinguish the exact degrees of relationship in which languages stand to each other, and he mixed up some of the Turanian dialects, such as Finnish and Tataric, with the Japhetic family of speech. If Leibniz had found time to work out all the plans which his fertile and comprehensive genius conceived, or if he had been

<sup>1</sup> *Catherinens der Grossen Verdienste um die vergleichende Sprachkunde*, von F. Adelung. Petersburg, 1815. Another letter of his to the Vice-Chancellor, Baron Schaffiroff, is dated Pirmont, June 22, 1716.

<sup>2</sup> *Collectanea Etymologica*, ii 255. 'Malim sine discrimine Dialectorum corrogari Germanicas voces. Puto quasdam origines ex superioribus Dialectis melius apparituras; ut ex Ullilo Pontogothico, Otfredi Franciscus.'



understood and supported by contemporary scholars. the science of language, as one of the inductive sciences, might have been established a century earlier. But a man like Leibniz, who was equally distinguished as a scholar, a theologian, a lawyer. an historian, and a mathematician, could only throw out hints as to how language ought to be studied. Leibniz was not only the discoverer of the differential calculus. He was one of the first to watch the geological stratification of the earth. He was engaged in constructing a calculating machine, the idea of which he first conceived as a boy. He drew up an elaborate plan of an expedition to Egypt, which he submitted to Louis XIV. in order to avert his attention from the frontiers of Germany. The same man was engaged in a long correspondence with Bossuet to bring about a reconciliation between Protestants and Romanists, and he endeavoured, in his *Théodicée* and other works, to defend the cause of truth and religion against the inroads of the materialistic philosophy of England and France. It has been said, indeed, that the discoveries of Leibniz produced but little effect, and that most of them had to be made again. This is not the case, however, with regard to the science of language. The new interest in languages, which Leibniz had called into life, did not die again. After it had once been recognised as a desideratum to bring together a complete *Herbarium* of the languages of mankind, missionaries and travellers felt it their duty to collect lists of words and draw up grammars wherever they came in contact with a new race. The two great

works in which, at the beginning of our century, the results of these researches were summed up—I mean the *Catalogue of Languages* by Hervas, and the *Mithridates* of Adelung—can both be traced back directly to the influence of Leibniz. As to Hervas, he had read Leibniz carefully, and though he differs from him on some points, he fully acknowledges his merits in promoting a truly philosophical study of languages. Of Adelung's *Mithridates* and his obligations to Leibniz we shall have to speak presently.

Hervas lived from 1735 to 1809. He was a Spaniard by birth, and a Jesuit by profession. While working as a missionary among the polyglottous tribes of America, his attention was drawn to a systematic study of languages. After his return, he lived chiefly at Rome in the midst of the numerous Jesuit missionaries who had at that time been recalled from all parts of the world, and who, by their communications on the dialects of the tribes among whom they had been labouring, assisted him greatly in his researches.

Most of his works were written in Italian, and were afterwards translated into Spanish. We cannot enter into the general scope of his literary labours, which are of the most comprehensive character. They were intended to form a kind of Kosmos, for which he chose the title of *Idea del Universo*. What is of interest to us is that portion which treats of man and language as part of the universe; and here, again, chiefly his *Catalogue of Languages*, in six volumes, published in Spanish in the year 1800.

If we compare the work of Hervas with a similar

work which excited much attention towards the end of the last century, and is even now more widely known than that of Hervas, I mean Court de Gebelin's *Monde primitif*,<sup>1</sup> we shall see at once how far superior the Spanish Jesuit is to the French philosopher. Gebelin treats Persian, Armenian, Malay, and Coptic as dialects of Hebrew; he speaks of Bask as a dialect of Celtic, and he tries to discover Hebrew, Greek, English, and French words in the idioms of America. Hervas, on the contrary, though embracing in his catalogue five times the number of languages that were known to Gebelin, is most careful not to allow himself to be carried away by theories not warranted by the evidence before him. It is easy now to point out mistakes and inaccuracies in Hervas, but I think that those who have blamed him most are those who ought most to have acknowledged their obligations to him. To have collected specimens and notices of more than three hundred languages is no small matter. But Hervas did more. He himself composed grammars of more than forty languages.<sup>2</sup> He was one of the first to point out that the true affinity of languages must be determined chiefly by grammatical evidence, not by mere similarity of words.<sup>3</sup> He proved, by a compara-

<sup>1</sup> *Monde primitif analysé et comparé avec le monde moderne.* Paris, 1773

<sup>2</sup> *Catalogo*, i. 63.

<sup>3</sup> 'Mas se deben consultar gramaticas para conocer su caracter proprio por medio de su artificio gramatical.'—*Catalogo*, i. 65. The same principle was expressed by Lord Monboddo, about 1795, in his *Antient Metaphysics*, vol. iv. p. 326: 'My last observation is, that, as the art of a language is less arbitrary and more determined by rule than either the sound or sense of words, it is one of the principal things by which the connection of languages with one another is to be discovered. And, therefore, when we find that two languages practise these great arts of

tive list of declensions and conjugations, that Hebrew, Chaldee, Syriac, Arabic, Ethiopic, and Amharic are all but dialects of one original language, and constitute one family of speech, the Semitic.<sup>1</sup> He scouted the idea of deriving all the languages of mankind from Hebrew. He had perceived clear traces of affinity between Chinese and Indo-Chinese dialects; also between Hungarian, Lapponian, and Finnish, three dialects now classed as members of the Turanian family.<sup>2</sup> He had proved that Bask was not, as was commonly supposed, a Celtic dialect, but an independent language, spoken by the earliest inhabitants of Spain, as proved by the names of the Spanish mountains and rivers.<sup>3</sup> Nay, one of the most brilliant discoveries in the history of the science of language, the establishment of the Malay and Polynesian family of speech, extending from the island of Madagascar east of Africa, over 208 degrees of longitude, to the Easter Islands west of America,<sup>4</sup> was made by

language,—derivation, composition, and flexion,—in the same way, we may conclude, I think, with great certainty, that the one language is the original of the other, or that they are both dialects of the same language.'

<sup>1</sup> *Catalogo*, ii. 468.

<sup>2</sup> *Ibid.* i. 49. Witsen, too, in a letter to Leibniz, dated mai 22, 1698, alludes to the affinity between the Tataric and Mongolic languages: 'On m'a dit que ces deux langues (la langue moegale et tartare) sont différentes à peu près comme l'Allemand l'est du Flamand, et qu'il est de même des Kalmucs et Moegals.'—*Collectanea Etymologica*, ii. p. 363.

<sup>3</sup> Leibniz held the same opinion (see Hervas, *Catalogo*, i. 50), though he considered the Celts in Spain as descendants of the Iberians.

<sup>4</sup> *Catalogo*, i. 30. 'Verá que la lengua llamada *malaya*, la qual se habla en la península de Malaca, es matriz de innumerables dialectos de naciones isleñas, que desde dicha península se extienden por mas de doscientos grados de longitud en los mares Oriental y Pacifico.'

*Ibid.* ii. 10 'De esta península de Malaca han salido enjambres de po-

Hervas long before it was worked out and announced to the world by Humboldt.

Hervas was likewise aware of the great grammatical similarity between Sanskrit and Greek, but the imperfect information which he received from his friend the Carmelite missionary Fra Paolino da S. Bartolommeo, the author of the first Sanskrit grammar, published at Rome in 1790, prevented him from seeing the full meaning of this grammatical similarity. How near Hervas was to the discovery of the truth may be seen from his comparing such words as *Theos*, God in Greek, with *Deva*, God, in Sanskrit. He identified the Greek auxiliary verb *eimi, eis, esti*, I am, thou art, he is, with the Sanskrit *asmi, asi, asti*. He even pointed out that the terminations of the three genders<sup>1</sup> in Greek, *os, ē, on*, are the same as the Sanskrit, *as, ā, a.n.*<sup>2</sup> But believing, as he did, that the Greeks derived their philosophy and mythology from India, he supposed that they had likewise borrowed from the

bladores de las islas del mar Indiano y Pacifico, en las que, aunque pareo a haber otra nacion, que es de negros, la *malaya* es generalmente la mas dominante y extendida. La lengua malaya se habla en dicha peninsula, continente del Asia, en las islas Maldivas, en la de Madagascar (perteneiente al Africa), en las de Sonda, en las Molucas, en las Filipinas, en las del archipiélago de San Lazaro, y en muchas mas del mar del Sur desde dicho archipiélago hasta islas, que por su poca distancia de America se creian pobladas por americanos. La isla de Madagascar se pone á 60 grados de longitud, y á los 268 se pone la isla de Paqan ó de Davis, en la que se habla otro dialecto malayo; por lo que la extension de los dialectos malayos es de 208 grados de longitud.<sup>2</sup>

<sup>1</sup> *Catologo*, ii. 134.

<sup>2</sup> *Ibid.* ii. 135. From what I had said before of *Guichard, Scaliger, Wilsen, Leibniz*, and others, it is quite clear that I did not consider *Hervas* as the first discoverer of those linguistic theories. I only wished to point out his real merits, which other historians had overlooked. See Bentley, *Geschichte der Sprachwissenschaft*, p. 270.

Hindus some of their words, and even the art of distinguishing the gender of words.

#### Adelung.

The second work which represents the science of language at the beginning of this century, and which is, to a still greater extent, the result of the impulse which Leibniz had given, is the *Mithridates* of Adelung.<sup>1</sup> Adelung's work depends partly on Herbas, partly on the collections of words which had been made under the auspices of the Russian government. Now these collections are clearly due to Leibniz. Although Peter the Great had no time or taste for philological studies, the government kept the idea of collecting all the languages of the Russian empire steadily in view.<sup>2</sup> Still greater luck was in store for the science of language. Having been patronised by Cæsar at Rome, it found a still more devoted patroness in the great Cæsarina of the North, Catharine the Great (1762-1796). Even as Grand-duchess, Catharine was engrossed with the idea of a Universal Dictionary, on the plan suggested by Leibniz. She encouraged the chaplain at the British Factory at St. Petersburg, the Rev. Daniel Dumaresq, to undertake the work, and he is said to have published, at

<sup>1</sup> The first volume appeared in 1806. He died before the second volume was published, which was brought out by Vater in 1809. The third and fourth volumes followed in 1816 and 1817, edited by Vater and the younger Adelung.

<sup>2</sup> Evidence of this is to be found in Strahlenberg's work on the *North and East of Europe and Asia*, 1730, with *tabula polyglotta*, &c.; in Messerschmidt's *Travels in Siberia*, from 1729-1739; in Bachmeister, *Idea et desideria de colligendis linguarum specimenibus*, Petropoli, 1773; in Guldenstädt's *Travels in the Caucasus*, &c.

her desire, a *Comparative Vocabulary of Eastern Languages*, in quarto, a work, however, which, if ever published, is now completely lost. The reputed author died in London in 1805, at the advanced age of eighty-four. When Catharine came to the throne, her plans of conquest hardly absorbed more of her time than her philological studies; and she once shut herself up nearly a year, devoting all her time to the compilation of her *Comparative Dictionary*. A letter of hers to Zimmermann, dated the 9th of May, 1785, may interest some of my readers.--

‘Your letter,’ she writes, ‘has drawn me from the solitude in which I had shut myself up for nearly nine months, and from which I found it hard to stir. You will not guess what I have been about. I will tell you, for such things do not happen every day. I have been making a list of from two to three hundred radical words of the Russian language, and I have had them translated into as many languages and jargons as I could find. Their number exceeds already the second hundred. Every day I took one of these words and wrote it out in all the languages which I could collect. This has taught me that the Celtic is like the Ostiakian—that what means sky in one language means cloud, fog, vault, in others; that the word God in certain dialects means Good, the Highest, in others, sun or fire. [As far as this her letter is written in French; then follows a line of German.] I became tired of my hobby, after I had read your book on Solitude. [Then again in French.] But as I should have been sorry to throw such a mass

of paper in the fire,—besides, the room, six fathoms in length, which I use as a boudoir in my hermitage, was pretty well warmed,—I asked Professor Pallas to come to me, and after making an honest confession of my sin, we agreed to publish these collections, and thus make them useful to those who like to occupy themselves with the forsaken toys of others. We are only waiting for some more dialects of Eastern Siberia. Whether the world at large will or will not see in this work bright ideas of different kinds, must depend on the disposition of their minds, and does not concern me in the least.’

If an empress rides a hobby, there are many ready to help her. Not only were all Russian ambassadors instructed to collect materials; not only did German professors<sup>1</sup> supply grammars and dictionaries, but Washington himself, in order to please the empress, sent her list of words to all governors and generals of the United States, enjoining them to supply the equivalents from the American dialects. The first volume of the Imperial Dictionary<sup>2</sup> appeared in 1787, containing a list of 285 words translated into

<sup>1</sup> The empress wrote to Nicolai at Berlin to ask him to draw up a catalogue of grammars and dictionaries. The work was sent to her in manuscript from Berlin, in 1785

<sup>2</sup> *Glossarium comparativum Linguarum totius Orbis*. Petersburg, 1787. A second edition, in which the words are arranged alphabetically, appeared in 1790–91, in 4 vols, edited by Jankiewitsch de Miriewo. It contains 279 (272) languages, i. e. 171 for Asia, 55 for Europe, 30 for Africa, and 23 for America. According to Adelung, as quoted by Pott, *Ungleichheit*, p. 230, it contains 277 languages, 185 for Asia, 52 for Europe, 28 for Africa, 15 for America. This would make 260. The first edition is a very scarce book.



fifty-one European and one hundred and forty-nine Asiatic languages. Though full credit should be given to the empress for this remarkable undertaking, it is but fair to remember that it was the philosopher who, nearly a hundred years before, sowed the seed that fell into good ground.

## CHAPTER V.

### THE DISCOVERY OF SANSKRIT.

#### *Imperfect Classification.*

**A**S collections, the works of Hervas, of the Empress Catharine, and of Adelung were highly important; though such is the progress made in the science of language during the last fifty years, that few people would now consult them. The principle of classification which is followed in these works can hardly claim to be called scientific. Languages are arranged geographically, as the languages of Europe, Asia, Africa, America, and Polynesia, though, at the same time, natural affinities are admitted which would unite dialects spoken at a distance of 208 degrees. Languages seemed to float about like islands on the ocean of human speech; they did not shoot together to form themselves into larger continents. This is a most critical period in the history of every science, and if it had not been for a happy accident, which, like an electric spark, caused the floating elements to crystallise into regular forms, it is more than doubtful whether the long list of languages and dialects, enumerated and described in the works of Hervas and Adelung, could long have sustained the interest of the student of languages. This electric spark was the discovery of Sanskrit, the ancient language of the Hindus.

**The Language of India.**

The history of the language and the dialects of India is by no means so simple and clear as was formerly supposed. The more it is studied, the more complicated it becomes. It begins with the Sanskrit of the Vedas, about 1500 B.C., though some scholars are inclined to place its beginning at a much earlier date. To me it seems that the admission of an earlier date would no doubt remove some difficulties, but that direct proof is quite impossible.

**Vedic Sanskrit.**

We can watch the Vedic language in three stages, that of the hymns, that of the Brâhmanas, and that of the Sûtras. Between the hymns and the Brâhmanas there must have been a complete break, and however carefully the pronunciation of the Vedic hymns may have been preserved by oral tradition, their true meaning had evidently been completely lost between the two periods. There is no such break between the Brâhmanas and the Sûtras, but the language of the Sûtras has preserved but few of the old Vedic peculiarities, and does not differ much from the ordinary Sanskrit, as fixed by the rules of Pâṇini's grammar.

The language of the Vedic hymns must have been at one time a spoken language in the North-West of India, but it should be remembered that we know it in its poetic form only, and mostly as applied to religious subjects. Though we cannot form a clear idea how these hymns were composed, preserved, and finally collected, one thing is quite certain, that they soon assumed a sacred character, and were handed

down with the most minute care. It is equally admitted by most Sanskrit scholars who have paid attention to this subject, that they were preserved till about the third century B.C. by means of oral tradition only. When I endeavoured for the first time to establish this fact in my *History of Ancient Sanskrit Literature* (1859),<sup>1</sup> I had to depend to a great extent on circumstantial evidence only. We know now as a matter of fact, that the alphabets employed in India in the third century B.C. by Asoka, would have been totally inadequate for reducing the Vedic hymns to a written form.<sup>2</sup> But this very ignorance of the art of writing produced a system of oral tradition of which we should have had no idea unless a full account of it had been preserved for us in the Prâtisâkhyas. No written alphabet which we know could ever have rendered the minute shades of pronunciation as detailed by the authors of the Prâtisâkhyas. No copyists could have handed down to us so accurate a representation of the Vedic hymns as we still meet with in the memory of living Śrotriyas.<sup>3</sup>

<sup>1</sup> *History of Ancient Sanskrit Literature*, pp 497-521, 'The Introduction of Writing'

<sup>2</sup> The old alphabet of the North-West has no signs for long vowels. Neither the North-Western nor the Magadha alphabet represents double consonants. The vowel *ri* was at first absent in both. The palatal *s* is absent in the old Magadha alphabet, and develops in later inscriptions. Senart, *Journal Asiatique*, 1886, p. 110

<sup>3</sup> Our best Vedic MSS. presuppose a knowledge of the rules of pronunciation as laid down in the Prâtisâkhyas, and cannot be read by us without such knowledge. Even in cases where the Devanâgarî alphabet could have expressed the more delicate varieties of pronunciation, the writers of the best MSS. are satisfied with indicating them, trusting that the reader will pronounce correctly, according to the rules of Śikṣâ phonetics).

It is clear, however, that this scholastic study of the Veda became a retarding element in the growth of the ancient language. Vedic Sanskrit became hieratic and unchangeable, and may thus have imparted even to the spoken language of the higher classes an amount of grammatical fixity which no language possesses in its natural state. We see indeed a small progress between the poetic hymns and the prose Brâhmanas, and again between the Brâhmanas and the Sûtras, but the grammar of the Sûtras, with the exception of some surviving Vedic forms, remained the grammar of Sanskrit, as fixed once for all by the grammatical rules of Pânini, whose probable, though by no means certain, date is the fourth century B. C. All Sanskrit literature after Pânini is under the iron sway of that grammarian. The literary language is no longer allowed to grow or to decay, but whatever contravenes his rules is *ipso facto* a blunder.<sup>1</sup> This applies to Kâlidâsa as much as to those who continue to write and speak Sanskrit to the present day.

#### Asoka's Inscriptions.

So far the history of Sanskrit seems clear and intelligible. But as soon as the real history of India begins, in the third century B. C., all is changed. We then perceive that the Vedic and the Pâninean Sanskrit form but one straight channel, and that by its side there run numerous streams of living speech, which are as far removed from Vedic and even from Pâninean Sanskrit as the Romanic dialects are from

<sup>1</sup> See M. M., *The Remains of Sanskrit Literature*, in 'India, what can it teach us?' pp. 281-366.

Latin. This fact cannot be doubted, for the inscriptions of Asoka are truly historical documents, contemporary witnesses of the language as then spoken in India; and in India, where historical documents are so scarce, their value, not only for chronology and political history, but for the study of the historical growth of the language of the country is immense.

I call the inscriptions of Asoka the only truly historical documents of the growth of the language of India for two reasons; first, because they are contemporary; secondly, because they are not written according to grammatical rules.

#### Grammatical and Ungrammatical Prâkrits.

If we call all Indian dialects which descend from Sanskrit, Prâkrit, we must distinguish between two classes, the *grammatical* and the *ungrammatical* Prâkrits, which may be called *Apabhramsas*. By grammatical Prâkrits I mean those which, like Sanskrit, are written according to the rules of grammarians, such as Pâli, the Prâkrit of the Buddhist scriptures, the *Gâna Mâgadhî* of the *Gâna* scriptures, and the Brahmanic Prâkrits, the so-called *Mahârâshtrî*, *Saurasenî*, and *Mâgadhî*. The last-named Prâkrits were used for popular poetry, such as the *Saptasatuka* of Hâla (467 A. D.), and for academic poetry, such as the *Setubandha*, the *Gauḍavaḍha*, and, more particularly, for dramatic plays.

#### Grammatical Prâkrits.

Vararuci, the oldest Prâkrit grammarian, treats of one classical Prâkrita, which in one place he calls

Mahârâshtrî. Whether he meant by this name to assign it to the country commonly called Mahârâshtra, or whether Dr. Hörnle is right in supposing that Mahârâshtrî with him meant the Prâkrit of the great kingdom, i.e. the Doâb and Râjputânâ,<sup>1</sup> certain it is that it is the Prâkrita *par excellence*. Of the other dialects which Vararuki mentions, Saurasenî, if it ever was restricted to the country of the Sûrasenas (about Mathurâ or the Vraçça) became for literary purposes the prose dialect, while Mahârâshtrî was reserved for poetry.<sup>2</sup> Saurasenî is in fact a mere subdivision of the Prâkrita (Mahârâshtrî), and hence, after the few special rules for Saurasenî have been given, Vararuki (xii 32) says, 'the rest is like Mahârâshtrî'; while Hemakandra (iv. 286) says, 'the rest is like Prâkrita.'

As to Mâgadhî (Behar), Vararuki (xi. 2) and Hemakandra (iv. 302) treat it as a modification of Saurasenî, and therefore indirectly of Mahârâshtrî. Paisâkî, as its very name indicates, is not a dialect properly so called, but Prâkrit as corrupted in the mouths of barbarians or devils.<sup>3</sup> Vararuki (x. 2) and Hemakandra (iv. 323) treat it as a corruption of Saurasenî. The Paisâkî in which the popular tales

<sup>1</sup> *Comparative Grammar of the Gaudian Languages*, p. xxii; Professor Jacobi takes Mahârâshtrî as the language of Mahârâshtra, the country on the Upper Godâvari with Pratishtâna as its capital (*Ausgewählte Erzählungen*, p. xiv). Dr. Hörnle maintains that Mahârâshtrî has not one point in common with Marâthî in which the latter differs from Western Hindi.

<sup>2</sup> *Sthitya-Darpana*, vi. § 732.

<sup>3</sup> See Hörnle, *Comparative Grammar of the Gaudian Languages*, p. xix. Lakshmidhara mentions as Pisika countries those of the Pândya, Kekaya, Vâhlika, Sahya, Nepâla, Kuntala, Sudesha (sic), Bhota, Gandhâra, Haiva, Kanoyana (sic).

are said to have been composed, the *Bṛihat-kathâ*, is unknown, and was probably a different dialect.

If we call the dialectic peculiarities of the *Saurasenî* x, and those of the *Mâgadhî* y, those of *Paisâkî* z, then

*Saurasenî* is = *Prâkrîta* + x,

*Mâgadhî* = *Prâkrîta* + x + y,

*Paisâkî* = *Prâkrîta* + x + z.

We have therefore, according to *Prâkrit* grammarians, one general *Prâkrîta* only, that of the great kingdom (*Mahârâshtrî*), while the other *Prâkrits* are minor modifications of it, used chiefly for theatrical purposes.

*Pâli*, the oldest *Prâkrit*, is naturally ignored by the *Prâkrit* grammarians, as its use is restricted to Buddhist, that is, to a heretical literature. The *Mahârâshtrî* was used by the *Gainas* in their ordinary literature, while the *Mahârâshtrî* of their sacred canon or *Siddhânta*, settled at the Council of *Valabhî*, 454 A. D., has preserved a number of archaic words and forms, and comes nearer in some respects to *Pâli*.<sup>1</sup>

We must remember that anything written in these grammatical *Prâkrits* was written, like *Sanskrit*, in fear and trembling. It is either right or wrong, according as it conforms to the rules of *Kâtyâyana* for *Pâli*, of *Vararûki*, *Hemakandra*, and other grammarians for the other *Prâkrits*. The *Pâli* of the *Tipitaka* obeys the rules of *Kâtyâyana*, not *vice versa*; and the same applies to the language of the *Gainas* and to the *Saurasenî* and *Mâgadhî* of the plays. The grammars presuppose, no doubt, a spoken language, but they also regulate it, and we know the spoken language

<sup>1</sup> *Jacobi, S. B. E.*, xxii, p. xli; *Kalpasûtra*, p. 17.



only as regulated by them. There are forms in Pâli which may almost be called Vedic, as being no longer allowed for ordinary Sanskrit by Pânini, nor tolerated in the later Prâkrits. This shows that the Pâli of the Tipitaka<sup>1</sup> has an historical foundation, but, as we know it, it has been reduced to strict grammatical regularity. The language spoken by Asoka was certainly not that of the Tipitaka which his son Mahinda is supposed to have taken to Ceylon. In order to account for the grammatical uniformity of the language, both of the Buddhist and the Gâina Canons, we must, I think, place their final edition later than the date of the earliest Pâli and Prâkrit grammarians. Kâlidâsa wrote his plays in the fear of Vararuki quite as much as of Pânini, and to the present day<sup>2</sup> plays are written in Sanskrit and Prâkrit, in which it is as difficult to detect a grammatical blunder as in the works of the great classical poets. It is very significant also, that these so-called grammatical Prâkrits are not used for ancient historical inscriptions.

**Ungrammatical Prâkrits. Asoka's Inscriptions.**

Quite different from these grammatical Prâkrits are the dialects employed in the inscriptions of Asoka and in some later inscriptions, extending in the North to the first century A. D., in the West to the second. These inscriptions are not written according to the rules of grammarians, but look like more or less successful attempts at representing, for the first time, the vernaculars, such as they were spoken at the time.

<sup>1</sup> See Muir, *Sanskrit Texts*, ii. p. 72.

<sup>2</sup> I have just received a play called the *Sâmavataṃ*, by Ambikâ-dattavyâsa, irreproachable in language and metre.

They represent a degree of corruption half-way between Pâli and the grammatical Prâkrits, but they differ from both by the unsettled state of their phonetic and grammatical character.

**The Gâthâ Dialect.**

The language used in the sacred writings of the Northern Buddhists, called the *Gâthâ dialect*, or by M. Senart, *Mixed Sanskrit*, belongs to the same category. It has not been written down, nor does it seem to have been remodelled according to the rules of any known grammarian, but it has a more scholastic character, and was probably reduced to writing by men more acquainted with the Sanskrit literature than the scribes of Asoka. It cannot, however, claim the same historical importance as the language of Asoka's inscriptions, because we are unable as yet to fix either its exact date or its locality.

**Ancient Apabhramsas.**

It seems to me that we must treat the language of the inscriptions as well as the language of the Northern Buddhist Canon as old Apabhramsas. Prâkrit grammarians distinguish between three component elements in Prâkrit, (1) tatsamas, words which are the same in Prâkrit and Sanskrit; (2) tadbhavas, words which are borrowed from Sanskrit and modified according to rule; (3) desî, literally local words, but often of Sanskrit origin, though not easily traced back to it.<sup>1</sup>

In addition to the Prâkrits, however, which comprise these three elements, Hemakandra mentions the

<sup>1</sup> See Hemakandra's *Desinâma mâlâ*, edited by Pischel and Bühler, Bombay, 1880, *Prâkrita-lakshana*m, ed Hornle, p. 1.

Apabhramsas, the spoken vernaculars of different parts of India. The more important are the Abhirî (Sindhî, Marwârî), the Âvantî (East-Râjpûtânî), the Gaurgarî (Gujarâtî), the Bâhlikâ (Panjâbî), the Saurasenî (West-Hindî), the Mâgadhî or Prâkyâ (East-Hindî), the Odrî (Orîyâ), the Gauḍî (Bangâlî), the Dâkshinâtyâ or Vaidarbhikâ (Marâṭhî), and the Paippâlî (Naipâlî?).<sup>1</sup>

It is quite clear from this list that these Apabhramsas were local dialects, and as we find a Saurasenî Apabhramsa, and a Mâgadhî Apabhramsa by the side of the Saurasenî and Mâgadhî Prâkrîta, it would seem to follow that the Apabhramsas represented the vulgar, the Prâkrîtas the literary dialects. Dr. Hornle has called attention to the fact that no Apabhramsa is mentioned for the Mahârâshṭrî, and this would no doubt tend to confirm his theory that Mahârâshṭrî is not the name of a local Prâkrit, but of the general Prâkrit of the great kingdom.<sup>2</sup>

What chiefly distinguishes Apabhramsas from Prâkrits is their unsettledness. Nearly all the rules applying to them are said to be prâyas, optional,<sup>3</sup> and the same applies to the language of the inscriptions and that of the Gâthâs.

It seems even possible to distinguish two Apabhramsas in the inscriptions which were put up in different parts of Asoka's kingdom.

#### Two Classes of Asoka's Inscriptions.

One class, the North-Western, comprises the inscriptions of Kapurdigiri and Girnar, the other all the

<sup>1</sup> See Hornle, *Grammar*, p. xxi.

<sup>2</sup> *L. c.* p. xxi.

<sup>3</sup> Hemakandra, iv. 329.

rest, those of Khalsi, Dhauli and Jaugada, Bahlira, Sahasarâm, Rûpanâth, Bairat, Kausâmbî, Barâbar, the so-called Edict of the Queen Allahabad, and the inscription on the column of Delhi and similar columns.<sup>1</sup> The first class possesses the lingual *n* and the palatal *ñ*, retains the initial *y* and the *r*, has the nom. sing. masc. in *o* and the locative in *amhi* or *e*; the second has no lingual *n*, no palatal *ñ*, drops initial *y*, changes *r* into *l*, and has the nom. sing. masc. and mostly neuter also in *e*, the locative in *asi*.<sup>2</sup> The nominative in *e* and the change of *r* into *l* were formerly considered sufficient for identifying the language of this class of inscriptions with the literary Mâgadhi Prâkrit, but this evidence seems far too meagre.<sup>3</sup> The language spoken in Magadha, the principal portion of his kingdom, may have exercised some influence on the writers of these inscriptions. But we must not forget that these edicts were not meant for Magadha alone, but for the whole kingdom, so that purely dialectic idioms would rather have had to be avoided in composing them.

#### Introduction of Writing.

And here we must try to realise the difficulties which the ministers of King Asoka had to encounter in trying for the first time to write the language of the people. The whole idea of writing, and of writing a vernacular language, was a novelty to them. They had no standard to follow, and any one who has attempted to write down for the first time a spoken

<sup>1</sup> See Map in Hornle's edition of the Prâkrita-lakshana, p. xx.

<sup>2</sup> See, however, for exceptions, Senart, in *Journal Asiatique*, 1886, p. 102.

<sup>3</sup> Senart, *Journal Asiatique*, 1886, p. 96.

dialect, knows the difficulty of settling what is individual and local or what is general; what is truly dialectic or what is due to literary influences. It is quite possible that the persons employed by King Asoka were not even men of high education or initiated in Vedic lore. This would account for the uncertainty in spelling, in grammar, in expression, sometimes approaching the literary Sanskrit, sometimes running counter to all grammatical rules. We find something analogous in the translations of the Bible by missionaries working independently among savage races. The same language seems hardly the same when reduced for the first time to writing by English or French missionaries. There are many of these irregularities in the inscriptions of Asoka which it is impossible as yet to account for. But for all that, the fact remains that the language in which Asoka addressed his subjects and which his subjects were supposed to understand, is as different from the literary Sanskrit as the Italian *vulgate* at the time of Dante was from classical Latin, and as different from Prâkrit as modern Provençal, if written down by ear, would be from French.

This language of the inscriptions of Asoka cannot be treated therefore as the lineal descendent of the Sanskrit of the Vedic hymns, the Brâhmanas, and the Sûtras. It rather represents one out of many parallel streams which in the divided kingdoms of that vast country must have developed, unchecked by any literary culture, while the literary Sanskrit remained almost stationary in its phonetic and grammatical organisation.

We know that Buddhism availed itself of the power which the local spoken dialects gave to its teachers. It allowed the doctrines of Buddha to be transferred into any dialect. I see no reason to doubt the belief of the Buddhists that Pâli was the language of Buddha,<sup>1</sup> only reduced to grammatical regularity at a very early time, and probably by the compilers of the Buddhist Canon. It possesses forms decidedly more primitive than the inscriptions of Asoka, and forms that could not have been invented by grammarians. Nor does it follow that it was not a dialect of Magadha, because the later Mâgadhî Prâkrit differs from it. Magadha may have had more than one dialect, and the dialect used by Buddha was fixed centuries before the so-called Mâgadhî Prâkrit. Westergaard<sup>2</sup> and E. Kuhn<sup>3</sup> took Pâli for the dialect of Uggayinî, the birth-place of Mahinda, the son of Asoka, who is believed to have taken the Pâli Tipitaka to Ceylon. Dr. Oldenberg doubts altogether Mahinda's conversion of Ceylon, as related in the Mahâvansa, and thinks that the Pâli text of the Tipitaka reached Ceylon from the country of the Andhras

<sup>1</sup> Pâli is sometimes called *Gina-vakana*, i. e. the language of Gîna or Buddha. It is also called the language of the Mâgadhâs (Mahâvansa, pp. 251, 253), because it was from Magadha that Mahinda was believed to have brought the sacred books to Ceylon. The Buddhists call that language the *mûlabhâsâ* (D'Alwis, *Pâli Grammar*, p. cvii), the root-language, from which all other languages were supposed to be derived, while they use Pâli, not as the name of a language, but in the sense of sacred text or scripture. *Tanti* also is used in the same sense (D'Alwis, *Pâli Grammar*, p. v). See also Barthélemy St Hilaire, in his report on Grimblot's *Collection of Buddhist MSS.*, published in the *Journal des Savants*, 1886, p. 26 of the separate edition.

<sup>2</sup> *Über den ältesten Zeitraum der indischen Geschichte*, p. 87.

<sup>3</sup> *Beiträge zur Pâli Grammatik*, p. 7.

and Kalingas in the Dekhan.<sup>1</sup> He lays great stress on the fact that the Sthavira school, which predominated in Ceylon, had its chief seat on the eastern shores of India, beginning at the mouth of the Ganges and extending southward to the kingdom of the Kalingas and the country of the Dravidas; and on the western shores in Bharukakleha and Surâshtra, countries closely connected with Ceylon. In the Malaya kingdom also a monastery is mentioned as having been founded by Mahinda.<sup>2</sup> Dr Oldenberg therefore takes Pâli as the old language of the Andhra kingdom, and supposes that the Pâli text of the Tipitaka came to Ceylon from the Dekhan.<sup>3</sup>

These conclusions seem to me to go far beyond the evidence on which they are based. Even admitting that the language of the inscriptions found in the Andhra and Kalinga country resembled Pâli, this would not prove that Pâli was spoken, but only that, like Sanskrit, it was used there for inscriptions. We are far safer in accepting the view taken by the Buddhists themselves that Pâli was the language of Buddha, only remodelled by later grammarians. As Ceylon (Tambapanni) is mentioned in Asoka's inscriptions, there is no reason to doubt that his son, Mahinda, led a colony to that island and took with him whatever existed then of the Buddhist Canon. If earlier colonies from Magadha had already taken possession of Ceylon, their language would account for the Elu, as the spoken language there, and its difference from the literary

<sup>1</sup> Oldenberg, *Vinaya*, vol. i. Introd. p. liv.

<sup>2</sup> *L. c.* p. lili.

<sup>3</sup> Oldenberg, *Buddha*, English translation, p. 177.

Pâli, just as in India we see the spoken Mâgadhi or the Apabhramsa of the inscriptions quite distinct from the well-regulated language of the Tipitaka.

#### **Difficulty of Writing a Spoken Language.**

In judging of the historical inscriptions of Asoka and of their unsettled phonetic and grammatical character, we have always to keep in mind that they represent the first attempt at writing in India. We have absolutely no evidence whatever of writing in India before these inscriptions, and we may be quite certain that the very idea of writing for literary purposes did not touch the Indian mind long before its contact with Alexander the Great, and through him with the West at large. The two alphabets used by Asoka in his inscriptions are both of foreign and Semitic origin; that of Kapurdigiri, written from right to left, is palpably so, that of Girnar, written from left to right, shows evident traces of having been framed systematically out of the same or very similar materials. Neither of these Indian alphabets is, like other alphabets, the result of a natural growth out of ideographic and syllabic elements. It is the work of a committee of learned men who, probably under royal auspices, contrived from foreign sources an alphabet that should somehow or other be adequate to express the sounds of the spoken language. The alphabet used in the North-West (right to left) may have existed before Asoka, but the Magadha alphabet (left to right) was clearly the work of the royal scribes at his court, and varied but slightly when used in different parts of his vast kingdom, and possibly under the influence of differ-



ent committees of learned men entrusted with the publication of the royal edicts.

If we keep this in view, if we remember that the writers of these inscriptions, though they may have been acquainted with Vedic and even with Pâninean Sanskrit, had no written texts of any kind to guide them in fixing the spelling of the spoken dialects of the country, we shall better understand their hesitation between what may be called phonetic and historical spelling, which is often so perplexing in these inscriptions. We shall also understand, what has been well pointed out by M. Senart, that in the hands of royal scribes the character of these inscriptions approached gradually, as time went on, to a more and more correct system, till at last the idea seems to have arisen that even Sanskrit was not too sacred a language to be reduced to a written form, and to be used for profane purposes, such as royal proclamations, edicts, and all the rest. In the North, according to M. Senart,<sup>1</sup> inscriptions became nearly pure Sanskrit at the time of Kanishka, first century A.D.,<sup>2</sup> in the West, at the time of Rudradâman, second century A.D.<sup>3</sup> At the same time, or a little later, the employment of the historical Prâkrits (without double consonants) ceased, while the grammatical Prâkrits, as we saw, were never used for monumental purposes.

We can thus understand the curious phenomenon that the language of the inscriptions, instead of becoming less regular, becomes more regular, and more

<sup>1</sup> *Journal Asiatique*, 1886, p. 331.

<sup>2</sup> Inscription of Mathurâ.

<sup>3</sup> Inscription of Gîrnar, Sâka 75 or 80, A. D. 153 or 158.

Sanskrit-like in its historical progress, till at last it is altogether superseded by pure grammatical Sanskrit.

**Renaissance of Sanskrit Literature.**

About that time, in the third or, at all events, in the fourth century, began in different Brahmanic centres what I have ventured to call the *Renaissance of Sanskrit Literature*, comprising all that we are accustomed to call Sanskrit, with the exception of the ancient Vedic literature. There must have existed, besides the Vedic literature, a considerable amount of poetry, and possibly of prose also, composed in the language which Pânini's grammar describes and settles for ever. But that literature, composed in the so-called Bhâshâ, or speech of the country, is lost, though parts of it may survive in certain portions of the Mahâbhârata, even such as we now possess it.

About 400 A. D. the revival of Sanskrit literature begins. Sanskrit and Sanskrit only was now used for public inscriptions. The Apabhramisas, i. e. the historical or monumental or ungrammatical Prâkrits, had come to an end, and whatever was written in the dialects of the country, whether the sacred writings of Buddhists and Gainas, or the profane poetry of Hâla, or the conversational portions of the plays, or complete artificial poems such as the Setubandha, had now to submit to the rules of grammarians, such as Kâtyâyana, Vararûci, and in later times Hemakandra, quite as much as Sanskrit writers had to obey the rules of Pânini. M. Senart places the origin of the Prâkrit grammars in the third century A. D.,<sup>1</sup> and would there-

<sup>1</sup> *Journal Asiatique*, 1881, p. 393. But how can the date of Vararûci be fixed?

fore refer all texts written in grammatical Prâkrits to a period later than the third century. This seems to me quite unobjectionable so long as we admit that the component parts of the Tipitaka existed during preceding centuries, only in a less regulated Prâkrit dialect.

The history of the language spoken in India, so far as we can follow it at present, would therefore fall into two branches :

*First Branch, Sanskrit.*

(1) The Vedic Sanskrit, Hymns, Brâhmanas, Sûtras, 1500–300 B. C.

(2) Pâṇinian Sanskrit, from 300 B. C. to the present day, with an interruption from the first to the fourth century A. D.

*Second Branch, Prâkrit.*

(1) The ungrammatical Prâkrit, Inscriptions from 250 B. C. to 200 A. D.; the Prâkrit of the Northern Buddhist Canon (Apabhraṃsa).

(2) The grammatical Prâkrits, Pâli, Gâina-Mâgadhi, Prâkrita (Mahârâshtri, Saurasenî, Mâgadhi), from 300 A. D. to present day.

**The Modern Vernaculars.**

We have now to consider the languages of India, as spoken at the present day. These languages have of late been so carefully studied by scholars such as Hornle, Beames, Grierson, and others, that we can gain a much clearer view of their origin and spreading than was possible in former years. The spoken languages of India, which have been called Neo-Aryan, Neo-Sanskrit, or Gaudian, seem to me to have a

perfect right to the common name of Prâkritic, which would at once distinguish them from the old Prâkrits, and would at the same time indicate their real origin. They are not derived from Sanskrit, but from the old Prâkrits, or, more truly still, from the local Apabhramsas.

These living Prâkritic languages have now been arranged under four heads, as *Western*, *Northern*, *Southern*, and *Eastern*.

The Western class comprises Sindhî, Gujarâtî, Panjâbî, and Western Hindî;

The Northern class comprises Garhwâlî, Kumaonî, and Naipâlî;

The Southern class comprises Marâthî;

The Eastern class comprises Bihârî (or Eastern Hindî), Bengâlî, Uriyâ, and Asâmî.

The Northern and Western classes on one side, and the Southern and Eastern on the other, show certain traces of affinity.

All these names are derived from the locality in which each language is spoken. The only exception is Hindî, a name given formerly to the language spoken in the central portion of Northern India. That name, however, has now to be discarded, as it comprises or rather confuses two languages or groups of dialects which are as different from one another as Panjâbî is from Bengâlî. The Eastern group of these dialects is now called Bihârî,<sup>1</sup> the Western still retains the inconvenient name of Western Hindî. The Eastern comprises Baiswârî (Audh) Bhojpurî, Maithilî,

<sup>1</sup> *Seven Grammars of the Dialects and Subdialects of the Bihâri Language*, by G. A. Grierson, 1883.

Mâgadhî, the Western Marwârî, Jaipurî, Braj Bhâshâ, Kanaujî. The dividing line of the two groups is about the 80th degree of E. longitude.

What used to be called Hindî, the literary or High Hindî,<sup>1</sup> is really a modified form of the Braj Bhâshâ, which was first changed into Urdu by being deprived of its wealth of grammatical forms, and mixed with Panjâbî and Marwârî forms. Urdu originated in the twelfth century round Delhi, then the centre of the Mohammedan power, in the camps (urdû) of the soldiers, and its vocabulary was largely recruited from Persian and Arabic. In the sixteenth century, under Akbar, Urdu began to produce a literature and spread over India, but it never became a real vernacular. In the present century Urdu has freed itself more and more of its Persian elements, and under English and Hindu influence has become what is now called High Hindî. Urdu and High Hindî are therefore the same language, identical in grammar, but the former using as many foreign words, the latter as few foreign words as possible.

All these languages and dialects must be considered as the descendants, not of the grammatical Sanskrit, nor of the grammatical Prâkrit, but of the various Apabhramsas, spoken in different parts of India, and reduced to some kind of grammatical order, partly by native schoolmasters, partly by literary cultivation. Hornle mentions the poet Chand in the twelfth century as representing the Western, Nâmdev and Dnândev in the thirteenth century as representing the Southern, Bidyâpati in the fourteenth or fifteenth century as re-

<sup>1</sup> See Hornle, *Comparative Grammar*, p. vi.

presenting the Eastern Gaudian, as yet undivided into local dialects. Later poets write each in his own dialect; Kabir (fifteenth century) in Western Hindî; Tulsî Dâs (1541-1624) in Eastern Hindî; Kabi Kankan in Bengâlî, Upendro Bhanj in Uriyâ, Tukarâm in Marâthî, Narsingh Mahta in Gujarâtî.<sup>1</sup>

Dr. Hörnle<sup>2</sup> has collected some evidence to show that the two divisions of the modern vernaculars, are derived from grammatical Prâkrits. The Northern and Western from Saurasenî, the Southern and Eastern from Mâgadhi. That evidence is naturally scanty, but it is valuable as showing certain tendencies preserved even in the literary Prâkrits, which appear again in the modern vernaculars. Vernaculars, however, spring from vernaculars, never from literary languages, and it is to the vernaculars or Apabhramsas of the North-West and South-East of India that we must look for the true origin of the dialects now spoken in India, and not to the language of the Vedas, the Tipitaka, Sakuntalâ, nor to the grammars of Pânini, Kâtyâyana, or Vararuki.

#### Sinhalese.

There is one other vernacular which has now been clearly proved to be Prâkritic, viz. that of Ceylon, the Sinhalese. It is curious that such scholars as Colebrooke, Stevenson and others should have treated that language as a Dravidian dialect. I believe I was the first who in 1854 claimed it as a member of the Aryan family, a view which has since been fully confirmed

<sup>1</sup> Hörnle, *Comparative Grammar*, p. xxxv.

<sup>2</sup> *Ibid.* pp. xxvi-xxx.

by the labours of D'Alwis, Childers, Kuhn, and others. Dr. Goldschmidt tried to prove that the language of Ceylon shares some characteristics in common with the Magadha Prâkrit, but the exact relationship between Sinhalese and any other of the Prâkritic dialects requires still further investigation. Neither Beames nor Hornle have treated it in their comparative grammars.

In its oldest form the language of Ceylon is called *Elu*, which has been shown by D'Alwis<sup>1</sup> to be a corruption of Sinhala. This language is believed to have been brought to Ceylon by a colony from Lâla, a district of Mâgadhî, at the time of Buddha's death, and this tradition is confirmed by the fact that, according to Childers, Sinhalese agrees with Pâli when Pâli differs from the other Prâkrits. The old Sinhalese or Elu differs from the modern no more than the Anglo-Saxon from English. The modern Sinhalese has, however, evolved many new grammatical forms and admitted a large number of Sanskrit words.

If we may trust the Mahâvansa, Sinhalese must have been distinct from Pâli as early as the third century B. C., for at that time it is said that Mahinda translated the Buddhist Arthakathâs or commentaries, not, as Weber says, the text of the Tipitaka, from Pâli into Sinhalese, while in the fifth century A. D. Buddhaghosha translated Mahinda's Sinhalese translation back into Pâli. From that time, possibly from the date of Mahinda's translation, the changes in the written language of Ceylon seem to have been inconsiderable.<sup>2</sup>

Elu books are said to date from the fifth and sixth

<sup>1</sup> *Sidath Sangarava*, p. xxxii.

<sup>2</sup> See Childers, *Notes on the Sinhalese Language*, 1878.

centuries A.D. By the researches of Dr. P. Goldschmidt and Dr. E. Muller inscriptions have lately been discovered in Ceylon going back to the first and second centuries B. C.<sup>1</sup>

<sup>1</sup> *Report on Inscriptions*, by P. Goldschmidt and Dr. E. Muller; printed by Order of Government, Colombo, 1876-1879.



## CHAPTER VI.

### SANSKRIT AS KNOWN OUTSIDE INDIA.

WE have seen that the history of the language of India and its various dialects is more complete in its successive periods than that of almost any other language.

Yet such was the surprise created by the discovery of this language and by its startling similarity to the classical languages of Greece and Rome, that some of the most enlightened spirits of the last century declined to believe in its historical reality, and accused the wily Brahmans of having forged it to deceive their conquerors. No one gave stronger expression to that opinion than Dugald Stewart in his *Conjectures concerning the Origin of the Sanskrit*. At present this controversy has no more than an historical interest. Still it may be useful to show how the existence of Sanskrit, as a real language, might have been proved by independent testimony, namely by the accounts left us by the four nations who successively came in contact with India, the Jews, the Greeks, the Chinese, and the Arabs. Besides, though it is true that we do not want their evidence any longer to prove that Sanskrit was a real, not a

forged language, that testimony will nevertheless be useful, because in the absence of anything like history or chronology in India, the accounts left us at different periods by Jews, Greeks, Chinese, and Arabs will continue to serve, like broad longitudinal lines, to impart a certain order and regularity to the ill-defined map of Indian language and literature.

I place the Jewish testimonies first because, though the date of the Books of Kings, in which commercial relations between Phenicia, Palestine, and India are alluded to, may be uncertain, it is certainly anterior to that of the Greek testimonies which will follow after.

#### **Jewish Testimonies.**

Let it be remembered then that in the hymns of the Veda, which are the oldest literary compositions in Sanskrit, the geographical horizon of the poets is, for the greater part, limited to the north-west of India. There are very few passages in which any allusions to the sea or the sea-coast occur, whereas the Snowy Mountains, and the rivers of the Panjâb, and the scenery of the Upper Ganges valley, are familiar objects to the ancient bards. There is no doubt, in fact, that the people who spoke Sanskrit came into India from the north-west, and gradually extended their sway towards the south-east. Now, at the time of Solomon, it can be proved that Sanskrit was spoken at least as far south as the mouth of the Indus.

The navy-ships which Solomon made at Ezion-geber, which is beside Eloth, on the shore of the Red Sea, in the land of Edom, are well known to Old Testament students. That fleet was manned by the servants of

Solomon and by the servants of Hiram, king of Tyre, and it went to Ophir and fetched from thence gold, and brought it to king Solomon (1 Kings ix. 26-28). From the same Ophir the fleet of Hiram is said to have brought not only gold, but great plenty of alghum-trees and precious stones (1 Kings x. 11). The sea-port of the fleet of Solomon is called Ezion-geber, and this Ezion-geber has by most scholars been identified with the modern port of Akaba on the north-east extremity of the Red Sea. It was in the same harbour of Ezion-geber that the ships of Tharshish were broken which Jehoshaphat made to go to Ophir for gold (1 Kings xxii. 48). What is meant by 'ships of Tharshish' is uncertain, but if we read (1 Kings x. 22) that Solomon had at sea a navy of Tharshish with the navy of Hiram, and that the navy of Tharshish came once in three years bringing not only gold, but silver, ivory, apes, and peacocks, the natural conclusion seems to be that Solomon possessed only one sea-port, i.e. that of Ezion-geber, and that his ships started from thence, both in order to fetch gold, alghum-trees, and precious stones from Ophir, and gold, silver, ivory, apes, and peacocks from some country not specified.

A great deal has been written<sup>1</sup> to find out where this Ophir was; and though I allow that the question does not admit of a definite answer, yet the evidence seems to me to incline in favour of India, or of a sea-port on the south-east coast of Arabia, carrying on an

<sup>1</sup> An excellent account of the whole controversy may be seen in the articles *Ophir* and *Tarshish* in Smith's *Dictionary of the Bible*, contributed by the Hon. E. T. B. Twissleton.

active trade with India. The names for *algum-trees*, as well as for *apes*, *peacocks*, and *ivory*, are foreign words in Hebrew, as much as *gutta-percha* or *tobacco* are in English. Now, if we wished to know from what part of the world *gutta-percha* was first imported into England, we might safely conclude that it came from that country where the name, *gutta-percha*, formed part of the spoken language.<sup>1</sup> If, therefore, we can find a language in which the name for *algum-tree*, which is foreign in Hebrew, is indigenous, we may be certain that the country in which that language was spoken must have been the country from whence Solomon obtained *algum-trees*, and, therefore, the Ophir of the Bible. It would not yet follow, as Mr. Twisleton has shown, that the other articles, *ivory*, *apes*, and *peacocks*, must likewise have come from Ophir, for the Bible nowhere says that they came from Ophir. But if it should turn out that the names of these articles came from the same language, which can be proved to be the language of Ophir, it would not seem an entirely unfounded conjecture to suppose, in the absence of evidence to the contrary, that these articles too came from the same country. The language in which the names for *algum-trees*, as well as for *ivory*, *apes*, and *peacocks*, find their most plausible etymology is Sanskrit; and if that language was spoken at Ophir and in some other place, it is probable that Ophir as well as that other place were situated in India, and accessible by sea.

<sup>1</sup> *Gutta* in Malay means *gum*, *percha* is the name of the tree (*Isonandra gutta*), or of an island from which the tree was first imported (*Pulo percha*).

Now, the *algum-tree*, or, as it is called in other places, the *almug-tree*, is supposed to be the sandal-wood-tree. I feel bound to confess that the evidence on which this identification rests was by no means satisfactory<sup>1</sup> before it was discovered that one of the numerous names for this tree in Sanskrit is *valguka*, sandal-wood. This *valguka*, which points back to a more original form *valgu*, might easily have been corrupted by Phœnician and Jewish sailors into *algum*, a form, as we know, still further corrupted, at least in one passage of the Old Testament, into *almug*. Sandal-wood is found indigenous in India only, and there chiefly on the coast of Malabar.

On the evidence, however, of the name *algum* alone, we could hardly say that Ophir was identified with a country in which the spoken language was Sanskrit. But if we examine the names for *peacocks*, *apes*, and *ivory*, and arrive at the same result, viz. that they are foreign in Hebrew, and explicable by Sanskrit, the evidence becomes stronger, and would not only warrant the supposition that Ophir was to be sought for in India, but likewise render it probable that the unknown country which yielded the names of these articles was the same which yielded the articles themselves,—a country within reach of the fleet of Ezion-geber, and probably not far from Ophir.

Now, *apes* are called in Hebrew *koph*, a word without any etymology in the Semitic languages, but nearly identical in sound with the Sanskrit name of

<sup>1</sup> See the Hon. F. T. B. Twissleton's article on *Ophir*, in Smith's *Dictionary of the Bible*, vol. ii. p. 640.

ape, *kapi*. Professor Dümichen<sup>1</sup> identifies this word with the hieroglyphic *kafu*, which occurs in inscriptions of the seventeenth century.

*Ivory* is called either *shen*, tooth, or *karnoth-shen* horns of tooth; or *shen habbin*. This *habbin* is again without a derivation in Hebrew, but it may be a corruption of the Sanskrit name for elephant, *ibha* preceded by the Semitic article.<sup>2</sup>

Lastly, the *peacocks* are called in Hebrew *tukhi-im*, and this finds its explanation in the old classical name of the pea-fowl in Tamil, *tókei*, dialectically pronounced *tógei*. In modern Tamil *tókei* generally signifies only the peacock's tail, but in the old classical Tamil it signifies the peacock itself.<sup>3</sup>

Of these articles, ivory, gold, and apes are indigenous in India, though of course they might have been found in other countries likewise. Not so the *algum-tree*, at least if interpreters are right in taking

<sup>1</sup> *Die Flotte einer Aegyptischen Königin*, 1868, tab ii. p. 17.

<sup>2</sup> See Lassen, *Indische Alterthumskunde*, b. i. s. 537.

<sup>3</sup> Cf. Caldwell, *Dravidian Grammar*, second edition, p. 91. This excellent scholar points out that *tókei* cannot be a corruption of Sanskrit *sikhin*, crested, as I had supposed, *sikhin* existing in Tamil under the form of *sigi*, peacock. *Tógei* does not occur either in Canarese, Telugu, or Malayâlm. Dr. Gundert, who has for many years devoted himself to the study of the Dravidian languages, was the first to derive *tógei* from a root *tó* or *tâ*. From this, by the addition of *nyu*, a secondary base, *tonyu*, is formed in Tamil, meaning to hang, to be pendent. Hence the Tamil *tongal*, a peacock's tail, ornaments, &c; in Malayâlm, *tóngul*, plunage, ornaments for the ear, drapery, &c. By adding the suffix *ker* or *yer* we get *togei*, what hangs down, tail, &c. If this etymology be right, it would be an important confirmation of the antiquity of the Tamulic languages spoken in India before the advent of the Aryan tribes. Dr. Gundert points to the ordinary name for peacock in Tamil, viz *nay-il* (blue-house), as the probable etymon of the Sanskrit *mayûra*, peacock. *Mayûra*, however, occurs in the Veda.

*algum* or *almug* for sandal-wood, nor the peacock. Sandal-wood, as pointed out before, is peculiar to India, and so is the peacock.<sup>1</sup> That the peacock was exported from India to Babylon (Bâberu) is shown by one of Pâli Gâtakas.<sup>2</sup> The name here used for the peacock is *mora*, Sanskrit mayûra.

If then Ophir, i.e. the country of the *algum*-tree, is to be sought for in India, and if the place from which the fleet of Solomon fetched peacocks, apes, and ivory, must likewise be sought for in a country where Sanskrit was spoken, a most natural place to fix upon is the mouth of the Indus. There gold and precious stones from the north would have been brought down the Indus; and sandal-wood, peacocks, and apes would have been brought from Central and Southern India. In this very locality Ptolemy (vi. 1) gives us the name of *Aberia*, above *Pattalene*. In the same locality Hindu geographers place the people called *Abhira* or *Abhira*, who must have been an important people, as their language is always mentioned first among the Apabhramsas or ungrammatical vernaculars. In the same neighbourhood MacMurdo, in his account of the province of Cutch, still knows a race of *Ahirs*,<sup>3</sup> the descendants, in all probability, of the people who sold to Hiram and Solomon their gold and precious stones, their apes, peacocks, and sandal-wood.<sup>4</sup>

<sup>1</sup> See the article *Tarshish* by E. T. in Smith's *Dictionary of the Bible*, vol. iii. p. 1410. It is strange that, in 2 Chron. ii. 8, *algum* trees should be mentioned as if growing in Lebanon.

<sup>2</sup> See Minayeff, in *Mélanges Asiatiques*, vi. p. 593.

<sup>3</sup> See also Sir Henry Elliot's *Supplementary Glossary*, s.v. *Aheer*.

<sup>4</sup> The arguments brought forward by Quatremère, in his *Mémoire*

This identification of Ophir with some place in India is not a modern conjecture. The Vulgate translates Job xxviii. 16, 'It cannot be valued with the gold of Ophir' (Sophir, LXX), by 'Non conferetur tinctis Indiæ coloribus.' In Coptic *Sofir* is the name for India, the same word by which the LXX translated the Hebrew Ophir.

Considering that in the Veda the people who spoke Sanskrit were still settled in the north of India, whereas at the time of Solomon their language had extended to Cutch and even the Malabar coast, we can hardly doubt that Sanskrit was an ancient and historical language, as old as the Books of Kings, or possibly as the book of Job, in which the gold of Ophir is mentioned for the first time.<sup>1</sup>

*sur le Pays d'Ophir*, against fixing Ophir on the Indian coast, are not conclusive. The arguments derived from the names of the articles exported from Ophir were unknown to him. It is necessary to mention this, because Quatremère's name deservedly carries great weight, and his essay on Ophir has lately been republished in the *Bibliothèque classique des Célébrités contemporaines*, 1861.

<sup>1</sup> Job xxii 24, xxviii. 16. Some of my critics have demurred to this argument because the Books of Kings are not contemporaneous with Solomon. The articles themselves, however, must have had names at the time of Solomon; and it has never been suggested that at his time they had Semitic names, and that these were replaced by Indian names at a later time, when all maritime commercial intercourse between India and Palestine had ceased. As to the name of sandal-wood, my critics ought to have known that both forms, *algum* as well as *almug*, occur in the Bible. The different opinions on the geographical position of Ophir have lately been most carefully examined and impartially summed up by Mr Twisleton, in the articles, quoted above, on *Ophir* and *Tarshish* in Dr Smith's *Biblical Dictionary*. Mr. Twisleton himself leans strongly towards the opinion of those scholars who, like Michaelis, Niebuhr, and Vincent, place Ophir in Arabia; and he argues very ingeniously, that if we consider Ophir simply as an emporium, the principal objection, viz. that gold or any other article brought from Ophir to Palestine was not a natural product of Arabia, falls to the ground. That is true.



## Greek Accounts of India.

The next people who possessed a knowledge of India were the Greeks. The earliest information about

But why look for Ophir in Arabia? The only strong argument for fixing Ophir in Arabia is that derived from the genealogical table in the 10th chapter of Genesis, where Ophir appears as the eleventh in order of the sons of Joktan. I accept all the facts brought forward by Mr. Twisleton, but I see no difficulty in admitting commercial intercourse between the south of Arabia and the gulf of Cutch in very ancient times (Rennan, *Histoire des Langues semitiques*, 1858, p. 314); and if Tharsush in Spain can be called a son of Javan, why not Ophir in India a son of Joktan? The expression 'from Meshah, as thou goest unto Siphah a mountain in the East,' on which Mr. Twisleton lays great stress as limiting the geographical position of all the sons of Joktan within the coasts of Arabia, is surely very vague; nor has it been possible to identify the names of all the Joktanide settlements within the sphere thus vaguely indicated by geographical tradition. On the other hand, it must be admitted that on the south-east coast of Arabia, traders between India and Palestine would naturally found commercial emporia. They existed there at the time of Diodorus Siculus, who, after describing the great wealth of Saba in gold, ivory, and precious stones, relates (lib. iii. cap. 47) that there were several islands near, where merchants from all parts of the world landed, and particularly from Potana (Pattana?), which Alexander had founded near the river Indus *Νῆσοι δ' εὐδαίμονες πλησίον ὑπάρχουσιν, ἔχουσαι πόλεις ἀτειχίστους. . .* *Εἰς ταύτας δ' ἔμποροι πάντοθεν καταπλέουσι, μάλιστα δ' ἐκ Ποτάνας, ἣν Ἀλέξανδρος ὤκισε παρὰ τὸν Ἰνδὸν ποταμὸν, ναύσταθμον ἔχειν βουλόμενος τῆς παρὰ τὸν Ὠκεανὸν παραλίου.* That the same coast was the seat of a very early commerce and a very early civilisation is attested to the present day by magnificent ruins and inscriptions, and by the fragments of a widely spread tradition. See A. von Kiemer, *Die Sudarabische Sage*, 1866. It is not necessary, however, to discuss here all the controverted points of this question, for even if Ophir should be proved to be in Arabia, the names for *arabes* and *giasochs* would still point to Sanskrit, and could have been brought to Ophir from no other country but India. These names, as found in the Old Testament, are foreign words in Hebrew, and they do not receive any light either from the dialects of Arabic, including the Hinyaritic inscriptions, or from the languages spoken on the Mozambique coast of Africa, where, according to some authorities, Ophir was situated. These very names have been traced back to Sanskrit and to the languages spoken on the Malabar coast of the Dekhan; and though it must be admitted that, as foreign

India seems to have reached the Greeks indirectly through Persia and Asia Minor. The name of India was known to the author of the Avesta. It occurs there as *Hindu* in the singular, and in the plurals as *Hapta Hindu*, the Seven Rivers, the Vedic *Sapta Sindhavañ*, that is, the seven rivers of the Panjâb<sup>1</sup> It occurs again in the cuneiform inscriptions as *Hindu*, one of the provinces which paid tribute to Darius and is mentioned in the inscription of *Nakshu Rustam*, a, 25, by the side of Medians, Parthians, Bactrians Spartans, and Ionians This shows through what channel countries so widely separated as India and Greece were first brought into historical contact It is true that in the Homeric poems the name of India is unknown. But long before Alexander's invasion of India Hekataeos (B. C. 549-486) knew that

words, they have suffered considerable corruption in the mouths of ignorant sailors, yet, allowing the same latitude of phonetic change, it has been impossible to trace them back to any other family of speech. If, therefore, there should seem to exist any stringent evidence that Ophir was a mere *entrepôt*, not in India, but in Arabia, the spreading of Sanskrit names to Arabia before they reached Palestine would only serve to increase the antiquity of Sanskrit as spoken in those parts of India from whence alone the natural products of her language and of her soil could have been exported. And if we consider that there is no other language which can claim these names as her own—that there is no country in which *all* the articles brought by the fleet of Ezion-geber, whether from Ophir or elsewhere, are indigenous, that sandal-wood and peacocks could in ancient times have been exported to Palestine from India only; if to all these coincidences, all pointing to India, is added the fact pointed out by Lassen, that the names of *cotton*, *nard*, and probably of *bellium*, have likewise found their way from Sanskrit into Hebrew, we shall, I think, feel justified in admitting, with Lassen and Ritter and others, a very early commercial intercourse between India and Palestine, whatever opinion we may hold on the exact position of Ophir.

<sup>1</sup> See *Biographies of Words*, p 153.

distant country, and from his mention of the river Indus,<sup>1</sup> we can safely conclude that Sanskrit was then the spoken language of the country.

The Sanskrit name of the river Sindhu must have reached Hekataeos through a Persian channel in which the initial s was regularly changed to h, and afterwards dropt. Indian names mentioned by Herodotus, such as Gandarioi, Sanskrit Gandhâra, a name which occurs in the Veda (RV. 1, 126, 7), and others, likewise prove the presence of Sanskrit in India at his time. Ktesias (about 400 B.C.), though he did not reach India, but lived at the court of Darius II and Artaxerxes Mnemon, gives us information which, however untrustworthy in other respects, leaves us no doubt that Sanskrit was then the language of the people whom he describes. With Megasthenes we enter into the very life of India. He stayed at Palimbothra, the Pâtaliputra of Sanskrit literature, the modern Pâtnâ, the capital of Sandracottus, in Sanskrit Kândragupta, the King of the Prasii, about 295 B.C. His account of India would probably have made us acquainted not only with the language, but also with the literary works of that period, had not the indifference of the Greeks for barbarous people allowed his work to be lost except the fragments now collected under the name of *Megasthenis Indica*.

The argument that nearly all the names of persons, places, and rivers in India mentioned by Megasthenes and other Greek and Roman writers are pure Sanskrit has been handled so fully and ably by others, more

<sup>1</sup> *Fragmenta Historicorum Græcorum*, ed. C. et T. Müller, vol. i. p. 12, fragm. 174.

particularly by Lassen in his *Indische Alterthums-kunde* that nothing remains to be said on that subject.<sup>1</sup>

#### Chinese Accounts of India.

The next nation after the Greeks that became acquainted with the language and literature of India was the Chinese. Though Buddhism was not recognised as a third state-religion before the year 65 A. D., under the Emperor Ming-ti,<sup>2</sup> Buddhist missionaries had reached China from India as early as the third century, 217 B. C.<sup>3</sup> One Buddhist missionary is mentioned in the Chinese annals in the year 217; and, about the year 120 B. C., a Chinese general, after defeating the barbarous tribes north of the desert of Gobi, brought back as a trophy a golden statue, the statue of Buddha. The very name of Buddha, changed in Chinese into Fo-t'o and Fo,<sup>4</sup> is pure Sanskrit, and so is every word and every thought of that religion. The language which the Chinese pilgrims went to India to study, as the key to the sacred literature of Buddhism, was Sanskrit. They called it Fan; but Fan, as M. Stanislas Julien has shown, is an abbreviation of Fan-lan-mo, and this is the only way in

<sup>1</sup> See *Ancient India as described by the Classical Authors*, by J. W. McCrindle. (i) *Ancient India as described by Megasthenes* (about 295) and Arrian (consul, A. D. 146), 1877. (ii) *The Commerce and Navigation of the Erythrean Sea*, 1879. (iii) *Ancient India as described by Kteuan* (about 400 B. C.), 1882. (iv) *Ancient India as described by Ptolemy* (150 A. D.), 1885.

<sup>2</sup> M. M.'s *Buddhist Pilgrims, Selected Essays*, vol. ii p. 261.

<sup>3</sup> *For Koue Ki*, traduit par Régnault, Paris, 1836, p. 11.

<sup>4</sup> *Méthode pour déchiffrer et transcrire les noms sanscrits qui se trouvent dans les livres chinois, inventée et démontrée par M. Stanislas Julien*, Paris, 1861, p. 103.

which the Sanskrit word Brahman could be rendered in Chinese.<sup>1</sup> We read of the Emperor Ming-ti, of the dynasty of Han, sending Tsai-in and other high officials to India, in order to study there the doctrine of Buddha. They engaged the services of two learned Buddhists, Matānga and Ku-fa-lan, and some of the most important Buddhist works were translated by them into Chinese.<sup>2</sup> The intellectual intercourse between the Indian peninsula and the northern continent of Asia continued uninterrupted for several centuries. Missions were sent from China to India to report on the religious, political, social, and geographical state of the country; and the chief object of interest which attracted public embassies and private pilgrims across the Himalayan mountains, was the religion of Buddha. About three hundred years after the public recognition of Buddhism by the Emperor Ming-ti, the great stream of Buddhist pilgrims began to flow from China to India. The first account which we possess of these pilgrimages belongs to the travels of Fa-hian, who visited India towards the end of the fourth century (A. D. 399-414). These travels were first translated into French by A. Rémusat.<sup>3</sup> After Fa-hian, we have the travels of Hœi-seng and Song-yun, who were sent to India, in 518, by command

<sup>1</sup> ' Fan-chou (brahmākshara), les caractères de l'écriture indienne, inventée par Fan, c'est-à-dire Fan-lan-mo (brahmā). '—Stanislas Julien, *Voyages des Pèlerins bouddhistes*, vol. ii. p. 505.

<sup>2</sup> See for a fuller account, M. M. *On Sanskrit Texts discovered in Japan, Selected Essays*, vol. ii. p. 319. Ku-fa-lan is called Bhāraṇa Paṇḍita in Tibetan; cf. *J. R. A. S.*, 1882, p. 89.

<sup>3</sup> They have been translated into English by the Rev. Samuel Beal, London, 1869; revised 1884; by Mr. Herbert A. Giles, 1877, and by Professor Legge, Oxford, 1886.

of the empress, with the view of collecting sacred books and relics. Then followed Hiouen-thsang, whose life and travels, from 629–645, have been rendered so popular by the excellent translation of M. Stanislas Julien.<sup>1</sup> After Hiouen-thsang, the principal works of Chinese pilgrims are the travels of Itsing<sup>2</sup> (left China in 671, arrived in India in 673, returned to China in 695, died in 713), the Itineraries of the Fifty-six Monks, published in 730, and the travels of Khinie, who visited India in 964, at the head of three hundred pilgrims.

That the language employed for literary purposes in India during all this time was Sanskrit, we learn not only from the numerous names and religious and philosophical terms mentioned in the travels of the Chinese pilgrims, but from a short paradigm of declension and conjugation in Sanskrit which one of them (Hiouen-thsang) has inserted in his diary. Nay, there is every reason to believe that Hiouen-thsang composed himself a book in Sanskrit.<sup>3</sup>

#### Persian Accounts of India.

The next evidence of the existence of an ancient literature in India comes to us from Persia. The King of Persia, Khosru Nushirvan, in the middle of the sixth century, had a collection of fables translated from Sanskrit into Pehlevi, a translation which was afterwards turned into Arabic by Abdallah ibn Almo-kaffa in the middle of the eight century, under the title of *Kalilah and Dimnah*. Though the complete

<sup>1</sup> New translation by Rev. S. Beal, 1884.

<sup>2</sup> On Itsing, see M. M., *India, what can it teach us?* p. 210 seq., *Journal Asiat.* 1888, p. 411.

<sup>3</sup> M. M., *India*, pp. 305, 310.

collection of these fables does no longer exist in Sanskrit, yet the portions of it which have been preserved in the *Pañkatantra* show clearly that they must have existed in Sanskrit in the sixth century A. D., and that the account given by the Pehlevi translator Barzôî is trustworthy in the main.<sup>1</sup>

#### Arab Accounts of India.

As soon as the Mohammedans entered India, we hear of translations of Sanskrit works into Persian and Arabic.<sup>2</sup> As early as the reign of the second Abasside Khalif Almansur,<sup>3</sup> in the year 773 A. D., an Indian astronomer, well versed in the science which he professed, visited the court of the Khalif, bringing with him tables of the equations of planets according to the mean motions, with observations relative to both solar and lunar eclipses and the ascension of the signs; taken, as he affirmed, from tables computed by an Indian prince, whose name, as the Arabian author writes it, was Phighar. The Khalif, embracing the opportunity thus happily presented to him, commanded the book to be translated into Arabic, to be published for a guide to the Arabians in matters pertaining to the stars. The task devolved on Mohammed ben Ibrahim Alfazari, whose version is

<sup>1</sup> See M. M., *Selected Essays*, vol. i. p. 516. It is curious that Alberuni was so dissatisfied with the Arabic translation of what he calls the *Pañkatantra* that he wished to translate it anew. See Alberuni's *India*, ed. Sachau, p. xx; also *Fihrist*, ed. Rölliger, vol. i.

<sup>2</sup> Sir Henry Elliot's *Historians of India*, vol. v., appendix, p. 570

<sup>3</sup> Colebrooke, *Miscellaneous Essays*, ii p. 504, quotes from the preface to the astronomical tables of Ben al Adami, published by his continuator, Al Casem, in 920 A.D. On Sanskrit figures, see Strachey, *As Res.* xi. 184; Colebrooke, *Algebra*, p. lii.

known to astronomers by the name of the greater Sind-hind or Hind-sind,<sup>1</sup> for the term occurs written both ways.

About the same time Yacub, the son of Tharek, composed an astronomical work, founded on the Sind-hind<sup>2</sup> Harun-al-Rashid (786-809) had two Indians, Manka and Saleh, as physicians at his court. Manka translated the classical work on medicine, Susruta,<sup>4</sup> and a treatise on poisons, ascribed to Kânakya, from Sanskrit into Persian.<sup>5</sup> During

<sup>1</sup> Sind-hind signifies the revolving ages, according to Ben al Adami; Kasiri translates it *perpetuum æternumque*. Colebrooke conjectures Siddhânta, and supposes the original to have been Brahmagupta's work, the Brahma-siddhânta. M. Reinaud, in his *Monnoire sur l'Inde*, p. 312, quotes the following passage from the *Tarikh-al-Hokama* : 'En l'année 156 de l'Hégire (773 de J. C.) il arriva de l'Inde à Bagdad un homme fort instruit dans les doctrines de son pays. Cet homme possédait la méthode du Sindhind, relative aux mouvements des astres et aux équations calculées au moyen de sinus de quart en quart de degré. Il connaissait aussi diverses manières de déterminer les éclipses, ainsi que le lever des signes du zodiaque. Il avait composé un abrégé d'un ouvrage relatif à ces matières qu'on attribuoit à un prince nommé Fyga. Dans cet écrit les kardağa (i. e. kramagya, see Sârya-siddhânta, ed. Burgess and Whitney, p. 57 and p. 59) étaient calculés par minutes. Le Khalife ordonna qu'on traduisit le traité indien en arabe, afin d'aider les musulmans à acquérir une connaissance exacte des étoiles. Le soin de la traduction fut confié à Mohammed, fils d'Ibrahim-al-Fazary, le premier entre les musulmans qui s'était livré à une étude approfondie de l'astronomie : on désigne plus tard cette traduction sous le titre de Grand Sindhind.' Alberuni places the translation in the year 771.

<sup>2</sup> Reinaud, *l. c.* p. 314.

<sup>3</sup> Elliot, *Historians of India*, vol. v. p. 572.

<sup>4</sup> Cf. Steinschneider, *Wissenschaftliche Blätter*, vol. i. p. 79.

<sup>5</sup> See Professor Flugel, in *Zeitschrift der D. M. G.*, xi. 148 and 325; Elliot, *Historians of India*, vol. v. p. 572. A Hebrew treatise on poisons, ascribed to the Indian Zank (Kânakya), is mentioned by Steinschneider, *Wissenschaftliche Blätter*, vol. i. p. 65. Alberuni mentions an Indian Kankah as astrologer of Harun-al-Rashid (Reinaud,



the Khalifate of Al Mamun, a famous treatise on algebra was translated by Mohammed ben Musa from Sanskrit into Arabic (edited by F. Rosen. 1831) and the medical treatises of Mikah and Ibn Dahan, both represented to be Indians, show that Sanskrit was well known then.<sup>1</sup>

#### Alberuni.

Alberuni (born 973, died 1048) was invited by Mahmud of Ghazni (died 1030) from Khwarizm (the modern Khiva), which the Sultan had conquered in 1017, to accompany him on his Indian campaigns. Avicenna, i. e. Abu' Ali Ibn Sina, declined to accompany him. Alberuni, an astronomer, a large-hearted philosopher, and an acute observer, utilised his stay in India for studying the astronomy, the philosophy and literature of that interesting country. According to his own statement the number of his works exceeded a hundred. The most important among those which have not perished are the 'Chronology of Ancient Nations,' of which a German and an English translation have lately (1878 and 1879) been published by Professor Sachau; a treatise on Astronomy, *Al-Kanun Al-Masudi*, and his extremely interesting work on India, sometimes called *Tarikh-i-Hind* (written A. D. 1030), but the full title of which has been translated by its learned editor, Professor Sachau, as 'An accurate de-

*Mémoire sur l'Inde*, p. 315). He is likewise mentioned as a physician. Another Indian physician of Harun-al-Rashid is called Mankba (Reinaud, *l. c.*).

<sup>1</sup> Elliot, *Historians of India*, vol. v. p. 572.

scription of all categories of Hindu thought, as well those which are admissible as those which must be rejected.' The value of Alberuni's *Indica* was first pointed out by Renaud in his *Fragments Arabes et Persans inédits relatifs à l'Inde*, 1845, and afterwards, in his excellent *Mémoire sur l'Inde*, Paris, 1849. It was then supposed that Alberuni had acquired a complete knowledge of Sanskrit which enabled him not only to translate works on the Sâṅkhya and Yoga philosophies from Sanskrit into Arabic, but even to translate Arabic texts into Sanskrit. This, however, has been rendered very doubtful by Professor Sachau's researches. He gives Alberuni full credit for having acquired an elementary knowledge of Sanskrit, sufficient for checking to a certain extent the statements of his Pandits, but he shows clearly that his translations, from Sanskrit into Arabic and Persian, and still more those from Arabic into Sanskrit could not have been made without the constant help of native scholars.<sup>1</sup> In that respect, therefore, Alberuni was inferior to Hiouen-thsang, who was able to write in Sanskrit and to carry on a public disputation in that language.

About 1150 we hear of Abu Saleh translating a work on the education of kings from Sanskrit into Arabic.<sup>2</sup>

<sup>1</sup> Alberuni's *India*, edited in the Arabic original by E. Sachau, London, 1887. *Chronology of Ancient Nations*, by Alberuni, translated by E. Sachau, London, 1879.

<sup>2</sup> In the Persian work *Muzmalu-l-Tawarikh* there are chapters translated from the Arabic of Abu Saleh ben Shub ben Jawa, who had himself abridged them, a hundred years before, from a Sanskrit work called *Instruction of Kings* (Râganiti). The Persian translator lived about 1150. See Elliot, *l. c.*

Two hundred years later, we are told that Firoz Shah, after the capture of Nagarcote, ordered several Sanskrit works on philosophy to be translated from Sanskrit by Maulana Izzu-d-din Khalid Khani. A work on veterinary medicine ascribed to Sâlotar.<sup>1</sup> said to have been the tutor of Susruta, was likewise translated from Sanskrit into Persian in the year 1381. A copy of this, called *Kurrut ul Mullk*, was preserved in the Royal Library of Lucknow. The date is somewhat doubtful, and it is curious that the translator should not have mentioned another work on the same subject, the *Kitab ul Buiturat*, translated from Sanskrit

<sup>1</sup> Sâlotar is not known as the author of such a work. Sâlotariya occurs instead of Sâlâturiya, in Râga Râdhakânt; but Sâlâturiya is a name of Pânini, and the teacher of Susruta is said to have been Divodâsa. Professor Weber, in his *Catalogue of Sanskrit MSS* (p 298), has pointed out Sâlihotra, who is mentioned in the *Pâñînatra* as a teacher of veterinary medicine, and who is quoted by Garga in the *Asvâyuri-veda*. The Professor quotes a translation into Arabic of such a work, made in the year 1361. Such a translation, however, of that date does not exist, and as he refers to Elliot's *Bibliographical Index to the Historians of India*, p 263, as his authority, the Professor's statement may possibly rest on some misapprehension. Sâlotri is the every-day Urdu and Hindi word for a horse doctor. Professor Aufrecht has discovered a work on medicine by Sâlihotra in the Library of the East India House. A medical work by Sâlinâtha is mentioned in the *Catalogue of Sanskrit MSS. of the College of Fort William*, p. 21. An Arabic translation of a Sanskrit work on veterinary medicine by Kânakya is mentioned by Hâjî Challa, v. p. 59. A translation of the *Karaka* (Proceedings of As. Soc. Bengal, 1870, Sept.) from Sanskrit into Persian, and from Persian into Arabic, is mentioned in the *Fihrist* (finished 987 A.D.). It is likewise mentioned by Alberuni (Reinaud, *Memoire sur l'Inde*, p 316), the translation is said to have been made for the Barmekides. The names of the persons by whom the doctrines contained in this work were supposed to have been handed down, should be restored in Alberuni as follows: Brahman, Pragâpati, the Asvinau, Indra, the sons of Atri, Agnivesa; cf. *Ashtâᅅgahridaya*, Introduction (MS. Wilson, 298).

into Arabic, at Baghdad. Another translation was made in the reign of Shah Jahán.<sup>1</sup>

#### Akbar.

Two hundred years more bring us to the reign of Akbar (1556–1605). A more extraordinary man never sat on the throne of India.<sup>2</sup> Brought up as a Mohammedan, he discarded the religion of the Prophet as superstitious,<sup>3</sup> and then devoted himself to a search after the true religion. He called Brahmans and fire-worshippers to his court, and ordered them to discuss in his presence the merits of their religions with the Mohammedan doctors. When he heard of the Jesuits at Goa, he invited them to his capital, and he was for many years looked upon as a secret convert to Christianity. He was, however, a rationalist and deist, and, as he declared himself, never believed anything that he could not understand. The religion which he founded, the so-called Ilâhi religion, was pure Deism, mixed up with the worship of the sun<sup>4</sup> as the purest and highest emblem of the Deity. Though Akbar himself could neither read nor write,<sup>5</sup> his court was the home of literary men of all persuasions. Whatever book, in any language, promised to throw light on the problems nearest to the emperor's heart, he ordered to be translated

<sup>1</sup> Elliot's *Historians of India*, vol. v. p. 574.

<sup>2</sup> See M. M., *Introduction to the Science of Religion*, Appendix to Lecture I.

<sup>3</sup> See Vans Kennedy, *Notice respecting the Religion introduced by Akbar*, Transactions of the Literary Society of Bombay, 1820, vol. ii. pp. 242–270.

<sup>4</sup> Elliot's *Historians of India*, p. 249.

<sup>5</sup> Müllbauer, *Geschichte der Katholischen Missionen Ostindiens*, s. 134.

into Persian. The New Testament<sup>1</sup> was thus translated at his command; so were the Mahâbhârata, the Râmâyana, the Amarakosha,<sup>2</sup> and other classical works of Sanskrit literature. But although the emperor set the greatest value on the sacred writings of different nations, he does not seem to have succeeded in extorting from the Brahmans a translation of the Veda. A translation of the Atharva-veda<sup>3</sup> was made for him by Haji Ibrahim Sirhindi; but that Veda never enjoyed the same authority as the other three Vedas, and it is doubtful whether by Atharva-veda is meant more than the Upanishads, some of which may have been composed for the special benefit of

<sup>1</sup> Elliot's *Historians of India*, p. 248.

<sup>2</sup> *Ibid* pp. 259, 260. The *Tarikh-i-Badauni* or *Muntakhabu-t-Tawarikh*, written by Mulla Abdu-l-Kadir Maluk, Shah of Badaun, and finished in 1595, is a general history of India from the time of the Ghaznevides to the 40th year of Akbar. The author is a bigoted Mohammedian, and judges Akbar severely, though he was himself under great obligations to him. He was employed by Akbar to translate from Arabic and Sanskrit into Persian: he translated the Râmâyana, two out of the eighteen sections of the Mahâbhârata, and abridged a history of Cashmir. It is doubtful, however, by whom and how these translations were made. Abdu-l-Kadir states that learned Brahmans were appointed to translate these books for him (Elliot's *Historians of India*, vol. v. p. 537), and there is no evidence that any of the courtiers of Akbar possessed a real knowledge of Sanskrit, or, as it was then called, Hindi (Alberuni's *India*, ed Sachau, p. xxii), whether literary or vernacular. As those who are mentioned as translators of Sanskrit texts were probably no more than the patrons of certain Pandits, and responsible only for the Arabic and Persian into which the Sanskrit texts were turned, we can understand why three or four names should be mentioned as translators of the same book. Thus the translation of the Mahâbhârata is ascribed to Abdu-l-Kadir, Nakib Khan, Shaikh Mohammad Sultan Thanesai, and Faizi, the brother of the prime minister, Abu-l-Fazl. Nay, Hervas writes. 'Abulfazel, ministro de Akbar, se valió del Amarasinha y del Mahâbhârata, que traduxo en persiano el año de 1586.'—Hervas, ii. 136.

<sup>3</sup> See M. M.'s *History of Ancient Sanskrit Literature*, p. 327.

Akbar. There is a story which, though evidently of a legendary character, shows how the study of Sanskrit was kept up by the Brahmans during the reign of the Mogul emperors.

‘Neither the authority (it is said) nor promises of Akbar could prevail upon the Brahmans to disclose the tenets of their religion: he was therefore obliged to have recourse to artifice. The stratagem he made use of was to cause a boy, of the name of *Feizi*, to be committed to the care of these priests, as a poor orphan of the sacerdotal line, who alone could be initiated into the sacred rights of their theology. *Feizi*, having received the proper instructions for the part he was to act, was conveyed privately to Benares, the seat of knowledge in Hindostan; he was received into the house of a learned Brahman, who educated him with the same care as if he had been his son. After the youth had spent ten years in study, Akbar was desirous of recalling him; but the boy was struck with the charms of the daughter of his preceptor. The old Brahman laid no restraint on the growing passion of the two lovers. He was fond of *Feizi*, and offered him his daughter in marriage. The young man, divided between love and gratitude, resolved to conceal the fraud no longer, and falling at the feet of the Brahman, discovered the imposture, and asked pardon for his offence. The priest, without reproaching him, seized a poniard which hung at his girdle, and was going to plunge it in his heart, if *Feizi* had not prevented him by taking hold of his arm. The young man used every means to pacify him, and declared himself ready to do anything to expiate his treachery. The Brahman, bursting into tears, promised to pardon him on condition that he should swear never to translate the Vedas, or sacred volumes, or to disclose to any person whatever the symbol of the Brahman creed. *Feizi* readily promised him: how far he kept his word is not known; but the sacred books of the Indians have never been translated.’<sup>1</sup>

<sup>1</sup> *History of the Settlements of the Europeans in the East and West Indies*, translated from the French of the Abbé Bernal by J. Justamond, Dublin, 1776, vol. i. p. 34.

We have thus traced the existence of Sanskrit, as the language of literature and religion in India, from the time of Solomon to the reign of Akbar. A hundred years after Akbar the eldest son of Shah Jehan, the unfortunate Dara, manifested the same interest in religious speculations which had distinguished his great grandsire. He became a student of Sanskrit, and translated the Upanishads, philosophical treatises appended to the Vedas, into Persian. This was in the year 1657 or 58,<sup>1</sup> a year before he was put to death by his younger brother, the bigoted Aurengzebe<sup>2</sup> This prince's translation was translated into French by Anquetil Duperron, in the year 1795, the fourth year of the French Republic; and was for a long time the principal source from which European scholars derived their knowledge of the sacred literature of the Brahmans.

#### European Accounts of India.

At the time at which we have now arrived, the reign of Aurengzebe (1658-1707), the contemporary and rival of Louis XIV, the existence of Sanskrit and Sanskrit literature was known, if not in Europe generally, at least to Europeans in India, particularly to missionaries. Who was the first European that knew of Sanskrit, or that acquired a knowledge of Sanskrit, it is difficult to say. When Vasco da Gama landed at Calicut, on the 9th of May, 1498, Padre Pedro began at once to preach to the natives, and

<sup>1</sup> See Proceedings of the Asiatic Society of Bengal, 1870, p 252.

<sup>2</sup> See Upanishads, translated by M. M., *Sacred Books of the East*, vol. 1. p lviii.

had suffered a martyr's death before the discoverer of India returned to Lisbon. Every new ship that reached India brought new missionaries; but for a long time we look in vain in their letters and reports for any mention of Sanskrit or Sanskrit literature.

#### St. Francis Xavier.

Francis, now St. Francis, Xavier was the first to organise the great work of preaching the Gospel in India (1542); and such were his zeal and devotion, such his success in winning the hearts of high and low, that his friends ascribed to him among other miraculous gifts, the gift of tongues<sup>1</sup>—a gift never claimed by St. Francis himself. It is not, however, till the year 1559 that we first hear of the missionaries at Goa studying, with the help of a converted Brahman,<sup>2</sup> the theological and philosophical literature of the country, and challenging the Brahmans to public disputations.

<sup>1</sup> Mullbauer, p. 67. He himself speaks of the difficulty he had in learning languages ' *Io non comprendo questo popolo, ed egli non comprende me davantaggio*' See G. Barone, *Vita del P. Paolino da S. Bartolommeo*, 1888, p. 66.

<sup>2</sup> Mullbauer, p. 80. These Brahmans, according to Robert de Nobili, were of a lower class, not initiated in the sacred literature. They were ignorant, he says, 'of the books Smârta, Apostamba, and Sûtra'—(Ibid. p. 188.) Robert himself quotes from the Âpastamba-Sûtra, in his defence (ibid. p. 192). He also quotes Skanda Purâna, p. 193, Kadambari, p. 193. A work of his is mentioned by Kircher, *China Illustrata*, 1667, p. 152, but it seems to have existed in MS. only. Kircher says, 'legat, qui vult, librum quem de Brahmanum theologia P. Robertus Nobilis Societatis Jesu, missionis Madurensis in Indiâ Malabaricâ fundator, nec non linguâ et Brahmanicâ genealogia consultissimus, summâ sane eruditione . . . conscripsit.' This book might still be of great interest.



**Filippo Sassetti.**

From 1581 to 1588 an Italian scholar of considerable eminence among the literary men of his time, Filippo Sassetti, lived at Goa. His letters have lately been published at Florence, and in one of them he states that the sciences of the Indians are all written in one language, which is called *Sanscruta*. This, he says, means a well-articulated language. The people learn it, as we learn Greek and Latin, and it takes them six or seven years before they master it. No one knows when that language was spoken, but it has many words in common with the spoken vernaculars, nay with Italian, particularly in the numerals 6, 7, 8, and 9, in the names for God, serpent, and many others. And then he adds 'I ought to have come here at eighteen, in order to return with some knowledge of these beautiful things.'<sup>1</sup>

**Roberto de' Nobili.**

The first certain instance of a European missionary having mastered the difficulties of the Sanskrit language belongs to a later period—to what may be called the period of Roberto de' Nobili (1577–1656), as distinguished from the first period, which is under the presiding spirit of Francis Xavier. Roberto de' Nobili went to India in 1606. He was himself a man of high family, a nephew of the famous cardinal

<sup>1</sup> *Lettere edite e inedite di Filippo Sassetti, raccolte e annotate da Ettore Marcucci*, Firenze, 1855, p. 417. I owe my knowledge of Sassetti to the kindness of Professor Maggi at Milan, who sent me a copy of his letters. See also A. De Gubernatis, *Viaggiatori Italiani*, 1875, p. 321.

Bellarmino, a man of a refined and cultivated mind. He therefore perceived the more quickly the difficulties which kept the higher castes, and particularly the Brahmans, from joining the Christian communities formed at Madura and other places. These communities consisted chiefly of men of low rank, of no education, and no refinement. He conceived the bold plan of presenting himself as a Brahman, and thus obtaining access to the high and noble, the wise and learned, in the land. He shut himself up for years, acquiring in secret a knowledge, not only of Tamil and Telugu, but of Sanskrit. When, after a patient study of the language and literature of the Brahmans, he felt himself strong enough to grapple with his antagonists, he showed himself in public, dressed in the proper garb of the Brahmans, wearing their cord and their frontal mark, observing their diet, and submitting even to the complicated rules of caste. He was successful, in spite of the persecutions both of the Brahmans, who were afraid of him, and of his own fellow-labourers, who could not understand his policy. His life in India, where he died as an old blind man, is full of interest to the missionary.<sup>1</sup> I can only speak of him here as the first European Sanskrit scholar. A man who could quote from Manu, from the Purânas, nay from works such as the Âpastamba-Sûtras, which are known even at present to only those few Sanskrit scholars who can read Sanskrit

<sup>1</sup> In a letter of Bunnell's (Tanjore, 27th April, 1876) published in the *Bollettino Italiano*, 1876, p. 16, there are some notices of R. de Nobilibus. 'He died 16th Jan. 1656, in his 80th year, at St. Thomas, near Madras.' The Jesuits had printing offices at Coccino, Ambalakâdu, and Punnikayal, but none of their books are to be found now.

MSS., must have been far advanced in a knowledge of the sacred language and literature of the Brahmans. The very idea that he came, as he said, to preach a new or a fourth Veda,<sup>1</sup> which had been lost, shows how well he knew the strong and weak points of the theological system which he came to conquer. It is surprising that the reports which he sent to Rome in order to defend himself against the charge of idolatry, and in which he drew a faithful picture of the religion, the customs, and literature of the Brahmans, should not have attracted the attention of scholars. The 'Accommodation Question,' as it was called, occupied cardinals and popes for many years; but not one of them seems to have perceived the extraordinary interest attaching to the existence of an ancient civilisation so perfect and so firmly rooted as to require accommodation even from the missionaries of Rome. At a time when the discovery of one Greek MS. would have been hailed by all the scholars of Europe, the discovery of a complete literature was

<sup>1</sup> The *Ezour-veda* is not the work of Robert de' Nobili. It was probably written by one of his converts. The translation from Sanskrit is ascribed to 'le grand prêtre ou archi-brame de la pagode de Cheruingham, veillard respecté par sa vertu incorruptible.' It is in Sanskrit verse, in the style of the *Purânas*, and contains a wild mixture of Hindu and Christian doctrine. The French translation was sent to Voltaire, and printed by him in 1778. '*L'Ezour Vedam, ou anciens commentaires du Vedam, contenant l'exposition des opinions religieuses et philosophiques des Indous, traduit du Sanscritum par un Brame,*' Yverdon, 1778, 2 vols 8°. Voltaire expressed his belief that the original was four centuries older than Alexander, and that it was the most precious gift for which the West had been ever indebted to the East. Mr. Ellis discovered the Sanskrit original at Pondichery.—(*Asiatic Researches*, vol. xiv.) There is no excuse for ascribing the work to Robert, and it is not mentioned in the list of his works.—(Bertrand, *La Mission du Madure*, Paris, 1847-50, tom. iii p. 116, Mullbauer, p. 205, note.)

allowed to pass unnoticed. The day of Sanskrit had not yet come.

**Heinrich Roth.**

There is another Jesuit missionary of the seventeenth century who acquired a knowledge of Sanskrit, Heinrich Roth. While stationed at Agra he succeeded in persuading a Brahman to teach him the elements of Sanskrit, and, after six years of hard study, he had acquired a perfect mastery of this difficult language. He was at Rome in the year 1666, and it was he who drew up the interesting account of the Sanskrit alphabet which Athanasius Kircher published in his *China Illustrata* (1667).

**Scholars of the Eighteenth Century.**

We now approach the eighteenth century,<sup>1</sup> and there we find that the attention of European scholars begins at last to be attracted to the extraordinary discovery, a discovery that could no longer be doubted, of the existence in India of an immense literature, the age of which was believed to exceed that of every other literature in the world. The French Jesuits whom Louis XIV. sent out to India after the treaty of Ryswick, in 1697, kept up a literary correspondence with members of the French Institute. Questions were addressed to them by members of that learned body, and their answers were printed either in the *Memoirs of the Academy*, or in the *Lettres édifiantes*. The answers sent by the Père Cœurloux, in 1767, to the queries addressed to him by the Abbé Barthélemy,

<sup>1</sup> In 1677 a Mr Marshall is said to have been a proficient in Sanskrit.—Elliot's *Historians of India*, vol. v. p 575

and his subsequent correspondence with Anquetil Duperron<sup>1</sup> are full of interesting materials. Of this learned missionary we shall have to speak again as one of the first who saw the real bearing of the similarity between the ancient language of India and the languages of Europe.

**Père Calmette.**

One of his colleagues, the Père Calmette, in a letter dated Venecataguiny, in the kingdom of Carnata, the 24th of January, 1733, informs us<sup>2</sup> that by that time the Jesuits had missionaries who were not only well grounded in Sanskrit, but able to read some portions of the Veda. They were forming an Oriental library from which, he says, they were beginning to derive great advantages for the advancement of religion. They drew from this arsenal of paganism the weapons which wounded the Brahmans most deeply. They possessed their philosophy, their theology, and particularly the four Vedas which contain the law of the Brahmans, and which the Indians from time immemorial regarded as their sacred books, as books of an irrefragable authority, and as coming from God himself.

'From the time that missionaries first went to India,' he continues, 'it has always been thought to be impossible to find this book which is so much respected by the Indians. And, indeed, we should never have succeeded, if we had not had Brahmans, who are Christians, hidden among them. For how would they have communicated this book to Europeans, and particularly to the enemies of their religion, as they do not

<sup>1</sup> *Mémoires de Littérature de l'Académie Royale des Inscriptions*, tom. xlix. p. 647.

<sup>2</sup> *Lettres élastiques* (Paris, 1751), vol. xiii. p. 390

communicate it even to the Indians, except to those of their own caste? . . . The most extraordinary part is that those who are the depositaries of the Veda, do not understand its meaning, for the Veda is written in a very ancient language, and the Samouscroutam, which is as familiar to their learned men as Latin is to us, is not sufficient, without the help of a commentary, to explain the thoughts as well as the words of the Veda. They call it the Maha bachiam, or the great commentary. Those who are given to the study of these books form the first class among their learned men. While the other Brahmins salute, these alone give a blessing.'

And again he says (p 437) —

'Since the Veda is in our hands we have extracted from it texts which serve to convince them of those fundamental truths that must destroy idolatry; for the unity of God, the qualities of the true God, and a state of blessedness and condemnation, are all in the Veda. But the truths which are to be found in this book are only scattered there like grains of gold in a heap of sand. . . .'

In another letter, dated 16th Sept. 1737, the same missionary writes —

'I think like you that it would have been right to consult with greater care the original books of the Indian religion. But hitherto these books were not in our hands, and it was thought for a long time that they could not be found, particularly the most important ones, viz. the four Vedas. It is only five or six years ago that I was allowed to form an Oriental library for the king, and charged to seek for Indian books for that purpose. I then made discoveries of great importance for religion, among which I count that of the four Vedas or sacred books.

'But these books, of which the ablest doctors among them understand hardly half, which a Brahman would not venture to explain to us for fear of getting into trouble with his own caste, and of which a knowledge of Sanskrit does not yet give us the

key, because they are written in a more ancient language,—these books, I say, are, in more than one sense, sealed books for us. One finds, however, some of their texts explained in theological works; some become intelligible by means of a knowledge of the ordinary Sanskrit, particularly those that are taken from the last books of the Veda, and which, to judge by the difference of language and style, are more than five centuries later than the rest.’

**Père Pons.**

A few years after Calmette the Père Pons drew up a comprehensive account of the literary treasures of the Brahmans; and his report, dated Karikal, dans le Maduré, November 23, 1740, and addressed to Father Du Halde, was published in the *Lettres édifiantes*.<sup>1</sup> Father Pons gives in it a most interesting and, in general, a very accurate description of the various branches of Sanskrit literature,—of the four Vedas, the grammatical treatises, the six systems of philosophy, and the astronomy of the Hindus. He anticipated, on several points, the researches of Sir William Jones.

But, although the letters of Father Pons, of Cœurdoux, Calmette, and others excited a deep interest, that interest remained necessarily barren, as long as there were no grammars, dictionaries, or Sanskrit texts to enable scholars in Europe to study Sanskrit in the same spirit in which they studied Greek and Latin. The Abbé Barthélemy, in 1763, had asked the Père Cœurdoux to send him before everything else, a grammar of the Sanskrit language; though it would seem that at that time the Royal Library at Paris

<sup>1</sup> *Lettres édifiantes* (Paris, 1781), vol. xiv p. 65. See an excellent account of this letter in an article of M. Biot in the *Journal des Sçavants*, 1861; and in Hervas, *Catálogo de las Lenguas*, ii. p. 125.

possessed a Sanskrit grammar written in Latin, and giving the Sanskrit words in Bengali letters. The only part wanting was the syntax, and this was afterwards supplied by the Père Cœundoux.

**Paolino da S. Bartolommeo.**

At Rome also materials for a Sanskrit grammar, from the pen of H. Roth,<sup>1</sup> seem to have existed in the library of the Collegio Romano, and likewise among the valuable papers left by the Jesuit J Hanxleden, to whom frequent reference is made by Paolino da S Bartolommeo, Hervas,<sup>2</sup> and others. This Paolino da S. Bartolommeo<sup>3</sup> was the first who succeeded in publishing a Sanskrit grammar in Europe. He was a Carmelite friar, a German of the name of Johann Philip Weidin (not Wesdin), who spent the years from 1776 to 1789 in India, and who published his grammar of Sanskrit at Rome, in 1790<sup>4</sup> Some years later he printed a more complete grammar; and he likewise wrote several essays on the antiquities, the mythology, and religion of India, availing himself

<sup>1</sup> Hervas, *Catalogo de las Lenguas*, ii. p. 133

<sup>2</sup> *Ibid.* p. 132 'Este jesuita, segun me ha dicho el referido Fray Paulino, llegó á hablar la lengua malabar, y á entender la sanscrita con mayor perfeccion que los Brahmanes, como lo demuestran sus signos manuscritos en dichas lenguas' He died in March, 1752, see *Bollettino Italiano*, 1876, p. 46

<sup>3</sup> An excellent account of the life and literary labours of Paolino is given by Professor Barone in his *Vita, Præursori ed Opere del P. Paolino da S. Bartolommeo* (Filippo Weidin), Napoli, 1888

<sup>4</sup> *Sidharubam seu Grammatica Sanscritamica*, cui accedit dissertatio historico-critica in linguam Sanscritamicam, vulgo Sanscrit dictam, in



in all his writings of the papers left by Hauxleden, whose knowledge of Sanskrit, to judge from quotations given by Paolino, must have been very considerable. The grammar of Paolino has been severely criticised, and is now hardly ever consulted; but it is only fair to bear in mind, that the first grammar of any language is a work of infinitely greater difficulty than any later grammar.<sup>1</sup>

The two missionaries whose manuscript materials Paolino was allowed to use were Padre Marco della Tomba, a Capuchin, and Ernestus Hauxleden, a Jesuit

#### Marco della Tomba.

The former, Marco della Tomba, arrived in India in 1757, and is said to have returned to Rome from Tibet in 1774. He set himself to study the language and literature of the Brahmans, and tells us that he was able not only to translate Sanskrit texts with the help of the Pandits, but to dispute with them in their own language without embarrassment. This, however, could hardly have been in Sanskrit, for though the account which he gives of the customs, manners, beliefs, and literature of the Brahmans is intelligent, it often betrays an ignorance of the real character of the Sanskrit language. He no doubt handled a large number of Sanskrit MSS., but he admits that he was never allowed to see a MS. of the Vedas, so that he doubts their very existence. He speaks of the wonderful memory of the Brahmans, who seemed to know whole books by heart. His letters must have roused the

<sup>1</sup> *Vyacarana seu Locupletissima Sanscritanica Lingua Institutio*, à P. Paolino à S. Bartholomæo: Romæ, 1804

curiosity of those to whom they were addressed, and they are pleasant to read even now in the extracts published by Count Angelo De Gubernatis,<sup>1</sup> from the MS. preserved in the Museo Borgiano.

#### E. Hanxleden.

The latter, Joh. Ernestus Hanxleden (died 1732), the Jesuit, seems to have been much more of a real scholar. Count Angelo De Gubernatis gives an account of a MS., now deposited in the Biblioteca Vittorio Emanuele,<sup>2</sup> which formerly belonged to the Jesuit Libreria segreta del Collegio Romano. He supposes that it came from Hanxleden. It contains text and translation of the *Vasisthâsâra* on Vedânta subjects, extracts from the Upanishads, the *Tarkabhâshâ* (logic), the *Vedântasâra*, and the *Ashtâvakragîtâ* (published by Carlo Giussani in the *Rivista Orientale*, 1867). This shows a considerable advance, supposing that it was his own work, and though the assertion of Hervas that Hanxleden spoke Sanskrit with greater perfection than the Brahmans, sounds exaggerated, he was probably far in advance of other missionaries returned to Rome from India.<sup>3</sup>

<sup>1</sup> *Gli Scritti del Padre Marco della Tomba*, 1878; *Bollettino Italiano*, 25 July, 1876, p. 43

<sup>2</sup> *Bollettino Italiano*, July 10, 1876

<sup>3</sup> Count Ugo Balzani has had the kindness to send me the following titles of MSS. now in the Biblioteca Vittorio Emanuele, formerly in the Convent di Santa Maria della Scala:—

*Hanxleden Ernestus*—*Dictionarium Malabaricum cui addita multa Vocabula Samscrdamica a P. F. Ernesto Hanxleden, descriptum a P. Franco Carmelita Discalceato Malabaricæ Missionario anno 1785. 1 v. in 4°. sec xviii chart S M S 25*

*Hanxleden Ernestus*—*Vocabularium Malabarico Lusitanum. 1 v. in fol. chart sec. xviii. S. M. S. 33.*

We have thus seen how the existence of the Sanskrit language and literature was known ever since India had first been discovered by Alexander and his companions. But what was not known was that this language, as it was spoken at the time of Alexander, and, as we saw, even at the time of Solomon,<sup>1</sup> nay, for centuries before his time, was

*Havelden Ernestus*—Vita Jesu Christi D. N. Versibus Malabaricis composita a P. F. E. Havelden, capita xiv. Dicitur Mishhâde Pana Vide Paulinus a S. Bartholomeo, Miscellanea Indica

*Havelden Ernestus*.—Liber excellens scriptus lingua Sanscrit character Granthamico, continet pœma insigne Brahmanicum Indicum *Yudhishthira vigea* (*Yudhishthira-vigaya*) inscriptum cum explanatione versuum in lingua

*Paulinus a S. Bartholomæo*.—Grammatica Grandonica Regi Transcaucidis dicata per F. Paulinum a S. Bartholomæo Carmelitam Discalearum 1782 S. M. S. 3. Paulino da S. Bartholomæo says. 'Hic (Havelden) primus grammaticam Sanscritamicam ex libro grammatico Brahmanico Sidharûbam dicto confecit, atque hæc grammatica Grandonica cum nostra Sanscritamica, quam ab Kunhen et Krishna Brahmanibus Angamalensibus accepimus, quoad elementa et regulas una cademque est' Examen historico-criticum Codicum Indicorum, p. 51; Barone, *Vita*, p. 147. *Grandonica* is not derived from *grantha*, book, as Benfey supposes; but *grantha* is simply the name given to the alphabet in which Sanskrit was written in the South, and therefore to Sanskrit literature. The *Grantha* MSS. are of great importance for Sanskrit philology. Ziegenbald (vol. iv. p. 381) says, 'Brammhanum linguæ propriæ nomen est *grantham*, neque a Brahmanibus ipsis unquam aliter vocatur' See Barone, *Vita*, p. 148.

*Paulinus a S. Bartholomæo*.—Celeberrimum pœma Mâga Sanscriticæ—De sex divinis attributis Carmen sermone Malabarico Sanscritamico contra Polytheistas Indos auctore P. Paulino a S. Bartholomæo Carm. Disc.—Vita S. M. Theresiæ a Jesu Versibus Sanscritamicis. Malabaricis composita a F. Paulino a S. Barth. C. D. anno 1783. S. M. S. 8. 1 v. in 8°. sec. xviii. chart.

*Paulinus a S. Bartholomæo*—Miscellanea Indica a P. Paulino collecta. 1 v. in fol. sec. xviii. chart. S. M. S. 34.

*Paulinus a S. Bartholomæo*—Opera Miscellanea 6 v. in fol. sec. xviii. chart. S. M. S. 38–43.

<sup>1</sup> See before, p. 186.

intimately related to Greek and Latin, in fact, stood to them in the same relation as French to Italian and Spanish.

**Asiatic Society of Calcutta.**

The history of what may be called European Sanskrit philology dates from the foundation of the Asiatic Society at Calcutta, in 1784.<sup>1</sup> For although some of the early missionaries seem to have possessed a far more considerable knowledge of Sanskrit than was at one time supposed, yet it was through the labours of Sir William Jones, Wilkins, Carey, Forster, Colebrooke, and other members of that illustrious society, that the language and literature of the Brahmans became first accessible to European scholars.

**Similarity between Sanskrit, Greek, and Latin.**

It would be difficult to say which of the two, the language or the literature, excited the deepest and most lasting interest. It was impossible to look, even in the most cursory manner, at the declensions and conjugations, without being struck by the extraordinary similarity, or, in some cases, by the absolute identity, of the grammatical forms in Sanskrit, Greek, and Latin. We saw that, as early as 1588, Filippo Sassetti was startled by the similarity of the San-

<sup>1</sup> The earliest publications were the *Bhagavadgītā*, translated by Wilkins, 1785, the *Hitopadeśa*, translated by Wilkins, 1787, and the *Sakuntalā*, translated by W. Jones, 1789. Original grammars, without mentioning mere compilations, were published by Paolo da S. Bartolommeo, 1790 and 1804, by Colebrooke, 1805, by Carey, 1806, by Wilkins, 1808, by Forster, 1810, by Yates, 1821, by Wilson, 1841. In Germany, Bopp published his grammars in 1827, 1832, 1834, L'enfey, in 1852 and 1855.

skrit and Italian numerals, and of the words for God, serpent, and many other things. The same remark must have been made by others, but it was never so distinctly set forth as by the Père Cœurdoux.

**Père Cœurdoux.**

In the year 1767 that French Jesuit wrote from Pondichery to the Abbé Barthélemy<sup>1</sup> at Paris, who had asked him for a Sanskrit grammar and dictionary and for general information on the history and literature of India, and he enclosed a memoir, which he wished to be laid before the Academy, with the following title.—*Question proposée à M. l'abbé Barthélemy et aux autres membres de l'Académie de belles-lettres et inscriptions: "D'où vient que dans la langue samscritane il se trouve un grand nombre de mots qui lui sont communs avec le latin et le grec, et surtout avec le latin?"* The Jesuit missionary first gives his facts, some of which are very interesting. He compares, for instance, *deva* and *deus*, God; *mrityu* and *mors*, death; *ganitam* and *genitum*, produced; *gânu* and *genu*, knee, *vidhavâ*, from *vi*, without, and *dhava*, man, with *vidua*, widow, *na* and *non*, not; *madhya* and *medius*, middle; *dattam* and *datum*, given; *dânain* and *donum*, gift; and many more which have since been pointed out afresh by later scholars. Some of his comparisons, no doubt, are untenable, but on the whole his paper deserved more attention than it seems to have received from the Academy. His grammatical comparisons, in particular, are very creditable. He con-

<sup>1</sup> Born 1716, died 1795

compares the indicative and the subjunctive of the auxiliary verb in Sanskrit and Latin:—

Sanskrit	Latin	Sanskrit	Latin
asmi	sum	syām	sim
asi	es	syās	sis
asti	est	syât	sit
smas	sumus	syāma	simus
stha	estis	syāta	sitis
santi	sunt	santu	sint.

Among the pronouns he compares *aḥam* and *ego*, *me* and *me*, *māhyam* and *mihī*, *sva* and *suaus*, *tvam* and *tu*, *tubhyam* and *tibi*, *kaś* and *quis*, *ke* and *qui*, *kam* and *quem*, &c. He likewise exhibits the striking similarities in the Sanskrit, Greek, and Latin numerals from one to one hundred.

But not satisfied with this, he goes on to examine the different hypotheses that suggest themselves for explaining these facts, and after showing that neither commerce, nor literary intercourse, nor proselytism, nor conquest could account for the common stock of words that is found in Sanskrit, Greek, and Latin, he sums up in favour of viewing these common words as relics of the primitive language of mankind, preserved by different tribes in their migrations north and south, after the great catastrophe of the confusion of tongues at Babel.

Considering that this essay was written a hundred years ago, it is astounding that it should have attracted so little attention, and should, in fact, never have been quoted until M. Michel Bréal discovered it from the *Memoirs of the French Academy*, and vindicated for this modest missionary the credit

that certainly belongs to him, of having anticipated some of the most important results of Comparative Philology by at least fifty years.

**Halhed.**

Halhed, in the preface to his Grammar of Bengali,<sup>1</sup> published in 1778, remarked, 'I have been astonished to find this similitude of Sanskrit words with those of Persian and Arabic, and even of Latin and Greek; and these not in technical and metaphorical terms, which the mutation of refined arts and improved manners might have occasionally introduced; but in the main groundwork of language, in monosyllables, in the names of numbers, and the appellations of such things as could be first discriminated on the immediate dawn of civilization.'

**Sir William Jones.**

Sir William Jones (died 1794), even before he went to India, had been interested in the curious coincidence between words in Persian and in Greek and Latin. In a letter to Prince Adam Czartoryski, dated Febr. 17, 1770, he writes:<sup>2</sup>—'How so many European words crept into the Persian language, I know not with certainty. Procopius, I think, mentions the great intercourse, both in war and peace, between the Persians and the nations in the north of Europe and Asia, whom the ancients knew by the

<sup>1</sup> Halhed was a servant of the East-India Company. He was born 1751, and died 1836. Halhed published in 1776 the *Code of Gentoo Laws*, a digest of the most important Sanskrit law-books made by eleven Brahmans, by the order of Warren Hastings. Halhed translated from a Persian translation of the original.

general name of Scythians. Many learned investigators of antiquity are fully persuaded, that a very old and almost primæval language was in use among these northern nations, from which not only the Celtic dialect but even Greek and Latin, are derived; in fact we find *πατήρ* and *μήτηρ* in Persian, nor is *θυγάτηρ* so far removed from *dochter*, or even *đroma* and *women* from *nām*, as to make it ridiculous to suppose that they sprang from the same root. We must confess that these researches are very obscure and uncertain; and you will allow, not so agreeable as an ode of Hæfaz, or an elegy of Amr'alkais.'

After he had gone to India he declared, after the first glance at Sanskrit, that, whatever its antiquity, it was a language of most wonderful structure, more perfect than the Greek, more copious than the Latin, and more exquisitely refined than either, yet bearing to both of them a strong affinity. 'No philologer,' he writes, 'could examine the Sanskrit, Greek, and Latin, without believing them to have sprung from some common source, which, perhaps, no longer exists. There is a similar reason, though not quite so forcible, for supposing that both the Gothic and Celtic had the same origin with the Sanskrit. The old Persian may be added to the same family.'<sup>1</sup>

But how was that affinity to be explained? People were completely taken by surprise. Theologians shook their heads; classical scholars looked sceptical;

<sup>1</sup> It should be remembered that Paolo da S. Bartolommeo, in his *Dissertatio de latinæ sermōnis origine et cum orientaliū linguīs connectione*, Romæ, 1802, declared, '*Indos veteres diceret latine locutos*



philosophers indulged in the wildest conjectures in order to escape from the only possible conclusion which could be drawn from the facts placed before them, but which threatened to upset their little systems of the history of the world.

**Lord Monboddo.**

Lord Monboddo had just finished his great work<sup>1</sup> in which he derives all mankind from a couple of apes, and all the dialects of the world from a language originally framed by some Egyptian gods,<sup>2</sup> when the discovery of Sanskrit came on him like a thunderbolt. It must be said, however, to his credit, that he at once perceived the immense importance of the discovery. He could not be expected to sacrifice his primæval monkeys or his Egyptian idols; but, with that reservation, the conclusions which he drew from the new evidence placed before him by his friend Wilkins, the author of one of our first Sanskrit grammars, are highly creditable to the acuteness of the Scotch judge.

‘There is a language,’ he writes<sup>3</sup> (in 1792), ‘still existing, and preserved among the Brahmins of India, which is a richer and in every respect a finer language than even the Greek of Homer. All the other languages of India have a great resem-

<sup>1</sup> *Of the Origin and Progress of Language*, second edition, 6 vols Edinburgh, 1774.

<sup>2</sup> ‘I have supposed that language could not be invented without supernatural assistance, and, accordingly, I have maintained that it was the invention of the Dæmon kings of Egypt, who, being more than men, first taught themselves to articulate, and then taught others. But, even among them, I am persuaded there was a progress in the art, and that such a language as the Sanscrit was not at once invented.’—Monboddo, *Antient Metaphysics*, vol. iv p 357.

<sup>3</sup> *Of the Origin and Progress of Language*, vol. vi. p. 97.

blance to this language, which is called the Shanscrit. But those languages are dialects of it, and formed from it, not the Shanscrit from them. Of this, and other particulars concerning this language, I have got such certain information from India, that if I live to finish my history of man, which I have begun in my third volume of *Antient Metaphysics*, I shall be able clearly to prove that the Greek is derived from the Shanscrit, which was the antient language of Egypt, and was carried by the Egyptians into India, with their other arts, and into Greece by the colonies which they settled there.'

A few years later (1795) he had arrived at more definite views on the relation of Sanskrit to Greek, and he writes,<sup>1</sup>

'Mr. Wilkins has proved to my conviction such a resemblance betwixt the Greek and the Shanscrit, that the one must be a dialect of the other, or both of some original language. Now the Greek is certainly not a dialect of the Shanscrit, any more than the Shanscrit is of the Greek. They must, therefore, be both dialects of the same language; and that language could be no other than the language of Egypt, brought into India by Osiris, of which, undoubtedly, the Greek was a dialect, as I think I have proved.'

Into these theories of Lord Monboddo's on Egypt and Osiris, we need not inquire at present. But it may be of interest to give one other extract, in order to show how well, apart from his men with and his monkey without tails, Lord Monboddo could sift and handle the evidence that was placed before him.—

'To apply these observations to the similarities which Mr. Wilkins has discovered betwixt the Shanscrit and the Greek, I will begin with these words, which must have been original words in all languages, as the things denoted by them must

<sup>1</sup> *Antient Metaphysics*, vol. iv p. 322.

have been known in the first ages of civility, and have got names; so that it is impossible that one language could have borrowed them from another, unless it was a derivative or dialect of that language. Of this kind are the names of numbers, of the members of the human body, and of relations, such as that of father, mother, and brother. And first, as to numbers, the use of which must have been coeval with civil society. The words in the Shanscrit for the numbers, from one to ten, are, *ek*, *dwee*, *tree*, *chatoor*, *panch*, *shat*, *sapt*, *augt*, *nava*, *das*, which certainly have an affinity to the Greek or Latin names for those numbers. Then they proceed towards twenty, saying ten and one, ten and two, and so forth, till they come to twenty; for their arithmetic is decimal as well as ours. Twenty they express by the word *veensatce*. Then they go on till they come to thirty, which they express by the word *treensat*, of which the word expressing three is part of the composition, as well as it is of the Greek and Latin names for those numbers. And in like manner they go on expressing forty, fifty, &c., by a like composition with the words expressing simple numerals, namely, four, five, &c., till they come to the number one hundred, which they express by *sat*, a word different from either the Greek or Latin name for that number. But, in this numeration, there is a very remarkable conformity betwixt the word in Shanscrit expressing twenty or twice ten, and the words in Greek and Latin expressing the same number, for in none of the three languages has the word any relation to the number two, which, by multiplying ten, makes twenty; such as the words expressing the numbers thirty, forty, &c., have to the words expressing three or four, for in Greek the word is *eikosi*, which expresses no relation to the number two; nor does the Latin *viginti*, but which appears to have more resemblance to the Shanscrit word *veensatce*. And thus it appears that in the anomalies of the two languages of Greek and Latin, there appears to be some conformity with the Shanscrit.'

Lord Monboddo compares the Sanskrit *pada* with the Greek *pous*, *podos*; the Sanskrit *nâsa* with the

Latin *nasus*; the Sanskrit *deva*, god, with the Greek *theos* and Latin *deus*; the Sanskrit *ap*, water, with the Latin *aqua*; the Sanskrit *vidhavâ* with the Latin *vidua*, widow. Sanskrit words such as *gonia* for angle, *kenra* for centre, *hora* for hour, he points out as clearly of Greek origin, and imported into Sanskrit. He then proceeds to show the grammatical coincidences between Sanskrit and the classical languages. He dwells on compounds such as *tripada*, from *tri*, three, and *pada*, foot—a tripod; he remarks on the extraordinary fact that Sanskrit, like Greek, changes a positive into a negative adjective by the addition of the *u* privative; and he then produces what he seems to consider as the most valuable present that Mr. Wilkins could have given him, namely, the Sanskrit forms, *asmi*, I am; *asi*, thou art; *asti*, he is; *santi*, they are; forms clearly of the same origin as the corresponding forms *esmi*, *eis*, *esti*, in Greek, and *sunt* in Latin.

#### Dugald Stewart.

Another Scotch philosopher, Dugald Stewart, was much less inclined to yield such ready submission. No doubt it must have required a considerable effort for a man brought up in the belief that Greek and Latin were either aboriginal languages, or modifications of Hebrew, to bring himself to acquiesce in the revolutionary doctrine that the classical languages were intimately related to a jargon of mere savages; for such all the subjects of the Great Mogul were then supposed to be. However, if the facts about Sanskrit were true, Dugald Stewart was too wise not

to see that the conclusions drawn from them were inevitable. He therefore denied the reality of such a language as Sanskrit altogether, and wrote his famous essay to prove that Sanskrit had been put together after the model of Greek and Latin, by those arch-forgers and liars, the Brahmans, and that the whole of Sanskrit literature was an imposition. I mention this fact, because it shows, better than anything else, how violent a shock was given by the discovery of Sanskrit to prejudices most deeply engrained in the mind of every educated man. The most absurd arguments found favour for a time, if they could only furnish a loophole by which to escape from the unpleasant conclusion that Greek and Latin were of the same kith and kin as the language of the black inhabitants of India. The first who, in the broad daylight of European science, dared boldly to face both the facts and the conclusions of Sanskrit scholarship, was the German poet, Frederick Schlegel.

#### Frederick Schlegel.

He had been in England during the peace of Amiens (1801-1802), and had acquired a smattering of Sanskrit from Mr. Alexander Hamilton. After carrying on his studies for some time in Paris, he published, in 1808, his work on *The Language and Wisdom of the Indians*. This work became the foundation of the science of language. Though published only two years after the first volume of Adelung's *Mithridates*, it is separated from that work by the same distance which separates the Copernican from the Ptolemæan system. Schlegel was not a great scholar. Many of

his statements have proved erroneous; and nothing would be easier than to dissect his essay and hold it up to ridicule. But Schlegel was a man of genius; and when a new science is to be created, the imagination of the poet is wanted, even more than the accuracy of the scholar. It surely required somewhat of poetic vision to embrace with *one* glance the languages of India, Persia, Greece, Italy, and Germany, and to rivet them together by the simple name of Indo-Germanic. This was Schlegel's work; and, in the history of the human intellect, it has been truly called 'the discovery of a new world.'

We shall see how Schlegel's idea was taken up in Germany, and how it led almost immediately to a genealogical classification of the principal languages of mankind.

## CHAPTER VII.

### GENEALOGICAL CLASSIFICATION OF LANGUAGES.

#### **The Founders of Comparative Philology.**

**W**E traced in a former chapter the history of the various attempts at a classification of languages to the year 1808, the year in which Frederick Schlegel published his little work on *The Language and Wisdom of the Indians*. This work was like the wand of a magician. It pointed out the place where a mine should be opened; and it was not long before some of the most distinguished scholars of the day began to sink their shafts and raise the ore. For a time, everybody who wished to learn Sanskrit had to come to England. Bopp, Schlegel, Lassen, Rosen, Burnouf, all spent some time in this country, copying manuscripts at the East India House, and receiving assistance from Wilkins, Colebrooke, Wilson, and other distinguished members of the old Indian Civil Service. The first minute and scholar-like comparison of the grammar of Sanskrit with that of Greek, Latin, Persian, and German was made by Francis Popp, in 1816.<sup>1</sup> Other essays of his followed; and in 1833 appeared the first volume of his *Comparative Grammar of Sanskrit, Zend, Greek, Latin, Lithuanian,*

<sup>1</sup> *Conjugationssystem*, Frankfurt, 1816

*Slavonic, Gothic, and German.* This work was not finished till nearly twenty years later, in 1852;<sup>1</sup> but it will form for ever the safe and solid foundation of Comparative Philology.<sup>2</sup> August Wilhelm von Schlegel, the brother of Frederick Schlegel, used the influence which he had acquired as a German poet, to popularise the study of Sanskrit in Germany. His *Indische Bibliothek* was published from 1819 to 1830, and though chiefly intended for Sanskrit literature, it likewise contained several articles on Comparative Philology. This new science soon found a still more powerful patron in Wilhelm von Humboldt, the worthy brother of Alexander von Humboldt, and at that time one of the leading statesmen in Prussia. His essays, chiefly on the philosophy of language, attracted general attention during his lifetime; and he left a lasting monument of his studies in his great work on the Kawi language, which was published after his death, in 1836. Another scholar who must be reckoned among the founders of Comparative Philology is Professor Pott, whose *Etymological Researches* appeared first in 1833 and 1836.<sup>3</sup> More special in its purpose, but based on the same general

<sup>1</sup> New edition in 1856, much improved.

<sup>2</sup> This may sound a bold statement in 1888, when Bopp has been relegated to the limbo of the fallen great ones, and his etymologies are only quoted as warning examples of perverse ingenuity. From an historical point of view, however, his work has lost nothing of its greatness. He did what was possible in his time. Let us hope that the same may be said hereafter of those who came after him and carried on his work to higher perfection.

<sup>3</sup> Second edition, 1859 to 1873. Pott's work on *The Language of the Gipsies* appeared in 1846; his work on *Proper Names* in 1856. See obituary notice at the end of this chapter, p. 290.



principles, was Grimm's *Teutonic Grammar*, a work which has truly been called colossal. Its publication occupied nearly twenty years, from 1819 to 1837. We ought, likewise, to mention here the name of an eminent Dane, Erasmus Rask, who devoted himself to the study of the northern languages of Europe. He started, in 1816, for Persia and India, and was the first to acquire a grammatical knowledge of Zend, the language of the Zend-Avesta; but he died before he had time to publish all the results of his learned researches. He had proved however, that the sacred language of the Parsis was closely connected with the sacred language of the Brahmans and that, like Sanskrit, it had preserved some of the earliest formations of Indo-European speech. These researches into the ancient Persian language were taken up again by one of the greatest scholars that France ever produced, by Eugène Burnouf. Though the works of Zoroaster had been translated before by Anquetil Duperron, his was only a translation of a modern Persian translation of the original. It was Burnouf who, by means of his knowledge of Sanskrit and Comparative Grammar, deciphered for the first time the very words of the founder of the ancient religion of light. He was, likewise, the first to apply the same key with real success to the cuneiform inscriptions of Darius and Xerxes; and his premature death will long be mourned, not only by those who, like myself, had the privilege of knowing him personally and attending his lectures, but by all who have the interest of oriental literature and of real oriental scholarship at heart.

I cannot give here a list of all the scholars who followed in the track of Bopp, Schlegel, Humboldt, Grimm, and Burnouf. How the science of language has flourished and abounded may best be seen in the library of any comparative philologist. There has been, since the year 1852, a special journal of Comparative Philology in Germany. The Philological Society in London publishes every year a valuable volume of its transactions; and in almost every continental university there is a professor of Sanskrit who lectures likewise on Comparative Grammar and the Science of Language.

**The proper place of Sanskrit in the Aryan Family.**

But why, it may naturally be asked—why should the discovery of Sanskrit have wrought so complete a change in the classificatory study of languages? If Sanskrit had been the primitive language of mankind, or at least the parent of Greek, Latin, and German, we might understand that it should have led to quite a new classification of these tongues. But Sanskrit does not stand to Greek, Latin, the Teutonic, Celtic, and Slavonic languages, in the relation of Latin to French, Italian, and Spanish. Sanskrit, as we saw before, could not be called their parent, but only their elder sister. It occupies with regard to the classical languages a position analogous to that which Provençal occupies with regard to the modern Romance dialects. This is perfectly true; but it was exactly this necessity of determining distinctly and accurately the mutual relation of Sanskrit and the other members of the same family of speech,

which led to such important results, and particularly to the establishment of the laws of phonetic change as the only safe means for measuring the various degrees of relationship of cognate dialects, and thus restoring the genealogical tree of human speech. When Sanskrit had once assumed its right position, when people had once become familiarised with the idea that there must have existed a language more primitive than Greek, Latin, and Sanskrit, and forming the common background of these three, as well as of the Teutonic, Celtic, and Slavonic branches of speech, all languages seemed to fall by themselves into their right position. The key of the puzzle was found, and all the rest was merely a work of patience. The same arguments by which Sanskrit and Greek had been proved to hold co-ordinate rank were perceived to apply with equal strength to Latin and Greek; and after Latin had once been shown to be more primitive on many points than Greek, it was easy to see that the Teutonic, the Celtic, and the Slavonic languages also, contained each a number of formations which it was impossible to derive from Sanskrit, Greek, or Latin. It was perceived that all had to be treated as co-ordinate members of one and the same class.

The first great step in advance, therefore, which was made in the classification of languages, chiefly through the discovery of Sanskrit, was this, that scholars were no longer satisfied with the idea of a general relationship, but began to inquire for the special degrees of relationship in which each member of a class stood to another. Instead of mere

*classes*, we hear now for the first time of well-regulated *families* of language.

A second step in advance followed naturally from the first. Whereas, for establishing in a general way the common origin of certain languages, a comparison of numerals, pronouns, prepositions, adverbs, and the most essential nouns and verbs, had been sufficient, it was soon found that a more accurate standard was required for measuring the more minute degrees of relationship. Such a standard was supplied by Comparative Grammar; that is to say, by an intercomparison of the grammatical forms of languages supposed to be related to each other; such intercomparison being carried out according to certain laws which regulate the phonetic changes of letters.

**The position of Provençal among the Romanic Languages.**

A glance at the modern history of language will make this clearer. There could never be any doubt that the so-called Romance languages, Italian, Roumanian, Provençal, French, Spanish, and Portuguese, were closely related to each other. Everybody could see that they were all derived from Latin. But one of the most distinguished French scholars, Raynouard, who has done more for the history of the Romance languages and literature than any one else, maintained that Provençal only was the daughter of Latin; whereas French, Italian, Spanish, and Portuguese were the daughters of Provençal. He maintained that Latin passed, from the seventh to the ninth century, through an intermediate stage, which he called *Langue Romane*, and which he endeavoured

to prove was the same as the Provençal of Southern France, the language of the Troubadours. According to him, it was only after Latin had passed through this uniform metamorphosis, represented by the *Langue Romane* or Provençal, that it became broken up into the various Romance dialects of Italy, France, Spain, and Portugal. This theory, which was vigorously attacked by August Wilhelm von Schlegel, and afterwards minutely criticised by Sir George Cornewall Lewis, can only be refuted by a comparison of the Provençal grammar with that of the other Romance dialects. And here, if you take the auxiliary verb *to be*, and compare its forms in Provençal and French, you will see at once that, on several points, French has really preserved the original Latin forms in a more primitive state than Provençal, and that, therefore, it is impossible to classify French as the daughter of Provençal, and as the granddaughter of Latin. We have in Provençal:—

<i>sem</i> ,	corresponding to the French	<i>nous sommes</i>
<i>etz</i>	”	<i>vous êtes</i>
<i>son</i>	”	<i>ils sont.</i>

And it would be a grammatical miracle if crippled forms, such as *sem*, *etz*, and *son*, had been changed back again into the more healthy, more primitive, more Latin forms, *sommes*, *êtes*, *sont*; *sumus*, *estis*, *sunt*.

Let us apply the same test to Sanskrit, Greek and Latin; and we shall see how their mutual genealogical position is equally determined by a comparison of their grammatical forms, and that it is as impossible to derive Latin from Greek, or Greek from Sanskrit, as

it is to treat French as a modification of Provençal. Keeping to the auxiliary verb *to be*, we find that *I am* is in

Sanskrit	Greek	Lithuanian
asmi	esmi	esmi.

The Sanskrit root is *as*, the termination *mi*.

Now, the termination of the second person is *si*, which, together with *as*, or *es*, would make

as-si	es-si	es-si
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But here Sanskrit, as far back as its history can be traced, has reduced *assi* to *asi*; and it would be impossible to suppose that the perfect, or, as they are sometimes called, organic, forms in Greek and Lithuanian, *es-si*, could first have passed through the mutilated state of the Sanskrit *asi*.

The third person is the same in Sanskrit, Greek, and Lithuanian, *as-ti* or *es-ti*; and, with the loss of the final *i*, we recognise the Latin *est*, Gothic *ist*, and Russian *est'*.

The same auxiliary verb can be made to furnish sufficient proof that Latin never could have passed through the Greek, or what used to be called the Pelasgic stage, but that both are independent modifications of the same original language. In the singular, Latin is less primitive than Greek; for *sum* could never become *ἐσμί*, or *es εἰς*, or *est ἐστί*. In the first person plural, too, *sumus* stands for *'s-umus*, the Greek *es-men*, the Sanskrit *'smás*. The second person, *es-tis*, is equal to Greek *es-te*, and more primitive therefore than even the Sanskrit *sthá*. But in the third person plural Latin is more primitive than Greek. The regular form would be *'s-anti*; this, in

Sanskrit, is regularly changed into *sánti*. In Greek the initial *s* is dropped, and the Æolic *enti* is finally reduced to *eisi*. The Latin, on the contrary, has kept the radical *s*, and it would be perfectly impossible to derive the Latin *sunt* from the Greek *eisi*.

I need hardly say that the modern English, *I am*, *thou art*, *he is*, are only secondary modifications of the same primitive verb. We find in Gothic

<i>im</i>	for	<i>iem</i>
<i>is</i>	”	<i>iss</i>
<i>ist</i>		

In Anglo-Saxon we have

singular. <i>eom</i>	plural: <i>sind</i> for <i>isind</i>
” <i>eart</i>	” <i>sind</i>
” <i>is</i>	” <i>sind</i>

By applying this test to all languages, the founders of comparative philology soon reduced the principal dialects of Europe and Asia to certain families, and they were able in each family to distinguish different branches, each consisting again of numerous dialects, both ancient and modern.

#### Genealogical Classification.

There are many languages, however, which as yet have not been reduced to families, and though there is no reason to doubt that some of them will hereafter be comprehended in a system of genealogical classification, it is right to guard from the beginning against the common but altogether gratuitous supposition, that the principle of genealogical classification must be applicable to all languages. Genealogical classifica-

tion is no doubt the most perfect of all classifications, but there are but few branches of physical science in which it can be carried out, except very partially. In the science of language, genealogical classification must rest chiefly on the formal or grammatical elements, which, after they have been affected by phonetic change, can be kept up only by a continuous tradition. We know that French, Italian, Spanish, and Portuguese must be derived from a common source, because they share grammatical forms in common, which none of these dialects could have supplied from their own resources, and which have no meaning, or, so to say, no life in any one of them. The termination of the imperfect *ba* in Spanish, *va* in Italian, by which *canto*, I sing, is changed into *cantaba* and *cantava*, has no separate existence, and no independent meaning in either of these modern dialects. It could not have been formed with the materials supplied by Spanish and Italian. It must have been handed down from an earlier generation in which this *ba* had a meaning. We trace it back to Latin *bam*, in *cantabam*, and this *ba-m* to an independent auxiliary verb, the same which exists in Sanskrit *bhavâmi*, and in the Anglo-Saxon *beom*, I am. Genealogical classification, therefore, applies properly only to decaying languages, to languages in which grammatical growth has been arrested, through the influence of literary cultivation; in which little that is new is added, everything old is retained as long as possible, and where what we call growth or history is nothing but the progress of phonetic corruption. But before languages decay, they have



passed through a period of growth ; and it seems to have been completely overlooked, that dialects which diverged during that early period, would naturally resist every attempt at genealogical classification. If we remember the manner in which, for instance, the plural was formed in Chinese, and other languages examined by us in a former chapter, we shall easily see that where each dialect may choose its own term expressive of plurality, such as *heap, class, kind, flock, cloud, &c.*, it would be unreasonable to expect similarity in grammatical terminations, after these terms have been ground down by phonetic corruption to mere exponents of plurality. But, on the other hand, it would by no means follow that therefore these languages had no common origin. Languages may have a common origin, and yet the words which they originally employed for marking case, number, person, tense, and mood, having been totally different, the grammatical terminations to which these words would gradually dwindle down, could not possibly yield any results, if submitted to the analysis of comparative grammar. A genealogical classification of such languages is, therefore, from the nature of the case, simply impossible, at least if such classification is chiefly to be based on grammatical or formal evidence.

It might be supposed, however, that such languages, though differing in their grammatical articulation, would yet evince their common origin by the identity of their radicals or roots. No doubt they will in many instances. They will probably have retained their numerals in common, some of their pronouns,

and some of the commonest words of every-day life. But even here we must not expect too much, nor be surprised if we find even less than we expected. You remember how the names for father varied in the numerous Frisian dialects. Instead of *frater*, the Latin word for brother, you find *hermano* in Spanish. Instead of *ignis*, the Latin word for fire, you have in French *feu*, in Italian *fuoco*. Nobody would doubt the common origin of German and English; yet the English numeral 'the first,' though preserved in *Fürst* (princeps, prince), is quite different from the German 'Der Erste'; 'the second' is quite different from 'Der Zweite'; and there is no connection between the possessive pronoun *its* and the German *sein*. Dialectic freedom works on a much larger scale in ancient and illiterate languages; and those who have most carefully watched the natural growth of dialects will be the least surprised that dialects which had the same origin should differ, not only in their grammatical framework, but likewise in many of those test-words which are very properly used for discovering the relationship of literary languages. How it is possible to say anything about the relationship of such dialects we shall see hereafter. For the present, it is sufficient if I have made it clear why the principle of genealogical classification is not of necessity applicable to all languages; and secondly, why languages, though they cannot be classified genealogically, need not therefore be supposed to have been different from the beginning. The assertion so frequently repeated, that the impossibility of classing all languages genealogically proves the

impossibility of a common origin of language, is nothing but a kind of scientific dogmatism which, more than anything else, has impeded the free progress of independent research.

But let us see now how far the genealogical classification of languages has advanced, how many families of human speech have been satisfactorily established. Let us remember what suggested to us the necessity of a genealogical classification. We wished to know the original intention of certain words and grammatical forms in English, and we saw that, before we could attempt to fathom the origin of such words as 'I love,' and 'I loved,' we should have to trace them back to their most primitive state. We likewise found, by a reference to the history of the Romance dialects, that words existing in one dialect had frequently been preserved in a more primitive form in another, and that therefore it was of the highest importance to bring ancient languages into the same genealogical connection by which French, Italian, Spanish, and Portuguese are held together as the members of one and the same family.

#### English and Anglo-Saxon.

Beginning, therefore, with the living language of England, we traced it, without difficulty, to Anglo-Saxon, divided into four dialects, the Northumbrian and Mercian forming the *Anglian* branch, and the West-Saxon (Saxons) and Kentish (Jutes) forming the *Southern* branch. This carries us back to the seventh century after Christ, for it is to that date that Kemble and Thorpe refer the ancient English

epic, the *Beowulf*.<sup>1</sup> Beyond this we cannot follow English literature on English soil.

**Continental Saxon, Low-German.**

But we know that the Jutes, the Saxons, and the Angles, whose dialects formed the principal tributaries of the so-called Anglo-Saxon, i. e. the ancient English language, came all from the continent. They spoke different dialects of Low-German, that of the Angles in the north being somewhat mixed, it would seem, with High-German elements. Their descendants, along the northern coast of Germany, still speak dialects of Low-German,<sup>2</sup> or *Nieder-Deutsch*<sup>3</sup> which, in the harbours of Antwerp, Bremen, and Hamburg, has been mistaken by many an English sailor for corrupt English. This Low-German lives on in many dialects in the north or the lowlands of Germany, where it is often called *Platt-Deutsch*; but, with few exceptions, these are no longer used for literary purposes. The dialects of the Frisians, who constituted a large portion of the tribes that came to

<sup>1</sup> The earliest MS. containing Anglo-Saxon words is a charter, dated A. D. 679.

<sup>2</sup> 'Het oecht engelsch is oud nederdutsch,' 'the genuine English is Old Low-Dutch.'—Bilderdyk. See Delfortie, *Analogie des Langues*, p. 13.

<sup>3</sup> *Nieder-Deutsch*, Low-German, and *Hoch-Deutsch*, High-German, have almost lost their geographical meaning as the German spoken in the highlands and lowlands of Germany. They have come to mean German in the first and in the second stages of the *Latent-entwicklung*, and in that sense these technical terms are very useful. (See the Gothic of Ulfilas, by Douse, p. 11.) We must take care, however, not to confound *Low-German* and *High-German*, in their purely grammatical meaning, with *Upper*, *Middle*, and *Low-German*, used in a purely geographical sense. In the latter sense it would perhaps be better to use in English *Southern*, *Central*, and *Northern German*.

settle in England, are Low-German, particularly in their consonantal system; so are the Dutch and the Flemish.

#### Frisian.

The Frisians of the continent had a literature of their own as early, at least, as the twelfth century, if not earlier.<sup>1</sup> The oldest literary documents now extant date from the thirteenth and fourteenth centuries. From the fifteenth century Frisian became more and more encroached upon by *Platt-Deutsch*, and though there is a certain patriotic feeling among the Frisians that keeps up the language, its approaching fate can hardly be doubted.<sup>2</sup>

#### Dutch, Flemish, Old Frankish.

The Dutch, the national and literary language of Holland, can be traced back to Middle Dutch and Old Dutch. The oldest specimens of Old Dutch,<sup>3</sup> the

<sup>1</sup> Although the old Frisian documents rank, according to their dates, with Middle rather than with Old German, the Frisian language appears there in a much more ancient stage, which very nearly approaches the Old High-German. The political isolation of the Frisians, and their noble attachment to their traditional manners and rights, have imparted to their language also a more conservative spirit. After the fourteenth century the old inflections of the Frisian decay most rapidly.—Grimm, *German Grammar* (first edition), vol. i. p. lxviii.

<sup>2</sup> Nussen, in his *Friske Fyndling* (Stedesand, 1873), has collected proverbs in seven North-Frisian and in the common West-Frisian dialect. His seven North-Frisian dialects are: the Karhharder, Mouinger, Wiedinger, Sylter, Amrumer, Hattstedter, Brecklumer, to which he afterwards adds an eighth, the Ockholmer. He admits, however, that some of these are rapidly disappearing.

<sup>3</sup> Moritz Heyne, *Altniederdeutsche Sprachdenkmale*, Paderborn, 1877; Cosys, *De Oud Nederlandsche Psalmen*, Haarlem, 1873; Gédéon Huet, *Fragments Inédits de la traduction des Cantiques du Psautier en vieux Neerlandais*, re-edited by J. H. Gallée, in *Tydschrift van Nederlandsche Letterkunde*, vol. v. p. 274.

Karolingian Psalms, have been referred to the ninth century. They come very near to the Saxon of the Heljand. The Middle Dutch,<sup>1</sup> in various local dialects, which goes on to the sixteenth century, consists chiefly of translations from French. The Flemish was for a time the language of the court of Flanders and Brabant, but has since been considerably infringed on, though by no means extinguished, by the official languages of the kingdoms of Holland and Belgium. Of late years there has been a patriotic revival of Flemish literature.

The oldest literary document of Low-German on the continent is the Christian epic, written in what is old or continental Saxon, the *Heljand* (Heljand = Heiland, the Healer or Saviour). It is preserved to us in two MSS. of the ninth century, and was written at that time for the benefit of the newly-converted Saxons. We have traces of a certain amount of literature in Saxon or Low-German from that time onward through the Middle Ages up to the seventeenth century. But little only of that literature has been preserved; and, after the translation of the Bible by Luther into High-German, the fate of Low-German literature was sealed.

#### High-German.

The literary language of Germany is, and has been ever since the days of Charlemagne, the High-German. It is spoken in various dialects all over Germany.<sup>2</sup>

<sup>1</sup> Franck, *Mittelniederlandische Grammatik*, Leipzig, 1885.

<sup>2</sup> The Upper-German dialects in South-Germany, the Alemannic and Bavarian; and the Middle-German dialects, the East-Franconian, Thuringian, Hessian, Upper-Saxon, and Silesian.

Its history may be traced through three periods. The present or New High-German period dates from Luther; the Middle High-German period extends from Luther backwards to the beginning of the twelfth century; the Old High-German period<sup>1</sup> extends from thence to the eighth century.

#### No Proto-Teutonic Language.

Thus we see that we can follow the High-German as well as the Low-German branch of Teutonic speech back to about the seventh century after Christ. We must not suppose that before that time there was *one* common Teutonic language spoken by all German tribes, and that it afterwards diverged into two streams—the High and Low. There never was a common, uniform Teutonic language; nor is there any evidence to show that there existed at any time a uniform High-German or a uniform Low-German language, from which all High-German and Low-German dialects are respectively derived. We cannot derive Anglo-Saxon, Frisian, Flemish, Dutch, and Platt-Deutsch from the ancient Low-German, which is preserved in the continental Saxon of the ninth century. All we can say is that these various Low-German dialects in England, Holland, Frisia, and Lower Germany passed at different times through the same stages, or, so to say, the same latitudes, of grammatical growth. We may add that, with every century we go back, the convergence of

<sup>1</sup> In Old High-German literature three dialects are now distinguished: the *Upper-German* (the Alemannic and Bavarian), the *Upper-Franconian* (East-Franconian and Rhenish-Franconian), the *Middle-Franconian* (from Coblenze to Dusseldorf).

these dialects becomes more and more decided ; but there is no evidence to justify us in admitting the historical reality of one primitive and uniform Low-German language from which they were all derived. This is a mere creation of grammarians who cannot understand a multiplicity of dialects without a common type. They would likewise demand the admission of a primitive High-German language as the source, not only of the literary Old, Middle, and Modern High-German, but likewise of all the local dialects of Austria, Bavaria, Swabia, Franconia, Thuringia, Hessa, Saxony, and Silesia. And they would wish us to believe that, previous to the separation into High and Low-German, there existed one complete Teutonic language, as yet neither High nor Low, but containing the germs of both. Such a system may be convenient for the purposes of grammatical analysis, but it becomes mischievous as soon as these grammatical abstractions are invested with an historical reality. As there were families, clans, confederacies, and tribes, before there was a nation, so there were dialects before there was one classical language. The grammarian who postulates an historical reality for the one primitive type of Teutonic speech, is no better than the historian who believes in a Francus, the grandson of Hector, and the supposed ancestor of all the Franks, or in a Brutus, the mythical father of all the Britons. When the German races descended, one after the other, from the Danube and from the Baltic, to take possession of Italy and the Roman provinces—when the Goths, the Lombards, the Vandals, the Franks, the Burgundians,



each under their own kings, and with their own laws and customs, settled in Italy, Gaul, and Spain, to act their several parts in the last scene of the Roman tragedy—we have no reason to suppose that they all spoke one and the same dialect. If, instead of a few names and glosses, we possessed any literary documents of those ancient German races, we should find them all dialects again, some with the peculiarities of High, others with those of Low, German. Nor is this mere conjecture: for it so happens that, by some fortunate accident, the dialect of one at least of these ancient German races has been preserved to us in the Gothic translation of the Bible by bishop Ulfilas.

#### Ulfilas.

Ulfilas translated the Bible, but not the Books of Kings. Others may have assisted in the work.<sup>1</sup> For the Old Testament he used the Septuagint; for the New, a Greek text, which comes nearest to Codex Alexandrinus A.<sup>2</sup> Unfortunately, the greater part of his work has been lost, and we have only considerable portions of the four Gospels, all the genuine epistles of St. Paul, though these again not complete; fragments of a Psalm, of Ezra, and Nehemiah.

Though Ulfilas belonged by birth to the Western Goths,<sup>3</sup> his translation was used by all Gothic tribes, when they advanced into Spain and Italy. The

<sup>1</sup> See p. 251, l. 20.

<sup>2</sup> Some passages agree with Cod. Sang. A, and Cod. Paris. K, while the translation of the Epistles points to the Italian group of MSS. represented by Cod. Claromont. D, and sometimes to the Itala (Cod. Brixianus f). See Piper, *Sprache und Literatur Deutschlands*, p. 10.

<sup>3</sup> See Forstemann, *Geschichte des deutschen Sprachstammes*, vol. ii. p. 4.

Gothic language died out in the ninth century,<sup>1</sup> and after the extinction of the great Gothic empires, the translation of Ulfilas was lost and forgotten. But a MS. of the fifth century had been preserved in the Abbey of Werden, and towards the end of the sixteenth century, a man of the name of Arnold Mercator, who was in the service of William IV. the Landgrave of Hessa drew attention to this old parchment containing large fragments of the translation of Ulfilas. This MS, now known as the Codex Argenteus was afterwards transferred to Prague, and when Prague was taken in 1648 by Count Königsmark, he carried this literary relic to Upsala in Sweden, where it is still preserved as one of the greatest treasures. The parchment is purple, the letters in silver, and the MS bound in solid silver.

In 1818, Cardinal Mai and Count Castiglione discovered some more fragments in the monastery of Bobbio, where they had probably been preserved ever since the Gothic empire of Theodoric the Great in Italy had been destroyed.<sup>2</sup>

Ulfilas must have been a man of extraordinary power to conceive, for the first time, the idea of

<sup>1</sup> Gothic was spoken in the ninth century at *Tomi* (now Kustendje) on the Black Sea coast. Crim-Goths (the ancient *Titaciter*) are mentioned by travellers in the Middle Ages, particularly by Rubruquis (1253). The fullest notice of them is given by a Flemish traveller, A. G. von Busbeck, who, when at Constantinople in 1562, met two ambassadors of theirs, and took down some scores of their words and a fragment of verse. See Massmann, *Gothica monna*, in Haupt's *Zeitschrift*, vol. i. p. 354 (1811), Forstemann, *Geschichte des deutschen Sprachstammes*, vol. II. p. 159; Douce, *Gothic*, p. 5.

<sup>2</sup> These are the Codices Ambrosiani A, B, C, D; also the Codex

translating the Bible into the vulgar language of his people. At his time there existed in Europe but two languages which a Christian bishop would have thought himself justified in employing, Greek and Latin. All other languages were still considered as barbarous. It required a prophetic sight, a faith in the destinies of these half-savage tribes, and a conviction also of the utter effeteness of the Roman and Byzantine empires, before a bishop could have brought himself to translate the Bible into the vulgar dialect of his barbarous countrymen. Soon after the death of Ulfilas the number of Christian Goths at Constantinople had so much increased as to induce Chrysostom, the bishop of Constantinople (397-405), to establish a church in the capital, where the service was to be read in Gothic.<sup>1</sup> We have the sermon which he preached on that occasion, and though he treats the Goths as mere barbarians, yet he acknowledges their importance in the Christian church. In 403 St. Jerome received a letter from two Goths, *Sunnia* and *Fretela*, who wished to be enlightened about some differences they had discovered between the Vulgate and the Alexandrian translation of the Psalms. 'Who would have believed,' says St. Jerome, 'that the barbarous tongue of the Getae should inquire after the Hebrew verity, and that, while the Greeks either slay or fight, Germany alone should search for the words of the Holy Ghost.'

#### Gothic.

The language of Ulfilas, the Gothic, belongs through its phonetic structure, particularly through its con-

<sup>1</sup> Theodoret, *H. E. V.* 30.

sonants, to the Low-German class, but in its grammar it is, with certain exceptions, far more primitive than the Anglo-Saxon of the *Beowulf*, or the Old High-German of Charlemagne. These exceptions, however, are very important, for they show that it would be grammatically, and therefore, historically, impossible to derive Anglo-Saxon or High-German, or both,<sup>1</sup> from Gothic. It would be impossible, for instance, to treat the first person plural of the indicative present, the Old High-German *nerjamés*, as a corruption of the Gothic *nasjam*; for we know, from the Sanskrit *masi*, the Greek *mes*, the Latin *mus*, that this was the original termination of the first person plural.

Gothic is but one of the numerous dialects of German speech; other dialects became the feeders of the literary languages of the British Isles, of Holland, Frisia, and of Low and High Germany, others became extinct, and others rolled on from century to century unheeded, and without ever producing any literature at all. It is because Gothic is the only one of these parallel dialects that can be traced back to the fourth century, whereas the others disappear from our sight in the seventh, that it has been mistaken by some for the original source of all Teutonic speech, particularly with regard to the consonantal *Lautverschiebung*. The same arguments, however, which we used against Raynouard, to show that

<sup>1</sup> For instances where Old High-German is more primitive than Gothic, see Bopp, *Vergl. Grammatik*, § 143, 1; 149, Schleicher, *Zeitschrift für V. S.* b. 1v. s. 266, Bugge, *ibid.* b. v. s. 59; Pott, *Etym. Forsch.* ii. p. 57, note; Piper, *Sprache und Literatur Deutschlands*, p. 12.

Provençal could not be considered as the parent of the six Romance dialects, would tell with equal force against the pretensions of Gothic to be considered as more than the eldest sister of the Teutonic branch of speech.

#### **Scandinavian.**

There is, in fact, a third stream of Teutonic speech, which asserts its independence as much as High-German and Low-German, and which it would be impossible to place in any but a co-ordinate position with regard to Gothic, Low and High-German. This is the *Scandinavian* branch. It consists at present of three literary dialects, those of Sweden, Denmark, and Iceland, and of various local dialects, particularly in the secluded valleys and fiords of Norway,<sup>1</sup> where, however, the literary language is Danish.

It is commonly supposed<sup>2</sup> that, as late as the eleventh century, identically the same language was spoken in Sweden, Norway, and Denmark, and that this language was preserved almost intact in Iceland, while in Sweden and Denmark it grew into two new national dialects. Nor is there any doubt that the Icelandic skald recited his poems in Iceland, Norway, Sweden, Denmark, nay, even among his countrymen in England and Gardariki, without fear of not being understood, till, as it is said, William introduced Welsh, i. e. French, into England, and Slavonic tongues grew up in the east.<sup>3</sup> But though one and the same language (then called Danish or Norrænish)

<sup>1</sup> See Schleicher, *Deutsche Sprache*, s 94

<sup>2</sup> *Ibid* s 60.

<sup>3</sup> Weinhold, *Altnordisches Leben*, s. 27; *Gunnlaugs saga*, cap. 7.

was understood, I doubt, in this case also, whether one and the same language was spoken by all Northmen, and whether the first germs of Swedish and Danish did not exist long before the eleventh century, in the dialects of the numerous clans and tribes of the Scandinavian race. That race is clearly divided into two branches, called by Swedish scholars the East and West Scandinavian, by German scholars *West-Nordisch* and *Ost-Nordisch*. The former would be represented by the old language of Norway and Iceland, the latter by Swedish and Danish. This division of the Scandinavian race had taken place before the Northmen settled in Sweden and Norway. The western division migrated westward from Russia, and crossed over from the continent to the Aland Islands, and from thence to the southern coast of the peninsula. The eastern division travelled along the Bothnian Gulf, passing the country occupied by the Fins and Laps, and settled in the northern highlands, spreading towards the south and west.

#### The Edda.

The earliest fragments of Scandinavian speech are preserved in the two Eddas, the elder or poetical Edda containing old mythic poems, the younger or Snorri's Edda giving an account of the ancient mythology in prose. Both Eddas were collected, not in Norway but in Iceland, an island about as large as Ireland, and which became first known through some Irish monks who settled there in the eighth century.<sup>1</sup> In the ninth century voyages of discovery

<sup>1</sup> See Davent's *Burnt Ngul*, Introduction.

were made to Iceland by Naddodd, Gardar, and Flokki, 860-870, and soon after the remote island, distant about 750 English miles from Norway, became a kind of America to the Puritans and Republicans of the Scandinavian peninsula. Harald Haarfagr (850-933) had conquered most of the Norwegian kings, and his despotic sway tended to reduce the northern freeman to a state of vassalage. Those who could not resist, and could not bring themselves to yield to the sceptre of Harald, left their country and migrated to France, to England, and to Iceland (874). They were mostly nobles and freemen, and they soon established in Iceland an aristocratic republic, such as they had had in Norway before the days of Harald. This northern republic flourished; it adopted Christianity in the year 1000. Schools were founded, two bishoprics were established, and classical literature was studied with the same zeal with which their own national poems and laws had been collected and interpreted by native scholars and historians. The Icelanders were famous travellers, and the names of Icelandic students are found not only in the chief cities of Europe, but in the holy places of the East. At the beginning of the twelfth century Iceland counted 50 000 inhabitants. Their intellectual and literary activity lasted to the beginning of the thirteenth century, when the island was conquered by Hakon VI, king of Norway. In 1380, Norway, together with Iceland, was united with Denmark; and when, in 1814, Norway was ceded to Sweden, Iceland remained, as it is still, under Danish sway.

The old poetry which flourished in Norway in the

eighth century, and which was cultivated by the skalds in the ninth, would have been lost in Norway itself, had it not been for the jealous care with which it was preserved by the emigrants of Iceland. The most important branch of their traditional poetry were short songs (*hliod* or *quida*), relating the deeds of their gods and heroes. It is impossible to determine their age, but they existed at least previous to the migration of the Northmen to Iceland, and probably as early as the seventh century, the same century which yields the oldest remnants of Anglo-Saxon or Low-German, and of High-German. Some scholars, particularly Holtzmann, supposed that they were originally composed on German, perhaps on Saxon soil. As they existed in the twelfth century, probably considerably modified in their language, they were collected by Saemund Sigfusson (born 1056, died 1133). In 1643 a similar collection was discovered in MSS. of the fourteenth century, and published under the title of *Edda*, or Great-Grandmother. This collection is called the old or poetic Edda, in order to distinguish it from a later work ascribed to Snorri Sturluson (1179-1241). This, the younger or prose Edda, consists of three parts: the mocking of Gylfi, the speeches of Bragi, and the *Skaldia*. or *Ars poetica*.

Snorri Sturluson has been called the Herodotus of Iceland, his chief work being the *Heimskringla*, the world-ring, which contains the northern history from the mythic times to the time of king Magnus Erlingsson (died 1177). It was probably in preparing this history that, like Cassiodorus, Saxo Grammaticus, Paulus Diaconus, and other historians of the same class, Snorri



collected the old songs of the people; for his *Edda*, and still more his *Skalda*, are full of ancient poetic fragments.

The *Skalda*, and the rules which it contains, represent the state of poetry in the thirteenth century; and nothing can be more artificial, nothing more different from the general poetry of the old Edda, than this *Ars poetica* of Snorri Sturluson. One of the chief features of this artificial or skaldic poetry was that nothing should be called by its proper name. A ship was not to be called a ship, but the beast of the sea; blood, not blood, but the dew of pain, or the water of the sword. A warrior was not spoken of as a warrior, but as an armed tree, the tree of battle. A sword was the flame of wounds. In this poetical language, which every skald was bound to speak, there were no less than 115 names for Odin; an island could be called by 120 synonymous titles. The specimens of ancient poetry which Snorri quotes are taken from the skalds, whose names are well known in history, and who lived from the tenth to the thirteenth century. But he never quotes from any song contained in the old Edda,<sup>1</sup> whether it be that those songs were considered by himself as belonging to a different and much more ancient period of literature, or that they could not be used in illustration of the scholastic rules of skaldic poets, rules which were put to shame by the simple style of

<sup>1</sup> The name *Edda* is not found before the fourteenth century. Snorri Sturluson does not know the word *Edda*, nor any collection of ancient poems attributed to Saemund; and though Saemund may have made the first collection of national poetry, it is now considered doubtful whether the work which we possess under his name is his.

the national poetry, expressing what it had to express without effort and circumlocution.

We have thus traced the modern Teutonic dialects back to four principal channels—the *High-German*, *Low-German*, *Gothic*, and *Scandinavian*; and we have seen that these four, together with several minor dialects, must be placed in a co-ordinate position from the beginning, as so many varieties of Teutonic speech. This Teutonic speech may, for convenience sake, be spoken of as one—as one branch of that great family of language to which, as we shall see, it belongs; but it should always be borne in mind that this primitive and uniform language never had any real historical existence, and that, like all other languages, German began with dialects, which gradually formed themselves into several distinct national deposits.

Adopting a different principle of classification, Grimm divided the Teutonic class into a *Northern* and *Southern* branch, placing Gothic with German, and not with Scandinavian, while Mullenhoff and Scherer proposed to divide the Teutonic class into an Eastern (Vandilian) and Western (Suevian) branch, the Eastern comprehending Gothic and Scandinavian, the Western, both High and Low-German, that is to say, continental Saxon, Anglo-Saxon, Frisian, Low Franconian (Dutch, Flemish), and High-German. Although there are certain grammatical features<sup>1</sup> which support these two classifications, yet the *Lautverschiebung* seems to me far more characteristic than all the rest, and according to it Gothic and Scandinavian

<sup>1</sup> Piper, *Sprache und Literatur Deutschlands*, p. 3.

belong both grammatically and historically to Low-German, while High-German represents a more independent ramification of the Teutonic stock.

## TEUTONIC CLASS.

### FIRST STAGE OF LAUTVERSCHIEBUNG.

1. Gothic, 4th cent.
2. Scandinavian—
  - Old Scandinavian, 800-1000.
  - West-Nordish*, Icelandic, Norwegian, 11th cent.
  - East-Nordish*, Swedish, Danish
3. Low-German—
  - Old Saxon*, 9th cent, Platt-Deutsch.
  - Anglo-Saxon*, 7th cent, English.
  - Old Frisian*, 13th cent., Modern Frisian.
  - Old Dutch*, 9th cent. (Old Low Franconian), Middle Dutch, 1600; Modern Dutch (Flemish, Low Franconian).

### SECOND STAGE OF LAUTVERSCHIEBUNG.

4. High-German—
  - Old High-German, 700-1100; Middle, 1100-1500; Modern, 1500.

Another division, founded more on geographical position, would be—

## TEUTONIC CLASS.

### East Teutonic:

1. Gothic.
2. Scandinavian,
  - West-Nordish (Icelandic, Norwegian).
  - East-Nordish (Swedish, Danish).

### West Teutonic:

- |             |   |   |
|-------------|---|---|
| Low-German  | { | <ol style="list-style-type: none"> <li>1. Anglo-Saxon, English.</li> <li>2. Old Frisian, Modern Frisian.</li> <li>3. Old Saxon (continental), Platt-Deutsch.</li> <li>4. Old Dutch (Low Franconian), Middle Dutch, Modern Dutch.</li> </ol> |
| High-German |   | 5. Old High-German, Middle, Modern High-German.   |

**Italic Class.**

We must now advance more rapidly, and, instead of the minuteness of an Ordnance-map, we must be satisfied with the broad outlines of Wyld's Great Globe in our survey of the languages which, together with the Teutonic, form the Indo-European or Aryan family of speech.

And first the Romanic, or modern Latin languages. Leaving mere local dialects out of sight, we have at present six literary modifications of Latin, or, more correctly, of the ancient language of Italy—the languages of Portugal, of Spain, of France, of Italy, of Roumania,<sup>1</sup> and of the Grisons of Switzerland, called

<sup>1</sup> The Roumanians, who used to be called Walachians, call themselves Románi, and their language Romána. This Romanic language is spoken in Walachia and Moldavia, and in parts of Hungary, Transylvania, and Bessarabia. On the right bank of the Danube it occupies some parts of the old Thracia, Macedonia, and even Thesaly. It is divided by the Danube into two branches—the Northern or Daco-romanian, and the Southern or Macedo-romanian. The former is less mixed, and has received a certain literary culture, the latter has borrowed a larger number of Albanian and Greek words, and has not yet been fixed grammatically.

The modern Roumanian is the daughter of the language spoken in the Roman province of Dacia. The original inhabitants of Dacia were called Thracians, and their language Illyrian, but we have hardly any remains of the ancient Illyrian language to enable us to form an opinion as to its relationship with Greek, with Albanian, or any other language.

229 B.C. the Romans conquered Illyria, 30 B.C. they took Mœsia; and 107 A.D. the Emperor Trajan made Dacia a Roman province. At that time the Thracian population had been displaced by the advance of Sarmatian tribes, particularly the Yazyges. Roman colonists introduced the Latin language, and Dacia was maintained as a colony up to 272, when the Emperor Aurelian had to cede it to the Goths. Part of the Roman inhabitants then emigrated and settled south of the Danube. In 489 the Slavonic tribes began their advance into Mœsia and Thracia. They were settled in Mœsia by 678 and eighty years later a province was founded in Macedonia, and by the name of Slavonic

the Roumansch or Romanese.<sup>1</sup> The Provençal, which, in the poetry of the Troubadours, attained at a very early time to a high literary excellence, has now sunk down to a mere *patois*. The earliest Provençal poem, the Song of Boëthius, is generally referred to the tenth century, Lebeuf referred it to the eleventh. Of Northern French we possess some specimens of a still earlier date. The text of the oaths of Strassburg, as preserved by Nithart, goes back to A.D. 842, and has been preserved to us in a MS of the ninth or tenth century. The song of Eulalia has likewise been preserved in a MS. of the ninth century, and in both the traces of Northern French, as distinct from Provençal, have been clearly pointed out by Diez.<sup>2</sup> Nothing can be a better preparation for the study of the comparative grammar of the ancient Aryan languages than a careful perusal of the *Comparative Grammar of the Six Romanic Languages* by Professor Diez.

Though in a general way we trace these six Romanic languages back to Latin, yet it has been

<sup>1</sup> The Roumansch or Runansch, the language of the Grisons, is spoken in the valley of the Inn, the Engadine; and in the valley of the Rhine, the Oberland. The inhabitants of the Engadine are Protestants, those of the Oberland, Roman Catholics. The dialect of the former is called *Roumansch*, that of the latter *Ladin*. There is a religious literature of the sixteenth century, consisting chiefly of translations of the Bible, catechisms, and hymns in Roumansch. A translation of the New Testament exists in the Bodleian Library 'L'g Nuof Sainc Testamant da nos Signer Jesu Christi, prias our delg Latin et our d'oters launguax et huossa da uoef mis in Arumaunsch tiés Iachiam Bifium d'Aguedina Schquischo ilg an MDLX.' The entire Bible has been published by the Bible Society in both dialects. Some of the dialects of Northern Italy, such as that of Friuli and of the Adige, have been proved by Ascoli to be closely allied to the Roumansch.

<sup>2</sup> *Altromanische Sprachdenkmale*, von F. Diez, Bonn, 1846.

pointed out before that the classical Latin would fail to supply a complete explanation of their origin. Many of the ingredients of the Neo-Latin dialects must be sought for in the ancient dialects of Italy and her provinces. More than one dialect of Latin was spoken there before the rise of Rome, and some important fragments have been preserved to us in inscriptions, of the Umbrian spoken to the north, and of the Oscan spoken to the south of Rome. The Oscan language, spoken by the Samnites, now rendered intelligible by the labours of Mommsen, had produced a literature before the time of Livius Andronicus; and the tables of Iguvium, so elaborately treated by Aufrecht and Kirchhoff, bear witness to a priestly literature among the Umbrians at a very early period. Oscan was still spoken under the Roman emperors, and so were minor local dialects in the south and the north. The Messapian inscriptions in the south are too scanty to count as representatives of an independent Italian dialect, and the few grammatical terminations which they contain point to Greeco rather than to Italy. As soon as the literary language of Rome became classical and unchangeable, the first start was made in the future career of those dialects which, even at the time of Dante, are still called *vulgar* or *popular*.<sup>1</sup> A great deal, no doubt, of the corruption of these modern dialects is due to the fact that, in the form in which we know them after the

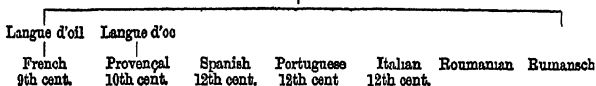
<sup>1</sup> 'E lo primo, che cominciò a dire siccome poeta volgare, si mosse però che volle fare intendere le sue parole a donna, alla quale era malagevole ad intendere versi Latini.'—Dante's *Vita Nuova*; *Opere Minori di Dante Alighieri*, tom. iii. p. 327; Firenze, 1837.

eighth century, they are really Neo-Latin dialects as adopted by the Teutonic barbarians: full, not only of Teutonic words, but of Teutonic idioms, phrases, and constructions. French is provincial Latin as spoken by the Franks, a Teutonic race; and, to a smaller extent, the same *barbarising* has affected all other Roman dialects. But, from the very beginning, the stock with which the Neo-Latin dialects started was not the classical Latin, but the vulgar, local, provincial dialects of the middle, the lower, and the lowest classes of the Roman empire. Many of the words which give to French and Italian their classical appearance, are really of much later date, and were imported into them by mediæval scholars, lawyers, and divines; thus escaping the rough treatment to which the original vulgar dialects were subjected by the Teutonic conquerors.

### ITALIC CLASS.

OSCAN, UMBRIAN, LATIN, ETC.

Lingua vulgaris.



### Hellenic Class.

The next branch of the Indo-European family of speech is the *Hellenic*. Its history is well known from the time of Homer to the present day. The only remark which the comparative philologist has to make is that the idea of making Greek the parent of Latin is more preposterous than deriving English from German; the fact being that there are many

forms in Latin more primitive than their corresponding forms in Greek. The idea of Pelasgians as the common ancestors of Greeks and Romans is another of those grammatical myths, which fortunately requires no longer any serious refutation.

## HELLENIC CLASS.

DORIC, ÆOLIC, ATTIC, IONIC.

Κοινή.  
Modern Greek.

### Celtic Class.

The fourth branch of our family is the *Celtic*.<sup>1</sup> The Celts are supposed to have been the first of the Aryans to arrive in Europe. Herodotus knows of them as early as the seventh century, and mentions also a Celtic town (πόλις Κελτική) *Nyssa*, the name of which has been identified with that of *Noricum*. But the pressure of subsequent migrations, particularly of Teutonic tribes, has driven them towards the westernmost parts, and latterly from Ireland across the Atlantic. The Celtic branch may be divided into the *Cymric*<sup>2</sup> and *Goidelic*.<sup>3</sup> The *Cymric* comprises the

<sup>1</sup> The name Celt is a Celtic word. Caesar states distinctly that it was so, when saying: '*Qui ipsorum lingua Celtæ, nostra Galli appellantur.*' The Greeks used both Κελταί and Κελτοί. The word *Keltos* may have meant in the ancient language of Gaul, elevated, upright, proud, like the Latin *celsus* and *excelsus*. See Gluck, in Kuhn's *Beitrage*, vol. v. p. 97.

<sup>2</sup> The Welsh call themselves *Cymry*, and their language *Cymraeg*.

<sup>3</sup> The Irish called themselves in Old Irish *Gíúdel* or *Gíúdil*. In modern Irish this name is written *Goidheal*, and with dh mute or omitted, *Gael*. In Welsh *Gwyddel* is the word for an Irishman. Some scholars prefer *Gaelic* instead of *Guedhelic*.



*Welsh*; the *Cornish*, extinct in the latter part of the eighteenth century; and the *Armorican*, of Brittany. The *Goidelic* comprises the *Irish* (Erse); the *Gaelic* of the west coast of Scotland; and the dialect of the *Isle of Man*. Sometimes the fragments of the Celtic language preserved in inscriptions, on coins, and in the proper names of Gaul are classed as *Gallic*, while the Cymric branch is designated from its principal habitat as *Britannic*, comprising *Cymric* (i. e. Welsh), *Cornish*, and *Armorican*. The literary documents of the Cymric branch date from the eighth century both for Welsh and Breton, nor is there any more ancient literature in the Goidelic branch, the Irish literature, so far as it is preserved to us, not reaching back beyond the eighth century. The Ogham inscriptions, however, are much older, and are supposed in some instances to go back to the first century A.D. Although these Celtic dialects are still spoken, the Celts themselves can no longer be considered an independent nation, like the Germans or Slaves. In former times, however, they not only enjoyed political autonomy, but asserted it successfully against Germans and Romans. Gaul, Belgium, and Britain were Celtic dominions, and the north of Italy was chiefly inhabited by them. In the time of Herodotus (450 B.C.) we find Celts as the conquerors of Spain; and Switzerland also, the Tyrol, and the country south of the Danube had once been the seats of Celtic tribes. But after repeated inroads into the regions of civilisation, familiarising Latin and Greek writers with the names of their kings, they disappear from the East of Europe. Brennus was supposed to mean king, the Welsh

*brenhin*. *Brenhin*, however, points back to an Old Celtic form *brigantinos*, free, noble, and it is doubtful whether this could have sounded like Brennus to Roman ears.<sup>1</sup> A Brennus conquered Rome (390), another Brennus threatened Delphi (280). And about the same time a Celtic colony settled in Asia, and founded Galatia,<sup>2</sup> where the language spoken at the time of St. Jerome is believed to have been the same as that of the Gauls. Celtic words may be found in German, Slavonic, and even in Latin, but only as foreign terms, and their number is much smaller than commonly supposed. A far larger number of Latin and German words have since found their way into the modern Celtic dialects, and these have frequently been mistaken by Celtic enthusiasts for original words, from which German and Latin might, in their turn, be derived. For further information on the Celtic languages I may refer to *Les Celtes*, par II. D'Arbois de Jubainville, 1875, and to Professor John Rhys' excellent *Lectures on Welsh Philology*, 1877.

#### CELTIC CLASS.

Cymric.		Goidelic.		Gallo.
Welsh 8th cent.	Cornish 8th cent.	Armorican 8th cent.	Irish 8th cent.	Gaelic Manx Inscriptions in Gaul.

#### WINDIC CLASS.

The fifth branch, which is commonly called *Slavonic*,

<sup>1</sup> Rhys, *Hubbert Lectures*, pp 76, 77; *Celtic Britain* (2), p. 282. It should be considered, however, how little of chronological order there is in dialectic corruption; see Senart, *Inscription de Piyadasi*, *Journ. Asiat.* 1886, pp. 68 seq.

<sup>2</sup> The name *Galatae* occurs first in the third century B.C., as used by Timæos; that of *Galli* is first used by Cato, possibly from the *Annales Maximæ* of the fourth century B.C.

I prefer to designate by the name of *Windic*, *Winidæ* being one of the most ancient and comprehensive names by which these tribes were known to the early historians of Europe. We have to divide these tribes into two divisions, the *Lettic* and the *Slavonic*, and we shall have to subdivide the Slavonic again into a *South-East Slavonic* and a *West Slavonic* branch.

The terminology used for the classification of the Slavonic languages has varied and is still varying. I follow chiefly Schaffarik. He, however, though he proves *Winidæ* to have been the oldest authenticated name of the Slaves, does not use it as a general name for the two branches, Lettic and Slavic. Later writers have used Letto-Slavic, or Balto-Slavic.

The *Lettic* division consists of languages hardly known to the student of literature, but of great importance to the student of language. *Lettish* is the language now spoken in Kurland and Livonia. It has a literature going back to the sixteenth century. *Lituanian* is the name given to a language still spoken by about 200,000 people in Eastern Prussia, and by more than a million of people in the contiguous parts of Russia. The earliest literary document of Lituanian is a small catechism of 1547.<sup>1</sup> In this, and even in the language as now spoken by the Lituanian peasant, there are a few grammatical forms more primitive and more like Sanskrit than the corresponding forms in Greek and Latin.

The *Old Prussian*, which is nearly related to Lituanian, became extinct in the seventeenth century, and the entire literature which it has left behind consists

<sup>1</sup> Schleicher, *Beitrage*, b. i. s. 19.

in an old catechism and some other fragments of the fifteenth and sixteenth centuries.

*Lettish* is the language of Kurland and Livonia, more modern in its grammar than Lituianian, yet not immediately derived from it.

We now come to the *Slavonic* languages, properly so called. The Eastern branch comprehends the *Russian* with various local dialects, the *Bulgarian*, and the *Illyrian*. The most ancient document of this Eastern branch is the so-called Ecclesiastical Slavonic, i.e. the ancient Bulgarian, into which Cyrillus and Methodius translated the Bible, in the middle of the ninth century. This is still the authorised version<sup>1</sup> of the Bible for the whole Slavonic race: and to the student of the Slavonic languages it is what Gothic is to the student of German. The modern Bulgarian, on the contrary, as far as grammatical forms are concerned, is the most reduced among the Slavonic dialects.

*Illyrian* is a convenient (though historically not quite correct) name to comprehend the *Servian*, *Croatian*, and *Slovenian* dialects.

Servian literature is generally divided into three periods, the first extending to the end of the fourteenth century, the conquest of Servia by Murad I, the second to the middle of the eighteenth century. At that time a national revival took place, which produced not only a new literature, but likewise a warm interest in the ancient literature of the country. What was left

<sup>1</sup> Oldest dated MS. of 1056, written for Prince Ostromir. Some older MSS are written with Glagolitic letters, the alphabet adopted by the Roman Church —Schleicher, *Beurage*, b. 1 s 20.

of ancient literary documents has been collected by Miklosich in the *Monumenta Serbica*, 1858. During the second period, under the Turkish sway, it was chiefly at Ragusa and along the Adriatic coast that literature flourished. The third period, beginning in the middle of the last century, may be said to have been inaugurated by Vuk Stephanovitch Karajitch (1787-1864) and his friends. His Servian Grammar (1814) became the foundation of a philological study of the language. Most interesting, however, are the collections of ancient Servian ballads, which form a kind of national epos. They roused the admiration of Goethe, and still form the chief attraction of Servian literature.

The history of the Slovenian language can be traced back to the tenth century.<sup>1</sup> The Codex of Freising, at present at Munich, contains religious compositions, published by Kopitar in his *Glagolita Clozianus*, 1836. At the time of the reformation there was a revival of literature, and as early as 1584 the first grammar was published by Bohorics. Miklosich, the great Slavonic scholar, is a Slovenian by birth.

The Western branch comprehends the language of *Poland*, *Bohemia*, and *Lusatia*. The oldest specimen of Polish belongs to the fourteenth century, the Psalter of Margarite. The Bohemian language was, till lately, traced back to the ninth century. But most of the old Bohemian poems are now considered spurious; and it is doubtful, even, whether an ancient interlinear translation of the Gospel of St. John can be ascribed to the tenth century.<sup>2</sup>

<sup>1</sup> Schleicher, *Beitrage*, b. i. s. 22.      <sup>2</sup> *Ibid* *Deutsche Sprache*, s. 77.

The language of *Lusatia*, divided into two dialects, *High* and *Low*, is spoken, probably, by no more than 150,000 people, known in Germany by the name of *Wends* and *Sorbs*. The earliest document we possess is a Roman Catholic prayer-book, printed in 1512.

The *Polabian* dialect became gradually extinct in the beginning of the last century, and there is nothing left of it besides a few lists of words, a song, and the Lord's Prayer. *Schleicher* classes it with *Polish*, the *Kashubian* being a link between it and *Polish*.

### WINDIC OR LETTO-SLAVIC CLASS.

#### 1. LETTIC.

	Old Prussian 15th cent.	
	+	
Lithuanian 16th cent.		Lettish

#### 2. SOUTH-EAST SLAVONIC.

Ecclesiastical Slavonic 9th cent.				
Illyrian				
		├───		
		└───		
Russian (Great, Little, White)	Bulgarian	Slovenian (or Carintian) 10th cent.	Servian	Croatian

#### 3. WEST SLAVONIC.

	Polabian	Old Bohemian
	+	
Polish 14th cent.		Bohemian 10th cent.
		Lusatian (Wends and Sorbs)

#### Albanian.

We have thus examined all the dialects of our first or Aryan family which are spoken in Europe, with one exception, the *Albanian*. This language is clearly a member of the same family; and as it is sufficiently

distinct from Greek or any other recognised language, it has been traced back to one of the neighbouring races of the Greeks, the Illyrians, and is supposed, though without stringent proof, to be the only surviving representative of the various so-called barbarous tongues which surrounded and interpenetrated the dialects of Greece.

#### **South-Eastern Division.**

We now pass on from Europe to Asia; and here we begin at once, on the extreme south, with the languages of India.

#### **Indic Class.**

As I sketched in a former chapter, pp. 163–184, the history of the Indian language, beginning with the Veda and ending with the spoken vernaculars, I have only to add here the table of the *Indic Class*, and may proceed at once to a survey of the languages spoken in Persia, forming the *Iranic Class*.

## INDIC CLASS.

Vedic Language ( <i>K/āandas</i> ).	Literary Language ( <i>Bhāshā</i> ).	Vulgar Language ( <i>Prākṛita</i> ).								
Hymns, 1500 B.C. ? Brāhmanas, 800 B.C. ? Sūtras, 500 B.C. ? Written, 3rd cent. B.C.	Pāṇini's Grammar, 400-300 B.C. ?	<table border="0"> <tr> <td><i>Ungrammatical.</i></td> <td><i>Grammatical.</i></td> </tr> <tr> <td>Gāthā Dialect (scholastic).</td> <td>Pāli, 500 B.C. ? Māgadhī. Mahārāshṭrī.</td> </tr> <tr> <td>Inscript. of Kanishka, 1st cent. A.D. Inscript of Rudradā- man, 2nd cent. A.D. Renaissance of Sanskrit Literature, 400 A.D.</td> <td>Written 88 B.C. Ceylon.</td> </tr> <tr> <td></td> <td>Written 454 A.D.</td> </tr> </table>	<i>Ungrammatical.</i>	<i>Grammatical.</i>	Gāthā Dialect (scholastic).	Pāli, 500 B.C. ? Māgadhī. Mahārāshṭrī.	Inscript. of Kanishka, 1st cent. A.D. Inscript of Rudradā- man, 2nd cent. A.D. Renaissance of Sanskrit Literature, 400 A.D.	Written 88 B.C. Ceylon.		Written 454 A.D.
<i>Ungrammatical.</i>	<i>Grammatical.</i>									
Gāthā Dialect (scholastic).	Pāli, 500 B.C. ? Māgadhī. Mahārāshṭrī.									
Inscript. of Kanishka, 1st cent. A.D. Inscript of Rudradā- man, 2nd cent. A.D. Renaissance of Sanskrit Literature, 400 A.D.	Written 88 B.C. Ceylon.									
	Written 454 A.D.									
		Modern Languages. Sindhī, Gujarātī,   Bahālī, Bengālī, Panjābī, West   Uriyā, Asāmī, Hindī, Nāgāri   Marātī.								



## Iranic Class.

Most closely allied to Sanskrit, more particularly to the Sanskrit of the Veda, is the ancient language of the Zend-Avesta,<sup>1</sup> the so-called *Zend*, or sacred

<sup>1</sup> *Zend-Avesta* is the name used by Chaqāni and other Mohammedan writers, and which it seems hopeless now to change. The Parsis themselves use the name '*Avesta* and *Zend*,' taking *Avesta* (Pehlevi, *avistāk*), in the sense of text, and *Zend*, or *Zand*, as the title of the Pehlevi commentary.

*Avestā*, or *avastāh*, was, according to J. Muller, derived from the same root which in Sanskrit appears as *ava-sthā*, the participle of which, *ava-sthita*, would mean laid down, settled. According to this etymology *Avistā* would have been intended as a name for the settled text of the sacred Scriptures. Professor Haug preferred to derive it from *āvul*, taking *āvesta* in the sense of what has been known, knowledge, a title somewhat analogous to the Sanskrit Veda, except that *āvīsta* or *āvesta* would rather mean notified, proclaimed, than known. *Zand* is now commonly taken as a corruption of *zanti*, knowledge, the Sanskrit *gñāti*, *γνώσις*, which is preserved in Zend *āzanti*, Old Persian *āzantā*. It would have meant originally an explanation, a commentary, without any reference to the language in which that explanation was conveyed. Afterwards, however, when the Avesta had been translated into Pehlevi, *Zand* became the name of that translation, and of the Pehlevi language in which the translation was composed (See Haug, *Pahlavi-Pazend Dictionary*, p. 239.) J. Oppert (*Journal Asiatique*, 1872, p. 293) connected *Avesta* with the Persian *ābushā*, law. This word he derived from *ā* + *bakhs*, to attribute, so that *ābushā*, instead of *ābakhshā*, would mean what is determined. He has shown that *ābushā* occurs in the Behistun inscription in the sense of law, but hardly as yet as a name of our Avesta. *Zend* he derived from the root *zail* or *zand*, to pray, which occurs in the Behistun tablets, the Zend *zandhyāmi*; hence *zānda*, prayer. But this cannot be our word *Zend*, which means commentary, not prayer. See Darmesteter, *Études Iraniennes*, ii. p. 9. Oppert took *Avesta* = *zend* to mean the Law and the Prayer. We know now, as Dr. West (*Sacred Books of the East*, v. p. 2) has shown, that the Pehlevi *avistāk* was derived from *ā* + *vid*, to know, with the meaning of what is announced, while *zand*, the Pehlevi form of *zanti*, comes from the root *zan*, to know, with the meaning of understanding. I have long surrendered my own explanation that *Zand* was originally the same word as the Sanskrit *Khandas*, metrical language, language of the Veda.

language of the Zoroastrians, or worshippers of Ormazd. It was, in fact, chiefly through the Sanskrit, and with the help of comparative philology, that the ancient dialect of the Parsis, or the so-called Fire-worshippers, was first deciphered. The MSS had been preserved by the Parsi priests at Bombay, where a colony of Zoroastrians had fled in the tenth century,<sup>1</sup> and where it has risen since to considerable wealth and influence. Other settlements of Guebres are to be found in Yezd and parts of Kerman. A Frenchman, Anquetil Duperron,<sup>2</sup> was the first to translate the Zend-Avesta, but his translation was not from the original, but from a modern Persian translation. The first European who attempted to read the original words of Zoroaster was Rask, the Dane; and, after his premature death, Burnouf, in France, achieved one of the greatest triumphs in modern scholarship by deciphering the language of the Zend-Avesta, and establishing its close relationship with Sanskrit. The same doubts which were expressed about the age and the genuineness of the Veda were

<sup>1</sup> 'According to the *Kissah-i-Sanján*, a tract almost worthless as a record of the early history of the Parsis, the fire-worshippers took refuge in Khorasan forty-nine years before the era of Yezdegerd (632 A.D.), or about 583. Here they stayed a hundred years, to 683, then departed to the city of Hormaz (Ormus, in the Persian Gulf), and after staying fifteen years, proceeded in 698 to Diu, an island on the south-west coast of Katiswar. Here they remained nineteen years, to 717, and then proceeded to Sanján, a town about twenty-four miles south of Damann. After three hundred years they spread to the neighbouring towns of Guzerat, and established the sacred fire successively at Barsadah, Nausai, near Surat, and Bombay.'—*Bombay Quarterly Review*, 1856, No viii p. 67.

<sup>2</sup> Born in Paris, 1731; arrived in Pondichery, 1755, returned to Paris, 1762; died 1805. Translation of *Zendavesta*, 1771; *Oupnekhat*, 1802-1804.

repeated with regard to the Zend-Avesta, by men of high authority as oriental scholars, by Sir W. Jones himself, and even by the late Professor Wilson. But Burnouf's arguments, based at first on grammatical evidence only, were irresistible, and have of late been most signally confirmed by the discovery of the cuneiform inscriptions of Darius and Xerxes. That there was a Zoroaster, an ancient sage, was known long before Burnouf. Plato speaks of a teacher of Zoroaster's Magic (*Μαγεία*), and calls Zoroaster the son of *Oromazes*.<sup>1</sup>

This name of Oromazes is important; for this Oromazes is clearly meant for *Ormazd*, the god of the Zoroastrians. The name of this god, as read in the inscriptions of Darius and Xerxes, is *Auramazda*, which comes very near to Plato's Oromazes.<sup>2</sup> Thus Darius says, in one passage: 'Through the grace of Auramazda I am king; Auramazda gave me the kingdom.' But what is the meaning of *Auramazda*? We receive a hint from one passage in the Achæmænian inscriptions, where Auramazda is divided into two words, both being declined. The genitive of Auramazda occurs there as *Aurahya mazdâha*. But

<sup>1</sup> Alc i p. 122, α. 'Ο μὲν μαγείαν διδάσκει τὴν Ζωροάστρου τοῦ Ἵερομάζου ἔστι δὲ τοῦτο θεῶν θεραπεία. Aristotle knew not only Oromasdes as the good, but likewise Aremanios as the evil spirit, according to the doctrine of the Magi. See *Diogenes Laertius*, I. 8. Ἀριστοτέλης δ' ἐν πρώτῳ Περὶ φιλοσοφίας καὶ πρεσβυτέρους [τοῖς Μάγοις] φησὶν εἶναι τῶν Αἰγυπτίων καὶ δύο κατ' αὐτοὺς εἶναι ἀρχάς, ἀγαθὸν δαίμονα καὶ κακὸν δαίμονα, καὶ τῷ μὲν ὄνομα εἶναι Ζεὺς καὶ Ἵερομάσδης, τῷ δὲ Αἰδῆς καὶ Ἀρειμάνιος. Cf. Bernays, *Die Dialoge des Aristoteles*; Berlin, 1863, p. 95.

<sup>2</sup> In the inscriptions we find—nom. *Auramazdâ*, gen. *Auramazdâha*, acc. *Auramazdam*. It should be pronounced A'uramazdâ.

even this is unintelligible, and is, in fact, nothing but a phonetic corruption of the name of the supreme Deity as it occurs on every page of the Zend-Avesta, namely, *Ahurô mazdâo* (nom.). Here, too, both words are declined, and instead of *Ahurô mazdâo*, we also find *Mazdâo ahurô*.<sup>1</sup> This *Ahurô mazdâo* is represented in the Zend-Avesta as the creator and ruler of the world; as good, holy, and true; and as doing battle against all that is evil, dark, and false. 'The wicked perish through the wisdom and holiness of the living wise spirit.' In the oldest hymns, the power of darkness which is opposed to *Ahurô mazdâo* has not yet received its proper name, which is *Angrô mainyus*, the later *Ahriman*, but it is spoken of as a power, as the *Druks* or deceiver; and the principal doctrine which Zoroaster came to preach was that we must choose between these two powers, that we must be good, and not bad. These are his words.—

'Thus are the primeval spirits who, as a pair and (yet each) independent in his action, have been famed. (They are) a better thing, they two, and a worse, in thought word, and deed. And between these two let the wise choose aright, not the evil-doers.'<sup>2</sup>

Or again:—

'Yea, I will declare the world's first two spirits, of whom the more bountiful thus spake to the harmful: "Neither our thoughts, nor commands, nor our under-

<sup>1</sup> Gen. *Ahurahr mazdâo*, dat. *mazdâi*, acc. *mazdâm*

<sup>2</sup> *Sacred Books of the East*, xxxl. p. 29; translation of the *Gâthas* by Dr. Mills.

standings, nor our beliefs, nor our words, nor our deeds, nor our consciences, nor our souls are at one.”<sup>1</sup>

Now, if we wanted to prove that Anglo-Saxon was a real language, and more ancient than English, a mere comparison of a few words such as *lord* and *hláford*, *gospel* and *godspell* would be sufficient. *Hláford* has a meaning; *lord* has none; therefore we may safely say that without such a compound as *hláford*, the word *lord* could never have arisen. The same, if we compare the language of the Zend-Avesta with that of the cuneiform inscriptions of Darius. *Auramaçdâ* is clearly a corruption of *Ahurô mazdâo* and if the language of the mountain records of Behistun is genuine, then, *à fortiori*, is the language of the Zend-Avesta genuine, as deciphered by Burnouf. long before he had deciphered the language of Cyrus and Darius. But what is the meaning of *Ahurô mazdâo*? Here Zend does not give us an answer; but we must look to Sanskrit as the more primitive language, just as we looked from French to Italian, in order to discover the original form and meaning of *feu*. According to the rules which govern the changes of words, common to Zend and Sanskrit, *Ahurô mazdâo* would correspond to the Sanskrit *Asura medhas*;<sup>2</sup> and this would mean the ‘Wise Spirit,’—neither more nor less.

We have editions, translations, and commentaries

<sup>1</sup> *L. c.* p 125.

<sup>2</sup> This is Benfey’s explanation of *mazdâo*. Burnouf took it as a compound of *maz*, great, and *dâo*, knowledge, an opinion supported by Spiegel, *Commentar uher das Avesta*, vol i p 3. In RV. viii. 20, 17, we read *yáthâ rudrâsya sârnâvah divâh vâsanti ásurasya vodhâsah*. Could it have been originally *ásura-sya medhâsah*?

of the Zend-Avesta by Burnouf, Brockhaus, Spiegel, Westergaard, Darmesteter, Mills, and Geldner.<sup>1</sup> Yet there still remains much to be done. Dr. Haug, who spent some years with the Parsis of Bombay, was the first to point out that the text of the Zend-Avesta, as we have it, comprises fragments of very different antiquity, and that the most ancient only, the so-called Gâthas,<sup>2</sup> may be ascribed to Zarathustra. 'This portion,' he writes in a lecture delivered at Poona in 1861, 'compared with the whole bulk of the Zend fragments is very small; but by the difference of dialect it is easily recognised. The most important pieces written in this peculiar dialect are called Gâthas or songs, arranged in five small collections; they have different metres, which mostly agree with those of the Veda; their language is very near to the Vedic dialect.'<sup>3</sup>

#### Was Zoroaster a Historical Character?

But even to ascribe to Zarathustra the authorship of the Gâthas is very doubtful so long as it has not been proved who Zarathustra was, and at what time he lived. In the Avesta, Zarathustra appears as a mythological personage,<sup>4</sup> fighting against the powers

<sup>1</sup> Geldner's edition of the *Avesta* is still in progress, and promises to be final, unless new MSS. should be discovered, which is not likely.

<sup>2</sup> These have been translated and commented by Dr. Mills in the 31st volume of the *Sacred Books of the East*.

<sup>3</sup> The derivation of the name of Zarathustra from the Vedic word *garadashtri*, as proposed by Dr. Haug, is not possible. See on the same subject J. H. C. Kern, *Over het woord Zarathustra en den mythischen persoon van dien naam*; Amsterdam, 1867.

<sup>4</sup> Darmesteter, *Sacred Books of the East*, iv. p. lxxvii; and Kern, *Over het woord Zarathustra*.

of evil, like Verethraghna, Vayu, or Keresâspa; but in the Gâthas he is still a leader of men, and a prophet, not unlikely to have been the author of such songs as the Gâthas. Certainty, however, whether Zarathustra was a man who was changed into a hero, or whether he was from the beginning a mythological being, is unattainable, and we must not try to go beyond what, from the circumstances of the case, is possible. All we can say is that both in the East and in the West the name of Zarathustra, whether as a king or as the founder of a religion, was widely known. Berosus, as preserved in the Armenian translation of Eusebius, mentions a Median dynasty of Babylon, beginning with a king Zoroaster, about 2234 B. C., and anterior therefore to Ninus. Xanthus, the Lydian (470 B. C.), as quoted by Diogenes Laertius, places Zoroaster, the prophet, 600 years before the Trojan war (1800 B. C.), and mentions even his *Logia*. Aristotle and Eudoxus, according to Pliny (*Hist. Nat.* xxx. 1), place Zoroaster 6000 before Plato; Hermippus, Hermodorus, and Theopompus of Chios, 5000 before the Trojan war (*Diog. Laert. proœm.*). According to Pliny himself (*Hist. Nat.* xxx. 2), Zoroaster would have lived several thousand years before Moses the Judæan, who founded another kind of Magic. These dates are startling and possibly exaggerated, nay it is doubtful whether the MSS. of Diogenes Laertius read 500 and 600 or 5000 and 6000.<sup>1</sup> Yet the fact remains that the name of Zoroaster, as a teacher, was known to Plato and Aristotle,

<sup>1</sup> See Duncker, *Monatsberichte der Königl. Akad. zu Berlin*, 14 Aug 1876, p. 518.

and we must admit that, whatever the original purport of the name may have been, it had been accepted as the name of a prophet before the conquest of Persia by Alexander.

#### Was Zoroaster the Author of the Avesta?

But granting that Zoroaster's name was known at an early time, and certainly before the time of Plato and Aristotle, it still remains to be proved that in the Avesta, as we now have it, we possess his work. Tradition seems unanimous in ascribing to Alexander the Great the complete destruction of the ancient writings of Persia. Pliny tells us indeed (*Hist. Nat.* xxx. 1, 2) that Hermippus, in the third century B.C., had given an analysis of the books of Zoroaster, amounting to 2,000,000 lines, but the Parsis themselves, on the authority of the *Dînkart*,<sup>1</sup> ascribe the first collection of what remained of their several books, after their destruction by Alexander, to the reign of the last Arsacide, possibly, as M. Darmesteter conjectures, to Vologses I, the contemporary of Nero. They tell us that the first Sassanian king, Ardeshîr Bâbagân (*Artakhshîr i Pâpakân*)<sup>2</sup> A.D. 226-240, made the Avesta the sacred book of Iran, and established Mazdeism as the state religion, while they ascribe the last purification or redaction of the Avesta to Âdarbâd Mahraspand under Shapur II (309-380). Our oldest MS., however, of the Avesta (Copenhagen.

<sup>1</sup> Darmesteter, *l. c.* p. xxxii. seq

<sup>2</sup> *Geschichte des Artakshîr i Pâpakân*, aus dem Pehlevi übersetzt von Th. Noldeke, Göttingen, 1879.



5) is dated A. D. 1323,<sup>1</sup> so that there was ample room for later additions and alterations.

#### Pehlevi.

One important help for checking the text of the Avesta and to a certain extent establishing its age, is found in the Pehlevi translations made under the Sassanian dynasty. Pehlevi is the name given to the language of Persia after the collapse of the Achæmenian dynasty. The language of the Cuneiform inscriptions of the Achæmenian dynasty does not represent a direct continuation of Zend. In some respects the language of Darius is really more primitive than Zend, in others Zend is more primitive than the language of Darius.<sup>2</sup> This can be accounted for, if we look upon Zend as the sacred language of the Magi, or the priesthood of Media which, though closely allied to the dialect spoken in Persia, was never the spoken language of that country.<sup>3</sup> When after the time of the Achæmenian inscriptions, we meet again with the language of Persia, we find it Pehlevi, the language of the Sassanian dynasty. The interval of five centuries is a blank as far as language is concerned. The first evidence of a new language and a new alphabet are certain Pehlevi inscriptions (third century A. D.),<sup>4</sup> and a literature consisting of (1) translations of Avesta

<sup>1</sup> West, in *S. B. E.*, vol. v. p. xxi

<sup>2</sup> Darmesteter, *Études Iraniques*, p. 9.

<sup>3</sup> See Darmesteter, in *S. B. E.*, vol. iv p. xxxvi.

<sup>4</sup> Mr West (p 424) mentions a legend on a coin of Abd Zoharâd, satrap of Cilicia (350 B. C.), and Dr. Haug imagined he had discovered a Pehlevi inscription on a tablet of Nineveh.

texts, in which Avesta sentences alternate with a word-for-word Pehlevi translation, more or less interspersed with explanatory glosses, and sometimes interrupted by Pehlevi commentaries of considerable extent. It is difficult to fix their date, though they must have existed before the sixth century A. D.<sup>1</sup> (2) Purely Pehlevi texts on religious subjects, such as the Bundahish, Dînkard, Maînôgî Khirad, mostly of the ninth century A. D., though consisting probably of older materials. (3) Pehlevi texts on miscellaneous subjects, such as social law, legendary history, tales, letters, documents. Most of these works are of small extent. Mr. West, who has taken the trouble to count their words, reckons that the first class consists of 140,160, the second of 404,370, the third of 40,800 words, so that the whole Pehlevi literature would amount to about 585,390 words.<sup>2</sup>

The language which we call Pehlevi has proved a great puzzle to Oriental scholars, and the views advanced by different authorities have often been very contradictory. Some scholars, and among them Dr. Haug, held at first that Pehlevi, though mixed with Iranian words, was a decidedly Semitic dialect, a continuation, it was supposed, of an Aramaean dialect spoken in the ancient Empire of Assyria, though not the dialect of the Assyrian inscriptions. (Haug, Introduction to *Pahlavi Pazand Glossary*, pp. 138-142.) Others considered Pehlevi a dialect that had arisen on the frontiers of Iran and Chaldea,

<sup>1</sup> See West, *The Extent, Language, and Age of Pahlavi Literature*, in the *Transactions of the Munich Academy*, 1888.

<sup>2</sup> West, *l. c.*, pp. 431, 439.

in the first and second centuries of our era, a dialect, Iranian in grammatical structure, but considerably mixed with Semitic vocables. The mystery has at last been solved, and the results of the latest researches of Haug and West can best be stated in their own words<sup>1</sup>

All Parsi writers apply the name of Zend or Zand to the Pehlevi translations and explanations of their sacred texts. The texts themselves they call Avesta, and if they speak of both the text and translations and commentaries together they call them Avesta and Zend, but not Zend-Avesta. The Zend or explanation is written in Pehlevi, but there may have been other explanations or Zends, written in the old language of the Avesta, some of them now incorporated in the text, with additional explanations by Pehlevi translators. Pehlevi is in fact the general name of the mediæval Persian language. There are legends in Pehlevi on coins, as early as the third century B. C., struck by kings of Persian provinces, subordinate to the Greek successors of Alexander; and later on, some provincial coins of the time of the Arsacide dynasty. But the most important documents in Pehlevi are the inscriptions of Ardeshir, the founder of the Sassanian dynasty, A. D. 226-240, and his immediate successors. Pehlevi continued to be written till about 900 A. D.; any fragments of later date than 1000 must be looked upon as artificial imitations.

The name Pehlevi is supposed to be a corruption of Parthva, which occurs in the Cuneiform inscriptions,

<sup>1</sup> See West, *Bundahis*, Introduction.

in Sanskrit Pahlava<sup>1</sup> Though Pehlevi was not the language of the Parthian rulers of Persia, the language of Persia became known by that name during the centuries in which Persia was under Parthian sway.

The language of Persia, however, is commonly called Pehlevi only when it is written, neither in Avesta nor in modern Persian, i. e. Arabic letters, but in that peculiar mode of writing which has so long perplexed European scholars. The Persians, during the Parthian times, gave up the Cuneiform alphabet, and borrowed their letters from their Semitic neighbours, but besides the alphabet, they transferred also a number of complete Semitic words to their writings, as representations of corresponding words in their own language. There are about 400 of these Semitic logograms, and they are often followed by Persian terminations, so that there can be little doubt that, though written as Semitic words, they were always pronounced as Persian. They would write, e. g. *mallân mallâ*. king of kings, but pronounce *shâhân shâh*,<sup>2</sup> it being utterly impossible grammatically in any Semitic language to form such a phrase as *mallân mallâ*<sup>3</sup> The nearest approach to this way of writing is when we write *viz.* but pronounce *namely*, or e. g. but pronounce *for instance*. This is the mode in which the Parsis still read their Pehlevi literature. Besides these 400 Semitic, there are about 100 old Persian or Iranian logograms used in Pehlevi, as we

<sup>1</sup> Lassen compared *pahlava* with *pahlva*, the old name of the Afghans, and *bâhlîka* with *bâkhîka*, the Zend name of Bactria

<sup>2</sup> Ammianus Marcellinus, xiv 2, 11, states that the Persians as early as 350 A. D. called their king *Shâhân shâh*.

<sup>3</sup> Darmesteter, *Études Iraniennes*, i. p. 33.

might write *y<sup>e</sup>* for *the*, *Xmas* for *Christmas*. These 500 or more logograms, which were collected in an old glossary for the use of literary men, are sometimes called the *Zvârish*, a term sometimes modified into *Uzvârish*, whence modern Pehlevi *Aûzvârish*, misread *Huzvârish*. *Zvârish* is supposed to mean obsolete *Pâzend* is not the name of a language, but is a transliteration of Pehlevi texts in which all Semitic words are replaced by their Iranian equivalents, written either in Avesta or modern Persian characters. Every *Pâzend* text, therefore, presupposes a Pehlevi original, while some modern Persian texts, written in Avesta characters, have no right to the name of *Pâzend*.

When the language of Persia is written in Arabic letters, it is called *Pârsî*, a name which has also been applied by European, though not by native, scholars to such *Pâzend* texts as contain Iranian words only.

Professor Darmesteter in his *Études Iraniennes* uses the technical terms *Zend*, *Pehlevi*, *Huzvârish* or *Zevârish*, *Pâzend*, and *Pârsî* in slightly different senses. There is no difference of opinion about *Zend*. Though it meant originally explanation, commentary, it is to be allowed to continue as the name of the language of the Avesta.

*Pehlevi* is to remain the name of the language of Persia as spoken under the Sassanians, though the Sassanians would probably have called their language *Pârsî*.

*Huzvârish* or *Zevârish* signifies, according to Darmesteter, the mode of writing Pehlevi according to the system described above. Its original meaning is supposed to have been *disguisement*.

*Pazend* (below Zend) is explained by the same scholar in the sense of transcript of Pehlevi into ordinary characters, while the language of such transcripts should be called *Pârsî*. These transcripts are not always correct, owing to the difficulty of the Pehlevi alphabet, but they are considered authoritative by the Parsis of the present day.

The language of *Firdusi*, the great epic poet of Persia, the author of the *Shah-nâmeh*, about 1000 A. D., is *Pârsî* or *Fârsî*, or modern Persian, only much freer from Arabic ingredients than any other Persian poetry of his own and of later times. In one sense it may be called ancient Persian, but the later history of Persian consists chiefly in the gradual increase of Arabic words, which have crept into the language since the conquest of Persia and the conversion of the Persians to the religion of Mohammed.

#### IRANIC CLASS.

Zend or Median,	Achæmenian Persian.
	Cuneiform Inscriptions
	500 to 336 B. C.
	Sassanian Persian.
	Pehlevi
	226 to 900 A. D.
	Modern Persian
	1000 A. D.

Persian is spoken even now in many local dialects. It is said that in the fourteenth century Pehlevi continued to be spoken in Zinjan near Kazwin, and that at Maragah in Adarbaijan the language was a mixture of Pehlevi and Arabic.<sup>1</sup> Sometimes Bokharian is

<sup>1</sup> Darmesteter, *Études Iraniennes*, i. p. 43.

mentioned as a separate language, but it is only Persian as spoken at Bokhara.

#### **Kurdish.**

The language of the Kurds, the old Karduchi, is an Iranian dialect, but it has assumed a kind of national independence, and is spoken on both sides of the Upper Tigris over a large area. We possess a dictionary and grammar of the language by Justi, 1880.

#### **Balúchi.**

The language of Baluchistân is likewise Iranian. It is divided into two dialects, the Northern and Southern, which are separated by people speaking *Bráhuí*, a Dravidian language. Those who speak these two dialects are said to be unable to understand each other.<sup>1</sup>

#### **Language of the Afghans and Dards.**

The language of the Afghans, the Pushtu, and the Paktyes of Herodotus, which was formerly classed as an Iranian dialect, has been proved by Trumpp to be more closely related with the vernaculars of India than of Persia.<sup>2</sup> North of Afghanistan the dialects of Dardistan have been examined by Dr. Leitner, and seem to occupy, so far as we may judge at present, the same intermediate position as Pushtu.

#### **Armenian.**

Armenian was formerly classed as an Iranian

<sup>1</sup> See W. Geiger, *Dialectspaltung im Balúchí*, in *Sitzungsberichte der philos.-philol. und histor. Classe der K. Bayer.-Akad. der Wiss.*, 1889, Heft i

<sup>2</sup> Trumpp, in the *Journal of the German Oriental Society*, vols. xxi and xxii; also *Grammar of Pushtu*, 1873.

language. This was the opinion of Eopp, Windischmann, F. Muller, and other scholars; nor can it be doubted that on many points it comes very near to the Iranian type of grammar. Pott was the first to express some doubts on the subject, and de Lagarde, in 1866, distinguished in Armenian between an original stratum, an old Iranian alluvium, and a new Iranian stratum. It was reserved, however, for Professor Hübschmann to claim for Armenian an independent position in the Aryan family, distinct in its phonetic structure from Persian, and with peculiarities of grammar which cannot be traced back to any other Aryan language, though on one important point it agrees with Letto-Slavic.<sup>1</sup>

#### Gipsies.

There remains one more Aryan language which belongs equally to Asia and Europe, the language of the *Gipsies*. Its Indian origin is now fully proved. The Gipsies first appeared in Europe in the twelfth century, and from the words which they carried along with them in their dictionary Miklosich has proved that they must have taken their journey through Persia, Armenia, Greece, Roumania, Hungary, and Bohemia.

#### South-Eastern, North-Western Branches.

It is possible to divide the whole Aryan family into two divisions the *South-Eastern*, including the Indic and Iranic classes, and the *North-Western*, comprising

<sup>1</sup> Über die Stellung des Armonischen im Kreise der Indo-germanischen Sprachen, Kuhn's *Zeitschrift*, xviii. 5.



all the rest Sanskrit and Zend share certain words and grammatical forms in common which do not exist in any of the other Aryan languages; and there can therefore be no doubt that the ancestors of the poets of the Veda and of the worshippers of *Ahurô mazdâo* lived together for some time after they had left the original home of the whole Aryan race. The genealogical classification of languages has in fact an historical meaning. There was a time when out of many possible names for *father, mother, daughter, son, dog, cow, heaven, and earth*, those which we find in all the Aryan languages were framed, and obtained a mastery *in the struggle for life* which is carried on among synonymous words as much as among plants and animals. A comparative table of the auxiliary verb AS, to be, in the different Aryan languages teaches the same lesson. The selection of the root AS out of many roots, equally applicable to the idea of being, and the joining of this root with one set of personal terminations, most of them originally personal pronouns, were individual acts, or, if you like, historical events. They took place once, at a certain date and in a certain place; and as we find the same forms preserved by all the members of the Aryan family, it follows that there was once a small clan of Aryas, settled probably somewhere on the highest elevation of Central Asia, speaking a language, not yet Sanskrit or Greek or German, but containing the dialectic germs of all; a clan that had advanced to a state of agricultural civilisation; that had recognised the bonds of blood, and sanctioned the laws of marriage; and that invoked the Giver

of light and life in heaven by the same name which may still be heard in the temples of Benares, in the basilicas of Rome, and in our own churches and cathedrals.

After this clan broke up, the ancestors of the Indians and Zoroastrians must have remained together for some time in their migrations or new settlements. Whether, besides this division into a southern and northern branch, it is possible by the same test (the community of particular words and forms) to discover the successive periods when the Germans separated from the Slaves, the Celts from the Italians, or the Italians from the Greeks, seems more than doubtful. The attempts made by different scholars have led to different and by no means satisfactory results;<sup>1</sup> and it seems best, for the present, to trace each of the northern classes back to its own dialect, and to account for the more special coincidences between such languages as, for instance, the Slavonic and Teutonic, by admitting that the ancestors of these races preserved from the beginning certain dialectical peculiarities which existed before, as well as after, the separation of the Aryan family.<sup>2</sup>

<sup>1</sup> See Schleicher, *Deutsche Sprache*, s. 81; *Chips from a German Workshop*, vol. iv. pp. 224-227.

<sup>2</sup> *Biographies of Words and the Home of the Aryas*, 1888.

**The Origin of the name *Ârya*.**

*Ârya* is a Sanskrit word, and in the later Sanskrit it means *noble, of a good family*. Teachers are frequently addressed as *Ârya*. It was, however, originally a national name, and we see traces of it as late as the law-book of the *Mânava*s, where India is still called *Ârya-âvarta*, the abode of the *Âryas*<sup>1</sup>. In the old Sanskrit, in the hymns of the *Veda*, *ârya* occurs frequently as a national name and as a name of honour, comprising the worshippers of the gods of the *Brahmans*, as opposed to their enemies, who are called in the *Veda* *Dasyus*. Thus one of the gods, *Indra*, who, in some respects, answers to the Greek *Zeus*, is invoked in the following words (*Rig-veda* 1. 51, 8). ‘Know thou the *Âryas*, O *Indra*, and they who are *Dasyus*; punish the lawless, and deliver them unto thy servant! Be thou the mighty helper of the worshippers, and I will praise all these thy deeds at the festivals.’

In the later dogmatic literature of the *Vedic* age, the name of *Ârya* is distinctly appropriated to the first three castes—the *Brâhmanas*, *Kshatriyas*, *Vaisyas*—as opposed to the fourth, or the *Sûdras*. In the *Satapatha-Brâhmana* it is laid down distinctly: ‘*Âryas* are only the *Brâhmanas*, the *Kshatriyas*, and *Vaisyas*, for they are admitted to the sacrifices. They shall not speak with everybody, but only with the *Brâhmana*, the *Kshatriya*, and the *Vaisya*. If they should fall into a conversation with a *Sûdra*, let them say to another man, “Tell this *Sûdra* so.” This is the law.’

In the *Atharva-veda* (iv. 20, 4; xix. 62, 1) expressions occur such as, ‘seeing all things, whether *Sûdra* or *Ârya*,’ where *Sûdra* and *Ârya* are meant to express the whole of mankind.

This word *ârya* with a long *â* is derived from *arya* with a short *a*, and this name *arya* is applied in the later Sanskrit

<sup>1</sup> *Ârya-bhûmi* and *Ârya-desa* are used in the same sense.

to a Vaisya, or a member of the third caste.<sup>1</sup> What is called the third class must originally have constituted the large majority of the Brahmanic society, for all who were not nobles or priests were Vaisyas. We may well understand, therefore, how a name, originally applied to the cultivators of the soil and householders, should in time have become the general name of all Aryas.<sup>2</sup> Why the householders were called arya is a question which would carry us too far at present. I can only state that the etymological signification of Arya seems to be, 'one who ploughs or tills,' and that it is connected with the root of ar-are.<sup>3</sup> The Aryans would seem to have chosen this name for themselves as opposed to the nomadic races, the *Taras*, or quick horsemen, whom we sometimes call *Tuannons*.

In India, as we saw, the name of *Ārya*, as a national name,

<sup>1</sup> Pāṇini, iii 1, 103 *Encyclopædia Britannica*, s v. Aryan.

<sup>2</sup> In one of the Vedas, *Ārya*, with a short a, is used like *ārya*, as opposed to *Sūdra*. For we read (*Vāg-Sanh* xx. 17): 'Whatever in we have committed in the village, in the forest, in the home, in the open air, against a *Sūdra*, against an *Ārya*—thou art our deliverance.'

<sup>3</sup> Bopp derived *ārya* from the root ar, to go, or from ark, to venerate. The former etymology would give no adequate sense; the latter is phonetically impossible. Lassen explains *ārya* as *ādātus*, like *śikārya*, the teacher, which would leave *arya* unexplained. This *arya* cannot be a participle fut. pass, because in that case the root would have to take *Viddhi*, we could explain *Ārya*, but not *arya* (*Pāṇ* iii. 1. 124). I take *arya* as formed by the *addhita* suffix va, like *div-ya*, *celestis*, i. e. *divi-bhava*, from *div*, *caelum*, or like *sit-yam*, ploughed, from *sitā*, furrow, while *Ārya*, with *Viddhi*, would either be derived from *arya*, or formed like *vais-ya*, householder, from *vis*, house. In ar, or arā, I recognize one of the oldest names of the earth, as the ploughed land, lost in Sanskrit, but preserved in Greek as *ἄρα* (Goth. *air-tha*), so that *arya* would have conveyed originally the meaning of landholder, cultivator of the land, while *vais-ya* from *vis*, meant a householder. *Idā*, the daughter of Manu, is another name of the cultivated earth, and probably a modification of arā. Kern (in his review of Childers' *Pali Dictionary*) derives *arya* from *ari*, man, hero, plu. men in general. Ari, in the sense of enemy, he connects with Lat. *alis*, *alvus*, Germ. *ali*, *olja*, and compares the meanings of *para*, other, stranger, enemy. See also Lipmann, *K. Z.* xix. 393; Pischel, *K. Z.* xx. 376, *Arya*, if it means *Vaisya*, has the accent on the first, otherwise on the last syllable.

fell into oblivion in later times, and was preserved in the term *Âryāvarta* only, the abode of the Aryans.<sup>1</sup> But it was more faithfully preserved by the Zoroastrians who had migrated to the north-west, and whose religion has been preserved to us in the *Zend-Avesta*, though in fragments only. Now *Airyā* in *Zend* means venerable, and is at the same time the name of the people.<sup>2</sup> In the first chapter of the *Vendidad*, where *Ahura-mazda* explains to *Zaathustia* the order in which he created the earth, sixteen countries are mentioned, each, when created by *Ahuramazda*, being pure and perfect; but each being tainted in turn by *Angro mainyus* or *Alriman*. Now the first of these countries is called *Airyānem vaôgô*, *Arianum semen*, the Aryan seed, and its position is supposed to have been as far east as the western slopes of the *Belurtag* and *Mustag*, near the sources of the *Oxus* and *Yaxartes*, the highest elevation of Central Asia.<sup>3</sup> From this country, which is called their seed, the Aryas, according to their own traditions, advanced towards the south and west, and in the *Zend-Avesta* the whole extent of country occupied by the Aryans is likewise called *Airyā*. A line drawn from India along the *Paopamisus* and *Caucasus Indicus*, in the east, following in the north the direction between the *Oxus* and *Yaxartes*,<sup>4</sup> then running along the *Caspian Sea*, so as to include *Hyrcania* and *Râgha*, then turning south-east on the borders of *Nisaea*, *Asia* (i.e. *Haria*), and the countries washed

<sup>1</sup> We are told, however, by the Rev. Dr. Wilson, in his *Notes on the Constituent Elements of the Marâthî Language*, p. 3, that *Aryâr* (an *Ârya*) is the name given to a *Marâthâ* by his neighbour of the Canarese country, and that *Âryâr*, too, is the name given to the *Marâthâs* by the degraded tribe of *Mangs*, located in their own territory. The same distinguished scholar points out that *Ariakô* is the name given to a great portion of the *Marâthâ* country by the merchant *Arrian*, the navigator, thought to be the contemporary of *Ptolemy*.—*Vincent's Periplus*, vol. ii. pp. 397, 428-438.

<sup>2</sup> Lassen, *Ind. Alt. b. i. s. 6*.

<sup>3</sup> *Ibid.* b. i. s. 526.

<sup>4</sup> *Ptolemy* knows *'Ariakai*, near the mouth of the *Yaxartes*. *Ptol.* vi. 14; Lassen, *l. c. i. 6*. In *Plin.* vi. 50, *Ariacæ* ought to be altered into *Asiotæ*. See *Mullenhoff, Monatsberichte der Berliner Akademie*, 1866, p. 551.

by the Etymandrus and Arachotus, would indicate the general horizon of the Zoroastrian world. It would be what is called in the fourth cardé of the Yasht of Mithra, 'the whole space of Aria,' *vîspem airyôsayanam* (*totum Ariæ situm*).<sup>1</sup> Opposed to the Aryan (*anyâo dainhâvô*) we find in the *Zend-Avesta* the non-Aryan countries (*anairyâo dainhâvô*),<sup>2</sup> and traces of this name are found in the 'Avapiûkau, a people and town on the frontiers of Hyrcania.'<sup>3</sup> Greek geographers use the name of Ariana in a wider sense even than the *Zend-Avesta*. All the country between the Indian Ocean in the south and the Indus on the east, the Hindu-kush and Paropamisus in the north, the Caspian gates, Karamana, and the mouth of the Persian gulf in the west, is included by Strabo (xv. 2) under the name of Ariana; and Bactria is called<sup>4</sup> by him 'the ornament of the whole of Ariana.' As the Zoroastrian religion spread westward, Persia, Elymais, and Media all claimed for themselves this Aryan title. Hellanicus, who wrote before Herodotus, knows of Aia as a name of Persia.<sup>5</sup> Herodotus (vii. 62) attests that the Medians were called Arii; and even for Atropatene, the northernmost part of Media, the name of Ariana (not Aria) has been preserved by Stephanus Byzantinus. As to Elymais its name has been derived from *Ailuma*, a supposed corruption of *Airyama*.<sup>6</sup> The

<sup>1</sup> Burnouf, *Yasna*, Notes, p. 61. In the same sense the *Zend-Avesta* uses the expression, Aryan provinces, 'anyânâm daçvunâm' gen. plur., or 'anyâo dainhâvô,' provincias Arianas. Burnouf, *Yasna*, p. 442, and *Notes*, p. 70.

<sup>2</sup> Burnouf, *Yasna*, Notes, p. 62.

<sup>3</sup> Strabo, xi. 7, 11; Pliny, *Hist. Nat.* vi. 19; Ptol. vi. 2; De Sacy, *Mémoires sur diverses Antiquités de la Perse*, p. 48, Lassen, *Indische Alterthumskunde*, i. 6.

<sup>4</sup> Strabo, xi. 11; Burnouf, *Yasna*, Notes, p. 110. 'In another place Eratosthenes is cited as describing the western boundary to be a line separating Parthene from Media, and Karmania from Paratakeræ and Persia, thus taking in Yezd and Kerman, but excluding Fars.'—Wilson, *Ariana antiquæ*, p. 120.

<sup>5</sup> Hellanicus, fragm. 166, ed. Muller. Ἑλλανικὴ χώρα.

<sup>6</sup> Joseph Muller, *Journal asiatique*, 1839, p. 298. Lassen, *l. c.* i. 6. From this the Elam of Genesis. *Mélanges asiatiques*, i. p. 623. In the cuneiform inscriptions which represent the pronunciation of Persian

Persians, Medians, Bactrians, and Sogdians all spoke, as late as the time of Strabo,<sup>1</sup> nearly the same language, and we may well understand, therefore, that they should have claimed for themselves one common name, in opposition to the hostile tribes of Turan.

That *Aryan* was used as a title of honour in the Persian empire is clearly shown by the cuneiform inscriptions of Darius. He calls himself Ariya and Ariya-*kitra*, an Aryan and of Aryan descent, and Ahuramazda, or, as he is called by Darius, Auramazda, is rendered in the Turanian translation of the inscription of Behistun, 'the god of the Aryas.' Many historical names of the Persians contain the same element. The great-grandfather of Darius is called in the inscriptions Ariyârâmna, the Greek *Ariaramnes* (Herod. vii. 90). Ariobarzanes (i.e. Euergetes), Ariomanes (i.e. Eumenes), Ariomardos, all show the same origin.<sup>2</sup>

About the same time as these inscriptions, Eudemos, a pupil of Aristotle, as quoted by Damascius, speaks of 'the Magi and the whole Arian race,'<sup>3</sup> evidently using Arian in the same sense in which the *Zend-Avesta* spoke of 'the whole country of Arian.'

And when after years of foreign invasion and occupation, Persia rose again under the sceptre of the Sassanians to be a national kingdom, we find the new national kings, the worshippers of Masdanes, calling themselves, in the inscriptions

under the Achæmenian dynasty, the letter *l* is wanting altogether. In the names of Babylon and Arbela it is replaced by *r*. The *l* appears, however, in the Sassanian inscriptions, where both Ailán and Airán, Anilán and Anirán occur.

<sup>1</sup> Heeren, *Ideen*, i. p. 337: ὁμόγλωττοι παρὰ μικρὸν. Strabo, p. 1054

<sup>2</sup> One of the Median classes is called Ἀριζαντοί, which may be aryagantu. Herod. i 101.

<sup>3</sup> Μάγοι δὲ καὶ πᾶν τὸ Ἀρειον γένος, ὡς καὶ τοῦτο γράφει ὁ Εὐδήμος, οἱ μὲν τόπον, οἱ δὲ χρόνον καλοῦσι τὸ νοητὸν ἅπαν καὶ τὸ ἠνωμένον ἐξ οὗ διακριθῆναι ἢ θεὸν ἀγαθὸν καὶ δαίμονα κακὸν ἢ φῶς καὶ σκότος πρὸ τούτων, ὡς ἐνίοις λέγειν. Οὗτοι δὲ οὖν καὶ αὐτοὶ μετὰ τὴν ἀδιάκριτον φύσιν διακρινομένην ποιοῦσι τὴν διττὴν συστοιχίαν τῶν κρειττόνων, τῆς μὲν ἡγεῖσθαι τὸν Ἰερομάσδη, τῆς δὲ τὸν Ἀρειμάνιον.—Damascius, *Quæstiones de primis principibus*, ed. Kopp, 1826, cap. 125, p. 384.

deciphered by De Sacy,<sup>1</sup> 'Kings of the Aryan and un-Aryan races;' in Pehlvi, *Irân ra Anirân*; in Greek, Ἀριάνων καὶ Ἀναριάνων.

The modern name of Irân for Persia still keeps up the memory of this ancient title.

In the name of *Armenia* the same element of Arya has been supposed to exist.<sup>2</sup> The name of Armenia, however, does not occur in Zend, and the name *Armina*, which is used for Armenia in the cuneiform inscriptions, is of doubtful etymology. In the language of Armenia, *ari* is used in the widest sense for Aryan or Iranian; it means also brave, and is applied more especially to the Medians.<sup>4</sup> The word *arya*, therefore, though not contained in the name of Armenia, can be proved to have existed in the Armenian language as a national and honourable name.

West of Armenia, on the borders of the Caspian Sea, we find the ancient name of *Albania*. The Armenians call the Albanians *Aghoran*, and as *gh* in Armenian stands for *r* or *l*, it has been conjectured by Boré, that in *Aghoran* also the name of *ARIA* is contained. This seems doubtful. But in the valleys of the Caucasus we meet with an Aryan race speaking an Aryan language, the Os of *Osseth*, and these call themselves *Iron*.<sup>5</sup>

<sup>1</sup> De Sacy, *Memoire*, p. 47; Lassen, *Ind. Alt.* i. 8.

<sup>2</sup> Burnouf, *Yasna*, Notes, p. 107. Spiegel, *Beitrag zur reynen Sprachf.* i. 31. Anquetil had no authority for taking the Zend *aryaman*, for Armenia.

<sup>3</sup> Bochart shows (*Phaleg.* lib. i. cap. 3, col. 20) that the Chaldee paraphrast renders the Mint of Jeremiah by Har Mint, and as the same country is called Minyas by Nicolaus Damascenus, he infers that the first syllable is the Semitic Har, a mountain (see Rawlinson's *Glossary*, s. v.).

<sup>4</sup> Lassen, *Ind. Alt.* i. 8, note. *Arikkh* also is used in Armenian as the name of the Medians, and has been referred by Jos Müller to Aryaka as a name of Media. *Journ. As.* 1839, p. 298. If, as Quatremère says, *ari* and *anari* are used in Armenian for Medians and Persians, this can only be ascribed to a misunderstanding, and must be a phrase of later date.

<sup>5</sup> Sjogren, *Ossetic Grammar*, p. 396. Scylax and Apollodorus mention Ἀριοὶ and Ἀριάνια, south of the Caucasus. Pictet, *Origines*, p. 67; Scylax, *Perip.* p. 213, ed. Klausen; *Apollodori Biblioth.* p. 433, ed. Heyne.



Along the Caspian, and in the country washed by the Oxus and Yaxartes, Aryan and non-Aryan tribes were mingled together for centuries. Though the relation between Aryas and Turas was hostile, and though there were continual wars between them, as we learn from the great Persian epic, the *Shahnameh*, it does by no means follow that all the nomad races who infested the settlements of the Aryas were of Tatar blood and speech. Turvasa and his descendants, who represent the Turanians, are described in the later epic poems of India as cursed and deprived of their inheritance in India; but in the *Vedas* Turvasa is represented as worshipping Aryan gods. Even in the *Shahnameh*, Persian heroes go over to the Turanians and lead them against Irán, very much as Cincinnatus led the Samnites against Rome. We may thus understand why so many Turanian or Scythian names, mentioned by Greek writers, should show evident traces of Aryan origin. *Aspa* was the Persian name for horse, and in the Scythian names *Aspabota*, *Aspakara*, and *Asparatha*<sup>1</sup> we can hardly fail to recognise the same element. Even the name of the Aspasian mountains, placed by Ptolemy in Scythia, indicates a similar origin. Not is the word *Ārya* unknown beyond the Oxus. There is a people called *Anacæ*,<sup>2</sup> another called *Antariani*.<sup>3</sup> A king of the Scythians, at the time of Darius, was called *Ariantes*. A contemporary of Xerxes is known by the name of *Aripithes* (i. e. Sanskrit *aryapati*; Zend *airypaiti*); and *Spargapithes* may have had some connection with the Sanskrit *svargapati*, lord of heaven.

We have thus traced the name of *Ārya* from India to the west, from *Āryāvarta* to *Arana*, *Persia*, *Media*, more doubtfully to *Armenia* and *Albania*, to the Iron in the *Caucasus*, and to some of the nomad tribes in *Transoxiana*. As we approach Europe the traces of this name grow fainter, yet they are not altogether lost.

<sup>1</sup> Burnouf, *Yasna*, Notes, p. 105.

<sup>2</sup> Ptolemy, vi 2, and vi 14. There are '*Αναπίαιαι*' on the frontiers of *Hyrkania*. Strabo, xi 7, Pliny, *Hist Nat* vi. 19.

<sup>3</sup> On *Arimaspi* and *Aramæi*, see Burnouf, *Yasna*, Notes, p. 105; Pliny, vi. 9.

Two roads were opened to the Aryas of Asia in their westward migrations. One through Chorasán<sup>1</sup> to the north, through what is now called Russia, and thence to the shores of the Black Sea and Thrace. Another from Armenia, across the Caucasus or across the Black Sea to Northern Greece, and along the Danube to Germany. Now on the former road the Aryas left a trace of their migrations in the old name of Thrace, which was *Aria*; <sup>2</sup> on the latter we meet in the eastern part of Germany, near the Vistula, with a German tribe called *Aru*. And as in Persia we found many proper names in which *Arya* formed an important ingredient, so we find again in German history names such as *Ariovistus*.<sup>3</sup>

Though we look in vain for any traces of this old national name among the Greeks and Romans, some scholars believe that it may have been preserved in the extreme west of the Aryan migrations, in the very name of *Ireland*. The common etymology of *Erin* is that it means 'island of the west,' *iar-innis*; or land of the west, *iar-in*. But this is clearly wrong,<sup>4</sup> at least with regard to the second portion of the word. The old name of Ireland is *Ériu* in the nominative, more recently *Éire*. It is only in the oblique cases that the final *n* appears, as in Latin words such as *regio*, *regionis*. *Erin* therefore has been explained as a derivative of *Er* or *Eri*, said to be the ancient name of the Irish Celts as preserved in the Anglo-Saxon name of their country, *Íreland*.<sup>5</sup> And it is maintained by O'Reilly, though denied by others, that this *er* is used in Irish in the sense of noble, like the Sanskrit *árya*.<sup>6</sup>

<sup>1</sup> *Qairizám* in the Zend-Avesta, *Uvázrazmis* in the inscriptions of Darius.

<sup>2</sup> Stephanus Byzantinus.

<sup>3</sup> Grimm, *Rechtsalterthümer*, s. 292, traces *Arii* and *Ariovistus* back to the Gothic *haryi*, army. If this etymology be right, this part of our argument must be given up.

<sup>4</sup> Pictet, *Les Origines indo-européennes*, p. 31. '*Jar*, l'ouest, ne s'écrit jamais *er* ou *eir*, et la forme *Iurin* ne se rencontre nulle part pour *Erin*.' Zeuss gives *iar-riend*, insula occidentalis. But *riend* (recte *riind*) makes *riendo* in the gen. sing.

<sup>5</sup> Old Norse *Íar*, Irishmen; Anglo-Saxon *Íra*, Irishman.

<sup>6</sup> Though I state these views on the authority of M. Pictet (Kuhn's

Some of the evidence here collected in tracing the ancient name of the Aryan family, may seem doubtful, and I have pointed out myself some links of the chain uniting the earliest

*Beitrage*, i. 91), I think it right to add the following note which an eminent Irish scholar has had the kindness to send me :—

The ordinary name of Ireland, in the oldest Irish MSS., is (*h*)*ériu*, gen. (*h*)*érenn*, dat. (*h*)*éirinn*. The initial *h* is often omitted. Before etymologising on the word, we must try to fix its Old Celtic form. Of the ancient names of Ireland which are found in Greek and Latin writers, the only one which *hériu* can formally represent is *Hiberno*. The abl. sing. of this form—*Hiberione*—is found in the Book of Armagh, a Latin MS. of the early part of the ninth century. From the same MS we also learn that a name of the Irish people was *Hyberionaces*, which is obviously a derivative from the stem of *Hiberno*. Now if we remember that the Old Irish scribes often prefixed *h* to words beginning with a vowel (e.g. *h-abunde*, *h-arundo*, *h-erimus*, *h-ostium*), and that they also often wrote *b* for the *v* consonant (e.g. *bobes*, *fribulas*, *corbus*, *fubonius*), if, moreover, we observe that the Welsh and Breton names for Ireland—*Ywerddon*, *Iwerdon*—point to an Old Celtic name beginning with *IVER*—, we shall have little difficulty in giving *Hiberno* a correctly Latinised form, viz. *Iverio*. This in Old Celtic would be *Iveriu*, gen. *Iverionos*. So the Old Celtic form of *Fronto* was *Frontá*, as we see from the Gaulish inscription at Vieux Poitiers. As *v* when flanked by vowels is always lost in Irish, *Iveriu* would become *ieriu*, and then, the first two vowels running together, *ériu*. [*‘*Absorbitur *v* in *é* in *iar* (occidens) in formula adverbiali *uniar* (in, ab occidente) Wb. Cr., cui adnumeranda præp. *iaru* (post), adverb. *iarum* (postea), siquidem recte confero nomina *Ἰουέπνιοι* (n. populi in angulo Hiberniæ verso contra occidentem et meridiem), *Ἰοεππίς* (oppid. Hiberniæ), et *Ἰοεππία* (nomen insulæ) ap. Ptolem. quæ Romani accommodaverint ad vocem suam *hibernus*, i.e. hiemalis.—Zeuss, *Grammatica Celtica*, i. p. 67.] As regards the double *n* in the oblique cases of *ériu*, the genitive *érenn* (e.g.) is to *Iverionos* as the Old Irish *anmann*, ‘names,’ is to the Skr. *nâmanî*, Lat. *nomina*. The doubling of the *n* may perhaps be due to the Old Celtic accent. What then is the etymology of *Iveriu*? I venture to think that it may (like the Lat. *Avernus*, Gr. *Ἄφορνος*) be connected with the Skr. *avara*, ‘posterior,’ ‘western.’ So the Irish *des*, Welsh *deheu*, ‘right,’ ‘south,’ is the Skr. *dakshina*, ‘dexter’; and the Irish *áir* (in *an-áir*), if it stand for *pár*, ‘east,’ is the Skr. *púrva*, ‘anterior.’

M. Pictet regards Ptolemy’s *Ἰοεππία* (*Ivernía*) as coming nearest to the Old Celtic form of the name in question. He further sees in the first syllable what he calls the Irish *ibh*, ‘land,’ ‘tribe of people,’ and he thinks that this *ibh* may be connected not only with the Vedic *ibha*,

name of India with the modern name of Ireland, as weaker than the rest. But the principal links are safe. Names of countries, peoples, rivers, and mountains have an extraordinary vitality, and they will remain while cities, kingdoms, and nations pass away. *Rome* has the same name to-day, and will probably have it for ever, which was given to it by the earliest Latin and Sabine settlers; and wherever we find the name of Rome, whether in Walachia, which by the inhabitants is called Roumania, or in the dialects of the Gisons, the Romansch, in the title of the Romance languages, or in the name of Rouina, given by the Arabs to the Greeks, and in that of Roumelia, we know that some threads would lead us back to the Rome of Romulus and Remus, the stronghold of the earliest warriors of Latium. The ruined city near the mouth of the Upper Zab, now usually known by the name of Nimrud, is called *Athur* by the Arabic geographers, and in *Athur* we recognise the old name of Assyria, which Dio Cassius writes *Alyria*, remarking that the barbarians changed the Sigma into Tau. Assyria is called *Athurâ* in the inscriptions of Darius.<sup>1</sup> We hear of battles fought on the *Sutledge*, and we hardly think that the battle-field of the Sikhs was nearly the same where Alexander fought the kings of the Penjâb. But the name of the *Sutledge* is the name of the same river as the *Hesudrus* of Alexander, the *Satadru* of the Indians, and among the oldest hymns of the Veda, about 1500 B.C., we find a war-song referring to a battle fought on the two banks of the same stream.

'family,' but with the Old High-German *eiba*, 'a district.' But, first, according to the Irish phonetic laws, *ebha* would have appeared as *eb* in Old, *eabh* in Modern, Irish. Secondly, the *er* in *eiba* is a diphthong = Gothic *ai*, Irish *oi*, *oe*, Skr. *ê*. Consequently, *ibh* and *ibhu* cannot be identified with *eiba*. Thirdly, there is no such word as *ibh* in the nominative singular, although it is to be found in O'Reilly's Dictionary, along with his explanation of the intensive prefix *er-*, as 'noble,' and many other blunders and forgeries. The form *ibh* is, no doubt, producible, but it is a very modern dative plural of *ua*, a 'descendant.' Irish districts were often called by the names of the occupying clans. These clans were often called 'descendants (*húi, lé, i*) of such an one.' Hence the blunder of the Irish lexicographer.—W.S.

<sup>1</sup> See Rawlinson's *Glossary*, s. v.

No doubt, there is danger in trusting to mere similarity of geographical names. Grimm may be right that the *Arni* of Tacitus were originally *Harii*, and that their name is not connected with *Arya*. But in this case, as the evidence on either side is merely conjectural, this must remain an open question. In other cases, however, a strict observation of the phonetic laws peculiar to each language will remove all uncertainty. Grimm, for instance, in his *History of the German Language* (p. 228), imagined that *Harwa*, the name of *Herat* in the cuneiform inscriptions, is connected with *Aiii*, the name which, according to Herodotus, was given to the Medes. This cannot be, for the initial aspiration in *Harwa* points to a word which in Sanskrit begins with *s*, and not with a vowel, like *Âiya*. The following remarks will make this clearer.

*Herat* is called both *Herat* and *Heri*,<sup>1</sup> and the river on which it stands is called *Heri-rud*. This river *Heri* is called by Ptolemy '*Apéias*,<sup>2</sup> by other writers *Arnus*; and *Ana* is the name given to the country between Parthia (Parthuwa) in the west, Margiana (Marghush) in the north, Bactria (Bakhtrish) and *Arachosia* (*Haiawatish*) in the east, and Drangiana (*Zaraka*) in the south. This, however, though without the initial *h*, is not *Anana*, as described by Strabo, but an independent country, forming part of it. It is supposed to be the same as the *Harawa* (*Haiwa*) of the cuneiform inscriptions, though this is doubtful. But in the *Zend-Avesta* there occurs *Harôyu*,<sup>3</sup> as the name of the sixth

<sup>1</sup> W. Ouseley, *Orient. Geog. of Ebn Haukal*. Burnouf, *Yasna*, Notes, p. 102.

<sup>2</sup> Ptolemy, vi. 17.

<sup>3</sup> It has been supposed that *harôyûm* in the *Zend-Avesta* stands for *harâevem*, and that the nominative was not *Harôyu*, but *Harâevô* (Oppert, *Journal Asiatique*, 1851, p. 280). Without denying the correctness of this view, which is partially supported by the accusative *vidôyûm*, from *vidâevô*, enemy of the Divs, there is no reason why *Harôyûm* should not be taken for a regular accusative of *Harôyu*, the long *ô* in the accusative being due to the final nasal. (Burnouf, *Yasna*, Notes, p. 103.) This *Harôyu* would be in the nominative as regular a form as *Sarayu* in Sanskrit, nay even more regular, as *harôyu* would presuppose a Sanskrit *sarasyu* or *saroyu*, from *sarav*, water. *Sarayû* occurs also with a long *û*; see Wilson, s. v. *M*. Oppert rightly identifies the people of *Harawa* with the '*Apéioi*, not, like Grimm, with the '*Apioi*.

country created by Ormuzd. We can trace this name with the initial *h* even beyond the time of Zoroaster. The Zoroastrians had lived for a time together with the ancestors of the people whose sacred songs have been preserved to us in the Veda. Afterwards the Zoroastrians migrated westward to Arachosia, Media, and Persia, while the Vedic people spread more and more towards the south and west. In their migrations the Zoroastrians did what the Greeks did when they founded new colonies, what the Americans did in founding new cities. They gave to the new cities and to the rivers along which they settled, the names of cities and rivers familiar to them, and reminding them of the localities which they had left. Now, as a Persian *h* points to a Sanskrit *s*, *Harôyu* would be in Sanskrit Saroyu. We do not find Saroyu in the Veda, but we find Sarayu one of the sacred rivers of Vedic India, famous in the epic poems as the River of Ayodhyâ, one of the earliest capitals of India, and still known as the modern *Saryu*, the river of *Awadh* or *Hanumân-garhî*. *Saras* is a name for water in Sanskrit, derived, like *sarit*, river, from *sar*, to go, to run. It was probably this river, the Sarayu, which lent its name to the *Harôyu*, the *Arius* or *Heri-rud*, and this in turn to the country of *Aria* or *Herat*. Anyhow *Aria*, as the name of *Herat*, has no connection with *Aria*, the country of the *Âryas*.

There is no necessity for restricting Aryan to the language of India and Persia. They can be distinguished as *Indic* and *Iranic*, or as *Perso-Aryan* and *Indo-Aryan*, having Aryan as the shortest and most convenient title of the whole family of Aryan<sup>1</sup> speech.

As Comparative Philology has thus traced the ancient name of *Ârya* from India to Europe, as the original title assumed by the *Aryas*, before they left their common home, it is but natural that it should have been chosen as the technical term for the family of languages which was formerly designated as Indo-Germanic, Indo-European, Caucasian, or Japhetic.

<sup>1</sup> For fuller information on the meaning of the word *Ârya*, see the author's article in the *Encyclopædia Britannica*, s. v. *Aryan*.

**August Friedrich Pott.**

The last of the triumvirs who founded the study of comparative philology—Bopp, Grimm, and Pott—has departed. Professor Pott, as the papers inform us, died at Halle on July 5, 1886, in his eighty-fifth year. I have at present no books of reference at hand, and cannot tell where he was born, how he was educated, when he became professor, and what were his titles and orders, and other distinctions. Though I believe I have read or consulted every one of his books, I cannot undertake to give even their titles. And yet I feel anxious to pay my tribute of gratitude and respect to one to whom we all owe so much, who has fought his battle so bravely, and whose whole life was consecrated to what was to him a sacred cause—the conquest of sure and accurate knowledge in the wide realm of human speech. I believe he never left the University of Halle, in which he first began his career. He knew no ambition but that of being in the first rank of hard and honest workers. His salary was small; but it was sufficient to make him independent, and that was all he cared for. Others were appointed over his head to more lucrative posts, but he never grumbled. Others received orders and titles: he knew that there was one order only that he ought to have had long ago—the *Ordre pour le Mérite*, which he received only last year, fortunately before it was too late. He never kept any private trumpeters, nor did he surround himself with what is called a school, so often a misnomer for a clique. His works, he knew, would remain his best monuments, long after the cheap applause of his friends and pupils, or the angry abuse of his envious rivals, had died away. What he cared for was work, work, work. His industry was indefatigable to the end of his life; and to the very last he was pouring out of his note-books streams of curious information which he had gathered during his long life.

A man cannot live to the age of eighty-five, particularly if he be engaged in so new and progressive a science as comparative philology, without having some of his earlier works called antiquated. But we ought to distinguish between books that become antiquated, and books that become historical. Pott's *Etymologische Forschungen*, in their first edition, contain, no doubt, many statements which the merest beginner now knows to be erroneous. But what these beginners are apt to forget is that Pott's mistakes were often inevitable, nay, even creditable. We do not blame the first decipherers of the hieroglyphic inscriptions, because in some of their first interpretations they guessed wrongly. We admire them for what they guessed rightly, and we often find even their mistakes extremely ingenious and instructive. I should advise all those who have been taught to look upon Pott's early works as obsolete to read his *Etymologische Forschungen*, even the first edition, and I promise them they will gain a truer insight into the original purposes of comparative philology than they can gain from any of the more recent manuals. They will be surprised at the numberless discoveries which are due to Pott, though they have been made again and again, quite innocently, by later comers. In Pott's time the most necessary work consisted in the collection of materials. Overwhelming proofs were wanted to establish what seems to us a simple fact, but what was then regarded as a most pestilent heresy, namely, that Greek, Latin, Teutonic, Celtic, Slavonic, and Sanskrit were cognate tongues. It was Pott who brought these overwhelming proofs together, and thus crushed once and for all the opposition of narrow-minded sceptics. It is quite true that his work was always rather massive, but massive work was wanted for laying the foundation of the new science. It is true, also, that his style was very imperfect, was, in fact, no style at all. He simply poured out his knowledge, without any attempt at order and perspicuity. I believe it was Ascoli who once compared his books to what the plan of Shinar might have looked like after the Tower of Babel had come to grief. But, after all, the foundation which he laid has lasted; and, after the rubbish has been cleared away by himself and others, enough



remains that will last for ever. Nor should it be forgotten that Pott was really the first who taught respect for phonetic rules. We have almost forgotten the discussion which preceded the establishment of such simple rules as that Sanskrit *g* may be represented by Greek  $\beta$ , that Sanskrit *gaus* may be  $\beta\omicron\upsilon\varsigma$ , and Sanskrit *gam*,  $\beta\alpha\iota\upsilon\omega$ . We can hardly imagine that scholars could have been incredulous as to Sanskrit *ksh* being represented by Greek  $\kappa\tau$ , as to an initial *s* being liable to elision, and certain initial consonants liable to prosthetic vowels. The rules, however, according to which *d* might or might not be changed into *l* had to be established by exactly the same careful arguments as those according to which the vowel *a* is liable to palatal or labial colouring (*e* and *o*). And when we look at the second edition of Pott's *Etymologische Forschungen*, we find it a complete storehouse which will supply all our wants, though, no doubt, every student has himself to test the wares which are offered him. The same remark applies to his works on the Gipsies, on Personal Names, and on Numerals; to his numerous essays on Mythology, on African Languages, and on General Grammar. Everywhere there is the same *embarras de richesse*, but, nevertheless, there is *richesse*, and the collection of it implies an amount of devoted labour such as but few scholars have been capable of.

In his earlier years, Professor Pott was very 'fond of fecht-  
ing'; and when we look at the language which he sometimes allowed himself to use in his controversies with Curtius and others, we cannot help feeling that it was not quite worthy of him. But we must remember what the general tone of scientific wrangling was at that time. Strong language was mistaken for strong argument, and coarseness of expression for honest conviction. In the days of Lachmann and Haupt, no one was considered a real scholar who could not be *grob*. Pott caught the infection; but, with all that, though he dealt hard blows, he never dealt foul blows. He never became the slave of a clique, and never wrote what he did not believe to be true. He must often have felt, like Goethe, that he stumbled over the roots of the trees which he himself had planted; but he remained on pleasant terms with most of the rising generation,

and, to the end of his life, was ready to learn from all who had anything to teach. He cared for the science of language with all the devotion of a lover, and he never forgot its highest aims, even when immersed in a perfect whirlpool of details. He had, in his younger days, felt the influence of William von Humboldt, and no one who had ever felt that influence could easily bring himself to believe that language had nothing to teach us but phonetic rules. Pott's name will remain for ever one of the most glorious in the heroic age of comparative philology. Let those who care to know the almost forgotten achievements of that age of heroes study them in Bentley's classical work—*The History of Comparative Philology*.

**Ulphilas.**

I must say a few words on this remarkable man. The accounts of ecclesiastical historians with regard to the date and the principal events in the life of Ulphilas are very contradictory. This is partly owing to the fact that Ulphilas was an Arian bishop, and that the accounts which we possess of him come from two opposite sides, from Arian and Athanasian writers. Although in forming an estimate of his character it would be necessary to sift this contradictory evidence, it is but fair to suppose that, when dates and simple facts in the life of the bishop have to be settled, his own friends had better means of information than the orthodox historians. It is, therefore, from the writings of his own co-religionists that the chronology and the historical outline of the bishop's life should be determined.

The principal writers to be consulted are Philostorgius, as preserved by Photius, and Auxentius, as preserved by Maximinus in a MS. discovered in 1840 by Professor Waitz<sup>1</sup> in the Library at Paris. (Supplement. Latin No. 594.) This MS contains some writings of Hilarius, the first two books of Ambrosius, *De Fide*, and the acts of the Council of Aquileja (381). On the margin of this MS. Maximinus repeated the beginning of the acts of the Council of Aquileja, adding remarks of his own in order to show how unfairly Palladius had been treated in that council by Ambrose. He jotted down his own views on the Arian controversy, and on foll. 282 seq. he copied an account of Ulphilas written by Auxentius, the bishop of Dorostorum (Silstria on the Danube), a pupil of Ulphilas. This is followed again by some dissertations of Maximinus, and on foll. 314-327, a treatise addressed to Ambrose by a Semi-Arian,

<sup>1</sup> *Ueber das Leben und die Lehre des Ulphilas*, Hanover, 1840; *Ueber das Leben des Ulphilas*, von Dr. Bessell, Göttingen, 1860.

a follower of Eusebius, possibly by Prudentius himself, was copied and slightly abbreviated for his own purposes by Maximinus.

It is from Auxentius, as copied by Maximinus, that we learn that Ulfilas died at Constantinople, where he had been invited by the emperor to a disputation. This could not have been later than the year 381, because, according to the same Auxentius, Ulfilas had been bishop for forty years, and, according to Philostorgius, he had been consecrated by Eusebius. Now Eusebius of Nicomedia died 341, and as Philostorgius says that Ulfilas was consecrated by 'Eusebius and the bishops who were with him,' the consecration has been referred with great plausibility to the beginning of the year 341, when Eusebius presided at the Synod of Antioch. As we know that Ulfilas was thirty years old at the time of his consecration, he must have been born in 311, and as he was seventy years of age when he died at Constantinople, his death must have taken place in 381.

Professor Waitz fixed the death of Ulfilas in 388, because it is stated by Auxentius that other Arian bishops had come with Ulfilas on his last journey to Constantinople, and had actually obtained the promise of a new council from the emperor, but that the heretical party, i. e. the Athanasians, succeeded in getting a law published, prohibiting all disputation on the faith, whether in public or private. Maximinus, to whom we owe this notice, has added two laws from the Codex Theodosianus, which he supposed to have reference to this controversy, dated respectively 388 and 386. This shows that Maximinus himself was doubtful as to the exact date. Neither of these laws, however, is applicable to the case, as has been fully shown by Dr. Bessel. They are quotations made by Maximinus at his own risk, from the Codex Theodosianus, and made in error. If the death of Ulfilas were fixed in 388, the important notice of Philostorgius, that Ulfilas was consecrated by Eusebius, would have to be surrendered, and we should have to suppose that as late as 388 Theodosius had been in treaty with the Arians, whereas after the year 383, when the last attempt at a reconciliation had been made by Theodosius, and had failed,

no mercy was any longer shown to the party of Ulfilas and his friends

If, on the contrary, Ulfilas died at Constantinople in 381, he might well have been called there by the Emperor Theodosius, not to a council, but to a disputation (*ad disputationem*), as Dr. Bessell ingeniously maintains, against the Psathyropolistæ,<sup>1</sup> a new sect of Arians at Constantinople. About the same time, in 380, Sozomen<sup>2</sup> refers to efforts made by the Arians to gain influence with Theodosius. He mentions, like Auxentius, that these efforts were defeated, and a law published to forbid disputations on the nature of God. This law exists in the Codex Theodosianus, and is dated January 10, 381. But what is most important is, that this law actually revokes a rescript that had been obtained fraudulently by the Arian heretics, thus confirming the statement of Auxentius that the emperor had held out to him and his party a promise of a new council.

Ulfilas was born in 310-11. His parents, as Philostorgius tells us, were of Cappadocian origin, and had been carried away by the Goths as captives from a place called Sadagolthina, near the town of Parnassus. It was under Valerian and Gallienus (about 267) that the Goths made this raid from Europe to Asia, Galatia, and Cappadocia, and the Christian captives whom they carried back to the Danube were the first to spread the light of the Gospel among the Goths. Philostorgius was himself a Cappadocian, and there is no reason to doubt this statement of his on the parentage of Ulfilas. Ulfilas was born among the Goths; Gothic was his native language, though he was able in after-life to speak and write both in Latin and Greek. Philostorgius, after speaking of the death of Crispus (326), and before proceeding to the last years of Constantine, says that 'about that time' Ulfilas led his Goths from beyond the Danube into the Roman Empire. They had to leave their country, being persecuted on account of their Christianity. Ulfilas was the leader of the faithful flock, and came to Constantine (not Constantius) as ambassador. This must have been before 337, the year of Constantine's death. It may have been

<sup>1</sup> Bessell, *l. c.* p. 38.

<sup>2</sup> Sozomenus, *H. E.* vii. 6.

in 328, when Constantine had gained a victory over the Goths; and though Ulfilas was then only seventeen years of age, this would be no reason for rejecting the testimony of Philostorgius, who says that Constantine treated Ulfilas with great respect, and called him the Moses of his time. Having led his faithful flock across the Danube into Mœsia, he might well have been compared by the emperor to Moses leading the Israelites from Egypt through the Red Sea. It is true that Auxentius institutes the same comparison between Ulfilas and Moses, after stating that Ulfilas had been received with great honours by Constantius, not by Constantine. But this refers to what took place after Ulfilas had been for seven years bishop among the Goths, in 348, and does not invalidate the statement of Philostorgius as to the earlier intercourse between Ulfilas and Constantine. Sozomen<sup>1</sup> clearly distinguishes between the first crossing of the Danube by the Goths, with Ulfilas as their ambassador, and the later attacks of Athanarich on Fridigern or Fritiger, which led to the settlement of the Goths in the Roman Empire. We must suppose that, after having crossed the Danube, Ulfilas remained for some time with his Goths, or at Constantinople. Auxentius says that he officiated as lector, and it was only when he had reached the requisite age of thirty, that at the synod of Antiochia he was made bishop by Eusebius in 341. He passed the first seven years of his episcopate among the Goths, and the remaining thirty-three of his life 'in solo Romanis,' where he had migrated together with Fritiger and the Thervingi. There is some confusion as to the exact date of the Gothic Exodus, but it is not at all unlikely that Ulfilas acted as their leader on more than one occasion.

There is little more to be learnt about Ulfilas from other sources. What is said by ecclesiastical historians about the motives of his adopting the doctrines of Arius, and his changing from one side to the other, deserves no credit. Ulfilas, according to his own confession, was always an Arian (*semper sic credidi*). Socrates says that Ulfilas was present at the Synod

<sup>1</sup> *H. E.* vi 3, 7.

of Constantinople in 360, which may be true, though neither Auxentius nor Philostorgius mentions it. The author of the acts of Nicetas speaks of Ulfilas as present at the Council of Nicæa, in company with Theophilus. Theophilus, it is true, signed his name as a Gothic bishop at that council, but there is nothing to confirm the statement that Ulfilas, then fourteen years of age, was with Theophilus. Auxentius thus speaks of Ulfilas (*Wantz*), p. 19:—

‘ Et [ita prædic] ante et per Christum cum dilectione Deo patri gratias agente, hæc et his similia exsequente, quadraginta annis in episcopatu gloriose florens, apostolica gratia Græcam et Latinam et Gothicam linguam sine intermissione in una et sola ecclesia Christi predicavit . . . Qui et ipsis tribus linguis plures tractatus et multas interpretationes volentibus ad utilitatem et ad ædificationem, sibi ad æternam memoriam et mercedem post se dereliquit. Quem condigne laudare non sufficio et penitus tacere non audeo; cui plus omnium ego sum debitor, quantum et amplius in me laboravit, qui me a prima etate mea a parentibus meis discipulum suscepit et sacras litteras docuit et veritatem manifestavit et per misericordiam Dei et gratiam Christi et carnaliter et spiritaliter ut filium suum in fide educavit.

‘ Hic Dei providentia et Christi misericordia propter multorum salutem in gente Gothorum de lectore triginta annorum episcopus est ordinatus, ut non solum esset heres Dei et coheres Christi, sed et in hoc per gratiam Christi imitator Christi et sanctorum ejus, ut quemadmodum sanctus David triginta annorum rex et profeta est constitutus, ut regeret et doceret populum Dei et filios Hishacl, ita et iste beatus tamquam profeta est manifestatus et sacerdos Christi ordinatus, ut regeret et corrigeret et doceret et ædificaret gentem Gothorum; quod et Deo volente et Christo auxiliante per ministerium ipsius admirabiliter est adimpletum, et sicuti Ioseph in Ægypto triginta annorum est manifestatus et quemadmodum dominus et Deus noster Iesus Christus filius Dei triginta annorum secundum carnem constitutus et baptizatus, cepit evangelium predicare et animas hominum pascere. ita et iste sanctus, ipsius Christi dispositione et ordinatione, et in fame et penuria predicationis indifferenter agentem ipsam gentem Gothorum secundum evangelicam et apostolicam et profeticam regulam emendavit et vibere [Deo] docuit, et christianos vere christianos esse, manifestavit et multiplicavit

‘ Ubi et ex invidia et operatione inimici thunc ab inreligioso et sacrilego iudice Gothorum tyrannico terrore in barbarico christianorum persecutio est excitata, ut satanas, qui male facere cupiebat, nolen[s] faceret bene, ut quos desiderabat prevaricatores facere et desertores. Christo opitulante et propugnante, fierent martyres et confessores, ut persecutor confunderetur, et qui persecutionem patiebantur, coronarentur ut hic

qui temptabat vincere, victus erubesceret, et qui temptabantur, victores gauderent Ubi et post multorum servorum et ancillarum Christi gloriosum martyrium, imminente vehementer ipsa persecutione, completis septem annis tantummodo in episcopatum, supradictus sanctissimus vir beatus Ulfila cum grandi populo confessorum de barbarico pulsus, in solo Romane a thu[n]c beate memorie Constantio principe honorifice est susceptus, ut sicuti Deus per Moysen de potentia et violentia Faraonis et Egyptorum populum suum liberavit [et rubrum] mare transire fecit et sibi servire providit, ita et per sepe dictum Deus confessores sancti filii sui unigeniti de barbarico liberavit et per Danubium transire fecit, et in montibus secundum sanctorum imitationem sibi servire de[c]ievit . . . . eo populo in solo Romanæ, ubi sine illis septem annis triginta et tribus annis veritatem predicavit, ut et in hoc quorum sanctorum imitator erat [similis esset], quod quadraginta annorum spatium et tempus ut multos . . . re et . . . a[nn]orum . . . e vita' . 'Qu[on]iam c[um] precepto imperiali, completis quadraginta annis, ad Constantinopolitanam urbem ad disputationem . . . . contra p . . . ic . . . [p] . t . stas periret, et cundo in . . . . nn . . ne . p . . . ecias sibi ax . . . . to docerent et contestarentur] . . . . abat, et inge . e . . . . supradictam [ci]vitatem, recogitato et in . . . . de statu concilii, ne arguerentur miseris miserabiliores, proprio iudicio damnati et perpetuo supplicio plectendi, statim cepit infirmari; qua in infirmitate susceptus est ad similitudine Elisei prophete Considerare modo oportet meritum viri, qui ad hoc duce Domino obit Constantinopolim, immo vero Cristianopolim, ut sanctus et immaculatus sacerdos Christi a sanctis et consacerdotibus, a dignis dignus digne [per] tantam multitudinem christianorum pro meritis [suis] mire et gloriose honoraretur'—(Bessell, p 37)

'Unde et cum sancto Hulfila ceterisque consortibus ad alium comitatum Constantinopolim venissent, ibique etiam et imperatores adissent, adque eis promissum fuisset concilium, ut sanctus Aux[en]tius exposuit, [alignata promissio]no prefati p[re]positi heretic[i] omnibus viribu[s] institerunt u[t] lex daretur q[uæ] concilium p[ro]hiberet, sed nec p[ri]vatim in domo [nec] in publico, vel i[n] quolibet loco di[s]putatio de fide haberetur, sic[ut] textus indicat [leg]is, etc.'—(Waltz, p. 23; Bessell, p. 15.)



## CHAPTER VIII.

### THE SEMITIC FAMILY.

#### **Comparative Study of the Semitic Language.**

**T**HE Science of Language owes its origin almost entirely to the study of the Aryan languages, one might almost say, to the study of Sanskrit. The more correct views on the origin and growth of language, on the true nature of grammatical elements, on the possible changes of letters, and on the historical development of the meaning of words, are all the work of the nineteenth century, and may be claimed, in the first instance, as the discoveries of Sanskrit scholars.

But similar discoveries had been attempted by scholars of the sixteenth, seventeenth, and eighteenth centuries, within the narrower sphere of the Semitic languages. That the constituent elements of Hebrew were triliteral roots, that the grammatical terminations were mostly pronominal, that certain consonants were interchangeable, while others were not, all this was known before the rise of Comparative Philology in Europe. Nevertheless, it was the new spirit which animated the schools of Bopp, Pott, and Grimm, which soon began to react powerfully on Semitic students, and in our own time has led to a comparative study of Hebrew, Arabic, and Aramaic, very different from that of former generations.

For the purpose of illustrating the general principles of the Science of Language the Aryan languages may still be considered as the most useful, and I need hardly add that from the nature of my own special studies, I was led to depend mainly on the evidence supplied by them in support of the linguistic theories which I wished to establish. But as it is impossible to avoid reference to the Semitic, if only in order to contrast them with the Aryan languages, and as a certain knowledge of what I called the Turanian languages seems almost indispensable to enable us to understand the only possible antecedents of Aryan grammar, a short survey of the Semitic, and what I called the Turanian languages will be useful, before we proceed further.

#### Division of the Semitic Family.

The Semitic family has been divided into three branches: the *Aramaic*, the *Hebraic*, and the *Arabic*;<sup>1</sup> or into two, the *Northern*, comprising the *Aramaic* and *Hebraic*, and the *Southern* the *Arabic*.

#### Aramaic.

The language of *Aram*, which formerly was represented chiefly by *Syriac* and *Chaldee*, has now received an older representative in the language of Assyria and Babylon, so far as it has been recovered and deciphered in the cuneiform inscriptions. The grammatical structure of this ancient language is clearly Semitic, but it displays no peculiarities which

<sup>1</sup> *Histoire générale et Système comparé des Langues sémitiques*, par Ernest Renan.

would connect it more closely with Aramaic than with the other Semitic languages. Geographically, however, the ancient language of Mesopotamia may for the present be called Aramaic. The date also of the most ancient of these inscriptions is still a matter of controversy. If some of them go back, as some scholars maintain, to 4000 B.C., they would represent the very oldest remnants of Semitic speech, and almost any deviations of the later Aramaic dialects might be accounted for by mere growth and decay.

If that ancient Semitic literature was itself preceded, as seems now very generally, though not yet universally, admitted, by another civilisation, not Semitic, and known by the name of *Sumero-Accadian*, this would open to us an insight into a past more distant even than that which is claimed for the oldest Egyptian and Chinese literature. It may be so, but as yet neither the language, nor the ideas conveyed by it, give the impression of so very remote an antiquity.<sup>1</sup> Much, no doubt, has been achieved in deciphering these cuneiform inscriptions, and every year brings new and important results. But this very fact shows how dangerous it would be to look upon every new discovery as final, and to arrange and rearrange the history and chronology of the East in accordance with the latest conjectures, based on the decipherment of the cuneiform inscriptions.<sup>2</sup>

#### Chaldee and Syriac.

The language spoken in historical times in the

<sup>1</sup> See *Gifford Lectures*, p. 305.

<sup>2</sup> See *Sayce, Hibbert Lectures*, 1887, p. 413.

ancient kingdoms of Babylon and Nineveh is called *Aramaic*. It spread from thence into Syria and Palestine. Owing to the political and literary ascendancy of these countries, Aramaic seems for a time to have become a kind of *lingua franca*, asserting its influence over Persia, Syria, Asia Minor, Egypt, and even Arabia.

The language spoken by Abraham and his people, before they emigrated to Canaan, was probably Aramaic. Laban must have spoken the same dialect, and the name which he gave to the heap of stones that was to be a witness between him and Jacob (*Jegar-sahulutha*) is Syriac, whereas *Galeed*, the name by which Jacob called it, is Hebrew.<sup>1</sup>

It has been usual to distinguish between Aramaic as used by the Jews, and Aramaic as used in later times by Christian writers. The former was called *Chaldee*, the latter *Syriac*. It may be true that the name Chaldee owes its origin to the mistaken notion of its having been introduced into Palestine by the Jews returning from the Babylonian captivity. But the name has now been too long in possession to make it advisable to replace it by a new name, such as *Western Aramaic*.

The Jewish *Chaldee*<sup>2</sup> shows itself first in some of the books of the Old Testament, such as the book of Ezra and the book of the Prophet Daniel. Afterwards we find it employed in the *Targums*<sup>3</sup> or Chaldee

<sup>1</sup> See Quatremère, *Mémoire sur les Nabatéens*, p. 139.

<sup>2</sup> Renan, pp. 214 seq. · *Le chaldéen biblique écrit un dialecte araméen légèrement hébraïsé.*

<sup>3</sup> Arabic, *tarjam*, to explain. *Drayoman*, Arabic, *tarjamân*.

paraphrases of the Pentateuch (Onkelos) and of the Prophets (Jonathan), which were read in the Synagogues<sup>1</sup> long before they were finally collected in about the fourth and fifth centuries A.D. The Jerusalem Targum and the Jerusalem Talmud<sup>2</sup> represent the Chaldee as spoken at that time by the Jews in Jerusalem and Galilee. Christ and his disciples must have employed the same Aramaic dialect, though they used Greek also in addressing the people at large. The few authentic words preserved in the New Testament as spoken by our Lord in his own native language, such as *Talitha kumi*, *Ephphatha*, *Abba*, are not Hebrew, but Chaldee.

After the destruction of Jerusalem the literature of the Jews continued to be written in Chaldee. The *Talmud* of Jerusalem of the fourth, and that of Pabylon of the fifth century, exhibit the spoken language of the educated Jews, though greatly depraved by an admixture of foreign elements. The conquests of the Arabs and the spreading of their language interfered with the literary cultivation of Chaldee as early as the seventh century; but Chaldee remained the literary idiom of the Jews to the tenth century. The *Masora*<sup>3</sup> and the traditional commentary of the

<sup>1</sup> The Targums of Onkelos and Jonathan are referred to the second century A.D. Others are later, later even than the Talmud; see Renan, *l. c.*, p. 220.

<sup>2</sup> *Talmud* (instruction) consists of *Mishna* and *Gemara*. *Mishna* means repetition or teaching, viz. of the Law. It was collected and written down about 218 A.D., by Jehuda. *Gemara* is a continuation and commentary of the *Mishna*. That of Jerusalem was finished toward the end of the fourth, that of Babylon toward the end of the fifth century.

<sup>3</sup> First printed in the Rabbinic Bible, Venice, 1525.

Old Testament· were probably written down about that time. Soon afterwards the Jews adopted Arabic as their literary idiom, and retained it to the thirteenth century. They then returned to a kind of modernised Hebrew, which is still employed by Rabbis in their learned discussions.

The *Samuritan* also may be called an Aramaic dialect. It is used in the Samaritan translation of the Pentateuch, and differs but little from the Chaldean of the Jews.

The *Mandaeans*, sometimes called *Mendrites* and *Nasoreans*, a somewhat mixed Christian sect in Babylonia, chiefly near Bassora, spoke and wrote likewise a corrupt Aramaic dialect. This is preserved in their writings, and in the jargon of a few surviving members of that sect. Best known among their writings is the *Book of Adam*. Though their extant literature cannot claim a date before the tenth century, it was supposed that under a modern crust of wild and senseless hallucinations, it contained some grains of genuine ancient Babylonian thought. These Mandaeans have in fact been identified with the *Nabateans*, who are mentioned as late as the tenth century<sup>1</sup> of our era, as a race purely pagan, and distinct from Jews, Christians, and Mohammedans. In Arabic the name *Nabatean*<sup>2</sup> is used for Babylonians—nay, all the people of Aramaic origin, settled in the earliest times between the Euphrates and Tigris, are referred to by that name.<sup>3</sup> It was supposed that the Nabateans, who are mentioned about the beginning

<sup>1</sup> Renan, p. 241.

<sup>2</sup> *Ibid.* p. 237.

<sup>3</sup> Quatremère, *Mémoire sur les Nabateens*, p. 116.

of the Christian era as a race distinguished for their astronomical and general scientific knowledge, were the ancestors of the mediæval Nabateans, and the descendants of the ancient Babylonians and Chaldeans. A work, called *The Nabatean Agriculture*, which exists in an Arabic translation by Ibn-Wahshiyyah, the Chaldean,<sup>1</sup> who lived about 900 years after Christ, was supposed to be a translation of a text written by Kuthami in Aramean, about the beginning of the thirteenth century B.C. Renan, however, has shown that it was really the compilation of a Nabatean who lived about the fourth century after Christ;<sup>2</sup> and though it contains ancient traditions, which may go back to the days of the great Babylonian monarchs, these traditions can hardly be taken as a fair representation of the ancient civilisation of the Aramean race.

*Syriac*, though spoken long before the rise of Christianity, owes its literary cultivation chiefly to Christian writers. In the second century A.D. the Old and New Testaments were translated into Syriac (the *Peshito*, i.e. simple), and became the recognised text

<sup>1</sup> Ibn-Wahshiyyah was a Mussulman, but his family had been converted for three generations only. He translated a collection of Nabatean books. Three have been preserved: 1. *The Nabatean Agriculture*; 2. *The Book on Poisons*; 3. *The Book of Tenkelusha (Teucros) the Babylonian*; besides fragments of *The Book of the Secrets of the Sun and Moon*. *The Nabatean Agriculture* was referred by Quatremère (*Journal asiatique*, 1835) to the period between Belesis who delivered the Babylonians from their Median masters and the taking of Babylon by Cyrus. Professor Chwolson of St Petersburg, who has examined all the MSS., places Kuthami at the beginning of the thirteenth century B.C.

<sup>2</sup> Renan, *Mémoire sur l'Âge du Livre intitulé Agriculture nabatienne*, p. 38, Paris, 1860, *Times*, January 31, 1862.

in the school of Edessa and other seats of learning in Syria. A large literature sprang up from the third to the seventh century, and extended its influence to Persia and the Eastern Roman Empire. Ephraem Syrus lived in the middle of the fourth century. During the eighth and ninth centuries the Nestorians of Syria acted as the instructors of the Arabs, but the literary cultivation of their own language began to wane. It was revived for a time in the thirteenth century by Gregorius Barhebraeus (Abulfaraj),<sup>1</sup> and lived on as a learned language to the present day.

The *Neo-Syriac* dialects, still spoken by Nestorian Christians in the neighbourhood of Mossul and in Kurdistan, as far as the lakes of Van and Urmia, also by some Christian tribes in Mesopotamia, are not directly derived from the literary Syriac, but represent remnants of the spoken Aramaic. One of these dialects has lately received some literary cultivation through the exertions of Christian missionaries.<sup>2</sup>

#### Hebraic.

The second branch of the Semitic family comprises *Phœnician* and *Carthaginian*, as known to us from inscriptions, dating, in the case of Phœnician, from about 600 B.C., and the *Hebrew* of the Old Testament.

The *Mwabites* spoke a language almost identical with Hebrew, as may be seen from the inscription of King Mesha, about 900 B.C. The *Philistines* also spoke what may be called a Hebrew dialect. About the time of the Maccabees, Hebrew and its cognate

<sup>1</sup> See Roman, p. 257

<sup>2</sup> Messrs Perkins and Stoddard, the latter the author of a grammar, published in the *Journal of the American Oriental Society*, vol. v.



dialects ceased to be spoken by the people at large, though it remained the language of the learned long after the destruction of Jerusalem by Titus. We saw before how, first of all, Aramaic encroached upon Hebrew, owing to the political ascendancy of Babylon, and still more of Syria. Afterwards Greek became for a time the language of civilisation in Palestine as in other parts of the East; and lastly Arabic, after the conquest of Palestine and Syria, in the year 636, monopolised nearly the whole area formerly occupied by the two older branches of the Semitic stock, Aramaic and Hebrew. At present the Jews scattered over Europe and Asia still employ, for their own purposes, a kind of corrupt Hebrew, both for conversation and for literary purposes.

#### Arabic.

The third branch, the Arabic, has its original home in the Arabian peninsula, where it is still spoken in its greatest purity by the bulk of the inhabitants, and from whence it spread over Asia, Africa, and Europe at the time of the Mohammedan conquests.

The earliest literary documents of Arabic go back beyond Mohammed's time. They are called *Mo'allakât*, literally, suspended poems, because they are said to have been thus publicly exhibited at Mecca. They are old popular poems, descriptive of desert life. Besides these there are the *Divans* of the six ancient Arabic poets, which likewise are anterior to the rise of Mohammedanism.

Inscriptions have been found in the *Hijâz*, commonly called *Thamudic*, which are supposed to be of an ante-Christian date. Similar Arabic inscriptions con-

tinue to be discovered, attesting the use of Arabic, as a cultivated language, long before the age of Mohammed. The trilingual inscription of Zabad (Aramaic, Arabic, Greek) dates from 513 A.D.; a bilingual inscription of Harran (Arabic and Greek) from 568 A.D.

With Mohammed Arabic became the language of a victorious religion and of a victorious literature in Asia, Africa, and, for a time, even in Europe. The language of the Qur'ân became a new type of literary excellence by the side of the ancient Bedouin poetry. In the second century after the Hejra grammatical studies fixed the rules of classical Arabic permanently, and after 1200 years the Qur'ân, representing the language of the seventh century, is still read and understood by all educated Arabs. The spoken Arabic, however, differs dialectically in Egypt, Algeria, Syria, and Arabia. One Arabic dialect continues to be spoken in Malta.

#### **Himyaritic Inscriptions.**

There seems to have existed a very ancient civilisation in the south of the Arabian peninsula, sometimes called *Sabaean*, remnants of which have been discovered in colossal monuments and in numerous inscriptions, written in a peculiar alphabet, called *Himyaritic*. Their age is supposed to date from before our era, and to extend to the fourth century A.D. It is possible to distinguish traces of different dialects in these Sabaean inscriptions, but they are all closely allied to Arabic. The Sabaean language was probably spoken in the south of the Arabian peninsula till the advent of Mohammedanism, which made Arabic the language of the whole of Yemen.

**Ethiopic.**

In very early times a Semitic colony from Arabia, or, more correctly, from Sabaea, crossed over to Africa. Here, south of Egypt and Nubia, a primitive Semitic dialect, closely allied to Sabaeen and Arabic, has maintained itself to the present day, called *Ethiopic*, *Abysinian*, or *Geez*. We have translations of the Bible in Ethiopic, dating from the third and fourth centuries. Other works followed, all of a theological character.

There are inscriptions also in ancient Ethiopic, dating from the days of the kingdom of Axum, which have been referred to 350 and 500 A.D.

The ancient Ethiopic ceased to be spoken in the ninth century, but it remained in use as a literary language for a much longer time.

Beginning with the fifteenth and sixteenth centuries, a new language appears, the modern Ethiopic, or *Amharic*. In it the Semitic type has been intensely modified, probably owing to the fact that the tribes who spoke it were of Hamitic origin. It is still a spreading language, and has given rise in modern times to a new literature.

Other dialects, such as *Tigré*, *Elkhili*, and *Harrari*, so called from the localities in which they are spoken, have not yet been sufficiently explored to enable Semitic scholars to pronounce a decided opinion whether they are varieties of Amharic, or representatives of more ancient independent dialects.<sup>1</sup>

<sup>1</sup> The latest and best account of the Semitic languages is given by Noldeke in the *Cyclopaedia Britannica*.

**Family likeness of the Semitic Languages.**

The family likeness of the Semitic is quite as strong as that of the Aryan languages, nay, even stronger. Their phonetic character is marked by the preponderance of guttural sounds; their etymological character by the trilateral form of most of its roots, and the manner in which these roots are modified by pronominal suffixes and prefixes; their grammatical character by the fixity of the vowels for expressing the principal modifications of meaning, a fixity which made it possible to dispense with writing the vowel signs. These characteristic features are so strongly developed that they render it quite impossible to imagine that a Semitic language could ever have sprung from an Aryan or an Aryan from a Semitic. Whether both could have sprung from a common source is a question that has often been asked, and has generally been answered according to personal predilections. Most scholars, I believe, would admit that it could not be shown that a common origin in far distant times is altogether impossible.<sup>1</sup> But the evidence both for and against is by necessity so intangible and evanescent that it hardly comes within the sphere of practical linguistics.<sup>2</sup>

<sup>1</sup> See M. M., *Selected Essays*, i p. 65, 'Stratification of Language.'

<sup>2</sup> Theologians who still maintain that all languages were derived from Hebrew would do well to read a work by the Abbé Lorenzo Hervás, the dedication of which was accepted by Pope Pius VI, *Saggio Pratico delle Lingue*, 1787, particularly the fourth chapter, which has the title 'La sostanziale diversità degli idiomi nella sintassi addimosta essere vana l'opinione degli Autori, che li credono derivati dall' Ebreo'

## CHAPTER IX.

### ANALYSIS OF LANGUAGE.

**B**EFORE we proceed to a consideration of the languages which are neither Aryan nor Semitic, languages which in my Letter on the Turanian Languages, published in 1854,<sup>1</sup> I ventured to call *Turanian*, and which Prichard before me had comprehended under the name of *Allophylian*, it will be necessary to discover what are the constituent elements of all human speech, and in how many different ways these elements may be combined. For it is in the combination of these elements that the principle has been discovered according to which languages may be classified, even when it is impossible to discover between them any traces of real genealogical relationship.

#### **Radical and Formal Elements.**

The genealogical classification of the Aryan and the Semitic languages was founded, as we saw, on a close comparison of the grammatical characteristics of each. It was the object of such works as Bopp's *Comparative Grammar* to show that the grammatical articulation of Sanskrit, Zend, Greek, Latin, Celtic, Teutonic, and Slavonic was produced once and for

<sup>1</sup> Letter to Chevalier Bunsen, 'On the Turanian Languages,' in Bunsen's *Christianity and Mankind*, vol. iii. pp. 263 seq. 1854.

all, and that the apparent differences in the terminations of Sanskrit, Greek, and Latin must be explained by laws of phonetic change, peculiar to each dialect, which modified the original common Aryan type, and transformed it into so many national languages. It might seem, therefore, as if the object of comparative grammar had been fully attained as soon as the exact genealogical relationship of languages had been settled; and those who only look to the higher problems of the science of language have not hesitated to declare that 'there is no longer any pains-worthy difficulty nor dispute about declension, number, case, and gender of nouns.' But although it is certainly true that comparative grammar is only a means, and that it has wellnigh taught us all that it has to teach—at least in the Aryan family of speech—it is to be hoped that in the science of language it will always retain that prominent place which has been gained for it through the labours of its founders, Bopp, Grimm, Pott, Benfey, Curtius, Kuhn, and others.

Besides, comparative grammar has more to do than simply to compare. It would be easy enough to place side by side the paradigms of declension and conjugation in Sanskrit, Greek, Latin, and the other Aryan dialects, and to mark both their coincidences and their differences. But after we have done this, and after we have explained the phonetic laws which cause the primitive Aryan type to assume those national varieties which we admire in Sanskrit, Greek, and Latin, new problems arise of a far more interesting nature. It is generally admitted that gramma-

tical terminations, as they are now called, were originally independent words, and had their own purpose and meaning. The question then arises whether it is possible, after comparative grammar has established the original forms of the Aryan terminations, to trace them back to independent words, and to discover their original purpose and meaning? You will remember that this was the point from which we started. We wanted to know why the termination *d* in *I loved* should change a present into a past act, and it was easily seen that, before answering this question, we had to discover, first of all, the most original form of this termination by tracing it from English to Gothic, and afterwards, if necessary, from Gothic to Sanskrit. Having surveyed the genealogical system of the Aryan and Semitic languages, we now return to our original question, namely, What is language that so small and merely formal a change as that of *I love* into *I loved*, should produce so portentous a difference?

Let us clearly see what we mean if we make a distinction between the radical and formal elements of a language. By formal elements I mean not only the terminations of declension and conjugation, but all derivative elements; all, in fact, that is not radical. Our view on the origin of language must chiefly depend on the view which we take of these formal, as opposed to the radical, elements of speech. Those who consider that language is a conventional production, base their arguments principally on these formal elements. The inflections of words, they maintain, are the best proof that language was made by

mutual agreement. They look upon them as mere letters or syllables without any meaning by themselves; and if they were asked why the mere addition of a *d* changes *I love* into *I loved*, or why the addition of the syllable *rai* gave to *j'aime*, I love, the power of a future, *j'aimerai*, they would answer, that it was so because, at a very early time in the history of the world, certain persons, or families, or clans, agreed that it should be so.

This view was opposed by another which represents language as an organic and as almost a living being, and explains its formal elements as produced by a principle of growth, inherent in its very nature. 'Languages,'<sup>1</sup> it is maintained, 'are formed by a process, not of crystalline accretion, but of germinal development. Every essential part of language existed as completely (although only implicitly) in the primitive germ, as the petals of a flower exist in the bud, before the mingled influences of the sun and the air caused it to unfold.' This view was first propounded by Frederick Schlegel,<sup>2</sup> and it is still held

<sup>1</sup> Farrar, *Origin of Languages*, p 35

<sup>2</sup> 'It has been common among grammarians to regard those terminational changes as evolved by some unknown process from the body of a noun, as the branches of a tree spring from the stem—or as elements, unmeaning in themselves, but employed arbitrarily or conventionally to modify the meanings of words "Languages with inflections," says Schlegel, "are organic languages, because they include a living principle of development and increase, and alone possess, if I may so express myself, a fruitful and abundant vegetation. The wonderful mechanism of these languages consists in forming an immense variety of words, and in marking the connection of ideas expressed by these words, by the help of an inconsiderable number of syllables, *which, viewed separately, have no signification*, but which determine with precision the sense of the words to which they are attached. By modifying radical letters and by adding derivative syllables to the roots, derivative words of



by many with whom poetical phraseology takes the place of sound and severe reasoning.

The science of language adopts neither of these views. As to imagining a congress for settling the proper exponents of such relations as nominative, genitive, singular, plural, active, and passive, it stands to reason that if such abstruse problems could have been discussed in a language void of inflections, there was no inducement for agreeing on a more perfect means of communication. And as to imagining language, that is to say, nouns and verbs, endowed with an inward principle of growth, all we can say is, that if we only think honestly, we shall find that such a conception is inconceivable. Language may be conceived as a production, but it can never be conceived as a substance that could itself produce.

Nor has the science of language anything to do with mere theories, whether conceivable or not. It collects facts, and its only object is to account for these facts, as far as possible. Instead of looking on inflections in general either as conventional signs or natural excrescences, it takes each termination by itself, establishes its most primitive form by means

various sorts are formed, and derivatives from those derivatives. Words are compounded from several roots to express complex ideas. Finally, substantives, adjectives, and pronouns are declined, with gender, number, and case; verbs are conjugated throughout voices, moods, tenses, numbers, and persons, by employing, in like manner, terminations and sometimes augments, which by themselves signify nothing. This method is attended with the advantage of enunciating in a single word the principal idea, frequently greatly modified, and extremely complex already, with its whole array of accessory ideas and mutable relations."—*Transactions of the Philological Society*, vol. ii. p. 39.

of comparison, and then treats that primitive syllable as it would treat any other part of language—namely, as something which was originally intended to convey a meaning. Whether we are still able to discover the original intention of every part of language is quite a different question, and it should be admitted at once, that many grammatical forms, after they have been restored to their most primitive type, are still without an explanation. But with every year new discoveries are made by means of careful inductive reasoning. We become more familiar every day with the secret ways of language, and there is no reason to doubt that in the end grammatical analysis will be as successful as chemical analysis. Grammar, though sometimes very bewildering to us in its later stages, is originally a much less formidable undertaking than is commonly supposed. What is Grammar after all but declension and conjugation? Originally declension could not have been anything but the composition of a noun with some other word expressive of number and case. How number could be expressed, we saw in a former chapter. A very similar process led to the formation of cases.

**All cases originally local.**

In Chinese<sup>1</sup> the locative is formed in various ways; one is by adding such words as *tung*, the middle, or *nei*, inside. Thus, *k'ü-tung*, in the empire; *i sai tung*, within a year. The instrumental is formed by the preposition *yi*, which preposition is an

<sup>1</sup> Endlicher, *Chinesische Grammatik*, s. 172.

old root, meaning to *use*. Thus *ÿ ting*, with a stick, where in Latin we should use the ablative, in Greek the dative. Now, however complicated the declensions, regular and irregular, may be in Greek and Latin, we may be certain that originally they were formed by this simple method of composition.

There was originally in all the Aryan languages a most useful case, expressive simply of locality, which grammarians call the *locative*. In Sanskrit every substantive has its locative, as well as its genitive, dative, and accusative. Thus, *heart* in Sanskrit is *hrid*; in the heart, is *hrid-i*. Here, therefore, the termination of the locative is simply short *i*. This short *i* may be called a demonstrative root, and there is no reason why the preposition *in* should not be traced back to the same origin. The Sanskrit *hridi* would thus represent an original compound, as it were, *heart-here*, or *heart-within*, which gradually became settled as one of the recognised cases of nouns ending in consonants. We saw that in Chinese<sup>1</sup> the locative is expressed in the same manner, but with a greater freedom in the choice of the words expressive of locality. 'In the empire,' is expressed by *kūδ-cung*; 'within a year,' is expressed by *i sūi-cung*. Instead of *cung*, however, we might have employed other terms, such, for instance, as *nei*, inside.

It might be said that the formation of so primitive a case as the locative offers little difficulty, but that this process of composition fails to account for the origin of the more abstract cases, the accusative, the

<sup>1</sup> Endlicher, *Chinesische Grammatik*, s. 172

dative, and the genitive. If we derive our notions of the cases from philosophical grammar, it is true, no doubt, that it would be difficult to realise by simple composition the abstract relations supposed to be expressed by the terminations of the genitive, dative, and accusative. But we should remember that these are only general categories under which philosophers and grammarians have endeavoured to arrange the facts of language. The people with whom language grew up knew nothing of datives and accusatives. Everything that is abstract in language was originally concrete. All relations expressed by the cases, subject, object, predicate, instrument, cause and purpose, were originally conceived as purely local relations.

Before people wanted to say the king of Rome, they really said the king at Rome. The more abstract idea of the genitive had not yet entered into their system of thought. But more than this, it can be proved that the locative has actually taken, in some languages, the place of the genitive. In Accadian the genitive is formed by locative particles, king of the gods being expressed by king among the gods.<sup>1</sup> The *æ* of the Latin genitive was originally *â-i*, that is to say, the old locative in *i*. 'King of Rome,' if rendered by *Rex Romæ*, meant really 'king at Rome.'<sup>2</sup>

And here you will see how the teaching of grammar, which ought to be the most logical of all sciences, is frequently the most illogical. A boy is taught at school, that if he wants to say 'I am staying at

<sup>1</sup> Haupt, *Die Sumerisch-Akkadische Sprache*, p. 261.

<sup>2</sup> In Sinhalese the loc. in *e* becomes genitive Childers, *J.R.A.S.* 1874, p 41.

Rome,' he must use the genitive to express the locative. How a logician or grammarian can so twist and turn the meaning of the genitive as to make it express rest in a place, it is not for us to inquire; but, if he succeeded, his pupil would at once use the genitive of Carthage (*Carthaginis*) or of Athens (*Athenarum*) for the same purpose, and he would then have to be told that these genitives could not be used in the same manner as the genitive of nouns in *a*. How all this is achieved by what is called philosophical grammar, we know not; but comparative grammar at once removes all difficulty. It is only in the first declension that the locative has supplanted the genitive, whereas *Carthaginis* and *Athenarum*, being real genitives, could never be employed to express a locative. A special case, such as the locative, may be generalised into the more general genitive, but not *vice versa*.

In adopting the opinion of the late Dr. Rosen and of Professor Bopp, who look upon the Latin termination of the genitive singular of feminine nouns in *a* as originally a termination of the locative, I was aware of the objections that had been raised against this view; but I did not feel shaken by them, as little as Professor Bopp, who in the second edition of his *Comparative Grammar* maintains his original explanation of that case. That the relation expressed by the genitive may be rendered by a locative, cannot be disputed, for it is well known that in the dual the locative and genitive cases are in Sanskrit expressed by the same termination. As it could hardly be maintained that an original genitive may be used to

convey a local meaning, it would seem to follow that the termination of the locative and genitive dual in *os* conveyed originally a local meaning, and gradually assumed a more general predicative sense. There is no doubt that Latin possessed, like Greek, the regular genitive in *s*. We find ancient forms such as *escas*, *monetas*, *terras*, and *fortunas*, while *familias* has been preserved throughout in *pater familias*. In Oscan, Umbrian, and Sabellian the same genitives occur. (Corssen, i. 769; ii. 722.) It is true also that Latin genitives in *ais* have been established by Ritschl on the evidence of ancient inscriptions, e. g. *Prosepnais*, instead of *Proserpinæ* (see Kuhn's *Zeitschrift*, xii. s. 234, xiii. s. 445); and it has often been pointed out that weakened forms in *aes*, such as *Dianaes*, *Juliuses*, are of more frequent occurrence, and continue in use on inscriptions even under the later emperors. These genitives, however, have now been proved to be Greek rather than Latin forms,<sup>1</sup> and even if it were otherwise, they could never be treated as the original forms from which the ordinary genitive in *ai* and *ae* had sprung. The final *s* in Latin is no doubt liable to be dropt; but, as far as I know at present, only after short vowels.<sup>2</sup> Thus we find *o* instead of *us*, *amare* instead of *amaris*, *pote* instead of *potis*; but we never find

<sup>1</sup> Corssen, *Aussprache*, 2nd ed. vol. i. p. 686.

<sup>2</sup> I cannot accept the explanation proposed by my learned friend, Professor Kuhn of Berlin, in his essay just published (1866), '*Ueber einige Genetiv und Dativ Bildungen.*' It seems to me to contravene three phonetic rules: 1. that no final *s* in Sanskrit is lost before a sord. consonant; 2. that no final *s* in Latin is lost after a long vowel; 3. that no medial *s* in Sanskrit is lost before *y*. The verb *ogáyate* does not invalidate the last rule, for its real base is *oga*, not *ogas*. See also *The Academy*, Jan. 1871, p. 103.

*mensi* in the dative, or *mensâ* in the accusative plural, instead of *mensis* and *mensâs*. The only other case where a final *s* is supposed to have been lost after a long vowel is in the nominative plural of the second declension, where forms such as *magistreis* occur in ancient Latin, by the side of *magistrî*. But it has never been proved that *magistrî* was a corruption of *magistris*. On the contrary, *magistrî* belongs to an earlier date than *magistrîs*,<sup>1</sup> and the latter is probably formed from a secondary base, *magistri*, instead of *magistro*, just as we find the base *acri* by the side of the base *acro*.<sup>2</sup>

We see thus by one instance how what grammarians call a genitive was formed by the same process of composition which we can watch in Chinese, and which we can prove to have taken place in the original language of the Aryas. And the same applies to the dative. If a boy is told that the dative expresses a relation of one object to another, less direct than that of the accusative, he may well wonder how such a flying arch could ever have been built up with the scanty materials which language has at her disposal; but he will be still more surprised if, after having realised this grammatical abstraction, he is told that in Greek, in order to convey the very definite idea of being in a place, he has to use after certain nouns the termination of the dative. 'I am staying at Salamis,' must be expressed by the dative *Salamînî*. If you ask why? comparative grammar again can alone give an answer. The termination of the Greek dative in *î* was likewise a local termination.

<sup>1</sup> Corssen, *Aussprache*, 2nd ed. vol. i. p. 753.    <sup>2</sup> *Ibid.* l. c. vol. i. p. 756.

The locative may well convey the meaning of the dative, but the faded features of the dative can never express the freshness and distinctness of the locative. The dative *Salaminē* was first a locative. 'I live at Salamis,' never conveyed the meaning, 'I live to Salamis.' On the contrary, the dative, in such phrases as 'I give it to the father,' was originally a locative, and after expressing at first the palpable relation of 'I give it unto the father,' or 'I place it on or in the father,' it gradually assumed the more general, and less local, less coloured aspect which logicians and grammarians ascribe to their datives.

If the explanation just given of some of the cases in Greek and Latin should seem too artificial or too forced, we should remember that there are languages which have one case only and that a locative.

The Algonquins, for instance, admit but one case which expresses locality.<sup>1</sup> The Shambhalas have one case-termination only, namely, *i*, which expresses in, at, or near.<sup>2</sup> But we can see exactly the same process much nearer home and repeated under our own eyes. The most abstract relations of the genitive, as, for instance, 'the immortality of the soul' (*l'immortalité de l'âme*); or of the dative, as, for instance, 'I trust myself to God' (*je me fie à Dieu*), are expressed by prepositions, such as *de* and *ad*, which in Latin had the distinct local meanings of 'down from' and 'towards.' Nay, the English *of* and *to*, which have taken the place of the German terminations *s* and *m*.

<sup>1</sup> *Du Ponceau*, p. 158.

<sup>2</sup> *Collections for a Handbook of the Shambhala Language*, p. 3, Zambibar, 1867.



are likewise prepositions of an originally local character. The only difference between our cases and those of the ancient languages consists in this, that the determining element is now placed before the word, whereas, in the original language of the Aryas, it was placed at the end.

It is generally supposed that the nominative and accusative cases differ from the rest, and it is well known that by the Greeks the nominative was not looked upon as a case at all. Yet, if the nominative has a termination of its own, say the masculine *s*, that too was originally local or demonstrative. It started from the local concept of *here*, or *this*, while the accusative expressed at first the local relation of *thither*. To strike a tree was originally to strike towards a tree, just as to go to Rome, *Romam eo*, was, I move towards Rome.

#### Verbal Terminations.

What applies to the cases of nouns, applies with equal truth to the terminations of verbs. It may seem difficult to discover in the personal terminations of Greek and Latin the exact pronouns which were added to a verbal base in order to express *I love*, *thou lovest*, *he loves*; but it stands to reason that originally these terminations must have been the same in all languages—namely, personal pronouns. We may be puzzled by the terminations of *thou lovest* and *he loves*, where *st* and *s* can hardly be identified with the modern *thou* and *he*; but we have only to place all the Aryan dialects together, and we shall see at once that they point back to an original set

of terminations which can easily be brought to tell their own story.

**Yes'r and Yes'm.**

Let us begin with quite modern formations, because we have here more daylight for watching the intricate and sometimes wayward movements of language; or better still, let us begin with an imaginary case, or with what may be called the language of the future, in order to see quite clearly how what we should call grammatical forms may arise. Let us suppose that the slaves in America were to rise against their masters, and, after gaining some victories, were to sail back in large numbers to some part of Central Africa, beyond the reach of their white enemies or friends. Let us suppose these men availing themselves of the lessons they had learnt in their captivity, and gradually working out a civilisation of their own. It is quite possible that, some centuries hence, a new Livingstone might find among the descendants of the American slaves, a language, a literature, laws, and manners, bearing a striking similitude to those of his own country. What an interesting problem for any future historian and ethnologist! Yet there are problems in the past history of the world of equal interest, which have been and are still to be solved by the student of language.

I believe that a careful examination of the language of the descendants of those escaped slaves would suffice to determine with perfect certainty their past history, even though no documents and no tradition had preserved the story of their captivity and liberation. At first, no doubt, the threads might

seem hopelessly entangled. A missionary might surprise the scholars of Europe by an account of a new African language. He might describe it at first as very imperfect—as a language, for instance, so poor that the same word had to be used to express the most heterogeneous ideas. He might point out how the same sound, without any change of accent, meant *true*, a *ceremony*, a *workman*, and was used also as a verb in the sense of literary composition. All these, he might say, are expressed in that strange dialect by the sound *rait* (right, rite, wright, write). He might likewise observe that this dialect, in this respect, as poor almost as Chinese, had hardly any grammatical inflections, and that it had no genders, except in a few words such as man-of-war and a railway-engine, which were both conceived as feminine beings, and spoken of as *she*. He might then mention an even more extraordinary feature, namely, that although this language had no terminations for the masculine and feminine genders of nouns, it employed a masculine and feminine termination after the affirmative particle, according as it was addressed to a lady or a gentleman. Their affirmative particle being the same as the English *Yes*, they added a final *r* to it, when addressed to a man, and a final *m*, when addressed to a lady: that is to say, instead of simply saying *Yes*, these descendants of the escaped American slaves said *Yesr* to a man, and *Yesm* to a lady.

Absurd as this may sound, I can assure you that the descriptions which are given of the dialects of savage tribes, as explained for the first time by travellers or missionaries, are often even more extra-

ordinary. But let us consider now what the student of language would have to do, if such forms as *Yes'r* and *Yes'm* were, for the first time, brought under his notice. He would first have to trace them back historically, as far as possible, to their more original types, and if he discovered their connection with *Yes Sir* and *Yes Ma'ni*, he would point out how such contractions were most likely to spring up in a vulgar dialect. After having traced back the *Yesr* and *Yesm* of the free African negroes to the idiom of their former American masters, the etymologist would next inquire how such phrases as *Yes Sir* and *Yes Madam* came to be used on the American continent.

Finding nothing analogous in the dialects of the aboriginal inhabitants of America, he would be led, by a mere comparison of words, to the languages of Europe, and here again, first to the language of England. Even if no historical documents had been preserved, the documents of language would show that the white masters whose language the ancestors of the free Africans adopted during their servitude, came originally from England, and, within certain limits, it would even be possible to fix the time when the English language was first transplanted to America. That language must have passed at least the age of Chaucer before it migrated to the New World. For Chaucer has two affirmative particles, *Yea* and *Yes*, and he distinguishes between the two. He uses *Yes* only in answer to negative questions. For instance, in answer to 'Does he not go?' he would say *Yes*. In all other cases Chaucer uses *Yea*.

To a question, 'Does he go?' he would answer *Yea*. He observes the same distinction between *No* and *Nay*, the former being used after negative, the latter after all other questions. This distinction became obsolete soon after Sir Thomas More,<sup>1</sup> and it must have become obsolete before phrases such as *Yes Sir* and *Yes Madam* could have assumed their stereotyped character.

But there is still more historical information to be gained from these phrases. The word *Yea* is Anglo-Saxon, the same as the German *Ja*, and it therefore reveals the fact that the white masters of the American slaves who crossed the Atlantic after the time of Chaucer, had crossed the Channel at a still earlier period, after leaving the continental fatherland of the Angles and Saxons. The words *Sir* and *Madam* tell us still more. They are Norman words, and they could only have been imposed on the Anglo-Saxons of Britain by Norman conquerors. They tell us more than this. For these Normans or Northmen spoke originally a Teutonic dialect, closely allied to Anglo-Saxon, and in that dialect words such as *Sir* and *Madam* could never have sprung up. We may conclude, therefore, that, previous to the Norman conquest, the Teutonic Northmen must have made a sufficiently long stay in one of the Roman provinces to forget their own and adopt the language of the Roman provincials.

We may now trace back the Norman *Madam* to the French *Madame*, and we recognise in this a corruption of the Latin *Mea domina*, my mistress.

<sup>1</sup> Marsh, *Lectures*, p 579.

*Domina* was changed into *domna*, *donna*, and *dame*; and the same word *dame* was also used as a masculine in the sense of lord, as a corruption of *domino*, *domno*, and *donno*. The temporal lord ruling as ecclesiastical seigneur under the bishop, was called a *vidame*, as the vidame of Chartres, &c. The French interjection *Dame!* has no connection with a similar exclamation in English, but it simply means Lord! *Dame-Dieu* in Old French is Lord God.<sup>1</sup> A derivative of *Domina*, mistress, was *dominicella*, which became *Demoiselle* and *Damsel*. The masculine *Dame* for *Domino*, Lord, was afterwards replaced by the Latin *Senior*, a translation possibly of the German *elder*. This word *elder* was a title of honour, as we see in *alderman* and in the Anglo-Saxon *ealdor*. The title *Senior*, meaning originally *elder*, was but rarely<sup>2</sup> applied to ladies as a title of honour. *Senior(em)* was changed into *Seigneur*, *Seigneur* into *Sieur*. *Senior* (nom.) was contracted to *sendre*, which is found in the Oath of Strassburg (ninth century) as *Carlus meos sendra*. From this *sendre*, passing through *\*sindre*

<sup>1</sup> *Dame-Dieu* :—

‘Ja dame Dieus non vuelha Qu’en ma colpa sia’l departimens’  
(Que jamais le Seigneur Dieu ne veuille Qu’en ma fautesoit la séparation)  
(Anc. Franç) ‘Grandes miracles fit dames Dex par lui’ (*Roman de Garin*, Du Cange, tom ii col 16, 19.)—Raynouard, *Lexique*, s v. Don.

Le latin *dominus* était devenu en vieux-français *damne*, *dan*; mais c’est en catalan que ce mot atteignit les dernières limites de l’ecthipe, car il se réduisit à deux et même à une seule lettre. On disait tantôt *En*, tantôt *N*, avec un nom propre d’homme : *En Ramon*, *N Aymes*, *don Rasmon*, *don Aimes*. On dirait *Ena*, *Na*, de *dominu* avec un nom de femme. *Ena Maria*, *Na Isabella*, *dame Marie*, *dame Isabelle*.—Terrien Poncel, *Du Langage*, p 791, Chevallet, t ii. p. 161.

<sup>2</sup> In Old Portuguese, Diez mentions *senhor varuha*, *mia sennor formosa*, my beautiful mistress.

and \**sidre*, was derived *Sire*, unless we prefer, with Bartsch, to derive it direct from *se(n)ior*.

Thus we see how in two short phrases, such as *Yesr* and *Yesm*, long chapters of history might be read. If a general destruction of books, such as took place in China under the Emperor Thsin-chi-hoang-ti (213 B.C.), should sweep away all historical documents, language, even in its most depraved state, would preserve some of the secrets of the past, and would tell future generations of the home and migrations of their ancestors from the East to the West Indies.

#### East Indies and West Indies.

It may seem startling at first to find the same name, the *East Indies* and the *West Indies*, at the two extremities of the Aryan migrations; but these very names again are full of historical meaning. They tell us how the Teutonic race, the most vigorous and enterprising of all the members of the Aryan family, gave the name of *West Indies* to the country which, in their world-compassing migrations, they imagined to be India itself; how they discovered their mistake, and then distinguished between the East Indies and West Indies; how they planted new states in the west, and regenerated the effete kingdoms in the east; how they preached Christianity, and at last practised it by abolishing slavery of body and mind among the slaves of West Indian landholders, and the slaves of Brahmanical soulholders, until they greeted at last the very homes from which the Aryan family had started, when setting out on their discovery of the world. All this, and even more, may be read in

the vast archives of language. The very name of India has a story to tell, for India is not a native name. We have it from the Romans, the Romans from the Greeks, the Greeks from the Persians. And why from the Persians? Because it is only in Persian that an initial *s* is changed into *h*, which initial *h* was, as usual, dropped in Greek. It is only in Persian that the country of the Sindhu (sindhu is the Sanskrit name for *river*), or of the *seven* sindhus, could have been called *Hindia* or *India*, instead of *Sindia*. Unless the followers of Zoroaster had pronounced every *s* like *h*, we should never have heard of the West Indies!

#### Grammatical Terminations.

We have thus seen by an imaginary instance what we must be prepared for in the growth of language, and we shall arrive at exactly the same result, if we analyse real grammatical forms such as we find them in ancient languages. The *s*, for instance, of the third person singular, he loves, can be proved to have been the demonstrative pronoun of the third person. The termination of the third person singular of the present is *ti* in Sanskrit. Thus *dâ*, to give, becomes *dadâti*, he gives: *dhâ*, to place; *dadhâti*, he places.

In Greek this *ti* is changed into *si*; just as the Sanskrit *tvam*, the Latin *tu*, thou, appears in Greek as *sy*. Thus Greek *didōsi* corresponds to Sanskrit *dadâti*; *tithēsi* to *dadhâti*. This intervocalic *s*, as it represents an original *t*, ought not to have been elided in Greek. But as there are many words in Greek in which, according to a general rule, an



original *s* between two vowels has been elided, the influence of analogy seems to have wrought the same change from *\*typteti*, *\*typtesi* to *typtei*, as from *\*genesi* to *geni*. Other scholars, however, admit a different kind of analogy for these new formations. The Latin drops the final *i*, and instead of *ti* has *t*. Thus we get *amat*, *dicit*.

Now there is a law, commonly called Grimm's Law. According to it every tenuis in Latin is in Gothic represented by its corresponding aspirate. Hence, instead of *t*, we should expect in Gothic *th*; and so we find indeed in Gothic *habairþ*, instead of Latin *habet*. This aspirate likewise appears in Anglo-Saxon, where *he loves* is *lufath*. It is preserved in the Biblical *he loveth*, and it is only in modern English that it gradually sank down to *s*. In the *s* of *he loves*, therefore, we have a demonstrative root, added to the predicative root *love*, and this *s* is originally the same as the Sanskrit *ti*. This *ti* again must be traced back to the demonstrative root *ta*, this or there, which exists in the Sanskrit demonstrative pronoun *tad*, the Greek *to*, the Gothic *thata*, the English *that*; and which in Latin we can trace in *talis*, *tantus*, *tunc*, *tam*, and even in *tamen*, an old locative in *men*.

We have thus seen that what we call the third person singular of the present is in reality a simple compound of a predicative root with a demonstrative root. It is a compound like any other, only that the second part is not predicative, but simply demonstrative. As in *pay-master* we predicate *pay* of *master*, meaning a person whose office it is to *pay*,

so in *dadâ-ti*, *give-he*, the ancient framers of language simply predicated giving of some third person, and this synthetic proposition, *give-he*, is the same as what we now call the third person singular in the indicative mood of the present tense in the active voice.

We shall now better understand why it must be laid down as a fundamental principle in Comparative Grammar to look upon nothing in language as merely formal, till every attempt has been made to trace the formal elements of language back to their original and substantial prototypes. We are accustomed to the idea of grammatical terminations modifying the meaning of words. But words can be modified by words only, and though in the present state of our science it would be too much to say that all grammatical terminations have been traced back to original independent words, so many of them have, even in cases where only a single letter was left, that we may well lay it down as a rule that all formal elements of language were originally substantial. Suppose English had never been written down before the times of Piers Ploughman. What should we make of such a form as *nadistou*,<sup>1</sup> instead of *ne hadst thou*? *Ne rechi*, instead of *I reckon not*? *Al ô'm* in Dorsetshire is *all of them*. *I midden*, is *I may not*; *I cooden*. *I could not*. Yet the changes which Sanskrit had undergone before it was reduced to writing, may have been more considerable by far than what we see in these dialects.<sup>2</sup>

<sup>1</sup> Marsh, *Lectures*, p. 387. Barnes, *Poems in Dorsetshire Dialect*.

<sup>2</sup> In Anglo-Saxon we find *nât* for *ne wât*, I do not know; *nist* for he

## The Romanic Future.

Let us now look to modern classical languages such as French and Italian. Most of their grammatical terminations are the same as in Latin, only changed by phonetic corruption. Thus *j'aime* is *ego amo*; *tu'aimes, tu amas*; *il aime, ille amat*. There was originally a final *t* in French *il aime*, and it comes out again in such phrases as *aime-t-il?* Thus the French imperfect corresponds to the Latin imperfect, the *parfait défini* to the Latin perfect. But what about the French future? There is no similarity between *amabo* and *j'aimerai*. Here then we have a new grammatical form, sprung up, as it were, within the recollection of men; or, at least, in the broad daylight of history. Now did the termination *rai* bud forth like a blossom in spring? or did some wise people meet together to invent this new termination, and pledge themselves to use it instead of the old termination *bo*? Certainly not. We see first of all that in all the Romance languages the terminations of the future are identical with the auxiliary verb *to have*<sup>1</sup> In French you find—

<i>j'ai</i>	and	<i>je chanter-ai</i>	<i>nous avons</i>	and	<i>nous chanterons</i>
<i>tu as</i>	„	<i>tu chanter-as</i>	<i>vous avez</i>	„	<i>vous chanterez</i>
<i>il a</i>	„	<i>il chanter-a</i>	<i>ils ont</i>	„	<i>ils chanteront.</i>

But besides this, we actually find in Spanish and Provençal the apparent termination of the future used as an independent word and not yet joined to

did not know; *nston* for they did not know; *nolde, nold est*, for I would not, thou wouldst not; *nyle* for I will not, *nabbe* for I have not; *næfth* for he has not; *næron* for they were not, &c.

<sup>1</sup> M M, *Survey of Languages*, p. 21.

the infinitive. We find in Spanish, instead of 'lo haré,' I shall do it, the more primitive form *hacer lo he*, i.e. *facere id habeo*. We find in Provençal *dir vos ai* instead of *je vous dirai*; *dir vos em* instead of *nous vous dirons*. There can be no doubt, therefore, that the Romance future was originally a compound of the auxiliary verb *to have* with an infinitive; and *I have to say* easily took the meaning of *I shall say*.<sup>1</sup>

Here, then, we see clearly how grammatical forms arise. An ordinary Frenchman looks upon his futures as merely grammatical forms. He has no idea, unless he is a scholar, that the terminations of his futures are identical with the auxiliary verb *avoir*. The Roman too had no suspicion that *amabo* was a compound; but it can now be proved to contain an auxiliary verb as clearly as the French future. The Latin future was destroyed by means of phonetic corruption. When the final letters lost their distinct pronunciation it became impossible to keep the imperfect *amabam* separate from the future *amabo*. The future was then replaced by dialectical regeneration, for the use of *habeo* with an infinitive is found in Latin, in such expressions as *habeo dicere*, I have to say, which would imperceptibly glide into I shall say.<sup>2</sup> In fact, wherever we look, we see that the future is expressed by means of composition. We

<sup>1</sup> The first, as far as I know, who thus explained the origin of the Romance future was *Castelietto* in his *Correttione* (Basilea, 1577). He says: 'C'ò è con lo 'nfinito del verbo, e col presente del verbo Ho, come Amare Ho, Amare Hai, Amare Ha. Leggere Ho, Leggere Hai, Leggere Ha, e così gli altri.' p. 111.

<sup>2</sup> Fuchs, *Romanische Sprachen*, s. 344.

have in English *I shall* and *thou wilt*, which mean originally *I am bound* and *thou intendest*. In German we use *werden*, the Gothic *vairthan*, which means originally to go, to turn towards. In modern Greek we find *thelō*, I will, in *thelō dōsein*, I shall give. In Roumansch we meet with *vegnir*, to come, forming the future *veng a vegnir*, I shall come; whereas in French *je viens de dire*, I come from saying, is equivalent to 'I have just said.' The French *je vais dire* is almost a future, though originally it is *vado dicere*, I go to say. The Dorsetshire, 'I be gwain to goo a-pickèn stuones,' is another case in point. Nor is there any doubt that in the Latin *bo* of *amaibo* we have the old auxiliary *bhā*, to become; and in the Greek future in *σω*, the old auxiliary *as*, to be.<sup>1</sup>

<sup>1</sup> The Greek term for the future is *δ μέλλον*, and *μέλλω* is used as an auxiliary verb to form certain futures in Greek. It has various meanings, but they can all be traced back to the Sanskrit *man* (manyate), to think. As *anya*, other, stands by the side of *ἄλλος*, so *manye*, I think, by the side of *μέλλω*. *Il* ii. 39: *θήσειν ἔτ' ἔμελλεν ἐπ' ἀλγέα τε στοναχάς τε Τρωσὶ τε καὶ Δαναοῖσι*, 'he still thought to lay sufferings on Trojans and Greeks' *Il*. xxiii. 514. *μέλλεις ἀφαιρήσεσθαι ἀέθλον*, 'thou thinkest thou wouldst have stripped me of the prize' *Od* xiii. 293 *οὐκ ἄρ' ἔμελλες λήξειν*, 'did you not think of stopping?' i e were you not going to stop? Or again in such phrases as *Il* ii. 36, *τὰ οὐ τελέσσομαι ἔμελλον*, 'these things were not meant to be accomplished,' literally, these things did not mean to be accomplished. Thus *μέλλω* was used of things that were likely to be, as if these things themselves meant or intended to be or not to be; and, the original meaning being forgotten, *μέλλω* came to be a mere auxiliary expressing probability. *Μέλλω* and *μέλλομαι*, in the sense of 'to hesitate,' are equally explained by the Sanskrit *man*, to think or consider. In Old Norse the future is likewise formed by *muia*, to mean. It is perfectly true that *ny* is not changed to *ll*, but that *an* and *al* are parallel pronominal elements, is shown by Sk. *anyonya*, Gr. *ἀλλήλων*. On *l* representing *n*, see Curtius, p. 150

## The Teutonic Weak Preterite.

We now go back another step, and ask the question which we asked many times before, How can a mere *d* produce so momentous a change as that from *I love* to *I loved*? As we have learnt in the meantime that English goes back to Anglo-Saxon, and is closely related to continental Saxon and Gothic, we look at once to the Gothic imperfect in order to see whether it has preserved any traces of the original compound; for, after what we have seen in the previous cases, we are no doubt prepared to find here, too, grammatical terminations as mere remnants of independent words.

In Gothic there is a verb *nasjan*, to nourish. Its preterite is as follows:—

Singular	Dual	Plural
nas-i-da	nas-i-dêdu	nas-i-dêdum
nas-i-dês	nas-i-dêduts	nas-i-dêduþ
nas-i-da	—	nas-i-dêdun

The subjunctive of the preterite :

nas-i-dêdjau	nas-i-dêdeiva	nas-i-dêdeima
nas-i-dêdeis	nas-i-dêdeits	nas-i-dêdeip
nas-i-dêdi	—	nas-i-dêdeina

This is reduced in Anglo-Saxon to

Singular	Plural
ner-e-de	ner-e-don
ner-e-des(t)	ner-e-don
ner-e-de	ner-e-don

Subjunctive :

ner-e-de	ner-e-den
ner-e-de	ner-e-den

Let us now look to the auxiliary verb *to do*, in Anglo-Saxon:

Singular	Plural
dyde	dydon
dydes(t)	dydon
dyde	dydon

If we had only the Anglo-Saxon preterite *nerede* and the Anglo-Saxon *dyde*, the identity of the *de* in *nerede* with *dyde* would not be very apparent. But here you will perceive the advantage which Gothic has over all other Teutonic dialects for the purposes of grammatical comparison and analysis. It is in Gothic, and in Gothic in the plural only, that the full terminations *dédum*, *dédup*, *dédun* have been preserved. In the Gothic singular *nasida*, *nasidés*, *nasida* represent an original, though perhaps never realised, *\*nasideda*, *\*nasidedés*, *\*nasideda*. The same has taken place in Anglo-Saxon, not only in the singular, but in the plural also. Yet such is the similarity between Gothic and Anglo-Saxon that we cannot doubt their preterites having been formed on the same last. If there be any truth in inductive reasoning, there must have been an original Anglo-Saxon preterite:<sup>1</sup>

Singular	Plural
ner-e-dyde	ner-e-dydon
ner-e-dydest	ner-e-dydon
ner-e-dyde	ner-e-dydon

And if *ner-e-dyde* dwindled down to *nerede*, *nerede* could, in modern English, become *nered*. The *d* of the preterite, therefore, which changes *I love* into *I*

<sup>1</sup> Bopp, *Comparative Grammar*, § 620. Grimm, *German Grammar*, ii. 845.

*loved* is originally the auxiliary verb *to do*, and *I loved* is the same as *I love did*, or *I did love*. In English dialects—as, for instance, in the Dorset dialect—every preterite, if it expresses a lasting or repeated action, is formed by *I did*,<sup>1</sup> and a distinction is thus established between ‘*e died eesterdae*,’ and ‘*the vo’ke did die by scores*’; though originally *died* is the same as *die did*. In the spoken Flemish, as Mr. G. Gezelle informs me, the ordinary preterite is *Ik hoorde*, *Gy hordet*. *Hy hoorde*, *Wy hoorden*, *Gy hoordet*, *Zy hoorden*. But the common people frequently use *Ik hoordede* and *Ik hoordege*, *Wy hoordeden* and *Wy hoordegen*, *Gy hoordedet* and *Gy hoordegen*, *Zy hoordeden* and *Zy hoordejen*. *I did* is expressed in the same dialect by *Ik dede* and *Ik dege*.

It might be asked, however, very properly, how *did* itself, or the Anglo-Saxon *dide*, was formed, and how it received the meaning of a preterite. In *dide* the final *de* is not a termination, but it is the root, and the first syllable *di* is the reduplication of the root. All preterites of old, or, as they are called, strong verbs, were formed as in Greek and Sanskrit by means of reduplication, reduplication being one of the principal means by which roots were invested with a verbal character.<sup>2</sup> The root *dō* in Anglo-Saxon is the same as the root *thē* in *tithēmi* in Greek, and the Sanskrit root *dhâ* in *dadhâmi*. Anglo-Saxon *dyde* would therefore correspond to Sanskrit *dadhe*, I placed, I made, I did.

This explanation, which at the time when Bopp

<sup>1</sup> Barnes, *Dorsetshire Dialect*, p. 39

<sup>2</sup> See M. M.'s *Letter on the Turanian Languages*, pp. 44, 46.



proposed it, seemed so self-evident, has since been called in question, but nothing better has as yet been suggested in its place. I quite admit the difficulty applying to weak preterites such as *mah-ta*, *kun-thu*, *wis-sa*, &c., which point to an original *t*, not *dh*. But I do not see the same difficulty with regard to preterites such as *nasida*. It was Begemann who in 1873 (*Das schwache Praeteritum der germanischen Sprachen*) and again in 1874 (*Zur Bedeutung des schwachen Praeteritums*) called attention to this difficulty. Windisch adopted the same view (Kuhn's *Beitriige*, 1876), and Moller defended it more strongly still (Kolbing's *Englische Studien*, 1880). Still, Paul was not convinced by their arguments (Paul und Braune, *Beiträge*, 1880, p. 136), and Möller had once more to defend his position (*ibid.*, p. 457). That position, in its negative character, is no doubt a strong one, but it is weak in its positive suggestions. To derive, as Begemann suggested, the weak preterites from the participle in *t*, such as *mah-t-s* in Gothic, is without any analogy. To take the *t* for a secondary verbal suffix, as in *κρῦπ-τω*, *plec-to*, O. H. G. *fleh-t-an*, is impossible, because that *t* is permanent, and does not mark the preterite. We may leave the question an open one, but it will require stronger arguments than any which have been hitherto produced before we can admit that Gothic forms such as *nas-i-dédum*, *nas-i-dédup*, *nas-i-dédun* have not been produced under the influence of *\*dédum*, *\*dédup*, *\*dédun*, we did, you did, they did.<sup>1</sup>

<sup>1</sup> The whole question has been fully treated by T. Le Marchant Douse, *Introduction to the Gothic of Ulfilas*, 1886, § 81. He is not

In this manner a considerable portion of the grammatical framework of the Aryan or Indo-European languages has been traced back to original independent words, and even the slightest changes which at first sight seem so mysterious, such as *foot* into *feet*, or *I find* into *I found*, have been fully accounted for. This is what is called comparative grammar, or a scientific analysis of all the formal elements of a language, preceded by a comparison of all the varieties which one and the same form has assumed in the numerous dialects of the Aryan family. The most important dialects for this purpose are Sanskrit, Greek, Latin, and Gothic; but in many cases Zend, or Celtic, or Slavonic dialects come in to throw an unexpected light on forms unintelligible in any of the four principal dialects. The result of such a work as Bopp's *Comparative Grammar* of the Aryan languages may be summed up in a few words. The general framework of grammar, the elements of derivation, declension, and conjugation, had become settled before the separation of the Aryan family. Hence the broad outlines of grammar in Sanskrit, Greek, Latin, Gothic, and the rest, are in reality the same. and the apparent differences can be explained either by dialectic growth, or by phonetic corruption, which is determined by the phonetic peculiarities of each nation. After the grammatical terminations of all these languages have been traced back to their most primitive

prepared to give up the composition theory as recently modified. Collitz, in the *American Journal of Philology*, 1888, vol. ix No. 1, inclines towards the participial theory. The chief difficulty lies in the terminations of the singular, where *daþ*, *dast*, *daþ* would be expected, representing an original *daidd*, *daiddst*, *daidd*. See Douse, pp. 186, 187.

forms, it is possible, in many instances, to determine their original meaning.

We need not say that *mi* and *mas*, *ti* or *nti*, are directly derived from *mad* or *tad*, but that they are parallel forms of their pronominal stems cannot be doubted. In many cases, no doubt, we can only guess, but the sphere of our guesses is closely limited. The period during which, as in the Provençal *dir vos ai*, the component elements of the old Aryan grammar maintained a separate existence in the language and the mind of the Aryas, had closed long before Sanskrit was Sanskrit or Greek Greek. That, however, there was such a period, we can doubt as little as we can doubt the real existence of fern forests previous to the formation of our coal fields.

#### Aryan Civilisation.

We can even go a step further. Suppose we had no remnants of Latin; suppose the very existence of Rome and of Latin were unknown to us; we might still prove, on the evidence of the six Romanic dialects, that there must have been a time when these dialects formed the language of a small settlement; nay, by collecting the words which all these dialects share in common, we might to a certain extent reconstruct the original language, and draw a sketch of the state of civilisation, as reflected by these common words. The same can be done if we compare Sanskrit, Greek, Latin, Gothic, Celtic, and Slavonic. The words which have as nearly as possible the same form and meaning in all the languages must have existed

before the people, who afterwards formed the prominent nationalities of the Aryan family, separated; and, if carefully interpreted, they, too, will serve as evidence as to the state of civilisation attained by the Aryas before they left their common home. It can be proved by the evidence of language, that before their separation the Aryas led the life of agricultural nomads—a life such as Tacitus describes that of the ancient Germans. They knew the arts of ploughing, of making roads, of building ships, of weaving and sewing, of erecting houses; they had counted at least as far as one hundred. They had domesticated the most important animals, the cow, the horse, the sheep, the dog; they were acquainted with the most useful metals, and armed with hatchets, whether for peaceful or warlike purposes. They had recognised the bonds of blood and the laws of marriage; they followed their leaders and kings, and the distinction between right and wrong was fixed by customs and laws. They were impressed with the idea of a Divine Being, invoked by various names. All this, as I said, can be proved by the evidence of language. For if you find that languages like Greek, Latin, Gothic, Celtic, or Slavonic, which, after their first separation, could have had but little contact with Sanskrit, have the same word, for instance, for metal which exists in Sanskrit, this is proof absolute that some kind of metal was wrought previous to the Aryan separation. Now, metal or ore is *ais* in Gothic, *ær* in Anglo-Saxon, *æs* in Latin, and *áyas* in Sanskrit, a word which, as it could not have been borrowed by the Indians from the Germans or by the Germans from the Indians, must

have existed previous to their separation. We could not find the same name for house in Sanskrit, Greek, Latin, Slavonic, and Celtic,<sup>1</sup> unless houses had been known before the separation of these dialects. In this manner a history of Aryan civilisation has been written from the archives of language, stretching back to times far beyond the reach of any documentary history.<sup>2</sup>

**Horne Tooke.**

It is true, no doubt, that we owe this insight into the true nature of language chiefly to the study of Comparative Philology, such as it has been carried on since the discovery of Sanskrit. But the conviction that all which is now purely formal in language was originally material, that terminations had not always been terminations, but were originally independent words, that the wonderful edifice of language was built up in fact with a limited number of stones—all this had been seen by philosophers who knew nothing of Sanskrit. However wild some of his speculations may appear to us now, the true nature of grammatical elements was clearly perceived by Horne Tooke in his *Diversions of Purley*, first published in 1786. This is what he wrote of terminations:<sup>3</sup>—

‘For though I think I have good reasons to believe that all terminations may likewise be traced to their respective origin; and that, however artificial they may now appear to us, they were not originally the effect of premeditated and deliberate *art*, but separate

<sup>1</sup> Sansk. *dama*; Greek, *δῶμος*; Lat *domus*; Slav. *domu*; Celt. *daimh*.

<sup>2</sup> See M. M.'s *Essay on Comparative Mythology*, Oxford Essays, 1856, and *Biographies of Words*, 1888, pp. 128 seq.

<sup>3</sup> *Diversions of Purley*, p. 190.

words by length of time corrupted and coalescing with the words of which they are now considered as the terminations; yet this was less likely to be suspected by others. And if it had been suspected, they would have had much further to travel to their journey's end, and through a road much more embarrassed; as the corruption in those languages is of much longer standing than in ours, and more complex.'

When we have once seen how grammatical terminations are to be traced back in the beginning to independent words, we have learnt at the same time that the component elements of language, which remain in our crucible at the end of a complete grammatical analysis, are of two kinds, namely, *Roots predicative* and *Roots demonstrative*.

We call *root* or *radical* whatever in the words of any language or family of languages cannot be reduced to a simpler or more original form. We assert nothing more about these *residua*, we simply say, they are ultimate, and cannot be traced back to simpler elements. There have been long controversies as to whether these roots ever existed as actual words. The answer is simple enough. From a logical point of view, a root, as soon as it is used as a noun or a verb, can no longer be called a root, though phonetically the root may be identical with the noun. But from a purely historical point of view, there can be no doubt that there are roots which, as far as sound is concerned, remain perfectly unchanged when used as nouns.

There is another controversy, more especially with regard to Sanskrit roots, whether they should be represented as monosyllabic or as dissyllabic, whether

in their strong (Guna) or in their weak form. If we keep strictly to our definition that a root is what cannot be reduced to a simpler form, it follows that we must give, for instance, *GAN*, not *GANA*, as the root meaning to beget. We might, no doubt, go a step further, and give *GN* as the last residue of our analysis, but the objection to this is that *GN* would be no longer pronounceable. For the same reason it seems preferable to give *BUDH* ( $\pi\nu\theta$ ) as the root, not *BEUDH* or *BHEUDH* ( $\pi\varepsilon\nu\theta$ ), because the *e* of *Guna* can be accounted for and removed without destroying the character of the root.

Still, these questions are of small moment, and may be settled according to the taste of different scholars. What is of importance is that we should see that these so-called roots, the *residua* of our grammatical analysis, are vital elements, and permeate the whole body of language.

This may be shown, either by tracing back a number of words in Sanskrit, Greek, and Latin to their common root, or by taking a root, after it has once been discovered, and following it through its wanderings from language to language. The latter course is perhaps the more useful, as placing before our eyes the actual growth of an Aryan root.

#### The Root *AR*.

This root *AR*<sup>1</sup> means to *plough*, to stir the soil. From it we have the Latin *ar-are*, the Greek *ar-oun*, the Irish *ar*, the Lithuanian *ar-ti*, the Russian *ora-ti*,

<sup>1</sup> *AR* might be identified with the Sanskrit root *ar*, to go (Pott, *Etymologische Forschungen*, i 218); but for our present purposes the root *AR*, to stir, is sufficient.

the Gothic *ar-jan*, the Anglo-Saxon *er-ian*, the modern English *to ear*. Shakespeare says (Richard II. III. 2), 'to ear the land that has some hope to grow.' We read in Deut. xxi. 4, 'a rough valley which is neither eared nor sown.'

From this we have the name of the plough, or the instrument of earing: in Latin, *ara-trum*; in Greek, *aro-tron*; in Bohemian, *ora-dlo*; in Lithuanian, *arkla-s*; in Cornish, *aradar*; in Welsh, *arad*;<sup>1</sup> in Old Norse, *ardhr*. In Old Norse, however, *ardhr*, meaning originally the plough, came to mean earnings or wealth; the plough being, in early times, the most essential possession and means of livelihood. In the same manner the Latin name for money, *pecunia*, was derived from *pecus*, cattle; the word *fee*, which is now restricted to the payment made to a doctor or lawyer, was in Old English *feh*, and in Anglo-Saxon *feoh*, meaning cattle and wealth; for *feoh* and Gothic *faihu* are really the same word as the Latin *pecus*, the modern German *vieh*.

The act of ploughing is called *aratio* in Latin; *arosis* in Greek: and I believe that *aróma*, too, in the sense of perfume, had the same origin. To derive *aróma* from the root *ghrâ*, to smell, is difficult, because there are no parallel cases in which an initial *gh* is dropt in Greek and replaced by *a*. But *aróma* occurs not only in the sense of sweet herbs, but likewise in that of field-fruits in general, such as barley and others. The general meaning, therefore,

<sup>1</sup> If, as has been supposed, the Cornish and Welsh words were corruptions of the Latin *arâtrum*, they would have appeared as *areuder*, *arawd*, respectively



of the word may have become restricted, like that of *spices*, originally *espèces*, and herbs of the field or *arómata*, particularly those offered at sacrifices, may have assumed the sense of sweet herbs.<sup>1</sup>

A more primitive formation of the root *ar* seems to be the Greek *era*, earth, the Sanskrit *irâ* and *idâ*, the Old High-German *ero*, the Gaelic *ire*, *irionn*. It meant originally the ploughed land, afterwards earth in general. Even the word *earth*, the Gothic *airtha*,<sup>2</sup> the Anglo-Saxon *eortha*, must have been taken originally in the sense of ploughed or cultivated land. The derivative *ar-mentum*, formed like *ju-mentum*, would naturally have been applied to any animal fit for ploughing and other labour in the field, whether ox or horse.<sup>3</sup>

The Latin *arvus*, ploughed, and *arvum*, field, and the Greek *ἀρουρα* have been traced back by Benfey to the same root.<sup>4</sup> *Ar-vus* would be formed like *pak-va*,

<sup>1</sup> I retract a guess which I expressed in former editions that *aróma* may have meant originally the smell of a ploughed field. That the smell of a ploughed field was appreciated by the ancients may be seen from the words of Jacob (Genesis xxvii 27), 'the smell of my son is as the smell of a field which the Lord has blessed' But *arómata* meant clearly substances fast, before it assumed the modern sense of odour. See *Greek Thesaurus* by Stephanus, ed. Didot, s. v.

<sup>2</sup> Grimm remarks justly that *airtha* could not be derived from *arjan*, on account of the difference in the vowels. But *airtha* is a much more ancient formation, and comes from the root *ar*, which root, again, was originally *ri* or *ir* (Benfey, *Kurze Gr.* p 27). From this primitive root *ri* or *ir*, we must derive both the Sanskrit *irâ* or *idâ*, the Greek *ἐρα*- in *ἐραγε*, the O. H. G. *ero* and *er-ita*, and the Gothic *airtha*. The latter would correspond to the Sanskrit *rita*, i. e. *arta*. The true meaning of the Sanskrit *idâ* is earth. The Brahmins explain it as prayer, but this is not its original meaning.

<sup>3</sup> Corssen objects to this derivation in his *Kritische Beiträge*, p 241.

<sup>4</sup> *Augsburger Allgemeine Zeitung*, 27 Juli, 1875.

ripe, from *paḥ*, to cook. Another suffix *vara* (as in *pî-vara* by the side of *pî-van*) would give us *\*ar-varâ*, and this by the change of *va* into *ou*, as in *Varuna* and *Οὐρανός*, would give *ἀρουρα*. The Sanskrit *urvarâ*, field, shows change of *a* into *u*, as in *Varuna* for *Varana*.

As agriculture was the principal labour in that early state of society when we must suppose most of our Aryan words to have been formed and fixed in their definite meanings, we may well understand how a word which originally meant this special kind of labour was afterwards used to signify labour in general. The most natural tendency in the growth of words and of their meanings is from the special to the general. Thus *regere* and *gubernare*, which originally meant to steer a ship, took the general sense of governing. To *equip*, which originally was to furnish a ship (French *équiper* and *esquif*, from *schifo*, ship), came to mean furnishing in general. Now in modern German, *arbeit* means simply *labour*; *arbeitsam* means *industrious*. In Gothic, too, *arbeits* is only used to express labour and trouble in general. But in Old Norse, *erfiðr* means chiefly *ploughing*, and afterwards labour in general;<sup>1</sup> and the same word in Anglo-Saxon, *earfoth* or *earfethe*, is labour. Of course we might equally suppose that, as *labourer*, from meaning one who labours in general, came to take the special sense of an agricultural labourer, so *arbeit*, from meaning work in general, came to

<sup>1</sup> This statement rests on the authority of Bjorn Halldórsson's *Dictionary*, Icelandic and Latin, published by Rask, 1814. Dr. Vigfusson, s.v. *erfiði*, doubts the meaning of *ploughing*.

be applied, in Old Norse, to the work of ploughing. But as the root of *erfithi* is clearly *ar*, our first explanation is the more plausible. Besides, the simple *ar* in Old Norse means ploughing and labour, and the Old High-German *art* has likewise the sense of ploughing.<sup>1</sup>

And as ploughing was not only one of the earliest kinds of labour, but also one of the most primitive arts, I venture to go a step further, and to derive the Latin *ars* from the same root. Ploughing and cultivating the land was after all the oldest art, and not too mean in the eyes of the Greeks to prevent them from ascribing its invention to the goddess of all wisdom.

In Old High-German *arunti*, in Anglo-Saxon *ærende*, mean simply work; but they, too, must originally have meant the special work of agriculture; and in the English *errand*, and *errand-boy*, the same word is still in existence.

*Ar*, however, did not only mean to plough, or to cut open the land; it was transferred at a very early time to the ploughing of the sea, or rowing. Thus Shakespeare says:—

Make the sea serve them, which they *ear* and wound  
With keels

In Latin such expressions as *perarare aquas, sub-*

<sup>1</sup> Grimm derives *arbeit*, Gothic *arbeits*, Old High-German *arapeit*, Modern High-German *arbeit*, directly from the Gothic *arbja*, heir; but admits a relationship between *arbja* and the root *arjan*, to plough. He identifies *arbja* with the Slavonic *rab*, servant, slave, and *arbeit* with *rabota*, *corvée*, supposing that sons and heirs were the first natural slaves. He supposes even a relationship between *rabota* and the Latin *labor* (*German Dictionary*, s. v. *Arbeit*). If Gothic *arbi*, inherited

*care vada carina, sulcare undas* are well known. In French *sillonner la mer* and *faucher le grand pré* mean to row or to cut through the green sea.<sup>1</sup> They are expressions especially applied to galley-slaves.<sup>2</sup> In a similar manner we find that Sanskrit derives from *ar* the substantive *aritra*, not in the sense of a plough, but in the sense of a rudder. In Anglo-Saxon Professor Skeat compares *ār*, the oar, the ploughshare of the water; but this is doubtful. The Greeks, however, had used the root *ar* in the sense of rowing; for *eretēs*<sup>3</sup> in Greek is a rower, and their word *tri-ēr-ēs* meant originally a ship with three oars, or with three rows of oars,<sup>4</sup> a trireme.

This comparison of ploughing and rowing is of frequent occurrence in ancient languages. The English word *plough*, the Slavonic *ploug*, has been compared with the Sanskrit *plava*,<sup>5</sup> a ship, and with the Greek *ploion*, ship. As the Aryas spoke of a ship ploughing the sea, they also spoke of a plough sailing across the field; and thus it was that the same names were applied to both.<sup>6</sup> In English dialects, *plough* or

property, could be derived from a root meaning to plough, its original meaning would have been ploughed land, while *αιβια*, the heir, would have been meant for the son to whom the ploughed land descended by inheritance. But this is doubtful.

<sup>1</sup> Pott, *Studien zur Mythologie*, s. 321; Brinkmann, *Metaphrasen*, p. 188.

<sup>2</sup> *Gil Blas*, ii. 4.

<sup>3</sup> Latin *remus* (Old Irish *rám*) for *resmus*, connected with *ἐρημός*. From *ἐρέτης* comes *ἐρέσσω*; and *ὑπηρέτης*, servant, helper; *rostium* from *rodere*.

<sup>4</sup> Cf Eur. *Heo* 455, *κῶπη ἀλιήρης*. *Ἀμφήρης* means having oars on both sides.

<sup>5</sup> From Sanskrit *plu*, *πλέω*: cf. fleet and float.

<sup>6</sup> Other similes *ἄνις* and *ἄννις*, ploughshare, derived by Plutarch from *ἄς*, boar. *Quæst. Conv.* iv. 5, 2, *τὴν δὲ ἄν ἀποχρηστῆσαι καὶ τιμᾶσθαι*

*plow* is still used in the general sense of wagon or conveyance.<sup>1</sup>

We might follow the offshoots of this root *ar* still further, but the number of words which we have examined in various languages will suffice to show what is meant by a root and its ramifications. In all those words *ar* is the radical element, all the rest is merely formative. The root *ar* is called a predicative root, because, in whatever composition it enters, it predicates one and the same conception, whether of the plough, or the rudder, or the ox, or the field. Even in such a word as *artistic*, the predicative power of the root *ar* may still be perceived, though, of course, as it were by means of a powerful telescope only. The Brahmans, who call themselves *ârya* in India, were no more aware of the real origin of this name

λέγουσι πρώτη γὰρ σχίσασα τῷ προὔχοντι τῆς ὀρυχῆς, ὡς φασι, τὴν γῆν, ἔχνος ἀρόσεως ἔθηκε, καὶ τὸ τῆς ὕνεως ὑψηγῆσατο ἔργον ὅθεν καὶ τοῦνομα γενέσθαι τῷ ἐργαλείῳ λέγουσι ἀπὸ τῆς ὕς. A plough is said to be called a pig's nose. The Latin *porca*, a ridge between two furrows, is derived from *porcus*, hog, and the German *furicha*, furrow, is connected with *farah*, boar. *Imporcitor* was an Italian deity presiding over the drawing of furrows. *Fab Pictor ap. Serv. Verg. G. i. 21*, 'imporcitor qui porcas in agro facit arando' The Sanskrit *vrika*, wolf, from *vras̥k*, to tear, is used for plough (*Rig-veda i. 117, 21*). The Sanskrit *protham* and *pótram* mean both the snout of boar and a ploughshare, see *Pân. iii. 2, 183*, *halasûkarayoh puvaḥ*. *Godarana*, earth-tearer, is another word for plough in Sanskrit. Gothic *hoha*, plough = Sanskrit *koka*, wolf. See Grimm, *Deutsche Sprache*, and Kuhn, *Indische Studien*, vol. i. p. 321; M. M., *Hibbert Lectures*, p. 192

<sup>1</sup> In the Vale of Blackmore, a wagon is called *plough* or *plow*; and *sull* (Anglo-Saxon *syll*) is used for *aratrum* (*Barnes, Dorset Dialect*, p. 369). Plough does not occur in Anglo-Saxon writers; and Southern authors of the thirteenth and fourteenth centuries employ it only in compound terms, as plow-land, etc. In the Southern dialects the word for plough is *suol*, Anglo-Saxon *sulh*. See R. Morris, *Ayebite of Inwyt*, preface, p. lxxi.

and its connection with agricultural labour, than the artist who now speaks of *his art* as a divine inspiration suspects that the word which he uses was originally applicable only to so primitive an art as that of ploughing.

#### The Root SPAS.

We shall now examine another family of words, in order to see by what process the radical elements of words were first discovered.

Let us take the word *respectable*. It is a word of Latin, not of Saxon origin. In *respectabilis* we easily distinguish the verb *respecta-re* and the termination *bilis*. We then separate the prefix *re*, which leaves *spectare*, and we trace *spectare* as a participial formation back to the Latin verb *specere* or *spicere*, meaning to see, to look. In *specere*, again, we distinguish between the changeable termination *ere* and the unchangeable remnant *spec*, which we call the root. This root we expect to find in Sanskrit and the other Aryan languages; and so we do. In Sanskrit the more usual form is *pas*, to see, without the *s*; but *spas* also is found in *spasa*, a spy; in *spashta* and *vi-spashta*, clear, manifest; and in the Vedic *spas*, a guardian. In the Teutonic family we find *spehōn* in Old High-German, meaning to look, to spy, to contemplate; and *spēha*, the English spy.<sup>1</sup> In Greek, the root *spek* has been changed into *skep*, which exists in *skeptomai*, I look, I examine: from whence *skeptikos*, an examiner or enquirer; in theo-

<sup>1</sup> Pott, *Etymologische Forschungen*, s. 267; Benfey, *Griechisches Wurzelwörterbuch*, s. 236.

logical language, a sceptic ; and *episkopos*, an overseer, in ecclesiastical language, a bishop.

Let us now examine the various ramifications of this root. Beginning with *respectable*, we found that it originally meant a person who deserves *respect*, *respect* meaning *looking back*. We pass by common objects or persons without noticing them, whereas we turn back to look again at those who deserve our admiration, our regard, our respect. This was the original meaning of *respect* and *respectable*; nor need we be surprised at this if we consider that *noble*, *nobilis* in Latin, conveyed originally no more than the idea of a person that deserves to be known; for *nobilis* stands for *gnobilis*, just as *nomen* stands for *gnomen*, or *natus* for *gnatus*.

'With respect to' has now become almost a mere preposition. For if we say, 'With respect to this point I have no more to say,' this is the same as, 'I have no more to say on this point.'

Again, as in looking back we single out a person, the adjective *respective*, and the adverb *respectively*, are used almost in the same sense as *special*, or *singly*.

The English *respite* is the Norman modification of *respectus*, the French *répît*. *Répît* meant originally looking back, reviewing the whole evidence. A criminal received so many days *ad respectum*, to re-examine the case. Afterwards it was said that the prisoner had received a respite, that is to say, had obtained a re-examination; and at last a verb was formed, and it was said that a person had been respited.

As *specere*, to see, with the preposition *re*, came to mean respect, so with the preposition *de*, down, it forms the Latin *despicere*, meaning to look down, the English *despise*. The French *dépit* (Old French *despit*) means no longer contempt, though it is the Latin *despectus*, but rather *anger*, *vexation*. *Se dépit* is, to be vexed, to fret. ‘*En dépit de lui*’ is originally ‘angry with him,’ then ‘in spite of him’; and the English *spite*, *in spite of*, *spiteful*, are mere abbreviations of *despite*, *in despite of*, *despiteful*, and have no more to do with the spitting of cats, than *souris* (*sorex*), mouse, has with *sourire* (*subridere*), to laugh.

As *de* means down from above, so *sub* means up from below, and this added to *specere*, to look, gives us *susplicere*, *susplicari*, to look up, in the sense of to suspect.<sup>1</sup> From it *suspicion*, *suspicious*; and likewise the French *soupçon*, even in such phrases as ‘There is a *soupçon* of chicory in this coffee,’ meaning just a touch, just the smallest atom of chicory.

As *circum* means round about, so *circumspect* means, of course, cautious, careful.

With *in*, meaning into, *specere* forms *inspicere*, to inspect, hence *inspector*, *inspection*.

With *ad*, towards, *specere* becomes *adspicere*, to look at a thing. Hence *adspetus*, the aspect, the look or appearance of things.

So with *pro*, forward, *specere* became *prospicere*;

<sup>1</sup> The Greek *ὑπόδρα*, askance, is derived from *ὑπό*, and *δρα*, which is connected with *δέρκομαι*, I see; the Sanskrit *dr̥ś*. In Sanskrit, however, the more primitive root *dr̥ś*, or *dar*, has likewise been preserved, and is of frequent occurrence, particularly if joined with the preposition *â*; *tad âdr̥śitya*, with respect to this.



and gave rise to such words as *prospectus*, as it were a look out, *prospective*, &c. With *con*, with, *spicere* forms *conspicere*, to see together, *conspicere*, *conspicuous*. We saw before in *respectable*, that a new word, *spectare*, is formed from the participle of *spicere*. This, with the preposition *ex*, out, gives us the Latin *expectare*, the English *to expect*, to look out; with its derivatives.

*Auspicious* is another word which contains our root as the second of its component elements. The Latin *auspicium* stands for *avispicium*, and meant the looking out for certain birds which were considered to be of good or bad omen to the success of any public or private act. Hence *auspicious* in the sense of lucky. *Haru-spea* was the name given to a person who foretold the future from the inspection of the entrails of animals.<sup>1</sup> We also have the feminine *haruspica*, formed like *vestispica*, a wardrobe-keeper.

Again, from *specere*. *speculum* was formed, in the sense of looking-glass, or any other means of looking at oneself; and from it *speculari*, the English *to speculate*, *speculative*, &c.

But there are many more offshoots of this one root. Thus, the Latin *speculum*, looking-glass, became *specchio* in Italian; and the same word, though in a roundabout way, came into French as the adjective *espègle*, waggish. The origin of this French word is curious. There exists in German a famous cycle of stories, mostly tricks played by a half-historical, half-mythical character of the name

<sup>1</sup> See *Chips from a German Workshop*, ii p 177.

of *Eulenspiegel*, or *Owl-glass*. These stories were translated into French, and the hero was known at first by the name of *Ulespiègle*, which name, contracted afterwards into *Espiègle*, became a general name for every wag.

As the French borrowed not only from Latin, but likewise from the Teutonic languages, we meet there, side by side with the derivatives of the Latin *specere*, the Old High-German *spehôn*, slightly disguised as *épièr*, to spy, the Italian *spiare*. The German word for a spy was *speha*, and this appears in Old French as *espie*, in Modern French as *espion*.

One of the most prolific branches of the same root is the Latin *species*. Whether we take species in the sense of a perennial succession of similar individuals in continual generations (Jussieu), or look upon it as existing only as a category of thought (Agassiz), *species* was intended originally as the literal translation of the Greek *eidos*, as opposed to *genos* or *genus*. The Greeks classified things originally according to *kind* and *form*, and though these terms were afterwards technically defined by Aristotle, their etymological meaning is in reality the most appropriate. Things may be classified either because they are of the same *genus* or *kind*, that is to say, because they had the same origin; this gives us a *genealogical* classification: or they can be classified because they have the same appearance, *eidos*, or *form*, without claiming for them a common origin; and this gives us a *morphological* classification. It was, however, in the Aristotelian, and not in its etymological sense, that the Greek *eidos* was rendered in

Latin by *species*, meaning the subdivision of a genus, the class of a family. Hence the French *espèce*, a kind, the English *special*, in the sense of particular as opposed to general. There is a little of the root *spas*, to see, left in a *special train*, or a *special messenger*; yet the connection, though not apparent, can be restored with perfect certainty. We frequently hear the expression *to specify*. A man specifies his grievances. What does it mean? The mediæval Latin *specificus* is a literal translation of the Greek *eidopoios*. This means what makes or constitutes an *eidōs* or species. Now, in classification, what constitutes a species is that particular quality which, superadded to other qualities, shared in common by all the members of a genus, distinguishes one class from all other classes. Thus the specific character which distinguishes man from all other animals is reason or language. Specific, therefore, assumed the sense of *distinguishing* or *distinct*, and the verb *to specify* conveyed the meaning of enumerating distinctly, or one by one.

I finish with the French *épicier*, a respectable grocer, but originally a man who sold drugs. The different kinds of drugs which the apothecary had to sell were spoken of, with a certain learned air, as *species*, not as drugs in general, but as peculiar drugs and special medicines. Hence the chymist or apothecary is still called *speziale* in Italian, his shop *spezieria*.<sup>1</sup> In French *species*, which regularly became *espèce*, assumed a new form to express drugs, namely,

<sup>1</sup> *Generi coloniali*, colonial goods.—Marsh, *Lectures*, p. 253. In Spanish, *generos*, merchandise.

*épices*; the English *spices*, the German *Spezereien*. Hence the famous *pain d'épices*, gingerbread nuts, and *épicier*, a grocer. If we try for a moment to trace *spicy*, or a *well-spiced* article, back to the simple root *specere*, to look, we shall understand that marvellous power of language which, out of a few simple elements, has created a variety of names hardly surpassed by the unbounded variety of nature herself.<sup>1</sup>

#### Classes of Roots.

William von Humboldt<sup>2</sup> held that roots are necessarily monosyllabic, and it is certainly true that in the Aryan family of speech roots consisting of more than one syllable can always be proved to be derivative.<sup>3</sup>

We may distinguish between primary, secondary, and tertiary roots

A. Primary roots are those which consist

- (1) of one vowel; for instance, *i*, to go.
- (2) of one vowel and one consonant; for instance, *a*, *d*, to eat
- (3) of one consonant and one vowel; for instance, *dâ*, to give.

B. Secondary roots are those which consist

- (1) of one consonant, vowel, and consonant; for instance, *tud*, to strike.

In these roots either the first or the last consonant is modificatory.

<sup>1</sup> Many derivatives might have been added, such as *specimen*, *spectator*, *le spectacle*, *spécialité*, *spectrum*, *spectacles*, *specious*, *specula*, &c.

<sup>2</sup> W. von Humboldt, *Verschiedenheit*, s. 376; Pott, *Etym. Forsch.* ii. s. 216, 311.

<sup>3</sup> See, however, p. 292.

## C. Tertiary roots are those which consist

- (1) of consonant, consonant, and vowel ; for instance, plu, to flow.
- (2) of vowel, consonant, and consonant ; for instance, ard, to hurt.
- (3) of consonant, consonant, vowel, and consonant ; for instance, spas, to see.
- (4) of consonant, consonant, vowel, consonant, and consonant ; for instance, spand, to tremble.

In the secondary roots we can frequently observe that one of the consonants, in the Aryan languages generally the final, is liable to modification. The root retains its general meaning, which is slightly modified and determined by the changes of the final consonants. Thus, besides tud (tudati), we have in Sanskrit tup (topati, tupati, and tumpati), meaning to strike; Greek *typ-tō*. We meet likewise with tubh (tubhnâti, tubhyati, tobhate), to strike; and, according to Sanskrit grammarians, also with tuph (tophati, tuphati, tumphati). Then there is a root tug (tuṅgati, togati), to strike, to excite; another root, tur (tutorti), to which the same meaning is ascribed; another, tûr (tûryate), to hurt. Then there is the further derivative turv (tûrvati), to strike, to conquer; there is tuh (tohati), to pain, to vex; and there is tus (tosate), to which Sanskrit grammarians attribute the sense of striking.

In the third class we shall find that one of the two consonants is always a semivowel, nasal, or sibilant,

these being more variable than the other consonants. We can almost always point to one consonant as of later origin, and added to a biconsonantal root in order to render its meaning more special. Thus we have, besides *spas*, the root *pas*, and even this root has been traced back by Pott to a more primitive *as*. Thus *vand*, again, is a mere strengthening of the root *vad*, like *mand* of *mad*, like *yu-na-g* and *yu-ñ-g* of *yug*. The root *yug*, to join, and *yudh*, to fight, both point back to a root *yu*, to mingle, and this simple root has been preserved in Sanskrit. We may well understand that a root, having the general meaning of mingling or being together, should be employed to express both the friendly joining of hands and the engaging in hostile combat; but we may equally understand that language, in its progress to clearness and definiteness, should have desired a distinction between these two meanings, and should gladly have availed herself of the two derivatives, *yug* and *yudh*, to mark this distinction.

The relationship, however, of these three classes of roots is by no means so clear as in the Semitic languages, where trilateral roots have with much greater, though even here with only limited success, been traced back to biliteral forms.<sup>1</sup> All we can say at present is that out of a number of possible parallel developments of the same radical types, certain roots have been preserved in the Aryan languages to express various shades of differentiated meaning. Traces of systematic derivation, however, are very few.<sup>2</sup>

<sup>1</sup> Benloew, *Aperçu général*, pp 28 seq

<sup>2</sup> This problem has been well worked out by A. Hjalmar Edgren, *On the Verbal Roots of the Sanskrit Language*, 1878.

## Number of Roots.

Sanskrit grammarians have reduced the whole growth of their language to 1,706 roots,<sup>1</sup> that is to say, they have admitted so many radicals in order to derive from them, according to their system of grammatical derivation, all nouns, verbs, adjectives, pronouns, prepositions, adverbs, and conjunctions, which occur in Sanskrit. According to our explanation of a root, however, this number of 1,706 would have to be reduced considerably, and though a few new roots would likewise have to be added which Sanskrit grammarians failed to discover, yet the number of primitive sounds, expressive of definite meanings, requisite for the etymological analysis of the whole Sanskrit dictionary does probably not amount to more than 850.<sup>2</sup> Even this number may be still further reduced. In the progress of language many roots disappear, that is to say, their derivatives are no longer wanted, being superseded by derivatives from more familiar roots. Thus Professor Skeat, in his *Etymological Dictionary*, is satisfied with 461 Aryan roots to account for the whole wealth of the English Language. Benloew (*Aperçu général*) estimates the necessary radicals

<sup>1</sup> Benfey, *Kurze Grammatik*, § 151.—

Roots of the 2, 3, 5, 7, 8, 9 classes . . .	226
Roots of the 1, 4, 6, 10 classes . . .	1,480
	1,706

including 143 of the 10th class

See also § 61; Pott, *Etym. Forsch.* (2 ed.), ii. p. 283, Bopp, *Vergl. Gr.* § 109<sup>a</sup>, 3; 109<sup>b</sup>, 1, note.

<sup>2</sup> *Science of Thought*, p 210.

of Gothic at 600, of modern German at only 250 (*l. c.* p. 22). Grimm's list of strong verbs in the Teutonic family amounts to 462 (*Deutsche Grammatik*, i. p. 1030; Pott, *Etym. Forsch.* ii p. 75). Dobrowsky (*Instit. Ling. Slavicae*, p. 256) gives 1,605 radicals of the Slavonic languages Hebrew has been reduced to about 500 roots.<sup>1</sup> whereas Chinese, which abstains from composition and derivation, and therefore requires a larger number of radicals, was satisfied with 450.<sup>2</sup> With these 450 sounds, raised to 1,263 by various accents and intonations, the Chinese have produced a dictionary of from 40,000 to 50,000 words.<sup>3</sup>

All this shows a wise spirit of economy on the part of primitive language, for the possibility of forming new roots for every new impression was almost unlimited. Even if we put the number of letters only at twenty-

<sup>1</sup> Renan, *Histoire des Langues sémitiques*, p. 138. Leusden counted 5,642 Hebrew and Chaldee words in the Old Testament.

<sup>2</sup> 'Morrison gives 411, Edkins 532, the difference being chiefly occasioned by Morrison not counting aspirated words as distinct from the non-aspirated. The number would be much greater if the final *m* and the soft initials *g*, *d*, *b*, *v*, &c, were still in existence, as under the Mongolian dynasty. There would then be at least 700 radicals. The sounds attached to Chinese characters in the thirteenth century are expressed alphabetically in old Mongolian writings.'—Edkins, *Mandarin Grammar*, pp. 44, 45.

<sup>3</sup> The exact number in the Imperial Dictionary of Khang-hi amounts to 42,718. About one-fourth has become obsolete; and one-half of the rest may be considered of rare occurrence, thus leaving only about 15,000 words in actual use. 'The exact number of the classical characters is 42,718. Many of them are no longer in use in the modern language, but they occur in the canonical and the classical books. They may be found sometimes in official documents, when an



four, the possible number of biliteral and triliteral roots would amount together to 14,400.<sup>1</sup>

#### Demonstrative Roots.

It is clear, however, that in addition to these predicative roots, we want another class of radical elements to enable us to account for the full growth of language. With the 400 or 500 predicative roots at her disposal, language would not have been at a loss to coin names for all things that come under our cognisance. Language is a thrifty housewife. If we consider the variety of ideas that were expressed by the one root *spas*, it is easy to see that with 500 such roots a dictionary might have been formed sufficient to satisfy the wants, however extravagant, of her husband—the human mind. If each root yielded fifty derivatives, we should have 25,000 words. Now, we are told by a country clergyman, that some of the labourers in his parish did not use more than 300 words in their daily conversation.<sup>2</sup> The cuneiform inscriptions of Persia contain no more than 379 words, 131 of these being proper names. The vocabulary of the ancient sages of Egypt, at least as far as it is known to us from the hieroglyphic inscriptions, amounts to about 658 words.<sup>3</sup> The *libretto* of an Italian opera

<sup>1</sup> Leibniz (*De Arte combinatoria*, Opp. tom. II. pp. 387, 388, ed. Duntens) ‘Quoties situs literarum in alphabeto sit variabilis; 23 literarum lingue Latine variationes sunt 25 852,016,738,881,076,610,000; 24 literarum Germanice lingue, 620,118 701,733,239,739,360,000.’ Cf. Pott, *Etym. Forsch.* II. s. 9, Jean Paul, *Leben Fabels*, s. 160. Plut *Quæst. Coniug.* viii. 9, 3. Ἐνοκράτης δὲ τὸν τῶν συλλαβῶν ἀριθμὸν ὃν τὰ στοιχεῖα μὴ γνόμενα πρὸς ἄλληλα παρέχει, μυριάδων ἀπέφηνεν εἰκοσάκις καὶ μυριάκις μυριάων

<sup>2</sup> *The Study of the English Language*, by A. D’Orsey, p. 15.

<sup>3</sup> This is the number of words in the Vocabulary given by Bunsen,

seldom displays a greater variety<sup>1</sup> A well-educated person in England, who has been at a public school and at the university, who reads his Bible, his Shakespeare, the *Times*, and all the books of Mudie's Library, seldom uses more than about 3,000 or 4,000

in the first volume of his *Egypt*, pp 453-491. Several of these words, however, though identical in sound, must be separated etymologically, and later researches have considerably increased the number. The number of hieroglyphic groups in Sharpe's *Egyptian Hieroglyphics*, 1861, amounts to 2,030.

<sup>1</sup> Marsh, *Lectures*, p 182. M Thommerel stated the number of words in the dictionaries of Robertson and Webster as 43,566. Todd's edition of Johnson, however, is said to contain 58,000 words, and the later editions of Webster have reached the number of 70,000, counting the participles of the present and perfect as independent vocables. Flugel estimated the number of words in his own dictionary at 94,464, of which 65,085 are simple, 29,379 compound This was in 1843; and he then expressed a hope that in his next edition the number of words would far exceed 100,000 This is the number fixed upon by Mr. Marsh as the minimum of the *copia vocabulorum* in English. See the *Saturday Review*, Nov 2, 1861.

'Adamantinos Korais inventit in veteri Academiæ Parisiensis dictionario 29,712 contineat, in Johnsoniano 36,784, in linguæ Armeniæ vocabulario 50,000, sed in thesauri Stephaniani editione Londinensi, 150,000' Cf Pott, *Etym Forsch* ii. s 78.

'The translation of the Scriptures under James I (1611) comprises 773,746 words, of which about 98 per cent. are proper names and repetitions, if it be true that the particle *and* occurs 46,219 times.' See John A. Weisse, 1873.

What we possess of Gothic amounts, according to Loebe, to 3,625 words, exc. 357 proper names, and 120 foreign words. Gaugengigl brings the number to 3,545, Schulze to 3,440, see Gaugengigl, *Ernleitung* to 2nd vol.

Varro, L. L. vi. § 35. 'Horum verborum si primigenia sunt ad mille, ut Cosconius scribit, ex eorum declinationibus verborum discrimina quingenta millia esse possunt, ideo quia singulis verbis primigenis circiter quingentæ species declinationibus fiunt. Primigenia dicuntur verba ut lego, scribo, sto, sedeo et cetera quæ non sunt ab aliquo verbo, sed suas habent radices.' Each verb in Greek, if conjugated through all its voices, tenses, moods, and persons, produces, together with its participles, 1,300 forms

words in actual conversation. Accurate thinkers and close reasoners, who avoid vague and general expressions, and wait till they find the word that exactly fits their meaning, employ a larger stock; and eloquent speakers may rise to a command of 10,000. The new Oxford Dictionary promises to bring the number of words to 250,000. The Hebrew Testament says all that it has to say with 5,642 words;<sup>1</sup> Milton's poetry is built up with 8,000; and Shakespeare, who probably displayed a greater variety of expression than any writer in any language, produced all his plays with about 15,000 words.

Five hundred roots, therefore, considering their fertility and pliancy, were more than was wanted for the dictionary of our primitive ancestors, nay, with proper management, even for our own times, when there are 245,000 living, and 95,000 fossil species of animals to be named, 100,000 living species, and 2,500 fossil species of plants, to say nothing of crystals, metals, and minerals.

And yet something more was wanted. If our ancestors had a root expressive of light and splendour, that root might have formed the predicate in the names of sun, and moon, and stars, and heaven, dawn, morning, day, spring, joy, beauty, majesty, love, friend, gold, riches, &c. But if they wanted to express *here* and *there*, *who*, *what*, *this*, *that*, *thou*, *he*, they would have found it impossible to discover any predicative root that could be applied to this purpose. Attempts have been made indeed to trace these words back to predicative roots; but if we are told that the demon-

<sup>1</sup> Renan, *Histoire*, p. 138.

strative root *ta*, this or there, may be derived from a predicative root *tan*, to extend, we find that even in our modern languages, the demonstrative pronouns and particles are of too primitive and independent a nature to allow of so artificial an interpretation. The sound *ta* or *sa*, for this or there, is as involuntary, as natural, as independent an expression as any of the predicative roots, and although some of these demonstrative, or pronominal, or local roots, for all these names have been applied to them, may be traced back to a predicative source, we must still admit a small class of independent radicals, not predicative in the usual sense of the word, but simply pointing, simply expressive of existence under certain more or less definite, local or temporal prescriptions.

It will be best to give one illustration at least of a pronominal root and its influence in the formation of words.

In some languages, and particularly in Chinese, a predicative root may by itself be used as a noun, or a verb, or an adjective, or an adverb. Thus the Chinese sound *ta* means, without any change of form, great, greatness, and to be great<sup>1</sup> If *ta* stands before a substantive, it has the meaning of an adjective. Thus *ta jin* means a great man. If *ta* stands after a substantive, it is a predicate, or, as we should say, a verb. Thus *jin ta* (or *jin ta ye*) would mean the man is great.<sup>2</sup>

<sup>1</sup> Endlicher, *Chinesische Grammatik*, § 128.

<sup>2</sup> If two words are placed like *jin ta*, the first may form the predicate of the second, the second being used as a substantive. Thus *jin ta* might mean the greatness of man, but in this case it is more usual to say *jin thi ta*.

<sup>3</sup> Another instance *chen*, virtue; ex. *jin tchi chen*, the virtue of

Or again, *jin ngö ye*,<sup>1</sup> *li pü ngö*, would mean man bad, law not bad. Here we see that there is no outward distinction whatever between a root and a word, and that a noun is distinguished from a verb merely by its collocation in a sentence.

In other languages, however, and particularly in the Aryan languages, no predicative root can by itself form a word. Thus in Latin there is a root *luc*, to shine. In order to have a substantive, such as light, it was necessary to add a pronominal or demonstrative root, thus forming the general subject of which the meaning contained in the root is to be predicated. Thus by the addition of the pronominal element *s* we have the Latin noun, *luc-s*, the light, or literally, shining-there. Let us add a personal pronoun to the verbal base *luce*, and we have the verb *luc-e-s*, shining-thou, thou shinest. Let us add other pronominal derivatives, and we get such nouns and adjectives as *lucidus*, *luculentus*, *lucerna*, &c.

#### Composition.

It would be a totally mistaken view, however, were we to suppose that all derivative elements, all that remains of a word after the predicative root has been removed, must be traced back to pronominal roots. We have only to look at some of our own modern derivatives in order to be convinced that many of

man : *chen*, virtuous ; ex. *chen jin*, the virtuous man : *chen*, to approve ; ex. *chen tchi*, to find it good ; *chen*, well ; ex. *chen ho*, to sing well.—Stanislas Julien.

<sup>1</sup> *Ye* is placed at the end to show the verbal character of *ngö* ; without it we should translate 'the badness of man,' while *jin ou li* would mean 'man hates law.'

them were originally predicative, that they entered into composition with the principal predicative root. and then dwindled down to mere suffixes. Thus *scape* in *landscape*, and the more frequent *ship* in *hardship*, are both derived from the same root which we have in Gothic,<sup>1</sup> *skapu*, *skôp*, *skôpum*, to create; in Anglo-Saxon, *scape*, *scôp*, *scôpon*. It is the same as the German derivative *schaft*, in *Gesellschaft*, &c. So again *dom* in *wisdom* or *christendom* is derived from the same root which we have in *to do*. It is the same as the German *thum* in *Christenthum*, the Anglo-Saxon *dôm* in *cyniny-dôm*, *Konigthum*. *Hood*, the Anglo-Saxon *hād*, means state or rank; but in *man-hood*, *child-hood*, *brother-hood*, *neighbour-hood*, it becomes a mere abstract suffix.<sup>2</sup>

The same holds good with regard to more ancient languages. Thus in Sanskrit *maya* is used as a secondary suffix to form words such as *asmamaya*, made of stone, *mrinmaya*, made of earth or loam, and its original meaning is hardly felt. Yet there can be little doubt that *maya* comes from the root *mâ*, *mîyate*, to measure, to make, and was originally an independent word, like *mita*, or *vimita*, made of. This we see more clearly in *gomaya*, which means not only *bovinus*, but *cow-dung*. In Greek a trace of

<sup>1</sup> Grimm, *Deutsche Grammatik*, b ii s. 521.

<sup>2</sup> Spenser, *Shepherd's Calender*, Februarie (ed. Collier, i p. 25):—  
'Cudde, I wote thou kenst little good

So vainly t'advauce thy headlesse hood:'

(for thy headlessness; *hood*, the German *hert*, is a termination denoting estate, as *manhood*.—T Warton.)

In Old High-German *deohert* and *deomuot* mean the same thing; in modern German we have only *Demuth*, lit. servant-hood, humility. See also *infra*, p 394, note 3.

the same suffix has been preserved in *ἀνδρό-μεος*, originally made of men, but used in the sense of human, e g *Od. ix. 297, ἀνδρόμεα κρέ' ἔδων*, eating human flesh, *Il xi. 538, ὄμιλον ἀνδρόμεον*, a crowd of men.<sup>1</sup>

We have necessarily confined ourselves in our analysis of language to that family of languages to which our own tongue, and those with which we are best acquainted, belong; but what applies to Sanskrit and the Aryan family applies to the whole realm of human speech. Every language, without a single exception, that has as yet been cast into the crucible of comparative grammar, has been found to contain these two substantial elements, predicative and demonstrative roots. In the Semitic family these two constituent elements are even more palpable than in Sanskrit and Greek. Even before the discovery of Sanskrit, and the rise of comparative philology, Semitic scholars had successfully traced back the whole dictionary of Hebrew and Arabic to a small number of roots, and as every root in these languages consists of three consonants, the Semitic languages have sometimes been called by the name of trilateral.

To a still higher degree the constituent elements are, as it were, on the very surface in the Turanian family of speech. It is one of the characteristic features of that family, that, whatever the number of prefixes and suffixes, the root must always stand out in full relief, and must never be allowed to suffer by its contact with derivative elements.

There is one language, the Chinese, in which no analysis of any kind is required for the discovery of

<sup>1</sup> *Pân. v. 4, 21.*

its component parts. It is a language in which no coalescence of roots has taken place; every word is a root, and every root is a word. It is, in fact, the most primitive stage in which we can imagine human language to have existed. It is language *comme il faut*, it is what we should naturally have expected all languages to be.

There are, no doubt, numerous dialects in Asia, Africa, America, and Polynesia, which have not yet been dissected by the knife of the grammarian; but we may be satisfied at least with this negative evidence, that, as yet, no language which has passed through the ordeal of grammatical analysis has ever disclosed any but these two constituent elements.

The problem, therefore, of the origin of language, which seemed so perplexing and mysterious to the ancient philosophers, assumes a much simpler aspect with us. We have learnt what language is made of; we have found that everything in language, except the roots, is intelligible, and can be accounted for. There is nothing to surprise us in the combination of the predicative and demonstrative roots which led to the building up of all the languages with which we are acquainted, from Chinese to English. It is not only conceivable, as Professor Pott remarks, 'that the formation of the Sanskrit language, as it is handed down to us, may have been preceded by a state of the greatest simplicity and entire absence of inflections, such as is exhibited to the present day by the Chinese and other monosyllabic languages'; it is absolutely impossible that it should have been otherwise.



# CHAPTER X.

## MORPHOLOGICAL CLASSIFICATION.

### **Families and Classes of Languages.**

**T**HE analysis of human speech given in the preceding chapter ought to teach us two things: first, that in families of language, held together by genealogical ties, there may be more near and more distant degrees of relationship; secondly, that languages which can claim no genealogical relationship whatever, may still be classified morphologically, that is, according to the manner in which their constituent elements, the predicative and demonstrative roots, have been combined. Both these lessons will be useful to us in treating of the languages which are neither Aryan nor Semitic.

Strictly speaking, the Aryan and Semitic are the only *families* of speech which fully deserve that title. They both presuppose the existence of a finished system of grammar, previous to the first divergence of their dialects. Their history is from the beginning a history of decay rather than of growth, and hence the unmistakable family-likeness which pervades every one even of their latest descendants. The language of the Sepoy and that of the English soldier are, in one sense, one and the same language. They are both built up of materials which were definitely shaped before the Teutonic and Indic branches

separated. No new root has been added to either since their first separation; and the grammatical forms which are of more modern growth in English or Hindustani are, if closely examined, new combinations only of elements which existed from the beginning in all the Aryan dialects. In the termination of the English *he is*, and in the inaudible termination of the French *il est*, we recognise the result of an act performed before the first separation of the Aryan family, the combination of the predicative root *as* with the demonstrative root *ti*; an act performed once for all, and continuing to be felt to the present day.

It was the custom of Nebuchadnezzar to have his name stamped on every brick that was used during his reign in erecting his colossal palaces. Those palaces fell to ruins, but from the ruins the ancient materials were carried away for building new cities; and, on examining the bricks in the walls of the modern city of Bagdad on the borders of the Tigris, Sir Henry Rawlinson discovered on each the clear traces of that royal signature. It is the same if we examine the structure of modern languages. They too were built up with the materials taken from the ruins of the ancient languages, and every word, if properly examined, displays the visible stamp impressed upon it from the first by the founders of the Aryan and the Semitic empires of speech.

#### **Distant Relationship.**

The relationship of languages, however, is not always so close, and they may nevertheless have to be

treated as genealogically akin. The Albanian language, for instance, is clearly Aryan, but the traces of a common descent are so few that it is impossible to decide as yet whether it should be treated as a near relative of Greek, or as an independent branch of the Aryan family. The language of Ceylon was for a long time treated as not Aryan at all, but certain terminations of the verb seemed to me to remove all doubt as to its Sanskritic origin. In these cases the difficulty of proving a common origin is due to the ravages of phonetic decay and dialectic growth. Languages, however, may also diverge before their grammatical system has become fixed and hardened; and in that case they cannot be expected to show the same marked features of a common descent as, for instance, the Neo-Latin dialects, French, Italian, and Spanish. They may have much in common, but they will likewise display an after-growth in words and grammatical forms, peculiar to each dialect. With regard to words we see, for instance, that even languages so intimately related to each other as the six Romance dialects, diverged in some of the commonest expressions. Instead of the Latin *frater*, the French *frère*, we find in Spanish *hermano*. There was a very good reason for this change. The Latin word *frater*, changed into *fray* and *frayle*, had been applied to express a brother or a friar. It was felt inconvenient that the same word should express two ideas which it was sometimes necessary to distinguish, and therefore, by a kind of natural elimination, *frater* was given up as the name of brother in Spanish, and replaced from

the dialectical stores of Latin by *germanus*. In the same manner the Latin word for shepherd, *pastor*, was so constantly applied to the shepherd of the people, or the clergyman, *le pasteur*, that a new word was wanted for the real shepherd. Thus *berbicularius*, from *berbex* or *vervex*, a wether, was used instead of *pastor*, and changed into the French *berger*. Instead of the Spanish *enfermo*, ill, we find in French *malade*, in Italian *malato*. Languages so closely related as Greek and Latin have fixed on different expressions for son, daughter, brother, woman, man, sky, earth, moon, hand, mouth, tree, bird, &c.<sup>1</sup> That is to say, out of a large number of synonyms which were supplied by the numerous dialects of the Aryan family, the Greeks perpetuated one, the Romans another. It is clear that when the working of this principle of natural selection is allowed to extend more widely, languages, though proceeding from the same source, may in time acquire a totally different nomenclature for the commonest objects. The number of real synonyms is frequently exaggerated, and if we are told that in Icelandic there are 120 names for island, or in Arabic 500 names for lion,<sup>2</sup> and 1,000 names for sword,<sup>3</sup> or in German sixty names for *Primula elatior*, and about fifty for *Colchicum autumnale*,<sup>4</sup> many of these are no doubt purely poetical or technical. But even where there are in a language four or five names only for the same object,

<sup>1</sup> See *Letter on the Turanian Languages*, p. 62.

<sup>2</sup> Renan, *Histoire des Langues sémitiques*, p. 137.

<sup>3</sup> Pococke, *Notes to Abulfaragius*, p. 153, *Glossology*, p. 352. See *infra*, p. 527.

<sup>4</sup> Blaghel, *Deutsche Sprache*, p. 64

it is clear that four languages might be derived from it, each in appearance quite distinct from the rest.<sup>1</sup>

The same applies to grammar. When the Romance languages, for instance, formed their new future by placing the auxiliary verb *habere*, to have, after the infinitive, it was quite open to any one of them to fix upon some other expedient for expressing the future. The French might have chosen *je vais dire* or *je dirais* (I wade to say) instead of *je dirai*, and in this case the future in French would have been totally distinct from the future in Italian. The English *wisdom* is the same word as the German *Weisheit*, only that in English the derivative element is *dom*, in German *heit*.<sup>2</sup> If such changes are possible in literary languages of such long standing as French and Italian, German and English, we must be prepared for a great deal more in languages which, as I said, diverged before any definite settlement had taken place, either in their grammar or their dictionary. It has been doubted whether Turkish is really related to Finnish, but there are features common to both languages which cannot be the result of accident. Some of the Bantu dialects on the east coast of Africa are mutually unintelligible, but not only their strongly-marked grammatical features, but their common property in certain important words also leaves no doubt of their being descendants of one and the same family. Sometimes, no doubt, we must refrain from pronouncing a decided opinion. That the language of the hieroglyphic inscriptions resembles the Semitic type in its

<sup>1</sup> See Terrien Poncelet, *Du Langage*, p. 213.

<sup>2</sup> See before, p. 382.

grammatical structure, is generally admitted. But it is not without points of resemblance with Aryan speech too, and it was supposed for a time that Egyptian might represent a most ancient phase of language, which had not yet been differentiated into Semitic and Aryan.

Dr. Lottner in some excellent articles in the Transactions of the Philological Society of 1861, 'On the Sister-families of Languages, especially those connected with the Semitic Family,' tried to prove that the Berber dialects of Northern Africa, spoken formerly on the coast from Egypt to the Atlantic Ocean, but, after the invasion of the Arabs, pushed back towards the interior, were collateral branches of the Semitic family. It is difficult, however, to connect a clear idea with such a term, and the similarities hitherto pointed out between these North-African dialects on one side, and Syriac, Hebrew, and Arabic on the other, are hardly such as to justify the name applied to them as Sub-Semitic.

#### **Morphological Classes.**

But while a genealogical classification of languages presupposes always a community of origin, however distant, there is another classification, the purely morphological, which is entirely independent of this consideration. It may happen that languages which are related genealogically, belong to different morphological classes; it constantly happens that languages of the same morphological class have no genealogical relationship whatever.

We saw that all languages can be reduced in the

end to roots, predicative and demonstrative. It is clear, therefore, that, according to the manner in which roots are put together, we may expect to find three kinds of languages, or rather three stages in the gradual formation of speech.

1. Roots may be used as words, each root preserving its full independence.

2. Two roots may be joined together to form words, and in these compounds one root may lose its independence.

3 Two roots may be joined together to form words, and in these compounds both roots may lose their independence.

What applies to two roots, applies to three or four or more. The principle is the same, though it would lead to a more varied subdivision.

#### **Three Stages, Radical, Terminational, Inflectional.**

The first stage, in which each root preserves its independence, and in which there is no formal distinction between a root and a word, I call the *Radical Stage*. Languages, while belonging to this first or Radical Stage, have sometimes been called *Monosyllabic* or *Isolating*.

The second stage, in which two or more roots coalesce to form a word, the one retaining its radical independence, the other sinking down to a mere termination, I call the *Terminational Stage*. The languages belonging to it have generally been called *agglutinative*, from *gluten*, glue.

The third stage, in which roots coalesce so that neither the one nor the other retains its substantive independence, I call the *Inflectional Stage*. The languages belonging to it have sometimes been distinguished by the name of *amalgamating* or *organic*.

The first stage excludes phonetic corruption altogether.

The second stage excludes phonetic corruption in the principal root, but allows it in the secondary or determinative elements.

The third stage allows phonetic corruption both in the principal root and in the terminations.

#### Transition from one stage to another.

It is perfectly true that few languages only, if we can trace their history during any length of time, remain stationary in one of these stages. Even Chinese, as has been shown by Dr. Edkins, exhibits in its modern dialects traces of incipient agglutination, if not of inflection. The Ugric languages show the most decided traces of phonetic corruption<sup>1</sup> and in consequence clear tendencies toward inflection, while the modern Aryan languages, such as French and English, avail themselves of agglutinative expedients for contriving new grammatical forms. So far I quite agree with Professor Hunfalvy, who has so strongly protested against substituting a morphological for a genealogical classification of languages. Such a sub-

<sup>1</sup> Thus, to quote Professor Hunfalvy, *sylam*, heart, in Finnish has been changed to *syom*, in Vogul to *sim*, in Hungarian to *szuv* and *szü*. The Ostjak. *jógot*, bow, is *jaut* and *jaft* in Vogul., *jout-se* in Finnish, *ij* and *iv* in Hungarian. The Ostjak. *kauh*, *kouh*, or *keu*, stone, is *kav* and *kav* in Vogul, *kivi* in Finnish, *kő* in Hungarian.



stitution was never contemplated. The two classifications were both supposed to be useful, each for its own purposes, but the genealogical classification was always considered the more important.

Professor Hunfalvy has proposed a different morphological classification, which is excellent in itself, but liable to the same limitations as my own. He establishes four classes.—

1. *Isolating*, the same as my own.

2. Languages in which the inherent vowels of nominal and verbal bases remain generally unchanged, and determine the vowels of the suffixes; Finnish, Turkish, &c

3. Languages in which the inherent vowels of the nominal and verbal bases are influenced by the suffixes; Sanskrit, Greek, Latin, Slavonic, German.

4. Languages in which nominal and verbal bases have no inherent vowels, but vowels are used to determine verbal and nominal categories; Hebrew, Arabic, &c.

This division, though ingenious, is liable to the same objection, if objection it can be called, namely that the same language may often share the peculiarities of two or three classes (see p 399, notes).

To return to our own morphological classification, it may be well to illustrate it by a few instances.

#### **Radical Stage**

In the first stage, which is represented by Chinese, every word is a root, and has its own substantial meaning. There is in Chinese no formal distinction between a noun, a verb, an adjective, an adverb, a

preposition. The same root, according to its position in a sentence, may be employed to convey the meaning of great, greatness, greatly, to grow, and to be great. Everything, in fact, depends in Chinese on the proper collocation of words in a sentence. Thus *ngò tà ni* means 'I beat thee', but *ni tà ngò* would mean 'thou beatest me.' Thus *ngõ ġin* means 'a bad man'; *ġin ngõ* would mean 'the man is bad.'

When we say in Latin *baculo*, with a stick, we say in Chinese *ỳ cáng*.<sup>1</sup> Here *ỳ* might be taken for a mere preposition, like the English *with*. But in Chinese this *ỳ* is a root; it is the same word which, if used as a verb, would mean 'to employ.' Therefore in Chinese *ỳ cáng* means literally 'employ stick.' Or again, where we say in English *at home*, or in Latin *domi*, the Chinese say *ủ-đ-li*, *ủ-đ* meaning *house*, and *li* originally *inside*.<sup>2</sup> The name for *day* in modern Chinese is *đi-tse*, which means originally *son of the sun*.<sup>3</sup>

As long as every word, or part of a word, is felt to express its own radical meaning, a language belongs to the first or radical stage. As soon as such words as *tse* in *đi-tse*, *day*, *li* in *ủ-đ-li*, *at home*, or *ỳ* in *ỳ-cáng*, with the stick, lose their etymological meaning and become mere signs of derivation or of case, language enters into the second or terminational

<sup>1</sup> Endlicher, *Chinesische Grammatik*, s. 223.

<sup>2</sup> *Ibid.* s. 339.

<sup>3</sup> 'In this word *tse* (*tseu*) does not signify son; it is an addition of frequent occurrence after nouns, adjectives, and verbs. Thus, *lao*, old, + *tseu* is father; *nei*, the interior, + *tseu* is wife; *hiang*, scent, + *tseu* is clove, *hoa*, to beg, + *tseu*, a mendicant, *hi*, to act, + *tseu*, an actor.'—Stanislas Julien.

stage. And this transition from one class into another does not, as Professor Hunfalvy imagines, vitiate our division. On the contrary, from an historical point of view, it confirms it.

In some respects the ancient language of Egypt, as recorded to us in the earliest hieroglyphic inscriptions, may be classed with Chinese. The points of similarity, however, are chiefly negative. They arise from the absence of grammatical differentiation and articulation, and from the possibility in consequence of the same word or root being used as a substantive, adjective, verb, or adverb. But there is no trace of any material relationship between the two languages.

Chinese stands by itself as a language which has changed very little since we know it in its most ancient literary records. Some scholars maintain that even in its earliest stage it shows signs of previous phonetic corruption. This may be so, and it seems confirmed by the evidence of local dialects. But we can hardly imagine that its grammatical simplicity, or rather its freedom from all grammar, in our sense of the word, could be due, as in the case of English, to a long-continued process of elimination of useless elements. Here we must wait for the results of further researches. The age claimed for the ancient Chinese literature seems to me as yet unsupported by any such evidence as would carry conviction to a student of Greek, Latin, or Sanskrit literature. Even if we admit that much of the ancient literature which was systematically destroyed by the Emperor Shi Hwang Tî of *Khin*, B.C. 213, may have been recovered from oral tradition and scattered MSS., we cannot claim

for the works of Confucius and Lao-tse an earlier date than that of their compilers. They may contain much older materials, but they give them to us as understood in the sixth century B. C., and they may not altogether have escaped the effects of the burning of books under the Emperor of *Khin*.

#### Terminational Stage.

West of China there stretches a cluster of languages which are on the point of leaving or have left the radical stage, which show the development of agglutination in high perfection, and in some instances rise to the level of inflectional grammar. They are called *Ural-Altaiic* or *Ugro-Tutaric*. In one of my earliest essays, 'A Letter on the Turanian Languages,' 1854, I proposed to comprehend these languages under the name of *Turanian*. I went even further and distinguished them as *North-Turanian*, in opposition to what in my youth I ventured to call the *South-Turanian* languages, namely the *Tamulic*, *Taic*, *Gangetic*, *Lohitic*, and *Malaic*. During the last thirty years, however, the principles of the Science of Language have been worked out with so much greater exactness, and the study of some of these languages has made such rapid progress, that I should not venture at present to suggest such wide generalisations, at all events so far as the *Tamulic*, *Taic*, *Gangetic*, *Lohitic*, and *Malaic* languages are concerned.

It is different, however, with the language I comprehended as *North-Turanian*. They share not only common morphological features, but they are held together by a real genealogical relationship, though

not a relationship so close as that which holds the Aryan or Semitic languages together.

**Rask's and Prichard's Classification.**

Though I am responsible for the name *Turanian*, and for the first attempt at a classification of the Turanian languages in the widest sense, similar attempts to comprehend the languages of Asia and Europe, which are not either Aryan or Semitic, under a common name had been made long ago by Rask, by Prichard and others. Rask admitted three families, the *Thracian* (Aryan), the *Semitic*, and the *Scythian*, the latter comprising most of what I call the Turanian languages. During his travels in India, Rask, in a letter dated 30th July, 1821, claimed for the first time the Dravidian languages also, Tamil, Telugu, &c., as decidedly Scythian<sup>1</sup>

The name *Allophylian*, proposed by Prichard, is in some respects better than Turanian.

Rask's Scythian and Prichard's Allophylian race was supposed to have occupied Europe and Asia before the advent of the Aryan and Semitic races, a theory which has lately been revived by Westergaard, Norris, Lenormant, and Oppert, who hold that a Turanian civilisation preceded likewise the Semitic civilisation of Babylon and Nineveh, that the cuneiform letters were invented by that Turanian race, and

<sup>1</sup> Professor De Lagarde has stated that F. Ruckert lectured at Berlin in 1843 on the relationship of the Dravidian and Turanian languages, and that I received the first impulse from him. It may be so, though I am not aware of it. Anyhow, the first impulse came from Rask; *Samløse Afhandlinger af R. K. Rask*, Kobenhavn, 1836, pp. 323 seq.

that remnants of its literature have been preserved in the second class of the cuneiform inscriptions, called sometimes Scythian, sometimes Median, and possibly in that large class of inscriptions now called Akkadian or Sumerian.<sup>1</sup>

Whatever may be thought of these far-reaching theories, no one, I believe, doubts any longer a close relationship between Mongolic and Turkic, a wider relationship between these two and Tungusic, and a still wider one between these three and Finnic and Samoyedic. Hence the Mongolic, Turkic, and Tungusic languages have been comprehended under the name of Altaic, the Finnic languages are called Ugric (including Hungarian), while Samoyedic forms, according to some, a more independent *nucleus*. These five groups together constitute a real family of speech, the Ural-Altaiic.

#### Vocalic Harmony.

There is one peculiarity common to many of the Ural-Altaiic languages which deserves a short notice, the law of *Vocalic Harmony*. According to this law the vowels of every word must be changed and modulated so as to harmonise with the key-note struck by its chief vowel. This law pervades the Tungusic, Mongolic, Turkic, Samoyedic, and Finnic classes, and even in dialects where it is disappearing, it has often left traces of its former existence behind. The same

<sup>1</sup> The affinity of Akkadian and Sumerian with the Finno-Ugric languages has been disproved by Donner. Their affinity with the Altaic languages is maintained by Hönigsmann, 'Die Sumero-Akkaden, ein altaisches Volk,' in *Correspondenz-Blatt der deutschen Ges. für Anthropologie*, xv. Jahrg. No. 8, 1884, p. 63.

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.<sup>1</sup> The vowels in Turkish, for instance, are divided into two classes, *sharp* and *flat*. If a verb contains a sharp vowel in its radical portion, the vowels of the terminations are all sharp, while the same terminations, if following a root with a flat vowel, modulate their vowels into a flat key. Thus we have *sev-mek*, to love, but *bak-mak*, to regard, *mek* or *mak* being the termination of the infinitive. Thus we say *ev-ler*, the houses, but *at-lar*, the horses, *ler* or *lar* being the termination of the plural.

No Aryan or Semitic language has preserved a similar freedom in the harmonic arrangement of its vowels, while traces of it have been found among the most distant members of the Turanian family, as in Hungarian, Mongolian, Turkish, the Yakut, spoken in the north of Siberia, in Telugu, Tulu,<sup>2</sup> and in dialects spoken on the eastern frontier of India.

#### Nomad Languages.

No doubt, if we expected to find in this immense number of languages the same family likeness which holds the Semitic or Aryan languages together, we should be disappointed. It is the very absence of that family likeness which constitutes one of the distinguishing features of the Turanian dialects. They are

<sup>1</sup> Cf. Caldwell, *Dravidian Grammar*, second ed., p. 78.

<sup>2</sup> 'In Tulu final short *u* is left unchanged only after words containing labial vowels (*bududu*, having left); it is changed into *ü* after all other vowels (*pandüdü*, having said).—Dr. Gundert.

*Nomad* languages, as contrasted with the Aryan and Semitic languages.<sup>1</sup> In the latter most words and grammatical forms were thrown out but once, and they were not lightly parted with, even though their original distinctness had been blurred by phonetic corruption. To hand down a language in this manner is possible only among people whose history runs on in one main stream, and where religion, law, and poetry supply well-defined borders which hem in on every side the current of language. Among the ancient Turanian nomads no such nucleus of a political, social, or literary character has ever been formed. Empires were no sooner founded than they were scattered again like the sand-clouds of the desert; no laws, no songs, no stories outlived the age of their authors. How quickly language can change, if thus left to itself without any literary standard, we saw when treating of the growth of dialects. The most necessary substantives, such as father, mother, daughter, son, have frequently been lost, and replaced by synonyms in the different dialects of Turanian speech, and the grammatical terminations have been treated with the same freedom. Nevertheless some of the Turanian numerals and pronouns, and several Turanian roots, point to a single original source; and the common words and common roots which have been discovered in the most distant branches of the Turanian stock, warrant, at least provisionally, the admission of a real, though very distant relationship of all Turanian speech.

<sup>1</sup> *Letter on the Turanian Languages*, p 24.



**Agglutination and Inflection.**

Agglutination,<sup>1</sup> the most characteristic feature of the Turanian languages, means not only that in their grammar pronouns are *glued* to the verbs in order to form the conjugation, or prepositions to substantives in order to form declension. *That* would not be a distinguishing characteristic of the Turanian or nomad languages; for in Hebrew, as well as in Sanskrit, conjugation and declension were originally formed on the same principle, and could hardly have been formed on any other. What distinguishes the Turanian languages is that in them the conjugation and declension can still be taken to pieces; and although the terminations have by no means always retained their significative power as independent words, they are felt as modificatory syllables, and as distinct from the roots to which they are appended.

In the Aryan languages the modifications of words, comprised under declension and conjugation, were likewise originally expressed by agglutination. But the component parts began soon to coalesce, so as to form one integral word, liable in its turn to phonetic corruption to such an extent that it became impossible after a time to decide which was the root and which the modificatory element. The difference between an Aryan and a Turanian language is somewhat the same as between good and bad mosaic. The Aryan words seem made of one piece, the Turanian words clearly show the sutures and fissures where the small stones are cemented together.

<sup>1</sup> *Survey of Languages*, p. 90; De Maistre (died 1821), in his *Soirées de St. Pétersbourg* (i. 81), uses *agglutination* in a grammatical sense.

There was a very good reason why the Turanian languages should for a long time have remained in this second or agglutinative stage. It was felt essential that the radical portion of each word should stand out in distinct relief, and never be obscured or absorbed, as so often happens in the third or inflectional stage.

The French *âge*, for instance, has lost its whole material body, and is nothing but termination. *Âge* in Old French was *eage* and *edage*. *Edage* is a corruption of the Latin *ætaticum*; *ætaticum* is a derivative of *ætās*; *ætās* an abbreviation of *ævitas*; *ævitas* is derived from *ævum*, and in *ævum*, *æ* only is the radical or predicative element, the Sanskrit *ây* in *ây-us*, life, which contains the germ from which these various words derive their life and meaning. From *ævum* the Romans derived *æviternus*, contracted into *aternus*, so that *age* and *eternity* flow from the same source. What trace of *æ* or *ævum*, or even *ævitas* and *ætās*, remains in *âge*? Or, to take a more ancient case, what trace of the root *si*, to bind, is there left in *μάσθλη* for *ιμάσθλη*, the thong of a whip? Turanian languages cannot afford such words as *âge* in their dictionaries. It is an indispensable requirement in a nomadic language that it should be intelligible to many, though their intercourse be but scanty. It requires tradition, society, and literature to maintain words and forms which can no longer be analysed at once. Such words would seldom spring up in nomadic languages, or if they did, they would die away with each generation.

The Aryan verb contains many forms in which the personal pronoun is no longer felt distinctly. And

yet tradition, custom, and law preserve the life of these veterans, and make us feel unwilling to part with them. But in the ever-shifting state of a nomadic society no debased coin can be tolerated in language, no obscure legend accepted on trust. The metal must be pure, and the legend distinct; that the one may be weighed, and the other, if not deciphered, at least recognised as a well-known guarantee. Hence the small proportion of irregular forms in all agglutinative languages.<sup>1</sup>

A Turanian might tolerate the Sanskrit

as-mi, a-si,      as-ti, 's-mas,    's-tha, 's-anti,  
I am,    thou art,    he is,    we are,    you are,    they are;

or even the Latin

's-um,    e-s,      es-t,    'su-mus,    es-tis,    'sunt.

In these instances, with a few exceptions, root and affix are as distinguishable as, for instance, in Turkish :

bakar-im,	bakar-sin,	bakar,
I regard,	thou regardest,	he regards.
bakar-iz,	bakar-siniz,	bakar-lar,
we regard,	you regard,	they regard.

But a conjugation like the Hindustani, which is a modern Aryan dialect,

hún, hai, hai, hain, ho, hain,

would not be compatible with the original genius of the Turanian languages, because it would not answer the requirements of a nomadic life. Turanian dialects exhibit either no terminational distinctions at all,

<sup>1</sup> The Abbé Molina states that the language of Chuli is entirely free from irregular forms (Du Ponceau, *Mémoire*, p. 90).

as in Mandshu, which is a Tungusic dialect; or a complete and intelligible system of affixes, as in the spoken dialect of Nyertchinsk, equally of Tungusic descent. But a state of conjugation in which, through phonetic corruption, the suffix of the first person singular and plural and of the third person plural are the same, where there is no distinction between the second and third persons singular, and between the first and third persons plural, would in a Turanian dialect, which had not yet been fixed by literary cultivation, lead to the adoption of new and more expressive forms. New pronouns would have to be used to mark the persons, or some other expedient be resorted to for the same purpose.

And this will make it clear why the Turanian languages, or in fact all languages in this second or agglutinative stage, though protected against phonetic corruption more than the Aryan and Semitic languages, are so much exposed to the changes produced by dialectical regeneration. A Turanian retains, as it were, the consciousness of his language and grammar. The idea, for instance, which he connects with a plural is that of a noun followed by a syllable indicative of plurality; a passive with him is a verb followed by a syllable expressive of suffering, or eating, or going.<sup>1</sup> Now these determinative ideas may be expressed in various ways, and though in one and the same clan, and during one period of time, a certain number of terminations would become stationary, and be assigned to the expression of certain grammatical categories, such as the plural, the pas-

<sup>1</sup> *Letter on the Turanian Languages*, p. 206.

sive, the genitive, different hordes, as they separated, would still feel themselves at liberty to repeat the process of grammatical composition, and defy the comparative grammarian to prove the identity of the terminations, even in dialects so closely allied as Finnish and Hungarian, or Tamil and Telugu.

It must not be supposed, however, that Turanian or agglutinative languages are for ever passing through this process of grammatical regeneration. Where nomadic tribes approach to a political organisation, their language too, though Turanian or agglutinative, may approach to the system of political or traditional languages, such as Sanskrit or Hebrew. This is particularly the case with the most advanced members of the Turanian family, such as the Turkish, the Hungarian, the Finnish, the Tamil, Telugu, &c. Many of their grammatical terminations have suffered by phonetic corruption, but they have not been replaced by new and more expressive words. The termination of the plural is *lu* in Telugu, and this is supposed to be a mere corruption of *gal*, the termination of the plural in Tamil. The only characteristic Turanian feature which always remains is this,—the root is not obscured.

## CHAPTER XI.

### URAL-ALTAIC FAMILY.

WE may now proceed to examine the principal languages belonging to the *Ural-Altai* Family.

This family comprises the *Samoyedic*, *Tungusic*, *Mongolic*, *Turkic* (or *Tataric*), and *Finnic*, or *Finno-Ugric* classes. Among these we can distinguish three distinct *nuclei*, the *Samoyedic*, the *Altai*, comprising the *Tungusic*, *Mongolic* and *Turkic*, and the *Finno-Ugric*.

#### The Samoyedic.

The tribes speaking Samoyedic dialects are spread along the Yenisei and Ob rivers, and were pushed more and more North by their Mongolic successors. They have now dwindled down to about 16,000 souls. Five dialects, however, have been distinguished in their language by Castrén, the *Yurakian*, *Tawgyan*, *Yeniseian*, *Ostjako-Samoyede*, and *Kamassinian*, with several local varieties.

The vocalic harmony is most carefully preserved in the *Kamassinian* dialect, but seems formerly to have existed in all. The Samoyedic has no gender of nouns, but three numbers, singular, dual, and plural, and eight cases. The verb has two tenses, an Aorist (present and future) and a Preterite. Besides the indicative, there is a subjunctive and an imperative.

**Altaic Languages.**

The name Altaic comprehends the Tungusic, Mongolic, and Turkic languages. Some of the Tungusic and Mongolic dialects represent the lowest phase of agglutination, which in some cases is as yet no more than juxta-position, while in Turkish agglutination has really entered into the inflectional phase. The vocalic harmony prevails throughout.

**Tungusic Class.**

The *Tungusic* class extends from China northward to Siberia and westward to 113°, where the river Tunguska partly marks its frontier. The Tungusic tribes in Eastern Siberia are under Russian sway. They consist of about 70,000 souls. Some are called *Tchapogires*, others *Orotongs*. Other Tungusic tribes belong to the Chinese empire, and are known by the name of *Mundshu*, a name taken after they had conquered China in 1644, and founded the present imperial dynasty. Their country is called *Mandshuria*.

**Mongolic Class.**

The original seats of the people who speak Mongolic dialects lie near the Lake Baikal and in the eastern parts of Siberia, where we find them as early as the ninth century after Christ. They were divided into three classes, the *Mongols* proper, the *Burjats*, and the *Olots* or *Kalmiuks*. Chingis-Khan (1227) united them into a nation and founded the Mongolian empire, which included, however, not only Mongolic, but likewise Tungusic and Turkic (commonly, though wrongly, called Tataric) tribes.

The name of Tatar soon became the terror of Asia and Europe, and changed into Tartar, as if derived from *Tartarus*; it was applied promiscuously to all the nomadic warriors whom Asia then poured forth over Europe. Originally Tatar was a name of the Mongolic races, but through their political ascendancy in Asia after Chingis-Khan, it became usual to call all the tribes which were under Mongolian sway by the name of Tatar. In linguistic works Tataic is now used in two several senses. Following the example of writers of the Middle Ages, Tataric, like Scythian in Greek, has been fixed upon as the general term comprising all languages spoken by the nomadic tribes of Asia. Secondly, Tataric, by a strange freak, has become the name of that class of languages of which the Turkish is the most prominent member. While the Mongolic class—that which in fact has the greatest claims to the name of Tataric—is never so called, it has become an almost universal custom to apply this name to the third or Turkic branch of the Ural-Altai family; and the races belonging to this branch have in many instances themselves adopted the name.

These Turkish, or, as they are more commonly called, Tataric races, were settled on the northern side of the Caspian Sea, and on the Black Sea, and were known as Komanes, Pechenegs, and Bulgars, when conquered by the Mongolic army of the son of Chingis-Khan, who founded the Kapchakian empire, extending from the Dniester to the Yemba and the Kirgisian steppes. Russia for two centuries was under the sway of these Khans, known as the Khans of the Golden Horde.



Their empire was dissolved towards the end of the fifteenth century, and several smaller kingdoms rose out of its ruins. Among these, Krim, Kasan, and Astrachan were the most important. The princes of these kingdoms still gloried in their descent from Chingis-Khan, and had hence a real right to the name of Mongols or Tatars. But their armies and subjects also, who were not of Mongol, but of Turkish blood, received the name of their princes; and their languages continued to be called Tataric, even after the Turkish tribes by whom they were spoken had been brought under the Russian sceptre, and were no longer governed by Khans of Mongolic or Tataric origin. It would therefore be desirable to use Turkic instead of Tataric, when speaking of the third branch of the northern division of the Ural-Altai family, did not a change of terminology generally produce as much confusion as it remedies. The recollection of their non-Tataric, i.e. non-Mongolic, origin remains, it appears, among the so-called Tatars of Kasan and Astrachan. If asked whether they are Tatars, they reply No; and they call their language Turki or Turuk, but not Tataric. Nay, they consider Tatar as a term of reproach, synonymous with robber, evidently from a recollection that their ancestors had once been conquered and enslaved by Mongolic, that is, Tataric, tribes. All this rests on the authority of Klaproth, who during his stay in Russia had great opportunities of studying the languages spoken on the frontiers of this half-Asiatic empire.

The conquests of the Mongols, or the descendants of Chingis-Khan, were not confined, however, to these

Turkish tribes. They conquered China in the East, where they founded the Mongolic dynasty of Yuan, and in the West, after subduing the Khalifs of Bagdad and the Sultans of Iconium, they conquered Moscow, and devastated the greater part of Russia. In 1240 they invaded Poland, in 1241 Silesia. Here they recoiled before the united armies of Germany, Poland, and Silesia. They retired into Moravia, and, having exhausted that country, occupied Hungary.

At that time they had to choose a new Khan, which could only be done at Karakorum, the old capital of their empire. Thither they withdrew to elect an emperor to govern an empire which then extended from China to Poland, from India to Siberia. But a realm of such vast proportions could not be long held together, and towards the end of the thirteenth century it broke up into several independent states, all under Mongolian princes, but no longer under one Khan of Khans. Thus new independent Mongolic empires arose in China, Turkestan, Siberia, Southern Russia, and Persia. In 1360 the Mongolian dynasty was driven out of China; in the fifteenth century they lost their hold on Russia. In Central Asia they rallied once more under Timur (1369), whose sway was again acknowledged from Karakorum to Persia and Anatolia. But, in 1468, this empire also fell by its own weight, and for want of powerful rulers like Chingis-Khan or Timur. In Jagatai alone—the country extending from the Aral lake to the Hindu-kush between the rivers Oxus and Yaxartes (Jihon and Sihon), and once governed by Jagatai, the son of Chingis-Khan—the Mongolian dynasty maintained

itself, and thence it was that Baber, a descendant of Timur, conquered India, and founded there a Mongolian dynasty, surviving up to our own times in the Great Moguls of Delhi. Most Mongolic tribes are now under the sway of the nations whom they once had conquered, the Tungusic sovereigns of China, the Russian Czars, and the Turkish Sultans.

The Mongolic language, although spoken (but not continuously) from China as far as the Volga, has given rise to but few dialects. Next to Tungusic, the Mongolic is the poorest language of the Ural-Altai family, and the scantiness of grammatical terminations accounts for the fact that, as a language, it has remained very much unchanged. There is, however, a distinction between the language as spoken by the Eastern, Western, and Northern tribes; and incipient traces of grammatical life have lately been discovered by Castrén, the great Swedish traveller and Turanian philologist, in the spoken dialects of the Buriäts. In it the persons of the verb are distinguished by affixes, while, according to the rules of Mongolic grammar, no other dialect distinguishes in the verb between *amo*, *amas*, *amat*.

The Mongols who live in Europe have fixed their tents on each side of the Volga and along the coast of the Caspian Sea near Astrachan. Another colony is found south-east of Sembirsk. They belong to the Western branch, and are Ölöts or Kalmüks, who left their seats on the Koko-nur, and entered Europe in 1662. They proceeded from the clans Dürbet and Torgod, but most of the Torgods returned again in

1770, and their descendants are now scattered over the Kirgisian steppes.

Some Mongolic tribes, called Aimak and Hazara, live between Herat and Cabul, on the frontier of the North-Western Provinces of India.

#### Turkic Class.

Much more important are the Turkic languages, most prominent among which is the Turkish itself, or the Osmanli of Constantinople. The number of the Turkish inhabitants of European Turkey is indeed small. It is generally stated at 2,000 000; but Shafarik estimates the number of genuine Turks at not more than 700 000, who rule over fifteen millions of people. The different Turkic dialects of which the Osmanli is one, occupy one of the largest linguistic areas, extending from the Lena and the Polar Sea down to the Adriatic.

The most ancient name by which the Turkic tribes of Central Asia were known to the Chinese was *Hiong-nu*. These Hiong-nu founded an empire (206 B. C.) comprising a large portion of Asia, west of China. Engaged in frequent wars with the Chinese, they were defeated at last in the middle of the first century after Christ. Thereupon they divided into a northern and southern empire; and, after the southern Hiong-nu had become subjects of China, they attacked the northern Hiong-nu, together with the Chinese, and, driving them out of their seats between the rivers Amur and Selenga and the Altai mountains, westward, they are supposed to have given the first impulse to the inroads of the barbarians into

Europe. In the beginning of the third century, the Mongolic and Tungusic tribes, who had filled the seats of the northern Hiung-nu, had grown so powerful as to attack the southern Hiung-nu and drive them from their territories. This occasioned a second migration of Asiatic tribes towards the west, which culminated under Attila (died 453).

Another name by which the Chinese designate these Hiung-nu or Turkish tribes is *Tu-kiu*. This *Tu-kiu* is supposed to be identical with Turk. Although the tribe to which this name was given was originally but small, it began to spread in the sixth century from the Altai to the Caspian, and it was probably to them that in 569 the Emperor Justinian sent an ambassador in the person of Semarchos. The empire of the *Tu-kiu* was destroyed in the eighth century, by the 'Hui-'he (Chinese Kao-che), a branch of the Uigurs. This tribe, equally of Turkish origin, maintained itself for about a century, and was then conquered by the Chinese and driven back from the northern borders of China. Part of the 'Hui-'he occupied Tangut, and, after a second defeat by the Mongolians in 1257, the remnant proceeded still farther west, and joined the Uigurs, whose tents were pitched near the towns of Turfan, Kashgar, Khamil, and Aksu.

The *Yueh-chi* also, the so-called Indo-Scythian conquerors of India, belonged to the same race, and are often called the White Huns. Pressed by the Hiung-nu, they invaded Bactria (about 128 B.C.), then held by the Tochâri, and mixed with the Tochâri, they conquered the North of India about the beginning of

our era. They are the 'Εφθαλίται of the Greek, the Hayathalah or Haithal (i. e. Habathilah) of the Persian writers.<sup>1</sup>

These facts, gleaned chiefly from Chinese historians, show from the very earliest times the westward tendency of the Turkish nations. In 568 A. D. Turkish tribes occupied the country between the Volga and the sea of Azov, and numerous reinforcements have since strengthened their position in those parts.

The northern part of Persia, west of the Caspian Sea, Armenia, the south of Georgia, Shirwan, and Dagestan, harbour a Turkish population, known by the general name of *Turkman* or *Kisil-bash* (Quazal-báshí, i. e. Red-caps). They are nomadic robbers, and their arrival in these countries dates from the eleventh and twelfth centuries.

East of the Caspian Sea the Turkman tribes are under command of the Usbek-Khans of Khiva, Fergana, and Bokhara. They call themselves, however, not subjects, but guests of these Khans. Still more to the east the Turkmans are under Chinese sovereignty, and in the south-west they reach as far as Khorasan and other provinces of Persia.

The *Usbeks*, descendants of the 'Hui-'he and Uigurs, and originally settled in the neighbourhood of the towns of Khoten, Kashgar, Turfan, and Khamil, crossed the Yazartes in the sixteenth century, and, after several successful campaigns, gained possession of Balkh, Kharism (Khiva), Bokhara, and Fergana. In the latter country and in Balkh they have become

<sup>1</sup> See M. M., *India, what can it teach us?* pp. 274-277.

agricultural; but generally their life is nomadic, and too warlike to be called pastoral.

Another Turkish tribe are the *Nogái*, west of the Caspian, and also north of the Black Sea. To the beginning of the seventeenth century they lived north-east of the Caspian, and the steppes on the left of the Irtish bore their name. Pressed by the Kalmuks, a Mongolic tribe, the Nogáis advanced westward as far as Astrachan. Peter I. transferred them thence to the north of the Caucasian mountains, where they grazed their flocks on the shores of the Kuban and the Kuma. One horde, that of Kundur, remained on the Volga, subject to the Kalmuks.

Another tribe of Turkish origin in the Caucasus are the *Buzianes*. They now live near the sources of the Kuban, but before the fifteenth century within the town Majari, on the Kuma.

A third Turkish tribe in the Caucasus are the *Kumúks*, on the rivers Sunja, Aksai, and Koisu: subjects of Russia, though under native princes.

The southern portion of the Ural mountains has long been inhabited by the *Bashkirs*, a race considerably mixed with Mongolic blood, savage and ignorant, subjects of Russia and Mohammedans by faith.<sup>1</sup> Their

<sup>1</sup> With regard to the Bashkirs as well as other Ugro-Altai tribes, I am afraid that my information was chiefly derived from works which were considered authoritative thirty years ago, and would require occasional correction after what has happened since my Lectures were first delivered. I received from time to time most useful notes from my readers, which I have tried to incorporate in my book. Mr. M. A. MORRISON, Agent to the British and Foreign Bible Society for South Russia, the Caucasus and Turkestan, wrote to me last April (1889), that he found the Bashkirs by no means savage and ignorant,

land is divided into four Roads, called the Roads of Siberia, of Kasan, of Nogai, and of Osa, a place on the Kama. Among the Bashkirs, and in villages near Ufa, is now settled a Turkish tribe, the *Meshcherüks*, who formerly lived near the Volga.

The tribes near the Lake of Aral are called *Kara-Kalpak*. They are subject partly to Russia, partly to the Khans of Khiva.

The *Turks of Siberia*, commonly called Tatars, are partly original settlers, who crossed the Ural and founded the Khanat of Sibir, partly later colonists. Their chief towns are Tobolsk, Yeniseisk, and Tomsk. Separate tribes are the Uran'hat on the Chulym, and the Barabas in the steppes between the Irtysh and the Ob.

The dialects of these Siberian Turks are considerably intermingled with foreign words, taken from Mongolic, Samoyedic, or Russian sources. Still they resemble one another closely in all that belongs to the original stock of the language.

In the north-east of Asia, on both sides of the river Lena, the *Yakuts* form the most remote link in the Turkic chain of languages. Their male population has lately risen to 100,000, while in 1795 it amounted only to 50,066. The Russians became first acquainted with them in 1620. They call themselves Sakha, and are mostly heathen, though Christianity is gaining

but rather mild and inoffensive, and mostly occupied with agriculture. This shows the danger of all generalisation with regard to national character, for the description of the Bashkirs by German officers who had known them during the Napoleonic wars, did certainly not represent them as mild and inoffensive. Their seats are at present on the Ural, not in the Altaic mountains.



ground among them. According to their traditions, their ancestors lived for a long time in company with Mongolic tribes, and traces of this intercourse can still be discovered in their language. Attacked by their neighbours, they built rafts and floated down the river Lena, where they settled in the neighbourhood of what is now Yakutzk. Their original seats seem to have been north-west of Lake Baikal. Their language has preserved the Turkic type more completely than any other Turco-Tataric dialect. Separated from the common stock at an early time, and removed from the disturbing influences to which the other dialects were exposed, whether in war or in peace, the Yakutian has preserved so many primitive features of Tataric grammar, that even now it may be used as a key to the grammatical forms of the Osmanli and other more cultivated Turkic dialects.

Southern Siberia is the mother-country of the *Kirgis*, one of the most numerous tribes of Turco-Tataric origin. The Kirgis lived originally between the Ob and Yenisei, where Mongolic tribes settled among them. At the beginning of the seventeenth century the Russians became acquainted with the Eastern Kirgis, then living along the Yenisei. In 1606 they had become tributary to Russia, and after several wars with two neighbouring tribes, they were driven more and more south-westward, till they left Siberia altogether at the beginning of the eighteenth century. They now live at Burut, in Chinese Turkestan, together with the Kirgis of the 'Great Horde,' near the town of Kashgar, and north as far as the Irtish.

Another tribe is that of the *Western Kirgis*, or *Kirgis-Kasak*, who are partly independent, partly tributary to Russia and China.

Of what are called the three Kirgis Hordes, from the Caspian Sea east as far as Lake Tenghiz, the Small Horde is fixed in the west, between the rivers Yemba and Ural, the Great Horde in the east; while the most powerful occupies the centre between the Sarasu and Yemba, and is called the Middle Horde. Since 1819, the Great Horde has been subject to Russia. Other Kirgis tribes, though nominally subject to Russia, have often been her most dangerous enemies.

The *Turks of Asia Minor and Syria* came from Khorasan and Eastern Persia, and are *Turkumans*, or remnants of the Seljuks, the rulers of Persia during the Middle Ages. It was here that Turkish received its strong admixture of Persian words and idioms. The Osmanli, whom we are accustomed to call Turks *par excellence*, and who form the ruling portion of the Turkish empire, must be traced to the same source. They are Seljuks, and the Seljuks were a branch of the Ugurs. They are now scattered over the whole Turkish empire in Europe, Asia, and Africa, and their number amounts to between 11,000,000 and 12,000,000. They form the landed gentry, the aristocracy, and the bureaucracy of Turkey; and their language, the Osmanli, is spoken by persons of rank and education, and by all government authorities in Syria, in Egypt, at Tunis, and at Tripoli. It is heard even at the court of Teheran, and is understood by official personages in Persia. Osmanli is spoken in the neigh-

bourhood of Kars, Batoum, and generally by the Turks of Lazistan, but further east, commencing at Alexandropol (the Turkish Gumri), and right into Mazandaran, Ghilan, and Azerbaijan, the dialect of Azerbaijan prevails, which has its own literature and even its own newspaper, and differs considerably from the pure Osmanli.<sup>1</sup>

The rise of this powerful tribe of Osman, and the spreading of the Turkish dialect which is now emphatically called the Turkish, are matters of historical notoriety. We need not search for evidence in Chinese annals, or try to discover analogies between names that a Greek or an Arabic writer may by chance have heard and handed down to us, and which some of these tribes have preserved to the present day. The ancestors of the Osman Turks are men as well known to European historians as Charlemagne or Alfred. It was in the year 1224 that Soliman-shah and his tribe, pressed by Mongolians, left Khorasan and pushed westward into Syria, Armenia, and Asia Minor. Soliman's son, Ertoghrul, took service under Aladdin, the Seljuk Sultan of Iconium (Konieh), and, after several successful campaigns against Greeks and Mongolians, received part of Phrygia as his own. There he founded what was afterwards to become the basis of the Osman empire. During the last years of the thirteenth century the Sultans of Iconium lost their power, and their former vassals became independent sovereigns. Osman, after taking his share of the spoil in Asia, advanced through the Olympic passes into Bithynia, and was successful against the

<sup>1</sup> Letter from M. A. Morrison, see p. 415, note.

armies of the Emperors of Byzantium. Osman became henceforth the national name of his people. His son, Orkhan, whose capital was Prusa (Bursa), after conquering Nicomedia (1327) and Nicæa (1330), threatened the Hellespont. He took the title of Padishah, and his court was called the 'High Porte.' His son, Soliman, crossed the Hellespont (1357), and took possession of Gallipoli and Sestos. He thus became master of the Dardanelles. Murad I. took Adrianople (1362), made it his capital, conquered Macedonia, and, after a severe struggle, overthrew the united forces of the Slavonic races south of the Danube, the Bulgarians, Servians, and Croatians, in the battle of Kossova-polye (1389). He fell himself, but his successor Bayazeth followed his course, took Thessaly, passed Thermopylæ, and devastated the Peloponnesus. The Emperor of Germany, Sigismund, who advanced at the head of an army composed of French, German, and Slavonic soldiers, was defeated by Bayazeth on the Danube in the battle of Nicopolis, 1399. Bayazeth took Bosnia, and would have taken Constantinople, had not the same Mongolians, who in 1244 drove the first Turkish tribes westward into Persia, threatened again their newly-acquired possessions. Timur had grasped the reins fallen from the hands of Chingis-Khan: Bayazeth was compelled to meet him, and suffered defeat (1402) in the battle of Angora (Ankyra) in Galatia.

Europe now had respite, but not long. Timur died, and with him his empire fell to pieces, while the Osman army rallied again under Mahomet I. (1413), and re-gained its former power under Murad II.

(1421). Successful in Asia, Murad sent his armies back to the Danube, and after long-continued campaigns, and powerful resistance from the Hungarians and Slaves under Hunyad, he at last gained two decisive victories; Varna in 1444, and Kossova in 1448. Constantinople could no longer be held, and the Pope endeavoured in vain to rouse the chivalry of Western Europe to a crusade against the Turks. Mahomet II. succeeded in 1451, and on the 26th of May, 1453, Constantinople, after a valiant resistance, fell, and became the capital of the Turkish empire.

#### **Turkish Grammar.**

It is a real pleasure to read a Turkish grammar, even though one may have no wish to acquire it practically. The ingenious manner in which the numerous grammatical forms are brought out, the regularity which pervades the system of declension and conjugation, the transparency and intelligibility of the whole structure, must strike all who have a sense for that wonderful power of the human mind which is displayed in language. Given so small a number of predicative and demonstrative roots as would hardly suffice to express the commonest wants of human beings, to produce an instrument that shall render the faintest shades of feeling and thought; given a vague infinitive or a stern imperative, to derive from it such moods as an optative or subjunctive, and tenses as an aorist or paulo-post future; given incoherent utterances, to arrange them into a system where all is uniform and regular, all combined and harmonious; such is the work of

the human mind which we see realised in language. But in most languages nothing of this early process remains visible. They stand before us like solid rocks, and the microscope of the philologist alone can reveal the remains of organic life with which they are built up.

In the grammar of the Turkic languages, on the contrary, we have before us a language of perfectly transparent structure, and a grammar the inner workings of which we can study, as if watching the building of cells in a crystal beehive. An eminent orientalist remarked, 'We might imagine Turkish to be the result of the deliberations of some eminent society of learned men.' But no such society could have devised what the mind of man produced, left to itself in the steppes of Tartary, and guided only by its innate laws, or by an instinctive power as wonderful as any within the realm of nature.

Let us examine a few forms. 'To love,' in the most general sense of the word, or 'love,' as a root, is in Turkish *sev*. This does not yet mean 'to love,' which is *sevmek*, or 'love' as a substantive, which is *sevgü* or *sevi*; it only expresses the general idea of loving in the abstract. This root, as we remarked before, can never be touched. Whatever syllables may be added for the modification of its meaning, the root itself must stand out in full prominence like a pearl set in diamonds. It must never be changed or broken, assimilated or modified, as in the English I fall, I fell, I take, I took, I think, I thought, and similar forms. With this one restriction, however, we are free to treat it at pleasure.

Let us suppose we possessed nothing like our conjugation, but had to express such ideas as I love, thou lovest, and the rest, for the first time. Nothing would seem more natural now than to form an adjective or a participle, meaning 'loving,' and then add the different pronouns, as I loving, thou loving, &c. Exactly this the Turks have done. We need not inquire at present how they produced what we call a participle. It was a task, however, by no means so facile as we now conceive it. In Turkish, one participle is formed by *er*. *Sev+er* would, therefore, mean lov+er or lov+ing. *Thou* in Turkish is *sen*, and as all modificatory syllables are placed at the end of the root, we get *sev-er-sen*, thou lovest. *You* in Turkish is *siz*; hence *sev-er-siz*, you love. In these cases the pronouns and the terminations of the verb coincide exactly. In other persons the coincidences are less complete, because the pronominal terminations have sometimes been modified, or, as in the third person singular, *sever*, dropt altogether as unnecessary. A reference to other cognate languages, however, where either the terminations or the pronouns themselves have maintained a more primitive form, enables us to say that, in the original Turkish verb, all persons of the present were formed by means of pronouns appended to this participle *sever*. Instead of 'I love, thou lovest, he loves,' the Turkish grammarian says, 'lover-I, lover-thou, lover.'

But these personal terminations are not the same in the imperfect as in the present.

Present	Imperfect
Sever-im, I love	sever-di-m, I loved
Sever-sen	sever-di-ñ
Sever	sever-di
Sever-iz	sever-di-k (miz)
Sever-siz	sever-di-ñiz
Sever-ler	sever-di-ler

We need not inquire as yet into the origin of the *di*, added to form the imperfect; but it should be stated that in the first person plural of the imperfect a various reading occurs in other Tataric dialects, and that *miz* is used there instead of *k*. Now, looking at these terminations, *m*, *ñ*, *i*, *miz*, *ñiz*, and *ler*, we find that they are exactly the same as the possessive pronouns used after nouns. As the Italian says *fratel-mo*, my brother, as in Hebrew we say *El-i*, God (of) I, i.e. my God, the Tataric languages form the phrases 'my house, thy house, his house,' by possessive pronouns appended to substantives. A Turk says

Bâbâ father	bâbâ-m	my father
Aghâ lord	aghâ-ñ	thy lord
El hand	el-i	his hand
Oghlu son	oghlu-muz	our son
Anâ mother	anâ-niz	your mother
Kitâb book	kitâb-leri	their book.

We may hence infer that in the imperfect these pronominal terminations were originally taken in a possessive sense, and that, therefore, what remains after the personal terminations are removed, *sever-di*, was never an adjective or a participle, but must have been originally a substantive capable of receiving terminal possessive pronouns; that is, the idea origi-



nally expressed by the imperfect could not have been 'loving-I,' but 'love of me.'

How, then, could this convey the idea of a past tense as contrasted with the present? Let us look to our own language. If desirous to express the perfect, we say, I have loved, *j'ai aimé*. This 'I have' meant originally, 'I possess,' and in Latin '*amicus quem amatum habeo*' signified in fact a friend whom I hold dear—not, as yet, whom I *have* loved. In the course of time, however, these phrases 'I have said, I have loved,' took the sense of the perfect, and of time past—and not unnaturally, inasmuch as what I *hold*, or *have* done, *is* done—done, as we say, and past. In place of an auxiliary possessive verb, the Turkish language uses an auxiliary possessive pronoun to the same effect. 'Paying belonging to me,' equals 'I have paid'; in either case, a phrase originally possessive took a temporal signification, and became a past or perfect tense. This, however, is the very anatomy of grammar, and when a Turk says 'severdim,' he is, of course, as unconscious of its literal force, 'loving belonging to me,' as of the circulation of his blood.

The most ingenious part of Turkish is undoubtedly the verb. Like Greek and Sanskrit, it exhibits a variety of moods and tenses, sufficient to express the nicest shades of doubt, of surmise, of hope, and supposition. In all these forms the root remains intact, and sounds like the key-note through all the various modulations produced by the changes of person, number, mood, and time. But there is one feature peculiar to the Turkish verb, of which

but scant analogies can be discovered in other languages—the power of producing new verbal bases by the mere addition of certain letters, which give, to every verb a negative, or causative, or reflexive, or reciprocal meaning.

*Sev-mek*, for instance, as a simple root, means to love. By adding *in*, we obtain a reflexive verb, *sev-in-mek*, which means to love oneself, or rather, to rejoice, to be happy. This may now be conjugated through all moods and tenses, *sevin* being in every respect equal to a new root. By adding *ish* we form a reciprocal verb, *sev-ish-mek*, to love one another.

To each of these three forms a causative sense may be imparted by the addition of the syllable *dir*. Thus

- i. *sev-mek*, to love, becomes iv. *sev-dir-mek*, to cause to love.
- ii. *sev-in-mek*, to rejoice, becomes v. *sev-in-dir-mek*, to cause to rejoice.
- iii. *sev-ish-mek*, to love one another, becomes vi. *sev-ish-dir-mek*, to cause one to love one another.

Each of these six forms may again be turned into a passive by the addition of *il*. Thus

- i. *sev-mek*, to love, becomes vii. *sev-il-mek*, to be loved.
- ii. *sev-in-mek*, to rejoice, becomes viii. *sev-in-il-mek*, to be rejoiced at.
- iii. *sev-ish-mek*, to love one another, becomes ix. *sev-ish-il-mek*, not translatable.
- iv. *sev-dir-mek*, to cause one to love, becomes x. *sev-dir-il-mek*, to be brought to love.
- v. *sev-in-dir-mek*, to cause to rejoice, becomes xi. *sev-in-dir-il-mek*, to be made to rejoice.
- vi. *sev-ish-dir-mek*, to cause them to love one another, becomes xii. *sev-ish-dir-il-mek*, to be brought to love one another.

This, however, is by no means the whole verbal contingent at the command of a Turkish grammarian. Every one of these twelve secondary or tertiary roots may again be turned into a negative by the mere addition of *me*. Thus, *sev-mek*, to love, becomes *sev-me-mek*, not to love. And if it is necessary to express the impossibility of loving, the Turk has a new root at hand to convey even that idea. Thus while *sev-me-mek* denies only the fact of loving, *sev-eme-mek*, denies its possibility, and means not to be able to love. By the addition of these two modificatory syllables, the number of derivative roots is at once raised to thirty-six. Thus

- i. *sev-mek*, to love, becomes xiii. *sev-me-mek*, not to love.
- ii. *sev-in-mek*, to rejoice, becomes xiv. *sev-in-me-mek*, not to rejoice.
- iii. *sev-ish-mek*, to love one another, becomes xv. *sev-ish-me-mek*, not to love one another.
- iv. *sev-dir-mek*, to cause to love, becomes xvi. *sev-dir-me-mek*, not to cause one to love.
- v. *sev-in-dir-mek*, to cause to rejoice, becomes xvii. *sev-in-dir-me-mek*, not to cause one to rejoice.
- vi. *sev-ish-dir-mek*, to cause them to love one another, becomes xviii. *sev-ish-dir-me-mek*, not to cause them to love one another
- vii. *sev-il-mek*, to be loved, becomes xix. *sev-il-me-mek*, not to be loved
- viii. *sev-in-il-mek*, to be rejoiced at, becomes xx. *sev-in-il-me-mek*, not to be the object of rejoicing
- ix. *sev-ish-il-mek*, if it were used, would become xxi. *sev-ish-il-me-mek*, neither form being translatable
- x. *sev-dir-il-mek*, to be brought to love, becomes xxii. *sev-dir-il-me-mek*, not to be brought to love.
- xi. *sev-in-dir-il-mek*, to be made to rejoice, becomes xxiii. *sev-in-dir-il-me-mek*, not to be made to rejoice.

xii. *sev-ish-dir-il-mek*, to be brought to love one another, becomes xxiv *sev-ish-dir-il-me-mek*, not to be brought to love one another.<sup>1</sup>

Some of these forms are of course of rare occurrence, and with many verbs these derivative roots, though possible grammatically, would be logically impossible. Even a verb like 'to love,' perhaps the most pliant of all, resists some of the modifications to which a Turkish grammarian is fain to subject it. It is clear, however, that wherever a negation can be formed, the idea of impossibility also can be super-added, so that by substituting *eme* for *me*, we should raise the number of derivative roots to thirty-six. The very last of these, xxxvi. *sev-ish-dir-il-eme-mek*, would be perfectly intelligible, and might be used, for instance, if, in speaking of the Sultan and the ('zar we wished to say, that it was impossible that they should be brought to love one another.

#### Finno-Ugric Class.

We now proceed to consider the Finnic or Finno-Ugric class of languages.

It is generally supposed that the original seat of the Fin tribes was in the Ural mountains, and their languages have sometimes been called *Uralic*. From this centre they spread east and west, and southward

<sup>1</sup> Professor Pott, in the second edition of his *Etymologische Forschungen*, ii s 118, refers to similar verbal formations in Arabic, in the language of the Gallas, &c. Analogous forms, according to Dr. Gunderdt, exist also in Tulu, but they have not yet been analysed as successfully as in Turkish. Thus *malpuwe* is I do; *malpéwe*, I do habitually; *malpurúwe*, I do all at once; *malpáwe*, I cause to do; *malpawdye*, I cause not to do.

in ancient times, as far as the Black Sea, where Finnic tribes, together with Mongolic and Turkic, are supposed to have been known to the Greeks under the comprehensive and convenient name of Scythians. As we possess no literary documents of any of these nomadic nations, it is impossible to say, even where Greek writers have preserved their barbarous names, to what branch of the vast North-Turanian class they belonged. Their habits were probably identical before the Christian era, during the Middle Ages, and at the present day. One tribe takes possession of a tract and retains it for several generations, and gives its name to the meadows where it tends its flocks, and to the rivers where the horses are watered. If the country be fertile, it will attract the eye of other tribes; wars begin, and if resistance be hopeless, hundreds of families fly from their paternal pastures, to migrate perhaps for generations, for migration they find a more natural life than permanent habitation; and after a time we may rediscover their names a thousand miles distant. Or two tribes will carry on their warfare for ages, till with reduced numbers both have perhaps to make common cause against some new enemy.

During these continued struggles their languages lose as many words as men are killed on the field of battle. Some words, we might say, go over, others are made prisoners, and exchanged again during times of peace. Besides, there are parleys and challenges, and at last a dialect is produced which may very properly be called a language of the camp (Urdu-zabân, camp-language, is the proper name of

Hindustani, formed in the armies of the Mogul emperors), but where it is difficult for the philologist to arrange the living and to number the slain, unless some salient points of grammar have been preserved throughout the medley. We saw how a number of tribes may be at times suddenly gathered by the command of a Chingis-Khan or Timur, like billows heaving and swelling at the call of a thunder-storm. One such wave rolling on from Karakorum to Liegnitz may sweep away all the sheepfolds and landmarks of centuries, and when the storm is over, a thin crust will, as after a flood, remain, concealing the underlying stratum of people and languages.

**Castrén's Classification.**

On the evidence of language, the Finno-Ugic family has been divided by Castrén into four branches,

(1) The *Ugic*, comprising Ostjakian, Vogulian, and Hungarian.

(2) The *Bulgaric*,<sup>1</sup> comprising Tcheremissian and Mordvinian.

(3) The *Permian*, comprising Syrianian, Permian, and Votjakian.

(4) The *Finnic* (or *Chudic*), comprising Finnish, Estonian, Lapponian, Livonian, and Votian.

<sup>1</sup> The name *Bulgaric* is not borrowed from Bulgaria, on the Danube; Bulgaria, on the contrary, received its name (replacing Moesia) from Bulgarian armies by whom it was conquered in the seventh century. Bulgarian tribes marched from the Volga to the Don, and after remaining for a time under the sovereignty of the Avars on the Don and Dnieper, they advanced to the Danube in 635, and founded there the Bulgarian kingdom. This has retained its name to the present day, though the original Bulgarians have long been absorbed and replaced by Slavonic inhabitants, and both brought under Turkish sway since 1392.

**Hunfalvy's Classification.**

Later researches induced P. Hunfalvy to modify this classification, first proposed by Castrén, and to divide the whole stock into two branches,

(1) The *Western or Finnic*, comprising the Finnish and the Lapponian.

(2) The *Eastern or Ugrian*, comprising the other three branches.

Later on he classed Finnish, Estonian, Karelian, Votian, Vepsian, and Livonian as true *Finnic*; while Permian, Syriani, Votjakian, Vogulian, Ostjakian, Magyar, Tcheremissian and Mordvinian were classed as *Ugrian*, less closely held together. Lapponian was then supposed to hold an intermediate position between the two.

**Budenz's Classification.**

Still more recently a new division was advocated by Budenz in his essay, *Über die Verzweigung der Ugrischen Sprachen*, Göttingen, 1879. He proposed to divide these languages into

(1) a North-Ugrian branch, i. e. Lapponian, Syrjäni, Votjakian, Vogul-Ostjakian, and Magyar;

(2) a South-Ugrian branch, i. e. Finnish, Mordvinian, and Tcheremissian.

The chief distinction between these two branches would seem to consist in the initial n, which is palatal in the Northern, dental in the Southern branch.

In the further progress of phonetic change, the Lapponian was separated from the rest of the North-Ugrian branch; Mordvinian and Tcheremissian from the South-Ugrian branch.

**Donner's Classification.**

After an examination of the classification of his predecessors, Professor Donner in his essay on *Die gegenseitige Verwandtschaft der Finnisch-Ugrischen Sprachen*, published at Helsingfors, 1879, has proposed still another classification, based on a careful intercomparison of the phonetic and grammatical structure of the principal Finno-Ugric languages. He accepts the division into two branches, the *Finnic* and the *Ugric*, the later comprising Ostjakian, Vogulian, and Magyar, the former all the rest. He then proceeds to trace the ramifications of each branch according to certain peculiarities which different languages do or do not share in common, and arrives in the end at the following result.

**Finno-Ugric Family.****I Ugric Branch, represented by—**

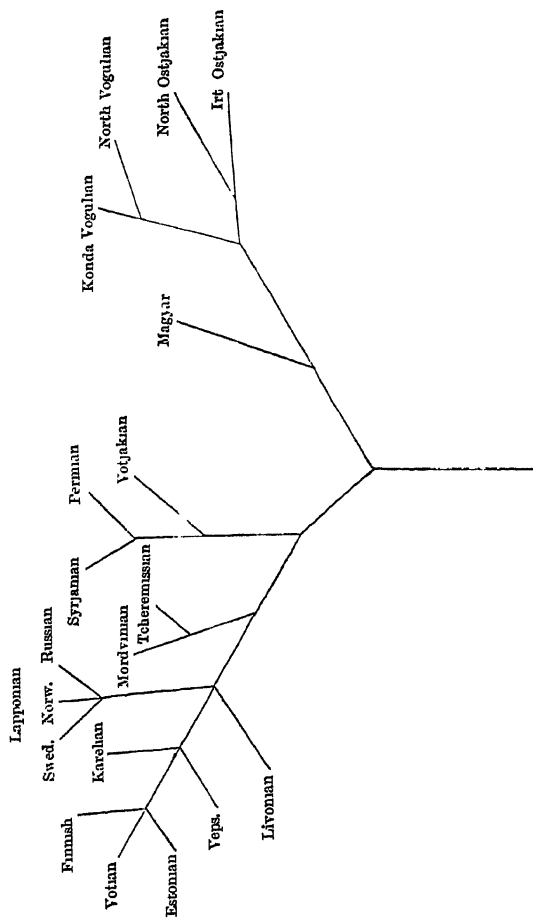
- (1) Irtish- and Surgut-Ostjakes, and North-Ostjakes.
- (2) Sosva- or North-Voguls, and Konda-Voguls.
- (3) Magyars.

**II. Finnic Branch—**

- (a) Permian division,
  - (1) Syrjanen, Permians.
  - (2) Votjakes.
- (b) Volga-Baltic division,
  - (a) Volga group,
    - (1) Tcheremissians.
    - (2) Ersa- and Moksha-Mordvines.
  - (β) West-Finnic group,
    - (1) Russian, Norwegian, and Swedish Laps.
    - (2) Lives.
    - (3) Vepses.
    - (4) Ests.
    - (5) Votes.
    - (6) Fins.



The successive spreading of this family may be represented by the following outline:—



**Spreading of the Finno-Ugric Languages.**

Trusting to linguistic evidence alone, Professor Donner makes out the following history of the gradual spreading of the Finno-Ugric languages.

The Finnic branch must have started, he thinks, from its original home towards Europe, leaving successive settlements behind on its way towards the West. We do not know what caused the separation between the Volga-Baltic division and the Permian divisions. Possibly the pressure of Tatar tribes drove the Permians to move towards the north. The formation of the Permian numerals seems to have taken place under Tatar influences. The Volga-Baltic tribes remained together for some time, in contact with German tribes from whom they received the decimal method of counting, and a few words connected with higher culture. New historical convulsions drove the West-Finnic people more towards the west and the north, and during this period the German influence became considerable. To judge from the phonetic character of the words borrowed from German, which is more primitive than the Old Norse and Gothic, this period is supposed to have been anterior to the third century.

During the same time the Laps must have had their seats on the Eastern frontiers of the common group, which would explain their closer relation with the Tcheremissians. At this time a Lituianian influence begins to show itself. In Lapponian the number of Lituianian words is small. But after the Laps had migrated more northward, the Baltic

Fins, properly so-called, came into closer contact both with Lithuanians and Scandinavians.

About the same time the Magyars began their migrations. It was after the dismemberment of Attila's Hunnic Empire that the Ugrian tribes approached Europe. They were then called Onagurs, Saragurs, and Urogs; and in later times they appear in Russian chronicles as Ugry, the ancestors of the Hungarians.

These conclusions drawn from linguistic evidence alone, are confirmed by what history teaches us, and thus gain even greater probability.<sup>1</sup>

**Geographical Distribution.**

I. Ugrie Branch :

- (1) The Ostjakes live in the districts of Tobolsk and Tomsk, about 23,000 people.
- (2) The Voguls, about 7,000 people, are scattered on the Northern Ural, along the Konda and Sosva rivers.
- (3) The Magyars inhabit Hungary and parts of Siebenburgen.

II. Finnic Branch :

(a) Permian division,

- (1) The Syrjanes, about 90,000 people, live in the districts of Archangel and Vologda.

Their southern neighbours, the Permians, about 60 000, inhabit the districts of Perm and Vjatka. Their country was known to the Scandinavians under the name of Bjarma-land, then peopled by Karelian Fins.

<sup>1</sup> See Donner, *Die gegenseitige Verwandtschaft* (1879), pp. 146-158

- (2) The Votjakes, about 230,000, are found in the district of Vjatka, and scattered in those of Kasan, Ufa, and Orenburg.
- (b) Volga-Baltic division,
- (a) Volga group,
- (1) The Tcheremissians, about 200,000, are settled in the districts of Kasan and Vjatka. on the left side of the Volga.
- (2) The Mordvines, about 700,000, in the districts of Novgorod, Tambow, Pensa, Simbirsk, Saratow, and Samara, stretching as far as Orenburg and Astrachan.

#### The Fins and their Literature.

The most interesting among the Finno-Ugric tribes are, no doubt, the Fins, or, as they call themselves, *Suomalaiset*, i.e. inhabitants of fens. Their number is estimated at 1,521,515. They are divided into *Karelians* and *Tavastians*. The Karelians dwell in Eastern Finland, and in the western part of the district of Archangel, also in the north-western part of the districts of Olonetz and in Ingermanland. The old *Bjarmar*, known to the Scandinavians, were Karelians.

The Tavastians live in Finland, west of the Karelians. The *Vepses* or *North-Tchudes* and the *Votes* or *South-Tchudes* are Tavastians. Their literature and, above all, their popular poetry bear witness to a high intellectual development in times which we may call almost mythical, and in places more favourable to the glow of poetical feelings than their present abode, the last refuge Europe could

afford them. Their epic songs still live among the poorest, recorded by oral tradition alone, and preserving all the features of a perfect metre and of a more ancient language. A national feeling has arisen amongst the Fins, despite of Russian supremacy; and the labours of Sjögern, Lonnrot, Castrén, Kellgren, Krohne, and Donner, receiving hence a powerful impulse, have produced results truly surprising. From the mouths of the aged an epic poem has been collected equalling the *Iliad* in length and completeness—nay, if we can forget for a moment all that we in our youth learned to call beautiful, not less beautiful. A Fin is not a Greek, and Wainamoinen was not a Homeric rhapsôdos. But if the poet may take his colours from that nature by which he is surrounded, if he may depict the men with whom he lives, the *Kalevala* possesses merits not dissimilar from those of the *Iliad*, and will claim its place as the fifth national epic of the world, side by side with the Ionian songs, with the *Mahâbhârata*, the *Shâhnâmeh*, and the *Nibelunge*. If we want to study the circumstances under which short ballads may grow up and become amalgamated after a time into a real epic poem, nothing can be more instructive than the history of the collection of the *Kalevala*. We have here facts before us, not mere surmises, as in the case of the Homeric poems and the *Nibelunge*. We can still see how some poems were lost, others were modified; how certain heroes and episodes became popular, and attracted and absorbed what had been originally told of other heroes and other episodes. Lonnrot could watch the effect of a good and of a bad memory among the people who repeated the songs to

him, and he makes no secret of having himself used the same freedom in the final arrangement of these poems which the people used from whom he learnt them

This early literary cultivation has not been without a powerful influence on the language. It has imparted permanence to its forms and a traditional character to its words, so that at first sight we might almost doubt whether the grammar of this language had not left the agglutinative stage altogether. The agglutinative type, however, yet remains, and its grammar shows a luxuriance of grammatical combination second only to Turkish and Hungarian. Like Turkish it observes the 'harmony of vowels,' a feature which lends a peculiar charm to its poetry.

Karelian and Tavastian are dialectical varieties of Finnish.

#### **The Ests and their Literature.**

The *Ests*, the neighbours of the Fins, and speaking a language closely allied to the Finnish, inhabit Estonia and Livonia. Their number is said to be about 100,000. They possess, like the Fins, large fragments of ancient national poetry. Dr. Kreutzwald has been able to put together a kind of epic poem, called *Kalewipoeg*, the Son of Kalew, not so grand and perfect as the Kalevala, yet interesting as a parallel. There are two dialects of Estonian, that of Dorpat in Livonia, and that of Revel.

The *Lives* have dwindled down to about 2,000. They live on the coast of Kurland, from Lyserort to the gulf of Riga.

Estonia, Livonia, and Kurland form the three

Baltic provinces of Russia. The population on the islands of the Gulf of Finland is mostly Estonian. In the higher ranks of society, however, Estonian is hardly understood, and never spoken.

**Finnno-Ugric Philology.**

The similarity between the Hungarian language and the dialects of Finnic origin, spoken East of the Volga, is not a new discovery. In 1253, Wilhelm Ruysbroeck, a priest who travelled beyond the Volga, remarked that a race called Pascatir, who lived on the Yaik, spoke the same language as the Hungarians. They were then still settled east of the old Bulgarian kingdom, the capital of which, the ancient Bolgari on the left of the Volga, may still be traced in the ruins of Spask. The affinity of the Hungarians with the Ugro-Finnic dialects was first proved philologically by Gyarmathi in 1799, before the rise of Aryan Comparative Philology. It is still a subject of patriotic controversy, and Vambéry in 1882 tried to establish a closer affinity between Hungarian and Turkish. His theory, however, has not been accepted.

A few paradigms may suffice to show how close this affinity really is —

Hungarian	Tcheremissian	English
Atyá-m	átyā-m	my father
Atyá-d	átyā-t	thy father
Aty-ja	atyā-že	his father
Atyá-nk	átya-nā	our father
Atyá-tok	atya-dā	your father
Aty-jok	átya-št	their father.

## DECLENSION.

Hungarian	Estonian	English
Nom. vér	werri	blood
Gen. vére	werre	of blood
Dat. vérnek	werrele	to blood
Acc. vért	werd	blood
Abl. vérestol	werrist	from blood.

## CONJUGATION.

Hungarian	Estonian	English
Lelek	leian	I find
Lelsz	leiad	thou findest
Lel	leiab	he finds
Leljuk	leiname	we find
Lelitek	leiate	you find
Lelik	leawad	they find.



# A COMPARATIVE TABLE<sup>1</sup>

## OF THE

### NUMERALS OF THE FINNO-UGRIC CLASS.

	1	2	3	4	5	6	7	8	9	10
<b>I. Ugric Branch—</b>										
(1) Irish-Ostjakian . . .	it, i, ja	{ kät, kätän küden, kädän	xüdem	{ iéta, iét iéda, iéda	wét	xüt	täbet	néda, nít	är jón	jou, jau
(2) North Vogulian . . .	akve	kit, kiti, kët	koron	ñile	at	kat	sät, soat	íjala-lu	antel-lu	lau
(3) Magyar . . . . .	adj	két, kattó	három	nédj	öt	hat	hét	íol-ts	klari-ts	tíz
<b>II. Finnic Branch—</b>										
(a) Permian Division—										
(1) Syrjannan . . . . .	otak, óti	kik	kuum, kujum	íolj	vié	kvait	sizum	kokjammis	ókrmis	das
(2) Voljakkán . . . . .	odjg, og	kik	kuí	nií	vié	kvat	sizum	ámis	ukrmis	das
(b) Volga-Baltic Division—										
(c) Volga group										
(1) Tchebemsian . . . . .	ikte, ik	kok	kum	nií	vié, viz	kut	šem, šim	{ kanda-kš kandaxše	{ mde-kš endexše	lu, luo
(2) Mordvinian . . . . .	veike, ve	kavto	kolmo	niie	vate	koto	sisem	kavkso	veikso	kamen
(3) West-Finnic group										
(1) Swedish Lapponian	akt	kuakt	kolm	nelje	vié	kot	čieča, žeže	kaktso	oktso	lokke
(2) Livonian . . . . .	üt	käd	kuohn	nēla	vié	kūt	seis	kodoks	ūdoks	kum
(3) Estonian . . . . .	uks	kaks	kolm	neli	vié	kūž	seitse	kaheksa	uheksa	kumme
(4) Votian . . . . .	ühsi	kahsi	kõlme	nella	viisi	küsi	seitsē	kaheksā	ühheksā	ümme
(5) Finnish . . . . .	uhte	kahte	kolme	nelja	viite	küte	seitsemän	kahdeksan	yhdeksän	kummenen

<sup>1</sup> See Donner, *Die gegenseitige Verwandtschaft der Finno-Ugrischen Sprachen*, 1879; pp 118-119.

## CHAPTER XII.

### SURVEY OF LANGUAGES.

#### **The Northern and Southern Divisions of the Turanian Class.**

**W**E have now examined the five classes of the Ural-  
Altaic family, the Samoyedic, Tungusic, Mongolic, Turkic, and Finnic. The Tungusic branch stands lowest; its grammar is not much richer than Chinese, and in its structure there is an absence of that architectonic order which in Chinese makes the Cyclopean stones of language hold together without cement. This applies, however, principally to the Mandshu; other Tungusic dialects spoken, not in China, but in the original seats of the Mandshus, are even now beginning to develop grammatical forms.

The Mongolic dialects excel the Tungusic, but in their grammar can hardly distinguish between the different parts of speech. The spoken idioms of the Mongolians, as of the Tungusians, are evidently struggling towards a more organic life, and Castrén has brought home evidence of incipient verbal growth in the language of the Buriats and of a Tungusic dialect spoken near Nyertchinsk.

This is, however, only a small beginning, if compared with the profusion of grammatical resources displayed by the Turkic languages. In their system of conjugation, the Turkic dialects can hardly be surpassed. Their verbs are like branches which

break down under the heavy burden of fruit and blossom. The excellence of the Finnic languages consists rather in a diminution than increase of verbal forms. The Tcheremissian and Mordvinian languages, however, are extremely artificial in their grammar, and allow an accumulation of pronominal suffixes at the end of verbs, surpassed only by the Bask, the Caucasian, and those American dialects that have been called *polysynthetic*. In declension also Finnish is richer even than Turkish.

These five classes constitute the northern or Ural-Altaiic division of the Turanian class.

#### **South-Turanian Languages.**

The languages which I formerly comprehended under the general name of *South-Turanian*, should, for the present at least, be treated as independent branches of speech. My work, thirty-five years ago, was that of a bold, perhaps a too bold pioneer. The materials then accessible were extremely scanty, rough-hewn, and often untrustworthy. We have learnt more caution since, and know that we have to account, not only for points of similarity, but for dissimilarities also, before we can speak with authority on the genealogical relationship of languages. I do not mean to say that my rough classification of these South-Turanian languages has been proved to be altogether wrong, but I am quite ready to admit that what is 'not proven' in linguistic science should be treated, for the present at least, as non-existent. Otherwise there is considerable danger of hasty conclusions impeding the free and untrammelled progress of scien-

tific inquiry. I still hold, for instance, that *Tibetan* and *Burmese*, or what I called the *Gangetic* and *Lohitic* languages, show traces of relationship which have to be accounted for, and which induced me to comprehend them under the common name of *Bhotiya* languages. I likewise hold that *Siamese* and what I called the *Taic* languages are closely connected with Chinese, and that both the *Bhotiya* and *Taic* groups point to a common origin with Chinese, though at a more distant period. The future will show whether I have guessed rightly or wrongly, for I cannot claim for my classification of these languages more than a hypothetical character. In the presence of scholars who have since made a special study of Chinese, Siamese, Tibetan, and Burmese, it would be unbecoming on my part to offer any opinion on the ultimate issues of these great linguistic problems which still await their final solution, and I gladly leave these matters to younger and stronger hands.<sup>1</sup>

For our own immediate purposes there is no necessity why we should extend our survey of languages beyond Europe and Asia. The principles of the Science of Language, with which alone we are concerned, have hitherto been elucidated almost exclusively by students of the Aryan, Semitic, the Chinese, and the Ural-Altaic, and the Malayo-Polynesian languages. This is, no doubt, an imperfection, but such imperfections exist in all sciences. Science can only advance step by step, and nowhere is this more true than

<sup>1</sup> I give at the end a tabular survey of these North and South Turanian Languages, referring for further particulars to my 'Letter on the Turanian Languages,' published in 1854.

in the Science of Language. Even after new clusters of languages have been explored and arranged into families, it will always remain extremely difficult, if not impossible, for one scholar to control the whole of the ever widening field of linguistic knowledge. There are, however, some excellent books in which the researches of scholars in different fields of human speech have been catalogued; and I can strongly recommend two works by Frederick Muller to those who wish to make themselves acquainted with the latest advances in linguistic and ethnological science, *Grundriss der Sprachwissenschaft*, Wien, 1876-1888, 4 vols.; and *Allgemeine Ethnographie*, Wien, 1879, 1 vol.

It may be useful, however, for our own purposes to add a short list of such languages and families of languages as have by this time been reduced to some kind of order, because some of them have to be used by ourselves from time to time in order to illustrate important features in the growth and decay of human speech.

#### Tamulic Languages.

*Tamil*, *Telugu*, *Canarese*, and *Malayalam*, constitute a well-defined family, with its smaller dialects, such as *Tulu*, and the vernaculars spoken by the *Todas*, *Gonds*, *Uraon-Kols*, *Râjmahals*, and, we may safely add, by the *Brahuis*. They occupy nearly the whole of the Indian peninsula, while dialects such as those of the *Gonds*, *Uraon-Kols*, *Râjmahals*, and *Brahuis*, scattered in less accessible places in the North, indicate the former more extended seats of the Tamulic or Dravidian race, before it had to make room before the

advance of the Aryan conquerors of India. These languages have been carefully analysed by Caldwell in his *Comparative Grammar of the Dravidian or South-Indian Family of Languages*, Second Edition, 1875.

#### Munda Languages.

The dialects spoken by the *Santhals*, *Kols*, *Hos*, and *Bhumij*, which were formerly classed as Tamulic, must be recognised, as I tried to show in 1854, as an independent family. For reasons which I explained, I called these languages by the general name of *Munda*. Sir G. Campbell, who accepted my discovery, suggested the name *Kolarian*. This name, however, seems too restricted, if it refers to the Koles only, while the termination *arian* has either no meaning at all, or is misleading by its similarity to Arian.

#### Taic Languages.

The Taic family is represented by *Siamese* and its congeners, such as *Laos*, *Shan*, *Ahom*, *Khamti*, and *Kassia*. Its close connection with Chinese seems now admitted.

#### Bhotiya Languages.

The *Gangetic* and *Lohitic* languages, the former represented chiefly by *Tibetan*, the latter by *Burmese*, show traces of close relationship. With Tibetan we have to class such dialects as *Lepcha*, *Murni*, *Magar*, *Gurmug*; with Burmese *Bolo*, *Guro*, *Nāga*, *Singpho*, and similar dialects.

Whether the Bhotiya and Taic languages can both claim a distant relationship with Chinese, is as yet an open question, but several competent scholars seem inclined to answer it in the affirmative.

**Languages of Farther India.**

The languages spoken in *Annam*, *Pegu*, and *Cambodja* formed till lately an undistinguishable agglomerate. Some light, however, begins to dawn even here, and instead of purely isolated languages, certain groups of dialects become discernible.<sup>1</sup> The supposition of a relationship between the Munda dialects and the *Môn* or *Talaing*, first started by Mason, has received no support from further researches. and several languages, such as the *Khasi* (or *Kassia*) and *Tjam*, for instance, must for the present remain unclassified.

**Languages of the Caucasus.**

The same remark applies to the numerous dialects spoken in the Caucasus, such as the *Georgian Lazian*, *Suanian*, *Mingrelian*; *Abchasian*, *Circassian*; *Thush* and *Tchetchenzian*; *Lesghian*, *Awarian*, *Kasikumükian*, &c. Some of these languages have been studied carefully, and attempts have been made to trace them back to a common type, but as yet without complete success.

The *Ossetian*, spoken in the Caucasus, is an Aryan language.

**Egypt.**

The ancient language of Egypt stands by itself. It has been mentioned already that some scholars recognise in it the most ancient phase of a language, as yet neither Semitic nor Aryan, but containing the germs of both families. Such a theory, however, if it

<sup>1</sup> See E. Kuhn, *Beitrag zur Sprachenkunde Hinterindiens*, in the *Sitzungsberichte* der philol.-philol. Classe der Bayer. Akad. der Wissenschaften, 1889, Heft II.

ever can be proved, requires much stronger support than it has hitherto received.

#### Sub-semitic Languages.

The same applies to the so-called *Sub-semitic* languages, the *Berber* or *Libyan* (*Kabyl, Shilhe, Tuareg* or *Tamasheg*), and to some of the native dialects of *Abyssinia* or *Ethiopia* (*Somáli, Galla, Beja* or *Bihári, Agau, Dankali*, etc.). Some scholars treat them as Semitic, modified by people who spoke originally a Hamitic language, others as Hamitic, modified by Semitic influences. These questions may be solved hereafter, though it is difficult to see how the evidence can ever acquire sufficient strength to support such far-reaching theories.

#### Languages of Africa.

Some of the languages of Africa have lately been studied with a truly scholarlike accuracy, and the work of classification has made considerable progress.

(1) The languages spoken by *Hottentots* and *Bushman* in the South, may now safely be treated as related, though their more distant relationship with ancient Egyptian can for the present be looked upon as a suggestion only. The fully developed system of clicks in these languages constitutes a very characteristic feature, though the *Bantu* tribes, nearest to the *Hottentot*, have adopted the same.<sup>1</sup>

(2) The *Bantu* races or *Kafirs*, extending in an unbroken line on the East coast of Africa, from

<sup>1</sup> Some scholars speak of clicks in the Galla dialect, north of the equator, in the Circassian of the Caucasus, and even in the Kechua as spoken in Guatemala, see Bleek, *Compar. Gr.* § 67, Hahn, *Sprache der Nama*, pp. 15 seq.



North of the Equator down to the Hottentots, and from East to West across the whole continent, speak languages both radically and formally most closely related to each other.

(3) The dialects spoken by the Negro-races, extending from the Western coast of Africa towards the interior, are as yet classed as one mass, though recent researches tend more and more to the discovery of separate classes among them.

When so much remains to be done even for a preliminary survey of the languages of Africa, it seems rather premature to attempt to trace them all back to three sources, as Lepsius has done in his last great work, the 'Nubische Grammatik.' He there tries to reduce the inhabitants of Africa to three types, (1) the Northern negroes, (2) the Southern or Bantu negroes, (3) the Cape negroes.

In accordance with this ethnological system he arranges the languages also into three zones —

(1) The Southern, south of the equator, the Bantu dialects, explored chiefly on the west and east coasts, but probably stretching across the whole continent, comprising the Herero, Pongue, Fernando Po, Kafir ('Osa and Zulu), Tshuana (Soto and Rolon), Suahili, etc.

(2) The Northern zone, between the equator and the Sahara, and east as far as the Nile, comprising Efik, Ibo, Yoruba, Ewe, Akra or Ga, Otyi, Kru, Vei (Mande), Temne, Bullom, Wolof, Fula, Sonrhai, Kanuri, Teda (Tibu), Logone, Wandala, Bagirmi, Mâba, Konjâra, Umâle, Dinka, Shilluk, Bongo, Bari, Oigob, Nuba, and Barea.

(3) The Hamitic zone, including the extinct Egyp-

tian and Coptic, the Libyan dialects, such as Tuareg (Kabyl and Tamasheg), Hausa, the Kushitic or Ethiopian languages, including the Beja dialects, the Soho, Falasha, Agau, Galla, Dankali, and Somâli. Even the Hottentot and Bushman languages are referred by Lepsius to the same zone.

The languages of the third zone are considered by Lepsius as alien, and as having reached Africa from the East at different times and by different roads. He looks upon the Bântu languages as the true aboriginal nucleus of African speech, and he attempts to show that the languages of the Northern zone are modifications of Bântu speech, produced by contact and more or less violent friction with the languages of the Hamitic zone and with Semitic languages also.

This would considerably simplify the linguistic map of Africa; the question is whether this bold attempt will stand the test of further inquiry.

#### **America.**

The greatest diversity of opinion prevails with regard to the languages of America. Some scholars see nothing but diversity, others discover everywhere traces of uniformity, if not in the radical elements, at least in the formal structure of these languages. Without trying to anticipate the results of further research, which is now actively pushed forward by some of the most eminent scholars in America, we may safely accept at least four centres of language clearly defined and separated from the rest.

(i) The languages of the Red Indians in the North, with numerous subdivisions;

- (ii) The languages of Mexico ;
- (iii) The languages of Central America ;
- (iv) The languages of Peru.

These four centres of speech represent, however, four islands only in the vast ocean of American speech. They are surrounded by other islands which may formerly have belonged to larger continents of speech, but which for the present remain isolated. Such are the dialects of the *Arctic* or *Hyperborean* tribes, of the *Eskimos* and *Greenlanders* in the extreme North, the *Arowakes* and the once famous *Caribes*, in the north of South America and in the islands of the Antilles, of the aboriginal inhabitants of Brazil, of the *Abipones*, the *Patagonians*, and the inhabitants of Tierra del Fuego.

It will require much time and labour before this abundant linguistic flora of America can be reduced to something like scientific order. To attempt at present to trace back the inhabitants of America to a Jewish, Phœnician, Chinese, or Celtic source is simply labour lost, and outside the pale of real science.

#### Oceanic Languages.

Much more progress has been made in classifying the languages which extend from Madagascar on the East coast of Africa to the Sandwich Islands west of America.

There is an original, though very distant, relationship between the *Malay*, the *Polynesian*, and the *Melanesian* (and *Micronesian*) languages. They are independent branches of a common stem. The dialects of Australia, however, divided into three groups, and

those spoken by the Papuas of New Guinea, stand apart and have not yet been properly classified, though some dialects spoken in New Guinea, such as Motu, are clearly Melanesian.

This short survey of the work of linguistic classification, so far as it has been carried on at present, gives but a very imperfect idea of the labours bestowed on the study of languages all over the world. My object was only to point out the centres of linguistic life which have been discovered, and the ramifications from which have been determined with some amount of scientific accuracy. In some cases that ramification is perfectly clear, in others it is as yet vague and obscure. Many languages in Europe and Asia stand still completely isolated, such as Etruscan, Bask, Lycian, Japanese, Corean, the dialects of the Andaman and Nicobar islands, to say nothing of dialects spoken in other parts of the world. Future generations will probably smile at our linguistic maps of the world as we smile at the *Orbis terrarum veteribus notus*. Still, considering the difficulties in the way of studying unwritten languages, and the shortness of time that has elapsed since the genius of Leibniz, Humboldt, Bopp, Grimm, and Pott first gave the proper direction to these studies, the record of the Science of Language can well bear comparison with that of other sciences.

#### **Inflectional Stage.**

It must not be supposed, because this survey of languages has been inserted here as part of our discussion of the Terminational or Agglutinative Stage, that therefore all these languages, or even most of

them, are purely agglutinative. All we can say of them in general is that they have left the radical stage, and that they have not entered completely into the inflectional stage. But we must remember that these three stages are natural to all languages, that inflection invariably presupposes agglutination, and agglutination juxtaposition. The chief distinction between an inflectional and an agglutinative language consists in the fact that the speakers of agglutinative languages retain the consciousness of their roots, and therefore do but seldom allow them to be affected by phonetic corruption. Even when they have lost the consciousness of the original meaning of terminations, they feel distinctly the difference between the significative root and the modifying elements. Not so in the inflectional languages. There the various elements which enter into the composition of words, may become so welded together, and suffer so much from phonetic corruption, that none but the scholar would be aware of an original distinction between root and termination, and none but the comparative grammarian able to discover the seams that separate the component parts.

## CHAPTER XIII.

### THE QUESTION OF THE COMMON ORIGIN OF LANGUAGES.

#### **The Exhaustive Character of the Morphological Classification.**

IF you consider the character of our morphological classification, you will see that this classification, differing thereby from the genealogical, must be applicable to all languages. Our classification exhausts all possibilities. If the component elements of language are roots, predicative and demonstrative, we cannot have more than three combinations. Roots may either become words without any outward modification; or, secondly, they may be joined so that one determines the other and loses its independent existence; or, thirdly, they may be joined and be allowed to coalesce, so that both lose their independent character.

The number of roots which enter into the composition of a word makes no difference, and it is unnecessary, therefore, to admit a fourth class, sometimes called *polysynthetic*, or *incorporating*, including most of the American languages. As long as in these sesquipedalian compounds the significative root remains distinct, they belong to the agglutinative stage; as soon as it is absorbed by the terminations, they belong to the inflectional stage.

We must guard, however, against a very common mistake. It often happens that in polysynthetic languages words appear in a fuller form when standing by themselves, and in a shorter form when incorporated in a compound. Scholars are generally inclined in such cases to look upon the shorter form as shortened, while it is far more likely that the short is the original form, which has been more fully developed when used as an independent noun or verb.

Nor is it necessary to distinguish between *synthetic* and *analytical* languages, including under the former name the ancient, and under the latter the modern, languages of the inflectional class. The formation of such phrases as the French *j'aimerai*, for *j'ai à aimer*, or the English, *I shall do, thou wilt do*, may be called *analytical* or *metaphrastic*. But in their morphological nature these phrases are still inflectional. If we analyse such a phrase as *je vivrai*, we find it was originally *ego* (Sanskrit *a ham*) *vivere* (Sanskrit *gîv-as-e*, dat. neutr.) *habeo* (Sanskrit *\*ghâbh-ayâ-mi*); that is to say, we have a number of words in which grammatical articulation has been almost entirely destroyed, but has not been cast off; whereas in Turanian languages grammatical forms are produced by the combination of integral roots, and the old and useless terminations are first discarded before any new combination takes place.<sup>1</sup>

#### Common Origin of Languages.

At the end of our morphological classification a problem presents itself, which we might have declined to enter upon if we had confined ourselves to a genea-

<sup>1</sup> *Letter on the Turanian Languages*, p 75.

logical classification of languages. At the end of our genealogical classification we had to confess that only a certain number of languages had as yet been arranged genealogically, and that therefore the time for approaching the problem of the common origin of all had not yet come. In languages which have been proved to constitute one family, the constituent elements or roots are no doubt accessible, but all attempts at comparing the roots of different families of speech have hitherto proved useless. It may be true that there are roots in the Aryan languages which are identical, both in form and meaning, with roots of the Semitic, the Ural-Altaic, the Bantu, and Oceanic languages. But let us consider what this means, and what stringency of proof it would possess in support of a real common origin of these families. These roots, say about 1000 for each family, consist of one vowel and one or two consonants and their meaning is of the most general character. Suppose a root like SAR expressed some kind of movement in all these families of speech, would that prove a real genealogical relationship? Only if all, or if at least a majority of roots in all these families, could be proved to run parallel, would there be any nerve in such an argument, and such a result can hardly be anticipated in the present state of our knowledge.

But the case is very different at the end of our morphological classification. Though we have not yet examined all languages which belong to the radical, the terminational, and inflectional classes, we have arrived at the conclusion that all languages must fall under one or the other of these three categories



of human speech. It would not be consistent, therefore, to shrink from the consideration of a problem which, though beset with many difficulties, cannot be excluded altogether from the science of language.

#### Language and Race.

Let us first see our problem clearly and distinctly. The problem of the common origin of languages has no necessary connection with the problem of the common origin of mankind. If it could be proved that languages had had different beginnings, this would in no wise necessitate the admission of different beginnings of the human race. For if we look upon language as natural to man, it might have broken out at different times and in different countries among the scattered descendants of one original pair; if, on the contrary, language is to be treated as an invention, there is still less reason why each succeeding generation should not have invented its own idiom.

Nor would it follow, if it could be proved that all the dialects of mankind point to one common source, that therefore the human race must descend from one pair. For language might have been the property of one favoured race, and have been communicated to the other races in the progress of history.

#### Comparative Philology.

The science of language and the science of ethnology have both suffered most seriously from being mixed up together.<sup>1</sup> The classification of races and lan-

<sup>1</sup> See an excellent article of Professor Huxley, in the *Fortnightly Review*, 1866; and my *Letter on the Turanian Languages*, 1856, pp. 89-92.

guages should be quite independent of each other. Races may change their languages, and history supplies us with several instances where one race adopted the language of another. Different languages, therefore, may be spoken by one race, or the same language may be spoken by different races; so that any attempt at squaring the classification of races and tongues must necessarily fail.<sup>1</sup>

#### Biblical Genealogies.

Secondly, the problem of the common origin of languages has no connection with the statements contained in the Old Testament regarding the creation of man and the genealogies of the patriarchs. Those statements are interesting from a purely historical point of view, though no higher authority can be claimed for them than for the statements contained in ancient hieroglyphic or cuneiform inscriptions. But what even those who believe in a higher authority of the Bible as an historical document should consider, is that if our researches lead us to the admission of different beginnings for the languages of mankind, there is nothing in the Old Testament opposed to this view. For although the Jews believed that for a time the whole earth was of one language and of one speech, it has long been pointed out by eminent divines, with particular reference to the dialects of America, that new languages might have arisen at later times. If,

<sup>1</sup> The opposite view, namely, that a genealogical arrangement of the races of man would afford the best classification of the various languages now spoken throughout the world, is maintained by Darwin, *Origin of Species*, p. 422, though without sufficient proof.

on the contrary, we arrive at the conviction that all languages can be traced back to one common source, we should never think of transferring the genealogies of the Old Testament to the genealogical classification of languages. The genealogies of the Old Testament refer to blood, not to language, and as we know that people, without changing their name, did frequently change their language, it is clearly impossible that the genealogies of the Old Testament should coincide with the genealogical classification of languages. In order to avoid a confusion of ideas, it would be preferable to abstain altogether from using the same names to express relationship of language which in the Bible are used to express relationship of blood. It was usual formerly to speak of *Japhetic*, *Hamitic*, and *Semitic* languages. The first name has now been replaced by *Aryan*, the second by *African*; and though the third is still retained, it has received a scientific definition quite different from the meaning which it would have in the Bible. It is well to bear this in mind, in order to prevent not only those who are for ever attacking the Bible with arrows that cannot reach it, but likewise those who defend it with weapons they know not how to wield, from disturbing in any way the quiet progress of the science of language.

#### **Formal Relationship of Languages.**

Let us now look dispassionately at our problem. The problem of the possibility of a common origin of all languages naturally divides itself into two parts, the *material* and the *formal*. We are here concerned with the formal part only. We have examined all

possible forms which language can assume, and we have now to ask, Can we reconcile with these three distinct forms, the radical, the terminational, and the inflectional, the admission of one common origin of human speech?—I answer decidedly, Yes

The chief argument that has been brought forward against the common origin of language is this, that no monosyllabic or radical language has ever entered into an agglutinative or terminational stage, and that no agglutinative or terminational language has ever risen to the inflectional stage. Chinese, it is said, is still what it has been from the beginning, it has never produced agglutinative or inflectional forms; nor has any agglutinative language ever given up the distinctive feature of the terminational stage, namely, the integrity of its roots.

In answer to this, it should be pointed out that though each language, as soon as it once becomes settled, is apt to retain that morphological character which it had when it first assumed its individual or national existence, it does not lose altogether the power of producing grammatical forms that belong to a higher stage. In Chinese, and particularly in Chinese dialects, we find rudimentary traces of agglutination. The *li* which I mentioned before as the sign of the locative, has dwindled down to a mere postposition, and a modern Chinese is no more aware that *li* originally meant interior, than the Turanian is of the origin of his case terminations.<sup>1</sup> In the spoken dialects of

<sup>1</sup> M. Stanislas Julien remarks that the numerous compounds which occur in Chinese prove the wide-spread influence of the principle of agglutination in that language. The fact is, that in Chinese every sound

Chinese, agglutinative forms are of more frequent occurrence. Thus, in the Shanghai dialect, *wo* is to speak, as a verb; *woda*, a word. Of *woda* a genitive is formed, *woda-ka*, a dative *pela woda*, an accusative *tang woda*.<sup>1</sup> In agglutinative languages, again, we meet with rudimentary traces of inflection. Thus in Tamil the verb *tāngu*, to sleep, has not retained its full integrity in the derivative *tākkam*, sleep; and *tāngu* itself might probably be traced back to a simpler root, such as *tu*, to recline, to be suspended, to sleep.

I mention these instances, which might be greatly multiplied, in order to show that there is nothing mysterious in the tenacity with which each language clings in general to that stage of grammar which it had attained at the time of its first settlement. If a family, or a tribe, or a nation, has once accustomed itself to express its ideas according to one system of grammar, that first mould becomes stronger with each generation. But, while Chinese was arrested and be-

has numerous meanings; and in order to avoid ambiguity, one word is frequently followed by another which agrees with it in the one particular meaning which is intended by the speaker. Thus

<i>chi-youen</i>	(beginning-origin)	signifies beginning
<i>ken-youen</i>	(root-origin)	„ beginning
<i>youen-chi</i>	(origin-beginning)	„ beginning
<i>mei-miai</i>	(beautiful-remarkable)	„ beautiful
<i>mei-li</i>	(beautiful-elegant)	„ beautiful
<i>chen youen</i>	(charming-lovely)	„ beautiful
<i>yong-r</i>	(easy facile)	„ easily
<i>tsong-yong</i>	(to obey, easy)	„ easily

In order to express 'to boast,' the Chinese say *king-koua*, *king-fa*, etc., both words having one and the same meaning.

This peculiar system of *juxtaposition*, however, cannot be considered as agglutination in the strict sense of the word.

<sup>1</sup> M. M., *Letter on the Turanian Languages*, p. 24.

came traditional in this very early stage, the radical, other dialects passed on through that stage, retaining their pliancy. They were not arrested, and did not become traditional or national, before those who spoke them had learnt to appreciate the advantage of agglutination. That advantage being once perceived, a few single forms in which agglutination first showed itself, would soon, by that sense of analogy which is inherent in language, extend their influence irresistibly. Languages arrested in that stage would cling with equal tenacity to the system of agglutination. A Chinese can hardly understand how language is possible unless every syllable is significative, a Turanian would despise every idiom in which each word does not display distinctly its radical and significative element, whereas we, who are accustomed to the use of inflectional languages, are proud of the very grammar which a Chinese and Turanian would treat with contempt.

The fact, therefore, that languages, if once settled, do not change their grammatical constitution, is no argument against our theory, that every inflectional language was once agglutinative, and every agglutinative language was once monosyllabic. I call it a theory, but it is more than a theory, for it is the only possible way in which the realities of Sanskrit or any other inflectional language can be explained. As far as the formal part of language is concerned, we cannot resist the conclusion that what is now *inflectional* was formerly *agglutinative*, and what is now *agglutinative* was at first *radical*. The great stream of language rolled on in numberless dialects, and changed

its grammatical colouring as it passed from time to time through new deposits. The different channels which left the main current and became stationary and stagnant, or, if you like, literary and traditional, retained for ever that colouring which the main current displayed at the stage of their separation. If we call the radical stage *white*, the agglutinative *red*, and the inflectional *blue*, then we may well understand why the white channels should show hardly a drop of red or blue, or why the red channels should hardly betray a shadow of blue; and we shall be prepared to find what we do find, namely, white tints in the red, and white and red tints in the blue channels of speech

**True Meaning of the Problem of the Common Origin of Languages.**

In all this, however, I only argue for the possibility, not for the necessity, of a common origin of language.

I look upon the problem of the common origin of language, which I have shown to be quite independent of the problem of the common origin of mankind, as a question which ought to be kept open as long as possible. It is not, I believe, a problem quite as hopeless as that of the plurality of worlds, on which so much has been written, but it should be treated very much in the same manner. As it is impossible to demonstrate by the evidence of the senses that the planets are inhabited, the only way to prove that they are, is to prove that it is impossible that they should not be. Thus, on the other hand, in order to prove that the planets are not inhabited, you must prove

that it is impossible that they should be. As soon as the one or the other has been proved, the question will be set at rest; till then it must remain an open question, whatever our own predilections on the subject may be.

I do not take quite as desponding a view of the problem of the common origin of language, but I insist on this, that we ought not to allow this problem to be in any way prejudged. Now it has been the tendency of the most distinguished writers on comparative philology to take it almost for granted, that after the discovery of the two families of language, the Aryan and Semitic, and after the establishment of the close ties of relationship which unite the members of each, it would be impossible to admit any longer a common origin of language. After the criteria by which the unity of the Aryan as well as the Semitic dialects can be proved, had been so successfully defined, it was but natural that the absence of similar coincidences between any Semitic and Aryan language, or between these and any other branch of speech, should have led to a belief that no connection was admissible between them. A Linnæan botanist, who has his definite marks by which to recognise an anemone, would reject with equal confidence any connection between the species anemone and other flowers which have since been classed under the same head, though deficient in the Linnæan marks of the anemone.

But there are surely different degrees of affinity in languages as well as in all other productions of nature, and the different families of speech, though they can-



not show the same signs of relationship by which their members are held together, need not of necessity have been perfect strangers to each other from the beginning.

Now I confess that when I found the argument used over and over again, that it is impossible any longer to speak of a common origin of language, because comparative philology had proved that there existed various families of speech, I felt that this was not true, that at all events it was an exaggeration.

The problem, if properly viewed, bears the following aspect :—*‘If you wish to assert that language had various beginnings, you must prove it impossible that language could have had a common origin.’*

No such impossibility has ever been established with regard to a common origin of the Aryan and Semitic dialects ; while, on the contrary, the analysis of the grammatical forms in either family has removed many difficulties, and made it at least intelligible how, with materials identical or very similar, two individuals, or two families, or two nations, could in the course of time have produced languages so different in form as Hebrew and Sanskrit.

But still greater light was thrown on the formative and metamorphic process of language by the study of other dialects unconnected with Sanskrit or Hebrew, and exhibiting before our eyes the growth of those grammatical forms (grammatical in the widest sense of the word) which in the Aryan and Semitic families we know only as formed, not as forming ; as decaying, not as living ; as traditional, not as understood and

intentional: I mean the Ural-Altaic, the Bantu, the Oceanic, and other languages. The traces by which these languages attest their original relationship are much fainter than in the Semitic and Aryan families, but they are so of necessity. In the Aryan and Semitic families the agglutinative process by which alone grammatical forms can be obtained, has been arrested at some time, and this could only have been through social, religious, or political influences. By the same power through which an advancing civilisation absorbs the manifold dialects in which every spoken idiom naturally represents itself, the first political or religious centralisation must necessarily have put a check on the exuberance of an agglutinative speech. Out of many possible forms one became popular, fixed, and technical for each word, for each grammatical category; and by means of poetry, law, and religion, a literary or political language was produced to which thenceforth nothing had to be added; which in a short time, after becoming unintelligible in its formal elements, was liable to phonetic corruption only, but incapable of internal resuscitation. It is necessary to admit a primitive concentration of this kind for the Aryan and Semitic families, for it is thus only that we can account for coincidences between Sanskrit and Greek terminations, which were formed neither from Greek nor from Sanskrit materials, but which are still identically the same in both. It is in this sense that I call these languages political or state languages, and it has been truly said that languages belonging to these families must be able to prove their relationship by sharing in common not only what is

regular and intelligible, but what is anomalous, unintelligible, and dead.

If no such concentration takes place, languages, though formed of the same materials and originally identical, must necessarily diverge in what we may call dialects, but in a very different sense from the dialects such as we find in the later periods of political languages. The process of agglutination will continue in each clan, and forms becoming unintelligible will be easily replaced by new and more intelligible compounds. If the cases are formed by postpositions, new postpositions can be used as soon as the old ones become obsolete. If the conjugation is formed by pronouns, new pronouns can be used if the old ones are no longer sufficiently distinct.

Let us ask, then, what coincidences we are likely to find in agglutinative dialects which have become separated, and which gradually approach to a more settled state? It seems to me that we can only expect to find in them such coincidences as Castrén and Schott have succeeded in discovering in the Samoyedic, Tungusic, Mongolic, Turkic, and Finno-Ugric languages; and such as Hodgson, Caldwell, Logan, and myself have pointed out in the Tanulic, Taic, Gangetic, Lohitic, and Malaic languages. They must refer chiefly to those parts of speech which it is most difficult to reproduce—I mean pronouns, numerals, and prepositions. These languages will hardly ever agree in what is anomalous or inorganic, because their organism repels continually what begins to be formal and unintelligible. It is astonishing rather that any words of a conventional meaning should

have been discovered as the common property of such languages, than that most of their words and forms should be peculiar to each. These coincidences must, however, be accounted for by those who deny the possibility of their common origin; they must be accounted for, either as the result of accident, or of an imitative instinct which led the human mind everywhere to the same purely onomatopoeic formations. This has never been done, and it will require great efforts to achieve it.

To myself the study of the languages, neither Aryan nor Semitic, was interesting particularly because it offered an opportunity of learning how far languages, supposed to be of a common origin, might diverge and become dissimilar by the unrestrained operation of dialectic regeneration.

In a letter which in 1854 I addressed to my friend, the late Baron Bunsen, and which was published by him in his *Outlines of the Philosophy of Universal History*<sup>1</sup> (vol. i. pp. 263-521), it had been my object to trace, as far as I was able, the principles which guided the formation of agglutinative languages, and to show how far languages may become dissimilar in their grammar and dictionary, and yet allow us to treat them as cognate dialects. In answer to the assertion that it was impossible, I tried, in the fourth, fifth, and sixth sections of that Essay, to show *how* it was possible that, starting from a common ground, languages as different as Mandshu

<sup>1</sup> These *Outlines* form vols. iii. and iv. of Bunsen's work, *Christianity and Mankind*, in 7 vols. (London, 1854: Longman), and are sold separately.

and Finnish, Chinese and Siamese, should have arrived at their present state, and might still be treated as cognate tongues. And as I look upon this process of agglutination as the only intelligible means by which language can acquire a grammatical organisation, and clear the barrier which has arrested the growth of the Chinese idiom, I felt justified in applying the principles derived from the formation of agglutinative languages to the Aryan and Semitic families likewise. They also must have passed through an agglutinative stage, and it is during that period alone that we can account for the gradual divergence and individualisation of what we afterwards call the Aryan and Semitic forms of speech. If we can account for the different appearance of Mandshu and Finnish, we can also account for the distance between Hebrew and Sanskrit. It is true that we do not know the Aryan speech during its purely agglutinative period, but we can infer what it was, when we see languages like Finnish and Turkish approaching more and more towards an Aryan type. Such has been the advance which Turkish has made towards inflectional forms, that Professor Ewald claimed for it the title of a synthetic language, a title which he gives to the Aryan and Semitic dialects, after they have left the agglutinative stage, and entered into a process of phonetic corruption and dissolution. 'Many of its component parts,' he says, 'though they were no doubt originally, as in every language, independent words, have been reduced to mere vowels, or have been lost altogether, so that we must infer their former presence by the changes which they have

wrought in the body of the word. *Goz* means eye, and *gor*, to see; *ish*, deed, and *it*, to do; *êch*, the interior, and *gâr*, to enter.<sup>1</sup> Nay, he goes so far as to admit some formal elements which Turkish shares in common with the Aryan family, and which therefore could only date from a period when both were still in their agglutinative infancy. For instance, *di*, as exponent of a past action; *ta*, as the sign of the past participle of the passive; *lu*, as a suffix to form adjectives, &c.<sup>2</sup> This is more than I should venture to assert.

Taking this view of the gradual formation of language by agglutination, as opposed to internal development, it is hardly necessary to say that, when I spoke of a Turanian family of speech, I used the word family in a different sense from that which it has with regard to the Aryan and Semitic languages. In my *Letter on the Turanian Languages*, which has been the subject of so many random attacks on the part of those who believe in different beginnings of language and mankind, I had explained this repeatedly, and I had preferred the term of *group* for the Turanian languages, in order to express as clearly as possible that the relation between Turkish and Mandshu, between Tamil and Finnish, was a different one, not in degree only but in kind, from that between Sanskrit and Greek. 'These Turanian languages,' I said (p. 216), 'cannot be considered as standing to each other in the same relation as He-

<sup>1</sup> *Gottingische Gelehrt Anzeigen*, 1855, s. 298; see Hunfalvy's remarks, on p. 392.

<sup>2</sup> Ewald, *l c* s. 302, note.

brew to Arabic, Sanskrit and Greek.' 'They are radii diverging from a common centre, not children of a common parent.' And still they are not so widely distant as Hebrew and Sanskrit, because none of them has fully entered into that new phase of growth or decay through which the Semitic and Aryan languages passed after they had been settled, individualised and nationalised.

The real object of my Essay was therefore a defensive one. It was intended to show how rash it was to speak of different independent beginnings in the history of human speech, before a single argument had been brought forward to establish the necessity of such an admission. The impossibility of a common origin of language has never been proved, but, in order to remove what were considered difficulties affecting the theory of a common origin, I felt it my duty to show practically, and by the very history of the Turanian languages, how such a theory was possible, or, as I say in one instance only, probable. I endeavoured to show how even the most distant members of the Turanian family, the one spoken in the north, the other in the south of Asia, the *Finnic* and the *Tamulic*, have preserved in their grammatical organisation traces of a former unity; and, if some of my most determined opponents admit that I have proved the ante-Brahmanic or Tamulic inhabitants of India to belong to the Turanian family, and that these proofs have been considerably strengthened by Caldwell's Comparative Grammar of the Dravidian Languages, they can hardly fail to see that if this, the most extreme point of my argument, be conceded,

everything else is conceded, and must follow by necessity.

Yet I did not call the last chapter of my Essay, 'On the Necessity of a Common Origin of Language,' but 'On the Possibility'; and, in answer to the opinions advanced by the opposite party, I summed up my defence in these two paragraphs:—

## I.

'Nothing necessitates the admission of different independent beginnings for the *material* elements of the Turanian, Semitic, and Aryan branches of speech: nay, it is possible even now to point out radicals which, under various changes and disguises, have been current in these three branches ever since their first separation.'

## II.

'Nothing necessitates the admission of different beginnings for the formal elements of the Turanian, Semitic, and Aryan branches of speech; and though it is impossible to derive the Aryan system of grammar from the Semitic, or the Semitic from the Aryan, we can perfectly understand how, either through individual influences, or by the wear and tear of speech in its own continuous working, the different systems of grammar of Asia and Europe may have been produced.'

It will be seen, from the very wording of these two paragraphs, that my object was to deny the necessity of independent beginnings, and to assert the possibility of a common origin of language. I have been



accused of having been biassed in my researches by an implicit belief in the common origin of mankind. I do not deny that I hold this belief, and, if it wanted confirmation, that confirmation has been supplied by Darwin's book, *On the Origin of Species*.<sup>1</sup> But I defy my adversaries to point out one single passage where I have mixed up scientific with theological arguments. Only, if I am told that no 'quiet observer would ever have conceived the idea of deriving all mankind from one pair, unless the Mosaic records had taught it,' I must be allowed to say in reply, that this idea, on the contrary, is so natural, so consistent with all human laws of reasoning, that, as far as I know, there has been no nation on earth which, if it possessed any traditions on the origin of mankind, did not derive the human race from one pair, if not from one person. The author of the Mosaic records, therefore, though rightly stripped, before the tribunal of Physical Science, of his claims as an inspired writer, may at least claim the modest title of a quiet

<sup>1</sup> 'Here the lines converge as they recede into the geological ages, and point to conclusions which, upon Darwin's theory, are inevitable, but hardly welcome. The very first step backward makes the Negro and the Hottentot our blood-relations; not that reason or Scripture objects to that, though pride may.'—Asa Grey, *Natural Selection not inconsistent with Natural Theology*, 1861, p. 5.

'One good effect is already manifest, its enabling the advocates of the hypothesis of a multiplicity of human species to perceive the double insecurity of their ground. When the races of men are admitted to be of one species, the corollary, that they are of one origin, may be expected to follow. Those who allow them to be of one species must admit an actual diversification into strongly marked and persistent varieties, while those, on the other hand, who recognise several or numerous human species, will hardly be able to maintain that such species were primordial and supernatural in the ordinary sense of the word.'—*Ibid.*  
p 54

observer; and if his conception of the physical unity of the human race can be proved to be an error, it is an error which he shares in common with other quiet observers, such as Humboldt, Bunsen, Prichard, Owen, and, I may now add, Darwin.<sup>1</sup>

<sup>1</sup> Professor Pott, the most distinguished advocate of the polygenetic dogma, has pleaded the necessity of admitting more than one beginning for the human race and for language in an article in the *Journal of the German Oriental Society*, ix. 405, *Max Müller und die Kennzeichen der Sprachverwandtschaft*, 1855, in a treatise *Die Ungleichheit menschlicher Rassen*, 1856; and in the new edition of his *Etymologische Forschungen*, 1861.

On the other hand, the researches carried on independently by different scholars tend more and more to confirm, not only the close relationship of the languages belonging respectively to the northern and southern branches of the Turanian class, but likewise the relationship of these two branches themselves, and their ultimate dependence on Chinese. Nor is the evidence on which this relationship rests purely formal or grammatical, but it is likewise supported by evidence taken from the dictionary. The following letter from Mr. Edkins, the author of *A Grammar of the Chinese Colloquial Language* (second edition, Shanghai, 1861), will show how his inquiries into the primitive state of the Chinese language have brought to light the convergence of the Mongolic and the Tibetan languages toward a common centre, viz the ancient language of China, not deprived as yet of its various final consonants, most of which have disappeared in the Mandarin language:—

‘Peking, Oct 12, 1864.

‘I am now seeking to compare the Mongolian and Tibetan with Chinese, and have already obtained some interesting results.

‘I. A large proportion of Mongol words are Chinese. Perhaps a fifth are so. The identity is in the first syllable of the Mongol words; that being the root. The correspondence is most striking in the adjectives, of which, perhaps, one-half of the most common are the same radically as in Chinese: e.g. *sain*, good; *beyen*, low; *uñi*, right; *sologai*, left; *chike*, straight; *gadan*, outside; *ekohon*, few; *loyon*, green; *huygun*, light (not heavy). But the identity is also extensive in all parts of speech. This identity in common roots seems to extend into the Turkish Tartar: e.g. *su*, water; *tenri*, heaven.

‘II. To compare Mongol with Chinese it is necessary to go back at least six centuries in the development of the Chinese language. For we find in common roots final letters peculiar to the old Chinese, e.g. final *n*. The initial letters also need to be considered from an older stand-

The only question which remains to be answered is this, Was it one and the same volume of water which supplied all the lateral channels of speech? or, to drop all metaphor, are the roots which were joined together according to the radical, the terminational, and inflectional systems, identically the same? The only way to answer, or at least to dispose of, this question is to consider the nature and origin of roots; and we shall then have reached the extreme limits to which inductive reasoning can carry us in our researches into the mysteries of human speech.

point than the Mandarin pronunciation. If a large number of words are common to Chinese, Mongol, and Tartar, we must go back at least twelve centuries to obtain a convenient epoch of comparison.

‘III While Mongol has no traces of tones, they are very distinctly developed in Tibetan. Csoma de Koros and Schmidt do not mention the existence of tones. But they plainly occur in the pronunciation of native Tibetans resident in Peking.

‘IV. As in the case of the comparison with Mongol, it is necessary in examining the connection of Tibetan with Chinese to adopt the old form of the Chinese, with its more numerous final consonants, and its full system of soft and aspirated initials. The Tibetan numerals exemplify this with sufficient clearness.

‘V. While the Mongol is near the Chinese in the extensive prevalence of words common to the two languages, the Tibetan is nearer in phonal structure as being tonic and monosyllabic. This being so, it is not so remarkable that there are many words common to the Chinese and the Tibetan (for they are to be expected). But that there should be, perhaps, as many in the Mongol with its long untoned polysyllables, is a curious circumstance.’

An Essay by Mr. Edkins on the same subject, ‘On the Common Origin of the Chinese and Mongol Languages,’ has just been published in the *Revue orientale*, No 56, p. 75. Paris, 1865.

See also M. M., *On the Stratification of Language*, 1868.

## CHAPTER XIII.

### THE QUESTION OF THE COMMON ORIGIN OF LANGUAGES.

#### **The Exhaustive Character of the Morphological Classification.**

**I**F you consider the character of our morphological classification, you will see that this classification, differing thereby from the genealogical, must be applicable to all languages. Our classification exhausts all possibilities. If the component elements of language are roots, predicative and demonstrative, we cannot have more than three combinations. Roots may either become words without any outward modification; or, secondly, they may be joined so that one determines the other and loses its independent existence; or, thirdly, they may be joined and be allowed to coalesce, so that both lose their independent character.

The number of roots which enter into the composition of a word makes no difference, and it is unnecessary, therefore, to admit a fourth class, sometimes called *polysynthetic*, or *incorporating*, including most of the American languages. As long as in these sesquipedalian compounds the significative root remains distinct, they belong to the agglutinative stage; as soon as it is absorbed by the terminations, they belong to the inflectional stage.

sophers of old, yet, even in its simplest form, it seems to be almost beyond the reach of the human understanding.

Herder has truly remarked that if we were asked the riddle how images of the eye and all the sensations of our senses could be represented by sounds, nay, could be so embodied in sounds as to express thought and excite thought, we should probably give it up as the question of a madman, who, mixing up the most heterogeneous subjects, attempted to change colour into sound and sound into thought.<sup>1</sup> Yet this is the riddle which we have now to solve.

It is quite clear that we have no means of solving the problem of the origin of language *historically*, or of explaining it as a matter of fact which happened once in a certain locality and at a certain time. History does not begin till long after mankind had acquired the power of language, and even the most ancient traditions are silent as to the manner in which man came in possession of his earliest thoughts and words. Nothing, no doubt, would be more interesting than to know from historical documents the exact process by which the first man began to lisp his first words, and thus to be rid for ever of all the theories on the origin of speech. But this knowledge is denied us; and, if it had been otherwise, we should probably be quite unable to understand those primitive events in the history of the human mind.<sup>2</sup> We are

<sup>1</sup> Herder, as quoted by Steinthal, *Ursprung der Sprache*, s. 39.

<sup>2</sup> 'In all these paths of research, when we travel far backwards, the aspect of the earlier portions becomes very different from that of the advanced part on which we now stand; but in all cases the path is lost in obscurity as it is traced backwards towards its starting-point:—it

told that the first man was the son of God, that God created him in His own image, formed him of the dust of the ground, and breathed into his nostrils the breath of life. These are simple natural thoughts, and to be accepted as such. If we begin to reason on them, the edge of the human understanding glances off. Our mind is so constituted that it cannot apprehend the absolute beginning or the absolute end of anything. If we tried to conceive the first man created as a child, and gradually unfolding his physical and mental powers, we could not understand his living for *one* day, without supernatural aid. If, on the contrary, we tried to conceive the first man created full-grown in body and mind, the conception of an effect without a cause would equally transcend our reasoning powers. Nor should we gain anything by imagining a number of intermediate stages between lower animals and man. We should only disguise the real difficulty, we should not solve it.

It is the same with the first beginnings of language. Theologians who claim for language a divine origin drift into the most dangerous anthropomorphism when they enter into any details as to the manner in which they suppose the Deity to have compiled a dictionary and grammar in order to teach them to the first man, as a schoolmaster teaches the deaf and dumb. And they do not see that, even if all their premisses were granted, they would have explained no more than how the first man might have learnt a language, if

becomes not only invisible, but unimaginable; it is not only an interruption, but an abyss, which interposes itself between us and any intelligible beginning of things.'—Whewell, *Indications*, p. 166.

there was a language ready-made for him. How that language was made, would remain as great a mystery as ever. Philosophers, on the contrary, who imagine that the first man, though left to himself, would gradually have emerged from a state of mutism and have invented words for every new conception that arose in his mind, forget that man could not by his own power have acquired the faculty of speech which, so far as our experience goes, is the distinctive character of man,<sup>1</sup> unattainable, or, at all events, unattained by the brute and mute creation. It shows a want of appreciation as to the real bearings of our problem, if philosophers appeal to the fact that children are born without language, and gradually emerge from mutism to the full command of articulate speech. We want no explanation how birds learn to fly, created as they are with organs adapted to that purpose. Nor do we wish to inquire here how children learn to use the various faculties with which the human body and soul are endowed. We want to gain, if possible, an insight into the original faculty of speech, and for that purpose I fear it is as useless to watch the first stammerings of children, as it would be to repeat the experiment of the Egyptian king Psammetichus, who entrusted two new-born infants to a shepherd, with the injunction to let them suck goat's milk, to speak no word in their presence,

<sup>1</sup> 'Der Mensch ist nur Mensch durch Sprache; um aber die Sprache zu erfinden, musste er schon Mensch sein.'—W. von Humboldt, *Sammtliche Werke*, b. III s. 252. The same argument is ridden to death by Susmilch, *Versuch eines Beweises, dass die erste Sprache ihren Ursprung nicht vom Menschen, sondern allein vom Schöpfer erhalten habe*, Berlin, 1766.

and to observe what word they would first utter.<sup>1</sup> The same experiment is said to have been repeated by the Swabian emperor, Frederic II., by James IV of Scotland, and by Akbar, the emperor of India.<sup>2</sup> But, whether for the purpose of finding out which was the primitive language of mankind, or of discovering how far language was natural to man, the experiments have failed to throw any light on the problem before us. Children, in learning to speak, do not invent language. Language is there ready-made for them. It has been there for thousands of years. They acquire the use of a language, and, as they grow up, they may acquire the use of a second and a third. It is useless to inquire whether infants, left to themselves, would

<sup>1</sup> Farrar, *Origin of Language*, p 10, Grimm, *Ursprung der Sprache*, s. 32. The word *βρέκος*, which these children are reported to have uttered, and which, in the Phrygian language, meant bread—thus proving, it was supposed, that the Phrygian was the primitive language of mankind—is probably derived from the same Aryan root which exists in the English, to bake. How these unfortunate children came by the idea of baked bread, involving the ideas of corn, mill, oven, fire, &c, seems never to have struck the ancient sages of Egypt. Quintilian distinguishes very properly between the power of uttering a few words and the faculty of speaking ‘Propter quod infantes a mutis nutritibus jussu regum in solitudine educati, etiamsi verba quedam emisisse traduntur, tamen loquendi facultate caruerunt.’—*Instit Orat* x 1, 10

<sup>2</sup> Herivas, *Origine degl' idioma* (1785), pp. 147 seq. Akbar told Jerome Xavier that he had thirty children shut up before they could speak, and put guards over them, so that the nurses might not teach them their language. His object was to see what language they would talk when they grew older, and he was resolved to follow the laws and customs of the country whose language was that spoken by the children. None of the children, however, came to speak distinctly, wherefore he allowed no law but his own. See H. Beveridge, in *Journal of the Asiat. Soc. of Bengal*, 1888, p 38 Badaoni relates the same story, and states that the experiment was made in 1580. He says that after three or four years all the children who survived were found to be dumb



invent a language. It would be impossible, unnatural,<sup>1</sup> and illegal to try the experiment, and, without repeated experiments, the assertions of those who believe and those who disbelieve the possibility of children inventing a language of their own are equally valueless. All we know for certain is, that an English child, if left to itself, would never begin to speak English, and that history supplies no instance of any language having thus been invented.<sup>2</sup>

#### Man and Brute

If we want to gain an insight into the faculty of flying, which is a characteristic feature of birds, all we can do is, first, to compare the structure of birds with that of other animals which are devoid of that faculty, and secondly, to examine the conditions under which the act of flying becomes possible. It is the same with speech. Speech, so far as we know, is a specific faculty of man. It distinguishes man from all other creatures, and if we wish to acquire more definite ideas as to the real nature of human speech, all we can do is to compare man with those animals that seem to come nearest to him, and thus to try to discover what he shares in common with these animals, and what is peculiar to him, and to him alone. After we have discovered this, we may proceed to inquire

<sup>1</sup> 'Cioè a dire, si voleva farlo nella condizione più contraria alla natura, per sapere ciò che naturalmente avrebbe fatto'—Villari, *Il Politico*, vol i p 22. See also the extract from the *Wibhanga Aturwāna*, p 146.

<sup>2</sup> How children brought up among people speaking a real language, may invent an artificial language of their own has been well shown by Mr. Horatio Hale, *The Origin of Languages*, 1888.

into the conditions under which speech becomes possible, and we shall then have done all that we can do, considering that our instruments of knowledge, wonderful as they are, are yet far too weak to carry us through all the regions to which we may soar on the wings of our imagination!

In comparing man with the other animals, we need not enter here into the physiological question whether the difference between the body of an ape and the body of a man is one of degree or of kind. However that question is settled by physiologists, we need not be afraid. If the structure of a mere worm is such as to fill the human mind with awe, if a single glimpse which we catch of the infinite wisdom displayed in the organs of the lowest creature gives us an intimation of a wisdom far transcending the powers of our conception, how are we to criticise or disparage the most highly organised creatures, creatures as wonderfully made as we ourselves? Are there not many animals in many points more perfect even than man! Do we not envy the lion's strength, the eagle's eye, the wings of every bird? If there existed animals altogether as perfect as man in their physical structure, nay, even more perfect, no thoughtful man would ever be uneasy. The true superiority of man rests on very different grounds. 'I confess,' Sydney Smith writes, 'I feel myself so much at ease about the superiority of mankind—I have such a marked and decided contempt for the understanding of every baboon I have ever seen—I feel so sure that the blue ape without a tail will never rival us in poetry, painting, and music, that I see no reason what-

ever that justice may not be done to the few fragments of soul and tatters of understanding which they may really possess.' The playfulness of Sydney Smith in handling serious and sacred subjects has of late been found fault with by many; but humour is often a safer sign of strong convictions and perfect safety than guarded solemnity.

With regard to our own problem, no one can doubt that certain animals possess all the physical requirements for articulate speech. There is no letter of the alphabet which a parrot will not learn to pronounce.<sup>1</sup> The fact, therefore, that the parrot is without a language of his own, a Parrotese dialect, must be explained by a difference between the *mental*, not between the *physical*, faculties of the animal and man; and it is by a comparison of the mental faculties alone, such as we find them in man and brutes, that we may hope to discover what constitutes the indispensable qualification for language, a qualification to be found in man alone, and in no other creature on earth.

I say *mental faculties*, and I mean to claim a large

<sup>1</sup> 'L'usage de la main, la marche à deux pieds, la ressemblance, quoique grossière, de la face, tous les actes qui peuvent résulter de cette conformité d'organisation, ont fait donner au singe le nom d'*homme sauvage* par des hommes à la vérité qui l'étaient à demi, et qui ne savaient comparer que les rapports extérieurs. Que serait ce, si, par une combinaison de nature aussi possible que toute autre, le singe eût eu la voix du perroquet, et, comme lui, la faculté de la parole? Le singe parlant eût rendu muette d'étonnement l'espèce humaine entière, et l'aurait seduite au point que le philosophe aurait eu grand'peine à démontrer qu'avec tous ces beaux attributs humains le singe n'en était pas moins une bête. Il est donc heureux, pour notre intelligence, que la Nature ait séparé et placé, dans deux espèces très-différentes, l'imitation de la parole et celle de nos gestes.'—Buffon, as quoted by Flourens, p. 77.

share of what we call our mental faculties for the higher animals. These animals have *sensation, perception, memory, will, and intellect*; only we must restrict intellect to the comparing or interlacing of single perceptions. All these points can be proved by irrefragable evidence, and that evidence has never, I believe, been summed up with greater lucidity and power than by Flourens, in one of his most instructive works, *De la Raison, du Génie, et de la Folie*; Paris, 1861. There are no doubt many people who are as much frightened at the idea that brutes have souls and are able to think, as by 'the blue ape without a tail.' But their fright is entirely of their own making. If people will use such words as soul or thought without making it clear to themselves and others what they mean by them, these words will slip away under their feet, and the result must be painful. If we once ask the question, Have brutes a soul? we shall never arrive at any conclusion; for *soul* has been so many times defined by philosophers, from Aristotle down to Hegel, that it means everything and nothing. Such has been the confusion caused by the promiscuous employment of the ill-defined terms of mental philosophy that we find Descartes representing brutes as living machines, whereas Leibniz claims for them not only souls, but immortal souls. 'Next to the error of those who deny the existence of God,' says Descartes, 'there is none so apt to lead weak minds from the right path of virtue, as to think that the soul of brutes is of the same nature as our own, and, consequently, that we have nothing to fear or to hope after this life, any more than flies or ants; whereas, if we know how

much they differ, we understand much better that *our* soul is quite independent of the body, and consequently not subject to die with the body.'

The spirit of these remarks is excellent, but the argument is extremely weak. It does not follow that brutes have no souls because they have no human souls. It does not follow that the souls of men are not immortal, because the souls of brutes are not immortal; nor has it ever been proved by any philosopher that the souls of brutes must necessarily be destroyed and annihilated by death. Leibniz, who has defended the immortality of the human soul with stronger arguments than even Descartes, writes,—'I found at last how the souls of brutes and their sensations do not at all interfere with the immortality of human souls; on the contrary, nothing serves better to establish our natural immortality than to believe that all souls are imperishable.'

Instead of entering into these perplexities, which are chiefly due to the loose employment of ill-defined terms, let us simply look at the facts. Every unprejudiced observer will admit that—

1. Brutes see, hear, taste, smell, and feel; that is to say, they have five senses, just like ourselves, neither more nor less. They have both sensation and perception—a point which has been illustrated by M. Flourens by the most interesting experiments. If the roots of the optic nerve are removed, the retina in the eye of a bird ceases to be excitable, the iris is no longer movable; the animal is blind, because it has lost the organ of *sensation*. If, on the contrary, the cerebral lobes are removed, the eye remains pure and

sound, the retina excitable, the iris movable. The eye is preserved, yet the animal cannot see, because it has lost the organs of perception.

2. Brutes have sensations of pleasure and pain. A dog that is beaten behaves exactly like a child that is chastised, and a dog that is fed and fondled exhibits the same signs of satisfaction as a boy under the same circumstances. We can judge from signs only, and if they are to be trusted in the case of children, they must be trusted likewise in the case of brutes

3. Brutes do not forget, or, as philosophers would say, brutes have memory. They know their masters, they know their home; they evince joy on recognising those who have been kind to them, and they bear malice for years to those by whom they have been insulted or ill-treated. Who does not recollect the dog Argos in the *Odyssey*, who, after so many years' absence, was the first to recognise Ulysses?<sup>1</sup>

4. Brutes are able to compare and to distinguish. A parrot will take up a nut, and throw it down again without attempting to crack it. He has found that it is light. This he could discover only by comparing the weight of the good nuts with that of the bad. And he has found that it has no kernel. This he could discover only by what philosophers would dignify with the grand title of syllogism, namely, 'All light nuts are hollow; this is a light nut, therefore this nut is hollow.'

5. Brutes have a will of their own. I appeal to any one who has ever ridden a restive horse.

<sup>1</sup> *Odyssey*, xvii. 300.

6. Brutes show signs of shame and pride. Here again any one who has to deal with dogs, who has watched a retriever with sparkling eyes placing a partridge at his master's feet, or a hound slinking away with his tail between his legs from the huntsman's call, will agree that these signs admit of but one interpretation. The difficulty begins when we use philosophical language, when we claim for brutes a moral sense, a conscience, a power of distinguishing good and evil; and, as we gain nothing by these scholastic terms, it is better to avoid them altogether.

7. Brutes show signs of love and hatred. There are well-authenticated stories of dogs following their master to the grave, and refusing food from any one. Nor is there any doubt that brutes will watch their opportunity till they revenge themselves on those whom they dislike.

If, with all these facts before us, we deny that brutes have sensation, perception, memory, will, and intellect, we ought to bring forward powerful arguments for interpreting the signs which we observe in brutes so differently from those which we observe in men.<sup>1</sup>

Some philosophers imagine they have explained everything if they ascribe to brutes instinct instead of intellect. But, if we take these two words in their usual acceptations, they surely do not exclude each other.<sup>2</sup> There are instincts in man as well as in

<sup>1</sup> See the whole of these questions admirably argued by Porphyry, in his four books on 'Abstinence from Animal Food,' book 3.

<sup>2</sup> 'The evident marks of reasoning in the other animals—of reasoning which I cannot but think as unquestionable as the instincts that mingle with it.'—Brown, *Works*, vol. i. p. 446.

brutes. A child takes his mother's breast by instinct; the spider weaves his net by instinct; the bee builds her cell by instinct. No one would ascribe to the child a knowledge of physiology because it employs the exact muscles which are required for sucking; nor can we claim for the spider a knowledge of mechanics, or for the bee an acquaintance with geometry, because *we* could not do what they do without a study of these sciences. But what if we tear a spider's web, and see the spider examining the mischief that is done, and either giving up his work in despair, or endeavouring to mend it as well as may be? <sup>1</sup> Surely here we have the instinct of weaving controlled by observation, by comparison, by reflection, by judgment. Instinct, whether mechanical or moral, is more prominent in brutes than in man; but it exists in both, as much as intellect is shared by both.

Where, then, is the difference between brute and man? <sup>2</sup> What is it that man can do, and of which we find no signs, no rudiments, in the whole brute world? I answer without hesitation: the one great barrier between the brute and man is *Language*. Man

<sup>1</sup> Flourens, *De la Raison*, p. 51.

<sup>2</sup> To allow that 'brutes have certain mental endowments in common with men, . . . desires, affections, memory, simple imagination, or the power of reproducing the sensible past in mental pictures, and even judgment of the simple or intuitive kind;'—that 'they compare and judge' (*Mem. Amer. Acad.* 8, p. 118), is to concede that the intellect of brutes really acts, so far as we know, like human intellect, as far as it goes; for the philosophical logicians tell us that all reasoning is reducible to a series of simple judgments. And Aristotle declares that even reminiscence—which is, we suppose, 'reproducing the sensible past in mental pictures'—is a sort of reasoning (τὸ ἀναμνηστικῆς ἐστὶ ὄλον συλλογισμὸς τῆς).—Asa Grey, *Natural Selection*, &c. p. 58, note.



speaks, and no brute has ever uttered a word. Language is our Rubicon, and no brute will dare to cross it. This is our matter-of-fact answer to those who speak of development, who think they discover the rudiments at least of all human faculties in apes, and who would fain keep open the possibility that man is only a more favoured beast, the triumphant conqueror in the primeval struggle for life. Language is something more palpable than a fold of the brain or an angle of the skull. It admits of no cavilling, and no process of natural selection will ever distil significant words out of the notes of birds or the cries of beasts.

**Language the Barrier between Man and Brute.**

Language, however, is only the outward sign. We may point to it in our arguments, we may challenge our opponent to produce anything approaching to it from the whole brute world. But if this were all, if the art of employing articulate sounds for the purpose of communicating our impressions were the only thing by which we could assert our superiority over the brute creation, we might not unreasonably feel somewhat uneasy at having the gorilla so close on our heels.

It cannot be denied that brutes, though they do not use articulate sounds for that purpose, have nevertheless means of their own for communicating with each other. When a whale is struck, the whole shoal, though widely dispersed, are instantly made aware of the presence of an enemy; and when the grave-digger beetle finds the carcase of a mole, he hastens to communicate the discovery to his fellows,

and soon returns with his *four* confederates.<sup>1</sup> It is evident, too, that dogs, though they do not speak, possess the power of understanding much that is said to them, their names and the calls of their master, and other animals, such as the parrot, can pronounce almost any articulate sound. Hence, although, for the purpose of philosophical warfare, articulate language would still form an impregnable position, yet it is but natural that for our own satisfaction we should try to find out in what the strength of our position really consists; or, in other words, that we should try to discover that inward power of which language is the outward sign and manifestation.

For this purpose it will be best to examine the opinions of those who approached our problem from another point; who, instead of looking for outward and palpable signs of difference between brute and man, inquired into the inward mental faculties, and tried to determine the point where man transcends the barriers of the brute intellect. That point, if truly determined, ought to coincide with the starting-point of language; and, if so, that coincidence ought to explain the problem which occupies us at present.

I shall begin with an extract from Locke's *Essay concerning Human Understanding*.

After having explained how he thinks that universal ideas are produced,—how the mind, having observed the same colour in chalk, and snow, and milk, comprehends these single perceptions under the

<sup>1</sup> Conscience, *Boek der Natuer*, vi., quoted by Marsh, p 32. See also some curious instances collected by Porphyry, in the third book on 'Abstinence from Animal Food.'

general conception of whiteness, Locke continues:<sup>1</sup> 'If it may be doubted, whether beasts compound and enlarge their ideas that way to any degree: this, I think, I may be positive in, that the power of abstracting is not at all in them; and that the having of general ideas is that which puts a perfect distinction betwixt man and brutes, and is an excellency which the faculties of brutes do by no means attain to.'

If Locke is right in considering the having of general ideas as the distinguishing feature between man and brutes. and if we ourselves are right in pointing to language as the one palpable distinction between the two, it would seem to follow that language is the outward sign and realisation of that inward faculty which is called the faculty of abstraction. but which is better known to us by the homely name of Reason.

#### Roots.

Let us now look back to the result of our former discussions. It was this. After we had explained everything in the growth of language that can be explained, there remained in the end, as the only inexplicable residuum, what we called *roots*. These roots formed the constituent elements of all languages. This discovery has simplified the problem of the origin of language immensely. It has taken away all excuse for those rapturous descriptions of language which invariably precede the argument that language must have a divine origin. We shall hear no more of that wonderful instrument which can

<sup>1</sup> Book ii. chap. xi. § 10.

express all we see, and hear, and taste, and touch, and smell; which is the breathing image of the whole world; which gives form to the airy feelings of our souls, and body to the loftiest dreams of our imagination; which can arrange in accurate perspective the past, the present, and the future, and throw over everything the varying hues of certainty, of doubt, of contingency. All this is perfectly true, but it is no longer wonderful, at least not in the Arabian Nights' sense of that word. 'The speculative mind,' as Dr. Ferguson says, 'in comparing the first and last steps of the progress of language, feels the same sort of amazement with a traveller, who, after rising insensibly on the slope of a hill, comes to look from a precipice of an almost unfathomable depth, to the summit of which he scarcely believes himself to have ascended without supernatural aid.' To certain minds it is a disappointment to be led down again by the hand of history from that high summit. They prefer the unintelligible which they can admire, to the intelligible which they can only understand. But to a mature mind reality is more attractive than fiction, and simplicity more wonderful than complication. Roots may seem dry things as compared with the poetry of Goethe; yet there is something more truly wonderful in a root than in all the lyrics of the world.

What, then, are these roots? In our modern languages roots can only be discovered by scientific analysis, and, even as far back as Sanskrit, there are but few instances where a word is not distinguished by the addition of formal elements from a root. In

Chinese, however, there is as yet no outward distinction between roots and words, and it is but natural to suppose that this was the case everywhere during the earliest periods of human speech. The Aryan root *DÁ*, to give, appears in Sanskrit *dâ-nam*, Latin *do-num*, gift, as a substantive; in Latin *do*, Sanskrit *da-dâ-mi*, Greek *di-dō-mi*, I give, as a verb. But the root *DÁ* is never used by itself. In Chinese, on the contrary, the root *TA* is used in the sense of a noun, greatness; of a verb, to be great; of an adverb, greatly or much. Roots, therefore, are not, as is commonly maintained, merely scientific abstractions, but they were, outwardly at least, identical with the real words of a language. What we now want to find out is this, What inward mental phase is it that corresponds to these roots, as the germs of human speech?

#### The Bow-wow and Pooh-pooH Theories.

Two theories have been started to solve this problem, which, for shortness sake, I shall call the *Bow-wow* theory and the *PooH-pooH* theory.<sup>1</sup>

According to the first, roots are imitations of sounds; according to the second, they are involuntary interjections. The first theory was very popular among the philosophers of the eighteenth century, and, as it has been held by many distinguished scholars

<sup>1</sup> I regret to find that the expressions here used have given offence to several of my reviewers. They were used simply and solely because the names Onomatopoeic and Interjectional are awkward and not very clear. They were not intended to be disrespectful to those who hold the one or the other theory—some of them scholars for whose achievements in comparative philology I entertain the most sincere respect.

and philosophers, we must examine it more carefully. It is supposed, then, that man, being as yet mute, heard the voices of birds and dogs and cows, the thunder of the clouds, the roaring of the sea, the rustling of the forest, the murmurs of the brook, and the whisper of the breeze. He tried to imitate these sounds, and finding his mimicking cries useful as signs of the objects from which they proceeded, he followed up the idea and elaborated language. This view was most ably defended by Herder.<sup>1</sup> 'Man,' he says, 'shows conscious reflection when his soul acts so freely that it may separate in the ocean of sensations which rush into it through the senses, one single wave, arrest it, regard it, being conscious all the time of regarding this one single wave. Man proves his conscious reflection when, out of the dream of images that float past his senses, he can gather himself up and wake for a moment, dwelling intently on one image, fixing it with a bright and tranquil glance, and discovering for himself those signs by which he knows that *this* is *this* image and no other. Man proves his conscious reflection when he not only perceives vividly and distinctly all the features of an object, but is able to separate and recognise one or more of them as its distinguishing features.' For instance, 'Man sees a lamb. He does not see it like the ravenous wolf. He is not disturbed by any uncontrollable instinct. He wants to know it, but he is neither drawn towards it nor repelled from it by his

<sup>1</sup> A fuller account of the views of Herder and other philosophers on the origin of language may be found in Steinthal's useful little work, *Der Ursprung der Sprache*, first published in 1858.

senses. The lamb stands before him, as represented by his senses, white, soft, woolly. The conscious and reflecting soul of man looks for a distinguishing mark;—the lamb bleats!—the mark is found. The bleating, which made the strongest impression, which stood apart from all other impressions of sight or touch, remains in the soul. The lamb returns—white, soft, woolly. The soul sees, touches, reflects, looks for a mark. The lamb bleats, and now the soul has recognised it. “Ah, thou art the bleating animal,” the soul says within herself; and the sound of bleating, perceived as the distinguishing mark of the lamb, becomes the name of the lamb. It was the comprehended mark, the word. And what is the whole of our language but a collection of such words?’

Our answer is, that though there are names in every language formed by mere imitation of sound, yet these constitute a very small proportion of our dictionary. Scholars may differ as to the exact number of such words in different languages, but whatever their number, they offer no difficulty, and require no explanation. They are the playthings, not the tools, of language, and any attempt to reduce the most common and necessary words to imitative roots ends in complete failure. Herder himself, after having most strenuously defended this theory of Onomatopoeia, as it is called, and having gained a prize which the Berlin Academy had offered for the best essay on the origin of language, renounced it openly towards the latter years of his life, and threw himself in despair into the arms of those who looked

upon languages as miraculously revealed. We cannot deny the possibility that a language might have been formed on the principle of imitation; all we say is, that as yet no language has been discovered that was so formed. An Englishman in China,<sup>1</sup> seeing a dish placed before him about which he felt suspicious, and wishing to know whether it was a duck, said, with an interrogative accent,

*Quack-Quack?*

He received the clear and straightforward answer,

*Bow-wow!*

This, no doubt, was as good as the most eloquent conversation on the same subject between an Englishman and a French waiter. But I doubt whether it deserves the name of language. We do not speak of a *bow-wow*, but of a dog. We speak of a cow, not of a *moo*; of a lamb, not of a *baa*. It is the same in more ancient languages, such as Greek, Latin, and Sanskrit. If this principle of Onomatopoeia is applicable anywhere, it would be in the formation of the names of animals. Yet we listen in vain for any similarity between goose and cackling, hen and clucking, duck and quacking, sparrow and chirping, dove and cooing, hog and grunting, cat and mewling, between dog and barking, yelping, snarling, or growling.

There are of course some names, such as *cuckoo*, or the American *whip-poor-will*, which are clearly formed by an imitation of sound. But words of this kind are, like artificial flowers, without a root. They are sterile, and unfit to express anything beyond the

<sup>1</sup> Farral, *Essay on the Origin of Language*, p. 74



one object which they imitate. If you remember the variety of derivatives that could be formed from the single root SPAS, to see, you will at once perceive the difference between the fabrication of such a word as *cuckoo*, and the true natural growth of predicative words.

Let us compare two words such as *cuckoo* and *raven*. *Cuckoo* in English is clearly a mere imitation of the cry of that bird, even more so than the corresponding terms in Greek, Sanskrit, and Latin. In these languages the imitative element has received the support of a derivative suffix; we have *kokila* in Sanskrit, and *kokkyx* in Greek, *cuculus* in Latin.<sup>1</sup> *Cuckoo* is, in fact, a modern word, which has taken the place of the Anglo-Saxon *geac*, the German *gauch*, and being purely onomatopoeic, it is of course not liable to the changes of Grimm's Law. As the word *cuckoo* predicates nothing but the sound of a particular bird, it could never be applied for expressing any general quality in which other animals might share; and the only derivatives to which it might give rise are words expressive of a metaphorical likeness to the bird. The same applies to *cock*, the Sanskrit *kukkuta*. Here, too, Grimm's Law does not apply, for both words were intended to convey merely the cackling sound of the bird; and, as this intention continued to be felt, phonetic change was less likely to set in. The Sanskrit *kukkuta* is not derived from any root; it simply repeats the cry of the bird, and the only derivatives to which it gives

<sup>1</sup> Pott, *Etymologische Forschungen*, i. s. 87; Kuhn's *Zeitschrift*, iii. s. 43.

rise are metaphorical expressions, such as the French *coquet*, originally strutting about like a cock; *coquetterie*; *cocart*, conceited; *cocarde*, a cockade; *coquelicot*, originally a cock's comb, then the wild red poppy, likewise so called from its similarity to a cock's comb.

Let us now examine the word *raven*. It might seem at first as if this also was merely onomatopoeic. Some people imagine they perceive a kind of similarity between the word *raven* and the cry of that bird. This seems still more so if we compare the Anglo-Saxon *hræfn*, the German *rabe*, Old High-German *hruban*. The Sanskrit *kârava* also, the Latin *corvus*, the English *crow*, and the Greek *korônê*, all are supposed to show some similarity to the unmelodious sound of *Maître Corbeau*. But if we look more closely we find that these words, though so similar in sound, spring from different sources. The English *crow*, for instance, can claim no relationship whatever with *corvus*, for the simple reason that, according to Grimm's Law, an English *c* cannot correspond to a Latin *c*. *Raven*, on the contrary, which in outward appearance differs from *corvus* much more than *crow*, offers much less real difficulty in being traced back to the same source from which sprang the Latin *corvus*. For *raven* is the Anglo-Saxon *hræfen* or *hræfn*, and its first syllable *hræ* would be a legitimate substitute for the Latin *cor*. Opinions differ widely as to the root or roots from which the various names of the crow, the raven, and the rook in the Aryan dialects are derived. Those who look on Sanskrit as the most primitive form of Aryan speech, are disposed to admit the Sanskrit *kârava* as the

original type; and as *kârava* is by native etymologists derived from *kâ+rava*, making a harsh noise,<sup>1</sup> *ru*, to make a noise, the root of *rava*, noise, was readily fixed upon as the etymon for the corresponding words in Latin, Greek, and German. I cannot enter here into the question whether such compounds as *kâ+rava*, in which the initial interrogative or exclamatory element *kâ* or *ku* is supposed to fill the office of the Greek *dys* or the English *mis*, are so numerous as they are supposed to be in Sanskrit. The question has been discussed again and again, and though it is impossible to deny the existence of such compounds in Sanskrit, particularly in the later Sanskrit, I know of no well-established instance where such formations have found their way into Greek, Latin, or German. If, therefore, *kârava*, *corvus*, *korônē*, and *krufen* are cognate words, it would be more advisable to look upon the *k* as part of the radical, and thus to derive all these words from a root *kru*, a secondary form, it may be, of the root *ru*. This root *kru*, or, in its more primitive form, *ru* (*rauti* and *ravîti*), is not a mere imitation of the cry of the raven; it embraces many cries, from the harshest to the softest, and it might have been applied to the note of the nightingale as well as to the cry of the raven. In Sanskrit the root *ru* is applied in its verbal and nominal derivatives to the murmuring sound of birds, bees, and trees, to the barking of dogs, the lowing of cows, and the whispering of men.<sup>2</sup> In

<sup>1</sup> See Boehtlingk and Roth, *Sanskrit Dictionary*, s. v.

<sup>2</sup> Cf. *Hitopadesa*, i. 76, where *rauti* is used both of the humming of the gnat and the flatteries whispered into the ear by an enemy.

Latin we have from it both *raucus*, hoarse, and *rumor*, a whisper; in German *rânen*, to speak low, and *râna*, mystery. The Latin *lamentum* stands for a more original *lavimentum* or *ravimentum*, for there is no necessity for deriving this noun from the secondary root *kru*, *krav*, *krâv*, and for admitting the loss of the initial guttural in *cravimentum*, particularly as in *clamare* the same guttural is preserved. It is true, however, that this root *ru* appears under many secondary forms. I call *kru* and *klu*, for instance, a secondary or parallel form, well known by its numerous offshoots, such as the Greek *klyo*, *klytos*, the Latin *cluo*, *inclitus*, *cliens*, the English *loud*, the Slavonic *slava*, glory.<sup>1</sup> The Sanskrit *rud*, to cry, the Latin *rug* in *rugire*, to howl, nay even the Sanskrit *krus*, to shout, the Greek *kraugē*, cry, and the Gothic *hrukjan*,<sup>2</sup> to crow, all may be traced back to the same cluster of roots. The Sanskrit *sru* and the Greek *klyo* have been used to convey the sense of hearing; naturally, because, when a noise was to be heard from a far distance, the man who first perceived it might well have said 'I ring,' for his ears were sounding or ringing; and the same verb, if once used as a transitive, would well come in in such forms as the Homeric *klŷthŷ*, hear, or the Sanskrit *srudhi*, hear!

<sup>1</sup> The causative of *sru*, to hear, would be *srāvayâmi*, I cause to hear, but this would not explain the Old High-German *hruofan*, the modern German *rufen*. See Grimm, *Deutsche Grammatik*, vol. i second edition, s. 1023. Heyse, *Handwörterbuch der Deutschen Sprache*, s. v. *rufen*. Heyse compares the Latin *crepare*, which in *increpare*, to blame, has the same meaning as the Old Icelandic *hrôpa*.

<sup>2</sup> See Curtius, *Grundzüge der Griechischen Etymologie*, zweite Ausgabe, s. 468.

But although, as far as the meaning of *kârava*, *corvus korônē*, and *hr̥afn* is concerned, there would seem to be no difficulty in deriving them from a root *kru*, to sound, no satisfactory explanation has yet been suggested of the exact etymological process by which the Sanskrit *kârava* could be formed from *kru*. *Kru*, no doubt, might yield *krava*, but to admit a dialectic corruption of *krava* into *karva*, and of *karva* into *kârava*, is tantamount to giving up all rules of analogy. Are we therefore forced to be satisfied with the assertion that *kârava* is no grammatical derivative at all, but a mere imitation of the sound *cor cor*, uttered by the raven? I believe not. We may, as I hinted at before, treat *kârava* as a regular derivative of the Sanskrit *kâru*. This *kâru* is a Vedic word, and means one who sings praises to the gods. literally one that shouts. It comes from a root *kar*, to shout, to praise, to record, from which the Vedic word *kîri*, a poet, and the well-known *kîrti*, glory, *kîrtayati*, he praises<sup>1</sup> *Kâru* from *kar* meant originally a shouter (like the Greek *kéryx*, a herald),<sup>2</sup> and its derivative *kârava* was therefore applied to the raven in the general sense of the shouter. All the other names of the raven can easily be traced back to the same root *kar*:—*cor-vus* from *kar*, like *tor-vus* from *tar*;<sup>3</sup> *kor-ônē* from *kar*, like *chelônē* from *har*;<sup>4</sup> *kor-aa* from *kar*, like *phylax*,

<sup>1</sup> See Boehtlingk and Roth, *Sanskrit Dictionary*, s v. *Kar*, 2; Lassen, *Anthol.* p. 203

<sup>2</sup> Cf. Bopp, *Vergleichende Grammatik*, § 949.

<sup>3</sup> *Ibid* § 943.

<sup>4</sup> Bopp, *l. c* § 837, Curtius, *Grundzüge*, i s. 167; Hugo Weber, in Kuhn's *Zeitschrift*, τ. s 257.

&c. The Anglo-Saxon *hræfen*, as well as the Old High-German *hraban*, might be represented in Sanskrit by such forms as *kar-van* or *kar-van-a*; while the English *rook*, the Anglo-Saxon *hrôc*, the Old High-German *hruoh*, would seem to derive their origin from a different root altogether, viz. from the Sanskrit *krus*.

The English *crow*, the Anglo-Saxon *cræwe*, cannot, as was pointed out before, be derived from the same root *kar*. Beginning with a guttural tenuis in Anglo-Saxon, its corresponding forms in Sanskrit would there begin with the guttural media. There exists in Sanskrit a root *gar*, meaning to sound, to praise; from which the Sanskrit *gir*, voice, the Greek *gērys*, voice, the Latin *garrulus*. From it was framed the name of the crane, *geranos* in Greek, *cran* in Anglo-Saxon, and likewise the Latin name for cock, *gallus* instead of *garrus*. The name of the nightingale, Old High-German *nahti-gal*, has been referred to the same root, but in violation of Grimm's Law.<sup>1</sup> From this root *gar* or *gal*, *crow* might have been derived, but again not from the root *kar*, which yielded *corvus*, *korax*, or *kâra va*, still less from *cor*, the supposed cry of the bird.

It will be clear from these remarks that the process which led to the formation of the word *raven* is quite distinct from that which produced *cuckoo*. *Raven* means a shouter, a caller, a crier. It might have been applied to many birds; and it became the traditional and recognised name of one, and of one only. Cuckoo could never mean anything but the

<sup>1</sup> Curtius, *Grundzüge*, i s. 145, 147.

cuckoo, and while a word like *raven* has ever so many relations, cuckoo stands by itself like a stick in a living hedge.<sup>1</sup>

It is curious to observe how apt we are to deceive ourselves when we once adopt this system of Onomatopoeia. Who does not imagine that he hears in the word 'thunder' an imitation of the rolling and rumbling noise which the old Germans ascribed to their god Thor playing at nine-pins? Yet *thunder*, Anglo-Saxon *thunor*, has clearly the same origin as the Latin *tonitru*. The root is *tan*, to stretch. From this root *tan* we have in Greek *tonos*, our tone, *tone* being produced by the stretching and vibrating of cords; Latin *tonare*<sup>2</sup> In Sanskrit the sound thunder is expressed by the same root *tan*, but in the derivatives *tanyu*, *tanyatu*, and *tanayitnu*, thundering, we perceive no trace of the rumbling noise which we imagined we perceived in the Latin *tonitru* and the English *thunder*.<sup>3</sup> The very same root, *tan*, to

<sup>1</sup> The following remarks on the interjectional theory, from Yâska's Nirukta (in 18), a work anterior to Pânini, and therefore belonging at least to the fourth century B.C., may be of interest.

After mentioning that words like lion and tiger, or dog and crow, may be applied to men to express either admiration or contempt, Yâska continues: 'kâka, crow, is an imitation of the sound (kâku kâku, according to Durga), and this is very common with regard to birds. Apamanyava, however, maintains that imitation of sound does never take place. He therefore derives kâka, crow, from apakâlayitavya, i. e. a bird that is to be driven away; tittiri, partridge, from tar, to jump, or from tilamâtraḥitra, with small spots, etc.'

<sup>2</sup> Hom *Il* xvi 365 ὄτε τε Ζεὺς λαίλαπα τεύρη. Cf. Grimm, *Namen des Donners*, p. 8.

<sup>3</sup> A secondary root is *stan*, to sound; from which *stanitam*, the rattling of thunder, *stanayitnu*, thunder, lightning, cloud (see Wilson's *Dict.*); Greek *στένω*, I grieve, and its numerous derivatives, also *στένωρ*, the shouter; Bopp, *Vergl. Gr.* s. 914, note. Professor Bopp (*Vergleichende*

stretch, yields some derivatives which are anything but rough and noisy. The English *tender*, the French *tendre*, the Latin *tener*, are derived from it. Like *tenuis*, the Sanskrit *tanu*, the English *thin*, *tener* meant originally what was extended over a larger surface, then *thin*, then *delicate*. The relationship betwixt *tender*, *thin*, and *thunder* would be hard to establish, if the original conception of thunder had really been its rumbling noise.

Who does not imagine that he hears something sweet in the French *sucré*, *sucré*? Yet sugar came from India, and it is there called *sarkhara*, which is anything but sweet-sounding. This *sarkhara* is the same word as *sugar*; it was called in Latin *saccharum*, and we still speak of *saccharine* juice, which is sugar juice.<sup>1</sup> Who does not think that there is something stirring in *stirrup*; yet in its earliest Anglo-Saxon form *stirrup* is *stig-ráp*, i.e. a stepping-rope, the German *steig-riemen*.

In *squirrel*, again, some people imagine they hear something of the rustling and whirling of the little animal. But we have only to trace the name back to Greek, and there we find that *skiouros* is composed of two distinct words, the one meaning shade, the other tail; the animal being called shade-tail by the Greeks.

*Grammatik*, § 3) and Professor Kuhn (*Zeitschrift*, iv s 7) consider *stan* as the primitive form, Professor Potl (*Etym. Forsch.* ii. s. 293) treats *stan* as formed from *tan*.

<sup>1</sup> 'Lo nome d' Amore è sì dolce a udire, che impossibile mi pare, che la sua operazione sia nelle più cose altro che dolce, conciossiacosachè i nomi segurtino le nominate cose, siccome è scritto: Nomina sunt consequentia rerum.'—Dante, *Vita Nuova Opere Minori*: Firenze, 1837, tom. iii. p. 289.



Thus the German *katze*, cat, is supposed to be an imitation of the sound made by a cat spitting. But if the spitting were expressed by the sibilant, that sibilant does not exist in the Latin *catus*, nor in *cat* or *kitten*, nor in the German *kater*.<sup>1</sup> The Sanskrit *mârgâra*, cat, might seem to imitate the purring of the cat; but it is derived from the root *mrig*, to clean, *mârgâra* meaning the animal that always cleans itself.

Many more instances might be given to show how easily we are deceived by the constant connection of certain sounds and certain meanings in the words of our own language, and how readily we imagine that there is something in the sound to tell us the meaning of the words. 'The sound must seem an echo to the sense.'

Most of these onomatopoeias vanish as soon as we trace our own words back to Anglo-Saxon and Gothic, or compare them with their cognates in Greek, Latin, or Sanskrit. The number of names which are really formed by an imitation of sound dwindle down to a very small quatum, if cross-examined by the comparative philologist; and we are left in the end with the conviction that though some kind of language might have been made out of the roaring, fizzing, hissing, gobbling, twittering, cracking, banging, slamming, and rattling sounds of nature, the tongues with which *we* are acquainted point to a different origin.<sup>2</sup>

<sup>1</sup> See Pictet, *Aryas primitifs*, p. 381.

<sup>2</sup> In Chinese the number of imitative sounds is very considerable. They are mostly written phonetically, and followed by the determinative

There is another class of philosophers, and among them Condillac, who protest against a theory which would place men even below the animal. Why should man be supposed, they say, to have taken a lesson from birds and beasts? Does he not utter cries, and sobs, and shouts himself, according as he is affected by fear, pain, or joy? These cries or interjections are represented as the natural and real beginnings of human speech, and everything else was supposed to have been elaborated after their model. This theory may be called the Interjectional, or the Pooh-pooh, Theory

Our answer to this theory is the same as that which we gave to the Bow-wow theory. There are no doubt in every language interjections, and some of them may become traditional, and enter into the composition of words. But these interjections are only the outskirts of real language. Language begins where interjections end. There is as much difference between a real word, such as 'to laugh,' and the interjection *ha, ha!* between 'I suffer,' and *oh!* as there is between the involuntary act and noise of sneezing, and the verb 'to sneeze.' We sneeze, and cough, and sign 'mouth.' We give a few, together with the corresponding sounds in Mandshu. The difference between the two will show how differently the same sounds strike different ears, and how differently they are rendered into articulate language:—

The cock crows	<i>kiao kiao</i> in Chinese	<i>dchoi dchoi</i> in Mandshu
The wild goose cries	<i>kao kao</i>	<i>lór kór</i> "
The wind and rain sound	<i>siao siao</i>	<i>chor chor</i> "
Wagons sound	<i>lín lín</i>	<i>loun gour koun gour</i> "
Dogs coupled together	<i>ling-ling</i>	<i>kalang kulang</i> "
Chains	<i>tsiang-tsiang</i>	<i>kiling kiling</i> "
Bells	<i>tsiang-tsiang</i>	<i>tang tang</i> "
Drums	<i>kan kan</i>	<i>tung tung</i> "

scream, and laugh in the same manner as animals; but if Epicurus tells us that we speak in the same manner as dogs bark, moved by nature,<sup>1</sup> our own experience will tell us that this is not the case.

An excellent answer to the interjectional theory has been given by Horne Tooke.

'The dominion of speech,' he says,<sup>2</sup> 'is erected upon the downfall of interjections. Without the artful contrivances of language, mankind would have had nothing but interjections with which to communicate orally, any of their feelings. The neighing of a horse, the lowing of a cow, the barking of a dog, the purring of a cat, sneezing, coughing, groaning, shrieking, and every other involuntary convulsion with oral sound, have almost as good a title to be called parts of speech, as interjections have. Voluntary interjections are only employed where the suddenness and vehemence of some affection or passion returns men to their natural state, and makes them for a moment forget the use of speech; or when, from some circumstance, the shortness of time will not permit them to exercise it.'

As in the case of onomatopoeia, it cannot be denied that with interjections, too, some kind of language might have been formed; but not a language like that which we find in numerous varieties among all the races of men. One short interjection may be

<sup>1</sup> 'Ο γὰρ Ἐπίκουρος ἔλεγεν, ὅτι οὐχὶ ἐπιστημόνως οὗτοι ἔθεντο τὰ ὀνόματα, ἀλλὰ φυσικῶς κινούμενοι, ὡς οἱ βήσσοντες καὶ παίροντες καὶ μυκώμενοι καὶ ὑλακτοῦντες καὶ στενάζοντες.—Lersch, *Sprachphilosophie der Alten*, 1 40. Cf. *Diog. Laert* x § 75. The statement is taken from Proclus, and I doubt whether he represented Epicurus fairly.

<sup>2</sup> *Diversions of Purley*, p 32.

more powerful, more intelligible, more eloquent than a long speech. In fact, interjections, together with gestures, the movements of the muscles of the mouth, and the eye, would be quite sufficient for all purposes which language answers with the majority of mankind.

Sæpe tacens vocem verbaque vultus habet :  
 Me specta, nutusque meos, vultumque loquacem,  
 Excipe, furtivas et refer ipse notas.  
 Verba supercilis sine voce loquentia dicam :  
 Verba legam digitis, verba notata meo.

*Ovid.*

Lucian, in his treatise on dancing, mentions a king whose dominions bordered on the Euxine. He happened to be at Rome in the reign of Nero, and, having seen a pantomime perform, he begged him of the emperor as a present, in order that he might employ him as an interpreter among the nations in his neighbourhood with whom he could hold no intercourse on account of the diversity of language. A pantomime meant a person who could mimic everything, and there is hardly anything which cannot be thus expressed. We, having language at our command, have neglected the art of speaking without words; but in the south of Europe that art is still preserved. If it be true that one look may speak volumes, it is clear that we might save ourselves much of the trouble entailed by the use of discursive speech. Yet we must not forget that *hum!* *ugh!* *tut!* *pooh!* are as little to be called words as the expressive gestures which usually accompany these exclamations.

The attempts at deriving some of our words etymologically from mere interjections are apt to fail from the same kind of misconception which leads us to imagine that there is something expressive in the sounds of words. Thus it is said 'that the idea of disgust takes its rise in the senses of smell and taste, in the first instance probably in smell alone; that in defending ourselves from a bad smell we are instinctively impelled to screw up the nose, and to expire strongly through the compressed and protruded lips, giving rise to a sound represented by the interjections *faugh* ' *foh!* *fie!* From this interjection it is proposed to derive not only such words as *foul* and *filth*, but, by transferring it from natural to moral aversion, the English *fiend*, the German *Feind*. If this were true, we should suppose that the expression of contempt was chiefly conveyed by the *f*, that is, by the strong emission of the breathing with half-opened lips. But *fiend* is a participle from a root *fian*, to hate; in Gothic *fijan*; and as a Gothic *f* always corresponds to a labial tenuis in Sanskrit, the same root in Sanskrit would at once lose its expressive power. It exists in fact in Sanskrit as *pîy*, to hate, to destroy; just as *friend* is derived from a root which in Sanskrit is *prî*, to delight.<sup>1</sup>

<sup>1</sup> The following list of Chinese interjections may be of interest:—

*hu*, to express surprise.

*fu*, the same

*tsai*, to express admiration and approbation.

*i*, to express distress.

There is one more remark which I have to make about the interjectional and the onomatopoeic theories, namely this: If the constituent elements of human speech were either mere cries, or the mimicking of the sounds of nature, it would indeed be difficult to understand why brutes should be without language. There is not only the parrot, but the mocking-bird and others, which can imitate most successfully both articulate and inarticulate sounds; and there is hardly an animal without the faculty of uttering interjections, such as huff, hiss, baa, &c. What then is the difference between these interjections, which never led to a language among animals, and the roots, which are the living germs of human speech? Surely, if what puts a perfect distinction betwixt man and brutes is the having of general ideas, a language which arises from interjections and from the imitation of the cries of animals could not claim to be the outward sign of that distinctive faculty of man. I may quote from Professor Rosenkranz: 'If speaking,' he says, 'is considered merely as a sensuous imitation of objects received through the senses, if in its definition the logical articulation, which alone (being inherent) makes the sounds into heralds of thought, is forgotten, then speech would be the most striking and complete example for the supposition that knowledge is the result of the

*shin-i*, ah! indeed.

*pü sin*, alas

*ngo*, stop!

In many cases interjections were originally words, just as the French *hélas* is derived from *lassus*, tired, miserable.—Diez, *Lexicon Etymologicum*, s. v. *lasso*.

mechanical co-operation of sensation and reflection.'<sup>1</sup>

The theory which is suggested to us by an analysis of language carried out according to the principles of comparative philology, is the very opposite. We arrive in the end at roots, and every one of these expresses a general, not a particular, idea. Every name, if we analyse it, contains a predicate by which the object to which the name is applied was known.

#### The Primum Cognitum.

There is an old controversy among philosophers, whether language originated in general appellatives, or in proper names.<sup>2</sup> It is the question of the *primum cognitum*, and its consideration may help us perhaps in discovering the true nature of the root, or the *primum appellatum*.

#### Adam Smith.

Some philosophers, among whom I may mention Locke, Condillac, Adam Smith, Dr. Brown, and with some qualification Dugald Stewart, maintain that all terms, as at first employed, are expressive of individual objects. I quote from Adam Smith: 'The assignation,' he says, 'of particular names to denote particular objects, that is, the institution of nouns substantive, would probably be one of the first steps towards the formation of language. Two savages who had never been taught to speak, but had been bred up remote from the societies of men, would naturally

<sup>1</sup> Kant's *Werke*, vol. xii. p. 20.

<sup>2</sup> See W. Hamilton's *Lectures*, 11 p. 319.

begin to form that language by which they would endeavour to make their mutual wants intelligible to each other by uttering certain sounds, whenever they meant to denote certain objects. Those objects only which were most familiar to them, and which they had most frequent occasion to mention, would have particular names assigned to them. The particular cave whose covering sheltered them from the weather, the particular tree whose fruit relieved their hunger, the particular fountain whose water allayed their thirst, would first be denominated by the words *cave*, *tree*, *fountain*, or by whatever other appellations they might think proper, in that primitive jargon, to mark them. Afterwards, when the more enlarged experience of these savages had led them to observe, and their necessary occasions obliged them to make mention of, other caves, and other trees, and other fountains, they would naturally bestow upon each of those new objects the same name by which they had been accustomed to express the similar object they were first acquainted with. The new objects had none of them any name of their own, but each of them exactly resembled another object which had such an appellation. It was impossible that those savages could behold the new objects without recollecting the old ones, and the name of the old ones, to which the new bore so close a resemblance. When they had occasion, therefore, to mention, or to point out to each other many of the new objects, they would naturally utter the name of the correspondent old one, of which the idea could not fail, at that instant, to present itself to their memory in the strongest and liveliest



manner. And thus those words, which were originally the proper names of individuals, became the common name of a multitude. A child that is just learning to speak calls every person who comes to the house its papa or its mamma, and thus bestows upon the whole species those names which it had been taught to apply to two individuals. I have known a clown who did not know the proper name of the river which ran by his own door. It was *the river*, he said, and he never heard any other name for it. His experience, it seems had not led him to observe any other river. The general word *river*, therefore, was, it is evident, in his acceptance of it, a proper name signifying an individual object. If this person had been carried to another river. would he not readily have called it *a river*? Could we suppose any person living on the banks of the Thames so ignorant as not to know the general word *river*, but to be acquainted only with the particular word *Thames*, if he were brought to any other river, would he not readily call it a *Thames*? This, in reality, is no more than what they who are well acquainted with the general word are very apt to do. An Englishman, describing any great river which he may have seen in some foreign country, naturally says that it is another Thames. . . . It is this application of the name of an individual to a great multitude of objects, whose resemblance naturally recalls the idea of that individual, and of the name which expresses it, that seems originally to have given occasion to the formation of those classes and assortments which, in the schools, are called *genera* and *species*.'

## Leibniz.

This extract from Adam Smith will give a clear idea of one view of the formation of thought and language. I shall now read another extract, representing the diametrically opposite view. It is taken from Leibniz,<sup>1</sup> who maintains that general terms are necessary for the essential constitution of languages. He likewise appeals to children. 'Children,' he says, 'and those who know but little of the language which they attempt to speak, or little of the subject on which they would employ it, make use of general terms, as *thing*, *plant*, *animal*, instead of using proper names, of which they are destitute. And it is certain that all proper or individual names have been originally appellative or general.' And again: 'Thus, I would make bold to affirm that almost all words have been originally general terms, because it would happen very rarely that man would invent a name, expressly and without a reason, to denote this or that individual. We may, therefore, assert that the names of individual things were names of species, which were given *par excellence*, or otherwise, to some individual; as the name *Great Head* to him of the whole town who had the largest, or who was the man of the most consideration of the great heads known.'

It might seem presumptuous to attempt to arbitrate between such men as Leibniz and Adam Smith, particularly when both speak so positively as they do on this subject. But there are two ways of judging

<sup>1</sup> *Nouveaux Essais*, lb. iii. cap. 1. p. 297 (Erdmann); Sir W. Hamilton, *Lectures*, ii. p. 324.

of former philosophers. One is to put aside their opinions as simply erroneous where they differ from our own. This is the least satisfactory way of studying ancient philosophy. Another way is to try to enter fully into the opinions of those from whom we differ, to make them, for a time at least, our own, till at last we discover the point of view from which each philosopher looked at the facts before him, and catch the light in which they struck his mental vision. We shall then find that there is much less of downright error in the history of philosophy than is commonly supposed; nay, we shall find nothing so conducive to a right appreciation of truth as a right appreciation of the errors by which it is surrounded.

**Primum Appellatum.**

Now, in the case before us, Adam Smith is no doubt right, when he says that the first individual cave which is called cave gave the name to all other caves. In the same manner the first town, though a mere enclosure gave the name to all other towns; the first imperial residence on the Palatine hill gave the name to all palaces. Slight differences between caves, towns, or palaces are readily passed by, and the first name becomes more and more general with every new individual to which it is applied. So far Adam Smith is right, and the history of almost every substantive might be cited in support of his view. But Leibniz is equally right when, in looking beyond the first emergence of such names as cave or town or palace, he asks how such names could have arisen. Let us take the Latin names of cave. A cave in Latin is

called *antrum, cavea, spelunca*. Now *antrum* means really the same as *internum*. *Antar* in Sanskrit means *between* and *within*.<sup>1</sup> *Antrum*, therefore, meant originally what is within or inside the earth or anything else. It is clear, therefore, that such a name could not have been given to any individual cave, unless the general idea of being within, or inwardness, had been present in the mind. This general idea once formed, and once expressed by the pronominal root *an* or *antar*, the process of naming is clear and intelligible. The place where the savage could live safe from rain and from the sudden attacks of wild beasts, a natural hollow in the rock, he would call his *within*, his *antrum*, and afterwards similar places, whether dug in the earth or cut in a tree, would be designated by the same name. The same general idea, however, would likewise supply other names, and thus we find that the *entrails* (*intranía* in *lex Salica*) were called *antra* (neuter) in Sanskrit, *entera* in Greek, originally things within.

Let us take another word for cave, which is *cavea* or *caverna*. Here again Adam Smith would be perfectly right in maintaining that this name, when first given, was applied to one particular cave, and was afterwards extended to other caves. But Leibniz would be equally right in maintaining that in order to call even the first hollow *cavea*, it was necessary that the general idea of *hollow* should have been formed in the mind, and should have received its vocal expression *cav*. Nay, we may go a step beyond, for *cavus*, or hollow, is a secondary, not a primary,

<sup>1</sup> Pott, *Etymologische Forschungen*, s. 324 seq.

idea. Before a cave was called *cavea*, a hollow thing, many things hollow had passed before the eyes of men. Why then was a hollow thing, or a hole, called by the root *cav*? Because what had been hollowed out was intended at first as a place of safety and protection, as a cover; and it was called therefore by the root *ku* or *sku*, which conveyed the idea of to cover<sup>1</sup>. Hence the general idea of covering existed in the mind before it was applied to hiding-places in rocks or trees, and it was not till an expression had thus been framed for things hollow or safe in general, that caves in particular could be designated by the name of *cavea* or hollows.

Another form for *cavus* was *koilos*, hollow. The conception was originally the same; a hole was called *koilon* because it served as a cover. But once so used, *koilon* came to mean a cave, a vaulted cave, a vault; and thus the heaven was called *cælum*, the modern *cœl*, because it was looked upon as a vault or cover for the earth.

It is the same with all nouns. They all express originally one out of the many attributes of a thing, and that attribute, whether it be an action or a quality, is necessarily a general idea. The word thus formed was in the first instance intended for one object only, though of course it was almost immediately extended to the whole class to which this object seemed to belong. When a word such as *rivus*, river, was first formed, no doubt it was intended for a certain river, and that river was called *rivus*, from a root *ru* or

<sup>1</sup> Benfey, *Griech. Wurzel-Lex.* s. 611. From *sku* or *ku*, *σκῦρος*, skin, *cētis*, hide.

sru, to run, because of its running water. In many instances, a word meaning river or runner remained the proper name of one river, without ever rising to the dignity of an appellative. Thus *Rhenus*, the Rhine, means river or runner, but it clung to one river, and could not well be used as an appellative for others<sup>1</sup> The Ganges is the Sanskrit Gangâ, literally the Go-go;<sup>2</sup> a name applied to the sacred river, and to several minor rivers in India. The Indus again is the Sanskrit Sindhu, and means the protector, from sidh, to keep off. In this case, however, the proper name was not checked in its growth, but was used likewise as an appellative for any great stream.

We have thus seen how the controversy about the *primum cognitum* assumes a new and perfectly clear aspect. The first thing really known is the general. It is through it that we know and name afterwards individual objects of which any general idea can be predicated; and it is only in the third stage that these individual objects, thus known and named, become again the representatives of whole classes, and their names or proper names are raised into appellatives.<sup>3</sup>

<sup>1</sup> In Somersetshire the large drains which carry off the abundant water from the Sedgemoor district are locally termed *rhines*, the German *Rinne*.

<sup>2</sup> The following notice was sent me from Scotland:—‘At the village of Largs, on the Ayrshire coast, there is a small river or burn which is called *Gogo*. The local tradition is that the name originated in the expression of the Scots when driving the soldiers of Haco into the sea at the battle of Largs.’

<sup>3</sup> Sir William Hamilton (*Lectures on Metaphysics*, ii. p. 327) holds a view intermediate between those of Adam Smith and Leibniz. ‘As our knowledge,’ he says, ‘proceeds from the confused to the distinct, from the vague to the determinate, so, in the mouths of children, language at

There is a petrified philosophy in language, and if we examine the most ancient word for *name*, we find it is *nâman* in Sanskrit, *nomen* in Latin, *namô* in Gothic. This *nâman* stands for *gnâman*, which is preserved in the Latin *co-gnomen*. The *g* is dropped as in *notus*. son, for *gnatus*. *Nâman*, therefore, and *name* are derived from the root *gnâ*, to know, and meant originally that by which we know a thing.

And how do we know things? We perceive things by our senses. These, however, convey to us information about single things only. But to *know* is more than to feel, than to perceive, more than to remember, more than to compare. No doubt words are much abused. We speak of a dog *knowing* his master, of an infant *knowing* his mother. In such expressions, to know means to recognise. But to know a thing means more than to recognise it. We know a thing if we are able to bring it or any part of it, under more general ideas. We then say that we have not only a perception, but a conception, or that we have a general idea of a thing. The facts of nature are perceived by our senses; the thoughts of nature, to borrow an expression of Oersted's, can be conceived by our reason only.<sup>1</sup> Now the first step towards this

first expresses neither the precisely general nor the determinately individual, but the vague and confused, and out of this the universal is elaborated by generification, the particular and singular by specification and individualisation.' See some further remarks on this point in the *Literary Gazette*, 1861, p. 173

<sup>1</sup> 'We receive the impression of the falling of a large mass of water, descending always from the same height and with the same difficulty. The scattering of the drops of water, the formation of froth, the sound of the fall by the roaring and by the froth, are constantly produced by the same causes, and, consequently, are always the same. The impres-

real knowledge, a step which, however small in appearance, separates man for ever from all other animals, is *the naming of a thing*, or the making a thing knowable. All naming is classification, bringing the individual under the general; and whatever we know, whether empirically or scientifically, we know it by means of our general ideas only. Other animals have sensation, perception, memory, and, in a certain sense, intellect; but all these, in the animal, are conversant with single objects only. Man has sensation, perception, memory, intellect, and reason, and it is his reason which is conversant with general ideas.<sup>1</sup>

Through reason we not only stand a step above the brute creation; we belong to a different world. We look down on our merely animal experience, on our sensations, perceptions, our memory, and our intellect, as something belonging to us, but not as constituting our most inward and eternal self. Our senses, our memory, our intellect, are like the lenses of a telescope. But there is an eye that looks through them at the realities of the outer world, our own rational and self-conscious self; a power as distinct from our perceptive faculties as the sun is

sion which all this produces on us is no doubt at first felt as multiform, but it soon forms a whole, or, in other terms, we feel all the diversity of the isolated impressions as the work of a great physical activity which results from the particular nature of the spot. We may, perhaps, till we are better informed, call all that is fixed in the phenomenon, *the thoughts of nature*'—Oersted, *Esprit dans la Nature*, p 152.

<sup>1</sup> 'Ce qui trompe l'homme, c'est qu'il voit faire aux bêtes plusieurs des choses qu'il fait, et qu'il ne voit pas que, dans ces choses-là même, les bêtes ne mettent qu'une intelligence grossière, bornée, et qu'il met, lui, une intelligence doublée d'esprit.'—Flourens, *De la Raison*, p 73.



from the earth which it fills with light, and warmth, and life.

**Reason and Language.**

At the very point where man parts company with the brute world, at the first flash of reason as the manifestation of the light within us, there we see the true genesis of language. Analyse any word you like, and you will find that it expresses a general idea peculiar to the individual to whom the name belongs. What is the meaning of moon?—the measurer. What is the meaning of sun?—the begetter. What is the meaning of earth?—the ploughed. The old name given to animals, such as cows and sheep, was *pasu*, the Latin *pecus*, which means *tethered*. *Animal* itself is a later name, and derived from *anima*, soul. This *anima* again meant originally blowing or breathing, like spirit from *spirare*, and was derived from a root *an*, to blow, which gives us *anila*, wind, in Sanskrit, and *anemos*, wind, in Greek. *Ghost*, A.S. *gást*, the German *Geist*, seems to be based on a similar conception, if it is connected, as Wackernagel thinks, with *yeast*. Certainly *Geist* is used in German both for spirit and for yeast (Hefe). The boiling *Geysir* of Iceland also may be remotely related.<sup>1</sup> *Soul*, A.S. *sáwol*, is the Gothic *saiwala*, and this is clearly related to another Gothic word, *sarws*,<sup>2</sup> which means the sea. The sea, A.S. *scé*, was called *sarws*, from a root *si* or *siv*, the Greek *seio*, to shake; it meant the tossed-about water, in contradistinction to stagnant or running water. The

<sup>1</sup> See *Biographies of Words*, p. 27; Curtius, p. 352; Kuhn's *Zeitschrift*, ii. 137, xx 305.

<sup>2</sup> See Heyse, *System der Sprachwissenschaft*, s. 97.

soul being called *saivala*, we see that it was originally conceived by the Teutonic nations as a sea within, heaving up and down with every breath, and reflecting heaven and earth on the mirror of the deep.

The Sanskrit name for love is *smara*; it is derived from *smar*, to recollect; and the same root may have supplied the German *schmerz*, pain, and the English *smart*<sup>1</sup>

If the serpent is called in Sanskrit *sarpa*, it is because it was conceived under the general idea of creeping, an idea expressed by the root *sr̥ip*. But the serpent was also called *ahī* in Sanskrit, in Greek *echis* or *echidna*, in Latin *anguis*. This name is derived from quite a different root and idea. The root is *ah* in Sanskrit, or *amh*, which means to press together, to choke, to throttle. Here the distinguishing mark from which the serpent was named was his throttling and *ahi* meant serpent, as expressing the general idea of throttler. It is a curious root this *amh*, and it still lives in several modern words. In Latin it appears as *ango*, *anxi*, *anctum*, to strangle; in *angina*, quinsy; <sup>2</sup> in *angor*, suffocation. But *angor* meant not only quinsy or compression of the throat: it assumed a moral import and signifies anguish or anxiety. The two adjectives *angustus*, narrow, and *anxius*, uneasy, both come from the same source. In Sanskrit the same root was chosen with great truth

<sup>1</sup> Cf. Pott, *Etymologische Forschungen*, ii. s. 290.

<sup>2</sup> The word *quinsy*, as was pointed out to me, offers a striking illustration of the ravages produced by phonetic decay. The root *amh* has here completely vanished. But it was there originally, for *quinsy* is the Greek *κυνάγχη*, dog-throttling. See Richardson's *Dictionary*, s. v. Quinancy.

as the proper name of sin. Evil no doubt presented itself under various aspects to the human mind, and its names are many; but none so expressive as those derived from our root *amh*, to throttle. *Amhas* in Sanskrit means sin, but it does so only because it meant originally throttling—the consciousness of sin being like the grasp of the assassin on the throat of his victim. All who have seen and contemplated the statue of Laokoon and his sons, with the serpent coiled round them from head to foot, may realise what those ancients saw and felt when they called sin *amhas*, or the throttler. This *amhas* is the same word as the Greek *áchos*. fear. In Gothic the same root has produced *ag-is*, in the sense of *fear*, and from this source we have *awe*, in awful, i.e. fearful, and *ug*, in *ugly*. The English *anguish* is from the French *angorsse*, the Italian *angoscia*, a corruption of the Latin *angustia*, a strait<sup>1</sup>

And how did those early thinkers and framers of language distinguish between man and the other animals? What general idea did they connect with the first conception of themselves? The Latin word *homo*, the French *l'homme*, which has been reduced to *on* in *on dit*, is derived from the same root which we have in *humus*, the soil, *humilis*, humble. *Homo*, therefore, would express the idea of a being made of the dust of the earth.<sup>2</sup>

Another ancient word for man was the Sanskrit *marta*,<sup>3</sup> the Greek *brotos*, the Latin *mortalis* (a

<sup>1</sup> Kuhn, *Zeitschrift*, i. s. 152, 355; Curtius, p. 190.

<sup>2</sup> Greek *χαμαι*, Zend *zem*, Lithuanian *zeme* and *zmenes*, *homines*. See Bopp, *Glossarium Sanscritum*, s. v.

<sup>3</sup> See Windschmann, *Fortschritt der Sprachwissenschaft*, s. 23.

secondary derivative), our own *mortal*. *Marta* means 'he who dies,' and it is remarkable that, where everything else was changing, fading, and dying, this should have been chosen as the distinguishing name for man. Those early poets would hardly have called themselves mortals, unless they had believed in other beings as immortal.

There is a third name for man which means simply the thinker, and this, the true title of our race, still lives in the name of *man*. *Mâ* in Sanskrit means to measure, from which, as pointed out before, we had the name of moon. *Man*, a derivative root, means to think. From this we have the Sanskrit *manu*, originally thinker, then man. In the later Sanskrit we find derivatives, such as *mânava*, *mânusha*, *manushya*, all expressing man or son of man. In Gothic we find both *man* and *mannisks*, the modern German *mann* and *mensch*.

There were many more names for man, as there were many names for all things in ancient languages. Any feature that struck the observing mind as peculiarly characteristic could be made to furnish a new name. In common Sanskrit dictionaries we find 5 words for hand, 11 for light, 15 for cloud, 20 for moon, 26 for snake, 33 for slaughter, 35 for fire, 37 for sun.<sup>1</sup> The sun might be called the bright, the warm, the golden, the preserver, the destroyer, the wolf, the lion, the heavenly eye, the father of light and life. Hence that superabundance of synonyms in ancient dialects, and hence that *struggle for life* carried on among these words, which led to the destruction of

<sup>1</sup> Cf. Yates, *Sanskrit Grammar*, p. xviii.

the less strong, the less fertile, the less happy words, and ended in the triumph of *one*, as the recognised and proper name for every object in every language. On a very small scale this process of *natural selection*, or, as it would better be called, *elimination*, may still be watched even in modern languages, that is to say, even in languages so old and stricken in years as English and French. What it was at the first burst of dialects we can only gather from such isolated cases as when Von Hammer counts 5,744 words all relating to the camel.<sup>1</sup>

The fact that every word is originally a predicate—that names, though signs of individual conceptions, are all, without exception, derived from general ideas—is one of the most important discoveries in the science of language. It was known before that language is the distinguishing characteristic of man; it was known also that the having of general ideas is that which puts a perfect distinction betwixt man and brutes; but that these two were only different expressions of the same fact was not known till the theory of roots had been established as preferable to the theories both of Onomatopoeia and of Interjec-

<sup>1</sup> Farrar, *Origin of Language*, p. 85. 'Das Kamel,' *Extrait des Mém. de l'Acad. de Vienne, classe de phil. et d'hist.* tom. vii. In Arabic a work is mentioned on the 500 names of the lion; another on the 200 names of the serpent. Firuzabadi, the author of the *Kamus*, says he wrote a work on the names of honey, and that he counted 80 without exhausting the subject. The same author maintains that in Arabic there are at least 1,000 words for sword; others maintain that there are 400 to signify misfortune. Hervas (*Dell' Origine delle Lingue*, § 233) states that the Mandshu Tatars have more than 100 words to express the different ages and qualities of the horse. See *supra*, p. 329. There is, however, much exaggeration in these statements. See Renan, *Histoire des Langues semitiques*, p. 377; Sayce, *Principles*, p. 208.

tions. But, though our modern philosophy did not know it, the ancient poets and framers of language must have known it. For in Greek, language is *logos*, but *logos* means also reason, and *alolon* was chosen as the name, and the most proper name, for brute. No animal, so far as we know, thinks and speaks, except man. Language and thought are inseparable. Words without thought are dead sounds; thoughts without words are nothing. To think is to speak low; to speak is to think aloud. The word is the thought incarnate

We may still go a step further back and ask the question, How can sound express thought? How did roots become the signs of general ideas? How was the abstract idea of measuring expressed by *mâ*, the idea of thinking by *man*? How did *gâ* come to mean going; *sthâ*, standing; *sad*, sitting; *dâ*, giving, *mar*, dying, *kar*, walking; *kar*, doing?

#### Roots as Phonetic Types.

Though this question belongs to the Science of Thought rather than to the Science of Language, I shall try to answer it, at least negatively, by showing what roots are not. If we know this, it may help us hereafter in finding out what roots are.

The roots, whether 400 or 1000, which remain as the residue of a scientific analysis in different families of language, and which we are justified in regarding as the constituent elements of human speech, are not mere interjections, nor are they mere imitations. They may be called *phonetic types*, and whatever explanation the psychologist or the metaphysician may pro-

pose. to the student of language these roots are simply ultimate facts. We might say with Plato, that they exist by nature; though with Plato we should have to add that, when we say by nature, we mean by the hand of God.<sup>1</sup> If we must look for analogies, however imperfect, they have been pointed out by others. There is a law, it has been said, which runs through nearly the whole of nature, that everything which is struck rings. Each substance has its peculiar ring. We can tell the more or less perfect structure of metals by their vibrations, by the answer which they give. Gold rings differently from tin, wood rings differently from stone; and different sounds are produced according to the nature of each percussion. It is the same, we are told, with man the most highly organised of nature's work.<sup>2</sup> Man responds. Man rings. Man, in his primitive and perfect state, was not only endowed, like the brute, with the power of expressing his sensations by interjections, and his perceptions by onomatopoeia. He possessed likewise the faculty of giving more articulate expression to the general conceptions of his mind. That faculty was

<sup>1</sup> ὅθσω τὰ μὲν φύσει λεγόμενα ποιεῖσθαι θεία τέχνη.

<sup>2</sup> This view was propounded many years ago by Professor Heyse in the lectures which he gave at Berlin, and which have been very carefully published since his death by one of his pupils, Dr. Steinthal. The fact that wood, metals, cords, &c, if struck, vibrate and ring, can, of course, be used as an illustration only, and not as an explanation. The faculty peculiar to man, in his primitive state, by which every impression from without received its vocal expression from within, must be accepted as an ultimate fact, while the formation of roots, as the exponents of general conceptions will always be viewed differently by different schools of philosophy. Much new light has been thrown on the origin of roots by Professor Noiré, and the whole subject has now been fully treated by myself in the *Science of Thought*, 1887.

not of his own making. It was an instinct, an instinct of the mind as irresistible as any other instinct. Man loses his instincts as he ceases to want them. His senses become fainter when, as in the case of scent, they become useless. Thus the creative faculty which gave to each general conception, as it thrilled for the first time through the brain, a phonetic expression, became extinct when its object was fulfilled.

There may be some value in speculations of this kind, but I should not like to endorse them, for we have no right to imagine that a vague analogy can ever become an explanation of the problem of the origin of roots. If there is any truth in the results at which we have arrived after a careful and unprejudiced analysis of all the facts before us, all that we have a right to assert is that language begins with roots, and that these roots are neither more nor less than phonetic types, or typical sounds. What lies beyond them is no longer, or, if we speak historically, is not yet language, however interesting it may be for psychological researches. But whatever exists in real language is the upshot of these roots. Words are various impressions taken from those phonetic moulds, or, if you like, varieties and modifications, perfectly intelligible in their structure, of those typical sounds which, by means of unerring tests, have been discovered as the residuum of all human speech.

The number of these *phonetic types* must have been almost infinite in the beginning, and it was only through the same process of *natural elimination* which we observed in the early history of words that clusters of roots, more or less synonymous, were



gradually reduced to one definite type. Instead of deriving language from nine roots, like Dr. Murray,<sup>1</sup> or from *one* root, a feat actually accomplished by a Dr. Schmidt<sup>2</sup> we must suppose that the first settlement of the radical elements of language was preceded by a period of unrestrained growth—the spring of speech—to be followed by many an autumn.

With the process of elimination, or natural selection the historical element enters into the science of language. However primitive the Chinese may be as compared with terminational and inflectional languages, its roots or words have clearly passed through a long process of mutual attrition. There are many things of a merely traditional character even in Chinese. The rule that in a simple sentence the first word is the subject, the second the verb, the third the object, is a traditional rule. It is by tradition only that *ngō jin*, in Chinese, means a bad man, whereas *jin ngō* signifies man is bad. The Chinese themselves distinguish between *full* and *empty* roots,<sup>3</sup> the former being predicative, the latter corresponding to our particles, which modify the meaning of full roots and determine their relation to each other. Now it is only by tradition that roots became empty. All roots were originally full, whether predicative or demonstrative, and the fact that empty roots in

<sup>1</sup> Dr. Murray's primitive roots were *ag, bag, dwag, cwag, lag, mag, nag, rag, swag*. See Post, *Etymologische Forschungen*, 2nd ed., 1861, p. 75.

<sup>2</sup> Curtius, *Griechische Etymologie*, s. 13. Dr. Schmidt derives all Greek words from the root *e*, and all Latin words from the arch-radical *hi*.

<sup>3</sup> Endlicher, *Chinesische Grammatik*, s. 163.

Chinese cannot always be traced back to their full prototypes shows that even the most ancient Chinese had passed through successive periods of growth. Chinese commentators admit that all empty words were originally full words, just as Sanskrit grammarians maintain that all that is formal in grammar was originally substantial. But we must be satisfied with but partial proofs of this general principle, and must be prepared to find as many fanciful derivations in Chinese as in Sanskrit. The fact again that not all roots in Chinese are capable of being employed at pleasure, either as substantives, or verbs, or adjectives, is another proof that, even in this most primitive stage, language points back to a previous growth. *Fu* is father, *mu* is mother, *fu mu* parents; but neither *fu* nor *mu* is used as a root in its original predicative sense. The amplest proof, however, of the various stages through which even so simple a language as Chinese must have passed, is to be found in the comparatively small number of roots, and in the number of definite meanings attached to each—a result which could only have been obtained by that constant struggle which has been so well described in natural history as the struggle for life.

But although this sifting of roots, and still more the subsequent combination of roots, cannot be ascribed to the mere working of nature or natural instincts, it is still less, as we saw in a former lecture, the effect of deliberate or premeditated art, in the sense in which, for instance, a picture of Raphael or a symphony of Beethoven is. Given a root to express flying, or bird,

and another to express heap, then the joining together of the two to express many birds, or birds in the plural, is the natural effect of the synthetic power of the human mind, or, to use more homely language, of the power of putting two and two together. Some philosophers maintain that this explains nothing, and that the real mystery is how the mind can form any synthesis, and conceive many things as one. This is quite true, but we must not enter into these depths. Other philosophers imagine that the combination of roots to form agglutinative and inflectional language is, like the first formation of roots, the result of a natural instinct. Thus Professor Heyse<sup>1</sup> maintained that 'the various forms of development in language must be explained by philosophers as *necessary* evolutions, founded in the very essence of human speech.' This is not the case. We can watch the growth of language, and we can understand and explain all that is the result of that growth. But we cannot undertake to prove that all that is in language is so by necessity, and could not have been otherwise. When we have, as in Chinese, two such words as *kuai* and *tu*, both expressing a heap, an assembly, a quantity, then we may perfectly understand why either the one or the other should have been used to form the plural. But if one of the two becomes fixed and traditional while the other becomes obsolete, then we can only register the fact as historical, but no philosophy on earth will explain its absolute necessity. We can perfectly understand how, with two such roots as *kuo*, empire, and *chung*, middle, the Chinese should have formed what

we call a locative *káð cung*, in the empire. But to say that this was the only way to express this conception is an assertion contradicted both by fact and reason. We saw the various ways in which the future can be formed. They are all equally intelligible and equally possible, but not one of them can be called inevitable. In Chinese *yáo* means to will, *ngò* is I; hence *ngò yáo*, I will. The same root *yáo*, added to *kiú*, to go, gives us *ngò yáo kiú*, I will go, the first germ of our futures. To say that *ngò yáo kiú* was the necessary form of the future in Chinese would introduce a fatalism into language which rests on no authority whatever. The building up of language is not like the building of the cells in a beehive, nor is it like the building of St. Peter's by Michael Angelo. It is the result of innumerable agencies, working each according to certain laws, and leaving, in the end, the result of their combined efforts freed from all that proved superfluous or useless. From the first combination of two such words as *ġin*, man, *kiai*, many, forming the plural *ġin kiai*, to such inflectional forms as Sanskrit *nar-as*, from *nri*, Greek *ἄνδρες* from *ἄνθρωπος*, English *men* from *man*, everything is intelligible as the result of the two principles of development in language, phonetic decay and dialectic growth. What is antecedent to the production of roots is the work of nature; what follows after is the work of man, not in his individual and free, but in his collective and moderating, capacity.

I do not say that every form in Greek or Sanskrit has as yet been analysed and explained. There are

formations in Greek and Latin and English which have hitherto baffled all tests ; and there are certain contrivances, such as the augment in Greek, the change of vowels in Hebrew, the Umlaut and Ablaut in the Teutonic dialects, where we might feel inclined to suppose that language admitted distinctions purely musical or phonetic, corresponding to very palpable and material distinctions of thought. Such a supposition, however, is not founded on any safe induction. It may seem inexplicable to us why *bruder* in German should form its plural as *brüder* ; or *brother*, *brethren*. But what is inexplicable and apparently artificial in our modern languages becomes intelligible in their more ancient phases. The change of *u* into *i*, as in *bruder*, *brüder*, was not intentional ; least of all was it introduced to express plurality. The change was purely phonetic, and due originally to the influence of an *i* or *j*<sup>1</sup> in the next syllable, which reacted regularly on the vowel of the preceding syllable — nay, which left its effect behind, even after it has itself disappeared. By a false analogy such a change, justifiable in a small class of words only, was applied to other words also where no such change was called for ; and it may then appear as if an arbitrary change of vowels was intended to convey a change of meaning. But into these recesses also the comparative philologist can follow language, thus discovering a reason even for what in reality was irrational and wrong. It seems difficult to believe that the augment in Greek should originally have had an independent

<sup>1</sup> See Schleicher, *Deutsche Sprache*, s 146 ; J. Wright, *High-German Primer*, p. 11.

substantial existence, yet all analogy is in favour of such a view. Suppose English had never been written down before Wycliffe's time, we should then find that in some instances the perfect was formed by the mere addition of a short *a*. Wycliffe spoke and wrote,<sup>1</sup> *I knowlech to a felid and seid þus*, i. e. I acknowledge to have felt and said thus. In a similar way we read *it should a fallen*, instead of 'it should have fallen'; and in some parts of England common people still say very much the same: *I should a done it*. Now in some old English books this *a* actually coalesces with the verb—at least they are printed together—so that a grammar founded on them would give us 'to fall' as the infinitive of the present, *to afallen* as the infinitive of the past. I do not wish for one moment to be understood as if there was any connection between this *a*, a contraction of *have* in English, and the Greek augment which is placed before past tenses. All I mean is, that, if the origin of the augment has not yet been satisfactorily explained, we are not therefore to despair, or to admit an arbitrary addition of a consonant or vowel, used as it were algebraically or by mutual agreement, to distinguish a past from a present tense.

#### Origin and Confusion of Tongues.

If inductive reasoning is worth anything, we are justified in believing that what has been proved to be true on so large a scale, and in cases where it was least expected, is true with regard to language in general. We require no supernatural interference, nor any conclave of ancient sages, to explain the realities

<sup>1</sup> Marsh, *Lectures*, p. 388.

of human speech. All that is formal in language is the result of rational combination ; all that is material is the result of a mental instinct, call it interjectional, onomatopoeitic, or mimetic. The first natural and instinctive utterances, if sifted differently by different clans, would fully account both for the first origin and for the first divergence of human speech. We can understand not only the origin of language, but likewise the necessary breaking up of one language into many ; and we perceive that no amount of variety in the material or the formal elements of speech is incompatible with the admission of one common source.

The Science of Language thus leads us up to that highest summit from whence we see into the very dawn of man's life on earth, and where the words which we have heard so often from the days of our childhood—'And the whole earth was of one language and of one speech'—assume a meaning more natural, more intelligible, more convincing, than they ever had before.

# GENEALOGICAL TABLE

OF

## THE ARYAN FAMILY OF LANGUAGES.

LIVING LANGUAGES	DEAD LANGUAGES	BRANCHES	CLASSES
Spoken Dialects of :—			
India	Modern Sanskrit—Pāṇini and Pāṇi, Vēdic Sanskrit	Indic	South-Eastern Division
Afghanistan, Pushtu { the Gupstas . . .			
Persia . . .	Pāsi, Pehlvi, Achaemenian Inscriptions, Zend	Iranic	
Kurdistan . . .			
Baluchistan . . .		Celtic	
{ Assethi . . .			
Armenia . . .	Old Armenian		
Wales . . .	Old Welsh	Cymric	
Brittany . . .	Old Armorican		
+ . . .	Cornish	Goidelic	
Scotland . . .	Old Irish		
Ireland . . .	Inscriptions in Gaul	Gaulic	
{ Isle of Man . . .			
+ . . .		Italic	
Portugal . . .	Langue d'Oc { Oscan		
Spain . . .	Langue d'Oil { Latin		
Provence . . .	Langue vulgaire { Umbrian		
France . . .		Illyric	
Italy . . .			
Rumania . . .		Hellenic	
{ Grisons . . .			
Albania . . .	Kou'z { Doric, Aeolic	Lettic	
Greece . . .	{ Attic, Ionic		
Lithuania . . .	Old Prussian	South-East Slavonic	
+ . . .			
Kurland and Livonia (Lettish) . . .	Ecclesiastical Slavonic	West Slavonic	
Bulgaria . . .			
Russia (Great, Little, White Russian)		High-German	
Illyria (Slovenian or Carinthian, Ser- vian, Croatian) . . .			
Poland . . .	Old Bohemian	Low-German	
Bohemia (Slovakian) . . .	Polabian		
Lucania (Wends and Sorbs) . . .	Middle and Old High-German		
+ . . .	Anglo-Saxon		
Germany . . .	Middle and Old Dutch (Low-Franconian)		
England . . .	Old Frisian		
Holland . . .	Old Saxon		
Frisland . . .	Gothic		
North of Germany (Platt-Deutsch) . . .		Teutonic	
+ . . .			



NO II.—GENEALOGICAL TABLE OF THE SEMITIC FAMILY OF LANGUAGES.

LIVING LANGUAGES	DEAD LANGUAGES	CLASSES
Dialects of :—		
+ . . . . .	{ Chaldee (Masora, Talmud, Targum, Biblical Chaldee) Samaitan Mandaean Syriac (Peshito) { Biblical Hebrew Phœnician and Carthagin in Inscriptions Meabites { Thamudic Inscriptions, Himyaritic Inscriptions Ethiopic or Geez	Aramaic
+ . . . . .		
+ . . . . .		Arabic
Syria . . . . .		
the Jews . . . . .		Southern
+ . . . . .		
+ . . . . .		
Arabia . . . . .		
Abyssinia (Amharic, Tigre, Ekhili)		

No. III.

GENEALOGICAL TABLE OF THE TURANIAN FAMILY OF  
LANGUAGES.—NORTHERN DIVISION.

LIVING LANGUAGES	DEAD LANGUAGES	BRANCHES	CLASSES		
Dialects of the—					
Yurakians . . . . .		Northern	Samoyedic		
Tawgyans . . . . .					
Yeniseians . . . . .					
Ostiako-Samoyedes . . . . .					
Kamassiains . . . . .		Eastern			
Chapogres (Upper Tunguska) . . . . .		Western	Tungusic		
Orotongs (Lower Tunguska) . . . . .					
People of Nyeitchinsk . . . . .		Eastern	(Altaic)		
Lamutes (Coast of Ohotsk) . . . . .					
Mandshu (China) . . . . .					
Sharra-Mongols (South of Gobi) . . . . .		Eastern or Mon- gols Proper	Mongolic		
Khalkhas (North of Gobi) . . . . .					
Sharaigol (Tibet and Tangut) . . . . .		Ölöt or Kaimuks	Western Mongols		
Choshot (Kokonür) . . . . .					
Dzungur . . . . .					
Torgod . . . . .					
Duibet . . . . .					
Amaks (i. e. Tribes of Persia) . . . . .					
Sokpis (Tibet) . . . . .					
Buriats (Lake Balkal) . . . . .				Northern Mongols	
Uigurs . . . . .				Chagataic, S.E.	Turkic
Komanes . . . . .					
Chagatais . . . . .					
Usbeks . . . . .					
Turkmans . . . . .					
People of Kasan . . . . .		Turkic, N.	(Altaic)		
Kirgis . . . . .					
Bashkurs . . . . .					
Nogais . . . . .					
Kumans . . . . .					
Karachais . . . . .					
Karakalpaks . . . . .					
Meshcheiaks . . . . .					
People of Siberia . . . . .					
Yakuts . . . . .					
People of Durbend . . . . .		Turkic, W.			
" Aderbajan . . . . .					
" Krimea . . . . .					
" Anatolia . . . . .					
" Rumelia . . . . .					
Hungarians . . . . .		Ugric	Finnic		
Voguls . . . . .		Bulgario			
Ugro-Ostiaks . . . . .			Permian	(Uralic)	
Tcheremissians . . . . .					
Mordvins . . . . .		Chudic			
Permians . . . . .					
Syrianes . . . . .					
Votiaks . . . . .					
Laps . . . . .					
Fins . . . . .					
Esths . . . . .					
Lives . . . . .					
Votes . . . . .					

TURANIAN FAMILY.  
NORTHERN DIVISION.

GENEALOGICAL TABLE OF THE TURANIAN FAMILY OF  
LANGUAGES.—SOUTHERN DIVISION.

LIVING LANGUAGES	DEAD LANGUAGES	BRANCHES	CLASSES
Dialects of —			
Chinese.			
Siamese . . . . .			
Ahom . . . . .			} Taic
Laos . . . . .			
Khamti . . . . .			
Shan (Tenasserim) . . . . .			
Malay and Polynesian Islands (See Humboldt, <i>Kavi Sprache</i> ) . . . . .			
Tibetan . . . . .		} Trans-Himalayan	}
Horpa (NW Tibet, Bucharja)			
Thochu-Sifan (NE Tibet, China)			
Gyarung-Sifan (NE Tibet, China)			
Manyak-Sifan (NE. Tibet, China)			
Tyпка (West of Kwombo)		} Sub-Himalayan	} Gangetic
Kenaveri (Setle basin)			
Sarpa (West of Gandakéan basin)			
Sunwár (Gandakéan basin)			
Gurung (Gandakéan basin)			
Magar (Gandakéan basin)			
Newár (between Gandakéan and Koséan basins)			
Murmi (between Gandakéan and Koséan basins)			
Limbu (Koséan basin)			
Kiranti (Koséan basin)			
Lepcha (Tishtéan basin)		} Bhootya	}
Bhutanese (Manaséan basin)			
Chepang (Nepal-Teraí)			
Burmese (Burmah and Arakan)		}	}
Dhimil (between Konki and Dhorla)			
Kachari-Bodo (Migrat 80°—93½°, and 25°—27°)			
Garó (90°—91° E long., 25°—26° N. lat.)			
Changló (91°—92° E. long.)			
Miki (Nowgong)			
Dophla (92° 50'—97° N. lat.)			
Miri (94°—97° E. long.?)			
Abor-Miri			
Abor (97°—99° E. long.)			
Sibsagor-Miri			
Singpho (27°—28° N. lat.)			
Naga tribes (93°—97° E. long.; 23° N. lat. [Mithan])			
East of Sibagor)			
Naga tribes (Namsang)			
Naga tribes (Nowgong)			
Naga tribes (Tengsa)			
Naga tribes (Tablung, North of Sibagor)			
Naga tribes (Khau, Jorhat)			
Naga tribes (Angami, South)			
Kuki (NE of Chittagong)			
Khyenr (Shyu) 19°—21° N. lat. Arakan)			
Kumi (Kuladan R. Arakan)			
Kumi (Kuladan R. Arakan)			
Shindis (22°—23° and 93—94°)			
Mru (Arakan, Chittagong)			
Sak (Nauf River, East)			
Tungluh (Tenasserim)			
Ho (Kolehan)		} Munda (See <i>Turanian Languages</i> , p. 175)	}
Sinhbhum Kol (Chyebossa)			
Sontal (Chyebossa)			
Bhumij (Chyebossij)			
Mundala (Chota Nagpur)			
Cunarese . . . . .		} Tamulic	}
Tamil . . . . .			
Telugu . . . . .			
Malayalam . . . . .			
Gond . . . . .			
Brahvi . . . . .			
Tuluva . . . . .			
Toduva . . . . .			
Uraon-kol . . . . .			

TURANIAN FAMILY,  
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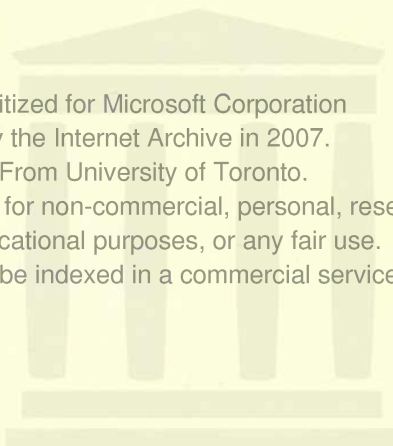
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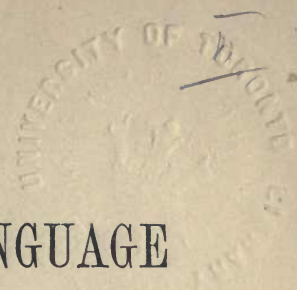
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THE  
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ON

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DELIVERED AT THE

ROYAL INSTITUTION OF GREAT BRITAIN

IN

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BY MAX MÜLLER, M.A.

FELLOW OF ALL SOULS COLLEGE, OXFORD: CORRESPONDANT DE L'INSTITUT DE FRANCE.

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## PREFACE.



THIS Second Series of Lectures on the Science of Language was delivered last year at the Royal Institution in London. Most of the topics treated in them had for many years formed the subject of my public courses at Oxford. In casting my notes into the shape of lectures to be addressed to a more advanced audience, I left out many things that were merely elementary, and I made several additions in order to show the bearing of the Science of Language on some of the more important problems of philosophy and religion.

Whilst expressing my gratitude to the readers and reviewers of the first series of my Lectures, to those who differed from me even more than to those who agreed with me, I venture to hope that this second volume may meet with as many indulgent friends and intelligent critics as the first.

MAX MÜLLER.

OXFORD: *June* 11, 1864.



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# LECTURES.

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## LECTURE I.

### INTRODUCTORY LECTURE.

IN a course of lectures which I had the honour to deliver in this Institution two years ago, I endeavoured to show that the language which we speak, and the languages that are and that have been spoken in every part of our globe since the first dawn of human life and human thought, supply materials capable of scientific treatment. We can collect them, we can classify them, we can reduce them to their constituent elements, and deduce from them some of the laws that determine their origin, govern their growth, necessitate their decay; we can treat them, in fact, in exactly the same spirit in which the geologist treats his stones and petrifications—nay, in some respects, in the same spirit in which the astronomer treats the stars of heaven, or the botanist the flowers of the field. There is a Science of Language, as there is a science of the earth, its flowers and its stars; and though, as a young science, it is very far as yet from that perfection which—thanks to the efforts of the intellectual giants of so many ages and many countries—has been reached in astronomy, botany, and even in

geology, it is, perhaps for that very reason, all the more fascinating. It is a young and a growing science, that puts forth new strength with every year, that opens new prospects, new fields of enterprise on every side, and rewards its students with richer harvests than could be expected from the exhausted soil of the older sciences. The whole world is open, as it were, to the student of language. There is virgin soil close to our door, and there are whole continents still to conquer if we step beyond the frontiers of the ancient seats of civilisation. We may select a small village in our neighbourhood to pick up dialectic varieties and to collect phrases, proverbs, and stories which will disclose fragments, almost ground to dust, it is true, yet undeniable fragments of the earliest formations of Saxon speech and Saxon thought.\* Or we may proceed to our very antipodes, and study the idiom of the Hawaiian islanders, and watch in the laws and edicts of Kaméhaméha the working of the same human faculty of speech which, even in its most primitive efforts, never seems to miss the high end at which it aims. The dialects of Ancient Greece, ransacked as they have been by classical scholars, such as Maittaire, Giese, and Ahrens, will amply reward a fresh *battue* of the comparative philologist. Their forms, which

\* A valuable essay 'On some leading Characteristics of the Dialects spoken in the six Northern Counties of England, or Ancient Northumbria, and on the Variations in their Grammar from that of Standard English,' has lately been published by Mr. R. P. Peacock, Berlin, 1863. It is chiefly based on the versions of the Song of Solomon into many of the spoken dialects of England, which have of late years been executed and published under the auspices of H.I.H. Prince Louis-Lucien Bonaparte. It is to be hoped that the writer will continue his researches in a field of scholarship so full of promise.



to the classical scholar were mere anomalies and curiosities, will thus assume a different aspect. They will range themselves under more general laws, and after receiving light by a comparison with other dialects, they will, in turn, reflect that light with increased power on the phonetic peculiarities of Sanskrit and Prâkrit, Zend and Persian, Latin and French. But even were the old mines exhausted, the Science of Language would create its own materials, and as with the rod of the prophet smite the rocks of the desert to call forth from them new streams of living speech. The rock inscriptions of Persia show what can be achieved by our science. I do not wonder that the discoveries due to the genius and the persevering industry of Grotefend, Burnouf, Lassen, and last, not least, of Rawlinson, should seem incredible to those who only glance at them from a distance. Their incredulity will hereafter prove the greatest compliment that could have been paid to these eminent scholars.\*

\* A thoroughly scholar-like answer to the late Sir G. C. Lewis's attacks on Champollion and other decipherers of ancient inscriptions may be seen in an article by Professor Le Page Renouf, 'Sir G. C. Lewis on the Decipherment and Interpretation of Dead Languages,' in the *Atlantis*, nos. vii. and viii., p. 23. Though it cannot be known now whether the late Sir G. C. Lewis ever modified his opinions as to the soundness of the method through which the inscriptions of Egypt, Persia, India, and ancient Italy have been deciphered, such was the uprightness of his character that he would certainly have been the first to acknowledge his mistake, had he been spared to continue his studies. Though his scepticism was occasionally uncritical and unfair, his loss is a severe loss to our studies, which, more than any others, require to be kept in order by the watchful eye and uncompromising criticism of close reasoners and sound scholars. An essay just published by Professor F. W. Newman, 'On the

What we at present call the Cuneiform inscriptions of Cyrus, Darius, Xerxes, Artaxerxes I., Darius II., Artaxerxes Mnemon, Artaxerxes Ochus (of which we now have several editions, translations, grammars, and dictionaries)—what were they originally? A mere conglomerate of wedges, engraved or impressed on the solitary monument of Cyrus in the Murgháb, on the ruins of Persepolis, on the rocks of Behistún near the frontiers of Media, and the precipice of Van in Armenia. When Grotefend attempted to decipher them, he had first to prove that these scrolls were really inscriptions, and not mere arabesques or fanciful ornaments.\* He had then to find out whether these magical characters were to be read horizontally or perpendicularly, from right to left, or from left to right. Lichtenberg maintained that they must be read in the same direction as Hebrew. Grotefend, in 1802, proved that the letters followed each other, as in Greek, from left to right. Even before Grotefend, Münter and Tychsen had observed that there was a sign to separate the words. Such a sign is of course an immense help in all attempts at deciphering inscriptions, for it lays bare at once the terminations of hundreds of words, and, in an Aryan language, supplies us with the skeleton of its grammar. Yet consider the difficulties that had still to be overcome before a single line could be read. It was unknown in what language these inscriptions were composed; it might have been

Umbrian Language,' following after a short interval on an article in *Fraser's Magazine*, Jan. 1863, does equal credit to the acumen and to the candour of its author.

\* *Mémoire de M. le comte de Caylus, sur les ruines de Persepolis, dans le tome XXIX des Mémoires de l'Académie des inscriptions et belles-lettres, Histoire de l'Académie, p. 118.*

a Semitic, a Turanian, or an Aryan language. It was unknown to what period they belonged, and whether they commemorated the conquests of Cyrus, Darius, Alexander, or Sapor. It was unknown whether the alphabet used was phonetic, syllabic, or ideographic. It would detain us too long were I to relate how all these difficulties were removed one after the other; how the proper names of Darius, Xerxes, Hystaspes, and of their god Ormusd, were traced; how from them the values of certain letters were determined; how with an imperfect alphabet other words were deciphered which clearly established the fact that the language of these inscriptions was Ancient Persian; how then, with the help of the Zend, which represents the Persian language previous to Darius, and with the help of the later Persian, a most effective cross-fire was opened; how even more powerful ordnance was brought up from the arsenal of the ancient Sanskrit; how outpost after outpost was driven in, a practical breach effected, till at last the fortress had to surrender and submit to the terms dictated by the Science of Language.

I should gladly on some future occasion give you a more detailed account of this glorious siege and victory. At present I only refer to it to show how, in all quarters of the globe, and from sources where it would least be expected, new materials are forthcoming that would give employment to a much larger class of labourers than the Science of Language can as yet boast of. The inscriptions of Babylon and Nineveh, the hieroglyphics of Egypt, the records in the caves of India, on the monuments of Lycia, on the tombs of Etruria, and on the broken tablets of Umbria and Samnium, all wait to have their spell broken or their



riddle more satisfactorily read by the student of language. If, then, we turn our eyes again to the yet unnumbered dialects now spoken by the nomad tribes of Asia, Africa, America, and the islands of the Pacific, no scholar need be afraid for some generations to come that there will be no language left to him to conquer.

There is another charm peculiar to the Science of Language, or one, at least, which it shares only with its younger sisters: I mean the vigorous contest that is still carried on between great opposing principles. In Astronomy, the fundamental laws of the universe are no longer contested, and the Ptolemæan system is not likely to find new supporters. In Geology, the feuds between the Vulcanists and the Neptunists have come to an end, and no unprejudiced person doubts at the present moment whether an ammonite be a work of nature and a flinthead a work of art. It is different in the Science of Language. There, the controversies about the great problems have not yet subsided. The questions whether language is a work of nature or a work of art, whether languages had one or many beginnings, whether they can be classified in families, or no, are constantly starting up, and scholars, even while engaged in the most minute inquiries—while carrying brick and mortar to build the walls of their new science—must have their sword girded by their side, always ready to meet the enemy. This, no doubt, may sometimes be tedious, but it has one good effect: it leads us to examine carefully the ground on which we take our stand, and keeps us alive, even while analysing mere prefixes and suffixes, to the grandeur and the sacredness of the issues that depend on these minutiae. The foundations of our science do not suffer from such attacks;—on the contrary,

like the coral cells built up quietly and patiently from the bottom of the sea, they become more strongly cemented by these whiffs of spray that are dashed across.

Emboldened by the indulgent reception with which I met in this place, when first claiming some share of public sympathy in behalf of the Science of Language, I venture to-day to come again before you with a course of lectures on the same subject—‘on mere words, on nouns, and verbs, and particles’—and I trust you will again, as you did then, make allowance for the inevitable shortcomings of one who has to address you with a foreign accent, and on a subject foreign to the pursuits of many of the supporters of this Institution. *One* thing I feel more strongly than ever—namely, that, without the Science of Language, the circle of the physical sciences, to which this Institution is more specially dedicated, would be incomplete. The whole natural creation tends towards man: without man, nature would be incomplete and purposeless. The Science of Man, therefore, or, as it is sometimes called, Anthropology, must form the crown of all the natural sciences. And if it is language by which man differs from all other created things, the Science of Language has a right to hold that place which I claimed for it when addressing for the first time the members and supporters of this Institution. Allow me to quote the words of one whose memory becomes more dear and sacred to me with every year, and to whose friendship I owe more than I here could say. Bunsen, when addressing, in 1847, the newly-formed section of Ethnology, at the meeting of the British Association at Oxford, said:—  
 ‘If man is the apex of the creation, it seems right,



on the one side, that an historical inquiry into his origin and development should never be allowed to sever itself from the general body of natural science, and in particular from physiology. But, on the other hand, if man is the apex of the creation, if he is the end to which all organic formations tend from the very beginning; if man is at once the mystery and the key of natural science; if that is the only view of natural science worthy of our age, then ethnological philology, once established on principles as clear as the physiological are, is the highest branch of that science for the advancement of which this Association is instituted. It is not an appendix to physiology or to anything else; but its object is, on the contrary, capable of becoming the end and goal of the labours and transactions of a scientific association.\*

In my former course all that I could attempt to do was to point out the principal objects of the Science of Language, to determine its limits, and to lay before you a general map of the ground that had been explored, with more or less success, during the last fifty years. That map was necessarily incomplete. It comprehended not much more than what in an atlas of the ancient world is called 'Orbis Veteribus Notus,' where you distinguish names and boundaries only in those parts of Europe, Asia, and Africa which formed the primeval stage of the great drama of history; but where beyond the Hyperboreans in the North, the Anthropophagi in the West, and the Ethiopians† in the South, you see but vaguely shadowed

\* *Report of the British Association for the Advancement of Science*, 1847, p. 257.

† The Hyperboreans, known to Homer and Herodotus as a people living in the extreme north, beloved by Apollo, and dis-

outlines—the New World beyond the Atlantis existing as yet merely as the dream of philosophers.

It was at first my intention, in the present course of lectures, to fill in greater detail the outlines of that map. Materials for this are abundant and steadily increasing. The works of Hervas, Adelung, Klaproth, Balbi, Prichard, and Latham, will show you how much more minutely the map of languages might be coloured at present than the ancient geographical maps of Strabo and Ptolemy. But I very soon perceived that this would hardly have been a fit subject for a course of lectures. I could only have given you an account of the work done by others: of explorations made by travellers or missionaries among the black races of Africa, the yellow tribes of Polynesia, and the red-skins of America. I should have had simply to copy their descriptions of the manners, customs, laws, and religions of these savage tribes, to make abstracts of their grammars and extracts from their vocabularies. This would necessarily have been work at second-hand, and all I could have added of my own would have been a criticism of their attempts at classifying

tinguished for piety and happiness, were to the Greeks a mythical people, like the Uttarakurus of the Brahmans. Their name signifies 'living beyond the mountains,' and Boreas too, the north wind, meant originally the wind from the mountains, and more particularly from the Rhipæan mountains. (See Preller, *Griechische Mythologie*, i. 157.) *Boros*, from which Boreas, is another form of *oros*, mountain, both derived from the same root which in Sanskrit yields *giri*, mountain, and in ancient Slavonic *gora*. (See Curtius, *Grundzüge der Griechischen Etymologie*, i. 314; ii. 67.)

The Ethiopians, equally known to Homer and Herodotus, were originally intended for dark-looking people in general. *Aithiops*, like *âthops*, meant fiery-looking, from *âthein*, to light up, to burn, Sanskrit *idh*, to kindle. (See Curtius, *l. c.* i. 215.)

some of the clusters of languages in those distant regions, to point out similarities which they might have overlooked, or to protest against some of the theories which they had propounded without sufficient evidence. All who have had to examine the accounts of new languages, or families of languages, published by missionaries or travellers, are aware how not only their theories, but their facts, have to be sifted, before they can be allowed to occupy even a temporary place in our handbooks, or before we should feel justified in rectifying accordingly the frontiers on the great map of the languages of mankind. Thus I received but the other day some papers, printed at Honolulu,\* propounding the theory 'that all those tongues which we designate as the Indo-European languages have their true root and origin in the Polynesian language.' 'I am certain,' the author writes, 'that this is the case as regards the Greek and Sanskrit: I find reason to believe it to be so as to the Latin and other more modern tongues—in short, as to all European languages, old and young.' And he proceeds: 'The second discovery which I believe I have made, and with which the former is connected, is that the study of the Polynesian language gives us the key to the original function of language itself, and to its whole mechanism.'

Strange as it may sound to hear the language of Homer and Ennius spoken of as an offshoot of the Sandwich Islands, mere ridicule would be a very inappropriate and very inefficient answer to such a theory. It is not very long ago that all the Greek

\* *The Polynesian*, Honolulu, Sept. 27, Oct. 4, Oct. 11, 1862—containing an Essay by Dr. J. Rae.



and Latin scholars of Europe shook their heads at the idea of tracing the roots of the classical languages back to Sanskrit, and even at the present moment there are still many persons who cannot realise the fact that, at a very remote, but a very real period in the history of the world, the ancestors of the Homeric poets and of the poets of the Veda must have lived together as members of one and the same race, as speakers of one and the same idiom.

There are other theories not less startling than this which would make the Polynesian the primitive language of mankind. I received lately a Comparative Grammar of the South-African Languages, printed at the Cape, written by a most learned and ingenious scholar, Dr. Bleek.\* In it he proves that, with the exception of the Bushman tongue, which has not yet been sufficiently studied, the great mass of African languages may be reduced to two families. He shows that the Hottentot is a branch of the North African class of languages,†

\* *A Comparative Grammar of the South African Languages*, by W. H. J. Bleek, Ph.D. 1862.

† When the Rev. R. Moffat was in England, a few years since, he met with a Syrian who had recently arrived from Egypt, and in reference to whom Mr. Moffat has the following note:—‘On my giving him a specimen and a description of the Hottentot language, he remarked that he had seen slaves in the market of Cairo, brought a great distance from the interior, who spoke a similar language, and were not near so dark-coloured as slaves in general. This corroborates the statement of ancient authors, whose description of a people inhabiting the interior regions of Northern Africa answers to that of the Hottentot and Bushman.’—‘It may be conceived as possible, therefore, that the people here alluded to form a portion of the Hottentot race, whose progenitors remained behind in the interior country, to the south or south-west of Egypt, whilst the general emigration continued its onward

and that it was separated from its relatives by the intrusion of the second great family, the Kafir, or, as Appleyard calls them, Alliteral languages, which occupy (as far as our knowledge goes) the whole remaining portion of the South African continent, extending on the eastern side from the Keiskamma to the equator, and on the western side from 32° southern to about 8° northern latitude. But the same author claims likewise a very prominent place for the African idioms, in the general history of human speech. 'It is perhaps not too much to say,' he writes (Preface, page viii.), 'that similar results may at present be expected from a deeper study of such primitive forms of language as the Kafir and the Hottentot exhibit, as followed, at the beginning of the century, the discovery of Sanskrit, and the comparative researches of Oriental scholars. The origin of the grammatical forms, of gender and number, the etymology of pronouns, and many other questions of the highest interest to the philologist, find their true solution in Southern Africa.'

But, while we are thus told by some scholars that we must look to Polynesia and South Africa if we

course. Should this prove not incorrect, it might be reasonably conjectured that Egypt is the country from which the Hottentot tribes originally came. This supposition, indeed, is strengthened by the resemblance which appears to subsist between the Copts and Hottentots in general appearance.' (Appleyard, *The Kafir Language*. 1850.)—'Since the Hottentot race is known only as a receding one, and traces of its existence extend into the interior of South Africa, it may be looked upon as a fragment of the old and properly Ethiopic population, stretched along the mountain-spine of Africa, through the regions now occupied by the Galla; but cut through and now enveloped by tribes of a different stock.' (J. C. Adamson, in *Journal of the American Oriental Society*, vol. iv. p. 449. 1854.)

would find the clue to the mysteries of Aryan speech, we are warned by others that there is no such thing as an Aryan or Indo-European family of languages, that Sanskrit has no relationship with Greek, and that Comparative Philology, as hitherto treated by Bopp and others, is but a dream of continental professors.\* How are theories and counter-theories of this kind to be treated? However startling and paradoxical in appearance, they must be examined before we can either accept or reject them. 'Science,' as Bunsen † said, 'excludes no suppositions, however strange they may appear, which are not in themselves absurd—viz. demonstrably contradictory to its own principles.' But by what tests and rules are they to be examined? They can only be examined by those tests and rules which the Science of Language has established in its more limited areas of research. 'We must begin,' as Leibnitz said, 'with studying the modern languages which are within our reach, in order to compare them with one another, to discover their differences and affinities, and then to proceed to those which have preceded them in former ages; in order to show their filiation and their origin, and then to ascend step by step to the most ancient of tongues, the analysis of which must lead us to the only trustworthy conclusions.' The principles of comparative philology must rest on the evidence of the best known and the best analysed dialects, and it

\* See Mr. John Crawfurd's essay *On the Aryan or Indo-Germanic Theory*, and an article by Professor T. Hewitt Key in the *Transactions of the Philological Society*, 'The Sanskrit Language, as the Basis of Linguistic Science, and the Labours of the German School in that field, are they not overvalued?'

† *L. c.* p. 256.



is to them that we must look, if we wish for a compass to guide us through the most violent storms and hurricanes of philological speculation.\*

I thought it best, therefore, to devote the present course of lectures to the examination of a very limited area of speech—to English, French, German, Latin, and Greek, and, of course, to Sanskrit—in order to discover or to establish more firmly some of the fundamental principles of the Science of Language. I believe there is no science from which we, the students of language, may learn more than from Geology. Now, in Geology, if we have once acquired a general knowledge of the successive strata that form the crust of the earth, and of the faunas and floras present or absent in each, nothing is so instructive as the minute exploration of a quarry close at hand, of a cave or a mine, in order to see things with our own eyes, to handle them, and to learn how every pebble that we pick up points a lesson of the widest range. I believe it is the same in the science of language. *One* word, however common, of our own dialect, if well examined and analysed, will teach us more than the most ingenious speculations on the nature of speech and the origin of roots. We may accept it, I believe, as a general principle that what is real in modern formations is possible in more ancient formations; that what has been found to be true on a small scale may be true on a larger scale. Principles like these, which underlie the study of Geology, are equally applicable to the study of Philology, though in their application they require, no doubt, the same circumspectness which is the great charm of geological reasoning.

\* *Lectures on the Science of Language*, First Series, p. 136, note (4th edition).

A few instances will make my meaning clearer. They will show how the solution of some of the most difficult problems of Comparative Grammar may be found at our very door, and how theories that would seem fanciful and incredible if applied to the analysis of ancient languages, stand before us as real and undeniable facts in the very words which we use in our every-day conversation. They will at the same time serve as a warning against too rapid generalisations, both on the part of those who have no eye for distinctive features and see nothing but similarity in all the languages of the world, and on the part of those who can perceive but one kind of likeness, and who would fain confine the whole ocean of living speech within the narrow bars of Aryan or Semitic grammar.

We have not very far to go in order to hear such phrases as 'he is a-going, I am a-coming, &c.,' instead of the more usual 'he is going, I am coming.' Now the fact is, that the vulgar or dialectic expression, 'he is a-going,' is far more correct than 'he is going.'\* *Ing*, in our modern grammars, is called the termination of the participle present, but it does not exist as such in Anglo-Saxon. In Anglo-Saxon the termination of that participle is *ande* or *inde* (Gothic, *ands*; Old High-German *anter*, *enter*; Middle High-German, *ende*; Modern High-German, *end*.) This was preserved as late as Gower's and Chaucer's time,† though in most cases it had then already been supplanted by the termination *ing*. Now what is that termination *ing*?‡

\* Archdeacon Hare, *Words corrupted by False Analogy or False Derivation*, p. 65.

† Pointis and sleves be wel sittānde  
Full right and straight upon the hande.

*Rom. of the Rose*, 2264.

‡ Grimm, *Deutsche Grammatik*, ii. 348-365.



It is clearly used in two different senses, even in modern English. If we say 'a loving child,' loving is a verbal adjective. If we say 'loving our neighbour is our highest duty,' loving is a verbal substantive. Again, there are many substantives in *ing*, such as *building*, *wedding*, *meeting*, where the verbal character of the substantive is almost, if not entirely, lost.

Now, if we look to Anglo-Saxon, we find the termination *ing* used—

(1) To form patronymics—for instance, *Godvulf-ing*, the son of *Godvulf*. In the A.S. translation of the Bible, the son of *Elisha* is called *Elising*. In the plural these patronymics frequently become the names of families, clans, villages, towns, and nations, e.g. *Thyringas*, the Thuringians. Even if names in *ing* are derived from names of rivers or hills or trees, they may still be called patronymics, because in ancient times the ideas of relationship and descent were not confined to living beings.\* People living near the Elbe might well be called the sons of the Elbe or Albing, as, for instance, the Nordalbingi in Holstein. Many of the geographical names in England and Germany were originally such patronymics. Thus we have the villages † of *Malling*, of *Billing*, &c., or in compounds, *Mallington*, *Billingborough*. In *Walsingham*, the home of the *Walsings*, the memory of the famous race of the *Wælsings* may have been preserved, to which Siegfried belonged, the hero of the *Nibelunge*.‡ In German

\* See Förstemann, *Die Deutschen Ortsnamen*, p. 244; and *Zeitschrift für Vergleichende Sprachforschung*, i. 109.

† Latham, *History of the English Language*, i. p. 223; Kemble, *Saxons in England*, i. p. 59, and Appendix, p. 449.

‡ Grimm, *Deutsche Heldensage*, p. 14.

names, such as *Göttingen* in Hanover, *Harlingen* in Holland, we have old genitives plural, in the sense of 'the home of the Gottings, the home of the Harlings,' &c.\*

(2) *Ing* is used to form more general attributive words, such as, *æþeling*, a man of rank ; *lyteling*, an infant ; *nîðing*, a bad man. This *ing* being frequently preceded by another suffix, the *l*, we arrive at the very common derivative *ling*, in such words as *darling*, *hireling*, *yearling*, *foundling*, *nestling*, *worldling*, *changeling*. It is doubtful, in fact, whether even in such words as *æþeling*, *lyteling*, which end in *l*, the suffix is not rather *ling* than *ing*, and whether the original spelling was not *æþelling* and *lytelling*. Thus *farthing*, too, is a corruption of *feorðling*, German *vierling*.

It has been supposed that the modern English participle was formed by the same derivative, but in A.S. this suffix *ing* is chiefly attached to nouns and adjectives, not to verbs. There was, however, another derivative in A.S., which was attached to verbs in order to form verbal substantives. This was *ung*, the German *ung*. For instance, *clænsung*, cleansing ; *bedcnung*, beaconing ; &c. In early A.S. these abstract nouns in *ung* are far more numerous than

\* Harlings, in A.S. Herelingas (*Trav. Song*, i. 224); Harlunge (W. Grimm, *Deut. Heldensage*, p. 280, &c.), are found at Harling in Norfolk and Kent, and at Harlington (Herelingatún) in Bedfordshire and Middlesex. The Wælsings, in Old Norse Völsungar, the family of Sigurdr or Siegfried, reappear at Walsingham in Norfolk, Wolsingham in Northumberland, and Woolingham in Durham. The Billings at Billinge, Billingham, Billinghoe, Billinghurst, Billingsden, Billington, and many other places. The Dyringas, in Thorington or Thorrington, are likely to be offshoots of the great Hermunduric race, the Thyringi or Thoringi, now Thuringians, always neighbours of the Saxons.—Kemble, *Saxons in England*, i. pp. 59 and 63.



those in *ing*. *Ing*, however, began soon to encroach on *ung*, and at present no trace is left in English of substantives derived from verbs by means of *ung*.

Although, as I said, it might seem more plausible to look on the modern participle in English as originally an adjective in *ing*, such popular phrases as *a-going*, *a-thinking*, point rather to the verbal substantives in *ing* as the source from which the modern English participle was derived. 'I am going' is in reality a corruption of 'I am a-going,' i.e. 'I am on going,' and the participle present would thus, by a very simple process, be traced back to a locative case of a verbal noun.\*

Let us lay it down, therefore, as a fact, that the place of the participle present may, in the progress of dialectic regeneration, be supplied by the locative or some other case of a verbal noun.

Now let us look to French. On June 3, 1679, the French Academy decreed that the participles present should no longer be declined.†

What was the meaning of this decree? Simply what may now be found in every French grammar, namely, that *commençant*, *finissant*, are indeclinable when they have the meaning of the participle present, active or neuter; but that they take the terminations of the masculine and feminine, in the singular and

\* Cf. Garnett's paper 'On the Formation of Words from Inflected Cases,' *Philological Society*, vol. iii. No. 54, 1847. Garnett compares the Welsh *yn sefyll*, in standing, Ir. *ag seasamh*, on standing, the Gaelic *ag sealgadh*. The same ingenious and accurate scholar was the first to propose the theory of the participle being formed from the locative of a verbal noun.

† Cf. Egger, *Notions élémentaires de Grammaire Comparée*, Paris, 1856, p. 197. 'La règle est faite. On ne declinera plus les participes présents.'—B. Jullien, *Cours Supérieur*, i. p. 186.

plural, if they are used as adjectives.\* But what is the reason of this rule? Simply this, that *chantant*, if used as a participle, is not the Latin participle present *cantans*, but the so-called gerund, that is to say, the oblique case of a verbal noun, the Latin *cantando* corresponding to the English *a-singing*, while the real Latin participle present, *cantans*, is used in the Romance languages as an adjective, and takes the feminine termination—for instance, '*une femme souffrante*,' &c.

Here, then, we see again that in analytical languages the idea conveyed by the participle present can be expressed by the oblique case of a verbal noun.

Let us now proceed to a more distant, yet to a cognate language, the Bengali. We there find † that the so-called infinitive is formed by *te*, which *te* is at the same time the termination of the locative singular. Hence the present, *Karitechî*, I am doing, and the imperfect, *Karitechilâm*, I was doing, are mere compounds of *âchi*, I am, *âchilâm*, I was, with what may be called a participle present, but what is in reality a verbal noun in the locative. *Karitechî*, I do, means 'I am on doing,' or 'I am a-doing.'

Now the question arises, Does this perfectly intelligible method of forming the participle from the oblique case of a verbal noun, and of forming the present indicative by compounding this verbal noun with the auxiliary verb 'to be,' supply us with a test

\* Diez, *Vergleichende Grammatik der Romanischen Sprachen*, ii. p. 114.

† M. M.'s Essay on the Relation of the Bengali to the Aryan and Aboriginal Languages of India: *Report of the British Association for the Advancement of Science*, 1847, pp. 344-45. Cf. Garnett, *l.c.* p. 29.



that may be safely applied to the analysis of languages which decidedly belong to a different family of speech? Let us take the Bask, which is certainly neither Aryan nor Semitic, and which has thrown out a greater abundance of verbal forms than almost any known language.\* Here the present is formed by what is called a participle, followed by an auxiliary verb. This participle, however, is formed by the suffix *an*, and the same suffix is used to form the locative case of nouns. For instance, *mendia*, the mountain; *mendiaz*, from the mountain; *mendian*, in the mountain; *mendico*, for the sake of the mountain. In like manner, *etchean*, in the house; *ohean*, in the bed. If, then, we examine the verb,

erorten niz, I fall;  
 „ hiz, thou fallest;  
 „ da, he falls;

we see again in *erorten* a locative, or, as it is called, a positive case of the verbal substantive *erorta*, the root of which would be *eror*, falling; † so that the indica-

\* See Inchauspe's *Le Verbe Basque*, published by Prince Louis-Lucien Bonaparte. Bayonne, 1858.

† Cf. *Dissertation critique et apologétique sur la Langue Basque* (par l'Abbé Darrigol), Bayonne, p. 102. 'Commençons par l'expression *erortean*. Cette façon de parler signifie en tombant, mais par quel secret? Le voici : le point où l'on est (*ubi*) s'exprime par le cas positif, comme *barnean* (dans l'intérieur), *etchean* (dans la maison), *ohean* (dans le lit), &c. Or l'action que l'on fait présentement peut être envisagée comme le point où l'on est, et dès lors s'exprime aussi par le positif : de là l'expression *erortean* n'est autre chose que l'infinitif *erortea* (le tomber) mis au cas positif ; elle signifie donc littéralement dans le tomber.

Cette façon de parler, qui paraît extraordinaire quand on l'entend analyser pour la première fois, n'est pas une locution propre à notre langue ; on dit en hébreu *biphkod* (en visitant), et le sens littéral de ce mot est *dans visiter* : on dit en grec *en tó piptein* (*en tombant*, littéralement *dans le tomber*), *en tó philein tou Theou*

tive present of the Bask verb does not mean either *I fall*, or *I am falling*, but was intended originally for

(mot à mot dans *l'aimer Dieu*). Quand Virgile a dit, *et cantare pares, et respondere parati*, il a sous-entendu la particule *in* devant le premier infinitif, disent les commentateurs. Nous disons en français, être à manger, à boire &c., comme être à la maison, à la campagne &c.

Comme l'action sur laquelle on est présentement peut être assimilée au point de l'espace où l'on existe, où l'on agit (*ubi*), elle peut de même représenter un point de départ (*unde*). C'est ainsi que nous envisageons souvent dans le français l'action exprimée par l'infinitif, puisque nous disons, *Je viens de voir la capitale*, comme *Je viens de la capitale*, *Je viens de visiter mes greniers*, comme *Je viens de mes greniers*. Les actions *voir*, *visiter* sont envisagées ici comme des points de départ, et par cette fiction elles deviennent complémens de la préposition *de*, aussi bien que les noms *capitale*, *greniers*. C'est la même fiction et la même tournure dans l'hébreu *miphpekod*, dans le latin, à *visitando*.

Ces observations faites, il est aisé de comprendre que les formes basques en *ic*, telles que *jatetic*, *edatetic*, *ikustetic*, &c. ne sont que les ablatifs des noms *jatea*, *edatea*, *ikustea*, ablatifs commandés par le point de vue sous lequel on envisage les actions qu'expriment ces mots. Ainsi cette phrase, *Çure aitaren ikustetic jiten niz* (je viens de voir votre père), signifie, mot à mot, *je viens du voir de votre père*.

Les formes *janic*, *edanic*, *ikusiric*, ont évidemment une terminaison commune avec celles dont nous venons de parler, et sont également des ablatifs qui expriment un rapport d'éloignement, ou dans l'ordre physique ou dans l'ordre moral ; toute la différence des premières formes aux dernières, consiste en ce que celles-là ont un sens actif, et celles-ci un sens passif. Conséquemment cette phrase, *Çure aita ikusiric jiten niz*, signifie, comme celle de l'exemple précédent, *Je viens de voir votre père*. Mais si l'on veut rendre plus scrupuleusement la force du mot *ikusiric*, il faut dire ici, *Je viens de votre père vu*. Et qu'on ne dise pas que cette traduction supposerait qu'il y a *ikusitic*, et non *ikusiric* ; nous avons observé plus d'une fois que la première des deux formules est l'ablatif singulier, et l'autre l'ablatif de la section indéfinie, comme on le voit dans ces façons de parler, *Ez da eginic* (il n'y en a point de fait), *Ez da erreric* (il n'y en a point de cuit), &c.



'I (am) in the act of falling,' or, to return to the point from whence we started, *I am a-falling*. The *a* in

L'action que l'on va faire peut être envisagée comme un point de l'espace où l'on se porte (*quò*); et ce rapport d'approximation, ce mouvement moral vers l'action dont il s'agit, s'exprime heureusement par le cas appelé approximatif. Conformément à cette doctrine, nous disons, *Hastera noa, Mintçatcera noa, Ikhustera noa* (*Je vais commencer, Je vais parler, Je vais voir*), ou plutôt, *Je vais au commencer, Je vais au parler &c.*, comme *Je vais au jardin &c.*, en hébreu *liphkod*, en latin *ad visitandum &c.*

Le lieu par où l'on passe (*quà*), l'espace ou le milieu que l'on traverse (*medium*), l'instrument ou le moyen par lequel une chose se fait (*medium*), veulent dans le basque le cas appelé médiatif, caractérisé par la terminaison *az, ez, iz, oz, uz*. Il n'est pas difficile de reconnaître cette inflexion dans les mots *janez, ikhusiz, baratuz, &c.* De là, quand je dis *Giçona janez bici da* (l'homme vit en mangeant), la traduction littérale est *l'homme vit par le manger*, ou plutôt l'homme vit par le mangé; car *janez* dérive de la forme *jan*, qui est tout à la fois et le radical de cette famille, et l'inflexion passive de ce mot, comme on le voit en disant *jana* (le mangé ou la chose mangée).

Nous voici maintenant en état d'apprécier au juste une infinité de mots que l'on avait coutume d'appeler verbes. Prenons par exemple le soi-disant verbe *tomber*; il fait au présent *erorten niz* (je tombe), *erorten hiz* (tu tombes), *erorten da* (il tombe), *erorten gire* (nous tombons), &c. Si ce que nous avons dit de l'expression *erortean* est exact, la formule *erortean niz* doit signifier, *je suis dans le tomber*, ou *dans l'acte de tomber*. Il est vrai que nous disons, par syncope, *erorten* pour *erortean*; mais de quelle conséquence peut être la suppression de la lettre *a*, puisqu'on dit indifféremment, selon le dialecte, *etchean, etchen* ou *etchin* (dans la maison)? Si cependant on veut attacher quelque importance à cette voyelle, il est permis de croire que son absence dénote l'absence de l'article; ce qui ne paraît pas invraisemblable, après ce qui a été dit à la page 46.

Il résulte de cette observation que, dans les formules du présent *erorten niz, erorten hiz, &c.*, le mot *erorten*, qui exprime l'action de tomber, n'est pas un verbe, mais bien un nom au cas positif.

Le prétérit *erori niz* (je suis tombé) se compose aussi du verbe *niz* (je suis) et de la formule passive *erori*, dont le sens adjectif se

*a-falling* stands for an original *on*. Thus *asleep* is *on sleep*, *aright* is *onrihte*, *away* is *onweg*, *aback* is *onbæc*, *again* is *ongén* (Ger. *entgegen*), *among* is *ongemang*, &c.

This must suffice as an illustration of the principles on which the Science of Language rests, viz. that what is real in modern formations must be admitted as possible in more ancient formations, and that what has been found to be true on a small scale may be true on a larger scale.

But the same illustration may also serve as a warning. There is much in the science of language to tempt us to overstep the legitimate limits of inductive reasoning. We may infer from the known to the unknown in language tentatively, but not positively. It does not follow, even within so small a sphere as the Aryan family of speech, that what is possible in

manifeste encore mieux si l'on y ajoute l'article, en disant *eroria niz*, c'est à dire, mot à mot, *je suis tombé*, ou celui qui est tombé.

Le futur *erorico niz* (je tomberai) offre le même verbe et la même forme passive avec la terminaison *co*, laquelle est propre à exprimer la futurition, par la vertu qu'elle a de signifier la destination à, *pour*. C'est dans ce même goût que l'on dit en espagnol, *está por llegar* (il est pour arriver).

Notre futur s'exprime encore par la désinence *en*, comme *jaikeren niz* (je me leverai), *joanen niz* (j'irai). Pour comprendre que cette formule n'exprime le futur que par une valeur empruntée de la déclinaison, il suffit d'observer que le cas destinatif *aitarentçat*, *aitarendaco* (pour le père), *amarentçat*, *amarendaco* (pour la mère), s'abrège quelquefois en cette manière, *aitaren*, *amaren*, &c. Cette observation faite, l'on comprend aisément que la double formule dont il s'agit n'est synonyme en cet endroit que parcequ'elle l'est aussi dans la déclinaison.

Tout ce que nous avons dit des infinitifs combinés avec le verbe *niz*, se vérifie également dans leur combinaison avec le verbe *dut*; ainsi *ikhusten dut*, pour *ikhustean dut*, répond littéralement au mauvais latin *habeo in videre*; *ikhusi dut* serait *habeo visum*; *ikhusico dut*, ou *ikhusiren dut*, *habeo videndum*.



French is possible in Latin, that what explains Bengali will explain Sanskrit; nay, the similarity between some of the Aryan languages and the Bask in the formation of their participles should be considered as an entirely exceptional case. Mr. Garnett, however, after establishing the principle that the participle present may be expressed by the locative of a verbal noun, endeavours in his excellent paper to show that the original Indo-European participle, the Latin *amans*, the Greek *týptōn*, the Sanskrit *bodhat*, were formed on the same principle:—that they are all inflected cases of a verbal noun. In this, I believe, he has failed,\* as many have failed before and after him, by imagining that what has been found to be true in one portion of the vast kingdom of speech *must* be equally true in all. This is not so, and cannot be so. Language, though its growth is governed by intelligible principles throughout, was not so uniform in its progress as to repeat exactly the same phenomena at every stage of its life. As the geologist looks for different characteristics when he has to deal with London clay, with Oxford clay, or with old red sandstone, the student of language, too, must be prepared for different formations, even though he confines himself to one stage in the history of language, the *inflectional*. And if he steps beyond this, the most modern stage, then to apply indiscriminately to the lower stages of human speech, to the *agglutinative* and *radical*, the same tests which have proved successful in the *in-*

\* He takes the Sanskrit *dravat* as a possible ablative, likewise *śas-at*, and *tan-vat* (sic). It would be impossible to form ablatives in *āt* (*as*) from verbal bases raised by the vikaraṇas of the special tenses, nor would the ablative be so appropriate a case as the locative, for taking the place of a verbal adjective.

*flexional*, would be like ignoring the difference between aqueous, igneous, and metamorphic rocks. There are scholars who, as it would seem, are incapable of appreciating more than one kind of evidence. No doubt the evidence on which the relationship of French and Italian, of Greek and Latin, of Lithuanian and Sanskrit, of Hebrew and Arabic, has been established, is the most satisfactory; but such evidence is possible only in inflectional languages that have passed their period of growth, and have entered into the stage of phonetic decay. To call for the same evidence in support of the homogeneousness of the Turanian languages, is to call for evidence which, from the nature of the case, it is impossible to supply. As well might the geologist look for fossils in granite! The Turanian languages allow of no grammatical petrifications like those on which the relationship of the Aryan and Semitic families is chiefly founded. If they did, they would cease to be what they are; they would be inflectional, not agglutinative.

If languages were all of one and the same texture, they might be unravelled, no doubt, with the same tools. But as they are not—and this is admitted by all—it is surely mere waste of valuable time to test the relationship of Tungusic, Mongolic, Turkic, Samoyedic, and Finnic dialects by the same criteria on which the common descent of Greek and Latin is established; or to try to discover Sanskrit in the Malay dialects, or Greek in the idioms of the Caucasian mountaineers. The whole crust of the earth is not made of lias, swarming with Ammonites and Plesiosaurs, nor is all language made of Sanskrit, teeming with Supines and Paulo-pluperfects. Up to a certain point the method by which so great results

have been achieved in classifying the Aryan languages may be applicable to other clusters of speech. Phonetic laws are always useful, but they are not the only tools which the student of language must learn to handle. If we compare the extreme members of the Polynesian dialects, we find but little agreement in what may be called their grammar, and many of their words seem totally distinct. But if we compare their numerals we clearly see that these are common property; we perceive similarity, though at the same time great diversity\* :—

	1	2	3	4	5
Fakaafoan	tasi	lua, ua	tolu	fa	lima
Samoan	tasi	lua	tolu	fa	lima
Tongan	taha	ua	tolu	fa	nima
New Zealand	tahi	rua	toru	wa	rima
Rarotongan	tai	rua	toru	a	rima
Mangarevan	tai	rua	toru	a	rima
Paumotuan	rari	ite	ŋeti	ope	ŋeka
Tahitian	tahi	rua, piti	toru	ha, maha	rima, pae
Hawaiian	tahi	lua	tolu	ha, tauna	lima
Nukuhivan	tahi	ua	tou	ha or fa	ima
	6	7	8	9	10
Fakaafoan	ono	fitu	valu	iva	fulu, ŋafulu
Samoan	ono	fitu	valu	iva	sefulu, ŋafulu
Tongan	ono	fitu	valu	hiva	hoŋofulu
New Zealand	ono	witu	waru	iwa	ŋahuru
Rarotongan	ono	itu	varu	iva	ŋauru
Mangarevan	ono	itu	varu	iva	ŋauru
Paumotuan	hene	hito	hawa	nipa	horihori
Tahitian	ono, fene	hitu	varu, vau	iva	ahuru
Hawaiian	ono	hitu	valu	iwa	umi
Nukuhivan	ono	hitu, fitu	vau	iva	onohuu.

We begin to note the phonetic changes that have taken place in one and the same numeral, as pronounced by different islanders; we thus arrive at

\* Hale, *United States Exploring Expedition*, vol. vii. p. 246.



phonetic laws, and these, in their turn, remove the apparent dissimilarity in other words which at first seemed totally irreconcilable. Let those who are inclined to speak disparagingly of the strict observance of phonetic rules in tracing the history of Aryan words, and who consider it mere pedantry to be restrained by Grimm's Law from identifying such words as Latin *cura* and *care*, Greek *kalên* and *to call*, Latin *peto* and *to bid*, Latin *corvus* and *crow*, look to the progress that has been made by African and Polynesian philologists in checking the wild spirit of etymology even where they have to deal with dialects never reduced as yet to a fixed standard by the influence of a national literature, never written down at all, and never analysed before by grammatical science. The whole of the first volume of Dr. Bleek's 'Comparative Grammar of the South African Languages' treats of Phonology, of the vowels and consonants peculiar to each dialect, and of the changes to which each letter is liable in its passage from one dialect into another (see page 82, seq.). And Mr. Hale, in the seventh volume of the 'United States Exploring Expedition' (p. 232), has not only given a table of the regular changes which words common to the numerous Polynesian languages undergo, but he has likewise noted those permutations which take place occasionally only. On the strength of these phonetic laws once established, words which have hardly one single letter in common have been traced back with perfect certainty to one and the same source.

But mere phonetic decay will not account for the differences between the Polynesian dialects, and unless we admit the process of dialectic regeneration to a much greater extent than we should be justified in doing in

the Aryan and Semitic families, our task of reconciliation would become hopeless. Will it be believed that since the time of Cook five of the ten simple numerals in the language of Tahiti have been thrown off and replaced by new ones? This is, nevertheless, the fact.

Two was *rua* ; it is now *piti*.

Four was *ha* ; it is now *maha*.

Five was *rima* ; it is now *pae*.

Six was *ono* ; it is now *fene*.

Eight was *varu* ; it is now *vau*.\*

It is clear that if a radical or monosyllabic language, like Chinese, begins to change and to break out in independent dialects, the results must be very different from those which we observe in Latin as split up into the Romance dialects. In the Romance dialects, however violent the changes which made Portuguese words to differ from French, there always remain a few fibres by which they hang together. It might be difficult to recognise the French *plier*, to fold, to turn, in the Portuguese *chegar*, to arrive, yet we trace *plier* back to *plicare*, and *chegar* to the Spanish *llegar*, the old Spanish *plegar*, the Latin *plicare*,† here used in the sense of plying or turning towards a place, arriving at a place. But when we have to deal with dialects of Chinese, everything that could possibly hold them together seems hopelessly gone. The language now spoken in Cochin-China is a dialect of Chinese, at least as much as Norman French was a dialect of French, though spoken by Saxons at a Norman court. There was a

\* *United States Exploring Expedition under the command of Charles Wilkes*. 'Ethnography and Philology,' by H. Hale. Vol. vii. p. 289.

† Diez, *Lexicon*, s. v. *llegar* ; *Grammar*, i. p. 379.

native language of Cochin-China, the Annamitic,\* which forms, as it were, the Saxon of that country on which the Chinese, like the Norman, was grafted. This engrafted Chinese, then, is a dialect of the Chinese which is spoken in China, and it is most nearly related to the spoken dialect of Canton. Yet few Chinese scholars would recognise Chinese in the language of Cochin-China. It is, for instance, one of the most characteristic features of the literary Chinese, the dialect of Nankin, or the idiom of the Mandarins, that every syllable ends in a vowel, either pure or nasal.† In Cochin-Chinese, on the contrary, we find words ending in *k*, *t*, *p*. Thus, ten is *thap*, at Canton *chap*, instead of the Chinese *tchi*.‡ No wonder that the early missionaries described the Annamitic as totally distinct from Chinese. One of them says : ‘ When I arrived in Cochin-China, and heard the natives speak, particularly the women, I thought I heard the twittering of birds, and I gave up all hope of ever learning it. All words are monosyllabic, and people distinguish their significations only by means of different accents in pronouncing them. The same syllable, for instance, *daï*,

\* On the native *residuum* in Cochin-Chinese, see Léon de Rosny, *Tableau de la Cochinchine*, p 138.

† Endlicher, *Chinesische Grammatik*, par. 53, 78, 96.

‡ Léon de Rosny, *Tableau de la Cochinchine*, p. 295. He gives as illustrations :—

	Annamique	Cantonnais
dix	thap	chap
pourvoir	dak	tak
sang	houet	hœët
forêt	lam	lam.

He likewise mentions double consonants in the Chinese as spoken in Cochin-China, namely, *bl*, *dy*, *ml*, *ty*, *tr*; also *f*, *r*, *s*. As final consonants he gives *ch*, *k*, *m*, *n*, *ng*, *p*, *t*.—P. 296.



signifies twenty-three entirely different things, according to the difference of accent, so that people never speak without singing.\* This description, though somewhat exaggerated, is correct in the main, there being six or eight musical accents or modulations in this as in other monosyllabic tongues, by which the different meanings of one and the same monosyllabic root are kept distinct. These accents form an element of language which we have lost, but which was most important during the primitive stages of human speech.† The Chinese language commands no more than about 450 distinct sounds, and with them it expresses between 40,000 and 50,000 words or meanings.† These meanings are now kept distinct by means of composition, as in other languages by derivation, but in the radical stage words with more than twenty significations would have bewildered the hearer entirely, without some hints to indicate their actual intention: Such hints were given by different intonations. We have something left of this faculty in the tone of our sentences. We distinguish an interrogative from a positive sentence by the raising of our voice. (Gone? Gone.) We pronounce *Yes* very differently when we mean *perhaps* (Yes, this may be true), or *of course* (Yes, I know it), or *really* (Yes? is it true?) or *truly* (Yes, I will). But in Chinese, in Annamitic (and likewise in Siamese and Burmese), these modulations have a much wider application. Thus in Annamitic, *ba* pronounced with the grave accent means a lady, an ancestor; pronounced with the sharp accent it means the favourite of a prince; pronounced with the semi-

\* Léon de Rosny, *l. c.* p. 301.

† See Beaulieu, *Mémoire sur l'origine de la Musique*, 1863. *Lectures on the Science of Language*, First Series, p. 276.

grave accent, it means what has been thrown away; pronounced with the grave circumflex, it means what is left of a fruit after it has been squeezed out; pronounced with no accent, it means three; pronounced with the ascending or interrogative accent, it means a box on the ear. Thus—

Ba, bà, bâ, bá,

is said to mean, if properly pronounced, 'Three ladies gave a box on the ear to the favourite of the prince.' How much these accents must be exposed to fluctuation in different dialects is easy to perceive. Though they are fixed by grammatical rules, and though their neglect causes the most absurd mistakes, they were clearly in the beginning the mere expression of individual feeling, and therefore liable to much greater dialectic variation than grammatical forms, properly so called. But let us take what we might call grammatical forms in Chinese, in order to see how differently they too fare in dialectic dispersion, as compared with the terminations of inflectional languages. Though the grammatical organisation of Latin has been well-nigh used up in French, we still see in the *s* of the plural a remnant of the Latin paradigm. We can trace the one back to the other. But in Chinese, where the plural is formed by the addition of some word meaning 'multitude, heap, flock, class,' what trace of original relationship remains when one dialect uses one, another another word? The plural in Cochin-Chinese is formed by placing *fo* before the substantive. This *fo* means many, or a certain number. It may exist in Chinese, but it is certainly not used there to form the plural. Another word employed for forming plurals is *nung*, several, and this again is wanting in Chinese. It fortunately happens, however,



that a few words expressive of plurality have been preserved both in Chinese and Cochin-Chinese; as, for instance, *choung*, clearly the Chinese *tchoung*,\* meaning conflux, vulgus, all, and used as an exponent of the plural; and *kak*, which has been identified with the Chinese *ko*. The last identification may seem doubtful; and if we suppose that *choung*, too, had been given up in Cochin-Chinese as a term of plurality, how would the tests which we apply for discovering the original identity of the Aryan languages have helped us in determining the real and close relationship between Chinese and Cochin-Chinese?

The present indicative is formed in Cochin-Chinese by simply putting the personal pronoun before the root. Thus—

Toy men,	I love.
Mai men,	thou lovest.
No men,	he loves.

The past tense is formed by the addition of *da*, which means 'already.' Thus—

Toy da men,	I loved.
Mai da men,	thou lovedst.
No da men,	he loved.

The future is formed by the addition of *chè*. Thus—

Toy chè men,	I shall love
Mai chè men,	thou wilt love.
No chè men	he will love.

Now, have we any right, however convinced we may be of the close relationship between Chinese and Cochin-Chinese, to expect the same forms in the language of the Mandarins? Not at all. The pronoun of the first person in Cochin-Chinese is not a pronoun, but means 'servant.' 'I love' is expressed in that

\* Endlicher, *Chinesische Grammatik*, s. 152.

civil language by 'servant loves.'\* In Chinese the same polite phraseology is constantly observed,† but the words used are not the same, and do not include *toy*, servant. Instead of *ngò*, I, the Chinese would use *kuà ĵin*, little man; *tcín*, subject; *t'sie*, thief; *iu*, block-head. Nothing can be more polite; but we cannot expect that different nations should hit on exactly the same polite speeches, though they may agree in the common sense of grammar. The past tense is indicated in Chinese by particles meaning 'already' or 'formerly,' but we do not find among them the Annamitic *da*. The same applies to the future. The system is throughout the same, but the materials are different. Shall we say, therefore, that these languages cannot be proved to be related, because they do not display the same criteria of relationship as French and English, Latin and Greek, Celtic and Sanskrit?

I tried in one of my former lectures to explain some of the causes which in nomadic dialects produce a much more rapid shedding of words than in literary languages, and I have since received ample evidence to confirm the views which I then expressed. My excellent friend, the Bishop of Melanesia, of whom it is difficult to say whether we should admire him most as a missionary, or as a scholar, or as a bold mariner, meets in every small island with a new language, which none but a scholar could trace back to the Melanesian type. 'What an indication,' he writes, 'of the jealousy and suspicion of their lives, the extraordinary multiplicity of these languages affords! In each generation, for aught I know, they diverge

\* Léon de Rosny, *l. c.* 302.

† Endlicher, § 206.

more and more; provincialisms and local words, &c., perpetually introduce new causes for perplexity.'

I shall mention to-day but one new, though insignificant cause of change in the Polynesian languages, in order to show that it is difficult to over-estimate the multifarious influences which are at work in nomadic dialects, constantly changing their aspect and multiplying their number; and in order to convince even the most incredulous how little we know of all the secret springs of language if we confine our researches to a comparison of the classical tongues of India, Greece, Italy, and Germany.

The Tahitians,\* besides their metaphorical expressions, have another and a more singular mode of displaying their reverence towards their king, by a custom which they term *Te pí*. They cease to employ, in the common language, those words which form a part or the whole of the sovereign's name, or that of one of his near relatives, and invent new terms to supply their place. As all names in Polynesian are significant, and as a chief usually has several, it will be seen that this custom must produce a considerable change in the language. It is true that this change is only temporary, as at the death of the king or chief the new word is dropped, and the original term resumed. But it is hardly to be supposed that after one or two generations the old words should still be remembered and be reinstated. Anyhow, it is a fact, that the missionaries, by employing many of the new terms, give them a permanency which will defy the ceremonial loyalty of the natives. Vancouver observes (*Voyage*, vol. i. p. 135) that at the accession of Otu,

\* *ale*, l. c. p. 288.



which took place between the visit of Cook and his own, no less than forty or fifty of the most common words, which occur in conversation, had been entirely changed. It is not necessary that all the simple words which go to make up a compound name should be changed. The alteration of one is esteemed sufficient. Thus in *Po-mare*, signifying 'the night (*po*) of coughing (*mare*),' only the first word, *po*, has been dropped, *mi* being used in its place. So in *Ai-mata* (eye-eater), the name of the present queen, the *ai* (eat) has been altered to *amu*, and the *mata* (eye) retained. In *Te-arîi-na-vahâ-roa* (the chief with the large mouth), *roa* alone has been changed to *maoro*. It is the same as if, with the accession of Queen Victoria, either the word *victory* had been tabooed altogether, or only part of it, for instance *tori*, so as to make it high treason to speak during her reign of *Tories*, this word being always supplied by another; such, for instance, as Liberal-Conservative. The object was clearly to guard against the name of the sovereign being ever used, even by accident, in ordinary conversation, and this object is attained by tabooing even one portion of his name.

'But this alteration,' as Mr. Hale continues, 'affects not only the words themselves, but syllables of similar sound in other words. Thus the name of one of the kings being *Tu*, not only was this word, which means "to stand," changed to *tia*, but in the word *fetu*, star, the last syllable, though having no connection, except in sound, with the word *tu*, underwent the same alteration—star being now *fetia*; *tui*, to strike, became *tiai*; and *tu pa pau*, a corpse, *tia pa pau*. So *ha*, four, having been changed to *maha*, the word *aha*,

split, has been altered to *amaha*, and *murihá*, the name of a month, to *muriáha*. When the word *ai* was changed to *amu*, *maraaí*, the name of a certain wind (in Rarotongan, *maranai*), became *maramu*.'

'The mode of alteration, or the manner of forming new terms, seems to be arbitrary. In many cases, the substitutes are made by changing or dropping some letter or letters of the original word, as *hopoi* for *hapai*, to carry in the arms; *ene* for *hono*, to mend; *au* for *tau*, fit; *hio* for *tio*, to look; *ea* for *ara*, path; *vau* for *varu*, eight; *vea* for *vera*, not, &c. In other cases, the word substituted is one which had before a meaning nearly related to that of the term disused,—as *tia*, straight, upright, is used instead of *tu*, to stand; *pae*, part, division, instead of *rima*, five; *piti*, together, has replaced *rua*, two, &c. In some cases, the meaning or origin of the new word is unknown, and it may be a mere invention—as *ofai* for *ohatu*, stone; *pape*, for *vai*, water; *pohe* for *mate*, dead, &c. Some have been adopted from the neighbouring Paumotuian, as *rui*, night, from *ruki*, dark; *fene*, six, from *hene*; *avae*, moon, from *kawake*.'

'It is evident that but for the rule by which the old terms are revived on the death of the person in whose name they entered, the language might, in a few centuries, have been completely changed, not, indeed, in its grammar, but in its vocabulary.'

It might, no doubt, be said that the *Te pi* is a mere accident, a fancy peculiar to a fanciful race, but far too unimportant to claim any consideration from the philosophical student of language. I confess that at first it appeared to myself in the same light, but my attention was lately drawn to the fact that the same peculiarity, or at least something very like it, exists

in the Kafir languages. 'The Kafir women,' as we are told by the Rev. J. W. Appleyard, in his excellent work on the Kafir language,\* 'have many words peculiar to themselves. This arises from a national custom, called *Ukuhlonipa*, which forbids their pronouncing any word which may happen to contain a sound similar to one in the names of their nearest male relations.' It is perfectly true that the words substituted are at first no more than family idioms—nay, that they would be confined to the gossip of women, and not enter into the conversation of men. But the influence of women on the language of each generation is much greater than that of men. We very properly call our language in Germany our mother-tongue, *Unsere Muttersprache*, for it is from our mothers that we learn it, with all its peculiarities, faults, idioms, accents. Cicero, in his 'Brutus' (c. 58), said:—'It makes a great difference whom we hear at home every day, and with whom we speak as boys, and how our fathers, our tutors, and our mothers speak. We read the letters of Cornelia, the mother of the Gracchi, and it is clear from them that her sons were brought up not in the lap, but, so to say, in the very breath and speech of their mother.' And again (Rhet. iii. 12), when speaking of his mother-

\* *The Kafir Language*, comprising a sketch of its history; which includes a general classification of South African dialects, ethnographical and geographical; remarks upon its nature; and a grammar. By the Rev. J. W. Appleyard, Wesleyan missionary in British Kaffraria. King William's Town: Printed for the Wesleyan Missionary Society; sold by Godlonton and White, Graham's Town, Cape of Good Hope, and by John Mason, 66 Paternoster Row, London. 1850. Appleyard's remarks on *Ukuhlonipa* were pointed out to me by the Rev. F. W. Farrar, the author of an excellent work on the *Origin of Language*.



in-law, Crassus said, 'When I hear Lælia (for women keep old fashions more readily, because, as they do not hear the conversation of many people, they will always retain what they learned at first); but when I hear her, it is as if I were listening to Plautus and Nævius.'

But this is not all. Dante ascribed the first attempts at using the vulgar tongue in Italy for literary compositions to the silent influence of ladies who did not understand the Latin language. Now this vulgar Italian, before it became the literary language of Italy, held very much the same position there as the so-called Prâkrit dialects in India; and these Prâkrit dialects first assumed a literary position in the Sanskrit plays where female characters, both high and low, are introduced as speaking Prâkrit, instead of the Sanskrit employed by kings, noblemen, and priests. Here, then, we have the language of women, or, if not of women exclusively, at all events of women and domestic servants, gradually entering into the literary idiom, and in later times even supplanting it altogether; for it is from the Prâkrit, and not from the literary Sanskrit, that the modern vernaculars of India branched off in course of time. Nor is the simultaneous existence of two such representatives of one and the same language as Sanskrit and Prâkrit confined to India. On the contrary, it has been remarked that several languages divide themselves from the first into two great branches; one showing a more manly, the other a more feminine character; one richer in consonants, the other richer in vowels; one more tenacious of the original grammatical terminations, the other more inclined to slur over these terminations, and to simplify grammar by the use of circumlocutions. Thus we have Greek in its two dialects, the Æolic and the Ionic, with their sub-

divisions, the Doric and Attic. In German we find the High and the Low German; in Celtic, the Gadhelic and Cymric, as in India the Sanskrit and Prâkrit; and it is by no means an unlikely explanation, that, as Grimm suggested in the case of High and Low German, so likewise in the other Aryan languages, the stern and strict dialects, the Sanskrit, the Æolic, the Gadhelic, represent the idiom of the fathers and brothers, used at public assemblies; while the soft and simpler dialects, the Prâkrit, the Ionic, and the Cymric, sprang originally from the domestic idiom of mothers, sisters, and servants at home.

But whether the influence of the language of women be admitted on this large scale or not, certain it is, that through a thousand smaller channels their idioms everywhere find admission into the domestic conversation of the whole family, and into the public speeches of their assemblies. The greater the ascendancy of the female element in society, the greater the influence of their language on the language of a family or a clan, a village or a town. The cases, however, that are mentioned of women speaking a totally different language from the men, cannot be used in confirmation of this view. The Caribe women, for instance, in the Antille Islands,\* spoke a language different from that of their husbands, because the Caribes had killed the whole male population of the Arawakes and married their women; and something similar seems to have taken place among some of the tribes of Greenland.† Yet even these isolated cases show how, among savage races, in a primitive state of society, language may be influenced by what we should call purely accidental causes.

\* Hervas, *Catalogo*, i. p. 212.

† *Ibid.* i. p. 369.



But to return to the Kafir language, we find in it clear traces that what may have been originally a mere feminine peculiarity—the result, if you like, of the bashfulness of the Kafir ladies—extended its influence. For, in the same way as the women eschew words which contain a sound similar to the names of their nearest male relatives, the men also of certain Kafir tribes feel a prejudice against employing a word that is similar in sound to the name of one of their former chiefs. Thus, the Amambalu do not use *ilanga*, the general word for *sun*, because their first chief's name was *Ulanga*, but employ *isota* instead. For a similar reason, the Amagqunukwebi substitute *immela* for *isitshetshe*, the general term for knife.\*

Here, then, we may perceive two things: first, the influence which a mere whim, if it once becomes stereotyped, may exercise on the whole character of a language (for we must remember that as every woman had her own male relations, and every tribe its own ancestors, a large number of words must constantly have been *tabooed* and supplanted in these African and Polynesian dialects); secondly, the curious coincidence that two great branches of speech, the Kafir and the Polynesian, should share in common what at first sight would seem a merely accidental idiosyncrasy, a thing that might have been thought of once, but never again. It is perfectly true that such principles as the *Te pi* and the *Ukuhlonipa* could never become powerful agents in the literary languages of civilised nations, and that we must not look for traces of their influence either in Sanskrit, Greek, or Latin, as known to us. But it is for that very reason that the study of what I call *No-*

\* Appleyard, *l. c.* p. 70.

*mad* languages, as distinguished from *State* languages, becomes so instructive. We see in them what we can no longer expect to see even in the most ancient Sanskrit or Hebrew. We watch the childhood of language with all its childish freaks, and we learn at least this one lesson, that there is more in language than is dreamt of in our philosophy.

One more testimony in support of these views. Mr. H. W. Bates, in his latest work, 'The Naturalist on the Amazons,' writes:—'But language is not a sure guide in the filiation of Brazilian tribes, seven or eight languages being sometimes spoken on the same river within a distance of 200 or 300 miles. There are certain peculiarities in Indian habits which lead to a quick corruption of language and segregation of dialects. When Indians, men or women, are conversing amongst themselves, they seem to take pleasure in inventing new modes of pronunciation, or in distorting words. It is amusing to notice how the whole party will laugh when the wit of the circle perpetrates a new slang term, and these new words are very often retained. I have noticed this during long voyages made with Indian crews. When such alterations occur amongst a family or horde, which often live many years without communication with the rest of their tribe, the local corruption of language becomes perpetuated. Single hordes belonging to the same tribe, and inhabiting the banks of the same river, thus become, in the course of many years' isolation, unintelligible to other hordes, as happens with the Collínas on the Jurúa. I think it, therefore, very probable that the disposition to invent new words and new modes of pronunciation, added to the small population and habits of isolation of hordes and tribes, are the causes



of the wonderful diversity of languages in South America.'—(Vol. i. pp. 329–30.)

As I intend to limit the present course of lectures chiefly to Greek and Latin, with its Romance offshoots; English, with its Continental kith and kin; and the much-abused, though indispensable, Sanskrit, I thought it necessary thus from the beginning to guard against the misapprehension that the study of Sanskrit and its cognate dialects could supply us with all that is necessary for the Science of Language. It can do so as little as an exploration of the tertiary epoch could tell us all about the stratification of the earth. But, nevertheless, it can tell us a great deal. By displaying to us the minute laws that regulate the changes of each consonant, each vowel, each accent, it disciplines the student, and teaches him respect for every jot and tittle in any, even the most barbarous, dialect he may hereafter have to analyse. By helping us to an understanding of that language in which we think, and of others most near and dear to us, it makes us perceive the great importance which the Science of Language has for the Science of the Mind. Nay, it shows that the two are inseparable, and that without a proper analysis of human language we shall never arrive at a true knowledge of the human mind. I quote from Leibniz: 'I believe truly,' he says, 'that languages are the best mirror of the human mind, and that an exact analysis of the signification of words would make us better acquainted than anything else with the operations of the understanding.'

I propose to divide my lectures into two parts. I shall first treat of what may be called the body or the outside of language, the sounds in which language is clothed, whether we call them letters, syllables, or

words; describing their origin, their formation, and the laws which determine their growth and decay. In this part we shall have to deal with some of the more important principles of Etymology.

In the second part I mean to investigate what may be called the soul or the inside of language; examining the first conceptions that claimed utterance, their combinations and ramifications, their growth, their decay, and their resuscitation. In that part we shall have to inquire into some of the fundamental principles of Mythology, both ancient and modern, and to determine the sway, if any, which language as such exercises over our thoughts.

## LECTURE II.

## LANGUAGE AND REASON.

THE division of my subject which I sketched out at the end of my last lecture is liable, I am aware, to some grave objections. To treat of sound as independent of meaning, of thought as independent of words, seems to defy one of the best established principles of the science of language. Where do we ever meet in reality, I mean in the world such as it is, with articulate sounds—sounds like those that form the body of language, existing by themselves, and independent of language? No human being utters articulate sounds without an object, a purpose, a meaning. The endless configurations of sound which are collected in our dictionaries would have no existence at all, they would be the mere ghost of a language, unless they stood there as the embodiment of thought, as the realisation of ideas. Even the interjections which we use, the cries and screams which are the precursors, or, according to others, the elements, of articulate speech, never exist without meaning. Articulate sound is always an utterance, a bringing out of something that is within, a manifestation or revelation of something that wants to manifest and to reveal itself. It would be different if language had been invented by agreement; if certain wise kings, priests, and



philosophers had put their heads together and decreed that certain conceptions should be labelled and ticketed with certain sounds. In that case we might speak of the sound as the outside, of the ideas as the inside of language ; and no objection could be raised to our treating each of them separately.

Why it is impossible to conceive of living human language as having originated in a conventional agreement, I endeavoured to explain in one of my former lectures. But I should by no means wish to be understood as denying the possibility of framing some language in this artificial manner, after men have once learnt to speak and to reason. It is the fashion to laugh at the idea of an artificial, still more of a universal language. But if this problem were really so absurd, a man like Leibniz would hardly have taken so deep an interest in its solution. That such a language should ever come into practical use, or that the whole earth should in that manner ever be of one language and one speech again, is hard to conceive. But that the problem itself admits of a solution, and of a very perfect solution, cannot be doubted.

As there prevails much misconception on this subject, I shall devote part of this lecture to a statement of what has been achieved in framing a philosophical and universal language.

*Leibniz*, in a letter to *Remond de Montmort*, written two years before his death, expressed himself with the greatest confidence on the value of what he calls his *Spécieuse Générale*, and we can hardly doubt that he had then acquired a perfectly clear insight into his ideal of a universal language.\* 'If he succeeded,'

\* *Guhrauer*, G. W. Freiherr von Leibnitz, 1846, vol. i. p. 328.

he writes, 'in stirring up distinguished men to cultivate the calculus with infinitesimals, it was because he could give palpable proofs of its use ; but he had spoken to the Marquis de L'Hôpital and others, of his *Spécieuse Générale*, without gaining from them more attention than if he had been telling them of a dream. He ought to be able, he adds, to support his theory by some palpable use ; but for that purpose he would have to carry out a part of his *Characteristics*—no easy matter, particularly circumstanced as he then was, deprived of the conversation of men who would encourage and help him in this work.'

A few months before this letter, Leibniz spoke with perfect assurance of his favourite theory. He admits the difficulty of inventing and arranging this philosophical language, but he maintains that, if once carried out, it could be acquired by others without a dictionary, and with comparative ease. He should be able to carry it out, he says, if he were younger and less occupied, or if young men of talent were by his side. A few eminent men might complete the work in five years, and within two years they might bring out the systems of ethics and metaphysics in the form of an incontrovertible calculus.'

Leibniz died before he could lay before the world the outlines of his philosophical language, and many even among his admirers have expressed their doubts whether he ever had a clear conception of the nature of such a language. It seems hardly compatible, however, with the character of Leibniz to suppose that he should have spoken so confidently, that he should actually have placed this *Spécieuse Générale* on a level with his differential calculus, if it had been a mere dream. It seems more likely that Leibniz

was acquainted with a work which, in the second half of the seventeenth century attracted much attention in England, 'The Essay towards a Real Character and a Philosophical Language,'\* by Bishop Wilkins (London, 1668), and that he perceived at once that the scheme there traced out was capable of much greater perfection. This work had been published by the Royal Society, and the author's name was so well known as one of its founders, that it could hardly have escaped the notice of the Hanoverian philosopher, who was in such frequent correspondence with members of that society.

Now, though it has been the fashion to sneer at Bishop Wilkins and his Universal Language, his work seems to me, as far as I can judge, to offer the best solution that has yet been offered of a problem which, if of no practical importance, is of great interest from a merely scientific point of view; and though it is impossible to give an intelligible account of the Bishop's scheme without entering into particulars which will take up some of our time, it will help us, I believe, towards a better understanding of real language, if we can acquire a clear idea of what an artificial language would be, and how it would differ from living speech.

The primary object of the Bishop was not to invent a new spoken language, though he arrives at that in the end, but to contrive a system of writing or representing our thoughts that should be universally intelligible. We have, for instance, our numerical figures, which are understood by people speaking

\* The work of Bishop Wilkins is analysed and criticised by Lord Monboddo, in the second volume of his *Origin and Progress of Language*, Edinburgh, 1774.



different languages, and which, though differently pronounced in different parts of the world, convey everywhere the same idea. We have besides such signs as + plus, - minus,  $\times$  to be multiplied,  $\div$  to be divided, = equal, < greater, > smaller,  $\odot$  sun,  $\circ$  moon,  $\oplus$  earth,  $\jmath$  Jupiter,  $\imath$  Saturn,  $\♂$  Mars,  $\♀$  Venus, &c., which are intelligible to mathematicians and astronomers all over the world. 'Now if to every thing and notion,'—I quote from Bishop Wilkins (p. 21), 'there were assigned a distinct mark, together with some provision to express grammatical derivations and inflexions, this might suffice as to one great end of a real character, namely, the expression of our conceptions by marks, which shall signify things, and not words. And so, likewise, if several distinct words (sounds) were assigned to the names of such things, with certain invariable rules for all such grammatical derivations and inflexions, and such only as are natural and necessary, this would make a much more easy and convenient language than is yet in being.'

This suggestion, which, as we shall see, is not the one which *Bishop Wilkins* carried out, has lately been taken up by *Don Sinibaldo de Mas*, in his *Idéographie*.\* He gives a list of 2,600 figures, all formed after the pattern of musical notes, and he assigns to each a certain meaning. According to the interval in which the head of such a note is placed, the same sign is to be taken as a noun, an adjective, a verb, or an ad-

\* *Idéographie*. Mémoire sur la possibilité et la facilité de former une écriture générale au moyen de laquelle tous les peuples puissent s'entendre mutuellement sans que les uns connaissent la langue des autres; écrit par Don Sinibaldo de Mas, Envoyé Extraordinaire et Ministre Plénipotentiaire de S. M. C. en Chine. Paris: B. Duprat, 1863.

verb. Thus the same sign might be used to express love, to love, loving, and lovingly, by simply moving its head on the lines and spaces from f to e, d, and c. Another system of signs is then added to express gender, number, case, person, tense, mood, and other grammatical categories, and a system of hieroglyphics is thus formed, by which the author succeeds in rendering the first 150 verses of the *Æneid*. It is perfectly true, as the author remarks, that the difficulty of learning his 2,000 signs is nothing in comparison with learning several languages; it is perfectly true, also, that nothing can exceed the simplicity of his grammatical notation, which excludes by its very nature everything that is anomalous. The whole grammatical framework consists of thirty-nine signs, whereas, as Don Sinibaldo remarks, we have in French 310 different terminations for the simple tenses of the ten regular conjugations, 1,755 for the thirty-nine irregular conjugations, and 200 for the auxiliary verbs, a sum total of 2,165 terminations, which must be learnt by heart.\* It is perfectly true, again, that few persons would ever use more than 4,000 words, and that by having the same sign used throughout as noun, verb, adjective, and adverb, this number might still be considerably reduced. There is, however, this fundamental difficulty, that the assignment of a certain sign to a certain idea is purely arbitrary in this system, a difficulty which, as we shall now proceed to show, Bishop Wilkins endeavoured to overcome in a very ingenious and truly philosophical way.

‘If these marks or notes,’ he writes, ‘could be so contrived as to have such a dependence upon, and relation to, one another, as might be suitable to the

\* Page 99.

nature of the things and notions which they represented; and so, likewise, if the names of things could be so ordered as to contain such a kind of *affinity* or *opposition* in their letters and sounds, as might be some way answerable to the nature of the things which they signified; this would yet be a farther advantage superadded, by which, besides the best way of helping the memory by natural method, the understanding likewise would be highly improved; and we should, by learning the character and the names of things, be instructed likewise in their natures, the knowledge of both of which ought to be conjoined.\*

The Bishop, then, undertakes neither more nor less than a classification of all that is or can be known, and he makes this dictionary of notions the basis of a corresponding dictionary of signs, both written and spoken. All this is done with great circumspection, and if we consider that it was undertaken nearly two hundred years ago, and carried out by one man single-handed, we shall be inclined to judge leniently of what may now seem to us antiquated and imperfect in his *catalogue raisonné* of human knowledge. A careful consideration of his work will show us why this language, which was meant to be permanent, unchangeable, and universal, would, on the contrary, by its very nature, be constantly shifting. As our knowledge advances, the classification of our notions is constantly remodelled; nay, in a certain sense, all advancement of learning may be called a corrected classification of our notions. If a plant, classified according to the system of Linnæus, or according to that

\* Page 21.



of Bishop Wilkins, has its own peculiar place in their synopsis of knowledge, and its own peculiar sign in their summary of philosophical language, every change in the classification of plants would necessitate a change in the philosophical nomenclature. The whale, for instance, is classified by Bishop Wilkins as a *fish*, falling under the division of *viviparous* and *oblong*. Fishes, in general, are classed as *substances*, *animate*, *sensitive*, *sanguineous*, and the sign attached to the whale, by Bishop Wilkins, expresses every one of those differences which mark its place in his system of knowledge. As soon, therefore, as we treat the whale no longer as a fish, but as a mammal, its place is completely shifted, and its sign or name, if retained, would mislead us quite as much as the names of rainbow, thunderbolt, sunset, and others, expressive of ancient ideas which we know to be erroneous. This would happen even in strictly scientific subjects.

Chemistry adopted *acid* as the technical name of a class of bodies of which those first recognised in science were distinguished by sourness of taste. But as chemical knowledge advanced, it was discovered that there were compounds precisely analogous in essential character, which were not sour, and consequently *acidity* was but an accidental quality of some of these bodies, not a necessary or universal character of all. It was thought too late to change the name, and accordingly in all European languages the term *acid*, or its etymological equivalent, is now applied to rock-crystal, quartz, and flint.

In like manner, from a similar misapplication of *salt*, in scientific use, chemists class the substance of which junk-bottles, French mirrors, windows, and opera glasses are made, among the *salts*, while analysts

have declared that the essential character, not only of other so-called salts, but of common kitchen salt, the salt of salts, has been mistaken; that *salt is not salt*, and, accordingly, have excluded that substance from the class of bodies upon which, as their truest representative, it had bestowed its name.\*

The Bishop begins by dividing all things which may be the subjects of language, into six classes or genera, which he again subdivides by their several differences. These six classes comprise:—

- A. TRANSCENDENTAL NOTIONS.
- B. SUBSTANCES.
- C. QUANTITIES.
- D. QUALITIES.
- E. ACTIONS.
- F. RELATIONS.

In B to F we easily recognise the principal predicaments or categories of logic, the pigeon-holes in which the ancient philosophers thought they could stow away all the ideas that ever entered the human mind. Under A we meet with a number of more abstract conceptions, such as *kind, cause, condition, &c.*

By subdividing these six classes, the Bishop arrives in the end at forty classes, which, according to him, comprehend everything that can be known or imagined, and therefore everything that can possibly claim expression in a language, whether natural or artificial. To begin with the beginning, we find that his transcendental notions refer either to things or to words. Referring to things, we have:—

- I. TRANSCENDENTALS GENERAL, such as the notions

\* Marsh, *History of the English Language*, p. 211; Liebig, *Chemische Briefe*, 4th edit., i. p. 96.

of *kind*, *cause*, *differences*, *end*, *means*, *mode*. Here, under *kind*, we should find such notions as being, thing, notion, name, substance, accident, &c. Under notions of *cause*, we meet with author, tool, aim, stuff, &c.

II. TRANSCENDENTALS OF MIXED RELATION, such as the notions of *general quantity*, *continued quantity*, *discontinued quantity*, *quality*, *whole and part*. Under *general quantity* the notions of greatness and littleness, excess and defect; under *continued quantity* those of length, breadth, depth, &c., would find their places.

III. TRANSCENDENTAL RELATIONS OF ACTIONS, such as the notions of *simple action* (putting, taking), *comparate action* (joining, repeating, &c.), *business* (preparing, designing, beginning), *commerce* (delivering, paying, reckoning), *event* (gaining, keeping, refreshing), *motion* (going, leading, meeting).

IV. THE TRANSCENDENTAL NOTIONS OF DISCOURSE, comprehending all that is commonly comprehended under grammar and logic; ideas such as noun, verb, particle, prose, verse, letter, syllogism, question, affirmative, negative, and many more.

After these general notions, which constitute the first four classes, but before what we should call the categories, the Bishop admits two independent classes of transcendental notions, one for *God*, the other for the *World*, neither of which, as he says, can be treated as predicaments, because they are not capable of any subordinate species.

V. The fifth class, therefore, consists entirely of the idea of *God*.

VI. The sixth class comprehends the *WORLD* or universe, divided into *spiritual* and *corporeal*, and



embracing such notions as spirit, angel, soul, heaven, planet, earth, land, &c.

After this we arrive at the five categories, subdivided into thirty-four subaltern genera, which, together with the six classes of transcendental notions, complete, in the end, his forty genera. The Bishop begins with *substance*, the first difference of which he makes to be *inanimate*, and distinguishes by the name of

VII. ELEMENT, as his seventh genus. Of this there are several differences, *fire, air, water, earth*, each comprehending a number of minor species.

Next comes SUBSTANCE INANIMATE, divided into *vegetative* and *sensitive*. The *vegetative* again he subdivides into *imperfect*, such as *minerals*, and *perfect*, such as *plants*.

The imperfect vegetative he subdivides into

VIII. STONE, and

IX. METAL.

STONE he subdivides by six differences, which, as he tells us, is the usual number of differences that he finds under every genus; and under each of these differences he enumerates several species, which seldom exceed the number of nine under any one.

Having thus gone through the *imperfect vegetative*, he comes to the *perfect*, or *plant*, which he says is a tribe so numerous and various, that he confesses he found a great deal of trouble in dividing and arranging it. It is in fact a botanical classification, not based on scientific distinctions like that adopted by Linnæus, but on the more tangible differences in the outward form of plants. It is interesting, if for nothing else, at least for the rich native nomenclature of all kinds of herbs, shrubs, and trees, which it contains.

The *herb* he defines to be a minute and tender plant, and he has arranged it according to its leaves, in which way considered, it makes his

X. Class, LEAF-HERBS.

Considered according to its flowers, it makes his

XI. Class, or FLOWER-HERBS.

Considered according to its seed-vessels, it makes his

XII. Class, or SEED-HERBS.

Each of these classes is divided by a certain number of differences, and under each difference numerous species are enumerated and arranged.

All other plants being woody, and being larger and firmer than the herb, are divided into

XIII. SHRUBS, and

XIV. TREES.

Having thus exhausted the vegetable kingdom, the Bishop proceeds to the animal or *sensitive*, as he calls it, this being the second member of his division of animate substance. This kingdom he divides into

XV. EXSANGUINEOUS.

XVI., XVII., XVIII. SANGUINEOUS, namely, FISH, BIRD, and BEAST.

Having thus considered the general nature of vegetables and animals, he proceeds to consider the parts of both, some of which are *peculiar* to particular plants and animals, and constitute his

XIX. Genus, PECULIAR PARTS;

while others are *general*, and constitute his

XX. Genus, GENERAL PARTS.

Having thus exhausted the category of *substances*, he goes through the remaining categories of *quantity*, *quality*, *action*, and *relation*, which, together with the preceding classes, are represented in the following



table, the skeleton, in fact, of the whole body of human knowledge.

{	General; namely, those universal notions, whether belonging more properly to	{	Things; called TRANSCENDENTAL	{ GENERAL. I. RELATION MIXED. II. RELATION OF ACTION. III.
	Words; DISCOURSE. IV.			
	Special; denoting either			
	CREATOR. V.			
	Creature; namely, such things as were either <i>created</i> or <i>concreated</i> by God, not excluding several of those notions which are framed by the minds of men, considered either			
	Collectively; WORLD. VI.			
	Distributively; according to the several kinds of beings, whether such as do belong to			
	Substance.			
	{ Inanimate; ELEMENT. VII.			
	{ Animate; considered according to their several			
	{ Species; whether			
	{ Vegetative;			
	{ { Imperfect; as Minerals		{ STONE. VIII. METAL. IX.	
	{ { Perfect; as Plant		{ HERB, considered according to	{ LEAF. X. FLOWER. XI. SEED-VESSEL. XII.
	{ { { SHRUB. XIII. TREE. XIV.			
	{ Sensitive		{ EXSANGUINEOUS. XV.	
	{ { Sanguineous		{ FISH. XVI. BIRD. XVII. BEAST. XVIII.	
	{ Parts		{ PECULIAR. XIX. GENERAL. XX.	
	Accident.			
	{ Quantity;		{ MAGNITUDE. XXI. SPACE. XXII. MEASURE. XXIII. NATURAL POWER. XXIV. HABIT. XXV.	
	{ Quality;		{ MANNERS. XXVI. SENSIBLE QUALITY. XXVII. SICKNESS. XXVIII. SPIRITUAL. XXIX.	
	{ Action;		{ CORPOREAL. XXX. MOTION. XXXI. OPERATION. XXXII.	
	{ Relation; whether more		{ Private	{ (ECONOMICAL. XXXIII. POSSESSIONS. XXXIV. PROVISIONS. XXXV. CIVIL. XXXVI. JUDICIAL. XXXVII. MILITARY. XXXVIII. NAVAL. XXXIX. ECCLESIASTICAL. XL.
			{ Public	

The Bishop is far from claiming any great merit for his survey of human knowledge, and he admits most fully its many defects. No single individual could have mastered such a subject, which would baffle even the united efforts of learned societies. Yet such as it is, and with all its imperfections, increased by the destruction of great part of his manuscript in the fire of London, it may give us some idea of what the genius of a Leibniz would have put in its place, if he had ever matured the idea which was from his earliest youth stirring in his brain.

Having completed, in forty chapters, his philosophical dictionary of knowledge, Bishop Wilkins proceeds to compose a philosophical grammar, according to which these ideas are to be formed into complex propositions and discourses. He then proceeds, in the fourth part of his work, to the framing of the language, which is to represent all possible notions, according as they have been previously arranged. He begins with the written language or *Real Character*, as he calls it, because it expresses things, and not sounds, as the common characters do. It is, therefore, to be intelligible to people who speak different languages, and to be read without, as yet, being pronounced at all. It were to be wished, he says, that characters could be found bearing some resemblance to the things expressed by them; also, that the sounds of a language should have some resemblance to their objects. This, however, being impossible, he begins by contriving arbitrary marks for his forty genera. The next thing to be done is to mark the differences under each genus. This is done by affixing little lines at the left end of the character, forming with the character angles of different kinds, that is, right,

obtuse, or acute, above or below ; each of these affixes, according to its position, denoting the first, second, third, and following difference under the genus, these differences being, as we saw, regularly numbered in his philosophical dictionary.

The third and last thing to be done is to express the species under each difference. This is done by affixing the like marks to the other end of the character, denoting the species under each difference, as they are numbered in the dictionary.

In this manner all the several notions of things which are the subject of language, can be represented by real characters. But, besides a complete dictionary, a grammatical framework, too, is wanted before the problem of an artificial language can be considered as solved. In natural languages the grammatical articulation consists either in separate particles or in modifications in the body of a word, to whatever cause such modifications may be ascribed. Bishop Wilkins supplies the former by marks denoting particles, these marks being circular figures, dots, and little crooked lines, or *virgulæ*, disposed in a certain manner. The latter, the grammatical terminations, are expressed by hooks or loops, affixed to either end of the character above or below, from which we learn whether the thing intended is to be considered as a noun, or an adjective, or an adverb ; whether it be taken in an active or passive sense, in the plural or singular number. In this manner, everything that can be expressed in ordinary grammars, the gender, number, and cases of nouns, the tenses and moods of verbs, pronouns, articles, prepositions, conjunctions, and interjections, are all rendered with a precision unsurpassed, nay unequalled, by any living language.



Having thus shaped all his materials, the Bishop proceeds to give the Lord's Prayer and the Creed, written in what he calls his *Real Character*; and it must be confessed by every unprejudiced person that with some attention and practice these specimens are perfectly intelligible.

Hitherto, however, we have only arrived at a written language. In order to translate this written into a spoken language, the Bishop has expressed his forty genera or classes by such sounds as *ba, be, bi, da, de, di, ga, ge, gi*, all compositions of vowels, with one or other of the best sounding consonants. The differences under each of these genera he expresses by adding to the syllable denoting the genus one of the following consonants, *b, d, g, p, t, c, z, s, n*, according to the order in which the differences were ranked before in the tables under each genus, *b* expressing the first difference, *d* the second, and so on.

The species is then expressed by putting after the consonant which stands for the difference one of the seven vowels, or, if more be wanted, the diphthongs.

Thus we get the following radicals corresponding to the general table of notions, as given above:

I.	} Transcendentials.	General . . . .	Ba	
II.		Relation Mixed . . .	Ba	
III.		Relation of Action . .	Be	
IV.		Discourse . . . .	Bi	
V.		God . . . .	Da	
VI.		World . . . .	Da	
VII.		Element . . . .	De	
VIII.		Stone . . . .	Di	
IX.		Metal . . . .	Do	
X.		Leaf . . . .	} Herbs . { Ga	
XI.		Flower . . . .		Ga
XII.		Seed-vessel . . . .		Ge
XIII.		Shrub . . . .		Gi
XIV.		Tree . . . .	Go	

XV.	Animals	Exsanguineous . . .	Za
XVI.		Fish . . . . .	Za
XVII.		Bird . . . . .	Ze
XVIII.	Parts	Beast . . . . .	Zi
XIX.		Peculiar . . . . .	Pa
XX.		General . . . . .	Pa
XXI.	Quantity	Magnitude . . . . .	Pe
XXII.		Space . . . . .	Pi
XXIII.		Measure . . . . .	Po
XXIV.	Quality	Natural Power . . . . .	Ta
XXV.		Habit . . . . .	Ta
XXVI.		Manners . . . . .	Te
XXVII.		Quality, sensible . . . . .	Ti
XXVIII.		Sickness . . . . .	To
XXIX.		Spiritual . . . . .	Ca
XXX.	Action	Corporeal . . . . .	Ca
XXXI.		Motion . . . . .	Ce
XXXII.		Operation . . . . .	Ci
XXXIII.		Economical . . . . .	Co
XXXIV.	Relation	Possessions . . . . .	Cy
XXXV.		Provisions . . . . .	Sa
XXXVI.		Civil . . . . .	Sa
XXXVII.		Judicial . . . . .	Se
XXXVIII.		Military . . . . .	Si
XXXIX.		Naval . . . . .	So
XL.		Ecclesiastical . . . . .	Sy

The differences of the first genus would be expressed by,

*Bab, bad, bag, bap, bat, bac, baz, bas, ban.*

The species of the first difference of the first genus would be expressed by,

*Baba, baba, babe, babi, babo, babs, baby, bbyi, babys.*

Here *baba* would mean being, *baba* thing, *babe* notion, *babi* name, *babo* substance, *babs* quantity, *baby* action, *bbyi* relation.

For instance, if *De* signify element, he says, then *Deb* must signify the first difference, which, according to the tables, is fire; and *Deb* will denote the first species, which is flame. *Det* will be the fifth difference under that genus, which is appearing meteor; *Deta*

the first species, viz. rainbow; *Dea* the second, viz. halo.

Thus if *Ti* signify the genus of Sensible Quality, then *Tid* must denote the second difference, which comprehends colours, and *Tida* must signify the second species under that difference, viz. redness, &c.

The principal grammatical variations, laid down in the philosophical grammar, are likewise expressed by certain letters. If the word, he writes, is an adjective, which, according to his method, is always derived from a substantive, the derivation is made by the change of the radical consonant into another consonant, or by adding a vowel to it. Thus, if *Da* signifies God, *dua* must signify divine; if *De* signifies element, then *due* must signify elementary; if *Do* signifies stone, then *duo* must signify stony. In like manner voices and numbers and such-like accidents of words are formed, particles receive their phonetic representatives; and again, all his materials being shaped, a complete grammatical translation of the Lord's Prayer is given by the Bishop in his own newly-invented philosophical language.

I hardly know whether the account here given of the artificial language invented by Bishop Wilkins will be intelligible, for, in spite of the length to which it has run, many points had to be omitted which would have placed the ingenious conceptions of its author in a much brighter light. My object was chiefly to show that to people acquainted with a real language, the invention of an artificial language is by no means an impossibility, nay, that such an artificial language might be much more perfect, more regular, more easy to learn, than any of the spoken tongues of man. The number of radicals in the Bishop's language



amounts to not quite 3,000, and these, by a judicious contrivance, are sufficient to express every possible idea. Thus the same radical, as we saw, expresses with certain slight modifications, noun, adjective, and verb. Again, if *Da* is once known to signify God, then *ida* must signify that which is opposed to God, namely, *idol*. If *dab* be spirit, *odab* will be body; if *dad* be heaven, *odad* will be hell. Again, if *saba* is king, *sava* is royalty, *salba* is reigning, *samba* to be governed, &c.

Let us now resume the thread of our argument. We saw that in an artificial language, the whole system of our notions, once established, may be matched to a system of phonetic exponents; but we maintain, until we are taught the contrary, that no real language was ever made in this manner.

There never was an independent array of determinate conceptions waiting to be matched with an independent array of articulate sounds. As a matter of fact, we never meet with articulate sounds except as wedded to determinate ideas, nor do we ever, I believe, meet with determinate ideas except as bodied forth in articulate sounds. This is a point of some importance on which there ought not to be any doubt or haze, and I therefore declare my conviction, whether right or wrong, as explicitly as possible, that thought, in one sense of the word, i. e. in the sense of reasoning, is impossible without language. After what I stated in my former lectures, I shall not be understood as here denying the reality of thought or mental activity in animals. Animals and infants that are without language, are alike without reason, the great difference between animal and infant being, that the infant possesses the healthy germs of speech and reason, only

not yet developed into actual speech and actual reason, whereas the animal has no such germs or faculties, capable of development in its present state of existence. We must concede to animals 'sensation, perception, memory, will, and judgment,' but we cannot allow to them a trace of what the Greek called *lógos*, i. e. reason, literally, gathering, a word which most rightly and naturally expresses in Greek both speech and reason.\* *Lógos* is derived from *légein*, which, like Latin *legere*, means, originally, to gather. Hence *Katálogo*, a catalogue, a gathering, a list; *collectio*, a collection. In Homer †, *légein* is hardly ever used in the sense of saying, speaking, or meaning, but always in the sense of gathering, or, more properly, of telling, for to *tell* is the German *Zählen*, and means originally to count, to cast up. *Lógos*, used in the sense of reason, meant originally, like the English *tale*, gathering; for reason, 'though it penetrates into the depths of the sea and earth, elevates our thoughts as high as the stars, and leads us through the vast spaces and large rooms of this mighty fabric,' ‡ is nothing more or less than the gathering up of the single by means of the general. § The Latin *intelligo*, i. e. *inter-*

\* Cf. Farrar, p. 125; Heyse, p. 41.

† Od. xiv. 197, οὐ τι διαπρήξαιμι λέγων ἐμὰ κήδεα θυμοῦ. Ulysses says he should never finish if he were to tell the sorrows of his heart, i. e. if he were to count or record them, not simply if he were to speak of them.

‡ Locke *On the Understanding*, iv. 17, 9.

§ This, too, is well put by Locke (iii. 3, 20) in his terse and homely language: 'I would say that all the great business of genera and species, and their essences, amounts to no more but this; that men making abstract ideas, and settling them in their minds, with names annexed to them, do thereby enable themselves to consider things, and discourse of them, as it were, *in bundles*, for



*ligo*, expresses still more graphically the interlacing of the general and the single, which is the peculiar province of the intellect. But *Lógos* used in the sense of word, means likewise a gathering, for every word, or, at least, every name is based on the same process; it represents the gathering of the single under the general. As we cannot tell or count quantities without numbers, we cannot tell or recount things without words. There are tribes that have no numerals beyond four. Should we say that they do not know if they have five children instead of four? They certainly do, as much as a cat knows that she has five kittens, and will look for the fifth if it has been taken away from her. But if they have no numerals beyond four, they cannot reason beyond four. They would not know, as little as children know it, that two and three make five, but only that two and three make many. Though I dwelt on this point in the last lectures of my former course, a few illustrations may not be out of place here, to make my meaning quite clear.

Man could not name a tree, or an animal, or a river, or any object whatever in which he took an interest, without discovering first some general quality that seemed at the time the most characteristic of the object to be named. In the lowest stage of language, an imitation of the neighing of the horse would have been sufficient to name the horse. Savage tribes are great mimics, and imitate the cries of animals with wonderful success. But this is not yet language. There are cockatoos who, when they see cocks and hens, will begin to cackle as if to inform us of what

the easier and readier improvement and communication of their knowledge, which would advance but slowly were their words and thoughts confined only to particulars.'

they see. This is not the way in which the words of our languages were formed. There is no trace of *neighing* in the Aryan names for *horse*. In naming the *horse*, the quality that struck the mind of the Aryan man as the most prominent was its swiftness. Hence from the root *ás\**, to be sharp or swift (which we have in Latin *acus*, needle, and in the French diminutive *aiguille*, in *acuo*, I sharpen, in *acer*, quick, sharp, shrewd, in *acrimony* and even in 'cute), was derived *ásva*, the runner, the horse. This *ásva*, appears in Lithuanian as *aszva* (mare), in Latin as *ekvus*, i. e. *equus*, in Greek as ἵκκος, † i. e. ἵππος, in Old Saxon as *ehu*. Many a name might have been given to the horse besides the one here mentioned, but whatever name was given it could only be formed by laying hold of the horse by means of some general quality, and by thus arranging the horse, together with other objects, under some general category. Many names might have been given to *wheat*. It might have been called eared, nutritious, graceful, waving, the incense of the earth, &c. But it was called simply the *white*, the white colour of its grain seeming to distinguish it best from those plants with which otherwise it had the greatest similarity. For this is one of the secrets of *onomatopoësis*, or name-poetry, that each name should express, not the most important or specific quality, but that which strikes our fancy, ‡ and seems most useful for the purpose of

\* Cf. Sk. *ásu*, quick, ὠκύς, ἀκωκή, point, and other derivatives given by Curtius, *Griechische Etymologie*, i. 101. The Latin *catus*, sharp, has been derived from Sk. *śo* (*śyati*), to whet.

† *Etym. Magn.*, p. 474, 12., ἵκκος σημαίνει τὸν ἵππον. Curtius, *G. E.* ii. 49.

‡ Pott, *Etym. F.*, ii. 139.

making other people understand what we mean. If we adopted the language of Locke, we should say that men were guided by *wit* rather than by *judgment*, in the formation of names. *Wit*, he says, lies most in the assemblage of ideas, and putting those together with quickness and variety, wherein can be found any resemblance or congruity, thereby to make up pleasant pictures, and agreeable visions, in the fancy: judgment, on the contrary, lies quite on the other side, in separating carefully, one from another, ideas wherein can be found the least difference, thereby to avoid being misled by similitude, and by affinity, to take one thing for another.\* While the names given to things according to Bishop Wilkins' philosophical method would all be founded on judgment, those given by the early framers of language repose chiefly on wit or fancy. Thus wheat was called the white plant, *hwaiteis* in Gothic, in A. S. *hwæte*, in Lithuanian *kwetys*, in English *wheat*, and all these words point to the Sanskrit *śveta*, i.e. white, the Gothic *hveits*, the A. S. *hwît*. In Sanskrit, *śveta*, white, is not applied to wheat (which is called *godhûma*, the smoke or incense of the earth), but it is applied to many other herbs and weeds, and as a compound (*śvetaśunga*, white-awned), it entered into the name of barley. In Sanskrit, silver is counted as white, and called *śveta*, and the feminine *śvetî*, was once a name of the dawn, just as the French *aube*, dawn, which was originally *alba*. We arrive at the same result whatever words we examine; they always express a general quality, supposed to be peculiar to the object to which they are attached. In some cases this is quite clear, in others it has to be

\* Locke, *On the Human Understanding*, ii. 11, 2.



brought out by minute etymological research. To those who approach these etymological researches with any preconceived opinions, it must be a frequent source of disappointment, when they have traced a word through all its stages to its first starting point, to find in the end, or rather in the beginning, nothing but roots of the most general powers, meaning to go, to move, to run, to do. But on closer consideration, this, instead of being disappointing, should rather increase our admiration for the wonderful powers of language, man being able out of these vague and pale conceptions to produce names expressive of the minutest shades of thought and feeling. It was by a poetical fiat that the Greek *próbata*, which originally meant no more than things walking forward, became in time the name of cattle, and particularly of sheep. In Sanskrit, *sarit*, meaning *goer*, from *sar*, to go, became the name of river; *sara*, meaning the same, what runs or goes, was used for sap, but not for river. Thus *dru*, in Sanskrit, means to run, *dravat*, quick; but *drapsa* is restricted to the sense of a drop, *gutta*. The Latin *ævum*, meaning going, from *i*, to go, became the name of time, age; and its derivative *æviternus*, or *æternus*, was made to express eternity. Thus in French, *meubles* means literally anything that is moveable, but it became the name of chairs, tables, and wardrobes. *Viande*, originally *vivenda*, that on which one lives, came to mean meat. A table, the Latin *tabula*, is originally what stands, or that on which things can be placed (stood); it now means what dictionaries define as 'a horizontal surface raised above the ground, used for meals and other purposes.' The French *tableau*, picture, again goes back to the Latin *tabula*, a thing stood up, exhibited, and at last to the

root *stâ* of *stare*, to stand. A *stable*, the Latin *stabulum*, comes from the same root, but it was applied to the standing-place of animals, to stalls or sheds. That on which a thing stands or rests is called its *base*, and *basis* in Greek meant originally no more than going, the base being conceived as ground on which it is safe to walk. What can be more general than *facies*, originally the make or shape of a thing, then the *face*? Yet the same expression is repeated in modern languages, *feature* being evidently a mere corruption of *factura*, the make. On the same principle the moon was called *luna*, i. e. *lucna* or *lucina*, the shining; the lightning, *fulmen* from *fulgere*, the bright; the stars *stellæ*, i. e. *sterulæ*, the Sanskrit *staras* from *strî*, to strew, the strewers of light. All these etymologies may seem very unsatisfactory, vague, uninteresting, yet, if we reflect for a moment, we shall see that in no other way but this could the mind, or the gathering power of man, have comprehended the endless variety of nature\* under a limited number of categories or names. What Bunsen called 'the first poetry of mankind,' the creation of words, is no doubt very different from the sensation poetry of later days: yet its very poverty and simplicity render it all the more valuable in the eyes of historians and philosophers. For of this first poetry, simple as it is, or of this first philosophy in all its childishness, man only is capable. He is capable of it because he can gather the single under the general; he is capable of it because

\* Cf. Sankara on Vedânta-Sûtra, 1, 3, 28 (Muir, *Sanskrit Texts*, iii. 67), âkritibhiḥ cha śabdânâm sambandho na vyaktibhiḥ, vyaktinâm ânantyât sambandhagrahaṇânupapattēh. 'The relation of words is with the genera, not with individuals; for, as individuals are endless, it would be impossible to lay hold of relations.'

he has the faculty of speech; he is capable of it—we need not fear the tautology—because he is man.

*Without speech no reason, without reason no speech.*

It is curious to observe the unwillingness with which many philosophers admit this, and the attempts they make to escape from this conclusion, all owing to the very influence of language which, in most modern dialects, has produced two words, one for language, the other for reason; thus leading the speaker to suppose that there is a substantial difference between the two, and not a mere formal difference. Thus Brown says: 'To be without language, spoken or written, is *almost* to be without thought.'\* But he qualifies this *almost* by what follows: 'That man can reason without language of any kind, and consequently without general terms—though the opposite opinion is maintained by many very eminent philosophers—seems to me not to admit of any reasonable doubt, or, if it required any proof, to be sufficiently shown by the very invention of language which involves these general terms, and still more sensibly by the conduct of the uninstructed deaf and dumb†—to which also the evident marks of reasoning in the other animals—of reasoning which I cannot but think as unquestionable as the instincts that mingle with it—may be said to furnish a very striking additional argument from analogy.'

The uninstructed deaf and dumb, I believe, have never given any signs of reason, in the true sense of the word, though to a certain extent all the deaf and dumb people that live in the society of other men catch something of the rational behaviour of their neighbours. When instructed, the deaf and dumb

\* Works, i. p. 475.

† *l. c.* ii. p. 446.



certainly acquire general ideas without being able in every case to utter distinctly the phonetic exponents or embodiments of these ideas which we call words. But this is no objection to our general argument. The deaf and dumb are taught by those who possess both these general ideas and their phonetic embodiments, elaborated by successive generations of rational men. They are taught to think the thoughts of others, and if they cannot pronounce their words, they lay hold of these thoughts by other signs, and particularly by signs that appeal to their sense of sight, in the same manner as words appeal to our sense of hearing. These signs, however, are not the signs of things or their conceptions, as words are: they are the signs of signs, just as written language is not an image of our thoughts, but an image of the phonetic embodiment of thought. Alphabetical writing is the image of the sound of language, hieroglyphic writing the image of language or thought.

The same supposition that it is possible to reason without signs, that we can form mental conceptions, nay, even mental propositions, without words, runs through the whole of Locke's philosophy.\* He maintains over and over again, that words are signs *added* to our conceptions, and added arbitrarily. He imagines a state 'in which man, though possessed of a great variety of thoughts, and such from which others, as well as himself, might receive profit and delight, was unable to make these thoughts appear. The comfort and advantage of society, however, not being to be had without communication of thoughts, it was necessary that man should find out some external

\* Locke, *On the Human Understanding*, iii. 2, 1.

sensible signs, whereby those invisible ideas of which his thoughts are made up might be made known to others. For this purpose, nothing was so fit, either for plenty or quickness, as those articulate sounds, which, with so much ease and variety, he found himself able to make. Thus we may conceive how words, which were by nature so well adapted to that purpose, came to be made use of by men as the signs of their ideas; not by any natural connexion there is between particular articulate sounds and certain ideas; for then there would be but one language amongst all men; but by a voluntary composition, whereby such a word is made arbitrarily the mark of such an idea.'

Locke admits, indeed, that it is almost unavoidable, in treating of mental propositions, to make use of words. 'Most men, if not all,' he says (and who are they that are here exempted?) 'in their thinking and reasoning within themselves, make use of words, instead of ideas, at least when the subject of their meditation contains in it complex ideas.'\* But this is in reality an altogether different question; it is the question whether, after our notions have once been realized in words, it is possible to use words without reasoning, and not whether it is possible to reason without words. This is clear from the instances given by Locke. 'Some confused or obscure notions,' he says, 'have served their turns; and many who talk very much of religion and conscience, of church and faith, of power and right, of obstructions and humours, melancholy and choler, would, perhaps, have little left in their thoughts and meditations, if one should

\* *l. c.*, iv. 5, 4.



desire them to think only of the things themselves, and lay by those words, with which they so often confound others, and not seldom themselves also.' \*

In all this there is, no doubt, great truth; yet, strictly speaking, it is as impossible to use words without thought, as to think without words. Even those who talk vaguely about religion, conscience, &c., have at least a vague notion of the meaning of the words they use: and if they ceased to connect any ideas, however incomplete and false, with the words they utter, they could no longer be said to speak, but only to make noises. The same applies if we invert our proposition. It is possible, without language, to see, to perceive, to stare at, to dream about things; but, without words, not even such simple ideas as white or black can for a moment be realized.

We cannot be careful enough in the use of our words. If reasoning is used synonymously with knowing or thinking, with mental activity in general, it is clear that we cannot deny it either to the uninstructed deaf and dumb, or to infants and animals. A child *knows* as certainly before it can speak the difference between sweet and bitter (i.e. that sweet is not bitter), as it knows afterwards (when it comes to speak) that wormwood and sugar-plums are not the same thing. † A child receives the sensation of sweetness; it enjoys it, it recollects it, it desires it again; but it does not know what sweet is; it is absorbed in its sensations, its pleasures, its recollections; it cannot look at them from above, it cannot reason on them, it cannot tell of them. ‡ This is well expressed by Schelling.

\* *l. c.*, iv. 5, 4.

† *l. c.*, i. 2, 15.

‡ A child certainly *knows* that a stranger is not its mother; that its sucking-bottle is not the rod, long before he knows that

‘Without language,’ he says, ‘it is impossible to conceive philosophical, nay, even any human consciousness: and hence the foundations of language could not have been laid consciously. Nevertheless, the more we analyse language, the more clearly we see that it transcends in depth the most conscious productions of the mind. It is with language as with all organic beings; we imagine they spring into being blindly, and yet we cannot deny the intentional wisdom in the formation of every one of them.’\*

Hegel speaks more simply and more boldly, ‘It is in names,’ he says, ‘that we think.’†

It may be possible, however, by another kind of argument, less metaphysical, perhaps, but more convincing, to show clearly that reason cannot become real without speech. Let us take any word, for instance, *experiment*. It is derived from *experior*. *Perior*, like Greek *perân*,‡ would mean to go through. *Perītus* is a man who has gone through many things; *periculum*, something to go through, a danger. *Experior* is to go through and come out (the Sanskrit, *vyutpad*); hence *experience* and *experiment*. The Gothic *faran*, the English *to fare*, are the same words as *perân*; hence the German *Erfahrung*, experience, and *Gefahr*, periculum; *Wohlfahrt*, welfare, the Greek *euporia*. As long then as the word *experiment* expresses this more or less general idea, it has a real existence. But take the mere sound, and change

it is impossible for the same thing to be and not to be.—Locke, *On the Human Understanding*, iv. 7, 9.

\* *Einleitung in die Philosophie der Mythologie*, p. 52; Pott, *Etymologische Forschungen*, ii. 261.

† Carrière, *Die Kunst im Zusammenhang der Culturentwicklung*, p. 11.

‡ Curtius, *G. E.*, i. 237.

only the accent, and we get *experiment*, and this is nothing. Change one vowel or one consonant, *exporiment* or *esperiment*, and we have mere noises, what Heraclitus would call a mere *psóphos*, but no words. *Cháacter*, with the accent on the first syllable, has a meaning in English, but none in German or French; *charácter*, with the accent on the second syllable, has a meaning in German, but none in English or French; *charactère*, with the accent on the last, has a meaning in French, but none in English or German. It matters not whether the sound is articulate or not; articulate sound without meaning is even more unreal than inarticulate sound. If, then, these articulate sounds, or what we may call the body of language, exist nowhere, have no independent reality, what follows? I think it follows that this so-called body of language could never have been taken up anywhere by itself, and added to our conceptions from without; from which it would follow again that our conceptions, which are now always clothed in the garment of language, could never have existed in a naked state. This would be perfectly correct reasoning, if applied to anything else; nor do I see that it can be objected to as bearing on thought and language. If we never find skins except as the teguments of animals, we may safely conclude that animals cannot exist without skins. If colour cannot exist by itself (*ἅπαν γὰρ χρῶμα ἐν σώματι*), it follows that neither can anything that is coloured exist without colour. A colouring substance may be added or removed; but colour without some substance, however ethereal, is, *in rerum naturâ*, as impossible as substance without colour, or as substance without form or weight.



Granting, however, to the fullest extent, the one and indivisible character of language and thought, agreeing even with the Polynesians, who express thinking by speaking in the stomach,\* we may yet, I think, for scientific purposes, claim the same liberty which is claimed in so many sciences, namely, the liberty of treating separately what in the nature of things cannot be separated. Though colour cannot be separated from some ethereal substance, yet the science of optics treats of light and colour as if they existed by themselves. The geometrician reasons on lines without taking cognizance of their breadth, of plains without considering their depth, of bodies without thinking of their weight. It is the same in language, and though I consider the identity of language and reason as one of the fundamental principles of our science, I think it will be most useful to begin, as it were, by dissecting the dead body of language, by anatomizing its phonetic structure, without any reference to its function, and then to proceed to a consideration of language in the fulness of life, and to watch its energies, both in what we call its growth and its decay.

I tried to show in my first course of lectures, that if we analyse language, that is to say, if we trace words back to their most primitive elements, we arrive, not at letters, but at roots. This is a point which has not been sufficiently considered, and it may almost be taken as the general opinion that the elements of language are vowels and consonants, but not roots. If, however, we call elements those primitive substances the combination of which is sufficient to

\* Farrar, p. 125.

account for things as they really are, it is clear that we cannot well call the letters the elements of language; for we might shake the letters together *ad infinitum*, without ever producing a dictionary, much less a grammar. It was a favourite idea of ancient philosophers to compare the atoms the concurrence of which was to form all nature, with letters. Epicurus is reported to have said that—‘The atoms come together in different order and position, like the letters, which, though they are few, yet, by being placed together in different ways, produce innumerable words.’\*

Aristotle, also, in his ‘Metaphysics,’ when speaking of Leucippus and Democritus, illustrates the different effects produced by the same elements by a reference to letters. ‘A,’ he says, ‘differs from N by its shape; AN from NA by the order of the letters; Z from N by its position.’†

It is true, no doubt, that by putting the twenty-three or twenty-four letters together in every possible variety, we might produce every word that has ever been used in any language of the world. The number of these words, taking twenty-three letters as the basis, would be 25,852,016,738,884,976,640,000; or, if we take twenty-four letters, 620,448,401,733,239,439,360,000.‡ But even then these trillions, billions, and millions of sounds, would not be words,

\* Lactantius, *Divin. Inst.*, lib. 3, c. 19. Vario, inquit (Epicurus), ordine ac positione conveniunt atomi sicut literae, quae cum sint paucae, varie tamen collocatae innumerabilia verba conficiunt.

† *Metaph.*, i. 4, 11. Διαφέρει γὰρ τὸ μὲν Α τοῦ Ν σχήματι, τὸ δὲ ΑΝ τοῦ ΝΑ τάξει, τὸ δὲ Ζ τοῦ Ν θέσει.

‡ Cf. Leibniz, *De Arte combinatoria*, *Opp.* t. ii. pp. 387–8, ed. Dutens; Pott, *Etym. Forsch.* ii. p. 9.

for they would lack the most important ingredient, that which makes a word to be a word, namely, the different ideas by which they were called into life, and which are expressed differently in different languages.

‘Element,’ Aristotle says, ‘we call that of which anything consists, as of its first substance, this being as to form indivisible; as, for instance, the elements of language (the letters) of which language is composed, and into which as its last component parts, it can be dissolved; while they, the letters, can no longer be dissolved into sounds different in form; but, if they are dissolved, the parts are homogeneous, as a part of water is water; but not so the parts of a syllable.’

If here we take *phōnē* as voice, not as language, there would be nothing to object to in Aristotle’s reasoning. The voice, as such, may be dissolved into vowels and consonants, as its primal elements. But not so speech. Speech is preeminently significant sound, and if we look for the elements of speech, we cannot on a sudden drop one of its two characteristic qualities, either its audibility or its significancy. Now letters as such are not significant; a, b, c, d, mean nothing, either by themselves or if put together. The only word that is formed of mere letters is ‘Alphabet’ (*ὁ ἀλφάβητος*), the English ABC; but even here it is not the sounds, but the names of the letters, that form the word. One other word has been supposed to have the same merely alphabetical origin, namely, the Latin *elementum*. As *elementa* is used in Latin for the ABC, it has been supposed, though I doubt whether in real earnest, that it was formed from the three letters l, m, n.



The etymological meaning of *elementa* is by no means clear, nor has the Greek *stoichêion*, which in Latin is rendered by *elementum*, as yet been satisfactorily explained. We are told that *stoichêion* is a diminutive from *stoîchos*, a small upright rod or post, especially the gnomon of the sundial, or the shadow thrown by it; and under *stoîchos*, we find the meaning of a row, a line of poles with hunting nets, and are informed that the word is the same as *stîchos*, line, and *stóchos*, aim. How the radical vowel can change from *i* to *o* and *oi*, is not explained.

The question is, why were the elements, or the component primary parts of things, called *stoichêia* by the Greeks? It is a word which has had a long history, and has passed from Greece to almost every part of the civilised world, and deserves, therefore, some attention at the hand of the etymological genealogist. *Stoîchos*, from which *stoichêion*, means a row or file, like *stîx* and *stîches* in Homer. The suffix *eios* is the same as the Latin *eius*, and expresses what belongs to or has the quality of something. Therefore, as *stoîchos* means a row, *stoichêion* would be what belongs to or constitutes a row. Is it possible to connect these words with *stóchos*, aim, either in form or meaning? Certainly not. Roots with *i* are liable to a regular change of *i* into *oi* or *ei*, but not into *o*. Thus the root *lip*, which appears in *élipon*, assumes the forms *léipo* and *léloipa*, and the same scale of vowel-changes may be observed in

*liph*, *aleíphō*, *éloípha*, and  
*pith*, *péithō*, *pépoitha*.

Hence *stoichos* presupposes a root *stich*, and this root would account in Greek for the following derivations:—

1, *stix*, gen. *stichós*, a row, a line of soldiers.

2, *stichos*, a row, a line ; *distich*, a couplet.

3, *steíchō*, *éstichon*, to march in order, step by step ;  
to mount.

4, *stoîchos*, a row, a file ; *stoichéîn*, to march in a line.

In German, the same root yields *steigen*, to step, to mount, and in Sanskrit we find *stigh*, to mount.

Quite a different root is presupposed by *stóchos*. As *tómos* points to a root *tam* (*témno*, *étamon*), or *bólos* to a root *bal* (*bélos*, *ébalon*), thus *stóchos* points to a root *stach*. This root does not exist in Greek in the form of a verb, and has left behind in the classical language this one formation only, *stóchos*, mark, point, aim, whence *stocházomai*, I point, I aim, and similar derivatives. In Gothic, a similar root exists in the verb *stiggan*, the English *to sting*.

A third root, closely allied with, yet distinct from, *stach*, has been more prolific in the classical languages, namely, *stig*, to stick.\* From it we have *stizō*, *éstigmai*, I prick ; in Latin, *in-stigare*, *stimulus*, and *stilus* (for *stiglius*, like *palus* for *paglus*) ; Gothic *stikan*, to stick, German *stechen*.

The result at which we thus arrive is that *stoichéion* has no connection with *stóchos*, and hence that it cannot, as the dictionaries tell us, have the primary meaning of a small upright rod or pole, or of the gnomon of the sundial. Where *stoichéion* (as in *δεκάπουν στοιχείον*, i.e. noon) is used with reference to the sundial, it means the lines of the shadow following each other in regular succession ; the radii, in fact, which constitute the complete series of hours described by the sun's daily course. And this gives

\* Grimm, *Deutsche Sprache*, p. 853.



us the key to *stoicheîon*, in the sense of elements. *Stoichêia* are the degrees or steps from one end to the other, the constituent parts of a whole, forming a complete series, whether as hours, or letters, or numbers, or parts of speech, or physical elements, provided always that such elements are held together by a systematic order. This is the only sense in which Aristotle and his predecessors could have used the word for ordinary and for technical purposes; and it corresponds with the explanation proposed by no less an authority than Dionysius Thrax. The first grammarian of Greece gives the following etymology of *stoichêia* in the sense of letters (§ 7):\* — ‘The same are also called *stoichêia*, because they have a certain order and arrangement.’ † Why the Romans, who probably became for the first time acquainted with the idea of elements through their intercourse with Greek philosophers and grammarians, should have translated *stoichêia* by *elementa* is less clear. In the sense of physical elements, the early Greek philosophers used *rizômata*, roots, in preference to *stoichêia*, and if *elementa* stands for *alimenta*, in the sense of feeders, it may have been intended originally as a rendering of *rizômata*.

From an historical point of view, letters are not the *stoichêia* or *rizômata* of language. The simplest parts into which language can be resolved are the *roots*, and these themselves cannot be further reduced without

\* Τὰ δὲ αὐτὰ καὶ στοιχεῖα καλεῖται διὰ τὸ ἔχειν στοιχόν τινα καὶ τάξιν.

† The explanation here suggested of *stoicheîon* is confirmed by some remarks of Professor Pott, in the second volume of his *Etymologische Forschungen*, p. 191, 1861. The same author suggests a derivation of *elementum* from root *li*, solvere, with the preposition *ê*.—*l. c.*, p. 193.

destroying the nature of language, which is not mere sound, but always significant sound. There may be roots consisting of one vowel, such as *i*, to go, in Sanskrit, or 'i, one, in Chinese; but this would only show that a root may be a letter, not that a letter may be a root. If we attempted to divide roots like the Sk. *chi*, to collect, or the Chinese *tchi*, many, into *tch* and *i*, we should find that we had left the precincts of language, and entered upon the science of phonetics.

Before we do this—before we proceed to dissect the phonetic skeleton of human speech, it may be well to say a few words about *roots*. In my former Lectures I said, intentionally, very little about roots; at least very little about the nature or the origin of roots, because I believed, and still believe, that in the science of language we must accept roots simply as ultimate facts, leaving to the physiologist and the psychologist the question as to the possible sympathetic or reflective action of the five organs of sensuous perception upon the motory nerves of the organs of speech. It was for that reason that I gave a negative rather than a positive definition of roots, stating \* that, for my own immediate purposes, I called root or radical whatever, in the words of any language or family of languages, cannot be reduced to a simpler or more original form.

It has been pointed out, however, with great logical acuteness, that if this definition were true, roots would be mere abstractions, and as such unfit to explain the realities of language. Now, it is perfectly true that, from one point of view, a root may be

\* p. 256.

considered as a mere abstraction. A root is a cause, and every cause, in the logical acceptation of the word, is an abstraction. As a cause it can claim no reality, no vulgar reality; if we call real that only which can become the object of sensuous perception. In real language, we never hear a root; we only meet with their effects, namely, with words, whether nouns, adjectives, verbs, or particles. This is the view which the native grammarians of India have taken of Sanskrit roots; and they have taken the greatest pains to show that a root, as such, can never emerge to the surface of real speech; that there it is always a word, an effect, a substance clothed in the garment of grammatical derivatives. The Hindus call a root *dhātu*, which is derived from the root *dhâ*,\* to support or nourish. They apply the same word to their five elements, which shows that, like the Greeks, they looked upon these elements (earth, water, fire, air, ether), and upon the elements of language, as the supporters and feeders of real things and real words. It is known that, in the fourth century B. C., the Hindus possessed complete lists, not only of their roots, but likewise of all the formative elements, which, by being attached to them, raise the roots into real words.

Thus from a root *vid*, to know, they would form by

\* *Unâdi Sûtras*, i. 70, *dudhâñ dhâraṇaposhanayoh*. *Hetú*, the Sanskrit word for cause, cannot be referred to the same root from which *dhātu* is derived; for though *dhâ* forms the participle *hita*, the *i* of *hi-ta* would not be liable to *guṇa* before *tu*. *Hetú* (*Unâdi Sûtras*, i. 73) is derived from *hi*, which Bopp identifies with *κίω* (Bopp, *Glossarium*, s. v. *hi*.) This *κίω* and *κίvéω* are referred by Curtius to the Latin *cio*, *cio*, *citus*, *excito*, not however to the Sanskrit *hi*, but to root *śi*, to sharpen.—Cf. Curtius, *G. E.* i. p. 118.



means of the suffix *ghañ*, *Veda*, i. e. knowledge ; by means of the suffix *trich*, *vettar*, a knower, Greek *hístōr* and *ístōr*. Again, by affixing to the root certain verbal derivatives, they would arrive at *vedmi*, I know, *viveda*, I have known, or *veda*, I know. Besides these derivatives, however, we likewise find in Sanskrit the mere *vid*, used, particularly in compounds, in the sense of knowing ; for instance, *dharmavid*, a knower of the law. Here then the root itself might seem to appear as a word. But such is the logical consistency of Sanskrit grammarians, that they have actually imagined a class of derivative suffixes, the object of which is to be added to a root for the sole purpose of being rejected again. Thus only could the logical conscience of Pāṇini be satisfied.\* When we should say that a root is used as a noun without any change except those that are necessitated by phonetic laws (as, for instance, *dharmavit*, instead of *dharmavid*), Pāṇini says (iii. 3, 68), that a suffix (namely, *viṭ*) is added to the root *vid*. But if we come to inquire what this suffix means and why it is called *viṭ*, we find (vi. 1, 67) that a *lopa*, i. e. a lopping off, is to carry away the *v* of *viṭ*; that the final *ṭ* is only meant to indicate certain phonetic changes that take place if a root ends in a nasal (vi. 4, 41); and that the vowel *i* serves merely to connect these two algebraic symbols. So that the suffix *viṭ* is in reality

\* In earlier works the meaning of *dhātu* is not yet so strictly defined. In the *Prâtisâkhya of the Rigveda*, xii. 5, a noun is defined as that which signifies a being, a verb as that which signifies being, and as such the verb is identified with the root (Tan nâma yenâbhidadhâti sattvam, tad âkhyâtam yena bhâvam, sa dhâtuḥ). In the *Nirukta*, too, verbs with different verbal terminations are spoken of as dhâtus.—*Nighantū*, i. 20.

nought. This is certainly strict logic, but it is rather cumbersome grammar, and from an historical point of view, we are justified in dropping these circumlocutions, and looking upon roots as real words.

With us, speaking inflectional and highly refined languages, roots are primarily what remains as the last residuum after a complete analysis of our own dialects, or of all the dialects that form together the great Aryan mass of speech. But if our analysis is properly made, what is to us a mere residuum must originally, in the natural course of events, have been a real germ; and these germinal forms would have answered every purpose in an early stage of language. We must not forget that there are languages which have remained in that germinal state, and in which there is to the present day no *outward* distinction between a root and a word. In Chinese,\* for instance, *ly* means to plough, a plough, and an ox, i. e. a plougher; *ta* means to be great, greatness, greatly. Whether a word is intended as a noun, or a verb, or a particle, depends chiefly on the position which it occupies in a sentence. In the Polynesian † dialects, almost every verb may, without any change of form, be used as a noun or an adjective; whether it is meant for the one or the other must be learnt from certain particles, which are called particles of affirmation (*kua*), and the particles of the agent (*ko*). In Egyptian, as Bunsen states, there is no formal distinction between noun, verb, adjective, and particle, and a word like *an'h* might mean life, to live, living, lively. ‡ What does this show? I think it shows that there

\* Endlicher, *Chinesische Grammatik*, § 123.

† Cf. Hale, p. 263.

‡ Bunsen's *Aegypten*, i. 324.

was a stage in the growth of language, in which that sharp distinction which we make between the different parts of speech had not yet been fixed, and when even that fundamental distinction between subject and predicate, on which all the parts of speech are based, had not yet been realized in its fulness, and had not yet received a corresponding outward expression.

A slightly different view is propounded by Professor Pott, when he says: 'Roots, it should be observed, as such, lack the stamp of words, and therefore their real value in the currency of speech. There is no inward necessity why they should first have entered into the reality of language, naked and formless; it suffices that, unpronounced, they fluttered before the soul like small images, continually clothed in the mouth, now with this, now with that form, and surrendered to the air to be drafted off in hundred-fold cases and combinations.' \*

It might be said, that as soon as a root is pronounced—as soon as it forms part of a sentence—it ceases to be a root, and is either a subject or a predicate, or, to use grammatical language, a noun or a verb. Yet even this seems an artificial distinction. To a Chinese, the sound *ta*, even when pronounced, is a mere root; it is neither noun nor verb, distinctions which, in the form in which we conceive them, have no existence at all to a Chinese. If to *ta* we add *fu*, man, and when we put *fu* first and *ta* last, then, no doubt, *fu* is the subject, and *ta* the predicate, or, as our grammarians would say, *fu* is a noun, and *ta* a verb; *fu ta* would mean, 'the man is great.' But if

\* *Etymologische Forschungen*, ii. 95.



we said *ta fu*, *ta* would be an adjective, and the phrase would mean 'a great man.' I can here see no real distinction between *ta*, potentially a noun, an adjective, a verb, an adverb, and *ta* in *fu ta*, used actually as an adjective or verb.

As the growth of language and the growth of the mind are only two aspects of the same process, it is difficult for us to think in Chinese, or in any radical language, without transferring to it our categories of thought. But if we watch the language of a child, which is in reality Chinese spoken in English, we see that there is a form of thought, and of language, perfectly rational and intelligible to those who have studied it, in which, nevertheless, the distinction between noun and verb, nay, between subject and predicate, is not yet realized. If a child says *Up*, that *up* is, to his mind, noun, verb, adjective, all in one. It means, 'I want to get up on my mother's lap.' If an English child says *ta*, that *ta* is both a noun, thanks, and a verb, I thank you. Nay, even if a child learns to speak grammatically, it does not yet think grammatically; it seems, in speaking, to wear the garments of its parents, though it has not yet grown into them. A child says 'I am hungry,' without an idea that *I* is different from *hungry*, and that both are united by an auxiliary verb, which auxiliary verb again was a compound of a root *as*, and a personal termination *mi*, giving us the Sanskrit *asmi*, I am. A Chinese child would express exactly the same idea by one word, *shi*, to eat, or food, &c. The only difference would be that a Chinese child speaks the language of a child, an English child the language of a man. If then it is admitted that every inflectional language passed through a radical and an agglutinate stage, it seems

to follow that at one time or other, the constituent elements of inflectional languages, namely, the roots, were, to all intents and purposes, real words, and used as such both in thought and speech.

Roots, therefore, are not such mere abstractions as they are sometimes supposed to be, and unless we succeed in tracing each word in English or in any inflectional language back to its root, we have not traced it back to its real origin. It is in this analysis of language that comparative philology has achieved its greatest triumphs, and has curbed that wild spirit of etymology which would handle words as if they had no past, no history, no origin. In tracing words back to their roots we must obey certain phonetic laws. If the vowel of a root is *i* or *u*, its derivatives will be different, from Sanskrit down to English, from what they would have been if that radical vowel had been *a*. If a root begins with a tenuis in Sanskrit, that tenuis will never be a tenuis in Gothic, but an aspirate; if a root begins with an aspirate in Sanskrit, that aspirate will never be an aspirate in Gothic, but a media; if a root begins with a media in Sanskrit, that media will not be a media in Gothic, but a tenuis.

And this, better than anything else, will, I think, explain the strong objection which comparative philologists feel to what I called the Bow-wow and the Pooh-pooh theories, names which I am sorry to see have given great offence, but in framing which, I can honestly say, I thought of Epicurus\* rather than of living writers, and meant no offence to

\* 'Ο γὰρ Ἐπίκουρος ἔλεγεν ὅτι οὐχὶ ἐπιστημόνως οὗτοι ἔθεντο τὰ ὀνόματα, ἀλλὰ φυσικῶς κινούμενοι, ὡς οἱ βήσσοντες καὶ πταίροντες καὶ μυκώμενοι καὶ ἕλακτοῦντες καὶ στενάζοντες.—*Proclus, ad Plat. Crat. p. 9.*



either. 'Onomatopœic' is neither an appropriate nor a pleasant word, and it was absolutely necessary to distinguish between two theories, the *onomatopœic*, which derives words from the sounds of animals and nature in general, as imitated by the framers of language, and the *interjectional*, which derives words, not from the imitation of the interjections of others, but from the interjections themselves, as wrung forth, almost against their will, from the framers of language. I did not think that the weapons of ridicule were necessary to combat theories which, since the days of Epicurus, had so often been combated, and so often been defended. I may have erred in choosing terms which, while they expressed exactly what I wished to express, sounded rather homely and undignified; but I could not plead for the terms I had chosen a better excuse than the name now suggested by the supporters of the onomatopœic theory, which, I am told, is *Imsonic*, from *im* instead of *imitation*, and *son* instead of *sonus*, sound.

That there is some analogy between the faculty of speech and the sounds which we utter in singing, laughing, crying, sobbing, sighing, moaning, screaming, whistling, and clicking, was known to Epicurus of old, and requires no proof. But does it require to be pointed out that even if the scream of a man who has his finger pinched should happen to be identically the same as the French *hélas*, that scream would be an effect, an involuntary effect of outward pressure, whereas an interjection like *alas*, *hélas*, Italian *lasso*, to say nothing of such words as *pain*, *suffering*, *agony*, &c., is there by the free will of the speaker, meant for something, used with a purpose, chosen as a sign?

Again, that sounds can be rendered in language by sounds, and that each language possesses a large stock of words imitating the sounds given out by certain things, who would deny? And who would deny that some words, originally expressive of sound only, might be transferred to other things which have some analogy with sound?

But how are all things that do not appeal to the sense of hearing—how are the ideas of going, moving, standing, sinking, tasting, thinking, to be expressed?

I give the following as a specimen of what may be achieved by the advocates of 'painting in sound.' *Hooiaioai* is said in Hawaiian to mean to testify; and this, we are told, was the origin of the word: \*—

'In uttering the *i* the breath is compressed into the smallest and seemingly swiftest current possible. It represents therefore a swift, and what we may call a sharp movement.

'Of all the vowels *o* is that of which the sound goes farthest. We have it therefore in most words relating to distance, as in *holo*, *lo*, long, &c.

'In joining the two, the sense is modified by their position. If we write *oi*, it is an *o* going on with an *i*. This is exemplified in *oi*, lame. Observe how a lame man advances. Standing on the sound limb, he puts the lame one leisurely out and sets it to the ground: this is the *o*. But no sooner does it get there, and the weight of the body begin to rest on it, than, hastening to relieve it of the burden, he moves the other leg rapidly forward, lessening the pressure at the same time by relaxing every joint he can bend, and thus letting his body sink as far as possible; this rapid sinking movement is the *i*.

\* *The Polynesian*, Honolulu, 1862.

‘Again, *oi*, a passing in advance, excellency. Here *o* is the general advance, *i* is the going ahead of some particular one.

‘If, again, we write *io*, it is an *i* going on with an *o*. That is to say, it is a rapid and penetrating movement—*i*, and that movement long continued. Thus we have in Hawaiian *io*, a chief’s forerunner. He would be a man rapid in his course—*i*; of good bottom—*o*. In Greek, *ios*, an arrow, and *Io*, the goddess who went so fast and far. Hence *io* is anything that goes quite through, that is *thorough*, complete, real, true. Like Burns, “facts are chieils that winna ding,” that is, cannot be forced out of their course. Hence *io*, flesh, real food, in distinction to bone, &c., and reality or fact, or truth generally.

‘*Ia* is the pronoun that, analogous to Latin *is*, *ea*, *id*. Putting together these we have *o*, *ia*, *io*—Oh that is fact. Prefixing the causative *hoo*, we have “make that to be fact;” affix *ai*, completive of the action, and we have, “make that completely out to be a fact,” that is “testify to its truth.”

‘It is to be remarked that the stress of the voice is laid on the second *i*, the *oia* being pronounced very lightly, and that in Greek the *i* in *oiomai*, I believe, is always strongly accented, a mark of the contraction the word has suffered.’

Although the languages of Europe, with their well-established history, lend themselves less easily to such speculations, yet I could quote similar passages from French, German, and English etymologists. Dr. Bolza, in his *Vocabolario Genetico-Etimologico* (Vienna, 1852), tells us, among other things, that in Italian *a* expresses light, *o* redness, *u* darkness; and he continues, ‘*Ecco probabilmente le tre note, che in*



*fiamma, fuoco, e fumo, sono espresse dal mutamento della vocale, mentre la f esprime in tutti i tre il movimento dell' aria'* (p. 61, note). And again we are told by him that one of the first sounds pronounced by children is *m*: hence *mamma*. The root of this is *ma* or *am*, which gives us *amare*, to love. On account of the movement of the lips, it likewise supplies the root of *mangiare* and *masticare*; and explains besides *muto*, dumb, *muggire*, to low, *miagolare*, to mew, and *mormorio*, murmur. Now, even if *amare* could not be protected by the Sanskrit root *am*, to rush forward impetuously (according to others, *kâm*, to love), we should have thought that *mangiare* and *masticare* would have been safe against onomatopœic interference, the former being the Latin *manducare*, to chew, the latter the post-classical *masticare*, to chew. *Manducare* has a long history of its own. It descends from *mandere*, to chew, and *mandere* leads us back to the Sanskrit root *mard*, to grind, one of the numerous offshoots of the root *mar*, the history of which will form the subject of one of our later lectures. *Mâtus* has been well derived by Professor A. Weber (Kuhn's *Zeitschrift*, vi. p. 318) from the Sanskrit *mû*, to bind (Pân. vi. 4, 20), so that its original meaning would have been 'tongue-bound.' As to *miagolare*, to mew, we willingly hand it over to the onomatopœic school.

The onomatopœic theory goes very smoothly as long as it deals with cackling hens and quacking ducks; but round that poultry-yard there is a dead wall, and we soon find that it is behind that wall that language really begins.

But whatever we may think of these onomatopœic and interjectional theories, we must carefully distin-

guish between two things. There is one class of scholars who derive all words from roots according to the strictest rules of comparative grammar, but who look upon the roots, in their original character, as either interjectional or onomatopœic. There are others who derive words straight from interjections and the cries of animals, and who claim in their etymologies all the liberty the cow claims in saying *booh*, *mooh*, or *ooh*, or that man claims in saying *pooh*, *fi*, *pfui*.\* With regard to the former theory, I should wish to remain entirely neutral, satisfied with considering roots as phonetic types till some progress has been made in tracing the principal roots, not of Sanskrit only, but of Chinese, Bask, the Turanian, and Semitic languages, back to the cries of man or the imitated sounds of nature.

Quite distinct from this is that other theory which, without the intervention of determinate roots, derives our words directly from cries and interjections. This theory would undo all the work that has been done by Bopp, Humboldt, Grimm, and others, during the last fifty years; it would with one stroke abolish all the phonetic laws that have been established with so much care and industry, and throw etymology back into a state of chaotic anarchy. According to Grimm's law, we derive the English *fiend*, the German *feind*, the Gothic *fjand*, from a root which, if it exists at all in Sanskrit, Latin, Lithuanian, or Celtic, must there begin with the tenuis *p*. Such is the phonetic law that holds these languages together, and that cannot be violated with impunity. If we found in Sanskrit a

\* On the uncertainty of rendering inarticulate by articulate sounds, see Marsh (4th ed.), p. 36; Sir John Stoddart's *Glossology*, p. 231; *Mélanges Asiatiques* (St. Petersburg) iv. 1.

word *fiend*, we should feel certain that it could not be the same as the English *fiend*. Following this rule we find in Sanskrit the root *pîy*, to hate, to destroy, the participle of which *pîyant* would correspond exactly with Gothic *fijand*. But suppose we derived *fiend* and other words of a similar sound, such as *foul*, *filth*, &c., from the interjections *fi*, and *pooh* (*faugh! fo! fie!* Lith. *pui*, Germ. *pfui*), all would be mere scramble and confusion; Grimm's law would be broken; and roots, kept distinct in Sanskrit, Greek, Latin, and German, would be mixed up together. For besides *pîy*, to hate, there is another root in Sanskrit, *pûy*, to decay. From it we have Latin *pus*, *puteo*, *putridus*; Greek *pýon*, and *pýthō*; Lithuanian *pulei*, matter; and, in strict accordance with Grimm's law, Gothic *fuls*, English *foul*. If these words were derived from *fi*! then we should have to include all the descendants of the root *bhi*, to fear, such as Lithuanian *bijau*, I fear; *biaurus*, ugly.

In the same manner, if we looked upon *thunder* as a mere imitation of the inarticulate noise of thunder, we could not trace the A. S. *thunor* back to the root *tan*, which expresses that tension of the air which gives rise to sound, but we should have to class it together with other words, such as *to din*, *to dun*, and discover in each, as best we could, some similarity with some inarticulate noise. If, on the contrary, we bind ourselves by definite rules, we find that the same law which changes *tan* into *than*, changes another root *dhvan* into *din*. There may be, for all we know, some distant relationship between the two roots *tan* and *dhvan*, and that relationship may have its origin in onomatopœia; but from the earliest beginnings of the history of the Aryan language, these two roots were independent



germs, each the starting point of large classes of words, the phonetic character of which is determined throughout by the type from which they issue. To ignore the individuality of each root in Sanskrit, Greek, and Latin, would be like ignoring the individuality of the types of the animal creation. There may be higher, more general, more abstract types, but if we want to reach them, we must first toil through the lower and more special types; we must retrace, in the descending scale of scientific analysis, every step by which, in an ascending scale, language has arrived at its present state.

The onomatopœic system would be most detrimental to all scientific etymology, and no amount of learning and ingenuity displayed in its application could atone for the lawlessness which is sanctioned by it. If it is once admitted that all words must be traced back to definite roots, according to the strictest phonetic rules, it matters little whether these roots are called phonetic types, more or less preserved in all the innumerable impressions that are taken from them, or whether we call them onomatopœic and interjectional. As long as we have definite forms between ourselves and chaos, we may build our science like an arch of a bridge, that rests on the firm piles fixed in the rushing waters. If, on the contrary, the roots of language are mere abstractions, and there is nothing to separate language from cries and interjections, then we may play with language as children play with the sands of the sea, but we must not complain if every fresh tide wipes out the little castles we had built on the beach.

## LECTURE III.

## THE PHYSIOLOGICAL ALPHABET.

WE proceed to-day to dissect the body of language. In doing this we treat language as a mere corpse, not caring whether it ever had any life or meaning, but simply trying to find out what it is made of, what are the impressions made upon our ear, and how they can be classified. In order to do this it is not sufficient to examine our alphabet, such as it is, though no doubt the alphabet may very properly be called the table of the elements of language. But what do we learn from our A B C ? what even, if we are told that *k* is a guttural tenuis, *s* a dental sibilant, *m* a labial nasal, *y* a palatal liquid ? These are names which are borrowed from Greek and Latin grammars. They expressed more or less happily the ideas which the scholars of Athens and Alexandria had formed of the nature of certain letters. But as translated into our grammatical phraseology they have lost almost entirely their original meaning. Our modern grammarians speak of *tenuis* and *media*, but they define *tenuis* not as a bare or thin letter, but on the contrary as the hardest and strongest articulation ; nor are they always aware that the *mediae* or middle letters were originally so called because, as pronounced at Alexandria, they stood half-way between the bare and the rough letters, i.e. the aspirates,—being pronounced



with less aspiration than the aspirates, with more than the tenues.\* Plato's division of letters, as given in his *Cratylus*, is very much that which we still profess to follow. He speaks of voiced letters (φωνήεντα, vocales), our vowels; and of voiceless letters (ἄφωνα), our consonants, or mutes. But he seems to divide the latter into two classes: first, those which are voiceless, but produce a sound (φωνήεντα μὲν οὐ, οὐ μέντοι γε ἄφθογγα), afterwards called semi-vowels (ἡμίφωνα); and secondly, the real mutes, both voiceless and soundless, i.e. all consonants, except the semi-vowels (ἄφθογγα).† In later times, the scheme adopted by Greek grammarians is as follows:—

I. *Phōnēenta*, vocales, voiced vowels.

II. *Sýmphōna*, consonantes.

II. 1. *Hēmiphōna*, semi-vocales, half-voiced,  
l, m, n, r, s: or, Hygrá, liquidæ, fluid,  
l, m, n, r.

II. 2. *A'phōna*, mutæ, voiceless.

a. *Psilá*, tenues    b. *Mésa*, mediæ    c. *Daséa*, aspiratæ.  
k, t, p.                      g, d, b.                      ch, th, ph.

Another classification of letters, more perfect, be-

\* Scholion to Dionysius Thrax, in *Anecdota Bekk.* p. 810. Φωνητικὰ ὄργανα τρία εἰσὶν, ἡ γλῶσσα, οἱ ὀδόντες, τὰ χεῖλη. Τοῖς μὲν οὖν ἄκροις χεῖλεσι πιλουμένοις ἐκφωνεῖται [τὸ π], ὥστε σχεδὸν μηδὲ ὀλίγον τι πνεῦμα παρεκβαίνειν· ἀνοιγομένων δὲ τῶν χελέων πάνυ καὶ πνεύματος πολλοῦ ἐξιόντος, ἐκφωνεῖται τὸ φ· τὸ δὲ β, ἐκφωνούμενον ὁμοίως τοῖς ἄκροις τῶν χελέων, τουτέστι περὶ τὸν αὐτὸν τόπον τοῖς προλεχθεῖσι τῶν φωνητικῶν ὀργάνων, οὔτε πάνυ ἀνώγει τὰ χεῖλη ὡς τὸ φ, οὔτε πάνυ πιλεῖ ὡς τὸ π, ἀλλὰ μέσην τινὰ διέξοδον τῷ πνεύματι πεφεισμένως δίδωσιν, κ.τ.λ. See Rudolph von Raumer, *Sprachwissenschaftliche Schriften*, p. 102; Curtius, *Griechische Etymologie*, ii. p. 30.

† Raumer, *l. c.* p. 100.

cause deduced from a language (the Sanskrit) not yet reduced to writing, but carefully watched and preserved by oral tradition, is to be found in the so-called *Prâtisâkhyas*, works on phonetics, belonging to different schools in which the ancient texts of the Veda were handed down from generation to generation with an accuracy far exceeding that of the most painstaking copyists of MSS. Some of these works have lately been published and translated, and may be consulted by those who take an interest in these matters.\*

Of late years the whole subject of phonetics has been taken up with increased ardour by scientific men, and assaults have been made from three different points by different armies, philologists, physiologists, and mathematicians. The best philological treatises I can recommend (without mentioning earlier works, such as the most excellent treatise of Bishop Wilkins, 1688), are the essays published from time to time by Mr. Alexander John Ellis,† by far the most accurate observer

\* *Prâtisâkhya du Rig-Veda*, par M. Ad. Regnier, in the *Journal Asiatique*, Paris, 1856-58.

*Text und Uebersetzung des Prâtisâkhya, oder der ältesten Phonetik und Grammatik*, in M. M.'s edition of the *Rig-Veda*, Leipzig, 1856.

*Das Vâjasanêyi-Prâtisâkhyam*, published by Prof. A. Weber, in *Indische Studien*, vol. iv. Berlin, 1858.

*The Atharva-Veda Prâtisâkhya*, by W. D. Whitney, New-haven, 1862. The same distinguished scholar is preparing an edition of the *Prâtisâkhya* of the *Taittirîya-Veda*. As the hymns of the *Sâmaveda* were chanted, and not recited, no *Prâtisâkhya* or work on phonetics exists for this Veda.

† Works on Phonetics by Alexander J. Ellis.—*The Alphabet of Nature*; or, contributions towards a more accurate analysis and symbolisation of spoken sounds, with some account of the principal Phonetical alphabets hitherto proposed. Originally published in the *Phonotypic Journal*, June 1844 to June 1845. London and

and analyser in the field of phonetics. Other works by R. von Raumer,\* F. H. du Bois-Reymond,†

Bath, 1845. 8vo. pp. viii. 194. *The Essentials of Phonetics*; containing the theory of a universal alphabet, together with its practical application as an ethnical alphabet to the reduction of all languages, written or unwritten, to one uniform system of writing, with numerous examples, adapted to the use of Phoneticians, Philologists, Etymologists, Ethnographists, Travellers, and Missionaries. In lieu of a second edition of the *Alphabet of Nature*. London, 1848. 8vo. pp. xvi. 276. Printed entirely in a Phonetic character, with illustrations in twenty-seven languages, and specimens of various founts of Phonetic type. The *Ethnical Alphabet* was also published as a separate tract. *English Phonetics*; containing an original systematisation of spoken sounds, a complete explanation of the Reading Reform Alphabet, and a new universal Latinic Alphabet for Philologists and Travellers. London, 1854. 8vo. pp. 16. *Universal Writing and Printing with Ordinary Letters*, for the use of Missionaries, Comparative Philologists, Linguists, and Phonologists (Edinburgh and London, 1856, 4to. pp. 22), containing a complete Digraphic, Travellers' Digraphic, and Latinic Alphabets (of which the two first were published separately), with examples in nine languages, and a comparative table of the Digraphic, Latinic, suggested Panethnic, Prof. Max Müller's Missionary, and Dr. Lepsius's Linguistic Alphabets. *A Plea for Phonetic Spelling; or, the Necessity of Orthographic Reform*. London, 8vo. First edition, 1844, pp: 40. Second edition, 1848, pp. 180, with an Appendix, showing the inconsistencies of hetéric orthography, and the present geographical extent of the writing and printing reform. Third edition, with an Appendix, containing the above tables remodelled, an account of existing Phonetic alphabets, and an elaborate *Inquiry into the Variations in English Pronunciation during the last Three Centuries*, has been in the press in America since 1860, but has been stopped by the civil war. The whole text, pp. 151, has been printed.

\* *Gesammelte Sprachwissenschaftliche Schriften*, von Rudolph von Raumer. Frankfort, 1863. (Chiefly on classical and Teutonic languages.)

† *Kadmus, oder Allgemeine Alphabetik*, von F. H. du Bois-Reymond. Berlin, 1862. (Containing papers published as early as 1811, and full of ingenious and original observations.)



Lepsius,\* Thausing,† may be consulted with advantage in their respective spheres. The physiological works which I found most useful and intelligible to a reader not specially engaged in these studies were, Müller's 'Handbook of Physiology,' Brücke's 'Grundzüge der Physiologie und Systematik der Sprachlaute' (Wien, 1856), Funke's 'Lehrbuch der Physiologie,' and Czermak's articles in the 'Sitzungsberichte der K. K. Akademie der Wissenschaften zu Wien.'

Among works on mathematics and acoustics, I have consulted Sir John Herschel's 'Treatise on Sound,' in the 'Encyclopædia Metropolitana;' Professor Willis's paper 'On the Vowel Sounds and on Reed Organ-Pipes,' read before the Cambridge Physiological Society in 1828 and 1829; but chiefly Professor Helmholtz's classical work, 'Die Lehre von den Tonempfindungen' (Braunschweig, 1863), a work giving the results of the most minute scientific researches in a clear, classical, and truly popular form, so seldom to be found in German books.

I ought not to omit to mention here the valuable services rendered by those who, for nearly twenty years, have been labouring in England to turn the results of scientific research to practical use, in devising and propagating a new system of 'Brief Writing and True Spelling,' best known under the name of the *Phonetic Reform*. I am far from underrating the difficulties that stand in the way of such a reform, and I am not so sanguine as to indulge in any hopes

\* *Lepsius, Standard Alphabet*, second edition, 1863. (On the subject in general, but particularly useful for African languages.)

† *Das Natürliche Lautsystem der Menschlichen Sprache*, von Dr. M. Thausing. Leipzig, 1863. (With special reference to the teaching of deaf and dumb persons.)

of seeing it carried for the next three or four generations. But I feel convinced of the truth and reasonableness of the principles on which that reform rests, and as the innate regard for truth and reason, however dormant or timid at times, has always proved irresistible in the end, enabling men to part with all they hold most dear and sacred, whether corn-laws, or Stuart dynasties, or Papal legates, or heathen idols, I doubt not but that the effete and corrupt orthography will follow in their train. Nations have before now changed their numerical figures, their letters, their chronology, their weights and measures; and though Mr. Pitman may not live to see the results of his persevering and disinterested exertions, it requires no prophetic power to perceive that what at present is pooh-pooed by the many will make its way in the end, unless met by arguments stronger than those hitherto levelled at the 'Fonetic Nuz.' One argument which might be supposed to weigh with the student of language, viz., the obscuration of the etymological structure of words, I cannot consider very formidable. The pronunciation of languages changes according to fixed laws, the spelling has changed in the most arbitrary manner, so that if our spelling followed the pronunciation of words, it would in reality be of greater help to the critical student of language than the present uncertain and unscientific mode of writing.

Although considerable progress has thus been made in the analysis of the human voice, the difficulties inherent in the subject have been increased rather than diminished by the profound and laborious researches carried on independently by physiologists, students of acoustics, and philologists. The human voice opens

a field of observation in which these three distinct sciences meet. The substance of speech or sound has to be analysed by the mathematician and the experimental philosopher; the organs or instruments of speech have to be examined by the anatomist; and the history of speech, the actual varieties of sound which have become typified in language, fall to the province of the student of language. Under these circumstances it is absolutely necessary that students should cooperate in order to bring these scattered researches to a successful termination, and I take this opportunity of expressing my obligation to Dr. Rolleston, our indefatigable Professor of Physiology, Mr. G. Griffith, Deputy-Professor of Experimental Philosophy, Mr. A. J. Ellis, and others, for their kindness in helping me through difficulties which, but for their assistance, I should not have been able to overcome without much loss of time.

What can seem simpler than the A B C, and yet what is more difficult when we come to examine it? Where do we find an exact definition of vowel and consonant, and how they differ from each other? The vowels, we are told, are simple emissions of the voice, the consonants cannot be articulated except with the assistance of vowels. If this were so, letters such as *s*, *f*, *r*, could not be classed as consonants, for there is no difficulty in pronouncing these without the assistance of a vowel. Again, what is the difference between *a*, *i*, *u*? What is the difference between a tenuis and media, a difference almost incomprehensible to certain races; for instance, the Mohawks and the inhabitants of Saxony? Has any philosopher given as yet an intelligible definition of the difference between whispering, speaking, singing? Let us begin,



then, with the beginning, and give some definitions of the words we shall have to use hereafter.

What we hear may be divided, first of all, into *Noises* and *Sounds*. Noises, such as the rustling of leaves, the jarring of doors, or the clap of thunder, are produced by irregular impulses imparted to the air. Sounds, such as we hear from tuning-forks, strings, flutes, organ-pipes, are produced by regular periodical (isochronous) vibrations of elastic air. That sound, musical sound, or tone in its simplest form, is produced by tension, and ceases after the sounding body has recovered from that tension, seems to have been vaguely known to the early framers of language, for the Greek *tonos*, tone, is derived from a root *tan*, meaning to extend. Pythagoras \* knew more than this. He knew that when chords of the same quality and the same tension are to sound a fundamental note, its octave, its fifth, and its fourth, their respective lengths must be like 1 to 2, 2 to 3, and 3 to 4.

When we hear a single note, the impression we receive seems very simple, yet it is in reality very complicated. We can distinguish in each note—

1. Its strength or loudness.
2. Its height or pitch.
3. Its quality, or, as it is sometimes called, *timbre*; in German *Tonfarbe*, i.e. colour of tone.

Strength or loudness depends upon the *amplitude* of the excursions of the vibrating particles of air which produce the wave.

Height or pitch depends on the length of time that each particle requires to perform an excursion,

\* Helmholtz, *Einleitung*, p. 2.

i.e. on the number of vibrations executed in a given time. If, for instance, the pendulum of a clock, which oscillates once in each second, were to mark smaller portions of time, it would cause musical sounds to be heard. Sixteen double oscillations in one second would be sufficient to bring out sound, though its pitch would be so low as to be hardly perceptible. For practical purposes, the lowest tone we hear is produced by 30 double vibrations in one second, the highest by 4,000. Between these two lie the usual seven octaves of our musical instruments. It is said to be possible, however, to produce perceptible musical sounds through 11 octaves, beginning with 16 and ending with 38,000 double vibrations in one second, though here the lower notes are mere hums, the upper notes mere clinks. The A' of our tuning-forks, as fixed by the Paris Academy, requires 437.5 double, or 875 single \* vibrations in one second. In Germany the A' tuning-fork makes 440 double vibrations in one second. It is clear that beyond the lowest and the highest tones perceptible to our ears, there is a progress *ad infinitum*, musical notes as real as those which we hear, yet beyond the reach of sensuous perception. It is the same with the other senses. We can perceive the movement of the pendulum, but we cannot perceive the slower movement of the hand on the watch. We can perceive the flight of a bird, but we cannot perceive the quicker movement of a

\* It is customary to reckon by single vibrations in France and Germany, although some German writers adopt the English fashion of reckoning by double vibrations or complete excursions backwards and forwards. Helmholtz uses double vibrations, but Scheibler uses single vibrations. De Morgan calls a double oscillation a 'swing-swang.'



cannon-ball. This, better than anything else, shows how dependent we are on our senses; and how, if our senses are our weapons for the discovery of truth, they are likewise our chains that keep us from soaring too high. Up to this point everything, though wonderful enough, is clear and intelligible. As we hear a note, we know, with mathematical accuracy, to how many vibrations in one second it is due; and if we want to produce the same note, an instrument, such as the siren, which gives a definite number of impulses to the air within a given time, will enable us to do it in the most mechanical manner.

When *two* waves of one note enter the ear in the same time as *one* wave of another, the interval between the two is *an octave*.

When *three* waves of one note enter the ear in the same time as *two* waves of another, the interval between the two notes is a *fifth*.

When *four* waves of one note enter the ear in the same time as *three* waves of another, the interval between the two notes is a *fourth*.

When *five* waves of one note enter the ear in the same time as *four* waves of another, the interval between the two notes is a *major third*.

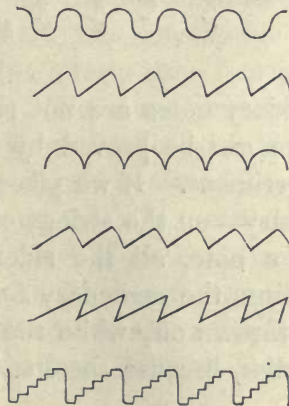
When *six* waves of one note enter the ear in the same time as *five* waves of another, the interval between the two notes is a *minor third*.

When *five* waves of one note enter the ear in the same time as *three* waves of another, the interval between the two notes is a *major sixth*.

All this is but the confirmation of what was known to Pythagoras. He took a vibrating cord, and, by placing a bridge so as to leave  $\frac{2}{3}$  of the cord on the right,  $\frac{1}{3}$  on the left side, the left portion vibrating by itself, gave him the octave of the lower note of the

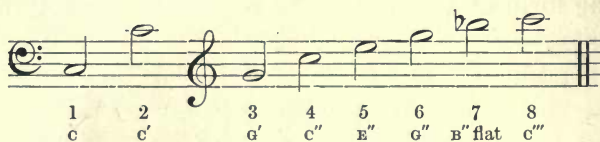
right portion. So, again, by leaving  $\frac{3}{5}$  on the right,  $\frac{2}{5}$  on the left side, the left portion vibrating gave him the fifth of the right.

But it is clear that we may hear the same tone, i.e. the result of exactly the same number of vibrations in one second, produced by the human voice, by a flute, a violoncello, a fife, or a double bass. They are tones of the same pitch, and yet they differ in character, and their difference is called their *quality*. But what is the cause of these various qualities? By a kind of negative reasoning, it had long been supposed that, as quality could neither arise from the amplitude nor from the duration, it must be due to the form of the vibrations. Professor Helmholtz, however, was the first to prove positively that this is the case, by applying the microscope to the vibrations of different musical instruments, and thus catching the exact outline of their respective vibrations—a result which before had been but imperfectly attained by an instrument called the *Phonautograph*. What is meant by the form of waves may be seen from the following outlines.—



In pursuing these inquiries, Professor Helmholtz made another most important discovery, viz., that the different forms of the vibrations which are the cause of what he calls quality or colour are likewise the cause of the presence or absence of certain harmonics, or by-notes; in fact, that varying quality and varying harmonics are but two expressions for the same thing.

Harmonics are the secondary tones which can be perceived even by the unassisted ear, if, after lifting the pedal, we strike a key on a pianoforte. These harmonics arise from a string vibrating as if its motion were compounded of several distinct vibrations of strings of its full length, and one half, one third, one fourth, &c., part of its length. Each of these shorter lengths would vibrate twice, three times, four times as fast as the original length, producing corresponding tones. Thus, if we strike *c*, we hear, if listening attentively, *c'*, *g'*, *c''*, *e''*, *g''*, *b''* flat, *c'''*, &c.



That the secondary notes are not merely imaginative or subjective can be proved by a very simple and amusing experiment. If we place little soldiers—very light cavalry—on the strings of a pianoforte, and then strike a note, all the riders that sit on strings representing the secondary tones will shake, and possibly be thrown off, while the others remain firm in their saddles, because these strings vibrate in



sympathy with the secondary tones of the string struck. Another test can be applied by means of resounding tubes, tuned to different notes. If we apply these to our ear, and then strike a note the secondary tones of which are the same as the notes to which the resounding tubes are tuned, those notes will sound loudly and almost yell in our ears; while if the tubes do not correspond to the harmonics of the note played, the resounding tubes will not answer in the same manner.

We thus see, again, that what seems to us a simple impression, the one note struck on the pianoforte, consists of many impressions which together make up what we hear and perceive. We are not conscious of the harmonics which follow each note and determine its quality, but we know, nevertheless, that these by-notes strike our ear, and that our senses receive them and suffer from them. The same remark applies to the whole realm of our sensuous knowledge. There is a broad distinction between *sensation* and *perception*. There are many things which we perceive at first and which we perceive again as soon as our attention is called to them, but which, in the ordinary run of life, are to us as if they did not exist at all. When I first came to Oxford, I was constantly distracted by the ringing of bells; after a time I ceased even to notice the dinner-bell. There are earrings much in fashion just now—little gold bells with coral clappers. Of course they produce a constant jingling which everybody hears except the lady who wears them. In these cases, however, the difference between sensation and perception is simply due to want of attention. In other cases our senses are really incapable, without assistance, of distinguishing the various constituents

of the objective impressions produced from without. We know, for instance, that white light is a vibration of ether, and that it is a compound of the single colours of the solar spectrum. A prism will at once analyse that compound, and divide it into its component parts. To our apprehension, however, white light is something simple, and our senses are too coarse to distinguish its component elements by any effort whatsoever.

We now shall be better able to understand what I consider a most important discovery of Professor Helmholtz.\* It had been proved by Professor G. S. Ohm † that there is only one vibration without harmonics, viz., the simple pendulous vibration. It had likewise been proved by Fourier, Ohm, and other mathematicians, ‡ that all compound vibrations or sounds can be divided into so many simple or pendulous vibrations. But it is due to Professor Helmholtz that we can now determine the exact configuration of many compound vibrations, and determine the presence and absence of the harmonics which, as we saw, caused the difference in the quality, or colour, or *timbre* of sound. Thus he found that in the violin, as compared with the guitar or pianoforte, the primary note is strong, the secondary tones from two to six are weak, while those from seven to ten are much more distinct.§ In the clarinet || the odd harmonics only are perceptible, in the hautboy the even harmonics are of equal strength.

Let us now see how all this tells on language.

\* Helmholtz, *l. c.* p. 82.

† *l. c.* p. 54.

‡ *l. c.* p. 162.

† *l. c.* p. 38.

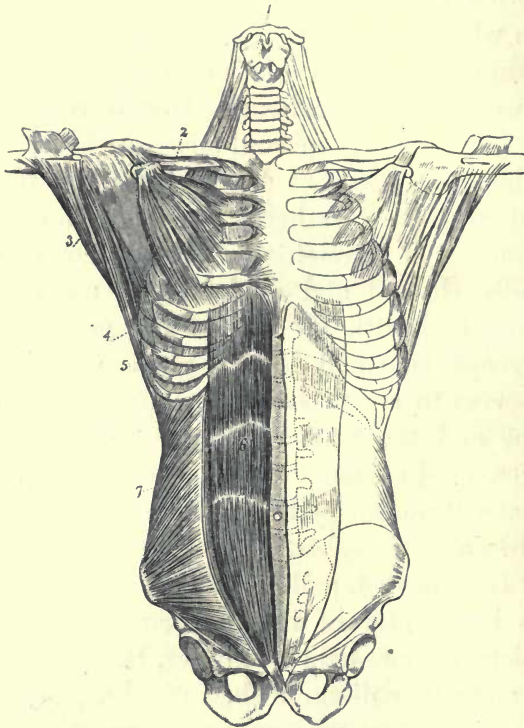
§ *l. c.* p. 143.

When we are speaking we are in reality playing on a musical instrument, and a more perfect instrument than was ever invented by man. It is a wind-instrument, in which the vibrating apparatus is supplied by the *chordæ vocales*, while the outer tube, or bells, through which the waves of sound pass, are furnished by the different configurations of the mouth. I shall try, as well as I can, to describe to you, with the help of some diagrams, the general structure of this instrument, though in doing so I can only retail the scant information which I gathered myself from our excellent Professor of Physiology at Oxford, Dr. Rolleston. He kindly showed and explained to me by actual dissection, and with the aid of the newly-invented laryngoscope (a small looking-glass, which enables the observer to see as far as the bifurcation of the windpipe and the bronchial tubes), the bones, the cartilages, the ligaments and muscles, which together form that extraordinary instrument on which we play our words and thoughts. Some parts of it are extremely complicated, and I should not venture to act even as interpreter of the different and sometimes contradictory views held by Müller, Brücke, Czermak, Funke, and other distinguished physiologists, on the mechanism of the various cartilages, the *thyroid*, *cricoid*, and *arytenoid*, which together constitute the levers of the larynx. It fortunately happens that the most important organs which are engaged in the formation of letters lie above the larynx, and are so simple in their structure, and so open to constant inspection and examination, that, with the diagrams placed before you, there will be little difficulty, I hope, in explaining their respective functions.



There is, first of all, the *thorax* (1), which, by alternately compressing and dilating the lungs, performs the office of bellows.

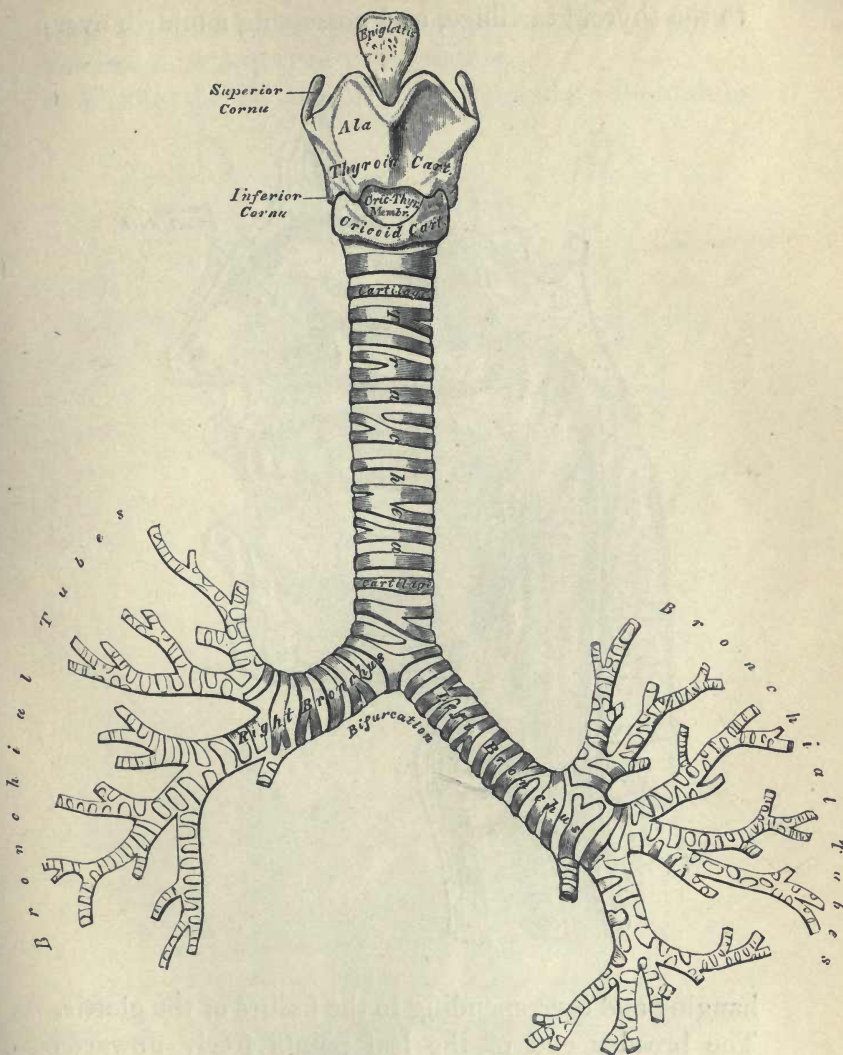
Fig. 1.



- |                      |                           |
|----------------------|---------------------------|
| 1. Larynx.           | 5. External intercostals. |
| 2. Pectoralis minor. | 6. Rectus abdominis.      |
| 3. Latissimus dorsi. | 7. Internal oblique.      |
| 4. Serratus magnus.  |                           |

The next diagram (2) shows the *trachea*, a cartilaginous and elastic pipe, which terminates in the lungs by an infinity of roots or *bronchial tubes*, its upper extremity being formed into a species of head called the *larynx*, situated in the throat, and composed of five cartilages.

Fig. 2.

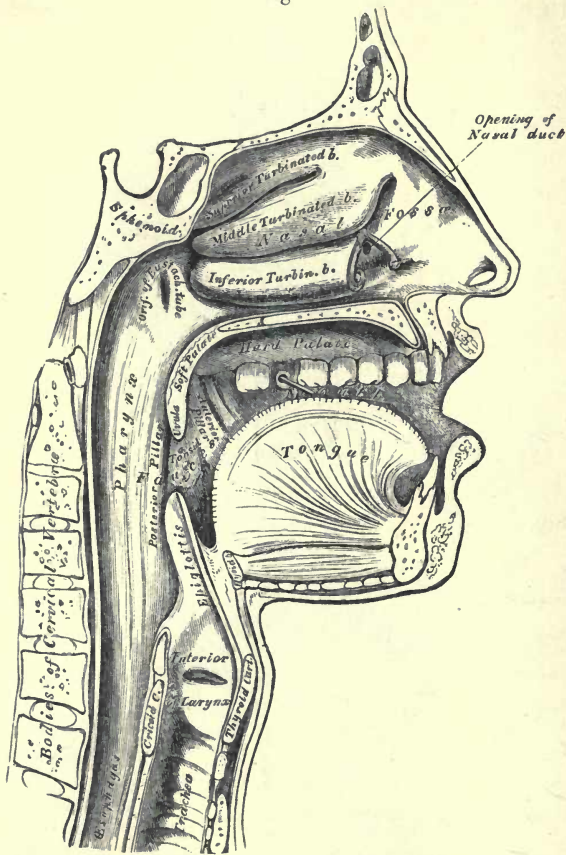


The uppermost of these cartilages, the *epiglottis* (3), is intended to open and shut, like a valve, the aperture of the *glottis*, i.e. the superior orifice of the larynx (*fissura laryngea pharyngis*). The *epiglottis* is a leaf-



shaped elastic cartilage, attached by its narrower end to the thyroid cartilage, and possessing a midrib over-

Fig. 3.



hanging and corresponding to the fissure of the glottis. The broader end of the leaf points freely upwards toward the tongue, in which direction the entire cartilage presents a concave, as towards the larynx a convex, outline. In swallowing, the epiglottis falls over the larynx, like a saddle on the back of a horse. In the

formation of certain letters a horizontal narrow fissure may be produced by depressing the epiglottis over the vertical false and true vocal chords.

Within the larynx (4, 5), rather above its middle,

Fig. 4.

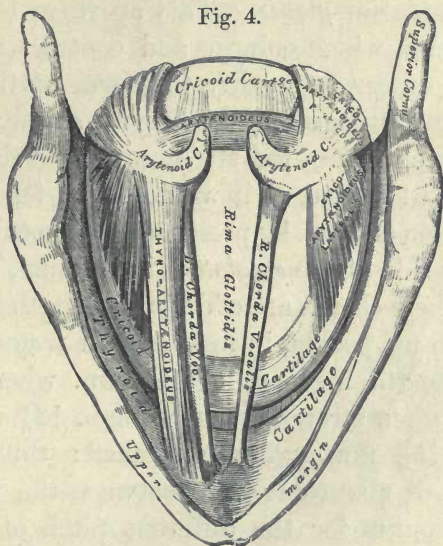
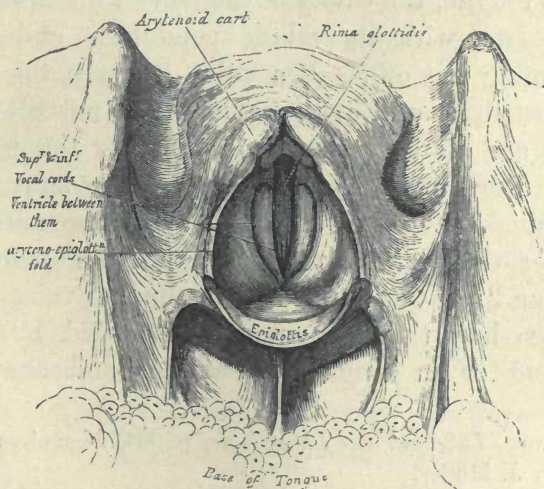


Fig. 5.



I

between the thyroid and arytenoid cartilages, are two elastic ligaments, like the parchment of a drum split in the middle, and forming an aperture which is called the interior or true *glottis*, and corresponds in direction with the exterior *glottis*. This aperture is provided with muscles, which enlarge and contract it at pleasure, and otherwise modify the form of the larynx. The three cartilages of the larynx supply the most perfect mechanism for stretching or relaxing the chords, and likewise, as it would seem, for deadening some portion of them by pressure of a protuberance on the under side of the *epiglottis* (in German, *Epiglottiswulst*). These chords are of different length in children and grown-up people, in man and in woman. Their average length in man is  $18\frac{1}{2}$  mm. when relaxed,  $23\frac{1}{8}$  mm. when stretched; in woman,  $12\frac{2}{3}$  mm. when relaxed,  $15\frac{2}{3}$  mm. when stretched: thus giving a difference of about one-third between the two sexes, which accounts for the different pitch of male and female voices.\*

The tongue, the cavity of the fauces, the lips, teeth, and palate, with its velum pendulum and uvula performing the office of a valve between the throat and nostrils, as well as the cavity of the nostrils themselves, are all concerned in modifying the impulse given to the breath as it issues from the larynx, and in producing the various vowels and consonants.

After thus taking to pieces the instrument, the tubes and reeds as it were of the human voice, let us now see how that instrument is played by us in speaking or in singing. Familiar and simple as

\* Funke, *Lehrbuch der Physiologie*, p. 664, from observations made by J. Müller.



singing or music in general seems to be, it is, if we analyse it, one of the most wonderful phenomena. What we hear when listening to a chorus or a symphony is a commotion of elastic air, of which the wildest sea would give a very inadequate image. The lowest tone which the ear perceives is due to about 30 vibrations in one second, the highest to about 4,000. Consider then what happens in a *Presto* when thousands of voices and instruments are simultaneously producing waves of air, each wave crossing the other, not only like the surface waves of the water, but like spherical bodies, and, as it would seem, without any perceptible disturbance; \* consider that each tone is accompanied by secondary tones, that each instrument has its peculiar *timbre*, due to secondary vibrations; and, lastly, let us remember that all this cross-fire of waves, all this whirlpool of sound, is moderated by laws which determine what we call harmony, and by certain traditions or habits which determine what we call melody—both these elements being absent in the songs of birds—that all this must be reflected like a microscopic photograph on the two small organs of hearing, and there excite not only perception, but perception followed by a new feeling even more mysterious, which we call either pleasure or pain; and it will be clear that we are surrounded on all sides by miracles transcending all we are accustomed to call miraculous, and yet disclosing to the genius of an Euler or a Newton laws which admit of the most minute mathematical determination.

For our own immediate purposes it is important to remark that, while it is impossible to sing without at

\* Weber, *Wellenlehre*, p. 495.

the same time pronouncing a vowel, it is perfectly possible to pronounce a vowel without singing it. Why this is so we shall see at once. If we pronounce a vowel, what happens? Breath is emitted from the lungs, and some kind of tube is formed by the mouth through which, as through a clarinet, the breath has to pass before it reaches the outer air. If, while the breath passes the *chordæ vocales*, these elastic *laminæ* are made to vibrate periodically, the number of their vibrations determines the pitch of our voice, but it has nothing to do with its *timbre* or vowel. What we call vowels are neither more nor less than the qualities, or colours, or *timbres* of our voice, and these are determined by the form of the vibrations, which form again is determined by the form of the buccal tubes. This had, to a certain extent, been anticipated by Professor Wheatstone in his critique \* on Professor Willis's ingenious experiments, but it has now been rendered quite evident by the researches of Professor Helmholtz. It is, of course, impossible to watch the form of these vibrations by means of a vibration microscope, but it is possible to analyse them by means of resounding tubes, like those before described; and thus to discover in them what, as we saw, is homologous with the form of vibration, viz. the presence and absence of certain harmonics. If a man sings the same note on different vowels, the harmonics which answer to our resounding tubes vary as they would vary if the same note was played on the violin, or flute, or some other musical instruments. In order to remove all uncertainty, Professor Helmholtz simply inverted the experiment. He took a number of tun-

\* *London and Westminster Review*, Oct. 1837, pp. 34, 37.

ing-forks, each furnished with a resonance box, by advancing or withdrawing which he could give their primary tones alone various degrees of strength, and extinguish their secondary tones altogether. He tuned them so as to produce a series of tones answering to the harmonics of the deepest tuning-fork. He then made these tuning-forks vibrate simultaneously by means of a galvanic battery, and by combining the harmonics, which he had first discovered in each vowel by means of the sounding tubes, he succeeded in reproducing artificially exactly the same vowels.\*

We know now what vowels are made of. They are produced by the form of the vibrations. They vary like the *timbre* of different instruments, and we in reality change the instruments on which we speak when we change the buccal tubes in order to pronounce *a, e, i, o, u* (the vowels to be pronounced as in Italian).

Is it possible, then, to produce a vowel, to evoke a certain timbre of our mouth, without giving at the same time to each vowel a certain musical pitch? This question has been frequently discussed. At first it was taken for granted that vowels could not be uttered without pitch; that there could be mute consonants, but no mute vowels. Yet, if a vowel was whispered, it was easy to see that the *chordæ vocales* were not vibrating, at least not periodically; that they began to vibrate only when the whispered vowel was changed into a voiced vowel. J. Müller proposed a compromise. He admitted that the vowels might be uttered as mutes without any tone from the *chordæ vocales*, but he thought that these mute vowels were formed in the glottis by the air passing the non-sonant chords, while

\* *l. c.* p. 188.



all consonantal noises are formed in the mouth.\* Even this distinction, however, between mute vowels and mute consonants is not confirmed by later observations, which have shown that in whispering the vocal chords are placed together so that only the back part of the glottis between the arytenoid cartilages remains open, assuming the form of a triangle.† Through this aperture the air passes, and if, as happens not unfrequently in whispering, a word breaks forth quite loud, betraying our secrets, this is because the *chordæ vocales* have resumed their ordinary position and been set vibrating by the passing air. Cases of aphonia, where people are unable to intone at all, invariably arise from disease of the vocal chords; yet, though unable to intone, these persons can pronounce the different vowels. It can hardly be denied, therefore, that the vowels pronounced with *vox clandestina* are mere noises, coloured by the configuration of the mouth, but without any definite musical pitch; though it is equally true that, in whispering vowels, certain vague tones inherent in each vowel can be discovered, nay, that these inherent tones are invariable. This was first pointed out by Professor Donders, and afterwards corrected and confirmed by Professor Helmholtz.‡ It will be necessary, I think, to treat these tones as imperfect tones, that is to say, as noises approaching to tones, or as irregular vibrations, nearly, yet not quite, changed into regular or isochronous vibrations; though the exact limit where a noise ends and tone begins has, as far as I can see, not yet been determined by any philosopher.

\* Funke, *Handbuch der Physiologie*, p. 673. Different views of Willis and Brücke, p. 678.

† *Helmholtz*, p. 171.

‡ *l. c.* p. 172.

Vowels in all their varieties are really infinite in number. Yet, for practical purposes, certain typical vowels have been fixed upon in all languages, and these we shall now proceed to examine.

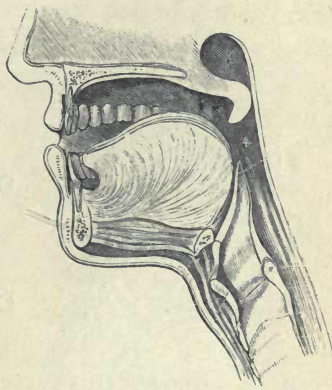
From the diagrams which are meant to represent the configuration of the mouth requisite for the formation of the three principal vowels, you will see that there are two extremes, the *u* and the *i*, the *a* occupying an intermediate position. All vowels are to be pronounced as in Italian.

1. In pronouncing *u* we round the lips and draw down the tongue so that the cavity of the mouth assumes the shape of a bottle without a neck. Such bottles give the deepest notes, and so does the vowel *u*. According to Helmholtz its inherent tone is F.\*

Fig. 6.

## EXAMPLES :

- Open syllable, long, *who*  
 short, *fruition*
- Closed syllable, long, *fool*  
 short, *full*



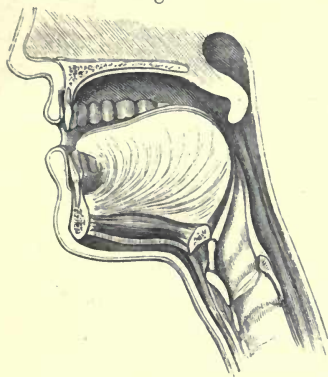
2. If the lips are opened somewhat wider, and the

\* I give instances of short and long vowels, both in open and closed syllables (i.e. not followed or followed by consonants), because in English particularly, hardly any vowels pair when free and stopped. On the qualitative, and not only quantitative, difference between long and short vowels, see Brücke, *l. c.* p. 24, seq.; and R. von Raumer.



tongue somewhat raised, we hear the *o*. Its pitch, according to Helmholtz,  $B'$  flat.

Fig. 7.



## EXAMPLES :

Open syllable, long, *ago*

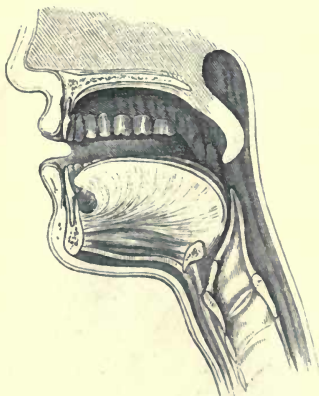
short, *zoology*

Closed syllable, long, *bone*

short, *Sonne* (German)

3. If the lips are less rounded, and the tongue somewhat depressed, we hear the  $\hat{a}$ .

Fig. 8.



## EXAMPLES :

Open syllable, long, *aügust* (subs.)

short, *augüst* (adj.)

Closed syllable, long, *nought*

short, *not*

4. If the lips are wide open, and the tongue in its natural flat position, we hear *a*. Inherent pitch, according to Helmholtz,  $B''$  flat. This seems the most natural position of the mouth in singing; yet for the higher notes singers prefer the vowels *e* and *i*, and

find it impossible to pronounce *a* and *u* on the highest.\*

Fig. 9.

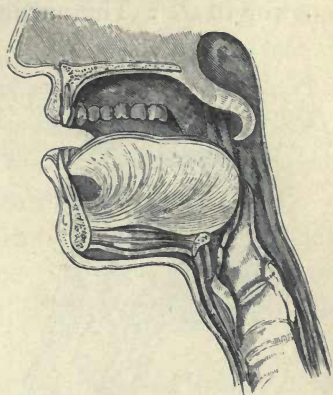
## EXAMPLES :

Open syllable, long, *mamá*

short, *păpă* †

Closed syllable, long, *farm*

short, It. *ballare*



5. If the lips are fairly open, and the back of the tongue raised towards the palate, the larynx being raised at the same time, we hear the sound *e*. The buccal tube resembles a bottle with a narrow neck. The natural pitch of *e* is B''' flat.

Fig. 10.

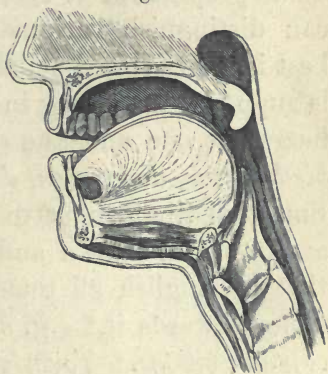
## EXAMPLES :

Open syllable, long, *hay*

short, *aerial*

Closed syllable, long, *lake*

short, Germ. *Leck*



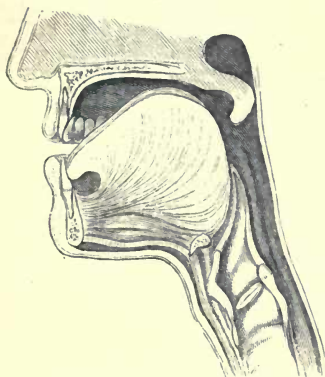
6. If we raise the tongue higher still, and narrow the lips, we hear *i*. The buccal tube represents a bottle

\* Brücke, p. 13.

† As pronounced by children.

with a very narrow neck of no more than six centimètres from palate to lips. Such a bottle would answer to  $c'''$ . The natural pitch of  $i$  seems to be  $d'''$ .

Fig. 11.



## EXAMPLES :

Open syllable, long, *he*

short, *behalf*

Closed syllable, long, *been*

short, *been,*

pronounced *bin*

7. There is, besides, the most troublesome of all vowels, the neutral vowel, sometimes called *Urvocal*. Professor Willis defines it as the natural vowel of the reed, Mr. Ellis as the voice in its least modified form. Some people hear it everywhere, others imagine they can distinguish various shades of it. We know it best in short closed syllables, such as *but, dust, &c.* It is supposed to be long in *absurd*. Sir John Herschel hears but one and the same vowel in *spurt, assert, bird, virtue, dove, oven, double, blood*. Sheridan and Smart distinguish between the vowels heard in *bird* and *work*, in *whir'd* and *world*. There is no doubt that in English all unaccented syllables have a tendency towards it,\* e.g. *ăgainst, fīnăl, principăl, ideă, captăin, villăge. Town* sinks to *PaddingtŃn, ford* to *OxfŃrd*; and though some of these pronunciations may still be considered as vulgar, they are nevertheless real.

\* Ellis, § 29.



These are the principal vowels, and there are few languages in which they do not occur. But we have only to look to English, French, and German in order to perceive that there are many varieties of vocal sound besides these. There is the French *u*, the German *ü*, which lies between *i* and *u*;\* as in French, *du*, German, *über*, *Sünde*. Professor Helmholtz has fixed the natural pitch of *ü* as  $g'''$ .

There is the French *eu*, the German *ö*, which lies between *e* and *o*, as in French *peu*, German *König*, or short in *Böcke*.† Professor Helmholtz has fixed the natural pitch of *ö* as  $c'''$  sharp.

There is the peculiar short *a* in closed syllables in English, such as *hat*, *happy*, *man*. It may be heard lengthened in the affected pronunciation of *half*.

There is the peculiar short *i*, as heard in the English *happy*, *reality*, *hit*, *knit*.‡

There is the short *e* in closed syllables, such as heard in English *debt*, *bed*, *men*, which if lengthened comes very near to the German *ä* in *Väter*, and the French *è* in *père*, not quite the English *there*.

Lastly, there are the diphthongs, which arise when, instead of pronouncing one vowel immediately after another with two efforts of the voice, we produce a sound *during* the change from one position to the other that would be required for each vowel. If we

\* 'While the tongue gets ready to pronounce *i*, the lips assume the position requisite for *u*.'—Du Bois-Reymond, *Kadmus*, p. 150.

† The German *ö*, if shortened, seems to dwindle down to the neutral vowel, e.g. *Öfen*, ovens, but *öffnen*, to open. See Du Bois-Reymond, *Kadmus*, p. 173. Nevertheless, it is necessary to distinguish between the German *Götter* and the English *gutter*.

‡ Brücke speaks of this and some other vowels which occur in English in closed syllables as imperfect vowels.—p. 23.

change the *a* into the *i* position and pronounce a vowel, we hear *ai*, as in *aisle*. A singer who has to sing *I* on a long note will end by singing the Italian *i*. If we change the *a* into the *u* position and pronounce a vowel, we hear *au*, as in *how*. Here, too, we find many varieties, such as *āi*, *âi*, *ei*, and the several less perfect diphthongs, such as *oi*, *ui*, &c.

Though this may seem a long and tedious list, it is, in fact, but a very rough sketch, and I must refer to the works of Mr. Ellis and others for many minute details in the chromatic scale of the vowels. Though the tube of the mouth, as modified by the tongue and the lips, is the principal determinant in the production of vowels, yet there are other agencies at work, the *velum pendulum*, the posterior wall of the *pharynx*, the greater or less elevation of the *larynx*, all coming in at times to modify the cavity of the throat. It is said that in pronouncing the high vowels the bones of the skull participate in the vibration,\* and it has been proved by irrefragable evidence that the *velum pendulum* is of very essential importance in the pronunciation of all vowels. Professor Czermak,† by introducing a probe through the nose into the cavity of the pharynx, felt distinctly that the position of the *velum* was changed with each vowel; that it was lowest for *a*, and rose successively with *e*, *o*, *u*, *i*, reaching its highest point with *i*.

He likewise proved that the cavity of the nose was more or less opened during the pronunciation of certain vowels. By introducing water into the nose he found that while he pronounced *i*, *u*, *o*, the water

\* Brücke, p. 16.

† *Sitzungsberichte der K. K. Akademie zu Wien* (Mathemat. Naturwissenschaftliche Classe), xxiv. p. 5.

would remain in the nose, but that it would pass into the fauces when he came to *e*, and still more when he uttered *a*.\* These two vowels, *a* and *e*, were the only vowels which Leblanc,† a young man whose larynx was completely closed, failed to pronounce.

### *Nasal Vowels.*

If, instead of emitting the vowel sound freely through the mouth, we allow the velum pendulum to drop and the air to vibrate through the cavities which connect the nose with the pharynx, we hear the nasal vowels‡ so common in French, as *un*, *on*, *in*, *an*. It is not necessary that the air should actually pass through the nose; on the contrary, we may shut the nose, and thus increase the nasal twang. The only requisite is the removal of the velum, which, in ordinary vowels, covers the *choanæ* more or less completely.§

### *Consonants.*

There is no reason why languages should not have been entirely formed of vowels. There are words consisting of vowels only, such as Latin *eo*, I go; *ea*, she; *eoæ*, eastern; the Greek êioeis (ἤϊόεις, with high banks). but for its final *s*; the Hawaiian *hooiaioai*,

\* Funke, *l. c.* p. 676.

† Bindseil, *Abhandlungen zur Allgemeinen Vergleichenden Sprachlehre*, 1838, p. 212.

‡ Brücke, p. 27.

§ The different degrees of this closure were tested by the experiment of Prof. Czermak with a metal looking-glass applied to the nostrils during the pronunciation of pure and nasal vowels. *Sitzungsberichte der Wiener Akademie*, xxviii. p. 575, xxix. p. 174.



to testify, but for its initial breathing. Yet these very words show how unpleasant the effect of such a language would have been. Something else was wanted to supply the bones of language, namely, the consonants. Consonants are called in Sanskrit *vyanjana*, which means 'rendering distinct or manifest,' while the vowels are called *svara*, sounds, from the same root which yielded *susurrus* in Latin.

As scholars are always fond of establishing general theories, however scanty the evidence at their disposal, we need not wonder that languages like the Hawaiian, in which the vowels predominate to a very considerable extent, should on that very ground have been represented as primitive languages. It was readily supposed that the general progress of language was from the slightly articulated to the strongly articulated; and that the fewer the consonants, the older the language. Yet we have only to compare the Hawaiian with the Polynesian languages in order to see that there too the consonantal articulation existed and was lost; that consonants, in fact, are much more apt to be dropped than to sprout up between two vowels. Prof. Buschmann expresses the same opinion: 'Mes recherches m'ont conduit à la conviction, que cet état de pauvreté phonique polynésienne n'est pas tant l'état naturel d'une langue prise à sa naissance, qu'une détérioration du type vigoureux des langues malaïes occidentales, amenée par un peuple qui a peu de disposition pour varier les sons.\*' The very name of *Havai*, or more correctly *Hawai'i*, confirms this view. It is pronounced

\* Buschmann, *Iles Marq.* p. 36, 59. Pott, *Etymologische Forschungen*, ii. 46.

in the Samoan dialect,	Savai'i
Tahitian,	Havai'i
Rarotongan,	Avaiki
Nukuhivan,	Havaiki
New Zealand,	Hawaiki

from which the original form may be inferred to have been *Savaiki*.\*

All consonants fall under the category of noises. If we watch any musical instruments, we can easily perceive that their sounds are always preceded by certain noises, arising from the first impulses imparted to the air before it can produce really musical sensations. We hear the puffing and panting of the siren, the scratching of the violin, the hammering of the pianoforte, the spitting of the flute. The same in speaking. If we send out our breath, whether vocalised or not, we hear the rushing out, the momentary breathing, the impulse produced by the inner air as it reaches the outer.

If we breathe freely the glottis is wide open,† and the breath emitted can be distinctly heard. Yet this is not yet our *h*, or the *spiritus asper*. An intention is required to change mere breathing into *h*; the *velum pendulum* has to assume its proper position, and the breath thus jerked out is then properly called *asper*, because the action of the abdominal muscles gives to it a certain asperity. If, on the contrary, the breath is slightly curbed or tempered by the pressure of the *glottis*, and if thus held in, it is emitted gently, it is properly called *spiritus lenis*, soft breath. We dis-

\* Hale, *l. c.* p. 120.

† Czermak, *Physiologische Untersuchungen mit Garcia's Kehlkopfspiegel*, *Sitzungsberichte der K. K. Akademie der Wissenschaften*, vol. xxix. 1858, p. 563.



tinently hear it, like a slight bubble, if we listen to the pronunciation of any initial vowel, as in *old*, *art*, *ache*, *ear*, or if we pronounce 'my hand,' as it is pronounced by vulgar people, 'my 'and.' According to some physiologists,\* and according to nearly all grammarians, this initial noise can be so far subdued as to become evanescent, and we all imagine that we can pronounce an initial vowel quite pure.† Yet I believe the Greeks were right in admitting the *spiritus lenis* as inherent in all initial vowels that have not the *spiritus asper*, and the laryngoscope clearly shows in all initial vowels a narrowing of the vocal chords, quite distinct from the opening that takes place in the pronunciation of the *h*.

It has been customary to call the *h* or spiritus asper a surd, the spiritus lenis a sonant letter; and there is some truth in this distinction if we clearly know what is meant by these terms. Now, as we are speaking of whispered language, it is clear that the vocal chords, in their musical quality, can have no influence on this distinction. Nevertheless, if we may trust the laryngoscope,‡ that is to say, if we may trust our eyes, the chordæ vocales or the glottis would seem to be chiefly concerned in producing the spiritus lenis, or in mollifying the spiritus asper. It is their narrowing, though not their stretching, that tempers the impetus of the spiritus asper, and prevents it from rushing straight against the faucal walls, and in this

\* Brücke, p. 9.

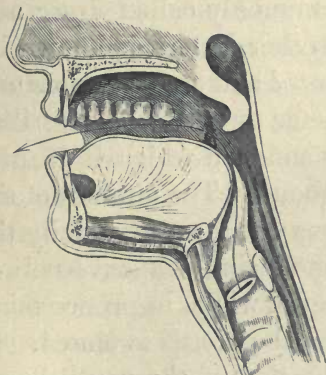
† Brücke, p. 85. 'If in pronouncing the spiritus asper the glottis is narrowed, we hear the pure tone of the voice without any additional noise.' The noise, however, is quite perceptible, particularly in the *vox clandestina*.

‡ Brücke, *Grundzüge*, p. 9.

sense the noise or friction which we hear while the breath slowly emerges from the larynx into the mouth may be ascribed to them. There is another very important distinction between spiritus asper and lenis. It is quite impossible to sing the spiritus asper, that is to say, to make the breath which produces it, sonant. If we try to sing *ha*, the tone does not come out till the *h* is over. We might as well try to whistle and to sing at the same time.\*

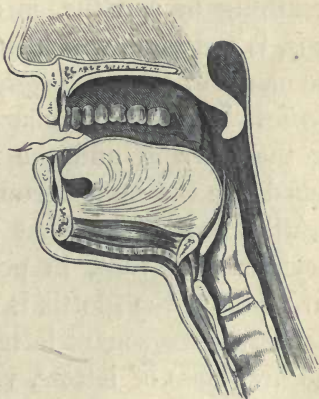
The reason of this is clear. If the breath that is to produce *h* is to become a tone, it must be checked by

Fig. 12.



'-(h); e.g. *hand*.

Fig. 13.



'—; e.g. *and*.

the vocal chords, but the very nature of *h* consists in the noise of the breath rushing forth *unchecked* from the lungs to the outer air. The spiritus lenis, on the

\* See R. von Raumer, *Gesammelte Schriften*, p. 371, note. Johannes Müller says, 'The only continua which is quite mute and cannot be accompanied by the tone or the humming of the voice, is the *h*, the aspirate. If one attempts to pronounce the *h* loud, with the tone of the chordæ vocales, the humming of the voice is not synchronous with the *h*, but follows it, and the aspiration vanishes as soon as the air is changed into tones by the chordæ vocales.'

contrary, can be sounded, because, in pronouncing it more or less distinctly, the breath is checked near the chordæ vocales, and can there be intoned.

This simplest breathing, in its double character of *asper* and *lenis*, can be modified in eight different ways by interposing certain barriers or gates formed by the tongue, the soft and hard palate, the teeth, and the lips. Before we examine these, it will be useful to say a few words on the general distinction between *asper* and *lenis*, a distinction which, as we shall see, affects every one of these breathings.

The distinction which, with regard to the first breathing or spiritus, is commonly called *asper* and *lenis*, is the same which, in other letters, is known by the names of *hard* and *soft*, *surd* and *sonant*, *tenuis* and *media*. The peculiar character meant to be described by these terms, and the manner in which it is produced, are the same throughout. The authors of the Prâtiśâkhyas knew what has been confirmed by the laryngoscope, that, in pronouncing *tenuis*, hard or surd letters, the glottis is open, while, in pronouncing *media*, soft or sonant letters, the glottis is closed. In the first class of letters, vibration of the vocal chords is impossible; in the second, they are so close that, though not set to vibrate periodically, they begin to sound audibly, or, perhaps more correctly, they modify the sound. Anticipating the distinction between *k*, *t*, *p*, and *g*, *d*, *b*, I may quote here the description given by Professor Helmholtz of the general causes which produce their distinction.

‘The series of the *media*, *b*, *d*, *g*,’ he says, ‘differs from that of the *tenuis*, *p*, *t*, *k*, by this, that for the former the glottis is, at the time of consonantal opening, sufficiently narrowed to enable it to sound, or at



least to produce the noise of the *vox clandestina*, or whisper, while it is wide open with the *tenues*,\* and therefore unable to sound.'

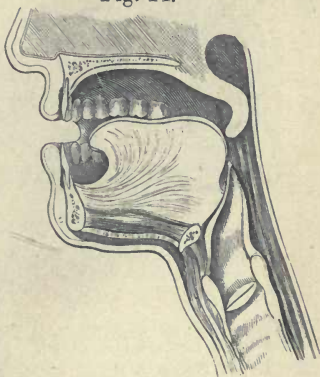
'*Mediæ* are therefore accompanied by the tone of the voice, and this may even, when they begin a syllable, set in a moment before, and when they end a syllable, continue a moment after the opening of the mouth, because some air may be driven into the closed cavity of the mouth and support the sound of the vocal chords in the larynx.'

'Because of the narrowed glottis, the rush of the air is more moderate, the noise of the air less sharp than with the *tenues*, which are pronounced with the glottis wide open, so that a great mass of air may rush forth at once from the chest.' †

We now return to an examination of the various modifications of the breaths, in their double character of hard and soft.

If, instead of allowing the breath to escape freely from the lungs to the lips, we hem it in by a barrier formed by lifting the tongue against the uvula, we get the sound of *ch*, as heard

Fig. 14.



'h (ch); e.g. *Loch*.  
'h (g); e.g. *Tage* (German).

\* See Lepsius, *Die Arabischen Sprachlaute*, p. 108, line 1.

† This distinction is very lucidly described by R. von Raumer, *Gesammelte Schriften*, p. 444. He calls the hard letters *flatæ*, blown, the soft letters *halatæ*, breathed. He observes that breathed letters, though always sonant in English, are not so in other languages, and therefore divides the breathed consonants, physiologically, into two classes, sonant and non-sonant. This distinction, however, is apt to mislead, and is of no importance in

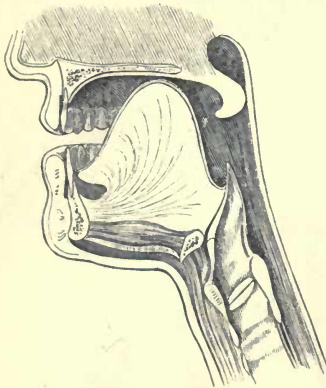
in the German *ach* or the Scotch *loch*.\* If, on the contrary, we slightly check the breath as it reaches that barrier, we get the sound which is heard when the *g* in the German word *Tage* is not pronounced as a media, but as a semi-vowel, *Tage*.

A second barrier is formed by bringing the tongue in a more contracted state towards the point where the hard palate begins, a little beyond the point where the *k* is formed. Letting the spiritus asper pass this isthmus, we produce the sound *ch* as heard in the German *China* or *ich*, a sound very difficult to an Englishman, though approaching to the initial sound

of words like *hume*, *huge*.†

If we soften the breath as it reaches this barrier, we arrive at the familiar sound of *y* in *year*. This sound is naturally accompanied by a slight hum arising from the check applied through the glottis, nor is there much difficulty in intoning the *y*. There is no evidence whatever that the Sanskrit palatal flatus  $\text{य}$  was ever pronounced like

Fig. 15.



ý (ch); e.g. *ich* (German).  
 ý (y); e.g. *yea*.

reducing languages to writing. See also *Investigations into the Laws of English Orthography and Pronunciation*, by Prof. R. L. Tafel. New York, 1862.

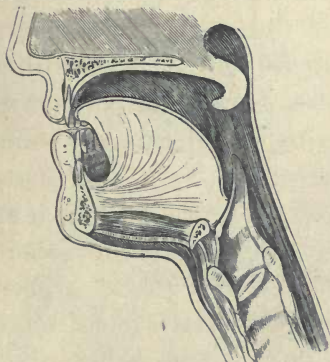
\* The same sound occurs in some of the Dayak dialects of Borneo. See *Surat Peminyuh Daya Sarawak*, Reading Book for Land and Hill Dayaks, in the Sentah dialect. Singapore, 1862. Printed at the Mission Press.

† Ellis, *English Phonetics*, § 47.

*ch* in German *China* and *ich*. Most likely it was the assibilated sound which can be produced if, keeping the organs in the position for German *ch*, we narrow the passage and strengthen the breath. This, however, is merely an hypothesis, not a dogma.

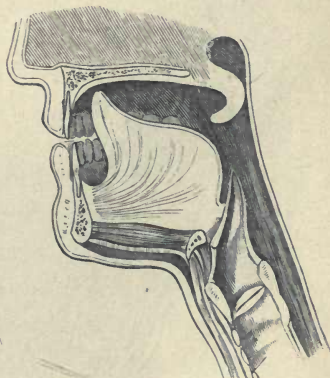
A third barrier, produced by advancing the tongue towards the teeth, modifies the spiritus asper into *s*, the spiritus lenis into *z*, the former completely surd, the latter capable of intonation; for instance, *the rise* or *rice*; but *to rise*.

Fig. 16.



*s*; e.g. *the rise, rice, sin.*  
*z*; e.g. *to rise, zeal.*

Fig. 17.



*ś*; (*sh*); e.g. *sharp.*  
*z*; e.g. *azure.*

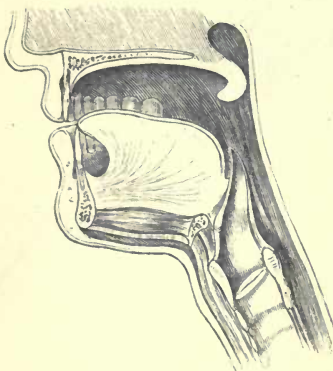
A fourth barrier is formed by drawing the tongue back and giving it a more or less concave (*retroussé*) shape, so that we can distinctly see its lower surface brought in position towards the back of the upper teeth or the palate. By pressing the air through this trough, we get the letter *sh* as heard in *sharp*, and *s* as heard in *pleasure*, or *j* in the French *jamais*; the former mute, the latter intonable. The pronunciation of the Sanskrit lingual *sh* requires a very elaborate position of the tongue, so that its lower surface should really strike the roof of the palate. But a much



more simple and natural position, as described above, will produce nearly the same effect.

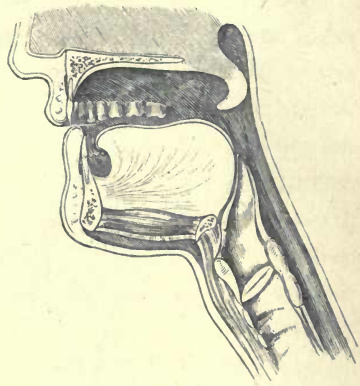
A fifth barrier is produced by bringing the tip of the tongue almost point-blank against the back of the upper teeth, or, according to others, by placing it against the edge of the upper teeth, or even between the edges of the upper and lower teeth. If, then, we emit the spiritus asper, we form the English *th*, if we emit the spiritus lenis, the English *dh*; the former mute, as in *breath*, the latter intonable, as in *to breathe*, and both very difficult for a German to pronounce.

Fig. 18.



th (þ); e.g. *breath*.  
dh (ð); e.g. *to breathe*.

Fig. 19.



f; e.g. *life*.  
v; e.g. *to live*.

A sixth barrier is formed by bringing the lower lip against the upper teeth. This modifies the spiritus asper to *f*, the spiritus lenis to *v*, as heard in *life* and *to live*, *half* and *to halve*.

A seventh barrier is possible by bringing the two lips together. The sound there produced by the spiritus asper would be the sound which we make in blowing out a candle; it is not a favourite sound in civilized languages. The spiritus lenis, however, is very common; it is the *w* in German as heard

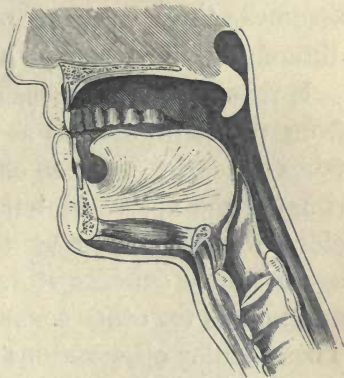
in *Quelle*, i.e. *Kwelle*; \* also sometimes in the German *Wind*, &c.

An eighth barrier is formed by slightly contracting and rounding the lips, instead of bringing them together flat against each other. Here the spiritus asper assumes the sound of *wh* in *wheel*, *which*; whereas the spiritus lenis is the common English double *u*, as heard in *weal*.

We have thus examined eight modifications of spiritus asper and spiritus lenis, produced by breath emitted eruptively or prohibitively, and modified by certain narrowings of the mouth. Considering the great pliability of the muscles of the tongue and the mouth, we can easily imagine other possible narrowings; but with the exception of some peculiar letters of the Semitic and African languages, we shall find these eight sufficient for our own immediate purposes.

The peculiar guttural sounds of the Arabs, which have given rise to so much discussion, have at last been scientifically defined by Professor Czermak. Examining an Arab by means of the laryngoscope, he was able to watch the exact formation of the Hha and Ain which constitute a separate class of guttural breathings in the Semitic languages. This is his account. If the glottis is narrowed and the vocal

Fig. 20.



ŵ (wh); e. g. *which*.  
w; e. g. *we*.

\* Brücke, *l. c.* p. 34.



chords brought near together, not however in a straight parallel position, but distinctly notched in the middle, while, at the same time, the epiglottis is pressed down, then the stream of breath in passing assumes the character of the Arabic Hha, ح, as different from *h*, the spiritus asper, the Arabic ه.

If this Hha is made sonant, it becomes Ain. Starting from the configuration as described for Hha, all that takes place in order to change it into Ain is that the rims of the apertures left open for Hha are brought close together, so that the stream of air striking against them causes a vibration in the *fissura laryngea*, and not, as for other sonant letters, in the real glottis. These ocular observations of Czermak\* coincide with the phonetic descriptions given by Arab grammarians, and particularly with Wallin's account. If the vibration in the *fissura laryngea* takes place less regularly, the sound assumes the character of a trilled *r*, the deep guttural *r* of the Low Saxons. The Arabic ر and ر I must continue to consider as near equivalents of the *ch* in *loch* and 'h in German *tage*, though the pronunciation of the ر approaches sometimes to a trill, like the *r grasseyé*.

### *Trills.*

We have to add to this class of letters two which are commonly called *trills*, the *r* and the *l*. They are

\* *Sitzungsberichte der Mathematisch-Naturwissenschaftlichen Classe der Kaiserlichen Akademie der Wissenschaften*, vol. xxix. p. 576, seq. Professor Lepsius, *Die Arabischen Sprachlaute*, has but partially adopted the views of Brücke and Czermak on what they call the *Gutturales Verae* in Arabic. See also the curious controversy between Professor Brücke and Professor Lepsius, in the 12th volume of the *Zeitschrift für Vergleichende Sprachforschung*.

both in-tonable or sonant, that is to say, they are modifications of the spiritus lenis, but they differ from the other modifications by a vibration of certain portions of the mouth. I am unable to pronounce the different *r*'s, and I shall therefore borrow their description from one of the highest authorities on this subject, Mr. Ellis.\* 'In the trills,' he writes, 'the breath is emitted with sufficient force to cause a vibration, not merely of some membrane, but of some much more extensive soft part, as the uvula, tongue, or lips. In the Arabic *grh* (*grhain*), which is the same as the Northumberland *burr* (*burgh*, Hágrihut for Harriot), and the French Provençal *r* *grasseyé* (as, Paris *c'est la France*, Paghri *c'est la Fgrhance*), the uvula lies along the back part of the tongue, pointing to the teeth, and is very distinctly vibrated. If the tongue is more raised and the vibration indistinct or very slight, the result is the English *r*, in *more*, *poor*, while a still greater elevation of the tongue produces the *r* as heard after palatal vowels, as *hear*, *mere*, *fire*. These trills are so vocal that they form distinct syllables, as *surf*, *serf*, *fur*, *fir*, *virtue*, *honour*, and are with difficulty separable from the vowels. Hence, when a guttural vowel precedes, the effect of the *r* is scarcely audible. Thus *laud*, *lord*, *father*, *farther*, are scarcely distinguishable.'

Professor Helmholtz describes *r* and *l* as follows:—  
'In pronouncing *r* the stream of air is periodically entirely interrupted by the trembling of the soft palate or of the tip of the tongue, and we then get an intermittent noise, the peculiar jarring quality of which is produced by these very intermissions. In

\* *Universal Writing and Printing*, by A. J. Ellis, B.A., 1856, p. 5.

pronouncing *l* the moving soft lateral edges of the tongue produce, not entire interruptions, but oscillations in the force of air.\*

If the lips are trilled the result is *brh*, a sound which children are fond of making, but which, like the corresponding spiritus asper, is of little importance in speaking. If the tongue is placed against the teeth, and its two lateral edges, or even one only, are made to vibrate, we hear the sound of *l*, which is easily intonable as well as the *r*.

We have thus exhausted one class of letters which all agree in this, that they can be pronounced by themselves, and that their pronunciation can be continued. In Greek, they are all included under the name of *Hemiphona*, or semi-vowels, while Sanskrit grammarians mention as their specific quality that, in pronouncing them, the two organs, the active and passive, which are necessary for the production of all consonantal noises, are not allowed to touch each other, but only to approach.†

#### *Checks or Mutes.*

We now come to the third and last class of letters, which are distinguished from all the rest by this, that for a time they stop the emission of breath altogether. They are called by the Greeks *aphōna*, mutes, because they check all voice, or, what is the same, because they cannot be intoned. They differ, however, from the hisses or hard breathings, which likewise resist all intonation; for, while the hisses are emissions of breath,

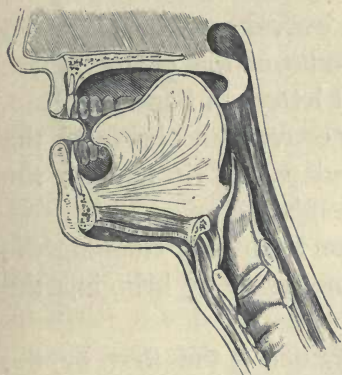
\* *l. c.* p. 116.

† In Pânini, i. 1, 9, *y, r, l, v*, are said to be pronounced with *îshatsprishṭam*, slight touch; *ś, sh, s, h*, with *vivṛitam*, opening, or *îshadvivṛitam*, slight opening, or *asprishṭam*, no contact.



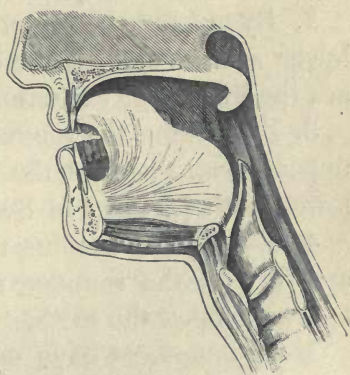
they, the mutes, are prohibitions of breath. They are formed, as the Sanskrit grammarians say, by complete contact of the active and passive organs. They will require very little explanation. If we bring the root of the tongue against the soft palate, we hear the consonantal noise of *k*. If we bring the tongue against

Fig. 21.



k

Fig. 22.

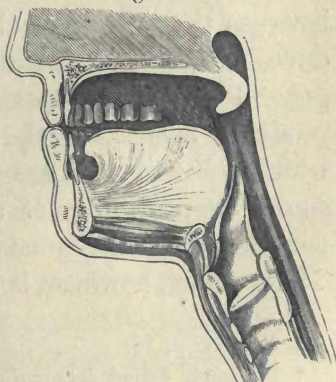


t

the teeth, we hear the consonantal noise of *t*. If we bring the lower against the upper lip, we hear the consonantal noise of *p*. The

Fig. 23.

real difference between those three articulations consists in this, that in *p*, two flat surfaces are struck against each other; in *t*, a sharp against a flat surface; in *k*, a round against a hollow surface. These three principal contacts can be modified almost indefinitely, in some cases without perceptibly altering the articulation. If we pronounce *ku*,



p

*ka*, *ki*, the point of contact between tongue and palate

advances considerably without much influence on the character of the initial consonant. The same applies to the *t* contact.\* Here the essential point is that the tongue should strike against the wall formed by the teeth. But this contact may be effected—

1. By flattening the tongue and bringing its edge against the alveolar part of the palate.

2. By making the tongue convex, and bringing the lower surface against the dome of the palate (these are the lingual or cacuminal letters in Sanskrit †).

3. By making the tongue convex, and bringing the upper surface against the palate, the tip against the lower teeth (dorsal *t* in Bohemian).

4. By slightly opening the teeth and stopping the aperture by the rounded tongue, or by bringing the tongue against the teeth.

Most languages have only one *t*, the first or the fourth; some have two; but we seldom find more than two sets of dentals distinguished phonetically in one and the same dialect.

If we place the tongue in a position intermediate between the guttural and dental contact, we can produce various consonantal sounds which go by the general name of *palatal*. The click that can be produced by jerking the tongue, from the position in which *ich* and *yea* are formed, against the palate, shows the possibility of a definite and simple consonantal contact analogous to the two palatal breathings. That contact, however, is liable to many modifications,

\* Brücke, p. 38.

† Formerly called *cerebral*, a mistranslation of *mûrddhanya*, thoughtlessly repeated by many Sanskrit scholars and retained by others, on the ground that it is too absurd to mistake. Brücke, p. 37.

and it oscillates in different dialects between *ky* and *tsh*. The sound of *ch* in *church*, or Ital. *cielo*, is formed most easily if we place the tongue and teeth in the position described above for the formation of *sh* in *sharp*, and then stop the breath by complete contact between the tongue and the back of the teeth. Some physiologists, and among them Brücke,\* maintain that *ch* in English and Italian consists of two letters, *t* followed by *sh*, and should not be classed as a simple letter. There is some truth in this, which, however, has been greatly exaggerated from want of careful observation. *Ch* may be said to consist of half *t* and half *sh*; but half *t* and half *sh* give only one whole consonant. There is an attempt of the organs at pronouncing *t*, but that attempt is frustrated or modified before it takes effect.† If Sanskrit grammarians called the vowels *ê* and *ô* diphthongs, because they combine the conditions of *a* and *i*, and of *a* and *u*, we might call the Sanskrit *ch* a consonantal diphthong, though even this would lead to the false supposition that it was necessarily a double letter, which it is not. That the palatal articulation may be simple is clearly seen in those languages where, as in Sanskrit, both ancient and modern, *ch* leaves a short vowel that precedes it short, whereas a double consonant would raise its quantity.

Few Sanskrit scholars acquainted with the Prâti-*śâkhyas*, works describing the formation of letters, would venture to speak dogmatically on the exact pronunciation of the so-called palatal letters at any definite period in the history of ancient Sanskrit. They

\* Brücke, p. 63, seq. He would, however, distinguish these concrete consonants from groups of consonants, such as  $\xi$ ,  $\psi$ .

† Du Bois-Reymond, *Kadmus*, p. 213.



may have been pronounced as they are now pronounced, as consonantal diphthongs; they may have differed from the gutturals no more than *k* in *kaw* differs from *k* in *key*; or they may have been formed by raising the convex part of the tongue so as to flatten it against the palate, the hinder part being in the *k*, and the front part in the *y* position. The *k*, as sometimes heard in English, in *kind*, *card*, *cube*, *cow*, sounding almost like *kyind*, *cyard*, *cyube*, *cyow*, may give us an idea of the transition of *k* into *ky*, and finally into English *ch*—a change analogous to that of *t* into *ch*, as in *natura*, *nature*, or of *d* into *j*, as in *soldier*, pronounced *soljer*, *diurnale* changed to *journal*. In the northern dialects of Jutland a distinct *j* is heard after *k* and *g* if followed by *a*, *e*, *o*, *ö*; for instance, *kjæv'*, *kjær*, *gjekk*, *kjerk*, *skjell*, instead of *kæv'*, *kær*, &c.\* However that may be, we must admit, in Sanskrit and in other languages, a class of palatals, sometimes modifications of gutturals, sometimes of dentals, varying no doubt in pronunciation, not only at different periods in the history of the same language, but also in different localities; yet sufficiently distinct to claim a place for themselves, though a secondary one, between gutturals and dentals, and embracing, as we shall see, the same number of subdivisions as gutturals, dentals, and labials.

It is not always perceived that these three consonants *k*, *t*, *p*, and their modifications, represent in reality two quite different effects. If we say *ka*, the effect produced on the ear is very different from *ak*. In the first case the consonantal noise is produced by

\* See Kuhn's *Zeitschrift*, xii. 147.

the sudden opening of the tongue and palate; in the second by their shutting. This is still clearer in *pa* and *ap*. In *pa* you hear the noise of two doors opening, in *ap* of two doors shutting. In *empire* you hear only half a *p*; the shutting takes place in the *m*, and the *p* is nothing but the opening of the lips. In *topmost* you hear likewise only half a *p*; you hear the shutting, but the opening belongs to the *m*. The same in *uppermost*. It is on this ground that mute letters have sometimes been called *dividua*, or divisible, as opposed to the first class, in which that difference does not exist; for whether I say *sa* or *as*, the sound of *s* is the same.

*Soft Checks, or Media.*

We should now have finished our survey of the alphabet of nature, if it was not that the consonantal stops *k*, *t*, *p*, are liable to certain modifications, which, as they are of great influence in the formation of language, deserve to be carefully considered. What is it that changes *k* into *g* and *ng*, *t* into *d* and *n*, *p* into *b* and *m*? *B* is called a media, a soft letter, a sonant, in opposition to *p*, which is called a tenuis, a hard letter, or a surd. But what is meant by these terms? A tenuis, we saw, was so called by the Greeks in opposition to the aspirates, the Greek grammarians wishing to express that the aspirates had a rough or shaggy sound,\* whereas the tenues were bald, slight, or thin. This does not help us much. 'Soft' and 'hard' are terms which no doubt express the outward difference of *p* and *b*, but they

\* Brücke, p. 90. τῷ πνεύματι πολλῶ, Dion Hal. R. von Rau-mer, *Die Aspiration*, p. 103.



do not explain the cause of that difference. 'Surd' and 'sonant' are apt to mislead; for, as both *p* and *b* are classed as *mutes*, it is difficult to see how a mute letter could be sonant. Some persons have been so entirely deceived by the term sonant, that they imagined all the so-called sonant letters to be necessarily pronounced with *tonic* vibrations of the chordæ vocales.\* This is physically impossible; for if we really tried to intone *p* or *b*, we should either destroy the *p* and *b*, or be suffocated in our attempt at producing voice. Both *p* and *b*, as far as tone is concerned, are aphonous or mute. But *b* differs from *p* in so far as, in order to pronounce it, the breath is for a moment checked by the glottis, just as it was in pronouncing *v* instead of *f*. What, then, is the difference between German *w* and *b*? Simply that in the former no contact takes place, and hence no cessation of breath, no silence; whereas the mute *b* requires contact, complete contact, and hence causes a pause, however short it may seem, so that we clearly hear the breath all the time it is struggling with the lips that shut in upon it. We may now understand why the terms soft and hard, as applied to *b* and *p*, are by no means so inappropriate as has sometimes been supposed. Czermak, by using his probe, as described above, found that hard consonants (*mutæ tenues*) drove it up much more violently than the soft consonants (*mutæ mediæ*).† The normal impetus of the breath is certainly checked, subdued, softened, when we pronounce *b*; it does not strike straight against the barrier of the lips; it hesitates, so to say, and we hear how it clings to the glottis in its slow onward passage. This slight sound, which is not caused by any rhythmic vibration, but

\* Funke, p. 685. Brücke, *Grundzüge*, p. 7, 89.

† *l. c.* p. 9.

only by a certain narrowing of the chordæ, is all that can be meant when some grammarians call these mute consonants sonant; and, physiologically, the only appreciable difference between p and b, t and d, k and g, is that in the former the glottis is wide open, in the latter narrowed, but not so far stretched as to produce musical tones.

*Nasal Checks.*

Fig. 24.

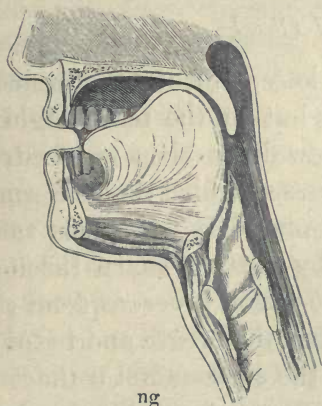
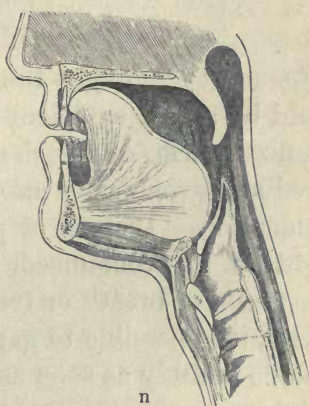
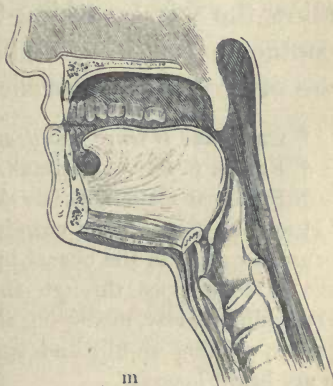


Fig. 25.



Lastly, g, d, b, may be modified to ng, n, m. For these three nasals a full contact takes place, but the breath is stopped, not abruptly as in the tenues, but in the same manner as with the mediæ. At the same time the breathing is emitted, not through the mouth, but through the nose. It is not necessary that breath should be propelled through the nose, as long as the veil is withdrawn that separates

Fig. 26.



L

m

the nose from the pharynx. Water injected into the nose while n and m are pronounced rushes at once into the windpipe.\* Where the withdrawal of the velum is rendered impossible by disease—such a case came under Czermak's † observation—pure nasals cannot be produced. ‡

The so-called mouillé or softened nasal, and all other mouillé consonants, are produced by the addition of a final y, and need not be classified as simple letters.

### *Aspirated Checks.*

For most languages the letters hitherto described would be amply sufficient; but in the more highly-organized forms of speech new distinctions were introduced and graphically expressed which deserve some explanation. Instead of pronouncing a tenuis as it ought to be pronounced, by cutting sharp through the stream of breath or tone which proceeds from the larynx, it is possible to gather the breath and to let it explode audibly as soon as the consonantal contact is withdrawn. In this manner we form the hard or surd aspirates which occur in Sanskrit and in Greek, kh, th, ph.

If, on the contrary, we pronounce g, d, b, and allow the soft breathing to be heard as soon as the contact is removed, we have the soft aspirates, which are of frequent occurrence in Sanskrit, gh, dh, bh.

\* Czermak, *Wiener Akademie*, xxiv. p. 9.

† Funke, p. 681. Czermak, *Wiener Akademie*, xxix. p. 173.

‡ Professor Helmholtz has the following remarks on M and N: 'M and N resemble the vowels in their formation, because they cause no noise in the buccal tube. The buccal tube is shut, and the voice escapes through the nose. The mouth only forms a resounding cavity, modifying the sound. If we watch from below people walking up-hill and speaking together, the nasals m and n are heard longest.'



Much discussion has been raised on these hard and soft aspirates, the question being whether their first element was really a complete consonantal contact, or whether the contact was incomplete, and the letters intended were hard and soft breathings. As we have no means of hearing either the old Brahmans or the ancient Greeks pronounce their hard aspirates, and as it is certain that pronunciation is constantly changing, we cannot hope to derive much aid either from modern Pandits or from modern Greeks. The Brahmans of the present day are said to pronounce their kh, th, and ph like a complete tenuis, followed by the spiritus asper. The nearest approach to kh is said to be the English kh in *inkhorn*, though this can hardly be a good illustration, as here the tenuis ends and the aspirate begins a syllable. The Irish pronunciation of *kind*, *town*, *pig*, has likewise been quoted as in some degree similar to the Sanskrit hard aspirates. In the modern languages of India where the Sanskrit letters are transcribed by Persian letters, we actually find kh represented by two letters, k and h, joined together. The modern Greeks, on the contrary, pronounce their three aspirates as breathings, like h, th, f. It seems to me that the only two points of importance are, first, whether these aspirates in Greek or Sanskrit were formed with or without complete contact, and secondly, whether they were classed as surd or as sonant. Sanskrit grammarians allow, as far as I can judge, of no doubt on either of these points. The hard aspirates are formed by complete contact (*sprishṭa*), and they belong to that class of letters for which the glottis must be completely open, i.e. to the surd or hard consonants. These two points once established put an end to all speculations on the

subject. What the exact sound of these letters was is difficult to determine, because the ancient authorities vary in their descriptions, but there is no uncertainty as to their physiological character. They are said to be uttered with a strong out-breathing (mahâprâṇah), but this, as it is shared by them in common with the soft aspirates and the hard breaths, cannot constitute their distinctive feature. Their technical name 'soshman,' i.e. 'with wind,' would admit of two explanations. 'Wind' might be taken in the general sense of breath, or—and this is more correct—in the sense of the eight letters called 'the winds' in Sanskrit, h, ś, sh, s, tongue-root breath (Jihvâmûliya), labial breath (Upadhmânîya), neutral breath (Visarga), and neutral nasal (Anusvâra). Thus it is maintained by some ancient grammarians \* that the hard aspirates are the hard letters, k, t, p, together with the corresponding winds or homorganic winds; that is to say, kh is = k + tongue-root breath, th = t + s, ph = p + labial breath. The soft aspirates, on the contrary, of which more hereafter, are said to be produced by the union of the soft g, d, b, with the soft 'h. It is quite clear that the Sanskrit 'h, which is not the spiritus asper (though it has constantly been mistaken for that), but a sonant letter, could not possibly form the second element in the hard aspirates. They were formed, as here described, by means of complete hard contact, followed by the hard breaths of each organ. The objections which other grammarians raise against this view do not affect the facts, but only their explanation. As they look upon all letters as eternal, they cannot admit their composite character, and they therefore represent the aspiration, not as an additional

\* *Survey of Languages*, p. xxxii. *Śākala-prāṭiśākhya*, xiii. 18.

element, but as an external quality, and prescribe for them a quicker pronunciation in order to prevent any difference between them and other consonants. In other letters the place, the contact, and the opening or shutting of the glottis form the three constituent elements; in the aspirates a fourth, the breath, is added. The Sanskrit hard aspirates can only be considered as k, t, p, modified by the spiritus asper, which immediately follows them, and which assumes, according to some, the character of the guttural, dental, or labial breaths.

As to the Greek aspirates, we know that they belonged to the aphōna, i.e. that they were formed by complete contact. They were not originally hemiphona or breaths, though they became so afterwards. That they were hard, or pronounced with open glottis, we must gather from their original signs, such as ΠΗ, and from their reduplicated forms, *tí-thēmi*, *ké-chyka*, *pé-phyka*.\*

It is more difficult to determine the real nature of the Sanskrit soft aspirates, gh, dh, bh. According to some grammarians they are produced by the union of g, d, b, with 'h, which in Sanskrit is a sonant letter, a spiritus lenis, but slightly modified.† The same grammarians, however, maintain that they are not formed entirely with the glottis closed, or as sonant letters, but that they and the h require the glottis 'both to be opened and to be closed.' What this means is somewhat obscure. A letter may be either surd or sonant, but it can hardly be both, and the fact that not only the four soft aspirates but the simple 'h ‡ also

\* Raumer, *Aspiration*, 96. Curtius, *Gr. Etymologie*, ii. p. 11.

† If Sanskrit writing were not of so late a date, the fact that the Vedic ḡh or ḥh is actually represented by a combination of ḡ and h might be quoted in support of this theory (ḡ = ḡḡ).

‡ *Śákala-Prâtisákhya*, xiii. 1. The expression 'the breath



were considered as surd-sonant, would seem to show that an intermediate rather than a compound utterance is intended. One thing is certain, namely, that neither the hard nor the soft aspirates were originally mere breaths. They are both based on complete contact, and thus differ from the hard and soft breaths which sometimes take their places in cognate tongues.

We have thus finished our survey, which I have kept as general as possible, without dwelling on any of the less normal letters, peculiar to every language, every dialect—nay, to the pronunciation of every individual. It is the excessive attention paid to these more or less peculiar letters that has rendered most works on Phonetics so complicated and unintelligible. If we have clearly impressed on our mind the normal conditions of the organs of speech in the production of vowels and consonants, it will be easy to arrange the sounds of every new language under the categories once established on a broad and firm basis. To do this, to arrange the alphabet of any given language according to the compartments planned by physiological research, is the office of the grammarian, not of the physiologist. But even here, too much nicety is dangerous. It is easy to perceive some little difference between *k*, *t*, *p*, as pronounced by an Englishman and by a German; yet each has only one set of tenues, and to class them as different and represent them by different graphic exponents would produce nothing but confusion. The Semitic nations have sounds which are absent in the Indo-European languages—the sounds which Brücke has well described as *gutturales veræ*, true gutturals; for becomes both sonant and surd between the two, i.e. between the complete opening and shutting, shows that an intermediate sound is meant.

the letters which we commonly call gutturals, k, g, have nothing to do with the guttur, but with the root of the tongue and the soft palate. But their character, if only accurately described, as it has been by Czermak, will easily become intelligible to the student of Hebrew and Arabic if he has but acquired a clear conception of what has been well called the *Alphabet of Nature*. To sum up, we must distinguish three things:—

- (1) What letters are made of.
- (2) How they are made.
- (3) Where they are made.

(1) Letters are formed—

(a) Of vocalized breath. These I call vowels (Phōnēnta, no contact).

(b) Of breath, not vocalized. These I call breaths or spiritus (Hēmíphōna, slight contact).

(c) Of articulate noise. These I call checks or stopping letters (Áphōna, complete contact).

(2) Letters are formed—

(a) With wide opening of the chordæ vocales. These I call *hard* letters (psila, tenues, surd, sharp; vivâraśvâśâghoshâḥ).

(b) With a narrowing of the chordæ vocales. These I call *soft* letters (mesa, mediæ, sonant, blunt; samvâranâdaghoshâḥ). This distinction applies both to the breaths and to the checks, though the effect, as pointed out, is different.

(3) Letters are formed in different places by active and passive organs, the normal places being those marked by the contact between the root of the tongue and the palate, the tip of the tongue and the teeth, and the upper and lower lips, with their various modifications.



## PHYSIOLOGICAL ALPHABET.

Places	Breaths			Checks		
	Hard	Soft	Trilled	Hard	Soft	Nasal
1. Glottis . . . . .	h hand	h , and	r r	k (kh)	g (gh)	n̄ (ng)
2. Root of tongue and soft palate .	h loch	h Tage, G.	.	ch (chh)	j (jh)	n̄ (ny)
3. Root of tongue and hard palate .	ŷ ich, G.	ŷ yea	l	t (th)	d (dh)	n
4. Tip of tongue and teeth . . . . .	s rice	z to rise	r	t̄ (t̄h)	d̄ (d̄h)	n̄
5. Tongue reversed and palate . . . . .	ʃ sharp	z̄ pleasure				
6. Tongue and edge of teeth . . . . .	th breath	dh breathe				
7. Lower lip and upper teeth . . . . .	f life	v live				
8. Upper and lower lips . . . . .	.	w Quell, G.	.			
9. Upper and lower lips rounded . . . . .	w̄ which	w̄ with		p (ph)	b (bh)	m
	Continuæ.			Prohibitivæ sive Explosivæ.		

## APPENDIX TO LECTURE III.

## ON TRANSLITERATION.

Having on former occasions discussed the problem of transcribing languages by a common alphabet,\* I should, for the present, have passed over that subject altogether if I had not been repeatedly urged to declare my opinion on other alphabets recommended to the public by powerful advocates. No one has worked more energetically for the propagation of a common alphabet than Professor Lepsius, of Berlin; and though, in my opinion, and in the opinion of much more competent judges, such as Brücke, the physiological basis of his alphabet is not free from error—nay, though in the more limited field of languages on which I can form an independent opinion he has slightly misapprehended the nature of certain letters and classes of letters—I should nevertheless rejoice in the success even of an imperfect alphabet, supposing it had any chance of general adoption. If his alphabet could become the general alphabet at least among African scholars, it would be a real benefit to that new branch of philological studies. But I regret to see that even in Africa those who, like Dr. Bleek, are most anxious to follow the propositions of Professor Lepsius, find it impossible to do so, ‘on account of its too great typographical difficulties.’† If this is the case at a steam printing-office in Cape Town, what can we expect at Neuherrnhut? Another

\* Proposals for a Missionary Alphabet in M. M.’s *Survey of Languages* (2nd edition), 1855.

† Dr. Bleek, *Comparative Grammar*, p. xii.

and even more serious objection, urged likewise by a scholar most anxious to support the Church Missionary Alphabet, is that the scheme of Dr. Lepsius, as modified by the Church of England and Continental Missionary Societies has long ceased to be a uniform system. 'The Societies,' says the Rev. Hugh Goldie, in his 'Dictionary of the Efik Language' (Glasgow, 1862), 'have not succeeded in establishing a uniform system, for which Dr. Lepsius's alphabet is taken as a base; deviations are made from it, which vary in different languages, and which destroy the claim of this system to uniformity. Marks are employed in the Church of England Society which are not employed by the continental societies, and *vice versâ*. This, I think, is fatal to the one great recommendation of the system, namely, its claim to be received as a common system. Stripped of its adventitious recommendations, and judged on its own merits, we think it deficient in simplicity.'

These are serious objections; and yet I should gladly have waived them and given my support to the system of Professor Lepsius, if, during the many years that it has been before the public, I had observed any signs of its taking root, or of that slow and silent growth which alone augurs well for the future. What has been, I believe, most detrimental to its success, is the loud advocacy by which it was attempted to force that system on the acceptance of scholars and missionaries, many of them far more competent, in their own special spheres,\* to form an

\* Professor Lepsius has some interesting remarks on the African clicks. The Rev. J. L. Döhne, author of a *Zulu Kafir Dictionary*, expressed himself against Dr. Lepsius's proposal to write the clicks *before* their accompanying letters. He at the same time



opinion of its defects than either its author or its patrons. That my unwillingness to adopt the system of Professor Lepsius did not arise from any predilection for my own Missionary Alphabet, I have proved by adopting, when I write in English, the system of Sir William Jones. My own system was, in every sense of the word, a missionary system. My object was, if possible, to devise an alphabet, capable of expressing every variety of sound that could be physiologically defined, and yet not requiring one single new or artificial type. As in most languages we find, besides the ordinary sounds that can be expressed by the ordinary types, one, or at the utmost two modifications to which certain letters or classes of letters are liable, I proposed italics as exponents of the first degree of modification, small capitals as exponents of the second degree. Thus as, besides the ordinary dentals, *t*, *th*, *d*, *dh*, we find in Sanskrit the linguals, I proposed that these should be printed as italics, *t*, *th*, *d*, *dh*, instead of the usual but more difficult types, *t'*, *th'*, *d'*, *dh'*; or t, th, d, dh. As in Arabic we find, besides the ordinary dentals, another set of

advanced some etymological arguments in support of his own view. How is the African missionary answered by the Berlin Professor? I quote Professor Lepsius's reply, which, if it did not convince, must have startled and stunned his humble adversary. 'Equally little,' he writes, 'should we be justified in inferring from the fact that in the Sanskrit लेढि *leṭi* (sic), he licks, from लिह् *lih*, and ति *ti*, *t'* (sic) must be pronounced not as *th* (sic), but as *ht* (sic).' How the change of Sanskrit *h* and *t* into *ḍ* (ḍ is *dh*, not *ṭh*) has any bearing on the Rev. J. L. Döhne's argument about the clicks, I am afraid few missionaries in Africa will understand.

linguals, I proposed to express these too by italics. These italics were only intended to show that the dentals printed in italics were not meant for the usual dentals. This would have been sufficient for those not acquainted with Sanskrit or Arabic, while Sanskrit and Arabic scholars could have had little doubt as to what class of modified dentals was intended in Sanskrit or Arabic. If certain letters require more than one modification—as, for instance, t, s, n, r—then small capitals would have come in, and only in very extreme cases would an additional diacritical mark have been required for a third modification of one common type. If through the princely liberality of one opulent society, the Church Missionary Society,\* complete founts of complicated and expensive types are to be granted to any press that will ask for them, there is no further need for italics or small capitals—mere make-shifts, that could only have recommended themselves to poor missionaries wishing to obtain the greatest results by the smallest means. It is curious, however, that in spite of all that has been urged against a systematic use of italics, italics crop out almost everywhere both in philological works at home and in missionary publications abroad, while as yet I have very seldom met with the Church Missionary  $\bar{o}$  for the vowel in French *cœur*, or with the Church Missionary  $\ddot{s}$  for the Sanskrit *sh*, as written by Sir W. Jones.

Within the circle of languages in which I take a more immediate interest, the languages of India, the adoption of the alphabet advocated by the Church Missionary Society seems now, after the successful exertions of Sir Charles Trevelyan, more than hope-

\* See Resolution 2, carried August 26, 1861, at the Church Missionary House, London.

less, nor do I think that for people situated like the modern Hindús such a *pis-aller* as italics and small capitals is likely to be popular. Living in England, and writing chiefly for England and India, I naturally decided to follow that system which was so modestly put forth by Sir William Jones in the first volume of the 'Asiatic Researches,' and has since, with slight modifications, not always improvements, been adopted by the greatest Oriental scholars in India, England, and the Continent. In reading that essay, written about eighty years ago, one is surprised to see how well its author was acquainted with all that is really essential either in the physiological analysis or in the philological definition of the alphabet. I do not think the criticism of Professor Lepsius quite fair when he imputes to Sir W. Jones 'a defective knowledge of the general organism of sounds, and of the distinct sounds to be represented;' nor can I blame the distinguished founder of the Asiatic Society for the imperfect application of his own principles, considering how difficult it is for a scholar to sacrifice his own principles to considerations of a more practical nature.

The points on which I differ from Sir W. Jones are of very small consequence. They arise from habit rather than from principle. I should willingly give them up if by so doing I could help to bring about a more speedy agreement among Sanskrit scholars in England and India. I am glad to find that in the second edition of his 'Standard Alphabet' Professor Lepsius has acknowledged the practical superiority of the system of Sir W. Jones in several important points, and I think he will find that his own system may be still further improved, or at all events have a better chance of success in Europe as well as in India, if it



approaches more and more closely to that excellent standard. The subjoined table will make this clearer than any comment :—

*Sanskrit Alphabet, as transcribed by Sir W. Jones, M. M., in the Missionary, and in the Church Missionary Alphabets.*

Sir W. Jones.	M. M.	Missionary Alphabet.	Church Miss. Alphabet.	Sir W. Jones.	M. M.	Missionary Alphabet.	Church Miss. Alphabet.
अ	a	a	a	च	ch	ch	ċ or ċ
आ	á	â	â	छ	ch'h	chh	k' or ċh
इ	i	i	i	ज	j	j	ġ or ĵ
ई	í	î	î	झ	j'h	jh	ġ' or ĵh
उ	u	u	u	ञ	ny	ñ	ń
ऊ	ú	û	û	ट	t	t	t
ऋ	rī	ri	ri	ठ	t'h	th	t' or th
ॠ	rī	rî	rî	ड	d	d	d
ऌ	lrī	li	li	ढ	d'h	dh	d' or dh
ॡ	lrī	lî	lî	ण	ñ	ṇ	ṇ
ए	é	e	ê	त	t	t	t
ओ	ó	o	ô	थ	t'h	th	t' or th
ऐ	ai	ai	âi	द	d	d	d
औ	au	au	âu	ध	d'h	dh	d' or dh
क	c	k	k	न	n	n	n
ख	c'h	kh	kh	प	p	p	p
ग	g	g	g	फ	p'h	ph	p' or ph
घ	g'h	gh	gh	ब	b	b	b
ङ	ñ	ñ	ñ	भ	b'h	bh	b' or bh

Sir W. Jones.	M. M.	Missionary Alphabet.	Church Miss. Alphabet.	Sir W. Jones.	M. M.	Missionary Alphabet.	Church Miss. Alphabet.
म	m	m	m	स	s	s	s
ह	h	h	h	:	h (ñ)	h	:
य	y	y	y	उ	ñ	m	~
र	r	r	r or r	+	—	χ	—
ल	l	l	l	२	—	φ	—
व	v	v	w	ळ	—	l	l
श	ś	ś	s	ॠ	—	lh	—
ष	sh	sh	š or ś				



## LECTURE IV.

## PHONETIC CHANGE.

FROM the investigations which I laid before you in my last Lecture, you know the materials which were at the disposal of the primitive architects of language. They may seem small compared with the countless vocables of the countless languages and dialects to which they have given rise, nor would it have been difficult to increase their number considerably, had we assigned an independent name and position to every slight variety of sound that can be uttered, or may be discovered among the various tribes of the globe. Yet small as is the number of the alphabetic elements, there are but few languages that avail themselves of all of them. Where we find very abundant alphabets, as for instance in Hindustani and English, different languages have been mixed, each retaining, for a time, its own phonetic peculiarities. It is because French is Latin as spoken not only by the Roman provincials but by the German Franks, that we find in its dictionary words beginning with *h* and with *gui*. They are due to German throats; they belong to the Teutonic, not to the Romance alphabet. Thus *hair* is to hate; *hameau*, home; *hâter*, to haste; *déguiser* points to *wise*, *guile* to *wile*, *quichet* to *wicket*. It is because English is Saxon as spoken not only by Saxons, but likewise by Normans, that we hear in it several sounds

which do not occur in any other Teutonic dialects. The sound of *u* as heard in *pure* is not a Teutonic sound. It arose from an attempt to imitate the French *u* in *pure*.\* Most of the words in which this sound is heard are of Roman origin, e.g. *duke*, *during* (*durer*), *beauty* (*beauté*, *bellitas*), *nuisance* (*nocentia*). This sound of *u*, however, being once naturalized, found its way into Saxon words also; that is to say, the Normans pronounced the A.S. *eow* and *eaw* like *yu*; e.g. *knew* (*cneow*), *few* (*feawa*), *dew* (*deaw*), *hue* (*hiw*).†

The sounds of *ch* and *j* in English are Roman or Norman rather than Teutonic sounds, though, once admitted into English, they have infected many words of Saxon descent. Thus *cheer* in *good cheer* is the French *chère*, the Mediæval Latin *cara*; ‡ *chamber*, *chambre*, *camera*; *cherry*, A.S. *cirse*, Fr. *cerise*, Lat. *cerasus*; to *preach*, *prêcher*, *prædicare*; *forge*, *fabricare*. Or *j* in *joy*, *gaudium*, *judge*, *judex*, &c. But the same sounds found their way into Saxon words also, such as *choose* (*ceosan*, German *kiesen*); *chew* (*ceowan*, German *kauen*); particularly before *e* and *i*, but likewise before other vowels; e.g. *child*, as early as Layamon, instead of the older A.S. *cild*; *cheap*, A.S. *ceap*; *birch*, *finch*, *speech*, *much*, &c.; *thatch* (*theccan*), *watch* (*weccan*); in Scotch, *theek* and *waik*; or in *bridge* (*brycg*, *Brücke*), *edge* (*ecg*, *Ecke*), *ridge* (*hrycg*, *Rücken*).

The soft sound of *z* in *azure* or of *s* in *vision* is likewise a Roman importation.

\* Fiedler, *Englische Grammatik*, i. pp. 118 and 142.

† Cf Marsh, *Lectures*, Second Series, p. 65.

‡ *Cara* in Spanish, *chière* in Old French, mean *face*; Nicot uses 'avoir la chère baissée.' It afterwards assumed the sense of welcome, and hospitable reception. Cf. Diez, *Lex. Etym.* s. v. *Cara*.

Words, on the contrary, in which *th* occurs are Saxon, and had to be pronounced by the Normans as well as they could. To judge from the spelling of MSS., they would seem to have pronounced *d* instead of *th*. The same applies to words containing *wh*, originally *hv*, or *ght*, originally *ht*; as in *who*, *which*, or *bought*, *light*, *right*. All these are truly Saxon, and the Scotch dialect preserves the original guttural sound of *h* before *t*.

The O Tyi-herero has neither *l* nor *f*, nor the sibilants *s* *r* *z*. The pronunciation is lispng, in consequence of the custom of the *Va-herero* of having their upper front teeth partly filed off, and four lower teeth knocked out. It is perhaps due to this that the O Tyi-herero has two sounds similar to those of the hard and soft *th* and *dh* in English (written *s*, *z*).\*

There are languages that throw away certain letters which to us would seem almost indispensable, and there are others in which even the normal distinctions between guttural, dental, and labial contact are not yet clearly perceived. We are so accustomed to look upon *pa* and *ma* as the most natural articulations, that we can hardly imagine a language without them. We have been told over and over again that the names for *father* and *mother* in all languages are derived from the first cry of recognition which an infant can articulate, and that it could at that early age articulate none but those formed by the mere opening or closing of the lips. It is a fact, nevertheless, that the Mohawks, of whom I knew an interesting specimen at Oxford, never, either as infants or as grown-up people, articulate with their lips. They have no *p*, *b*, *m*, *f*, *v*, *w*—no labials of any kind; and although their own

\* Sir G. Grey's Library, i. 167.



name Mohawk would seem to bear witness against this, that name is not a word of their own language, but was given to them by their neighbours. Nor are they the only people who always keep their mouths open and abstain from articulating labials.\* They share this peculiarity with five other tribes, who together form the so-called six nations, *Mohawks, Senekas, Onandagos, Oneidas, Cayugas, and Tuscaroras*. The Hurons likewise have no labials, and there are other languages in America with a similar deficiency.†

The gutturals are seldom absent altogether; in some, as in the Semitic family, they are most prominent, and represented by a numerous array of letters. Several languages do not distinguish between *k* and *g*; some have only *k*, others *g* only. The sound of *g* as in gone, of *j* as in jet, and of *z* as in zone, which are often heard in Kafir, have no place in the Sechuana alphabet.‡ There are a few dialects mentioned by Bindseil as entirely destitute of gutturals, for instance, that of the Society Islands.§ It was unfor-

\* Brosses, *Formation Mécanique des Langues*, i. p. 220: 'La Hontan ajoute qu'aucune nation du Canada ne fait usage de la lettre *f*, que les Hurons, à qui elles manquent toutes quatre (B, P, M, F), ne ferment jamais les lèvres.' *F* and *s* are wanting in Rarotongan. Hale, p. 232.

† See Bindseil, *Abhandlungen*, p. 368. The Mixteca language has no *p, b, f*; the Mexican no *b, v, f*; the Totonaca no *b, v, f*; the Kaigáni (Haidah) and Thlinkit no *b, p, f* (Pott, *Et. F.* ii. 63); the Hottentot no *f* or *v* (Sir G. Grey's Library, i. p. 5); the languages of Australia no *f* or *v* (*ibid.* ii. 1, 2). Many of the statements of Bindseil as to the presence and absence of certain letters in certain languages, require to be re-examined, as they chiefly rest on Adelung's Mithridates.

‡ Bindseil, *l. c.* 344. Mithridates, i. 632, 637.

§ Appleyard, p. 50.

tunate that one of the first English names which the natives of these islands had to pronounce was that of Captain Cook, whom they could only call *Tute*. Besides the Tahitian, the Hawaian and Samoan \* are likewise said to be without gutturals. In these dialects, however, the *k* is indicated by a hiatus or catching of the breath, as *ali'i* for *alihi*, *'a'no* for *kakano*.†

The dentals seem to exist in every language.‡ The *d*, however, is never used in Chinese, nor in Mexican, Peruvian, and several other American dialects,§ and the *n* is absent in the language of the Hurons || and of some other American tribes. The *s* is absent in the Australian dialects ¶ and in several of the Polynesian languages, where its place is taken by *h*. \*\* Thus in Tongan we find *hahake* for *sasake*; in the New Zealand dialect *heke* for *seke*. In Rarotongan the *s* is entirely lost, as in *ae* for *sae*. When the *h* stands for an original *s*, it has a peculiar hissing sound which some have represented by *sh*, others by *zh*, others by *he* or *h'*, or simply *e*. Thus the word *hong'i*, from the Samoan *song'i*, meaning to salute by pressing noses, has been spelt by different

\* Hale, p. 232.

† To avoid confusion, it may be stated that throughout Polynesia, with the exception of Samoa, all the principal groups of islands are known to the people of the other groups by the name of their largest island. Thus the *Sandwich Islands* are termed *Hawaii*; the *Marquesas*, *Nukuhiva*; the *Society Islands*, *Tahiti*; the *Gambier Group*, *Mangareva*; the *Friendly Islands*, *Tonga*; the *Navigator Islands*, *Samoa* (all), see Hale, pp. 4, 120; the *Hervey Islands*, *Rarotonga*; the *Low or Dangerous Archipelago*, *Paumotu*; *Boeditch Island* is *Fakaafo*.

‡ Bindseil, *l. c.* p. 358.

§ Bindseil, *l. c.* p. 365.

|| Bindseil, *l. c.* p. 334.

¶ Sir George Grey's Library, ii. 1, 3.

\*\* Hale, *l. c.* p. 232.



writers, *shongi*, *ehongi*, *heongi*, *h'ongi* and *zongi*.\* But even keeping on more familiar ground, we find that so perfect a language as Sanskrit has no *f*, no soft sibilants, no short *e* and *o*; Greek has no *y*, no *w*, no *f*, no soft sibilants; Latin likewise has no soft sibilants, no *ϑ*, *ϕ*, *χ*. English is deficient in guttural breathings like the German *ach* and *ich*. High German has no *w* like the English *w* in wind, no *th*, *dh*, *ch*, *j*. While Sanskrit has no *f*, Arabic has no *p*. *F* is absent not only in those dialects which have no labial articulation at all, but we look for it in vain in Finnish (despite of its name, which was given it by its neighbours †), in Lithuanian, ‡ in the Gipsy languages, in Tamil, Mongolian, some of the Tataric dialects, Burmese, &c. §

It is well known that *r* is felt to be a letter difficult to pronounce not only by individuals but by whole nations. No Chinese who speaks the classical language of the empire ever pronounces that letter. They say *Ki li sse tu* instead of *Christ*; *Eulopa* instead of *Europe*; *Ya me li ka* instead of *America*. Hence neither *Mandarin* nor *Sericum* can be Chinese words: the former is the Sk. *mantrin*, counsellor; the latter derived from *Seres*, a name given to the Chinese by their neighbours. || It is likewise absent in the language of the Hurons, the Mexicans, the Othomi, and other American dialects; in the Kafir language, ¶ and

\* Hale, *l. c.* pp. 122, 234.

† Pott, *Etymologische Forschungen*, ii. 62.

‡ 'F does not occur in any genuine Slavonic word.'—Brücke *Grundzüge*, p. 34.

§ *Bindseil*, p. 289.

|| Pott, *Deutsche Morgenländische Gesellschaft*, xii. 453.

¶ Boyce's *Grammar of the Kafir Language*, ed. Davis, 1863, p. vii. The *r* exists in the Sechuana. The Kafirs pronounce *l*

in several of the Polynesian\* tongues. In the Polynesian tongues the name of Christ is *Kalaisi*, but also *Karaita* and *Keriso*. *R* frequently alternates with *l*, but *l* again is a sound unknown in Zend, and in the Cuneiform Inscriptions, † in Japanese (at least some of its dialects) and in several American and African tongues. ‡

It would be interesting to prepare more extensive statistics as to the presence and absence of certain letters in certain languages; nay, a mere counting of consonants and vowels in the alphabets of each nation might yield curious results. I shall only mention a few:—

*Hindustani*, which admits Sanskrit, Persian, Arabic, and Turkish words, has 48 consonants, of which 13 are classical Sanskrit aspirates, nasals, and sibilants, and 14 Arabic letters.

*Sanskrit* has 37 consonants, or if we count the Vedic *l* and *lh*, 39.

*Turkish*, which admits Persian and Arabic words, has 32 consonants, of which only 25 are really Turkish.

*Persian*, which admits Arabic words, has 31 consonants, of which 22 are really Persian, the rest Arabic.

*Arabic* has 28 consonants.

instead of *r* in foreign words; they have, however, the guttural trills. Cf. Appleyard, *The Kafir Language*, p. 49.

\* The dialects of New Zealand, Rarotonga, Mangareva, Paumotu, Tahiti, and Nukuhiva have *r*; those of Fakaafo, Samoa, Tonga, and Hawai, have *l*.—See Hale, *l. c.* p. 232.

† See Sir H. Rawlinson, *Behistun*, p. 146. Spiegel, *Parsi Grammatik*, p. 34.

‡ *Bindseil*, p. 318; Pott, *l. c.* xii. 453.

The *Kafir* (Zulu) has 26 consonants, besides the clicks.

*Hebrew* has 23 consonants.

*English* has 20 consonants.

*Greek* has 17 consonants, of which 3 are compound.

*Latin* has 17 consonants, of which 1 is compound.

*Mongolian* has 17 or 18 consonants.

*Finnish* has 11.

*Polynesian* has 10 native consonantal sounds; no dialect has more—many have less.\*

Some *Australian* languages have 8, with three variations.†

The *Melanesian* languages are richer in consonants. The poorest, the Duauru, has 12; others 13, 14 and more consonants. ‡

But what is even more curious than the absence or presence of certain letters in certain languages or families of languages, is the inability of some races to distinguish, either in hearing or speaking, between some of the most normal letters of our alphabet. No two consonants would seem to be more distinct than *k* and *t*. Nevertheless, in the language of the Sandwich Islands these two sounds run into one, and it seems impossible for a foreigner to say whether what he hears is a guttural or a dental. The same word is written by Protestant missionaries with *k*, by French missionaries with *t*. It takes months of patient labour to teach a Hawaiian youth the difference between *k* and *t*, *g* and *d*, *l* and *r*. The same word

\* Cf. Hale, p. 231; Von der Gabelentz, *Abhandlungen der Philologisch-Historischen Classe der Königlich Sächsischen Gesellschaft der Wissenschaften*, vol. iii. p. 253. Leipzig, 1861.

† Hale, p. 482.

‡ See Von der Gabelentz, *l. c.*



varies in Hawaiian dialects as much as *koki* and *hoi*, *kela* and *tea*.\* In adopting the English word *steel*, the Hawaiians have rejected the *s*, because they never pronounce two consonants together; they have added a final *a*, because they never end a syllable with a consonant, and they have changed *t* into *k*.† Thus *steel* has become *kila*. Such a confusion between two prominent consonants like *k* and *t* would destroy the very life of a language like English. The distinction between *carry* and *tarry*, *car* and *tar*, *key* and *tea*, *neck* and *net*, would be lost. Yet the Hawaiian language struggles successfully against these disadvantages, and has stood the test of being used for a translation of the Bible, without being found wanting. Physiologically we can only account for this confusion by inefficient articulation, the tongue striking the palate bluntly half-way between the *k* and the *t* points, and thus producing sometimes more of a dental, sometimes more of a palatal noise. But it is curious to observe that, according to high authority, something of the same kind is supposed to take place in English and in French.‡ We are told by careful observers that the lower classes in Canada habitually confound *t* and *k*, and say *mékier*, *moikié*, for *métier* and *moitié*. Webster goes so far as to maintain, in the Introduction to his English Dictionary, that in English the letters *cl* are pronounced as if written *tl*; *clear*, *clean*,

\* *The Polynesian*, October 1862.

† Buschmann, *Iles Marq.* p. 103; Pott, *Etym. F.* ii. 138. 'In Hawaiian the natives make no distinction between *t* and *k*, and the missionaries have adopted the latter, though improperly (as the element is really the Polynesian *t*), in the written language.'—Hale, vii. p. 234.

‡ *Student's Manual of the English Language* (Marsh and Smith), p. 349.

he says are pronounced *tlear*, *tlean*; *gl* is pronounced *dl*; *glory* is pronounced *dlory*. Now Webster is a great authority on such matters, and although I doubt whether anyone really says *dlory* instead of *glory*, his remark shows, at all events, that even with a well-mastered tongue and a well-disciplined ear there is some difficulty in distinguishing between guttural and dental contact.

How difficult it is to catch the exact sound of a foreign language may be seen from the following anecdote. An American gentleman, long resident in Constantinople, writes:—‘There is only one word in all my letters which I am certain (however they may be written) of not having spelt wrong, and that is the word *bactshtasch*, which signifies a present. I have heard it so often, and my ear is so accustomed to the sound, and my tongue to the pronunciation, that I am now certain I am not wrong the hundredth part of a whisper or a lisp. There is no other word in the Turkish so well impressed on my mind, and so well remembered. Whatever else I have written, *bactsh-tasch!* my earliest acquaintance in the Turkish language, I shall never forget you.’ The word intended is *Bakhshish*.\*

The Chinese word which French scholars spell *eul*, is rendered by different writers *öl*, *eulh*, *eull*, *r'l*, *r'll*, *urh*, *rhl*. These are all meant, I believe, to represent the same sound, the sound of a word which at Canton is pronounced *i*, in Annamitic *ñi*, in Japanese *ni*. †

\* *Constantinople and its Environs*, by an American long resident, New York, 1835, ii. p. 151; quoted by Marsh, *Lect.*, Second Series, p. 87.

† Léon de Rosny, *La Cochinchine*, p. 294.



If we consider that *r* is in many languages a guttural, and *l* a dental, we may place in the same category of wavering pronunciation as *k* and *t*, the confusion between these two letters, *r* and *l*, a confusion remarked not only in the Polynesian, but likewise in the African languages. Speaking of the Setshuana dialects, Dr. Bleek remarks: 'One is justified to consider *r* in these dialects as a sort of floating letter, and rather intermediate between *l* and *r*, than a decided *r* sound.'\*

Some faint traces of this confusion between *r* and *l* may be discovered even in the classical languages, though here they are the exception, not the rule. There can be no doubt that the two Latin derivatives *aris* and *alis* are one and the same. If we derive *Saturnalis* from *Saturnus*, and *secularis* from *seculum*, *normalis* from *norma*, *regularis* from *regula*, *astralis* from *astrum*, *stellaris* from *stella*, it is clear that the suffix in all is the same. Yet there is some kind of rule which determines whether *alis* or *aris* is to be preferred. If the body of the words contains an *l*, the Roman preferred the termination *aris*; hence *secularis*, *regularis*, *stellaris*, the only exceptions being that *l* is preserved (1) when there is also an *r* in the body of the word, and this *r* closer to the termination than the *l*; hence *pluralis*, *lateralis*; (2) when the *l* forms part of a compound consonant, as *fluvialis*, *glacialis*. †

Occasional changes of *l* into *r* are to be found in almost every language, e.g. *lavender*, i.e. *lavendula*; *colonel*, pronounced *curnel* (Old French, *coronel*; Spanish, *coronel*); *rossignole*=*lusciniola*; *cœruleus*

\* Sir G. Grey's Library, vol. i. p. 135.

† Cf. Pott, *Etymologische Forschungen*, 1st edit. ii. 97, where some exceptions, such as *legalis*, *letalis*, are explained.

from *cælum*; *kephalargía* and *lêthargía*, but *ôtagía*, all from *álgos*, pain. The Wallachian *dor*, desire, is supposed to be the same word as the Italian *duolo*, pain. In *apôtre*, *chapitre*, *ésclandre*, the same change of *l* into *r* has taken place. \*

On the other hand *r* appears as *l* in Italian *albero* = *arbor*; *celebro* = *cerebrum*; *mercoledì*, *Mercurii dies*; *pellegrino*, pilgrim = *peregrinus*; *autel* = *altare*. †

In the Dravidian family of languages the change of *l* into *r*, and more frequently of *r* into *l*, is very common. ‡

Instances of an utter inability to distinguish between two articulate sounds are, however, of rare occurrence, and they are but seldom found in languages which have received a high amount of literary cultivation. What I am speaking of here is not merely change of consonants, one consonant being preferred in one, another in another dialect, or one being fixed in one noun, another in another. This is a subject we shall have to consider presently. What I wished to point out is more than that; it is a confusion between two consonants in one and the same language, in one and the same word. I can only explain it by comparing it to that kind of colour-blindness when people are unable to distinguish between blue and red, a colour-blindness quite distinct from that which makes blue to seem red, or yellow green. It frequently happens that individuals are unable to pronounce certain letters. Many persons cannot pronounce the *l*, and say *r* or even *n* instead; *grass* and *crowds* instead of *glass* and *clouds*; *ritten* instead of *liddle*.

\* Diez, *Vergleichende Grammatik*, i. p. 189.

† Diez *l. c.* i. p. 209.

‡ Caldwell, *Dravidian Grammar*, p. 120.



Others change *r* to *d*, *dound* instead of *round*; others change *l* to *d*, *dong* instead of *long*. Children, too, for some time substitute dentals for gutturals, speaking of *tat* instead of *cat*, *tiss* instead of *kiss*. It is difficult to say whether their tongue is more at fault or their ear. In these cases, however, a real substitution takes place; we who are listening hear one letter instead of another, but we do not hear as it were two letters at once, or something between the two. The only analogy to this remarkable imperfection peculiar to uncultivated dialects may be discovered in languages where, as in Modern German, the soft and hard consonants become almost, if not entirely, undistinguishable. But there is still a great difference between actually confounding the places of contact as the Hawaiians do in *k* and *t*, and merely confounding the different efforts with which consonants, belonging to the same organic class, ought to be uttered, a defect very common in some parts of Germany and elsewhere.

This confusion between two consonants in the same dialect is a characteristic, I believe, of the lower stages of human speech, and reminds us of the absence of articulation in the lower stages of the animal world. Quite distinct from this is another process which is going on in all languages, and in the more highly developed even more than in the less developed, the process of *phonetic diversification*, whether we call it growth or decay. This process will form the principal subject of our sixth Lecture, and we shall see that, if properly defined and understood, it forms the basis of all scientific etymology.

Wherever we look at language, we find that it changes. But what makes language change? We

are considering at present only the outside, the phonetic body of language, and are not concerned with the changes of meaning, which, as you know, are sometimes very violent. At present we only ask, how is it that one and the same word assumes different forms in different dialects, and we intentionally apply the name of dialect not only to Scotch as compared with English, but to French as compared with Italian, to Latin as compared with Greek, to Old Irish as compared with Sanskrit. These are all dialects; they are all members of the same family, varieties of the same type, and each variety may, under favouring circumstances, become a species. How then is it, we ask, that the numeral four is *four* in English, *quatuor* in Latin, *cethir* in Old Irish, *chatvar* in Sanskrit, *keturi* in Lithuanian, *tettares* in Greek, *pisyres* in Æolic, *fidvor* in Gothic, *fior* in Old High-German, *quatre* in French, *patru* in Wallachian?

Are all these varieties due to accident, or are they according to law; and, if according to law, how is that law to be explained?

I shall waste no time, in order to show that these changes are not the result of mere accident. This has been proved so many times, that we may, I believe, take it now for granted.

I shall only quote one passage from the Rev. J. W. Appleyard's excellent work, 'The Kafir Language,' in order to show that even in the changes of languages sometimes called barbarous and illiterate, law and order prevail (p. 50):—

'The chief difference between Kafir and Sechuana roots consists in the consonantal changes which they have undergone, according to the habit or taste of the respective tribes. None of these changes, however,

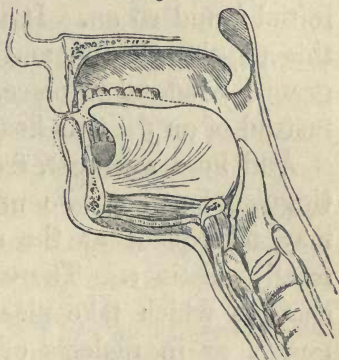
appear to be arbitrary, but, on the contrary, are regulated by a uniform system of variation. The vowels are also subject to the same kind of change; and, in some instances, roots have undergone abbreviation by the omission of a letter or syllable.' Then follows a table of vowel and consonantal changes in Kafir and Sechuana, after which the author continues: 'By comparing the above consonantal changes with § 42, it will be seen that many of them are between letters of the same organ, the Kafir preferring the flat sounds (*b, d, g, v, z*), and the Sechuana, the sharp ones (*p, t, k, f, s*). It will be observed, also, that when the former are preceded by the nasal *m* or *n*, these are dropped before the latter. There is sometimes, again, an interchange between dentals and linguals; and there are, occasionally, other changes which cannot be so easily accounted for, unless we suppose that intermediate changes may be found in other dialects . . . . It will thus be seen that roots which appear totally different the one from the other, are in fact the very same, or rather, of the same origin. Thus no one, at first sight, would imagine that the Sechuana *reka* and the Kafir *tonga*, or the Kafir *pila* and the Sechuana *tsera*, were mere variations of the same root. Yet a knowledge of the manner in which consonants and vowels change between the two languages shows that such is the case. As corroborative of this, it may be further observed, that one of the consonants in the above and other Sechuana words sometimes returns in the process of derivation to the original one, as it is found in the Kafir root. For example, the reflective form of *reka* is *iteka*, and not *ireka*; whilst the noun, which is derived from the verb *tsera* is *botselo*, and not *botsero*.'



The change of *th* into *f*, is by many people considered a very violent change, so much so that Bur-

Fig. 27.

nouf's ingenious identification of *Thraêtona* with *Feridûn*, of which more hereafter, was objected to on that ground. But we have only to look at the diagrams of *th* and *f*, to convince ourselves that the slightest movement of the lower lip towards the upper teeth would change the sound of *th* into *f*,\* so that in English, 'nothing,' as pronounced vulgarly, sounds sometimes like 'nuffing.'



th and f.  
(the dotted outline is th.)

Few people, if any, would doubt any longer that the changes of letters take place according to certain phonetic laws, though scholars may differ as to the exact application of these laws. But what has not yet been fully explained is the nature of these phonetic laws which regulate the changes of words. Why should letters change? Why should we, in modern English, say *lord* instead of *hlâford*, *lady* instead of *hlæfdige*? Why should the French say *père* and *mère*, instead of *pater* and *mater*? I believe the laws which regulate these changes are entirely based on physiological grounds, and admit of no other explanation whatsoever. It is not sufficient to say that *l* and *r*, or *d* and *r*, or *s* and *r*, or *k* and *t*, are interchangeable. We want to know why they are interchangeable,

\* See M. M. *On Veda and Zendavesta*, p. 32. Arendt, *Beiträge zur Vergleichenden Sprachforschung*, i. p. 425.



or rather, to use more exact language, we want to know why the same word, which a Hindu pronounces with an initial *d*, is pronounced by a Roman with an initial *l*, and so on. It must be possible to explain this physiologically, and to show, by means of diagrams, what takes place, when, instead of a *d* an *l*, instead of an *f* a *th* is heard.

And here we must, from the very beginning, distinguish between two processes, which, though they may take place at the same time, are nevertheless totally distinct. There is one class of phonetic changes which take place in one and the same language, or in dialects of one family of speech, and which are neither more nor less than the result of *laziness*. Every letter requires more or less of muscular exertion. There is a manly, sharp, and definite articulation, and there is an effeminate, vague, and indistinct utterance. The one requires a will, the other is a mere *laisser-aller*. The principal cause of phonetic degeneracy in language is when people shrink from the effort of articulating each consonant and vowel; when they attempt to economize their breath and their muscular energy. It is perfectly true that, for practical purposes, the shorter and easier a word, the better, as long as it conveys its meaning distinctly. Most Greek and Latin words are twice as long as they need be, and I do not mean to find fault with the Romance nations, for having simplified the labour of speaking. I only state the cause of what we must call *phonetic decay*, however advantageous in some respects; and I consider that cause to be neither more nor less than want of muscular energy. If the provincial of Gaul came to say *père* instead of *pater*, it was simply because he shrank from the trouble of

lifting his tongue, and pushing it against his teeth. *Père* required less strain on the will, and less expenditure of breath: hence it took the place of *pater*. So in English, *night* requires less expenditure of muscular energy than *nächt* or *Nacht*, as pronounced in Scotland and in Germany; and hence, as people always buy in the cheapest market, *night* found more customers than the more expensive terms. Nearly all the changes that have taken place in the transition from Anglo-Saxon to modern English belong to this class. Thus:—

A. S. hafoc	became	hawk		A. S. nawiht	became	nought
„ dæg	„	day		„ hlâford †	„	lord
„ fæger	„	fair		„ hlæfdige	„	lady
„ secgan	„	say		„ sælig	„	silly
„ spreca	„	speak		„ bûton	„	but
„ folgian	„	follow		„ heáfod	„	head
„ morgen	„	morrow		„ nose-þyrel	„	nostril
„ cyning	„	king		„ wif-man	„	woman
„ wëorold	„	world*		„ Eofor-wic	„	York

The same takes place in Latin or French words naturalized in English. Thus:—

Scutarius	escuier	=	sqire
Historia	histoire	=	story
Egyptianus	Egyptian	=	gipsy
Extraneus	estrangier	=	stranger

\* Old High-German *wër-alt* = *seculum*, i.e. *Menschenalter*. Cf. *vër-vulf*, *lycanthropus*, *werewolf*, *währwolf*, *loup-garrou(l)*; *were-gild*, *manngeld*, *ransom*. Cf. Grimm, *Deutsche Grammatik*, ii. 480.

† Is *hlâford*, as Grimm supposes, an abbreviation of *hlâf-weard*, and *hlæfdige* of *hlæfweardige*, meaning loaf-ward? The compound *hlâf-ord*, source of bread, is somewhat strange, considering by whom and for whom it was formed. But *hlâf-weard* does not occur in Anglo-Saxon documents. See *Lectures on the Science of Language*, 4th. ed., vol. i. p. 216.

Hydropsis	—	= dropsy
Capitulum	chapitre	= chapter
Dominicella	demoiselle	= damsel
Paralysis	paralysie	= palsy
Sacristanus	sacristain	= sexton

There are, however, some words in English which, if compared with their originals in Anglo-Saxon, seem to have added to their bulk, and thus to violate the general principle of simplification. Thus A.S. *thunor* is in English *thunder*. Yet here, too, the change is due to laziness. It requires more exertion to withdraw the tongue from the teeth without allowing the opening of the dental contact to be heard than to slur from *n* on to *d*, and then only to the following vowel. The same expedient was found out by other languages. Thus, the Greek said *ándres*, instead of *áneres*; *ambrosia*, instead of *amrosia*.\* The French *genre* is more difficult to pronounce than *gendre*; hence the English *gender*, with its anomalous *d*. Similar instances in English are, *to slumber*=A.S. *slumerian*; *embers*=A.S. *æmyrie*; *cinders*=*cineres*; *humble*=*humilis*.

It was the custom of grammarians to ascribe these and similar changes to *euphony*, or a desire to make words agreeable to the ear. Greek, for instance, it was said, abhors two aspirates at the beginning of two successive syllables, because the repeated aspiration would offend delicate ears. If a verb in Greek, beginning with an aspirate, has to be reduplicated, the first syllable takes the tenuis instead of the aspirate. Thus *thē* in Greek

\* In Greek  $\mu$  cannot stand before  $\lambda$  and  $\rho$ , nor  $\lambda$  before  $\rho$ , nor  $\nu$  before any liquid. Hence *μησημ(ε)ρία*=*μησημβρία*; *γαμος*=*γαμβρός*; *ἡμαρτον*=*ἡμφοτον*; *μορτος*=*βροτός*. See Mehlhorn, *Griechische Grammatik*, p. 54. In Tamil *nr* is pronounced *ndr* Caldwell, *Dravidian Grammar*, p. 138.



forms *tithēmi*, as *dhâ* in Sanskrit *dadhâmi*. If this was done for the sake of euphony, it would be difficult to account for many words in Greek far more inharmious than *thithēmi*. Such words as *χθών*, *chthôn*, earth, *φθόγγος*, *phthóggos*, vowel, beginning with two aspirates, were surely more objectionable than *thithēmi* would have been. There is nothing to offend our ears in the Latin *fefelli*,\* from *fallo*, or in the Gothic reduplicated perfect *haihald*, from *haldan*, which in English is contracted into *held*, the A.S. being *heöld*, instead of *hehold*; or even in the Gothic *faiifahum*, we caught, from *fahan*, to catch.† There is nothing fearful in the sound of *fearful*, though both syllables begin with an *f*. But if it be objected that all these letters in Latin and Gothic are mere breaths, while the Greek *χ*, *ϑ*, *φ* are real aspirates, we have in German such words as *Pfropfenzieher*, which to German ears is anything but an unpleasant sound. I believe the secret of this so-called abhorrence in Greek is nothing but laziness. An aspirate requires great effort, though we are hardly aware of it, beginning from the abdo-

\* It should be remarked that the Latin *f*, though not an aspirated tenuis like *φ*, but a labial flatus, seems to have had a very harsh sound. Quintilian, when regretting the absence in Latin of Greek *φ* and *υ*, says, 'Quæ si nostris literis (*f* et *u*) scribantur, surdum quiddam et barbarum efficient, et velut in locum earum succedent tristes et horridæ quibus Græcia caret. Nam et illa quæ est sexta nostratium (*f*) pæne non humana voce, vel omnino non voce potius, inter discrimina dentium efflanda est; quæ etiam cum vocalem proxima accipit, quassa quodammodo, utique quoties aliquam consonantem frangit, ut in hoc ipso frangit, multo fit horridior' (xii. 10).—Cf. Bindseil, p. 287.

†	Pres.	Perf. Sing.	Perf. Plur.	Part. Perf. Pass.
G.	haita	haihait	haihaitum	haitan
A.S.	hâtan	hêht (hêt)	hêton	hâten
O.E.	hate	hight	highten	hoten, hoot, hight

minal muscles and ending in the muscles that open the glottis to its widest extent. It was in order to economize this muscular energy that the tenuis was substituted for the aspirate, though, of course, in cases only where it could be done without destroying the significancy of language. Euphony is a very vague and unscientific term. Each nation considers its own language, each tribe its own dialect, euphonic ; and there are but few languages which please our ear when heard for the first time. To my ear *knight* does not sound better than *Knecht*, though it may do so to an English ear, but there can be no doubt that it requires less effort to pronounce the English *knight* than the German *Knecht*.

But from this, the most important class of phonetic changes, we must distinguish others which arise from a less intelligible source. When we find that, instead of Latin *pater*, the Gothic tribes pronounced *fadar*, it would be unfair to charge the Goths with want of muscular energy. On the contrary, the aspirated *f* requires more effort than the mere tenuis; and the *d*, which between two vowels was most likely sounded like the soft *th* in English, was by no means less troublesome than the *t*. Again, if we find in Sanskrit *gharma*, heat, with the guttural aspirate, in Greek *thermós* with the dental aspirate, in Latin *formus*, adj.,\* with the labial aspirate, we cannot charge any one of these three dialects with effeminacy, but we must look for another cause that could have produced these changes. That cause I call *Dialectic Growth*; and I feel strongly inclined to ascribe the phonetic diversity which we observe between Sanskrit, Greek,

\* Festus states, 'forcipes dicuntur quod his *forma* id est calida capiuntur.'

and Latin, to a previous state of language, in which, as in the Polynesian dialects, the two or three principal points of consonantal contact were not yet felt as definitely separated from each other. There is nothing to show that in *thermós*, Greek ever had a guttural initial, and to say that Sanskrit *gh* becomes Greek *th* is in reality saying very little. No letter ever *becomes*. People pronounce letters, and they either pronounce them properly or improperly. If the Greek pronounced *th* in *thermós* properly, without any intention of pronouncing *gh*, then the *th*, instead of *gh*, requires another explanation, and I cannot find a better one than the one just suggested. When we find three dialects, like Sanskrit, Greek, and Latin, exhibiting the same word with guttural, dental, and labial initials, we gain but little if we say that Greek is a modification of Sanskrit, or Latin of Greek. No Greek ever took the Sanskrit word and modified it; but all three received it from a common source, in which its articulation was as yet so vague as to lend itself to these various interpretations. Though we do not find in Greek the same confusion between guttural and dental contact which exists in the Hawaiian language, it is by no means uncommon to find one Greek dialect preferring the dental\* when another prefers the guttural; nor do I see how this fact could be explained unless we assume that in an earlier state of the Greek dialects the pronunciation fluctuated or hesitated between *k* and *t*. 'No Polynesian dialect,' says Mr. Hale, 'makes any distinction between the sounds of *b* and *p*, *d* and *t*, *g* and *k*, *l* and *r*, or *v* and *w*. The *l*, moreover, is frequently sounded

\* Doric, *πόκα*, *όκα*, *άλλοκα*, for *πότε*, *ότε*, *άλλοτε*; Doric, *δνόφος*; Æolic, *γνόφος*; Doric *δã* for *γñ*.



like *d*, and *t* like *k*.\* If colonies started to-morrow from the Hawaiian Islands, the same which took place thousands of years ago, when the Hindus, Greeks, and Romans left their common home, would take place again. One colony would elaborate the indistinct, half-guttural, half-dental articulation of their ancestors into a pure guttural; another into a pure dental; a third into a labial. The Romans who settled in Dacia, where their language still lives in the modern Wallachian, are said to have changed every *qu*, if followed by *a*, into *p*. They pronounce *aqua* as *apa*; *equa* as *epa*.† Are we to suppose that the Italian colonists of Dacia said *aqua* as long as they stayed on Italian soil, and changed *aqua* into *apa* as soon as they reached the Danube? Or may we not rather appeal to the fragments of the ancient dialects of Italy, as preserved in the Oscan and Umbrian inscriptions, which show that in different parts of Italy certain words were from the beginning fixed differently, thus justifying the assumption that the legions which settled in Dacia came from localities in which these Latin *qu*'s had always been pronounced as *p*'s?‡ It will sound to classical scholars almost like blasphemy to explain the phenomena in the language of Homer and Horace, by supposing for both a background like that of the Polynesian dialects of the present day. Comparative philologists, too, will rather admit what

\* Hale, *Polynesian Grammar*, p. 233.

† The Macedonian (Kutzo-Wallachian) changes *pectus* into *keptu*, *pectine* into *keptine*. Cf. Pott, *Etym. F.* ii. 49. Of the Tegeza dialects, the northern entirely drops the *p*, the southern, in all grammatical terminations, either elide it or change it into *k*. Cf. Sir G. Grey's Library, i. p. 159.

‡ The Oscans said *pomtis* instead of *quinque*. See Mommsen, *Unteritalische Dialecte*, p. 289.

is called a degeneracy of gutturals sinking down to dentals and labials, than look for analogies to the Sandwich Islands. Yet the most important point is, that we should have clear conceptions of the words we are using, and I confess that, without certain attenuating circumstances, I cannot conceive of a real *k* degenerating into a *t* or *p*. I can conceive different definite sounds arising out of one indefinite sound; and those who have visited the Polynesian islands describe the fact as taking place at the present day. What then takes place to-day can have taken place thousands of years ago; and if we see the same word beginning in Sanskrit, Greek, and Latin, with *k*, *t*, or *p*, it would be sheer timidity to shrink from the conclusion that there was a time in which that word was pronounced less distinctly; in short, in the same manner as the *k* and *t* in Hawaiian.

There is, no doubt, this other point to be considered, that each man has his phonetic idiosyncrasies, and that what holds good of individuals, holds good of families, tribes, and nations. We saw that individuals and whole nations are destitute of certain consonants, and this defect is generally made up on the other hand by a decided predilection for some other class of consonants. The West Africans, being poor in dentals and labials, are rich in gutturals. Now if an individual, or a family, or a tribe cannot pronounce a certain letter, nothing remains but to substitute some other letter as nearly allied to it as possible. The Romans were destitute of a dental aspirate like the *th* of the Greeks, or the *dh* of the Hindus. Hence, where that letter existed in the language of their common ancestors, the Romans had either to give up the aspiration and pronounce *d*, or to take the nearest consonantal contact and pro-



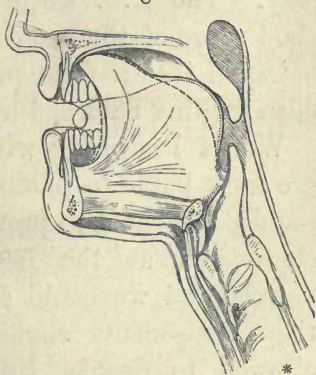
nounce *f*. Hence *fumus* instead of Sk. *dhûma*, Greek *thýmos*. It is exactly the same as what took place in English. The modern English pronunciation, owing, no doubt, to Norman influences, lost the guttural *ch*, as heard in the German *lachen*. The Saxons had it, and wrote and pronounced *hleáhtor*. It is now replaced by the corresponding labial letter, namely, *f*, thus giving us *laughter* for *hleáhtor*, *enough* for *genug*, &c. If we find one tribe pronounce *r*, the other *l*,\* we can hardly accuse either of effeminacy, but must appeal to some phonetic idiosyncrasy, something in fact corresponding to what is called colour-blindness in another organ of sense. These idiosyncrasies have to be carefully studied, for each language has its own, and it would by no means follow that because a Latin *f* or even *b* corresponds to a Sanskrit *dh*, therefore every *dh* in every language may lapse into *f* and *b*. Greek has a strong objection to words ending in consonants; in fact, it allows but three consonants, and all of them semi-vowels, to be heard as finals. We only find *n*, *r*, and *s*, seldom *k*, ending Greek words. The Roman had no such scruples. His words end with a guttural tenuis, such as *hic*, *nunc*; with a dental tenuis, such as *sunt*, *est*; and he only avoids a final labial tenuis which certainly is not melodious. We can hardly imagine Virgil, in his hexameters, uttering such words as *lump*, *trump*, or *stump*. Such tendencies or dispositions, peculiar to each nation, must exercise considerable influence on the phonetic structure of a language, particularly if we consider that in the Aryan family the grammatical life-blood throbs chiefly in the final letters.

These idiosyncrasies, however, are quite inadequate

\* Pott, *Etym. Forsch.* ii. 59.

to explain why the Latin *coquo* should, in Greek, appear as *péptō*. Latin is not deficient in labial, nor Greek in guttural sounds. Nor could we honestly say that the gutturals in Latin were gradually ground down to labials in Greek. Such forms are dialectic varieties, and it is, I believe, of the greatest importance, for the purposes of accurate reasoning, that these dialectic varieties should be kept distinct, as much as possible, from phonetic corruptions. I say, as much as possible, for in some cases I know it is difficult to draw a line between the two. Physiologically speaking, I should say that the phonetic corruptions are always the result of muscular effeminacy, though it may happen, as in the case of *thunder*, that 'lazy people take the most pains.' All cases of phonetic corruption can be clearly represented by anatomical diagrams. Thus the Latin *clamare* requires complete contact between root of tongue and soft palate, which contact is merged by sudden transition into the dental position of the tongue with a vibration of its lateral edges. In Italian

Fig. 28.



this lateral vibration of the tongue is dropped, or rather is replaced by the slightest possible approach of the tongue towards the palate, which follows almost involuntarily on the opening of the guttural contact, producing *chiamare*, instead of *clamare*. The Spaniard slurs over the initial guttural contact altogether; he thinks he has

\* This diagram was drawn by Professor Richard Owen.

pronounced it, though his tongue has never risen, and he glides at once into the *l* vibration, the opening of which is followed by the same sticky sound which we observed in Italian. What applies to the Romance applies equally to the Teutonic languages. The old Saxons said *cniht*, *cnif*, and *cneow*. Now, the guttural contact is slurred over, and we only hear *knight*, *knife*, *knee*. The old Saxons said *hleápan*, with a distinct initial aspiration; that aspiration is given up in *to leap*. Wherever we find an initial *wh*, as in *who*, *which*, *white*, there stood originally in A.S. *hw*, the aspirate being distinctly pronounced. That aspirate, though it is still heard in correct pronunciation, is fast disappearing in the language of the people except in the north, where it is clearly sounded before, not after, the *w*. In the interrogative pronoun *who*, however, no trace of the *w* remains except in spelling, and in the interrogative adverb, *how*, it has ceased to be written (A.S. *hwû*, *hu*, Goth. *hvaiva*). In *whole*, on the contrary, the *w* is written, but simply by false analogy. The A.S. word is *hâl*, without a *w*, and the good sense of the people has not allowed itself to be betrayed into a false pronunciation in spite of the false spelling enforced by its schoolmasters.

Words beginning with more than one consonant are most liable to phonetic corruption. It certainly requires an effort to pronounce distinctly two or three consonants at the beginning without intervening vowels, and we could easily understand that one of these consonants should be slurred over and be allowed to drop. But if it is the tendency of language to facilitate pronunciation, we must not shirk the question how it came to pass that such troublesome forms were ever framed and sanctioned.



Strange as it may seem, I believe that these troublesome words, with their consonantal exuberances, are likewise the result of phonetic corruption, i. e. of muscular relaxation. Most of them owe their origin to contraction, that is to say, to an attempt to pronounce two syllables as one, and thus to save time and breath, though not without paying for it by an increased consonantal effort.

It has been argued, with some plausibility, that language in its original state, of which, unfortunately, we know next to nothing, eschewed the contact of two or more consonants. There are languages still in existence in which each syllable consists either of a vowel or of a vowel preceded by one consonant only, and in which no syllable ever ends in a consonant. This is the case, for instance, in the Polynesian languages. A Hawaiian finds it almost impossible to pronounce two consonants together, and in learning English he has the greatest difficulty in pronouncing *cab*, or any other word ending in a consonant. *Cab*, as pronounced by a Hawaiian, becomes *caba*. Mr. Hale, in his excellent 'Polynesian Grammar,'\* says, 'In all the Polynesian dialects every syllable must terminate in a vowel; and two consonants are never heard without a vowel between them. This rule admits of no exception whatever, and it is chiefly to this peculiarity that the softness of these languages is to be attributed. The longest syllables have only three letters, a consonant and a diphthong, and many syllables consist of a single vowel.'

There are other languages besides the Polynesian which never admit closed syllables, i. e. syllables ending

\* Hale, *l. c.* p. 234.

in consonants. All syllables in Chinese are open or nasal,\* yet it is by no means certain whether the final consonants which have been pointed out in the vulgar dialects of China are to be considered as later additions, or whether they do not represent a more primitive state of the Chinese language.

In South Africa all the members of the great family of speech, called by Dr. Bleek the Bâ-ntu family, agree in general with regard to the simplicity of their syllables. Their syllables can begin with only one consonant (including, however, consonantal diphthongs, nasalised consonants, and combinations of clicks with other consonants reckoned for this purpose as substantially simple). The semivowel *w*, too, may intervene between a consonant and a following vowel. No syllable, as a general rule, in these South African languages, which extend north beyond the Equator, can end in a consonant, but only in vowels, whether pure or nasal.† The exceptions serve but to prove the rule, for they are confined to cases where by the falling off of the generally extremely short and almost indistinct terminal vowel, an approach has been made to consonantal endings.‡

In the other family of South African speech, the Hottentot, compound consonants are equally eschewed at the beginning of words. It is clear, too, that all radical words ended there originally in vowels, and that the final consonants are entirely due to grammatical terminations, such as *p*, *s*, *ts*, and *r*. By the frequent

\* Endlicher, *Chinesische Grammatik*, p. 112.

† Bleek, *Comparative Grammar*, § 252. Appleyard, *Kafir Language*, p. 89.

‡ Bleek, *Comparative Grammar*, § 257. Hahn, *Herero Grammar*, § 3.

use of these suffixes the final vowel disappeared, but that it was there originally has been proved with sufficient evidence.\*

The permanent and by no means accidental or individual character of these phonetic peculiarities is best seen in the treatment of foreign words. Practice will no doubt overcome the difficulty which a Hawaiian feels in pronouncing two consonants together or in ending his words by consonantal checks, and I have myself heard a Mohawk articulating his labial letters with perfect accuracy. Yet if we examine the foreign words adopted by the people into their own vocabulary, we shall easily see how they have all been placed on a bed of Procrustes. In the Ewe, a West-African language, *school* is pronounced *suku*, the German *Fenster* (window) *fesre*.†

In the Kafir language we find	bapitizesha	= to baptize
”	”	igolide = gold
”	”	inkamela = camel
”	”	ibere = bear
”	”	umperisite = priest
”	”	ikerike = kirk
”	”	umposile = apostle
”	”	isugile = sugar
”	”	ama-Ngezi = English‡

If we look to the Finnish and the whole Uralic class of the Northern Turanian languages, we meet with the same disinclination to admit double consonants at the beginning, or any consonants whatever at the end of words. The German *Glas* is written *lasi* in Finnish. The Swedish *smak* is changed into

\* Bleek, *Comparative Grammar*, § 257-60.

† Pott, *Etymologische Forschungen*, ii. 56.

‡ Appleyard, *Kafir Language*, p. 89.



*maku*, *stor* into *suuri*, *strand* into *ranta*. No genuine Finnish word begins with a double consonant, for the assibilated and softened consonants, which are spelt as double letters, were originally simple sounds. This applies equally to the languages of the Esths, Ostiaks, Hungarians, and Sirianes, though, through their intercourse with Aryan nations, these tribes, and even the Finns, succeeded in mastering such difficult groups as *pr*, *sp*, *st*, *str*, &c. The Lapp, the Mordvinian, and Tcheremissian dialects show, even in words which are of native growth, though absent in the cognate dialects, initial consonantal groups such as *kr*, *ps*, *st*, &c.; but such groups are always the result of secondary formation, as has been fully proved by Professor Boller.\* The same careful scholar has shown that the Finnish, though preferring syllables ending in vowels, has admitted *n*, *s*, *l*, *r*, and even *t*, as final consonants. The Esthonian, Lapp, Mordvinian, Ostiakian, and Hungarian, by dropping or weakening their final and unaccented vowels, have acquired a large number of words ending in simple and double consonants; but throughout the Uralic class, wherever we can trace the radical elements of language, we always find simple consonants and final vowels.

We arrive at the same result, if we examine the syllabic structure of the Dravidian class of the South Turanian languages, the Tamil, Telugu, Canarese, Malayalam, &c. The Rev. R. Caldwell, in his excellent work, the 'Dravidian Comparative Grammar,' has

\* Boller, *Die Finnischen Sprachen*, p. 19. Pott, *l. c.* pp. 40 and 56. See also Boehtlingk, *Ueber die Sprache der Jakuten*, § 152, 'The Turko-Tataric languages, the Mongolian and Finnish show a strong aversion against double consonants at the beginning of words.'

treated this subject with the same care as Professor Boller in his Essay on the Finnish languages, and we have only to place these accounts by the side of each other, in order to perceive the extraordinary coincidences.

‘The chief peculiarity of Drâvidian syllabation is its extreme simplicity and dislike of compound or concurrent consonants; and this peculiarity characterizes the Tamil, the most early cultivated member of the family, in a more marked degree than any other Drâvidian language.

‘In Telugu, Canarese, and Malayâlam, the great majority of Drâvidian words, i.e. words which have not been derived from Sanskrit, or altered through Sanskrit influences, and in Tamil all words without exception, including even Sanskrit derivatives, are divided into syllables on the following plan. Double or treble consonants at the beginning of syllables, like “str,” in “strength,” are altogether inadmissible. At the beginning not only of the first syllable of every word, but also of every succeeding syllable, only one consonant is allowed. If, in the middle of a word of several syllables, one syllable ends with a consonant and the succeeding one commences with another consonant, the concurrent consonants must be euphonicly assimilated, or else a vowel must be inserted between them. At the conclusion of a word, double and treble consonants, like “gth,” in “strength,” are as inadmissible as at the beginning; and every word must terminate in Telugu and Canarese in a vowel; in Tamil, either in a vowel or in a single semivowel, as “l,” or “r,” or in a single nasal, as “n,” or “m.” It is obvious that this plan of syllabation is extremely unlike that of the Sanskrit.



‘Generally, “i” is the vowel which is used for the purpose of separating inadmissible consonants, as appears from the manner in which Sanskrit derivatives are Tamilized. Sometimes “u” is employed instead of “i.” Thus the Sanskrit preposition “pra” is changed into “pira” in the compound derivatives, which have been borrowed by the Tamil; whilst “Kriṣṇa” becomes “Kiruṭṭina-n” (“ṭṭ,” instead of “sh,”), or even “Kiṭṭina-n.” Even such soft conjunctions of consonants as the Sanskrit “dya,” “dva,” “gya,” &c., are separated in Tamil into “diya,” “diva,” and “giya.”’\*

It is hardly to be wondered at that evidence of this kind, which might be considerably increased, should have induced speculative scholars to look upon the original elements of language as necessarily consisting of open syllables, of one consonant followed by one vowel, or of a single vowel. The fact that languages exist, in which this simple structure has been preserved, is certainly important, nor can it be denied, that out of such simple elements languages have been formed, gradually advancing, by a suppression of vowels, to a state of strong consonantal harshness. The Tcheremissian *śma*, mouth, if derived from a root *śu*, to speak, must originally have been *śuma*.

In the Aryan languages, the same process can easily be observed as producing the same effect, viz., double consonants, either at the beginning or at the end of words. It was in order to expedite the pronunciation of words that vowels were dropt, and consonants brought together: it was to facilitate the pronunciation of such words that one of the consonants was

\* Caldwell, *Dravidian Comparative Grammar*, p. 138.

afterwards left out, and new vowels were added to render the pronunciation easier once more.

Thus, *to know* points back to Sk. *jnâ*, but this *jnâ*, the Lat. *gnô* in *gnôvi*, or *gnô* in Gr. *égnôn*, again points back to *janâ*, contracted to *jnâ*. Many roots are formed by the same process, and they generally express a derivative idea. Thus *jan*, which means to create, to produce, and which we find in Sk. *janas*, Gr. *génos*, genus, kin, is raised to *jnâ*, in order to express the idea of being able to produce. If I am able to produce music, I know music; if I am able to produce ploughing, I know how to plough, I can plough; and hence the frequent running together of the two conceptions, I can and I know, Ich kann and Ich kenne.\* As from *jan* we have *jnâ*, so from *man*, to think (Sk. *manas*, Gr. *ménos*, mens, mind), we have *mnâ*, to learn by heart, Greek *mémnēmai*, I remember, *mimnēskō*. In modern pronunciation the *m* is dropt, and we pronounce *m-nemonics*. Again, we have in Sanskrit a root *mlai*, which means to fade; from it *mlâna*, faded, *mlâni*, fading. The Teutonic nations, avoiding the complete labial contact that is required for *m*, were satisfied with the labial approach which produces *w*, and thus pronounced *ml* like *vl*. Hence A.S. *wlæc*, tired, *wlacián*, to be tired, to flag. The Latin has *flaccus*, withered, flabby, where we should expect *blaccus*, Germ. *welk*. In German we have *flau*,† weak, and what seems to be merely a dialectic Low German variety, *lau*, in the sense of luke-warm, i.e. water that is but weakly

\* Pott, *E. F.* ii. 291, compares *queo* and *scio*, tracing them to Sanskrit *hi*. See Benfey, *Kurze Sanskrit Grammatik*, § 62, note.

† Cf. Leo, *Zeitschrift für Vergl. Sp.* ii. 252. Grimm (*Wörterbuch*, s. v.) traces *flau* to *fläuen*, and this to a supposed M.H.G. *flou* or *flouwe*.

boiling. Now, whence this initial double consonant *ml*, which in German meets with the usual fate of most double initial consonants, and from *ml* sinks to *l*? The Sanskrit root *mlai* or *mlâ* is formed like *jnâ* and *mnâ*, from a simpler root *mal* or *mar*, which means to wear out, to decay. As *jan* became *jnâ*, so *mar*, *mrâ*. This *mar* is a very prolific root, of which more hereafter, and was chiefly used in the sense of decaying or dying, *morior*, ἀμ(β)ρόσια, Old Slav. *mrěti*, to die, Lith. *mirti*, to die.

These instances must suffice in order to show that in Sanskrit, too, and in the Aryan languages in general, the initial double consonants owe their existence to the same tendency which afterwards leads to their extinction. It was phonetic economy that reduced *marâ* to *mrâ*; it was phonetic economy that reduced *mrâ* to *râ* and *lâ*.

The double consonants being once there, the simplest process would seem to drop one of the two. This happens frequently, but by no means always. We see this process in English words like *knight*, (*h*)*ring*, &c.; we likewise observe it in Latin *natus* instead of *gnatus*, *nodus* instead of *gnodus*, English *knot*. We know that the old Latin form of *locus* was *stlocus*,\* thus pointing to root *stâ*, whence the German *Stelle*; we know that instead of *lis*, *litis*, quarrel, litigation, the ancient Romans pronounced *stlis*, which points to German *streit*. In all these cases the first consonant or consonants were simply dropt. But it also happens that the double consonant, which was tolerated at first, only because it was the saving of a syllable, is lengthened again into two syllables, the

\* Quintil. i. 4, 16.



two syllables seeming to require less effort than the double consonant. The Semitic languages are quite free from words beginning with two consonants without an intermediate vowel or shewa. This is, in fact, considered by Ewald as one of the prominent characters of the Semitic family;\* and if foreign words like *Plato* have to be naturalized in Arabic, the *p* has to be changed to *f*, for Arabic, as we saw, has no *p*, and an initial vowel must be added, thus changing *Plato* into *Iflatín*. We saw that the Hawaiians, in adopting a word like *steel*, had to give up the initial *s* before the *t*, pronouncing *tila* or *kila*. We saw that the West African languages met the same difficulty by making two syllables instead of one, and saying *suku* instead of *school*. The Chinese, in order to pronounce *Christ*, have to change that name into *Ki-li-sse-tu*,† four syllables instead of one. There are analogous cases nearer home. Many words in Latin begin with *sc*, *st*, *sp*. Some of these are found in Latin inscriptions of the fourth century after Christ spelt with an initial *i*: e.g. *in istatuum* (Orelli, 1,120, A.D. 375); *Ispiritus* (Mai, Coll. Vat., t. v. p. 446, 8).‡ It seems that the Celtic nations were unable to pronounce an initial *s* before a consonant, or at least that they disliked it.§ The

\* Ewald, *Gramm. Arabica*, i. p. 23; Pott, *Etym. Forsch.* ii. 66.

† Endlicher, *Chinesische Grammatik*, p. 22.

‡ See Crecelius, in Hoefler's *Zeitschrift*, iv. 166.

§ Richards, *Antiquæ Linguae Britannicæ Thesaurus* (Bristol, 1753), as quoted by Pott, *E. F.* ii. 67, says (after letter S): 'No British word begins with *s*, when a consonant or *w* follows, without setting *y* before it; for we do not say Sgubor, snoden, &c., but Ysgubor, ysnoden. And when we borrow any words from another language which begin with an *s* and a consonant immediately following it, we prefix a *y* before such words, as from the Latin *schola*, ysgol; *spiritus*, yspryd; *scutum*, ysgwyd.'

Spaniards in Peru, even when reading Latin, pronounce *estudium* for *studium*, *eschola* for *schola*.\* Hence the constant addition of the initial vowel in the Western or chiefly Celtic branch of the Romance family; French *escabeau*, instead of Latin *scabellum*; *estame* (*étain*), Latin *stamen*; *espérer*, instead of Latin *sperare*. Then again, as it were to revenge itself for the additional trouble caused by the initial double consonant, the French language throws away the *s* which had occasioned the addition of the initial *e*, but keeps the vowel which, after the loss of the *s*, would no longer be wanted. Thus *spada* became *espée*, lastly *épée*; *scala* became *eschelle*, lastly *échelle*. *Stabilire* became *établir*, lastly *établir*, to stablish.†

Now it must be clear that all these changes rest on principles totally distinct from those which made the Romans pronounce the same word as *quatuor* which we pronounce *four*. The transition from Gothic *fidvor* to English *four* may properly be ascribed to phonetic corruption, but *quatuor* and *fidvor* together can only be explained as the result of dialectic variation. If we compare *quatuor*, *téssares*, *písyres*, and *fidvor*, we find a change of guttural, dental, and labial contact in one and the same word. There is nothing to show that the Greek changed the guttural into the dental contact, or that the Teutonic nations considered the labial contact less difficult than the guttural and dental. We

\* Tschudi, *Peru*, i. 176. Caldwell, *Dravidian Comparative Grammar*, p. 170: 'How perfectly in accordance with Tamil this is, is known to every European resident in Southern India, who has heard the natives speak of establishing an English *iskool*.' This *iskool* is as good as *establishing* for *stabilire*; or the Italian expressions, *con istudio*, *per istrada*, &c.

† Diez, *Grammatik*, i. p. 224.

cannot show that in Greece the guttural dwindles down to a dental, or that in German the labial is later, in chronological order, than the guttural. We must look upon guttural, dental, and labial as three different phonetic expressions of the same general conception, not as corruptions of one definite original type. The guttural tenuis once fixed in any language or dialect does not in that dialect slowly dwindle down to a dental tenuis; a dental tenuis once clearly pronounced as a dental does not in the mouth of the same speaker glide into a labial tenuis. That which is not yet individualized may grow and break forth in many different forms; that which has become individual and definite loses its capability of unbounded development, and its changes assume a downward tendency and must be considered as decay. To say where growth ends and decay begins is as difficult in living languages as in living bodies; but we have in the science of language this test, that changes produced by phonetic decay must admit of a simple physiological explanation—they must be referable to a relaxation of muscular energy in the organs of speech. Not so the dialectic varieties. Their causes, if they can be traced at all, are special, not general, and in many cases they baffle all attempts at physiological elucidation.



## LECTURE V.

## GRIMM'S LAW.

I INTEND to devote to-day's Lecture to the consideration of one phonetic law, commonly called Grimm's Law, a law of great importance and very wide application, affecting nearly the whole consonantal structure of the Aryan languages. The law may be stated as follows:—

There are in the Aryan languages three principal points of consonantal contact, the guttural, the dental, and the labial, *k, t, p*.

At each of these three points there are two modes of utterance, the hard and the soft; each in turn is liable to aspiration, though only in certain languages.

In Sanskrit the system is complete; we have the hard checks, *k, t, p*; the soft checks, *g, d, b*; the hard aspirated checks, *kh, th, ph*; and the soft aspirated checks, *gh, dh, bh*. The soft aspirated checks are, however, in Sanskrit of far greater frequency and importance than the hard aspirates.

In Greek we find, besides the usual hard and soft checks, one set of aspirates,  $\chi, \vartheta, \phi$ , which are hard, and which in later Greek dwindle away into the corresponding breathings.

In Latin there are no real aspirates; their place having been taken by the corresponding breathings. The dental breathing, however, the *s*, is never found

in Latin as the representative of an original dental aspirate (*th* or *dh*).

In Gothic, too, the real aspirates are wanting, unless *th* was pronounced as such. In the guttural and labial series we have only the breathings *h* and *f*. The same seems to apply to Old High-German.

In the Slavonic languages, including Lithuanian, the aspirates were originally absent.

We see, therefore, that the aspirated letters exist only in Sanskrit and Greek, that in the former they are chiefly soft, in the latter entirely hard.

Let us now consider Grimm's Law. It is this: 'If the same roots or the same words exist in Sanskrit, Greek, Latin, Celtic, Slavonic, Lithuanian, Gothic, and High-German, then wherever the Hindus and the Greeks pronounce an aspirate, the Goths and the Low Germans generally, the Saxons, Anglo-Saxons, Frisians, &c., pronounce the corresponding soft check, the Old High-Germans the corresponding hard check. In this first change the Lithuanian, the Slavonic, and the Celtic races agree in pronunciation with the Gothic. We thus arrive at the first formula:—

I. Greek and Sansk.	KH	TH	PH*
II. Gothic, &c.	G	D	B
III. Old H.G.	K	T	P

Secondly, if in Greek, Latin, Sanskrit, Lithuanian,

\* The letters here used are to be considered merely as symbols, not as the real letters occurring in those languages. If we translate these symbols into real letters, we find, in Formula I., instead of

	KH	TH	PH
Sanskrit	gh, h	dh, h	bh, h
Greek	χ	θ	φ
Latin	h, f (gv, g, v,')	f (d, b)	f (b)



Slavonic, and Celtic, we find a soft check, then we find a corresponding hard check in Gothic, a corresponding breath in Old High-German. This gives us the second formula:—

IV. Greek, &c.	G	D	B
V. Gothic	K	T	P
VI. Old H.G.	Ch	Z	F (Ph)

Thirdly, when the six first-named languages show a hard consonant, then Gothic shows the corresponding breath, Old High-German the corresponding soft check. In Old High-German, however, the law holds good with regard to the dental series only, while in the guttural and labial series the Old High-German documents generally exhibit *h* and *f*, instead of the corresponding mediæ *g* and *b*. This gives us the third formula:—

VII. Greek, &c.	K	T	P
VIII. Gothic	H (G, F)	Th (D)	F (B)
IX. Old H.G.	H (G, K)	D	F (B, V)

It will be seen at once that these changes cannot be considered as the result of phonetic corruption. Phonetic corruption always follows one and the same direction. It always goes downward, but it does not rise again. Now it may be true, as Grimm says, that it shows a certain pride and pluck on the part of the Teutonic nations to have raised the soft to a hard, and the hard to an aspirated letter.\* But if this were so, would not the dwindling down of the aspirate, the boldest of the bold, into the mediæ, the meekest of meek letters, evince the very opposite tendency? We must not forget that this phonetic law, which Grimm

\* Cf. Curtius, *Kuhn's Zeitschrift*, ii. 330.

has well compared with a three-spoked wheel, turns round completely, and that what seems a rise in one spoke is a fall in the other. Therefore we should not gain much if, instead of looking upon *Lautverschiebung* as a process of phonetic strengthening, we tried to explain it as a process of phonetic weakening.\* For though we might consider the aspiration of the hard *t* as the beginning of a phonetic infection (*th*) which gradually led to the softening of *t* to *d*, we should have on the other side to account for the transition of the *d* into *t* by a process of phonetic reinvigoration. We are in a vicious circle out of which there is no escape unless we look at the whole process from a different point of view.

Who tells us that Greek *t* ever became Gothic *th*? What idea do we connect with the phrase, so often heard, that a Greek *t* becomes Gothic *th*? How can a Greek consonant become a Gothic consonant, or a Greek word become a Gothic word? Even an Italian word never becomes a Spanish word; an Italian *t*, as in *amato*, never becomes a Spanish *d*, as in *amado*. They both come from a common source, the Latin; and the Greek and Gothic both come from a common source, the old Aryan language. Instead of attempting to explain the differences between Greek and Gothic by referring one to the other, we ought rather to trace back both to a common source from which each may have started with its peculiar consonantal structure. Now we know from the physiological analysis of the alphabet, that three, or sometimes four, varieties exist for each of the three consonantal contacts. We may pronounce *p* as a hard letter, by cutting the breath

\* See Lottner, *Zeitschrift*, xi. p. 204, Förstemann, *ibid.* i. p. 170.

sharply with our lips; we may pronounce it as a soft letter, by allowing the refraining pressure to be heard while we form the contact; and we may pronounce it an aspirate by letting an audible emission of breath follow immediately on the utterance of the hard or the soft letter. Thus we get for each point of consonantal contact four varieties:—

k, kh, g, gh,  
t, th, d, dh,  
p, ph, b, bh.

This rich variety of consonantal contact is to be found, however, in highly-developed languages only. Even among the Aryan dialects, Sanskrit alone can boast of possessing it entire. But if we look beyond the Aryan frontiers, and examine such dialects as, for instance, the Hawaian, we see first, that even the simplest distinction, that between hard and soft contact, has not yet been achieved. A Hawaian, as we saw, not only finds it extremely difficult to distinguish between *k* and *t*; he likewise fails to perceive any difference between *k* and *g*, *t* and *d*, *p* and *b*. The same applies to other Polynesian languages. In Finnish the distinction between *k*, *t*, *p*, and *g*, *d*, *b*, is of modern date, and owing to foreign influence. The Finnish itself recognises no such distinction in the formation of its roots and vocables, whereas in cognate dialects, such as Hungarian, that distinction has been fully developed (Boller, *Die Finnischen Sprachen*, p. 12).

Secondly, in some of the Polynesian languages we find an uncertainty between the hard checks and their corresponding hard breaths. We find the New Zealand *poe*, ball, pronounced *foe* in Tonga,\* just as

\* Hale, *Polynesian Grammar*, p. 232.



we find the Sanskrit *pati* represented in Gothic by *fath-s*.

Now the introduction of the differences of articulation in more highly developed languages had an object. As new conceptions craved expression, the phonetic organs were driven to new devices which gradually assumed a more settled, traditional, typical form. It is possible to speak without labials, it is possible to say a great deal in a language which has but seven consonants, just as it is possible for a mollusc to eat without lips, and to enjoy life without either lungs or liver. I believe there was a far far distant time when the Aryan nations (if we may call them so) had no aspirates at all. A very imperfect alphabet will suffice for the lower states of thought and speech; but, with the progress of the mind, a corresponding development will take place in the articulation of letters. Some dialects, as we saw, never arrived at more than one set of aspirates, others ignored them altogether, or lost them again in the course of time. But I believe it can be proved that before the Aryan nations, such as we know them, separated, some of them, at all events, had elaborated a threefold modification of the consonantal checks. The Aryans, before they separated, had, for instance, three roots, *tar*, *dar*, and *dhar*, differing chiefly by their initial consonants which represent three varieties of dental contact. *Tar* meant to cross, *dar*, to tear, *dhar*, to hold. Now although we may not know exactly how the Aryans before their separation pronounced these letters, the *t*, *d*, and *dh*, we may be certain that they kept them distinct. That distinction was kept up in Sanskrit by means of the hard, the soft, and the aspirated soft contact, but it might have been achieved equally well by the hard,

the soft, and the aspirated hard contact, *t*, *d*, *th*, or by the hard and soft contacts together with the dental breathing. The real object was to have three distinct utterances for three distinct, though possibly cognate, expressions. Now, if the same three roots coexisted in Greek, they would there, as the soft aspirates are wanting, appear from the very beginning, as *tar* (*térma*, *ter-minus*), *dar* (*dérma*, skin), and *thar*.\* But what would happen if the same three roots had to be fixed by the Romans, who had never realized the existence of aspirates at all? It is clear that in their language the distinctions so carefully elaborated at first, and so successfully kept up in Sanskrit and Greek, would be lost. *Dar* and *Tar* might be kept distinct, but the third variety, whether *dhar* or *thar*, would either be merged or assume a different form altogether.

Let us see what happened in the case of *tar*, *dar*, and *dhar*. Instead of three, as in Sanskrit, the other Aryan languages have fixed two roots only, *tar* and *dar*, replacing *dhar* by *bhar*, or some other radical. Thus *tar*, to cross, has produced in Sanskrit *tarman*, point, *tiras*, through; in Greek *tér-ma*, end; in Latin *ter-minus*, and *trans*, through; in Old Norse *thrö-m*, edge, *thairh*, through; in Old High-German *dru-m*, end, *durh*, through. *Dar*, to burst, to break, to tear, exists in Sanskrit *drinâti*, in Greek *dérō*, I skin; *dérma*, skin; Gothic *tairan*, to tear; Old High-German *zeran*. But

\* The possible corruption of *gh*, *dh*, *bh*, into *kh*, *th*, *ph*, has been explained by Curtius (*G. E.* ii. 17), under the supposition that the second element of *gh*, *dh*, *bh*, is the spiritus asper, a supposition which is untenable (Brücke, p. 84). But even if the transition of *gh* into *kh* were phonetically possible, it has never been proved that Greek ever passed through the phonetic phase of Sanskrit. See also the interesting observations of Grassmann, in Kuhn's *Zeitschrift*, xii. p. 106.

though traces of the third root *dhar* may be found here and there, for instance in Persian *Dârayavus*, Darius, i.e. the holder or sustainer of the empire, in Zend *dere*, Old Persian *dar*, to hold, that root has disappeared in most of the other Aryan dialects.

The same has happened even when there were only two roots to distinguish. The two verbs, *dadâmi*, I give, and *dadhâmi*, I place, were kept distinct in Sanskrit by means of their initials. In Greek the same distinction was kept up between *dî-dô-mi*, I give, and *tîthêmi*, I place; and a new distinction was added, namely, the *ê* and the *ô*. In Zend the two roots ran together, *dâ* meaning both to give and to place, or to make, besides *dâ*, to know. This is clearly a defect. In Latin it was equally impossible to distinguish between the roots *dâ* and *dhâ*, because the Romans had no aspirated dentals; but such was the good sense of the Romans that, when they felt that they could not efficiently keep the two roots apart, they kept only one, *dare*, to give, and replaced the other *dare*, to place or to make, by different verbs, such as *ponere*, *facere*. That the Romans possessed both roots originally, we can see in such words as *crêdo*, *credidi*, which corresponds to Sanskrit *śrad-dadhâmi*, *śrad-dadhau*,\* but where the *dh* has of course lost its aspiration in Latin. In *condere* and *abdere* likewise the radical element is *dhâ*, to place, while in *reddo*, I give back, *do* must be traced back to the same root as the Latin *dare*, to give. In Gothic, on the contrary, the root *dâ*, to give, was surrendered, and *dhâ* only was preserved, though, of course, under the form of *dâ*.

Such losses, however, though they could be re-

\* Sanskrit *dh* appears as Latin *d* in *medius*=Sk. *madhya*, Greek μέσος or μέσος, *meri-dies*=μεσ-ημερία.



medied and have been remedied in languages which had not developed the aspirated varieties of consonantal articulation, were not submitted to by Gothic and the other Low and High German tribes without an effort to counteract them. The Teutonic tribes were without aspirates, but when they took possession of the phonetic inheritance of their Aryan, not Indian, forefathers, they retained the consciousness of the threefold variety of their consonantal checks, and they tried to meet this threefold claim as best they could. Aspirates, whether hard or soft, they had not. Hence, where Sanskrit had fixed on soft, Greek on hard aspirates, Gothic, like the Celtic and Slavonic tongues, preferred the Latin corresponding soft checks; High German the corresponding hard checks. High German approached to Greek, in so far as both agreed on hard consonants; Gothic approached to Sanskrit, in so far as both agreed on some kind of aspiration. But none borrowed from the other, none was before the other. All four, according to my views of dialectic growth, must be taken as national varieties of one and the same type or idea.

So far all would be easy and simple. But now we have to consider the common Aryan words which in Sanskrit, Greek, in fact, in all the Aryan languages, begin with soft and hard checks. What could the Goths and the High Germans do? They had really robbed Peter to pay Paul. The High Germans had spent their hard, the Goths their soft checks, to supply the place of the aspirates. The soft checks of the Goths, *g*, *d*, *b*, corresponding to Sanskrit *gh*, *dh*, *bh*, were never meant, and could not be allowed, to run together and be lost in the second series of soft consonants, which the Hindus, the Greeks, and the other

Aryan nations kept distinct from *gh*, *dh*, *bh*, and expressed by *g*, *d*, *b*. These two series were felt to be distinct by the Goths and the High Germans, quite as much as by the Hindus and Greeks; and while the Celtic and Slavonic nations submitted to the aspirates *gh*, *dh*, *bh*, being merged in the real mediæ *g*, *d*, *b*, remedying the mischief as best they could, the Goths, guided by a wish to keep distinct what must be kept distinct, fixed the second series, the *g*, *d*, *b*'s in their national utterance as *k*, *t*, *p*. But then the same pressure was felt once more, for there was the same necessity of maintaining an outward distinction between their *k*, *t*, *p*'s and that third series, which in Sanskrit and Greek had been fixed on *k*, *t*, *p*. Here the Gothic nations were driven to adopt the only remaining expedient; and in order to distinguish the third series both from the *g*, *d*, *b*'s and *k*, *t*, *p*'s, which they had used up, they had to employ the corresponding hard breaths, the *h*, *th*, and *f*.

The High German tribes passed through nearly the same straits. What the Greeks took for hard aspirates they had taken for hard tenues. Having spent their *k*, *t*, *p*'s, they were driven to adopt the breaths, the *ch*, *z*, *f*, as the second variety; while, when the third variety came to be expressed, nothing remained but the mediæ, which, however, in the literary documents accessible to us, have, in the guttural and labial series, been constantly replaced by the Gothic *h* and *f*, causing a partial confusion which might easily have been avoided.

This phonetic process which led the Hindus, Greeks, Goths, and Germans to a settlement of their respective consonantal systems might be represented as follows.



The aspirates are indicated by I., the mediæ by II., the tenues by III., the breaths by IV. :—

{	Sanskrit .	gh	dh	bh	g	d	b	k	t	p						
	Gothic .	g	d	b	k	t	p	h	th	f						
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center;">I.</td> <td style="width: 33%; text-align: center;">II.</td> <td style="width: 33%; text-align: center;">III.</td> </tr> <tr> <td style="text-align: center;">gh dh bh</td> <td style="text-align: center;">g d b</td> <td style="text-align: center;">k t p</td> </tr> </table>											I.	II.	III.	gh dh bh	g d b	k t p
I.	II.	III.														
gh dh bh	g d b	k t p														
{	Greek . . .	χ	ϑ	φ	g	d	b	k	t	p						
	High German	k	t	p	ch	z	f	(g)h	d	(b)f						
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center;">II.</td> <td style="width: 33%; text-align: center;">III.</td> <td style="width: 33%; text-align: center;">II.</td> </tr> <tr> <td style="text-align: center;">g d b</td> <td style="text-align: center;">k t p</td> <td style="text-align: center;">h th f</td> </tr> </table>											II.	III.	II.	g d b	k t p	h th f
II.	III.	II.														
g d b	k t p	h th f														

Let us now examine one or two more of these clusters of treble roots, like *dhar*, *dar*, *tar*, and see how they burst forth under different climates from the soil of the Aryan languages.

There are three roots, all beginning with a guttural and ending with the vocalised *r*. In the abstract they may be represented as KAR, GAR, KHAR (or GHAR). In Sanskrit we meet first of all with GHAR, which soon sinks down to HAR, a root of which we shall have to say a great deal when we come to examine the growth of mythological ideas, but which for the present we may define as meaning to glitter, to be bright, to be happy, to burn, to be eager. In Greek this root appears in *chairein*, to rejoice, &c.

Gothic, following Sanskrit as far as it could, fixed the same root as GAR, and formed from it *geiro*, desire; *gairan* and *gairnjan*, to desire, to yearn—derivatives which, though they seem to have taken a sense almost the contrary of that of the Greek *chairein*, find valuable analogies in the Sanskrit *haryati*, to desire, &c.\* The High-German, following Greek as far as possible,

\* See Curtius, *Griechische Etymologie*, i. 166, and objections, *ibid.* ii. 313.

formed *kiri*, desire; *kerni*, desiring, &c. So much for the history of one root in the four representative languages, in Sanskrit, Gothic, Greek, and High German.

We now come to a second root, represented in Sanskrit by GAR, to shout, to praise. There is no difficulty in Greek. Greek had not spent its mediæ and therefore exhibits the same root with the same consonants as Sanskrit, in *gērýs*, voice; *gērýō*, I proclaim. But what was Gothic to do, and the languages which follow Gothic, Low German, Anglo-Saxon, Old Norse? Having spent their mediæ on *ghar*, they must fall back on their tenuis, and hence the Old Norse *kalla*, to call,\* but not the A.S. *galan*, to yell. The name for crane is derived in Greek from the same root, *géranos* meaning literally the shouter. In Anglo-Saxon *crân* we find the corresponding tenuis. Lastly, the High German, having spent its tenuis, has to fall back on its guttural breath; hence O.H.G. *challôn*, to call, and *chrânoh*, crane.

The third root, KAR, appears in Sanskrit as well as in Greek with its guttural tenuis. There is in Sanskrit *kar*, to make, to achieve; *kratu*, power, &c.; in Greek *krainō*, I achieve; and *kratýs*, strong; *kártos*, strength. Gothic having disposed both of its mediæ and tenuis, has to employ its guttural breath to represent the third series; hence *hardus*, hard, i. e. strong. The High German, which naturally would have recourse to its unemployed mediæ, prefers in the guttural series the Gothic breath, giving us *harti* instead of *garti*, and thereby causing, in a limited sphere, that very disturbance the avoidance of which seems to be the secret spring of the whole process of the so-called Dislocation of Consonants, or *Lautverschiebung*.

\* Lottner, in Kuhn's *Zeitschrift*, xi. p. 165.

Again, there are in Sanskrit three roots ending in u, and differing from each other merely by the three dental initials, *dh*, *d*, and *t*. There is *dhû* (dhu), to shake; *du*, to burn; and *tu*, to grow.\*

The first root, *dhû*, produces in Sanskrit *dhû-no-mi*, I shake; *dhû-ma*, smoke (what is shaken or whirled about); *dhû-li*, dust. In Greek the same root yields *thýō*, to rush, as applied to rivers, storms, and the passions of the mind; *thýella*, storm; *thýmós*, wrath, spirit; in Latin, *fumus*, smoke.

In Gothic the Sanskrit aspirate *dh* is represented by *d*; hence *dauns*, vapour, smell. In Old High-German the Greek aspirate *th* is represented by *t*; hence *tunst*, storm.

The second root, *du*, meaning to burn, both in a material and moral sense, yields in Sanskrit *dava*, conflagration; *davathú*, inflammation, pain; in Greek *daiō*, *dédaumai*, to burn; and *dýē*, misery. Under its simple form it has not yet been discovered in the other Aryan dialects; but in a secondary form it may be recognised in Gothic *tundnan*, to light; Old High-German, *zünden*; English, *tinder*. Another Sanskrit root, *du*, to move about, has as yet been met with in Sanskrit grammarians only. But, besides the participle *dûna*, mentioned by them, there is the participle *dûta*, a messenger, one who is moved or sent about on business, and in this sense the root *du* may throw light on the origin of Gothic *taujan*, German *zauen*, to do quickly, to speed an act.

The third root, *tu*, appears in Sanskrit as *tavîti*, he grows, he is strong; in *tavás*, strong; *tavishá*, strong; *tuvi* (in comp.), strong; in Greek, as *taijs*, great. The Latin *tôtus* has been derived from the

\* See Curtius, *Griechische Etymologie*, i. 224, 196, 192.



same root, though not without difficulty. The Umbrian and Oscan words for city, on the contrary, certainly come from that root, *tuta*, *tota*, from which *tuticus* in *meddix tuticus*,\* town magistrate. In Lettish, *tauta* is people; in Old Irish, *tuath*.† In Gothic we have *thiuda*, ‡ people; *thiudisks*, belonging to the people, *theodiscus*; *thiudiskô*, *ethnikôs*; in Anglo-Saxon, *theón*, to grow; *theód* and *theódisc*, people; *getheód*, language (il volgare). The High German, which looks upon Sanskrit *t* and Gothic *th* as *d*, possesses the same word, as *diot*, people, *diutisc*, popularis; hence *Deutsch*, German, and *deuten*, to explain, lit. to Germanize.

Throughout the whole of this process there was no transition of one letter into another; no gradual strengthening, no gradual decay, as Grimm supposes.§ It was simply and solely a shifting of the three cardinal points of the common phonetic horizon of the Aryan nations. While the Hindus fixed their East on the *gh*, *dh*, and *bh*, the Teutons fixed it on the *g*, *d*, and *b*. All the rest was only a question of what the French call *s'orienter*. To make my meaning more distinct, I will ask you to recall to your minds

\* Aufrecht und Kirchhoff, *Die Umbrischen Sprachdenkmäler*, i. p. 155.

† Lottner, Kuhn's *Zeitschrift*, vii. 166.

‡ Grimm, *Deutsche Grammatik*, first part, 3rd edition, 1840, Einleitung, p. x. 'Excurs über Germanisch und Deutsch.'

§ Grimm supposes these changes to have been very gradual. He fixes the beginning of the first change (the Gothic) about the second half of the first century after Christ, and supposes that it was carried through in the second and third centuries. More towards the West of Europe, he says, it may have commenced even at an earlier time, and have been succeeded by the second change (the Old High-German), the beginning of which is difficult to fix, though we see it developed in the seventh century.' — *Geschichte der Deutschen Sprache*, i. 437.

the arms of the Isle of Man, three legs on one body, one leg kneeling towards England, the other towards Scotland, the third towards Ireland. Let England, Scotland, and Ireland, represent the three varieties of consonantal contact; then Sanskrit would bow its first knee to England (*dh*), its second to Ireland (*d*), its third to Scotland (*t*); Gothic would bow its first knee to Ireland (*d*), its second to Scotland (*t*), its third to England (*th*); Old High-German would bow its first knee to Scotland (*t*), its second to England (*th*), its third to Ireland (*d*). The three languages would thus exhibit three different aspects of the three points that have successively to be kept in view; but we should have no right to maintain that any one of the three languages shifted its point of view after having once assumed a settled position; we should have no right to say that *t* ever became *th*, *th d*, and *d t*.

Let us now examine a few words which form the common property of the Aryan nations, and which existed in some form or other before Sanskrit was Sanskrit, Greek Greek, and Gothic Gothic. Some of them have not only the same radical, but likewise the same formative or derivative elements in all the Aryan languages. These are, no doubt, the most interesting, because they belong to the earliest stages of Aryan speech, not only by their material, but likewise by their workmanship. Such a word as *mother*, for instance, has not only the same root in Sanskrit, Greek, Latin, German, Slavonic, and Celtic, namely, the root *mâ*, but likewise the same derivative *tar*,\* so

\* Sk. *mâtâ*; Greek *μήτηρ*; Lat. *mater*; O. H. G. *muotar*; O.Sl. *mati*; Lith. *moti*; Gaelic, *mathair*.

that there can be no doubt that in the English *mother* we are handling the same word which in ages commonly called *prehistoric*, but in reality as historical as the days of Homer, or the more distant times of the Vedic Rishis, was framed to express the original conception of *genitrix*. But there are other words which, though they differ in their derivative elements, are identical in their roots and in their meanings, so as to leave little doubt that though they did not exist previous to the dispersion of the Aryans, in exactly that form in which they are found in Greek or Sanskrit, they are nevertheless mere dialectic varieties, or modern modifications of earlier words. Thus *star* is not exactly the same word as *stella*, nor *stella* the same as the Sk. *târâ*; yet these words show that, previous to the confusion of the Aryan tongues, the root *star*, to strew, was applied to the stars, as strewing about or sprinkling forth their sparkling light. In that sense we find the stars called *stri*, plural *staras*, in the Veda. The Latin *stella* stands for *sterula*, and means a little star; the Gothic *stair-no* is a new feminine derivative; and the Sanskrit *târâ* has lost its initial *s*. As to the Greek *astér*, it is supposed to be derived from a different root, *as*, to shoot, and to mean the shooters of rays, the darters of light; but it can, with greater plausibility, be claimed for the same family as the Sanskrit *star*.

It might be objected, that this very word *star* violates the law which we are going to examine, though all philologists agree that it is a law that cannot be violated with impunity. But, as in other sciences, so in the science of language, a law is not violated, on the contrary, it is confirmed, by exceptions of which a rational explanation can be given.



Now the fact is, that Grimm's law is most strictly enforced on all initial consonants, much less so on medial and final consonants. But whenever the tenuis is preceded at the beginning of words by an s, h, or f, these letters protect the k, t, p, and guard it against the execution of the law. Thus the root *stâ* does not become *sthâ* in Gothic; nor does the *t* at the end of *noct-is* become *th*, night being *naht* in Gothic. On the same ground, *st* in *stâr* and *stella* could not appear in Gothic as *th*, but remain *st* as in *stairnô*.

In selecting words to illustrate each of the nine cases in which the dislocation of consonants has taken place, I shall confine myself, as much as possible, to words occurring in English; and I have to observe that as a general rule, Anglo-Saxon stands throughout on the same step as Gothic. Consonants in the middle and at the end of words, are liable to various disturbing influences, and I shall therefore dwell chiefly on the changes of initial consonants.

Let us begin with words which in English and Anglo-Saxon begin with the soft g, d, and b. If the same words exist in Sanskrit, what should we expect instead of them? Clearly the aspirates gh, dh, bh, but never g, d, b, or k, t, p. In Greek we expect χ, ϑ, φ. In the other languages there can be no change, because they ignore the distinction between aspirates and soft checks, except the Latin, which fluctuates between soft checks and guttural and labial spiritus.

- I. KH, Greek χ; Sanskrit gh, h; Latin h, f.  
 G, Gothic g; Latin gv, g, v; Celtic g; Slavonic g, z.  
 K, Old High-German k.

The English *yesterday* is the Gothic *gistra*, the Anglo-Saxon *gystran* or *gyrstandæg*, German *gestern*. The radical portion is *gis*, the derivative *tra*; just as

in Latin *hes-ternus*, *hes* is the base, *ternus* the derivative. In *heri* the *s* is changed to *r*, because it stands between two vowels, like *genus*, *generis*. Now in Sanskrit we look for initial *gh*, or *h*, and so we find *hyas*, yesterday. In Greek we look for  $\chi$ , and so we find *chthés*. Old High-German, *kèstre*.

Corresponding to *gall*, bile, we find Greek *cholé*, Latin *fel* instead of *hel*.\*

Similarly *garden*, Goth. *gards*, Greek *chórtos*, Latin *hortus*, and *cohors*, *cohortis*, Slavonic *gradŭ*, † as in *Novgorod*, Old High-German *karto*.

The English *goose*, the A.S. *gôs*, is the O.H.G. *kans*, the Modern German *Gans*. ‡ (It is a general rule in A.S. that *n* before *f*, *s*, and  $\mathfrak{f}$  is dropped; thus Goth. *munths*=A.S. *muðh*, mouth; Latin *dens*, A.S. *toð*, tooth; German *ander*, Sk. *antara*, A.S. *oðer*, other.) In Greek we find *chén*, in Latin *anser*, instead of *hanser*, in Sanskrit *hansa*, in Russian *gus'*, in Bohemian *hus*, well known as the name of the great reformer and martyr.

- II. TH, Greek  $\theta$ ,  $\phi$ ; Sanskrit *dh*; Latin *f*.  
 D, Gothic *d*; Latin *d*, *b*; Celtic *d*; Slavonic *d*.  
 T, Old High-German *t*.

The English *deer*, A.S. *deor*, Goth. *dîus*, correspond to Greek *thér*, or *phér*; Latin, *fera*, wild beast; O.H.G., *tior*.

The English *to dare* is the Gothic *gadaursan*, the Greek *tharséin* or *tharréin*, the Sanskrit *dhṛish*, the O.Sl. *drizati*, O.H.G. *tarran*. The Homeric *Thersites* † may come from the same root, meaning the

\* Lottner, *Zeitschrift*, vii. 167.

† Grimm, *D. G.* i. 244.

‡ Curtius, *G. E.* i. 222.



daring fellow. Greek, *thrasýs*, bold, is Lithuanian *drasus*.

The English *doom* means originally *judgment*; hence, 'final doom,' the last judgment. So in Gothic *dom-s* is judgment, sentence. If this word exists in Greek, it would be there derived from a root *dhâ* or *thê* (*tithêmi*), which means to place, to settle, and from which we have at least one derivative in a strictly legal sense, namely, *thémis*, law, what is settled, then the goddess of justice.

- III. PH, Greek φ; Sanskrit bh; Latin f.  
 B, Gothic b; Latin b; Celtic and Slavonic b.  
 P, Old High-German p.

'I am' in Anglo-Saxon is *beom* and *eom*. *Eom* comes from the root *as*, and stands for eo(r)m, O.N. ë(r)m, Gothic i(s)m, Sanskrit *asmi*. *Beom* is the O.H.G. *pi-m*, the modern German *bin*, the Sanskrit *bhavâmi*, the Greek *phúō*, Latin *fu* in *fui*.

*Beech* is the Gothic *bôka*, Lat. *fagus*, O.H.G. *puocha*. The Greek *phêgós* which is identically the same word, does not mean beech, but oak. Was this change of meaning accidental, or were there circumstances by which it can be explained? Was *phêgós* originally the name of the oak, meaning the food-tree, from *phageîn*, to eat? And was the name which originally belonged to the oak (the *Quercus Esculus*) transferred to the beech, after the age of stone with its fir trees, and the age of bronze with its oak trees, had passed away,\* and the age of iron and of beech trees had dawned on the shores of Europe? I hardly venture to say Yes; yet we shall meet with other words and other changes of meaning suggesting similar ideas, and encouraging

\* Sir Charles Lyell, *Antiquity of Man*, p. 9.

the student of language in looking upon these words as witnesses attesting more strikingly than flints and 'tags' the presence of human life and Aryan language in Europe, previous to the beginning of history or tradition.

What is the English *brim*?\* We say a glass is *brim full*, or we fill our glasses to the *brim*, which means simply 'to the edge.' We also speak of the brim of a hat, the German *Bräme*. Now originally *brim* did not mean every kind of edge or verge, but only the line which separates the land from the sea. It is derived from the root *bhram*, which, as it ought, exhibits *bh* in Sanskrit, and means to *whirl about*, applied to fire, such as *bhrama*, the leaping flame, or to water, such as *bhrama*, a whirlpool, or to air, such as *bhrimi*, a whirlwind. Now what was called *æstus* by the Romans, namely, the swell or surge of the sea, where the waves seemed to foam, to flame, and to smoke (hence *æstuary*), the same point was called by the Teutonic nations the *whirl*, or the *brim*. After meaning the border-line between land and sea, it came to mean any border, though in the expression, 'fill your glasses to the brim,' we still imagine to see the original conception of the sea rushing or pouring in toward the dry land. In Greek we have a derivative verb *phrimássein*,† to toss about; in Latin *fremo*, chiefly in the sense of raging or roaring, and perhaps *frendo*, to gnash, are akin to this root. In the Teutonic languages other words of a totally different character must be traced back to

\* Kuhn, *Zeitschrift*, vi. 152.

† *βρέμω* and *βρόμος*, which are compared by Kuhn, would violate the law; they express principally the sound, for instance in *βροντή*, *ὑψιβρεμέτης*, Curtius, *G. E.* ii. 109. Grassmann, in Kuhn's *Zeitschrift*, xii. 93.

the same original conception of *bhram*, to whirl, to be confused, to be rolled up together, namely, *bramble*, *broom*, &c.\*

We now proceed to the second class, namely, words which in Gothic and Anglo-Saxon are pronounced with k, t, p, and which, therefore, in all the other Indo-European languages, with the exception of Old High-German, ought to be pronounced with g, d, b.

- IV. G, Sanskrit g; Greek, Latin, and Celtic g; Slavonic g, z.  
K, Gothic k.  
KH, Old High-German ch.

(4.) The English *corn* is the Gothic *kaurn*, Slavonic *zr'no*, Lith. *žirnis*. In Latin we find *granum*, in Sanskrit we may compare *jīrṇa*, ground down, though chiefly applied metaphorically to what is ground down or destroyed by old age. O. H. G. *chorn*.

The English *kin* is Gothic *kuni*, O. H. G. *chunni*. In Greek *génos*, Lat. *genus*, Sk. *janas*, we have the same word. The English *child* is in Old Saxon *kind*, the Greek *gónos*, offspring. The English *queen* is the Gothic *qinô*, or *qens*, the Old Saxon *quena*, A.S. *even*. It meant originally, like the Greek *gyné*,† the Old Slavonic *žena*, the Sanskrit *jani* and *janî*, mother, just as *king*, the German *könig*, the O. H. G. *chuninc*, the A.S. *cyn-ing*, meant originally, like Sk. *janaka*, father.

The English *knot* is the Old Norse *knâtr*, the Latin *nodus*, which stands for *gnodus*.

- V. D, Sanskrit d; Greek, Latin, Celtic, Slavonic d.  
T, Gothic t.  
TH, Old High-German z.

(5.) English *two* is Gothic *twai*, O. H. G. *zuei*. In

\* *Brande*, sorte de broussaille dans le Berry, bruyère à balai.  
† Curtius, *G. E.* ii. 247.



all other languages we get the initial soft d; Greek *dúo*, Latin *duo*, Lith. *du*, Slav. *dva*, Irish *do*. *Dubius*, doubtful, is derived from *duo*, two; and the same idea is expressed by the German *Zweifel*, Old High-German *zwifal*, Gothic *tweifts*.

English *tree* is Gothic *triu*; in Sanskrit *dru*, wood and tree (*dâru*, a log). In Greek *drýs* is tree, but especially *the* tree, namely, the oak.\* In Irish *darach* and in Welsh *derw*, the meaning of oak is said to preponderate, though originally they meant tree in general. In Slavonic *drjevo* we have again the same word in the sense of tree. The Greek *dóry* meant originally a wooden shaft, then a spear.

English *timber* is Gothic *timr* or *timbr*, from which *timrjan*, to build. We must compare it, therefore, with Greek *démein* to build, *dómos*, house, Lat. *domus*, Sanskrit, *dama*, the German *Zimmer*, room.

VI. B, Sanskrit b or v; Greek, Latin, Celtic, and Slavonic b.

P, Gothic p (scarce).

PH, Old High-German ph or f.

(6.) There are few really Saxon words beginning with p, and there are no words in Gothic beginning with that letter, except foreign words. In Sanskrit, too, the consonant that ought to correspond to Gothic p, namely b, is very seldom, if ever, an initial sound, its place being occupied by the labial spiritus v.

We now proceed to the third class, i.e. words beginning in English and Gothic with aspirates, or more properly with breathings, which necessitate in all other Aryan languages, except Old High-German, corresponding consonants such as k, t, p. In Old

\* Schol. ad Hom. *Il.* xi. 86. *δρυτόμος, ξυλοτόμος· δρῦν γὰρ ἐκάλουν οἱ παλαιοὶ ἀπὸ τοῦ ἀρχαιοτέρου πᾶν δένδρον.*

High-German the law breaks down. We find h and f instead of g and b, and only in the dental series the media d has been preserved, corresponding to Sanskrit t and Gothic th.

VII. K, Sanskrit k ; Greek k ; Latin c, qu ; Old Irish, c, ch ; Slavonic k.

KH, Gothic h, g (f). Sanskrit h.

G, Old High-German h (g, k).

(7.) The English *heart* is the Gothic *hairtô*. Accordingly we find in Latin *cor, cordis*, in Greek *kardia*. In Sanskrit we should expect *kṛid*, instead of which we find the irregular form *hṛid*. O.H.G. *herza*.

The English *hart, cervus*, is the Anglo-Saxon *heorot*, the Old High-German *hiruz*. This points to Greek *keras*, horned, from *kéras*, horn, and to *cervus* in Latin. The same root produced in Latin *cornu*, Gothic *hauru*, Old High-German *horn*. In Sk. *śiras* is head, *śringa*, horn.

The English *who* and *what*, though written with *wh*, are in Anglo-Saxon *hwa* and *hvæt*, in Gothic *hvas, hvô, hva*. Transliterating this into Sanskrit, we get *kas, kâ, kad* ; Latin *quis, quæ, quid* ; Greek *kós* and *pós*.

VIII. T, Sanskrit t ; Greek, Latin, Celtic, Slavonic t.

TH, Gothic th and d.

D, Old High-German d.

(8.) The English *that* is the Gothic *thata*, the neuter of *sa, sô, thata* ; A.S. *se, seó, thæt* ; German *der, die, das*. In Sanskrit *sa, sâ, tad* ; in Greek *hós, hé, tó*.

In the same manner *three*, Gothic *thrais*, is Sanskrit *trayas*, High German *drei*.

*Thou*, Sanskrit *tvam*, Greek *tý* and *sý*, Latin *tu*, High German *du*.

*Thin* in old Norse is *thunnr*, Sanskrit *tanu-s*, Latin *tenuis*, High German *dünn*.

- IX. P, Sanskrit p; Greek, Latin, Celtic, Slavonic p.  
PH, Gothic f and b.  
B, Old High-German f and v.

(9.) The last case is that of the labial spiritus in English or Gothic, which requires a hard labial as its substitute in Sanskrit and the other Aryan dialects, except in Old High-German, where it mostly reappears as f.

The English *to fare* in 'fare thee well' corresponds to Greek *póros*, a passage. *Welfare*, *wohlfahrt*, would be in Greek *euporía*, opposed to *aporía*, helplessness. In Sanskrit the same word appears, though slightly altered, namely, *char*,\* to walk.

The English *feather* would correspond to a Sanskrit *pattra*, and this means a *wing* of a bird, i.e. the instrument of flying, from *pat*, to fly, and *tra*. As *penna*, it comes from the same root, but is formed with another suffix. It would be in Sanskrit *patana*, *pesna* and *penna* in Latin.

The English *friend* is a participle present. The verb *frijon* in Gothic means *to love*; hence, *frijond*, a lover. It is the Sanskrit *prî*, to love.

The English *few* is the same word as the French *peu*. *Few*, however, is not borrowed from Norman-French, but the two are distant cousins. *Peu* goes back to *paucus*; *few* to A.S. *feawa*, Gothic *fav-s*; and this is the true Gothic representative of the Latin *paucus*. O.H.G. *fôh*.†

\* Cf. Grimm, s. v. *fahren*.

† Kuhn, *Zeitschrift*, i. 515. For exceptions to Grimm's law, see a learned article by Professor Lottner, in Kuhn's *Zeitschrift*, xi. 161; and Grassmann's observations in the same Journal, xii. 131.



## GENERAL TABLE OF GRIMM'S LAW.

	1	2	3	4	5	6	7	8	9
{ Sanskrit . . .	gh (h)	dh (h)	bh (h)	g	d	b	k	t	p
{ Greek . . . .	χ	θ	φ	γ	δ	β	κ	τ	π
{ Latin . . . .	h f (g v)	f (d b)	f (b)	g	d	b	c qu	t	p
{ Old Irish . . .	g	d	b	g	d	b?	c (ch)	t (th)	(p)?
{ Old Slavonic .	g z	d	b	g z	d	b	k	t	p
{ Lithuanian . .	g z	d	b	g z	d	b	k	t	p
{ Gothic . . . .	g	d	b	k	t	(p)?	h g (f)	th d	f b
{ Old High-German	k	t	p	ch	z z	f ph	h g k	d	f v

## APPENDIX.

## ON WORDS FOR FIR, OAK, AND BEECH.

In the course of these illustrations of Grimm's law I was led to remark on the peculiar change of meaning in Latin *fagus*, Greek *phēgós*, and Gothic *bōka*. *Phēgós* in Greek means oak, never beech;\* in Latin and Gothic *fagus* and *bōka* signify beech, and beech only. No real attempt, as far as I know, has ever been made to explain how the same name came to be attached to trees so different in outward appearance as oak and beech. In looking out for analogous cases, and trying to find out whether other names of trees were likewise used in different senses in Greek, Latin, and German, one other name occurred to me which in German means fir, and in Latin oak. At first sight the English word *fir* does not look very like the Latin *quercus*, yet it is the same word. If we trace *fir* back to Anglo-Saxon we find it there under the form of *furh*. According to

\* Theophrastus, *De Historia Plantarum*, iii. 8, 2.

Grimm's law, *f* points to *p*, *h* to *k*, so that in Latin we should have to look for a word the consonantal skeleton of which might be represented as *p r c*. Guttural and labial tenues change, and as Anglo-Saxon *fîf* points to *quinque*, so *furh* leads to Latin *quercus*, oak. In Old High-German, *foraha* is *Pinus silvestris*; in modern German *föhre* has the same meaning. But in a passage quoted from the Lombard laws of Rothar, *fereha*, evidently the same word, is mentioned as a name of oak (*roborem aut quercum quod est fereha*); and Grimm, in his 'Dictionary of the German Language,' gives *ferch*, in the sense of oak, blood, life.

It would be easy enough to account for a change of meaning from fir, or oak, or beech, to tree in general, or *vice versâ*. We find the Sanskrit *dru*, wood (cf. *druma*, tree, *dâru*, log), the Gothic *triu*, tree, used in Greek chiefly in the sense of oak, *drÿs*. The Irish *darach*, Welch *derw*, mean oak, and oak only.\* But what has to be explained here is the change of meaning from fir to oak, and from oak to beech—i.e. from one particular tree to another particular tree. While considering these curious changes, I happened to read Sir Charles Lyell's new work, 'The Antiquity of Man,' and I was much struck by the following passage (p. 8 *seq.*):—

'The deposits of peat in Denmark, varying in depth from ten to thirty feet, have been formed in hollows or depressions in the northern drift or boulder formations hereafter to be described. The lowest stratum, two or three feet thick, consists of swamp peat, composed chiefly of moss or sphagnum, above which lies another growth of peat, not made up ex-

\* Grimm, *Wörterbuch*, s. v. Eiche.



clusively of aquatic or swamp plants. Around the borders of the bogs, and at various depths in them, lie trunks of trees, especially of the Scotch fir (*Pinus silvestris*), often three feet in diameter, which must have grown on the margin of the peat-mosses, and have frequently fallen into them. This tree is not now, nor has ever been in historical times, a native of the Danish Islands, and when introduced there has not thriven; yet it was evidently indigenous in the human period, for Steenstrup has taken out with his own hands a flint instrument from below a buried trunk of one of these pines. It appears clear that the same Scotch fir was afterwards supplanted by the sessile variety of the common oak, of which many prostrate trunks occur in the peat at higher levels than the pines; and still higher the pedunculated variety of the same oak (*Quercus Robur*, L.) occurs, with the alder, birch (*Betula verrucosa*, Ehrh.), and hazel. The oak has in its turn been almost superseded in Denmark by the common beech. Other trees, such as the white birch (*Betula alba*), characterise the lower part of the bogs, and disappear from the higher; while others again, like the aspen (*Populus tremula*), occur at all levels, and still flourish in Denmark. All the land and fresh-water shells, and all the mammalia as well as the plants, whose remains occur buried in the Danish peat, are of recent species.

‘It has been stated that a stone implement was found under a buried Scotch fir at a great depth in the peat. By collecting and studying a vast variety of such implements, and other articles of human workmanship preserved in peat and in sand-dunes on the coast, as also in certain shell-mounds of the aborigines presently to be described, the Danish and Swedish

antiquaries and naturalists, MM. Nillson, Steens-trup, Forchhammer, Thomsen, Worsäae, and others, have succeeded in establishing a chronological succession of periods, which they have called the ages of stone, of bronze, and of iron, named from the materials which have each in their turn served for the fabrication of implements.

‘The age of stone in Denmark coincides with the period of the first vegetation, or that of the Scotch fir, and in part at least with the second vegetation, or that of the oak. But a considerable portion of the oak epoch coincided with “the age of bronze,” for swords and shields of that metal, now in the Museum of Copenhagen, have been taken out of peat in which oaks abound. The age of iron corresponded more nearly with that of the beech tree.

‘M. Morlot, to whom we are indebted for a masterly sketch of the recent progress of this new line of research, followed up with so much success in Scandinavia and Switzerland, observes that the introduction of the first tools made of bronze among a people previously ignorant of the use of metals, implies a great advance in the arts, for bronze is an alloy of about nine parts of copper and one of tin; and although the former metal, copper, is by no means rare, and is occasionally found pure, or in a native state, tin is not only scarce, but never occurs native. To detect the existence of this metal in its ore, then to disengage it from the matrix, and finally, after blending it in due proportion with copper, to cast the fused mixture in a mould, allowing time for it to acquire hardness by slow cooling, all this bespeaks no small sagacity and skilful manipulation. Accordingly, the pottery found associated with weapons of bronze is of a more

ornamental and tasteful style than any which belongs to the age of stone. Some of the moulds in which the bronze instruments were cast, and "tags," as they are called, of bronze, which are formed in the hole through which the fused metal was poured, have been found. The number and variety of objects belonging to the age of bronze indicates its long duration, as does the progress in the arts implied by the rudeness of the earlier tools, often mere repetitions of those of the stone age, as contrasted with the more skilfully-worked weapons of a later stage of the same period.

'It has been suggested that an age of copper must always have intervened between that of stone and bronze; but if so, the interval seems to have been short in Europe, owing apparently to the territory occupied by the aboriginal inhabitants having been invaded and conquered by a people coming from the East, to whom the use of swords, spears, and other weapons of bronze, was familiar. Hatchets, however, of copper have been found in the Danish peat.

'The next stage of improvement, or that manifested by the substitution of iron for bronze, indicates another stride in the progress of the arts. Iron never presents itself, except in meteorites, in a native state, so that to recognise its ores, and then to separate the metal from its matrix, demands no small exercise of the powers of observation and invention. To fuse the ore requires an intense heat, not to be obtained without artificial appliances, such as pipes inflated by the human breath, or bellows, or some other suitable machinery.'

After reading this extract I could hardly help asking the question, Is it possible to explain the change of meaning in one word which meant fir and came to



mean oak, and in another word which meant oak and came to mean beech, by the change of vegetation which actually took place in those early ages? Can we suppose that members of the Aryan family had settled in parts of Europe, that dialects of their common language were spoken in the south and in the north of this western peninsula of the primeval Asiatic Continent, at a time which Mr. Steenstrup estimates as at least 4,000 years ago? Sir Charles Lyell does not commit himself to such definite chronological calculations. 'What may be the antiquity,' he writes, 'of the earliest human remains preserved in the Danish peat, cannot be estimated in centuries with any approach to accuracy. In the first place, in going back to the bronze age, we already find ourselves beyond the reach of history or even of tradition. In the time of the Romans, the Danish Isles were covered, as now, with magnificent beech forests. Nowhere in the world does this tree flourish more luxuriantly than in Denmark, and eighteen centuries seem to have done little or nothing towards modifying the character of the forest vegetation. Yet in the antecedent bronze period there were no beech trees, or, at most, but a few stragglers, the country being covered with oak. In the age of stone, again, the Scotch fir prevailed, and already there were human inhabitants in those old pine forests. How many generations of each species of tree flourished in succession before the pine was supplanted by the oak, and the oak by the beech, can be but vaguely conjectured, but the minimum of time required for the formation of so much peat must, according to the estimate of Steenstrup and other good authorities, have amounted to at least 4,000 years; and there is nothing in the observed rate of the

growth of peat opposed to the conclusion that the number of centuries may not have been four times as great, even though the signs of man's existence have not yet been traced down to the lowest or amorphous stratum. As to the "shell-mounds," they correspond in date to the older portion of the peaty record, or to the earliest part of the age of stone as known in Denmark.'

To suppose the presence in Europe of people speaking Aryan languages at so early a period in the history of the world, is opposed to the ordinarily received notions as to the advent of the Aryan race on the soil of Europe. Yet, if we ask ourselves, we shall have to confess that these notions themselves rest on no genuine evidence, nor is there for these early periods any available measure of time, except what may be read in the geological annals of the post-tertiary period. The presence of human life during the fir period or the stone age seems to be proved. The question whether the races then living were Aryan or Turanian can be settled by language only. Skulls may help to determine the physical character, but they can in no way clear up our doubts as to the language of the earliest inhabitants of Europe. Now, if we find in the dialects of Aryan speech spoken in Europe, if we find in Greek, Latin, and German, changes of meaning running parallel with the changes of vegetation just described, may we not admit, though as an hypothesis, and as an hypothesis only, that such changes of meaning were as the shadows cast on language by passing events?

Let us look for analogies. A word like *book*, the German *Buch*, being originally identical with *beech*, the German *Buche*, is sufficient evidence to prove that

German was spoken before parchment and paper superseded wooden tablets. If we knew the time when tablets made of beech-wood ceased to be employed as the common writing material, that date would be a *minimum* date for the existence of that language in which a book is called book, and not either *volumen*, or *liber*, or *biblos*.

Old words, we know, are constantly transferred to new things. People speak of an *engine-driver*, because they had before spoken of the driver of horses. They speak of a steel-pen and a *pen-holder*, because they had before spoken of a *pen*, *penna*. When hawks were supplanted by fire-arms, the names of the birds of prey, formerly used in hawking, were transferred to the new weapons. *Mosquet*, the name of a sparrow-hawk, so called on account of its dappled (*muscatus*) plumage, became the name of the French *mousquet*, a musket. *Faucon*, hawk, was the name given to a heavier sort of artillery. *Sacre* in French and *saker* in English, mean both hawk and gun; and the Italian *terzeruolo*, a small pistol, is closely connected with *terzuolo*, a hawk. The English expression, 'to let fly at a thing' suggests a similar explanation. In all these cases if we knew the date when hawking went out and fire-arms came in, we should be able to measure by that date the antiquity of the language in which fire-arms were called by names originally the names of hawks.

The Mexicans called their own copper or bronze *tepuztli*, which is said to have meant originally *hatchet*. The same word is now used for iron, with which the Mexicans first became acquainted through their intercourse with the Spaniards. *Tepuztli* then became a general name for metal, and when copper had to be



distinguished from iron, the former was called red, the latter black *teputzli*.\* The conclusion which we may draw from this, viz., that Mexican was spoken before the introduction of iron into Mexico, is one of no great value, because we know it from other sources.

But let us apply the same line of reasoning to Greek. Here, too, *chalkós*, which at first meant copper, † came afterwards to mean metal in general, and *chalkeús*, originally a coppersmith, occurs in the *Odyssey* (ix. 391) in the sense of blacksmith, or a worker of iron (*sidēreús*). What does this prove? It proves that Greek was spoken before the discovery of iron, and it shows that if we knew the exact date of that discovery, which certainly took place before the Homeric poems were finished, we should have in it a *minimum* date for the antiquity of the Greek language. Though the use of iron was known before the composition of the Homeric poems, it certainly was not known, as we shall see presently, previous to the breaking up of the Aryan family. Even in Greek poetry there is a distinct recollection of an age in which copper was the only metal used for weapons, armour, and tools. Hesiod ‡ speaks of the third generation of men, ‘who had arms of copper, houses of copper, who ploughed with copper, and the black iron did not exist.’ In the Homeric poems,

\* *Anahuac; or, Mexico and the Mexicans*, by Edward B. Tylor. 1861, p. 140.

† Gladstone, *Homer and the Homeric Age*, iii. p. 499.

‡ Hesiod, *Op. et D.* 150 :—

Τοῖς δ' ἦν χάλκεα μὲν τεύχεα, χάλκεοι δὲ τε οἴκοι,  
Χαλκῷ δ' εἰργάζοντο μέλας δ' οὐκ ἔσκε σίδηρος.

Cf. Lucretius, 5, 1286.

knives, spear-points, and armour were still made of copper, and we can hardly doubt that the ancients knew a process of hardening that pliant metal, most likely by repeated smelting and immersion in water.\* The discovery of iron marks a period in the history of the world. Iron is not, like gold, silver, and copper, found in a pure state; the iron ore has to be searched for, and the process of extracting from it the pure metal is by no means easy.†

What makes it likely that iron was not known previous to the separation of the Aryan nations is the fact that its names vary in every one of their languages. It is true that *chalkós*, too, in the sense of copper, occurs in Greek only, for it cannot be compared phonetically with Sanskrit *hr̥iku*, which is said to mean tin. But there is another name for copper, which is shared in common by Latin and the Teutonic languages, *æs*, *æris*, Gothic *ais*, Old High-German *êr*, Modern German *Er-z*, Anglo-Saxon *âr*, English *ore*. Like *chalkós*, which originally meant copper, but came to mean metal in general, bronze or brass, the Latin *æs*, too, changed from the former to the latter meaning; and we can watch the same transition in the corresponding words of the Teutonic languages. *Æs*, in fact, like Gothic

\* See J. P. Rossignol, Membre de l'Institut, *Les Métaux dans l'Antiquité*, Paris, 1863, p. 215, 237. Proclus says, with regard to the passage in Hesiod, καὶ τῷ χαλκῷ πρὸς τοῦτο ἐχρῶντο, ὡς τῷ σιδήρῳ πρὸς γεωργίαν, διὰ τινος βαφῆς τὸν χαλκὸν στεῖρόποιουντες. In Strabo, xiii. p. 610, the process of making the alloy of copper and zinc is described, and if *φενδάργυρος* is zinc, the result of its mixture with copper can only be brass.

† Rossignol, *l. c.* p. 216. Buffon, *Histoire Naturelle*, article du *Fer*, and article du *Cuivre*. Homer calls iron πολύκμητος σίδηρος.



*aiz*, meant the one metal which, with the exception of gold and silver, was largely used of old for practical purposes. It meant copper whether in its pure state, or alloyed, as in later times, with zin (bronze) and zinc (brass). But neither *æs* in Latin nor *aiz* in Gothic ever came to mean gold, silver, or iron. It is all the more curious, therefore, that the Sanskrit *ayas*, which is the same word as *æs* and *aiz*, should in Sanskrit have assumed the almost exclusive meaning of iron. I suspect, however, that in Sanskrit, too, *ayas* meant originally the metal, i.e. copper, and that as iron took the place of copper, the meaning of *ayas* was changed and specified. In passages of the Atharva Veda (xi. 3, 1, 7), and the Vâjaseņeyi-saņhitâ (xviii. 13), a distinction is made between *śyâmam ayas*, dark-brown metal, and *loham* or *lohitam ayas*, bright metal, the former meaning copper, the latter iron.\* The flesh of an animal is likened to copper, its blood to iron. This shows that the exclusive meaning of *ayas* as iron was of later growth, and renders it more than probable that the Hindus, like the Romans and Germans, attached originally to *ayas* (*æs* and *aiz*), the meaning of the metal *par excellence*, i.e. copper. In Greek, *ayas* would have dwindled to *ēs*, and was replaced by *chalkós*; while, to distinguish the new from the old metals, iron was called by Homer *sídēros*. In Latin, different kinds of *æs* were distinguished by adjectives, the best known being the *æs Cyprium*, brought from *Cyprus*. Cyprus was taken possession of by the Romans in 57 B.C.

\* *Lohitâyas* is given in Wilson's *Dictionary* as meaning copper. If this were right, *śyâmam ayas* would be iron. The commentator to the Vâjaseņeyi-saņhitâ is vague, but he gives copper as the first explanation of *śyâmam*, iron as the first explanation of *loham*.

*Herod* was entrusted by Augustus with the direction of the Cyprian copper-mines, and received one half of the profits. Pliny used *æs Cyprium* and *Cyprium* by itself, for copper. The popular form, *cuprum*, copper, was first used by Spartianus, in the third century, and became more frequent in the fourth.\* Iron in Latin received the name of *ferrum*. In Gothic, *aiz* stands for Greek *chalkós*, but in Old High-German *chuphar* appears as a more special name, and *êr* assumes the meaning of bronze. This *êr* is lost in Modern German,† except in the adjective *chern*, and a new word has been formed for metal in general, the Old High-German *ar.uzi*,‡ the modern German *Erz*. As in Sanskrit, *ayas* assumed the special meaning of iron, we find that in German, too, the name for iron was derived from the older name of copper. The Gothic *eisarn*, iron, is considered by Grimm as a derivative form of *aiz*, and the same scholar concludes from this that ‘in Germany bronze must have been in use before iron.’ § *Eisarn* is changed in Old High-German to *îsarn*, later to *îsan*, the Modern German

\* Rossignol, *l. c.* p. 268–9.

† It occurs as late as the fifteenth century. See Grimm, *Deutsches Wörterbuch*, s. v. *erin*, and s. v. *Erz*, 4, *sub fine*.

‡ Grimm throws out a hint that *ruzi* in *aruzi* might be the Latin *rudus*, or *raudus*, *rauderis*, brass, but he qualifies the idea as bold.

§ See Grimm, *Geschichte der Deutschen Sprache*, where the first chapter is devoted to the consideration of the names of metals. The same subject has been treated by M. A. Pictet, in his *Origines Indo-Européennes*, vol. i. p. 149 *seq.* The learned author arrives at results very different from those stated above, but the evidence on which he relies, and particularly the supposed coincidences between comparatively late or purely hypothetical compounds in Sanskrit, and words in Greek and Latin, would require much fuller proofs than he has given.

*eisen*; while the Anglo-Saxon *îsern* leads to *îren* and *iron*.

It may safely be concluded, I believe, that before the Aryan separation, gold, silver, and a third metal, i. e. copper, in a more or less pure state, were known. Sanskrit, Greek, the Teutonic and Slavonic languages, agree in their names for gold;\* Sanskrit, Greek, and Latin in their names for silver; † Sanskrit, Latin, and German in their names for the third metal. The names for iron, on the contrary, are different in each of the principal branches of the Aryan family, the coincidences between the Celtic and Teutonic names being of a doubtful character. If, then, we consider that the Sanskrit *ayas*, which meant, originally, the same as Latin *æs* and Gothic *aiz*, came to mean iron—that the German word for iron is derived from Gothic *aiz*, and that Greek *chalkós*, after meaning copper, was used as a general name for metal, and conveyed occasionally the meaning of iron—we may conclude, I believe, that Sanskrit, Greek, Latin, and German were spoken before the discovery of iron, that each nation became acquainted with that most useful of all metals after the Aryan family was broken up, and that each of the Aryan languages coined its name for iron from its own resources, and marked it by its own national stamp, while it brought the names for gold, silver, and copper, from the common treasury of their ancestral home.

Let us now apply the same line of reasoning to the names of fir, oak, and beech, and their varying signification. The Aryan tribes, all speaking dialects of

\* Curtius, *Griechische Etymologie*, i. 172, ii. 314.

† Curtius, *l. c.* i. 141.



one and the same language, who came to settle in Europe during the fir period, or the stone age, would naturally have known the fir-tree only. They called it by the same name which still exists in English as *fir*, in German as *föhre*. How was it, then, that the same word, as used in the Lombard dialect, means oak, and that a second dialectic form exists in modern German, meaning oak, and not fir? We can well imagine that the name of the fir-tree should, during the fir period, have become the appellative for tree in general, just as *chalkós*, copper, became the appellative for metal in general. But how could that name have been again individualized and attached to oak, unless the dialect to which it belonged had been living at a time when the fir vegetation was gradually replaced by an oak vegetation? Although there is as little evidence of the Latin *quercus* having ever meant fir, and not oak, as there is of the Gothic *aiz* having ever meant copper and not bronze, yet, if *quercus* is the same word as *fir*, I do not hesitate to postulate for it the pre-historic meaning of fir. That in some dialects the old name of fir should have retained its meaning, while in others it assumed that of oak, is in perfect harmony with what we observed before, viz., that *æs* retained its meaning in Latin, while *ayas* in Sanskrit assumed the sense of iron.

The fact that *phēgós* in Greek means oak,\* and oak only, while *fagus* in Latin, *boka* in Gothic, mean beech,

\* In Persian, too, *búk* is said to mean oak. No authority, however, has ever been given for that meaning, and it is left out in the last edition of *Johnson's Dictionary*, and in Vullers' *Lexicon Persico-Latinum*. Though the Persian *búk*, in the sense of oak, would considerably strengthen our argument, it is necessary to wait until the word has been properly authenticated.

requires surely an explanation, and until a better one can be given, I venture to suggest that Teutonic and Italic Aryans witnessed the transition of the oak period into the beech period, of the bronze age into the iron age, and that while the Greeks retained *phēgós* in its original sense, the Teutonic and Italian colonists transferred the name, as an appellative, to the new forests that were springing up in their wild homes.

I am fully aware that many objections may be urged against such an hypothesis. Migration from a fir-country into an oak-country, and from an oak-country into a beech-country, might be supposed to have caused these changes of meaning in the ancient Aryan words for fir and oak. I must leave it to the geologist and botanist to determine whether this is a more plausible explanation, and whether the changes of vegetation, as described above, took place in the same rotation over the whole of Europe, or in the North only. Again, the skulls found in the peat deposits are of the lowest type, and have been confidently ascribed to races of non-Aryan descent. In answer to this, I can only repeat my old protest,\* that the science of language has nothing to do with skulls. Lastly, the date thus assigned to the Aryan arrival in Europe will seem far too remote, particularly if it be considered that long before the first waves of the Aryan emigrants touched the shores of Europe, Turanian tribes, Finns, Lapps, and Basks, must have roved through the forests of our continent. My answer is, that I feel the same difficulty myself, but that I

\* See M. M.'s *Lectures on the Turanian Languages*, p. 89. *Ethnology v. Phonology*.

have always considered a full statement of a difficulty a necessary step towards its solution. I shall be as much pleased to see my hypothesis refuted as to see it confirmed. All that I request for it is an impartial examination.



## LECTURE VI.

## ON THE PRINCIPLES OF ETYMOLOGY.

VOLTAIRE defined etymology as a science in which vowels signify nothing at all, and consonants very little. '*L'étymologie,*' he said, '*est une science où les voyelles ne font rien, et les consonnes fort peu de chose.*' Nor was this sarcasm quite undeserved by those who wrote on etymology in Voltaire's time, and we need not wonder that a man so reluctant to believe in any miracles should have declined to believe in the miracles of etymology. Of course, not even Voltaire was so great a sceptic as to maintain that the words of our modern languages have no etymology, i.e. no origin, at all. Words do not spring into life by an act of spontaneous generation, and the words of modern languages in particular are in many cases so much like the words of ancient languages that no doubt is possible as to their real origin and derivation. Wherever there was a certain similarity in sound and meaning between French words and words belonging to Latin, German, Hebrew, or any other tongue, even Voltaire would have acquiesced. No one, for instance, could ever have doubted that the French word for God, *Dieu*, was the same as the Latin *Deus*; that the French *homme*, and even *on*, was the Latin *homo*; the French *femme*, the Latin *femina*. In these instances there had been no change of meaning, and the change of form, though

the process by which it took place remained unexplained, was not such as to startle even the most sensitive conscience. There was indeed one department of etymology which had been cultivated with great success in Voltaire's time, and even long before him, namely, the history of the Neo-Latin or Romance dialects. We find in the dictionary of *Du Cange* a most valuable collection of extracts from mediæval Latin writers, which enables us to trace, step by step, the gradual changes of form and meaning from ancient to modern Latin; and we have in the much-ridiculed dictionary of *Menage* many an ingenious contribution towards tracing those mediæval Latin words in the earliest documents of French literature, from the times of the Crusades to the Siècle of Louis XIV. Thus a mere reference to Montaigne, who wrote in the sixteenth century, is sufficient to prove that the modern French *gêner* was originally *gehennner*. Montaigne writes: '*Je me suis contraint et gehenné,*' meaning, 'I have forced and tortured myself.' This verb *gehennner* is easily traced back to the Latin *gehenna*,\* used in the Greek of the New Testament and in the ecclesiastical writings of the middle ages not only in the sense of hell, but in the more general sense of suffering and pain. It is well known that Gehenna was originally the name of the valley of Hinnom, near Jerusalem (גֵּיהֶנּוֹם), the Tophet, where the Jews burnt their sons and their daughters in the fire, and of which Jeremiah prophesied that it should be called the valley of slaughter: for 'They shall bury in Tophet till there be no place.'†

\* Molière says, '*Je sens de son courroux des gênes trop cruelles.*'

† Jeremiah vii. 31-32.



How few persons think now of the sacrifices offered to Moloch in the valley of Hinnom when they ask their friends to make themselves comfortable, and say, '*Ne vous gênez pas.*'

It was well known not only to Voltaire, but even to Henri Estienne,\* who wrote in the sixteenth century, that it is in Latin we may expect to find the original form and meaning of most of the words which fill the dictionaries of the French, Italian, and Spanish languages. But these early etymologists never knew of any test by which a true derivation might be distin-

\* Henri Estienne, *Traicte de la Conformité du Langage Français avec le Grec*, 1566. What Estienne means by the *conformité* of French and Greek refers chiefly to syntactical peculiarities, common to both languages: 'En une epistre Latine que je mi l'an passé audevant de quelques miens dialogues Grecs, ce propos m'eschappa, Quia multo majorem Gallica lingua cum Græcâ habet affinitatem quam Latina; et quidam tantum (absit invidia dicto) ut Gallos eo ipso quod nati sint Galli, maximum ad linguæ Græcæ cognitionem προτέρημα seu πλεονέκτημα afferre putem.' Estienne's etymologies are mostly sensible and sober; those which are of a more doubtful character are marked as such by himself. It is not right to class so great a scholar as H. Estienne together with Perion, and to charge him with having ignored the Latin origin of French. (See August Fuchs, *Die Romanischen Sprachen*, 1849, p. 9.) What Estienne thought of Perion may be seen from the following extract (*Traicte de la Conformité*, p. 139): 'Il trouvera assez bõ nombre de telles en un livre de nostre maistre Perion: je ne di pas seulesmēt de phantastiques, mais de sottés et ineptes, et si lourdes et asnieres que n'estoyent les autres temoignages que ce poure moine nous a laissez de sa lourderie et asnerie, on pourroit penser son œuvre estre supposé.' Estienne is wrongly charged with having derived *amiral*, French *amiral*, from ἀλμυρός. He says it is Arabic, and so it is. It is the Arab *Emir*, prince, leader, possibly with the Arabic article. French *amiral*; Span. *almirante*; It. *almiraglio*, as if from *admirabilis*. Hammer's derivation from *amir al bahr*, commander of the sea, is untenable.

guished from a false one, except similarity of sound and meaning; and how far this similarity might be extended may be seen in such works as Perion's '*Dialogi de Linguæ Gallicæ Origine*' (1557), or Guichard's '*Harmonie Étymologique des Langues Hébraïque, Chaldaïque, Syriaque, Greque, Latine, Italienne, Espagnole, Allemande, Flamende, Angloise*' (Paris, 1606). Perion derives *brébis*, sheep (the Italian *berbice*) from *próbaton*, not from the Latin *vervex*, like *berger* from *berbicarius*. *Envoyer* he derives from the Greek *pémpein*, not from the Latin *inviare*. *Heureux* he derives from the Greek *oúrios*.

Now, if we take the last instance, it is impossible to deny that there is a certain similarity of form and meaning between the Greek and French; and as there can be no doubt that certain French words, such as *parler*, *prêtre*, *aumône*, were derived from Greek, it would have been very difficult to convince M. Perion that his derivation of *heureux* was not quite as good as any other. There is another etymology of the same word, according to which it is derived from the Latin *hora*. *Bonheur* is supposed to be *bona hora*; *malheur*, *mala hora*; and therefore *heureux* is referred to a supposed Latin form, *horosus*, in the sense of *fortunatus*. This etymology, however, is no better than that of Perion. It is a guess, and no more, and it falls to the ground as soon as any of the more rigid tests of etymological science are applied to it. In this instance the test is very simple. There is, first of all, the gender of *malheur* and *bonheur*, masculine instead of feminine. Secondly, we find that *malheur* was spelt in Old French *mal aür*, which is *malum augurium*. (See Diez, '*Etymologisches Wörterbuch der Romanischen Sprachen*,' 1858, s. v.)

Thirdly, we find in Provençal *agur*, *augur*, and from it the Spanish *aguëro*, an omen. *Augurium* itself comes from *avis*, bird, and *gur*, telling, *gur* being connected with *garrire*, *garrulus*, and the Sanskrit *gar* or *grî*, to shout.

We may form an idea of what etymological tests were in former times when we read in Guichard's 'Harmonie Étymologique: '\* 'With regard to the derivations of words by means of the addition, subtraction, transposition, and inversion of letters, it is certain that this can and must be done, if we wish to find true etymologies. Nor is it difficult to believe this, if we consider that the Jews wrote from right to left, whereas the Greeks and the other nations, who derive their languages from Hebrew, write from left to right.' Hence, he argues, there can be no harm in inverting letters or changing them to any amount. As long as etymology was carried on on such principles, it could not claim the name of a science. It was an amusement in which people might display more or less of learning or ingenuity, but it was unworthy of its noble title, 'The Science of Truth.'

It is only in the present century that etymology has taken its rank as a science, and it is curious to observe that what Voltaire intended as a sarcasm has now become one of its acknowledged principles. Etymology is indeed a science in which identity, or even similarity, whether of sound or meaning,

\* 'Quant à la derivaision des mots par addition, subtraction, transposition, et inversion des lettres, il est certain que cela se peut et doit ainsi faire, si on veut trouver les étymologies. Ce qui n'est point difficile à croire, si nous considerons que les Hebreux escrivent de la droite à la senestre, et les Grecs et autres de la senestre à la droite.'



is of no importance whatever. Sound etymology has nothing to do with sound. We know words to be of the same origin which have not a single letter in common, and which differ in meaning as much as black and white. Mere guesses, however plausible, are completely discarded from the province of scientific etymology. What etymology professes to teach is no longer merely that one word is derived from another; but how to prove, step by step, that one word was regularly and necessarily changed into another. As in geometry it is of very little use to know that the squares of the two sides of a rectangular triangle are equal to the square of the hypotenuse, it is of little value in etymology to know, for instance, that the French *larme* is the same word as the English *tear*. Geometry professes to teach the process by which to prove that which seems at first sight so incredible; and etymology professes to do the same. A derivation, even though it be true, is of no real value if it cannot be proved—a case which happens not unfrequently, particularly with regard to ancient languages, where we must often rest satisfied with refuting fanciful etymologies, without being able to give anything better in their place. It requires an effort before we can completely free ourselves from the idea that etymology must chiefly depend on similarity of sound and meaning; and in order to dispose of this prejudice effectually, it may be useful to examine this subject in full detail.

If we wish to establish our thesis that sound etymology has nothing to do with sound, we must prove four points:—

1. *That the same word takes different forms in different languages.*

2. *That the same word takes different forms in one and the same language.*

3. *That different words take the same form in different languages.*

4. *That different words take the same form in one and the same language.*

In order to establish these four points, we should at first confine our attention to the history of modern languages, or, as we should say more correctly, to the modern history of language. The importance of the modern languages for a true insight into the nature of language, and for a true appreciation of the principles which govern the growth of ancient languages, has never been sufficiently appreciated. Because a study of the ancient languages has always been confined to a small minority, and because it is generally supposed that it is easier to learn a modern than an ancient tongue, people have become accustomed to look upon the so-called classical languages—Sanskrit, Greek, and Latin—as vehicles of thought more pure and perfect than the spoken or so-called vulgar dialects of Europe. We are not speaking at present of the literature of Greece or Rome or ancient India, as compared with the literature of England, France, Germany, and Italy. We speak only of language, of the roots and words, the declensions, conjugations, and constructions peculiar to each dialect; and with regard to these, it must be admitted that the modern stand on a perfect equality with the ancient languages. Can it be supposed that we, who are always advancing in art, in science, in philosophy, and religion, should have allowed language, the most powerful instrument of the mind, to fall from its pristine purity, to lose its vigour and nobility, and to become a mere jargon?



Language, though it changes continually, does by no means continually decay; or at all events, what we are wont to call decay and corruption in the history of language is in truth nothing but the necessary condition of its life. Before the tribunal of the Science of Language, the difference between ancient and modern languages vanishes. As in botany aged trees are not placed in a different class from young trees, it would be against all the principles of scientific classification to distinguish between old and young languages. We must study the tree as a whole, from the time when the seed is placed in the soil to the time when it bears fruit; and we must study language in the same manner as a whole, tracing its life uninterruptedly from the simplest roots to the most complex derivatives. He who can see in modern languages nothing but corruption or anomaly, understands but little of the true nature of language. If the ancient languages throw light on the origin of the modern dialects, many secrets in the nature of the dead languages can only be explained by the evidence of the living dialects. Apart from all other considerations, modern languages help us to establish by evidence which cannot be questioned the leading principles of the science of language. They are to the student of language what the tertiary, or even more recent formations, are to the geologist. The works of Diez, his 'Comparative Grammar of the Romanic Languages' and his 'Lexicon Comparativum Linguarum Romanarum' are as valuable in every respect as the labours of Bopp, Grimm, Zeuss, and Miklosich; nay, they form the best introduction to the study of the more ancient periods of Aryan speech. Many points which, with regard to Sanskrit, Greek, and Latin, can only be proved by

inductive reasoning, can here be settled by historical evidence.

In the modern Romance dialects we have before our eyes a more complete and distinct picture or repetition of the origin and growth of language than anywhere else in the whole history of human speech. We can watch the Latin from the time of the first Scipionic inscription (283 B.C.) to the time when we meet with the first traces of Neo-Latin speech in Italy, Spain, and France. We can then follow for a thousand years the later history of modern Latin, in its six distinct dialects, all possessing a rich and well-authenticated literature. If certain forms of grammar are doubtful in French, they receive light from the collateral evidence which is to be found in Italian or Spanish. If the origin of a word is obscure in Italian, we have only to look to French and Spanish, and we shall generally receive some useful hints to guide us in our researches. Where, except in these modern dialects, can we expect to find a perfectly certain standard by which to measure the possible changes which words may undergo both in form and meaning without losing their identity? We can here silence all objections by facts, and we can force conviction by tracing, step by step, every change of sound and sense from Latin to French; whereas when we have to deal with Greek and Latin and Sanskrit, we can only use the soft pressure of inductive reasoning.

If we wish to prove that the Latin *coquo* is the same word as the Greek *péptō*, I cook, we have to establish the fact that the guttural and labial tenues, k and p, are interchangeable in Greek and Latin. No doubt there is sufficient evidence in the ancient languages to prove this. Few would deny the

identity of *pénte* and *quinque*, and if they did, a reference to the Oscan dialect of Italy, where *five* is not *quinque* but *pomtis*, would suffice to show that the two forms differed from each other by dialectic pronunciation only. Yet it strengthens the hands of the etymologist considerably if he can point to living languages and trace in these exactly the same phonetic influences. Thus the Gaelic dialect shows the guttural where the Welsh shows the labial tenuis. Five in Irish is *coic*, in Welsh *pimp*. Four in Irish is *cethir*, in Welsh *petwar*. Again, in Wallachian, a Latin *qu* followed by *a* is changed into *p*. Thus, *aqua* becomes in Wallachian *apà*; *equa*, *épà*; *quatuor*, *patru*. It is easier to prove that the French *même* is the Latin *semet ipsissimus*, than to convince the incredulous that the Latin *sed* is a reflective pronoun, and meant originally *by itself*.

Where, again, except in the modern languages, can we watch the secret growth of new forms, and so understand the resources which are given for the formation of the grammatical articulation of language? Everything that is now merely formal in the grammatical system of French can easily be proved to have been originally substantial; and after we have once become fully impressed with this fact, we shall feel less reluctance to acknowledge the same principle with regard to the grammatical system of more ancient languages. If we have learnt how the French future, *j'aimerai*, is a compound tense, consisting of the infinitive and the auxiliary verb, *avoir*, to have, we shall be more ready to admit the same explanation for the Latin future in *bo*, and the Greek future in *sō*. Modern dialects may be said to let out the secrets of language. They often surprise us by



the wonderful simplicity of the means by which the whole structure of language is erected, and they frequently repeat in their new formations the exact process which had given rise to more ancient forms. There can be no doubt, for instance, about the Modern German *entzwei*. *Entzweireissen* does not mean only to tear into two parts, but it assumes the more general sense of to tear in pieces. In English, too, a servant will say that a thing came *a-two*, though he broke it into many pieces. *Entzwei*, in fact, answers exactly the same purpose as the Latin *dis* in *dissolvo*, *disturbo*, *distraho*. And what is the original meaning of this *dis*? Exactly the same as the German *entzwei*, the Low-German *twei*. In Low-German *mîne Schau sint twei* means my shoes are torn. The numeral *duo*, with the adverbial termination *is*, is liable to the following changes:—*Du-is* may become *dvis*, and *dvis dbis*. In *dbis* either the *d* or the *b* must be dropped, thus leaving either *dis* or *bis*. *Bis* in Latin is used in the sense of twice, *dis* in the sense of *a-two*. The same process leads from *duellum*, *Zweikampf*, duel, to *dvellum*, *dbellum*, and *bellum*; from Greek *dyis* to *dFis* and *dis* (twice); from *duiginti* to *dviginti* and *viginti*, twenty; from *dyi-kosi* to *dFi-kosi*, *Fi-kosi*, and *eĭ-kosi*.

And what applies to the form, applies to the meaning of words. What should we say if we were told that a word which means good in Sanskrit meant bad in Greek? Yet we have only to trace the Modern German *schlecht* back through a few centuries before we find that the same word which now means *bad* was then used in the sense of *good*,\* and we are

\* 'Er (Got) enwil niht tuon wan slehtes,' God will do nothing

enabled to perceive, by a reference to intermediate writers, that this transition was by no means so violent as it seems to be. *Schlecht* meant *right* and *straight*, but it also meant *simple*; *simple* came to mean *foolish*; *foolish*, *useless*; *useless*, *bad*. *Ekelhaft* is used by Leibniz in the sense of fastidious, delicate; \* it now means only what causes disgust. *Ingenium*, which meant an inborn faculty, is degraded into the Italian *ingannare*, which means to cheat. *Sælig*, which in Anglo-Saxon meant blessed, *beatus*, appears in English as *silly*, and the same ill-natured change may be observed in the Greek *euéthēs*, guileless, mild, silly, and in the German *albern*, stupid, the Old High-German *alawâr*, verissimus, *alawâri*, benignus.

Thus, a word which originally meant life or time in Sanskrit, has given rise to a number of words expressing eternity, the very opposite of life and time. *Ever* and *never* in English are derived from the same source from which we have *age*. *Age* is of course the French *âge*. This *âge* was in Old French *edage*, changed into *eage* and *âge*. *Edage*, again, represents a Latin form, *ætaticum*, which was had recourse to after the original *ætās* had dwindled away into a mere vowel, the Old French *aé* (Diez, s.v.). Now the Latin *ætās* is a contraction of *ævitās*, as *æternus* is a contraction of *æviternus* (cf. sempiternus). *Ævum*, again, corresponds by its radical, though not by its derivative elements, to Greek *αιών* and the Gothic *aiv-s*, time, and eternity. In Sanskrit, we meet with a *âyus*, a neuter, which, if literally

but what is good. Fridank's *Bescheidenheit*, in M.M.'s *German Classics*, p. 121.

\* Not mentioned in Grimm's *Dictionary*.

translated into Greek, would give as a Greek form *aîos*, and an adjective, *aiês*, neut. *aiês*. Now, although *aîos* does not survive in the actual language of Greece, its derivatives exist, the adverbs *aiês* and *aiêi*. This *aiêi* is a regular dative (or rather locative) of *aiês*, which would form *aiesi*, *aiei*, like *gènesi* and *gênei*. In Gothic, we have from *aivs*, time, the adverbs *aiv*, ever, the Modern German *je*; and *ni aiv*, never, the Modern German *niê*.

There is a peculiar charm in watching the various changes of form and meaning in words passing down from the Ganges or the Tiber into the great ocean of modern speech. In the eighth century B.C. the Latin dialect was confined to a small territory. It was but one dialect out of many that were spoken all over Italy. But it grew—it became the language of Rome and of the Romans, it absorbed all the other dialects of Italy, the Umbrian, the Oscan, the Etruscan, the Celtic, and became by conquest the language of Central Italy, of Southern and Northern Italy. From thence it spread to Gaul, to Spain, to Germany, to Dacia on the Danube. It became the language of law and government in the civilized portions of Northern Africa and Asia, and it was carried through the heralds of Christianity to the most distant parts of the globe. It supplanted in its victorious progress the ancient vernaculars of Gaul, Spain, and Portugal, and it struck deep roots in parts of Switzerland and Walachia. When it came in contact with the more vigorous idioms of the Teutonic tribes, though it could not supplant or annihilate them, it left on their surface a thick layer of foreign words, and it thus supplied the greater portion in the dictionary of nearly all the civilized nations of the world. Words



which were first used by Italian shepherds are now used by the statesmen of England, the poets of France, the philosophers of Germany, and the faint echo of their pastoral conversation may be heard in the Senate of Washington, in the cathedral of Calcutta, and in the settlements of New Zealand.

I shall trace the career of a few of those early Roman words, in order to show how words may change, and how they adapt themselves to the changing wants of each generation. I begin with the word *Palace*. A palace now is the abode of a royal family. But if we look at the history of the name we are soon carried back to the shepherds of the Seven Hills. There, on the Tiber, one of the seven hills was called the *Collis Palatinus*, and the hill was called Palatinus, from *Pales*, a pastoral deity, whose festival was celebrated every year on the 21st of April as the birthday of Rome. It was to commemorate the day on which Romulus, the wolf-child, was supposed to have drawn the first furrow on the foot of that hill, and thus to have laid the foundation of the most ancient part of Rome, the *Roma Quadrata*. On this hill, the *Collis Palatinus*, stood in later times the houses of Cicero and of his neighbour and enemy Catiline. Augustus built his mansion on the same hill, and his example was followed by Tiberius and Nero. Under Nero, all private houses had to be pulled down on the *Collis Palatinus*, in order to make room for the emperor's residence, the *Domus Aurea*, as it was called, the Golden House. This house of Nero's was henceforth called the *Palatium*, and it became the type of all the palaces of the kings and emperors of Europe.

The Latin *palatium* has had another very strange offspring—the French *le palais*, in the sense of palate.

Before the establishment of phonetic rules to regulate the possible changes of letters in various languages, no one could have doubted that *le palais*, the palate, was the Latin *palatum*. However, *palatum* could never have become *palais*, but only *palé*. How *palatium* was used instead is difficult to explain. It was a word of frequent use, and with it was associated the idea of vault (*palais vouti*). Now *vault* was a very appropriate name for the palate. In Italian the palate is called *il cielo della bocca*; in Greek *ouranós*, *ouranískos*. Ennius, again, speaks of the vault of heaven as *palatum cæli*. There was evidently a similarity of conception between palate and vault, and vault and palace; and hence *palatium* was most likely in vulgar Latin used by mistake for *palatus*, and thus carried on into French.\*

Another modern word, the English *court*, the French *cour*, the Italian *corte*, carries us back to the same locality and to the same distant past. It was on the hills of Latium that *cohors* or *cors* was first used in the sense of a *hurdle*, an *enclosure*, a *cattle-yard*. The *cohortes*, or divisions of the Roman army, were called by the same name; so many soldiers constituting a pen or a court. It is generally supposed that *cors* is restricted in Latin to the sense of *cattle-yard*, and that *cohors* is always used in a military sense. This is not so. Ovid (*Fasti*, iv. 704) used *cohors* in the sense of *cattle-yard*:

‘ Abstulerat multas illa cohortis aves ;’

and on inscriptions *cors* has been found in the sense of *cohors*. The difference between the two words was a difference of pronunciation merely. As *nihil* and *nil*,

\* See Diez, *Lexicon Comp.* s. v.

*mihī* and *mī*, *nehemo* and *nemo*, *prehendo* and *prendo*, so *cohors*, in the language of Italian peasants, glided into *cors*.

Thus *cors*, *cortis*, from meaning a pen, a cattle-yard, became in mediæval Latin *curtis*, and was used, like the German *Hof*, of the farms and castles built by Roman settlers in the provinces of the empire. These farms became the centres of villages and towns, and in the modern names of *Vraucourt*, *Graincourt*, *Liencourt*, *Magnicourt*, *Aubignicourt*, the older names of *Vari curtis*, *Grani curtis*, *Leonii curtis*, *Manii curtis*, *Albini curtis*, have been discovered.\*

Lastly, from meaning a fortified place, *curtis* rose to the dignity of a royal residence, and became synonymous with palace. The two names having started from the same place, met again at the end of their long career.

Now, if we were told that a word which in Sanskrit means *cow-pen* had assumed in Greek the meaning of *palace*, and had given rise to derivatives such as *courteous* (civil, refined), *courtesy* (a graceful inclination of the body, expressive of respect), *to court* (to pay attentions, or to propose marriage), many people would be incredulous. It is therefore of the greatest use to see with our own eyes how, in modern languages, words are polished down, in order to feel less sceptical as to a similar process of attrition, in the history of the more ancient languages of the world.

While names such as *palace* and *court*, and many others, point back to an early pastoral state of society, and could have arisen only among shepherds and husbandmen, there are other words which we still use,

\* Mannier, *Études sur les Noms des Villes*. Paris, 1861, p. xxvi.



and which originally could have arisen only in a seafaring community. Thus *government*, or *to govern*, is derived from the Latin *gubernare*. This *gubernare* is a foreign word in Latin; that is to say, it was borrowed by the Romans from the Greeks, who at a very early time had sailed westward, discovered Italy, and founded colonies there, just as in later times the nations of Europe sailed farther west, discovered America, and planted new colonies there. The Greek word which in Italy was changed into *gubernare* was *kubernân*, and it meant originally to handle the rudder, or to steer. It was then transferred to the person or persons entrusted with the direction of public affairs, and at last came to mean to rule.

*Minister* meant, etymologically, a small man; and it was used in opposition to *magister*, a big man. *Minister* is connected with *minus*, less; *magister* with *magis*, more. Hence *minîster*, a servant, a servant of the Crown, a minister. From *minister* came the Latin *ministerium*, service; in French contracted into *métier*, a profession. A *minstrel* was originally a professional artist, and more particularly a singer or poet. Even in the *Mystery Plays*, the theatrical representations of portions of the Old or New Testament story, such as still continue to be performed at Ammergau in Bavaria, *mystery* is a corruption of *ministerium*; it meant a religious ministry or service, and had nothing to do with mystery. It ought to be spelt with an *i*, therefore, and not with a *y*.

There is a background to almost every word which we are using; only it is darkened by ages, and requires to be lighted up. Thus *lord*, which in modern English has become synonymous with *nobleman*, was in Anglo-Saxon *hlâf-ord*, which is supposed by some

to mean *ord*, the origin of *hlâf*, loaf; while others look upon it as a corruption of *hlâf-weard*, the warder of bread.\* It corresponds to the German *Brotherr*, and meant originally employer, master, lord. *Lady* in Anglo-Saxon is *hlæfdige*, and likewise means 'she who looks after the loaf,' the mistress; unless it is a corruption of *hlâf-weardige*, the feminine of *hlâf-weard*. *Earl*, the same as the Danish *Jarl*, was, I believe, originally a contraction of *elder*; *earl*, therefore, and *alder* in *alderman* were once the same word. In Latin, an *elder* would be *senior*, and this became changed into *seigneur*, *sieur*, and at last dwindled down to *sir*. *Duke* meant originally a leader; *count*, the Latin *comes*, a companion; *baron*, the mediæval Latin *baro*, meant man; and *knight*, the German *Knecht*, was a servant. Each of these words has risen in rank, but they have kept the same distance from each other.

As families rose into clans, clans into tribes, tribes into confederacies, confederacies into nations, the elders of each family naturally formed themselves into a *senate*, *senatus* meaning a collection of elders. The elders were also called the grey-headed, or the *Greys*, and hence the German *Graf*, *gravo*, originally *der Graue*. But at the head of such senates the German nations at an early time placed a *king*. In Latin the king is called *rex*, the Sanskrit *râjan*, in *Maharâja*, and this *rex*, the French *roi*, meant originally *steersman*, from *regere*, to steer. The Teutonic nations, on the contrary, used the name *König*, or *King*, and this corresponds to the Sanskrit *janaka*. What did it mean? It simply meant father, the father of a

\* See Grimm, *Deutsches Wörterbuch*, s. v. *Brotherr*.



family, 'the *king* of his own *kin*,' the father of a clan, the father of a people. Need I add what was the original, and what is still the true meaning of queen? In German we have simply formed a feminine of *König*, namely, *Königin*. In English, on the contrary, the old word for *mother* has been retained. In the translation of the Bible by Ulfilas, in the fourth century, we meet with *qens* and *qino*, meaning *wife* and *woman*. In the eleventh century we read in Notker, *Sol chena iro charal furhten unde minnon*, 'a wife shall fear and love her husband.' After the fifteenth century the word is no longer used in High German, but in the Scandinavian languages the word still lives, *karl* and *kona* still meaning *man* and *wife*.

We thus see how languages reflect the history of nations, and how, if properly analysed, almost every word will tell us of many vicissitudes through which it passed on its way from Central Asia to India or to Persia, to Asia Minor, Greece, and Italy, to Russia, Gaul, Germany, the British Isles, America, New Zealand; nay, back again, in its world-encompassing migrations, to India and the Himalayan regions from which it started. Many a word has thus gone the round of the world, and it may go the same round again and again. For although words change in sound and meaning to such an extent that not a single letter remains the same, and that their meaning becomes the very opposite of what it originally was, yet it is important to observe, that since the beginning of the world no new addition has ever been made to the substantial elements of speech, any more than to the substantial elements of nature. There is a constant change in language, a coming and going of words; but no man can ever invent an entirely new word.

We speak to all intents and purposes substantially the same language as the earliest ancestors of our race; and, guided by the hand of scientific etymology, we may pass on from century to century through the darkest periods of the world's history, till the stream of language on which we ourselves are moving carries us back to those distant regions where we seem to feel the presence of our earliest forefathers, and to hear the voices of the earth-born sons of Manu.

Those distant regions in the history of language are, no doubt, the most attractive, and, if cautiously explored, full of instructive lessons to the historian and the philosopher. But before we ascend to those distant heights, we must learn to walk on the smoother ground of modern speech. The advice of Leibniz that the science of language should be based on the study of modern dialects, has been but too much neglected, and the results of that neglect are visible in many works on Comparative Philology. Confining ourselves therefore for the present chiefly to the modern languages of Europe, let us see how we can establish the four fundamental points which constitute the *Magna Charta* of our science.

1. *The same Word takes different Forms in different Languages.*

This sounds almost like a truism. If the six dialects which sprang from Latin have become six independent languages, it would seem to follow that the same Latin word must have taken a different form in each of them. French became different from Italian, Italian from Spanish, Spanish from Portuguese, because the same Latin words were pro-

nounced differently by the inhabitants of the countries conquered or colonized by Rome, so that, after a time, the language spoken by the colonists of Gaul grew to be unintelligible to the colonists of Spain. Nevertheless if we are told that the French *même* is the same as the Italian *medesimo*, and that both are derived from the Latin *ipse*, we begin to see that even this first point requires to be carefully examined, and may help to strengthen our arguments against all etymology which trusts to vague similarity of sound or meaning.

How then can French *même* be derived from Latin *ipse*? By a process which is strictly genealogical, and which furnishes us with a safer pedigree than that of the Montmorencys or any other noble family. In Old French *même* is spelt *meisme*, which comes very near to Spanish *mismo* and Portuguese *mesmo*. The corresponding term in Provençal is *medesme*, which throws light on the Italian *medesimo*. Instead of *medesme*, Old Provençal supplies *smetessme*. In order to connect this with Latin *ipse*, we have only to consider that *ipse* passes through Old Provençal *eps* into Provençal *eis*, Italian *esso*, Spanish *ese*, and that the Old Spanish *esora* represents *ipsâ horâ*, as French *encore* represents *hanc horam*. If *es* is *ipse*, *essme* would be *ipsissimum*, Provençal *medesme*, *metipsissimum*, and Old Provençal *smetessme*, *semetipsissimum*.\*

To a certain point it is a matter of historical rather than of philological inquiry, to find out whether the English *beam* is the German *Baum*. *Beam* in Anglo-Saxon is *beám*, Frisian *bâm*, Old Saxon *bâm* and *bôm*, Middle High-German *boum*, Modern High-German *Baum*. It is only when we come to Gothic *bagms* that

\* Diez, *Grammatik* and *Lexicon*, s. v.



philological arguments come in, in order to explain the loss of *g* before *m*. This must be explained by a change of *beagm* into *beawm*, and lastly into *beam*.\*

If we take any word common to all the Teutonic dialects, we shall find that it varies in each, and that it varies according to certain laws. Thus, *to hear* is in Gothic *hausjan*, in Old Norse *heyra*, in Old Saxon *horian*, in Anglo-Saxon *hyran*, in Old High-German *horran*, in Swedish *höra*, in Danish *høre*, in Dutch *hooren*, in Modern German *hören*.

We have only to remember that English ranges, as far as its consonants go, with Gothic and Low-German, while Modern German belongs to the third or High-German stage, in order to discover without difficulty the meaning of many a German word by the mere application of Grimm's Law. Thus:—

I.	II.	III.
<i>Drei</i> is <i>three</i>	<i>Zehn</i> is <i>ten</i>	<i>Tag</i> is <i>day</i>
<i>Du</i> is <i>thou</i>	<i>Zagel</i> is <i>tail</i>	<i>Trommel</i> is <i>drum</i>
<i>Denn</i> is <i>then</i>	<i>Zahn</i> is <i>tooth</i>	<i>Traum</i> is <i>dream</i>
<i>Durch</i> is <i>through</i>	<i>Zaun</i> is <i>town</i>	<i>T(h)euer</i> is <i>dear</i>
<i>Denken</i> is <i>to think</i>	<i>Zinn</i> is <i>tin</i>	<i>T(h)au</i> is <i>dew</i>
<i>Drang</i> is <i>throng</i>	<i>Zerren</i> is <i>to tear</i>	<i>Taube</i> is <i>dove</i>
<i>Durst</i> is <i>thirst</i>	<i>Zange</i> is <i>tong</i>	<i>Teich</i> is <i>dough</i> .

If we compare *tear* with the French *larme*, a mere consultation of historical documents would carry us from *tear* to the earlier forms, *taer*, *tehr*, *teher*, *tæher*, to Gothic *tagr*. The A.S. *tæher*, however, carries us back, even more simply than the Gothic *tagr*, to the corresponding form *dákry* in Greek, and (*d*)*ásru* in Sanskrit. We saw in our last Lecture how every Greek *d* is legitimately represented in Anglo-Saxon by *t*, and *k* by *h*. Hence *tæher* is *dákry*. In the

\* Grimm, *Deutsche Grammatik*, ii. 66 ; i. 261.

same manner there is no difficulty in tracing the French *larme* back to Latin *lacruma*. The question then arises, are *dákry* and *lacruma* cognate terms? The secondary suffix *ma* in *lacruma* is easily explained, and we then have Greek *dákry* and Latin *lacru*, differing only by their initials. Here a phonetic law must remove the last difference. *D*, if pronounced without a will, is apt to lapse into *L*. *Dákry*, therefore, could become *lacru*, and both can be derived from a root *dak*, to bite.\* Only let it be borne in mind that although an original *d* may dwindle down to *l*, no *l* in the Aryan languages was ever changed into *d*, and that it would be wrong to say that *l* and *d* are interchangeable.

The following table will show at a glance a few of the descendants of the Latin preposition *ante* —

ANTE, before.

It. *anzi* ; Sp. *antes* ; Old Fr. *ans*, *ains* (*ainsné*=*ainé*, elder).

ANTE IPSUM.

Old Fr. *ainçois*, before.

It. *anziano* ; Sp. *anciano* ; Fr. *ancien*, old.

ABANTE, from before.

It. *avanti*, Fr. *avant*, before.

It. *avanzare* ; Sp. *avanzar* ; Fr. *avancer*, to bring forward.

It. *vantaggio* ; Sp. *ventaja* ; Fr. *avantage*, advantage.

DEABANTE.

It. *davanti* ; Fr. *devant*, before.

Fr. *devancer*, to get before.

If instead of a Latin we take a Sanskrit word, and follow it through all its vicissitudes from the earliest to the latest times, we see no less clearly how in-

\* See M. M. in Kuhn's *Zeitschrift*, v. 152. Pott, *Etymologische Forschungen*, ii. 58-60, 442, 450.

evitably one and the same word assumes different forms in different dialects. Tooth in Sanskrit is *dat* (nom. *dantah*, but genitive of the old base, *datah*). The same word appears in Latin as *dens*, *dentis*, in Gothic as *tunthus*, in English as *tooth*, in Modern German as *Zahn*. All the changes are according to law, and it is not too much to say that in the different languages the common word for tooth could hardly have appeared under any form but that in which we find it. But is the Greek *odoús*, *odóntos*, the same word as *dens*? And is the Greek *odóntes*, the Latin *dentes*, a mere variety of *edontes* and *edentes*, the eaters? I am inclined to admit that the *o* in *odóntes* is a merely phonetic excrescence, for although I know of no other well-established case in Greek where a simple initial *d* assumes this prosthetic vowel, it would be against all rules of probability to suppose that Greek had lost the common Aryan term for teeth, *danta*, and replaced it by a new and independent word so exactly like the one which it had given up. Prosthetic vowels are very common in Greek before certain double consonants, and before *r*, *l*, *n*, *m*.\* The addition of an initial *o* in *odóntes* may provisionally be admitted. But if so, it follows that *odóntes* cannot be a mere variety of *edontes*. For wherever Greek has these initial vowels, while they are wanting in Sanskrit, Latin, &c., they are, in the true sense of the word, prosthetic vowels. They are not radical, but merely adscititious in Greek, while if *odóntes* were derived from the root *ed*, we should have to admit the loss of a radical initial vowel in all the

\* Curtius, *Grundzüge der Griechischen Etymologie*, ii. 291. Savelsberg, in Höfer's *Zeitschrift*, iv. p. 91.



members of the Aryan family except Greek—an admission unsupported by any analogy.\*

In languages which possess no ancient literature the charm of tracing words back from century to century to its earliest form is of course lost. Contemporary dialects, however, with their extraordinary varieties, teach us even there the same lessons, showing that language must change and is always changing, and that similarity of sound is the same unsafe guide here as elsewhere. One instance must suffice. Man in Malay is *orang*; hence *orang utan*, the man of the forest, the Orangutang. This *orang* is pronounced in different Polynesian dialects, *rang*, *oran*, *olan*, *lan*, *ala*, *la*, *na*, *da*, *ra*.†

We now proceed to a consideration of our second point.

## 2. *The same Word takes different Forms in the same Language.*

There are, as you know, many Teutonic words which, through two distinct channels, found their way twice into the literary language of Chaucer, Shakespeare, and Milton. They were imported into England at first by Saxon pirates, who gradually dislodged the Roman conquerors and colonists from their *castra* and *coloniæ*, and the Welsh inhabitants from their villages, and whose language formed the first permanent stratum of Teutonic speech in these islands. They introduced such words as, for instance, *weardian*, to ward, *wile*, cunning, *wise*, manner. These words were German words, peculiar to that soft dialect of

\* See Schleicher, *Compendium*, § 43.

† Logan, *Journal of Indian Archipelago*, iii. p. 665.

German which is known by the name of Low German, and which was spoken on those northern coasts from whence the Juts, the Angles, and Saxons embarked on their freebooting expeditions.

Another branch of the same German stem was the High German, spoken by the Franks and other Teutonic tribes, who became the conquerors of Gaul, and who, though they adopted in time the language of their Roman subjects, preserved nevertheless in their conversational idiom a large number of their own home-spun words. The French or Frankish language is now a Romanic dialect, and its grammar is but a blurred copy of the grammar of Cicero. But its dictionary is full of Teutonic words, more or less Romanized to suit the pronunciation of the Roman inhabitants of Gaul. Among warlike terms of German origin, we find in French *guerre*, the same as *war*; *massacre*, from *metzeln*, to cut down, or *metzgen*, to butcher; *maçon*, *Metze*, *Stein-metze*, i.e. stone-cutter; *auberge*, Italian *albergo*, the German *Herberge*, barracks for the army, Old High-German *heriberga*; *bivouac*, the German *Beiwacht*; *boulevard*, German *Bollwerk*; *bourg*, German *Burg*; *brèche*, a breach, from *brechen*; *havresac*, German *Hafersack*; *haveron*, Old High-German *habaro*, oats; *canapsa*, the German *Knapp-sack*, *Ess-sack*, from *knappen*, *knabern*, or *Schnapp-sack*; \* *éperon*, Italian *sperone*, German *Sporn*; *héraut*, Italian *araldo*, German *Herold*, i.e. *Heerwalt*, or from Old High-German *harên*, French *harer*, to call; *maréchal*, Old German *mariscalco*.

Many maritime words, again, came from German,

\* Danneil, *Wörterbuch der Altmärkisch-plattdeutschen Mundart*, 1859, s. v.



more particularly from Low German. French *chaloûpe* = Sloop, Dutch *sloop*; *cahute* = Dutch *kajuit*, German *Kaue*, or *Koje*; *stribord*, the right side of a ship, English *starboard*, Anglo-Saxon *steorbord*, *Steuerbord*; *hâvre*, *Hafen*; *Nord*, *Sud*, *Est*, *Ouest*, all come from German.

But much commoner words are discovered to be German under a French disguise. Thus, *haie*, hedge, is *Hecke*; *hâir*, to hate, Anglo-Saxon *hatian*; *hamreau*, hamlet, *Heim*; *hâter*, to haste; *honnir*, to blame, Gothic *háunjan*, *höhnen*; *harangue*, (*h*)ring, as in ring-leader. The initial *h* betrays the German origin of all these words. Again, *choisir*, to choose, is *kiesen*, A.S. *ceósan*, Gothic *kiusan*, or Gothic *kausjan*, to examine; *danser*, *tanzen*; *causer*, to chat, *kosen*; *dérober*, to rob, *rauben*; *épier*, to spy, *spähen*; *gratter*, *kratzen*; *grimper*, to climb, *klimmen*; *grincer*, *grinsen*, or Old High-German *grimisôn*; *gripper*, *greifen*; *rôtir*, *rösten*; *tirer*, to tear; *tomber*, to tumble; *quinder*, to wind; *déguerpir*, to throw away, *werfen*.\*

It was this language, this Germanized Latin, which was adopted by the Norman invaders of France, themselves equally Teutonic, and representing originally that third branch of the Teutonic stock of speech which is known by the name of Scandinavian. These Normans, or Northmen, speaking their newly-acquired Franco-Roman dialect, became afterwards the victors of Hastings, and their language, for a time, ruled supreme in the palaces, law-courts, churches, and colleges of England. The same thing, however, which had happened to the Frank conquerors of Gaul and the Norman conquerors of Neustria happened again

\* See Diez, *Grammatik der Romanischen Sprachen*, passim.

to the Norman conquerors of England. They had to acquire the language of their conquered subjects; and as the Franks, though attempting to speak the language of the Roman provincials, retained large numbers of barbaric terms, the Normans, though attempting to conform to the rules of the Saxon grammar, retained many a Norman word which they had brought with them from France.

Thus the German word *wise* was common to the High and the Low branches of the German language; it was a word as familiar to the Frank invaders of Gaul as it was to the Saxon invaders of England. In the mouths of the Roman citizens of France, however, the German initial *W* had been replaced by the more guttural sound of *gu*. *Wise* had become *guise*, and in this new form it succeeded in gaining a place side by side with its ancient prototype, *wise*. By the same process *guile*, the Old French *guile*, was adopted in English, though it was the same word originally as the Anglo-Saxon *wile*, which we have in *wily*. The changes have been more violent through which the Old High-German *wetti*, a pledge (Gothic *vadi*), became changed into the mediæval Latin *wadium* or *vadium*,\* Italian *gaggio*, and French *gage*. Nevertheless, we must recognise in the verbs *to engage* or *disengage* Norman varieties of the same word which is preserved in the pure Saxon forms *to bet* and *to wed*, literally to bind or to pledge.

There are many words of the same kind which have obtained admittance twice into the language of England, once in their pure Saxon form, and again in their Roman disguise. Words beginning in Italian

\* Diez, *Lexicon Comparativum*, s. v.

with *gua*, *gue*, *gui*, are almost invariably of German origin. A few words are mentioned, indeed, in which a Latin *v* seems to have been changed into *g*. But as, according to general usage, Latin *v* remains *v* in the Romance dialects, it would be more correct to admit that in these exceptional cases Latin words had first been adopted and corrupted by the Germans, and then, as beginning with German *w*, and not with Latin *v*, been readopted by the Roman provincials.

These exceptional cases, however, are very few, and somewhat doubtful. It was natural, no doubt, to derive the Italian *guado*, a ford, the French *gué*, from Latin *vadum*. Yet the initial *gua* points first to German, and there we find in Old High-German *wat*, a ford, *watan*, to wade. The Spanish *vadear* may be derived from Latin, or it may owe its origin to a confusion in the minds of those who were speaking and thinking in two languages, a Teutonic and a Romanic. The Latin *vadum* and the German *wat* may claim a distant relationship.

*Guère* in *je ne crois guère* was for a time traced back to *parum*, *varium*, *valide*, *avare*, or *grandem rem*, the Provençal *granren*. But, like the Italian *guari*, it comes from *wâri*, true, which gradually assumed the meaning of *very*.\* The Latin *verus* changes to *vero* and *vrai*.

*Guastare*, French *gâter*, has been traced back to Latin *vastare*; but it is clearly derived from Old High-German *wastjan*, to waste, though again a confusion of the two words may be admitted in the minds of the bilingual Franks.

\* Diez, *Lexicon Comp.*, s. v., second edition, proposes *weiger* instead of *wâri*.



*Guêpe*, wasp, is generally derived from *vespa*; it really comes from the German *Wespe*.\*

It has frequently been pointed out that this very fact, the double existence of the same word (*warden* and *guardian*, &c.), has added much to the strength and variety of English. Slight shades of meaning can thus be kept distinct, which in other languages must be allowed to run together. The English *brisk*, *frisky*, and *fresh*, all come from the same source.† Yet there is a great difference between a brisk horse, a frisky horse, and a fresh horse—a difference which it would be difficult to express in any other language. It is a cause of weakness in language if many ideas have to be expressed by the same word, and *fresh* in English, though relieved by *brisk*, and *frisky*, embraces still a great variety of conceptions. We hear of a fresh breeze, of fresh water (opposed to stagnant), of fresh butter, of fresh news, of a fresh hand, a freshman, of freshness of body and mind; and such a variation as a brisk fire, a brisk debate, is therefore all the more welcome. *Fresh* has passed through a Latin channel, as may be seen from the change of its vowel, and to a certain extent from its taking the suffix *ment* in *refreshment*, which is generally, though not entirely, restricted to Latin words.‡ Under a thoroughly foreign form it exists in English as *fresco*, in

\* In Ital. *golpe* and *volpe*, Span. *vulpeja*, Fr. *goupil*, Lat. *vulpecula*, and a few more words of the same kind, mentioned by Diez (p. 267), the cause of confusion is less clear; but even if admitted as real exceptions, they would in no way invalidate the very general rule.

† Grimm, *Deutsche Grammatik*, ii. 63, *friskan*, *frask*, *fruskun*; O.H.G. *friscing*, *victima* (*caro recens*), *frischling*, *porcellus*.

‡ After Saxon verbs, *ment* is found in *shipment*, *easement*, *fulfilment*, *forebodement*.

*fresco-paintings*, so called because the paint was applied to the walls whilst the plaster was still fresh or damp.

The same process explains the presence of double forms, such as *ship* and *skiff*, the French *esquif*; from which is derived the Old French *esquiper*, the Modern French *équiper*, the English *to equip*. Or again, *sloop* and *shallop*, the French *chaloupe*.

Thus *bank* and *bench* are German; *banquet* is German Romanized.

*Bar* is German (O.H.G. *para*); *barrier* is Romanized. Cf. Span. *barras*, a bar, French *embarras*, and English *embarrassed*.

*Ball* is German; *balloon* Romanized.

*To pack* is German; *bagage* Romanized.

*Ring*, a circle, is German; O.H.G. *hring*. *To harangue*, to address a ring, to act as a ringleader, is Romanized; It. *aringa*, Fr. *la harangue*.

Sometimes it happens that the popular instinct of etymology reacts on these Romanized German words, and, after tearing off their foreign mask, restores to them a more homely expression. Thus the German *Krebs*, the O.H.G. *krebiz*, is originally the same word as the English *crab*. This *krebiz* appears in French as *écrevisse*; it returned to England in this outlandish form, and was by an off-hand etymology reduced to the Modern English *crayfish*.

Thus *filibuster* seems to be derived from the Spanish *filibote* or *flibote*, but the Spanish word itself was a corruption of the English *fly-boat*.

And as the German elements entered into the English language at various times and under various forms, so did the Latin. Latin elements flowed into England at four distinct periods, and through four distinct channels.

First, through the Roman legions and Roman colonists, from the time of Cæsar's conquest, 55 B.C., to the withdrawal of the Roman legions in 412: e. g. *colonia*=*coln*; *castra*=*chester*; *stratum*=*street*.

Secondly, through the Christian missionaries and priests, from the time of St. Augustine's landing in 597 to the time of Alfred: e. g. *candela*=*candle*; *Kyriake*=*church*; *diaconus*=*dean*; *regula*=*rule*; *corona*=*crown*; *discus*=*dish*; *uncia*=*inch*.

Thirdly, through the Norman nobility and Norman ecclesiastics and lawyers, who, from the days of Edward the Confessor, brought into England a large number of Latin terms, either in their classical or in their vulgar and Romanized form.

Fourthly, through the students of the classical literature of Rome, since the revival of learning to the present day. These repeated importations of Latin words account for the coexistence in English of such terms as *minster* and *monastery*. *Minster* found its way into English through the Christian missionaries, and is found in its corrupt or Anglicized form in the earliest documents of the Anglo-Saxon language. *Monastery* was the same word, only pronounced with less corruption by later scholars, or clergymen, familiar with the Latin idiom. Thus *paragraph* is the Latin *paragraphus*, but slightly altered; *pilcrow*, *pylcrafte*, and *paraf*, are vulgar corruptions of the same word.\* In a similar way, the verb *to blame* became naturalized in England through the Norman Conquest. The original Latin or Greek word from which the French *blâmer* was derived kept its place in the form of *to blaspheme* in the

\* See *Promptorium Parvulorum*, p. 398.



more cultivated language of the realm. *Triumph* was a Latin word, naturally used in the ecclesiastical and military language of every country. In its degraded form, *la triomphe*, it was peculiar to French, and was brought into England by the Norman nobility as *trump*, *trump card*.\* We can watch the same process more fully in the history of the French language. That language teems with Latin words which, under various disguises, obtained repeated admittance into its dictionary. They came first with the legions that settled in Gaul, and whose more or less vulgar dialects supplanted the Celtic idiom of the country. They came again in the track of Christian missionaries, and not unfrequently were smuggled in for the third time by the classical scholars of a later age. The Latin *sacramentum*, in its military acceptation, became the French *serment*; in its ecclesiastical meaning it appears as *sacrement*. *Redemptio*, in its military sense, became the French *rançon*, ransom; in its religious meaning it preserved the less mutilated form of *redemption*. Other words belonging to the same class are *acheter*, † to buy, *accepter*, to accept, both derived from the Latin *acceptare*. *Chétif*, miserable, *captif*, both from Latin *captivus*. *Chose*, a thing, *cause*, a cause, both from Latin *causa*. *Façon* and *faction*, from Latin *factio*; meaning originally the manner of doing a thing, then peculiarity, then party. Both *fraile* and *fragile* come from *fragilis*. *On* and *l'homme*, from *homo*. *Noël*, Christmas, and *natal*, from *natalis*. *Naïf* and *natif* from *nativus*. *Parole* and *parabole* from *parabola*. *Penser*, to weigh or ponder

\* Trench, *On Words*, p. 156.

† Fuchs, p. 125.

in one's mind, and *peser*, to weigh on scales, both come from Latin *pensare*. *Pension* also is derived from *pensum*. In Latin, too, *expendo* is used in the sense of spending money, and of weighing or considering.

The Latin pronoun *ille* exists in French under two different forms. It is the *il* of the pronoun of the third person, and the *le* of the definite article. Of course it must not be supposed for a moment that by any kind of agreement *ille* was divided into two parts, *il* being put aside for the pronoun, and *le* for the article. The pronoun *il* and *elle* in French, *egli* and *ella* in Italian, *el* and *ella* in Spanish, are nothing but provincial varieties of *ille* and *illa*. The same words, *ille* and *illa*, used as articles, and therefore pronounced more rapidly and without an accent, became gradually changed from *il*, which we see in the Italian *il* to *el*, which we have in Spanish; to *lo* (*illum*), which exists in Provençal and in Italian (*lo spirito*); and to *le*, which appears in Provençal\* dialects and in French.

As there are certain laws which govern the transition of Latin into French and Italian, it is easy to determine whether such a word as *opéra* in French is of native growth, or imported from Italian. French has invariably shortened the final *a* into *e*, and a Latin *p* in the middle of words is generally changed into French *b* or *v*. This is not the case in Italian. Thus the Latin *apis*, a bee, becomes in Italian *ape*, in French *abeille*.† The Latin *capillus* is the Italian *capello*, the French *cheveu*. Thus *opéra* has become

\* Diez, *Romanische Grammatik*, ii. 35.

† Diez, *Rom. Gram.* i. 177. There are exceptions to this rule; for instance, Italian *riva*, for *ripa*; *savio*, for *sapio*; and in French, such words as *vapeur*, *stupide*, *capitaine*, Old French *chevetain*.



*œuvre* in French, whereas in Italian it remained *opera*,\* Spanish *obra*.

There is a small class of words in French which ought to be mentioned here, in order to show under how many disguises words have slipped in again and again into the precincts of that language. They are words neither Teutonic nor Romance, but a cross between the two. They are Latin in appearance, but it would be impossible to trace them back to Latin unless we knew that the people who spoke this Latin were Germans who still thought in German. If a German speaks a foreign tongue, he commits certain mistakes which a Frenchman never would commit, and *vice versâ*. A German speaking English would be inclined to say *to bring a sacrifice*; a Frenchman would never make that mistake. A Frenchman, on the contrary, is apt to say that he cannot *attend* any longer, meaning that he cannot wait any longer. Englishmen, again, travelling abroad, have been heard to call for *Wächter*, meaning the waiter; they have declared, in German, *Ich habe einen grossen Geist Sie nieder zu klopfen*, meaning they had a great mind to knock a person down; and they have announced in French, *J'ai changé mon esprit autour*

\* Diez, ii. 20. Opera is not the Latin *opus*, used as a feminine, but the plural of *opus*. Such neutral plurals were frequently changed into Romance feminines, and used in the singular. Thus Latin *gaudia*, plural neut., is the French *joie*, fem. sing., Italian *gioja*. A diminutive of the French *joie* is the Old French *joel*, a little pleasure; the English *jewel*, the French *joyau*.

Latin <i>arma</i> , neut. plur.	Italian and Sp. <i>arma</i>	Fr. <i>l'arme</i>
„ <i>folia</i> „	It. <i>foglia</i>	Fr. <i>feuille</i>
„ <i>vela</i> „	It. and Sp. <i>vela</i>	Fr. <i>voile</i>
„ <i>batualia</i> „	It. <i>battaglia</i>	Fr. <i>bataille</i>

*de cette tasse de café*, meaning that they had changed their mind about a cup of coffee.

There are many more mistakes of that kind, which grammarians call Germanisms, Gallicisms, or Anglicisms, and for which pupils are constantly reproved by their masters.

Now the Germans who came to settle in Italy and Gaul, and who learnt to express themselves in Latin *tant bien que mal*, had no such masters to reprove them. On the contrary, their Roman subjects did the best they could to understand their Latin jargon, and, if they wished to be very polite, they would probably repeat the mistakes which their masters had committed. In this manner the most ungrammatical, the most unidiomatic phrases would, after a time, become current in the vulgar language.

No Roman would have expressed the idea of entertaining or amusing by *intertenerere*. Such an expression would have conveyed no meaning at all to Cæsar or Cicero. The Germans, however, were accustomed to the idiomatic use of *unterhalten*, *Unterhaltung*, and when they had to make themselves understood in Latin they rendered *unter* by *inter*, *halten* by *tenere*, and thus formed *entretenir*, a word owned neither by Latin nor German.

It is difficult, no doubt, to determine in each case whether words like *intertenerere*, in the sense of entertaining, were formed by Germans speaking in Latin but thinking in German, or whether one and the same metaphor suggested itself both to Romans and Germans. It might seem at first sight that the French *circonstance*, circumstance, was a barbarous translation of the German *Umstand*, which expresses the same

idea by exactly the same metaphor. But if we consult the later Latin literature, we find there, in works which could hardly have experienced any influence of German idiom, *circumstantia*, in the sense of quality or accident, and we learn from Quintilian, v. 10, 104, that the word had been formed in Latin as an equivalent of the Greek *perístasis*.

In some cases, however, it admits of no doubt that words now classical in the modern languages of Europe were originally the unidiomatic blunders of Germans attempting to express themselves in the Latin of their conquered provinces.

The future is called in German *Zukunft*, which means 'what is to come.'\* There is no such word in ancient Latin, but the Germans again translated their conception of future time literally into Latin, and thus formed *l'avenir*, what is to come, *ce qui est à venir*.

One of the many German expressions for sick or unwell is *unpass*. It is used even now, *unpässlich*, *Unpässlichkeit*. The corresponding Latin expression would have been *æger*, but instead of this we find the Provençal *malapte*, It. *malato*, Fr. *malade*. *Malapte* is the Latin *male-aptus*, meaning *unfit*, again an unidiomatic rendering of *unpass*. What happened was this. *Male-aptus* was at first as great a mistake in Latin as if a German speaking English were to take *unpass* in the sense of *unpassend*, and were to say, 'that he was unfit,' meaning he was unwell. But as there was no one to correct the German lords and masters, the expression *male-aptus* was tolerated, was

\* In Claus Groth's *Fiv nie Leder ton Singn un Beden var Schleswig-Holsteen*, 1864, *tokum*, i. e. to come, is used as an adjective: 'Se kamt wedder to tokum Jahr.'



probably repeated by good-natured Roman physicians, and became after a time a recognised term.

One more word of the same kind, the presence of which in French, Italian, and English it would be impossible to explain except as a Germanism, as a blunder committed by people who spoke in Latin, but thought in German.

*Gegend* in German means region or country. It is a recognised term, and it signified originally that which is before or against, what forms the object of our view. Now in Latin *gegen*, or against, would be expressed by *contra*; and the Germans, not recollecting at once the Latin word *regio*, took to translating their idea of *Gegend*, that which was before them, by *contratum*, or *terra contrata*. This became the Italian *contrada*, the French *contrée*, the English *country*.\*

\* Cf. M. M., *Ueber Deutsche Schattirung Romanischer Worte*, in Kuhn's *Zeitschrift*, v. 11.

I take this opportunity of stating that I never held the opinion ascribed to me by M. Littré (*Journal des Savants*, avril 1856; *Histoire de la Langue Française*, 1863, vol. i. p. 94), with regard to the origin of the Romance languages. My object was to explain certain features of these languages which, I hold, would be inexplicable if we looked upon French, Italian, and Spanish merely as secondary developments of Latin. They must be explained, as I tried to show, by the fact that the people in whose minds and mouths these modern dialects grew up, were not all Romans or Roman provincials, but tribes thinking in German and trying to express themselves in Latin. It was this additional disturbing agency to which I endeavoured to call attention, without for a moment wishing to deny other more normal and generally admitted agencies which were at work in the formation of the Neo-Latin dialects, as much as in all other languages advancing from what has been called a synthetic to an analytic state of grammar. In trying to place this special agency in its proper light, I may have expressed myself somewhat incautiously, but if I had to express again my own view on the origin of the

And here, in discussing words which, though originally distinct in origin and meaning, have in the course of time become identical or nearly identical in sound, I ought not to pass over in silence the name of a scholar who, though best known in the annals of the physical sciences, deserves an honourable place in the history of the Science of Language. Roger Bacon's views on language and etymology are strangely in advance of his age. He called etymology the tale of truth,\* and he was probably the first who conceived the idea of a Comparative Grammar. He uses the strongest language against those who proposed derivations of words in Latin, Greek, and Hebrew without a due regard to the history of these languages. 'Brito,' he says, 'dares to derive *Gehenna* from the Greek *ge*, earth, and *ennos*, deep, though *Gehenna* is a Hebrew word, and cannot have its origin in Greek.'† As an instance of words becoming identical in the course of time, he quotes *kenon* as used in many

Romance languages, I could not do it more clearly and accurately than in adopting the words of my eminent critic: 'A mon tour, venant, par la série de ces études, à m'occuper du débat ouvert, j'y prends une position intermédiaire, pensant que, essentiellement, c'est la tradition latine qui domine dans les langues romanes, mais que l'invasion germanique leur a porté un rude coup, et que de ce conflit où elles ont failli succomber, et avec elles la civilisation, il leur est resté des cicatrices encore apparentes et qui sont, à un certain point de vue, ces nuances germaniques signalées par Max Müller.'

\* Roger Bacon, *Compendium Studii*, cap. 7 (ed. Brewer, p. 449): 'quoniam etymologia est sermo vel ratio veritatis.'

† *l. c.* cap. 7, p. 450. 'Brito quidem indignissimus auctoritate, pluries reedit in vitium de quo reprehendit Hugutionem et Papiam. Nam cum dicit quod *Gehenna* dicitur a *ge*, quod est terra, et *ennos*, quod est profundum, Hebræum vocabulum docet oriri ex Græco; quia *ge* pro terra est Græcum, et *gehenna* est Hebræum.'

mediæval compounds. In *cenotaph*, an empty tomb, *ceno* represents the Greek κενός, empty. In *cenobite*, one of a religious order living in a convent, *ceno* is the Greek κοινός, common. In *encenia*, festivals kept in commemoration of the foundation of churches, &c., *cenia* answers to the Greek καινός, new, these festivals being intended as renewals of the memory of pious founders.\* Surely this does honour to the thirteenth century!

Accidents like those which we have hitherto discussed are, no doubt, more frequent in the modern history of speech, because, owing to ethnic migrations and political convulsions, the dialects of neighbouring or distant races have become mixed up together more and more with every century that has passed over the ethnological surface of Europe. But in ancient times also there had been migrations, and wars, and colonies, causing a dislocation and intermixture of the various strata of human speech, and the literary languages of Greece and Rome, however uniform they may seem to us in their classical writings,

\* *l. c.* cap. 7, p. 457. ‘Similiter multa falsa dicuntur cum istis nominibus, *cenobium*, *cenodoxia*, *encenia*, *cinomia*, *scenophagia*, et hujusmodi similia. Et est error in simplicibus et compositis, et ignorantia horribilis. Propter quod diligenter considerandum est quod multa istorum dicuntur a κενῷ Græco, sed non omnia. Et sciendum quod *cenon*, apud nos prolatum uno modo, scribitur apud Græcos tribus modis. Primo per *e* breve, sicut *kenon*, et sic est inane seu vacuum, a quo *cenodoxia*, quæ est vana gloria. . . . Secundo modo scribitur per diphthongum ex alpha et iota, sicut *kainon*, et tunc idem est quod novum; unde *encenia*, quod est innovatio vel dedicatio, vel nova festa et dedicationes ecclesiarum. . . . Tertio modo scribitur per diphthongum ex omicron et iota, sicut *koinos*. . . . Unde dicunt *cenon*, a quo *epicenum*, communis generis. . . . Item a *cenon*, quod est commune, et *bios*, quod est vita, dicitur *cenobium*, et *cenobitæ*, quasi communiter viventes.’



had grown up, like French or English, by a constant process of absorption and appropriation, exercised on the various dialects of Italy and Greece. What happened in French happened in Latin. As the French are no longer aware that their *paysan*, a peasant, and *païen*, a pagan, were originally but slight dialectic varieties of the same Latin word *paganus*, a villager, the citizen of Rome used the two words *luna*, moon, and *Lucina*, the goddess, without being aware that both were derived from the same root. In *luna* the *c* belonging to the root *lucere*, to shine, is elided; not by caprice or accident, but according to a general phonetic rule which requires the omission of a guttural before a liquid. Thus *lumen*, light, stands for *lucmen*; *examen* for *exagmen*; *flamma*, flame, for *flagma*, from *flagrare*, to burn; *flamen* for *flagmen*, the lighter, the priest (not *brahman*); *lanio*, a butcher, if derived from a root akin to *lacerare*, to lacerate, stands for *lacnio*. *Contaminare*, to contaminate, is certainly derived from the same verb *tango*, to touch, from which we have *contagio*, contagion, as well as *integer*, intact, entire. *Contaminare*, therefore, was originally *contagminare*. This is in fact the same phonetic rule which, if applied to the Teutonic languages, accounts for the change of German *Nagel* into *nail*, *Zagel* into *tail*, *Hagel* into *hail*, *Riegel* into *rail*, *Regen* into *rain*, *Pflegel* into *flail*, *Segel* into *sail*; and which, if applied to Greek and Latin, helps us to discover the identity of the Greek *láchnē*, wool, and Latin *lâna*; of Greek *áráchnē*, a spider, and Latin *aránea*. Though a scholar like Cicero\* might have

\* 'Quomodo enim vester *Axilla Ala* factus est nisi fugâ literæ vastioris, quam literam etiam e *maxillis* et *taxillis* et *vexillo* et

been aware that *ala*, a wing, was but an abbreviated form of *axilla*, the arm-pit, the two words were as distinct to the common citizen of Rome as *païen* and *paysan* to the modern Frenchman. *Tela*, a web, must, on the same principle, be derived from *texela*, and this from the verb *texere*, to weave. Thus *mala*, the cheek, is derived from *maxilla*, the jawbone, and *velum*, a sail or veil, from *vexillum*, anything flying or moved by the wind, a streamer, a flag, or a banner. Once in possession of this rule, we are able to discover even in such modern and corrupt forms as *subtle*, the same Latin root *texere*, to weave, which appeared in *tela*. From *texere* was formed the Latin adjective *subtilis*, that which is woven under or beneath, with the same metaphor which leads us to say *finè spun*; and this dwindled down into the English *subtle*.

Other words in Latin, the difference of which must be ascribed to the influence of local pronunciation, are *cors* and *cohors*, *nil* and *nihil*, *mi* and *mihi*, *prendo* and *prehendo*, *prudens* and *providens*, *bruma*, the winter solstice, and *brevissima*, scil. *dies*, the shortest day.\* Thus, again, *susum* stands for *sursum*, upward, from *sub* and *versum*. *Sub*, it is true, means generally below, under; but, like the Greek *hypó*, it is used in the sense of 'from below,' and thus may seem to have two meanings diametrically opposed to each other, *below* and *upward*. *Submittere* means to place below, to lay down, to submit; *sublevare*, to lift from below, to raise up. *Summus*, a superlative of *sub*, *hýpatos*, a superlative of *hypó*, do not mean the lowest

*paxillo* consuetudo elegans Latini sermonis evellit.'—Cicero, *Orat.* 45, § 153.

\* Pott, *Etymologische Forschungen*, i. p. 645.



but the highest.\* As *sub-versum* glides into *sursum* and *susum*, so *retroversum* becomes *retrorsum*, *retrosusum*, and *rursum*. *Proversum* becomes *prorsum*, originally *forward*, straightforward; and hence *oratio prosa*, straightforward speech or prose, opposed to *oratio vincta*, fettered or measured speech, poetry.†

Now as we look upon Æolic and Doric, Ionic and Attic, as dialects of one and the same language, as we discover in the Romance languages mere varieties of the Latin, and in the Scandinavian, the High German, and Low German, only three branches of one and the same stock, we must learn to look upon Greek and Latin, Teutonic and Celtic, Slavonic, Sanskrit, and the ancient Persian, as so many varieties of one and the same original type of speech, which were fixed in the end as the classical organs of the literature of the world. Taking this point of view, we shall be able to understand how what happens in the modern, happened in the ancient periods of the history of language. The same word, with but slight dialectic variations, exists in Greek, Latin, Gothic, and Sanskrit, and vocables which at first sight appear totally different, are separated from each other by no greater difference than that which separates an Italian word from its cognate term in French. There is little similarity to the naked eye between *pen* and *feather*, yet if placed under the microscope of comparative grammar, both words disclose exactly the same structure. Both are derived from a root *pat*, which in Sanskrit means to fly, and which is easily recognised in the Greek *pétomai*, I fly. From this root a Sanskrit word is derived by

\* The Sanskrit *upa* and *upari* correspond to Greek *ὑπό* and *ὑπέρ*, Latin *sub* and *super*, Gothic *uf* and *usar*.

† Quint. 9, 4, 'oratio alia vincta atque contexta, alia soluta.'

means of the instrumental suffix *tra*, *pat-tra*, or *pata-tra*, meaning the instrument of flying, a wing, or a feather. From the same root another substantive was derived, which became current in the Latin dialect of the Aryan speech, *patna* or *petna*, meaning equally an instrument of flying, or a feather. This *petna* became changed into *penna*—a change which rests not merely on phonetic analogy, but is confirmed by Festus, who mentions the intermediate Italian form, *pesna*.\* The Teutonic dialect retained the same derivative which we saw in Sanskrit, only modifying its pronunciation by substituting aspirated for hard consonants, according to rule. Thus *patra* had to be changed into *phathra*, in which we easily recognise the English *feather*. Thus *pen* and *feather*, the one from a Latin, the other from a Teutonic source, are established as merely phonetic varieties of the same word, analogous in every respect to such double words as those which we pointed out in Latin, which we saw in much larger numbers in French, and which impart not only the charm of variety, but the power of minute exactness to the language of Chaucer, Shakespeare, and Milton.

### 3. *Different Words take the same Form in different Languages.*

We have examined in full detail two of the propositions which serve to prove that in scientific etymology identity of origin is in no way dependent on identity of sound or meaning. If words could for ever retain their original sound and their original meaning,

\* Cf. Greek *ἑρμῆς*, Latin *resmus* and *remus*. *Triresmos* occurs in the inscription of the Columna Rostrata.

language would have no history at all; there would have been no confusion of tongues, and our language would still be the language of our first ancestors. But it is the very nature of language to grow and to change, and unless we are able to discover the rules of this change, and the laws of this growth, we shall never succeed in tracing back to their original source and primitive import the manifold formations of human speech, scattered in endless variety over all the villages, towns, countries, and continents of our globe. The radical elements of language are so extremely few, and the words which constitute the dialects of mankind so countless, that unless it had been possible to express the infinitesimal shades of human thought by the slightest differences in derivation or pronunciation, we should never understand how so colossal a fabric could have been reared from materials so scanty. Etymology is the knowledge of the changes of words, and so far from expecting identity, or even similarity of sound in the outward appearance of a word, as now used in English, and as used by the poets of the Veda, we should always be on our guard against any etymology which would fain make us believe that certain words which exist in French existed in exactly the same form in Latin, or that certain Latin words could be discovered without the change of a single letter in Greek or Sanskrit. If there is any truth in the laws which govern the growth of language, we can lay it down with perfect certainty, that words of identically the same sound in English and in Sanskrit cannot be the same words. And this leads us to our third proposition. It does happen now and then that in languages, whether



related to each other or not, certain words appear of identically the same sound and with some similarity of meaning. These words, which former etymologists seized upon as most confirmatory of their views, are now looked upon with well-founded mistrust. Attempts, for instance, are frequently made at comparing Hebrew words with the words of Aryan languages. If this is done with a proper regard to the immense distance which separates the Semitic from the Aryan languages, it deserves the highest credit. But if instead of being satisfied with pointing out the faint coincidences in the lowest and most general elements of speech, scholars imagine they can discover isolated cases of minute coincidence amidst the general disparity in the grammar and dictionary of the Aryan and Semitic families of speech, their attempts become unscientific and reprehensible.

It is surprising, considering the immense number of words that might be formed by freely mixing the twenty-five letters of our alphabet, that in languages belonging to totally different families, the same ideas should sometimes be expressed by the same or very similar words. Dr. Rae, in order to prove some kind of relationship between the Polynesian and Aryan languages, quotes the Tahitian *pura*, to blaze as a fire, the New Zealand *kapura*, fire, as similar to Greek *pyr*, fire. He compares Polynesian *ao*, sunrise, with Eos; Hawaiian *mauna* with *mons*; Hawaiian *ike*, he saw or knew, with Sanskrit *iksh*, to see; *manao*, I think, with Sanskrit *man*, to think; *noo*, I perceive, and *noo-noo*, wise, with Sanskrit *jnâ*, to know; *orero* or *orelo*, a continuous speech, with *oratio*; *kala*, I proclaim, with Greek *kaleîn*, to call; *kalanga*, continuous

speech, with *harangue*; *kani* and *kakani*, to sing, with *cano*; *mele*, a chaunted poem, with *mélos*.\*

It is easy to multiply instances of the same kind. Thus in the Kafir language to beat is *beta*, to tell is *tyelo*, hollow is *uholo*.†

In Modern Greek eye is *mati*, a corruption of *om-mation*; in Polynesian eye is *mata*, and in Lithuanian *matau* is to see.

And what applies to languages which, in the usual sense of the word, are not related at all, such as Hebrew and English, or Hawaian and Greek, applies with equal force to cognate languages. Here, too, a perfect identity of sound between words of various dialects is always suspicious. No scholar would now-a-days venture to compare *to look* with Sanskrit *lokayati*; *to speed* with Greek *speúdō*; *to call* with Greek *kaleîn*; *to care* with Latin *cura*. The English sound of *i* which in English expresses an *eye*, *oculus*, is used in German in the sense of *egg*, *ovum*; and it would not be unreasonable to take both words as expressive of roundness, applied in the one case to an *egg*, in the other to an *eye*. The English *eye*, however, must be traced back to the Anglo-Saxon *éage*, Gothic *augô*, German *Auge*, words akin to Sanskrit *akshi*, the Latin *oculus*, the Greek *ōsse*; whereas the German *Ei*, which in Old High-German forms its plural *eigir*, is identical with the English *egg*, the Latin *ovum*, the Greek *ōFon*, and possibly connected with *avis*, bird.

\* See M. M., *Turanian Languages*, p. 95, seq. Pott, in *Deutsche Morgenländische Gesellschaft*, ix. 430, containing an elaborate criticism on M. M.'s *Turanian Languages*. The same author has collected some more accidental coincidences in his *Etymologische Forschungen*, ii. 430.

† Appleyard, *Kafir Language*, p. 3.

This Anglo-Saxon *éage*, eye, dwindles down to *y* in *daisy*, and to *ow* in *window*, supposing that *window* is the Old Norse *vindauga*, the Swedish *vindöga*, the Old English *windor*.\* In Gothic a window is called *auga-dauro*, in Anglo-Saxon, *eágduru*, i.e. eye-door. In *island* (which ought to be spelt *iland*), the first portion is neither *egg* nor *eye*, but a corruption of Gothic *ahva*, i.e. *aqua*, water; hence Anglo-Saxon *eóland*, the Old Norse *aland*, waterland.

What can be more tempting than to derive 'on the whole' from the Greek *kath hólón*, from which *Catholic*?† Buttmann, in his 'Lexilogus,' has no misgivings whatever as to the identity of the Greek *hólos* and the English *hale* and *whole* and *wholesome*. At present, a mere reference to 'Grimm's Law' enables any tyro in etymology to reject this identification as impossible. First of all, *whole*, in the sense of sound, is really the same word as *hale*. Both exist in Anglo-Saxon under the form of *hál*, in Gothic as *hail*, German *heil*.‡ Now, an initial aspirate in Anglo-Saxon or Gothic presupposes a tenuis in Greek, and if, therefore, the same word existed in Greek, it could only have been *kólos*, not *hólos*.

In *hólos* the asper points to an original *s* in Sanskrit and Latin, and *hólos* has therefore been rightly identified with Sanskrit *sarva* and Latin *salvus* and *sollus*, in *sollers*, *sollemnis*, *solliferreus*, &c.

There is perhaps no etymology so generally acquiesced in as that which derives *God* from *good*. In Danish *good* is *god*, but the identity of sound

\* Grimm, *Deutsche Grammatik*, ii. pp. 193, 421.

† Pott, *Etymol. Forschungen*, i. 774, seq. 'Sollum Osce totum et solidum significat.'—Festus.

‡ Grimm, *Deutsche Grammatik*, i. pp. 389, 394.



between the English *God* and the Danish *god* is merely accidental; the two words are distinct, and are kept distinct in every dialect of the Teutonic family. As in English we have *God* and *good*, we have in Anglo-Saxon *God* and *gód*; in Gothic, *Guth* and *god*; in Old High-German, *Cot* and *cuot*; in German, *Gott* and *gut*; in Danish, *Gud* and *god*; in Dutch, *God* and *goed*. Though it is impossible to give a satisfactory etymology of either *God* or *good*, it is clear that two words which thus run parallel in all these dialects without ever meeting, cannot be traced back to one central point. *God* was most likely an old heathen name of the Deity, and for such a name the supposed etymological meaning of *good* would be far too modern, too abstract, too Christian.\* In the Old Norse, *Goð* is actually found in the sense of a graven image, an idol, and is then used as a neuter, whereas, in the same language, *Guð*, as a masculine, means God. When, after their conversion to Christianity, the Teutonic races used *God* as the name of the true God, in the same manner as the Romanic nations retained their old heathen word *Deus*, we find that in Old High-German a new word was formed for false gods or idols. They were called *apcot*, as if ex-gods. The Modern German word for idol, *Götze*, is but a modified form of *God*, and the compound *Oelgötze*, which is used in the same sense, seems actually to point back to ancient stone idols, before which, in the days of old, lamps were lighted and incense burned. Luther, in translating the passage of Deuteronomy,

\* In the language of the gipsies, *devel*, meaning God, is connected with Sanskrit *deva*. Kuhn, *Beiträge*, i. p. 147. Pott, *Die Zigeuner*, ii. p. 311.

‘And ye shall hew down the graven images of their gods,’ uses the expression, ‘*die Götzen ihrer Götter.*’

What thus happens in different dialects may happen also in one and the same language; and this leads us to the consideration of our fourth and last proposition.

4. *Different Words may take the same Form in one and the same Language.*

The same causes which make words which are perfectly distinct in their origin to assume the same, or very nearly the same sound in English and German, may produce a similar convergence between two words in one and the same language. Nay, the chances are, if we take into account the peculiarities of pronunciation and grammar in each dialect, that perfect identity of sound between two words, differing in origin, will occur more frequently in one and the same than in different dialects. It would seem to follow, also, that these cases of verbal convergence are more frequent in modern than in ancient languages; for it is only by a constant process of phonetic corruption, by a constant wearing off of the sharp edges of words, that this verbal assimilation can be explained. Many words in Latin differ by their terminations only; these terminations were generally omitted in the modern Romance dialects, and the result is, that these words are no longer distinguishable in sound. Thus *novus* in Latin means *new*; *novem*, *nine*; the terminations being dropped, both become in French *neuf*. *Suum*, *his*, is pronounced in French *son*; *sonum*, *sound*, is reduced to the same form. In the same manner *tuum*, *thine*, and *tonus*, *tone*, become *ton*. The French *feu*, *fire*, is the Latin *focus*; *feu*, in the sense of late,



is not exactly Latin—at least, it is derived from Latin in the most barbarous way. In the same manner as we find in Spanish *somos*, *sois*, *son*, where *sois* stands ungrammatically for Latin *estis*; as in the same language a gerund *siendo* is formed which would seem to point to a barbarous Latin form, *essendo*, so a past participle *fuitus* may have been derived from the Latin perfect *fui*, I was; and this may have given rise to the French *feu*, late. Hence we find both *feu la reine* and *la feue reine*.

It sometimes happens that three Latin words are absorbed into one French sound. The sound of *mer* conveys in French three distinct meanings; it means sea, mother, and mayor. Suppose that French had never been written down, and had to be reduced to writing for the first time by missionaries sent to Paris from New Zealand, would not *mer*, in their dictionary of the French language, be put down with three distinct meanings—meanings having no more in common than the explanations given in some of our old Greek and Latin dictionaries? It is no doubt one of the advantages of the historical system of spelling that the French are able to distinguish between *la mer*, *mare*, *le maire*, *major*, *la mère*, *mater*; yet if these words produce no confusion in the course of a rapid conversation, they would hardly be more perplexing in reading, even though written phonetically.

There are instances where four and five words, all of Latin origin, have dwindled away into one French term. *Ver*, the worm, is Latin *vermis*; *vers*, a verse, is Latin *versus*; *verre*, a glass, is Latin *vitrum*; *vert*, green, is Latin *viridis*; *vair*, fur, is Latin *varius*. Nor is there any difference in pronunciation between the French *mai*, the month of May, the Latin *majus*;

*mais*, but, the Latin *magis*; *mes*, the plural of my, Latin *mei*; and *la maie*, a trough, perhaps the Latin *maetra*; or between *sang*, blood, *sanguis*; *cent*, a hundred, *centum*; *sans*, without, *sine*; *sent*, he feels, *sentit*; *s'en*, in *il s'en va*, *inde*.

Where the spelling is the same, as it is, for instance, in *louer*, to praise, and *louer*, to let, attempts have not been wanting to show that the second meaning was derived from the first; that *louer*, for instance, was used in the sense of letting, because you have to praise your lodgings before you can let them. Thus *fin*, fine, was connected with *fin*, the end, because the end occasionally expresses the smallest point of an object. Now, in the first instance, both *louer*, to let, and *louer*, to praise, are derived from Latin; the one is *laudare*, the other *locare*. In the other instance we have to mark a second cause of verbal confusion in French. Two words, the one derived from a Latin, the other from a German source, met on the neutral soil of France, and, after being divested of their national dress, ceased to be distinguishable from each other. The same applies to the French *causer*. In one sense it is the Latin *causare*, to cause; in another, the Old German *chôsôn*, the Modern German *kosen*. As French borrows not only from German, but also from Greek, we need not be surprised if in *le page*, page, we meet with the Greek *paídion*, a small boy, whereas *la page* is the Latin *página*, a page or leaf.

There are cases, however, where French, Italian, and Spanish words, though apparently invested with two quite heterogeneous meanings, must nevertheless be referred to one and the same original. *Voler*, to fly, is clearly the Latin *volare*; but *voler*, to steal, would seem at first sight to require a different etymology. There

is, however, no simple word, whether in Latin, or Celtic, or Greek, or German, from which *voler*, to steal, could be derived. Now, as we observed that the same Latin word branched off into two distinct French words by a gradual change of pronunciation, we must here admit a similar bifurcation, brought on by a gradual change of meaning. It would not, of course, be satisfactory to have recourse to a mere gratuitous assumption, and to say that a thief was called *volator*, a flyer, because he flew away like a bird from his pursuers. But Professor Diez has shown that in Old French, to steal is *embler*, which is the mediæval Latin *imbulare*, used, for instance, in the *Lex Salica*. This *imbulare* is the genuine Latin *involare*, which is used in Latin of birds flying down,\* of men and women flying at each other in a rage,† of soldiers dashing upon an enemy,‡ and of thieves pouncing upon a thing not their own.§ The same *involare* is used in Italian in the sense of stealing, and in the Florentine dialect it is pronounced *imbolare*, like the French *embler*. It was this *involare*, with the sense of seizing, which was abbreviated to the French *voler*. *Voler*, therefore, meant originally, not to fly away, but to fly upon, just as the Latin *impetus*, assault, is derived from the root *pat*, to fly, in Sanskrit, from which we derived *penna* and *feather*. A complete dictionary of words of this kind

\* 'Neque enim debent (aves) ipsis nidis involare ; ne, dum adsiliunt, pedibus ova confringant.'—Col. 8, 3, 5.

† 'Vix me contineo, quin involem in capillum, monstrum.'—Ter. *Eun.* 5, 2, 20.

‡ 'Adeoque improvisi castra involaverē.'—Tac. *H.* 4, 33.

§ 'Remitte pallium mihi meum quod involasti.'—Cat. 25, 6. These passages are taken from White and Riddle's *Latin-English Dictionary*, a work which deserves the highest credit for the careful and thoughtful manner in which the meanings of each word are arranged and built up architecturally, story on story.



in French has been published by M. E. Zlatagorskoi, under the title, 'Essai d'un Dictionnaire des Homonymes de la Langue Française' (Leipzig, 1862), and a similar dictionary might be composed in English. For here, too, we find not only Romance words differing in origin and becoming identical in form, but Saxon words likewise; nay, not unfrequently we meet with words of Saxon origin which have become outwardly identical with words of Romance origin. For instance:—

- I. *to blow* . . A. S. *bláwan*, the wind blows  
*to blow* . . A. S. *blówian*, the flower blows  
*to cleave* . . A. S. *clifian*, to stick  
*to cleave* . . A. S. *clúfan*, to sunder  
*a hawk* . . A. S. *hafuc*, a bird; German *Habicht*  
*to hawk* . . to offer for sale, German *höken*  
*to last* . . A. S. *gelæstan*, to endure  
*last* . . . A. S. *latost*, latest  
*last* . . . A. S. *hlæst*, burden  
*last* . . . A. S. *lást*, mould for making shoes  
*to lie* . . . A. S. *licgan*, to repose  
*to lie* . . . A. S. *leogan*, to speak untruth  
*ear* . . . A. S. *éare*, the ear; Lat. *auris*  
*ear* . . . A. S. *éar*, the ear of corn; Gothic *ahs*;  
German *Ähre*
- II. *count* . . . Latin *comes*  
*to count* . . Latin *computare*  
*to repair* . . Latin *reparare*  
*to repair* . . Latin *repatriare*  
*tense* . . . Latin *tempus*  
*tense* . . . Latin *tensus*  
*vice* . . . Latin *vitium*  
*vice* . . . Latin *vice*
- III. *corn* . . . A. S. *corn*, in the fields  
*corn* . . . Latin *cornu*, on the feet  
*sage* . . . A. S. *salwige*, a plant  
*sage* . . . Latin *sapius*  
*to see* . . . A. S. *seohan*

<i>see</i> . . .	Latin <i>sedes</i>
<i>scale</i> . . .	A. S. <i>scalu</i> , of a balance
<i>scale</i> . . .	A. S. <i>scealu</i> , of a fish
<i>scale</i> . . .	Latin <i>scala</i> , steps
<i>sound</i> . . .	A. S. <i>sund</i> , hale
<i>sound</i> . . .	A. N. <i>sund</i> , of the sea, from <i>swimman</i>
<i>sound</i> . . .	Latin <i>sonus</i> , tone
<i>sound</i> . . .	Latin <i>subundare</i> , to dive*

Although, as I said before, the number of these equivocal words will increase with the progress of phonetic corruption, yet they exist likewise in what we are accustomed to call ancient languages. There is not one of these languages so ancient as not to disclose to the eye of an accurate observer a distant past. In Latin, in Greek, and even in Sanskrit, phonetic corruption has been at work, smoothing the primitive asperity of language, and now and then producing exactly the same effects which we have just been watching in French and English. Thus, Latin *est* is not only the Sanskrit *asti*, the Greek *esti*, but it likewise stands for Latin *edit*, he eats. Now, as in German *ist* has equally these two meanings, though they are kept distinct by a difference of spelling, elaborate attempts have been made to prove that the auxiliary verb was derived from a verb which originally meant to eat—eating being supposed to have been the most natural assertion of our existence.

The Greek *ίός* means both arrow and poison; and here again attempts were made to derive either arrow from poison, or poison from arrow.† Though these

\* Large numbers of similar words in Mätzner, *Englische Grammatik*, i. p. 187; Koch, *Historische Grammatik der Englischen Sprache*, i. p. 223.

† The coincidence of *ρόνον*, a bow, and *ροξικόν*, poison for smearing arrows (hence *intoxication*) is curious.

two words occur in the most ancient Greek, they are nevertheless each of them secondary modifications of two originally distinct words. This can be seen by reference to Sanskrit, where arrow is *ishu*, whereas poison is *visha*, Latin *virus*. It is through the influence of two phonetic laws peculiar to the Greek language—the one allowing the dropping of a sibilant between two vowels, the other the elision of the initial *v*, the so-called digamma—that *ishu* and *visha* converged towards the Greek *íos*.

There are three roots in Sanskrit which in Greek assume one and the same form, and would be almost undistinguishable except for the light which is thrown upon them from cognate idioms. *Nah*, in Sanskrit, means to bind, to join together; *snu*, in Sanskrit, means to flow, or to swim; *nas*, in Sanskrit, means to come. These three roots assume in Greek the form *néō*.

*Néō*, fut. *nésō* (the Sanskrit NAH), means to spin, originally to join together; it is the German *nähen*, to sew, Latin *nere*. Here we have only to observe the loss of the original aspirate *h*, which reappears, however, in the Greek verb *néthō*, I spin; and the former existence of which can be discovered in Latin also, where the *c* of *necto* points to the original guttural *h*.

*SNÜ*, *snauti*, to run, appears in Greek as *néō*. This *néō* stands for *sneFō*. *S* is elided as in *mikrós* for *smikrós*,\* and the digamma disappears, as usual, between two vowels. It reappears, however, as soon as it stands no longer in this position. Hence fut.

\* Cf. Mehlhorn, § 54. Also *σφάλλω*, fallo; *σφόγγος*, fungus. Festus mentions in Latin, *smitto* and *mitto*, *stritavus* and *tritavus*.



*neúsomai*, aor. *ēneusa*. From this root, or rather from the still simpler and more primitive root *nu*, the Aryan languages derived their word for ship, originally the *swimmer*; Sanskrit *naus*, *nâvas*; Greek *naûs*, *nēôs*; Latin *navis*; and likewise their word for snow, the Gothic *snaivs*, the Latin *nix*, but *nivis*, like *vivo*, *vixi*. Secondary forms of *nu* or *snu* are the Sanskrit causative *snavayati*, corresponding to the Latin *nare*, which grows again into *natare*. By the addition of a guttural, we receive the Greek *nēchō*, I swim, from which *nēsōs*, an island, and *Náxos*, the island. The German *Nachen*, too, shows the same tendency to replace the final *v* by a guttural.

The third root is the Sanskrit *nas*, to come, the Vedic *nasati*. Here we have only to apply the Greek euphonic law, which necessitates the elision of an *s* between two vowels; and, as our former rule with regard to the digamma reduced *nefō* to *néō*, this will reduce the original *nēsō* to the same *néō*. Again, as in our former instance, the removal of the cause removed the effect, the digamma reappearing whenever it was followed by a consonant, so in this instance the *s* rises again to the surface when it is followed by a consonant, as we see in *nóstos*, the return, from *néesthai*.

If, then, we have established that sound etymology has nothing to do with sound, what other method is to be followed in order to prove the derivation of a word to be true and trustworthy? Our answer is, We must discover the laws which regulate the changes of letters. If it were by mere accident that the ancient word for *tear* took the form *ásru* in Sanskrit, *dákry* in Greek, *lacruma* in Sanskrit, *tagr* in Gothic, a scientific treatment of etymology would be an im-



possibility. But this is not the case. In spite of the apparent dissimilarity of the words for *tear* in English and French, there is not an inch of ground between these two extremes, *tear* and *larme*, that cannot be bridged over by Comparative Philology. We believe, therefore, until the contrary has been proved, that there is law and order in the growth of language, as in the growth of any other production of nature, and that the changes which we observe in the history of human speech are not the result of chance, but are constrained by general and ascertainable laws.

## LECTURE VII.

## ON THE POWERS OF ROOTS.

AFTER we have removed everything that is formal, artificial, intelligible in words, there remains always something that is not merely formal, not the result of grammatical art, not intelligible, and this we call for the present a *root* or a *radical element*. If we take such a word as *historically*, we can separate from it the termination of the adverb, *ly*, the termination of the adjective *al*. This leaves us *historic*, the Latin *historicus*. Here we can again remove the adjectival suffix *cus*, by which *historicus* is derived from *hístōr* or *historia*. Now *historia*, again, is formed by means of the feminine suffix *ia*, which produces abstract nouns, from *hístōr*. *Hístōr* is a Greek word, and it is in reality a corruption of *īstōr*. Both forms, however, occur; the spiritus asper instead of the spiritus lenis, in the beginning of the word, may be ascribed to dialectic influences. Then *īstōr*, again, has to be divided into *is* and *tōr*, *tōr* being the nom. sing. of the derivative suffix *tar*, which we have in Latin *dâ-tor*, Sanskrit *dâ-tar*, Greek *do-tēr*, a giver, and the radical element *is*. In *is*, the *s* is a modification of *d*, for *d* in Greek, if followed immediately by a *t*, is changed to *s*. Thus we arrive at last at the root *īd*, which we have in Greek *ôida*, in Sanskrit *veda*, the

non-reduplicated perfect of the root *vid*, the English *to wit*, to know. *Histōr*, therefore, meant originally a knower, or a finder, *historia*, knowledge. Beyond the root *vid* we cannot go, nor can we tell why *vid* means to see, or to find, or to know. Nor should we gain much if from *vid* we appealed to the preposition *vi*, which means asunder, and might be supposed to have imparted to *vid* the power of *dividing, singling out, perceiving (dis-cerno)*.\* It is true there is the same similarity of meaning in the Hebrew preposition *bîn*, between, and the verb *bîn*, to know, but why *bîn* should mean *between* is again a question which we cannot hope to clear up by mere etymological analysis.

All that we can safely maintain with regard to the nature of the Aryan roots is this, that they have definite forms and definite meanings. However chaotic the origin of language may by some scholars be supposed to have been, certain it is that here, as in all other subjects of physical research, we must attempt to draw a line which may separate the Chaos from the Kosmos. When the Aryan languages began to assume their individuality, their roots had become typical, both in form and meaning. They were no longer mere interjections with varying and indeterminate vowels, with consonants floating about from guttural to labial contact, and uncertain between surd, sonant, or aspirated enunciation. Nor were they the expressions of mere impressions of the moment, of single, abrupt states of feeling that had no reference to other sensations of a similar or dissimilar character. Language, if it then deserved

\* On the supposed original connection between *vi* and *dvi*, see Pott, *Etym. Unters.* i. 705. *Lectures*, First Series, p. 44.



that name, may at one time have been in that chaotic condition; nay, there are some small portions in almost every language which seem to date from that lowest epoch. Interjections, though they cannot be treated as parts of speech, are nevertheless ingredients of our conversation; so are the clicks of the Bushmen and Hottentots, which have been well described as remnants of animal speech. Again, there are in many languages words, if we may call them so, consisting of mere imitations of the cries of animals or the sounds of nature, and some of them have been carried along by the stream of language into the current of nouns and verbs.

It is this class of words which the Greeks meant when they spoke of *onomatopœia*. But do not let us suppose that because *onomatopœia* means making of words, the Greeks supposed all words to owe their origin to *onomatopœia*, or imitation of sound. Nothing would have been more remote from their minds. By *onomatopœia* they meant to designate not real words, but made, artificial, imitative words—words that anyone could make at a moment's notice. Even the earliest of Greek philosophers had seen enough of language to know that the key to its mysteries could not be bought so cheaply. When Aristotle\* calls words imitations (*mimēmata*), he does not mean those downright imitations, as when we call a cow a moo, or a dog a bow-wow. His statements and those of Plato † on language must be read in connection with the statements of earlier philosophers, such as Pytha-

\* *Rhet.* iii. 1. τὰ γὰρ ὀνόματα μιμήματά ἐστιν, ὑπῆρξε δὲ καὶ ἡ φωνὴ πάντων μιμητικώτατον τῶν μορίων ἡμῶν.

† Plato, *Cratylus*, 423 B. ὄνομα ἄρα ἐστίν, ὡς ἔοικε, μίμημα φωνῆ ἐκείνου ὃ μιμεῖται καὶ ὀνομάζει ὁ μιμούμενος τῇ φωνῇ, ὅταν μιμηται.

goras (540–510), Heraclitus (503), Democritus (430–410), and others, that we may see how much had been achieved before them, how many guesses on language had been made and refuted before they in turn pronounced their verdict. Although we possess but scant, abrupt, and oracular sayings which are ascribed to those early sages, yet these are sufficient to show that they had pierced through the surface of language, and that the real difficulties of the origin of speech had not escaped their notice. When we translate the enigmatic and poetical utterances of Heraclitus into our modern, dry, and definite phraseology, we can hardly do them justice. Perfect as they are when seen in their dark shrines, they crumble to dust as soon as they are touched by the bright rays of our modern philosophy. Yet if we can descend ourselves into the dark catacombs of ancient thought, we feel that we are there in the presence of men who, if they lived with us and could but speak our language, would be looked upon as giants. They certainly had this one advantage over us, that their eyes had not been dimmed by the dust raised in the wars of words that have been going on since their time for more than two thousand years. When we are told that the principal difference of opinion that separated the philosophers of old with regard to the nature and origin of language is expressed by the two words *phýsei* and *théseï*, ‘naturally’ and ‘artificially,’ we learn very little from such general terms. We must know the history of those words, which were watch-words in every school of philosophy, before they dwindled down to mere technical terms. With the later sophists *théseï*, ‘artificially,’ or the still earlier *nómô*, ‘conventionally,’ meant no longer what they

meant with the fathers of Greek philosophy; nay, they sometimes assumed the very opposite meaning. A sophist like Hermogenes, in order to prove that language existed conventionally, maintained that an apple might have been called a plum, and a plum an apple, if people had only agreed to do so.\* Another † pointed in triumph to his slave, to whom he had actually given a new name, by calling him 'Yet,' in order to prove that any word might be significative. Nor were the arguments in favour of the natural origin of language of a better kind, when the efficacy of curses was quoted to show that words endowed with such powers could not have a merely human or conventional origin.‡

Such was not the reasoning of Heraclitus or Democritus. The language in which they spoke, the whole world of thought in which they lived, did not allow them to discuss the nature and origin of language after the fashion of these sophists, nor after our own fashion. They had to speak in parables, in full, weighty, sugges-

\* Lersch, *Sprachphilosophie der Alten*, i. p. 28. *Ammonius Hermias ad Aristot. de Interpret.* p. 25 A. Οἱ μὲν οὕτω τὸ θέσει λέγουσιν ὡς ἕξὸν ὀνομαζέσθαι τῶν ἀνθρώπων ἕκαστον τῶν πραγμάτων ὀνομάζειν ὅτι ἂν ἐθέλη ὀνόματι, καθάπερ Ἑρμογένης ἤξιον. . . . Οἱ δὲ οὐχ οὕτως, ἀλλὰ τίθεσθαι μὲν τὰ ὀνόματα ὑπὸ μόνου τοῦ ὀνομαθέτου, τοῦτον δὲ εἶναι τὸν ἐπιστήμονα τῆς φύσεως τῶν πραγμάτων, οἰκεῖον τῇ ἐκάστου τῶν ὄντων φύσει ἐπισημίζοντα ὄνομα, ἢ τὸν ὑπηρετούμενον τῷ ἐπιστήμονι.

† *l. c.* i. 42. *Ammonius Hermias ad Aristot. de Interpret.* p. 103. Εἰ δὲ ταῦτα ὀρθῶς λέγεται, δῆλον ὡς οὐκ ἀποδεξόμεθα τὸν διαλεκτικὸν Διόδωρον πᾶσαν οἰόμενον φωνὴν σημαντικὴν εἶναι, καὶ πρὸς πίστιν τούτου καλέσαντα τῶν ἑαυτοῦ τινα οἰκετῶν τῷ συλλογιστικῷ συνδέσμῳ Ἀλλάμην καὶ ἄλλον ἄλλῳ συνδέσμῳ· ποίαν γὰρ ἕξουσιν αἱ τοιαῦται φωναὶ σημασίαν φύσει ἢ ἐνεργείας ἢ πάθους, καθάπερ τὰ ῥήματα χαλεπὸν καὶ πλάσαι.

‡ Lersch, p. 44.



tive poetry, poetry that cannot be translated without an anachronism. We must take their words, such as they are, with all their vagueness and all their depth, but we must not judge them by these words as if these words were spoken by ourselves. The oracle on language which is ascribed to Heraclitus was certainly his own. Commentators may have spoiled, but they could not have invented it. Heraclitus held that words exist naturally, but he did not confine himself to that technical phraseology. Words, he said, \* are like the shadows of things, like the pictures of trees and mountains reflected in the river, like our own images when we look into a mirror. This sounds like Heraclitus; his sentences are always like nuggets of gold, to use his own simile, † without any of the rubbish through which philosophers have to dig before they can bring to light solid truth. He is likewise reported to have said, that to use any words except those supplied by nature for each thing, was not to speak, but only to make a noise. What Heraclitus meant by his simile, or by the word 'nature,' if he used it, we cannot know definitely; but we know, at all events, what he did *not* mean, namely, that man imposed what names he pleased on the objects around him. To have perceived that at that time, to have given any thought to that problem in the days when Heraclitus lived, stamps him once for all as a philosopher, ignorant though he may have been of all the rules of our logic, and our

\* Lersch, *l. c.* i. 11. *Ammonius ad Arist. de Interpret.* p. 24 B, ed. Ald.

† Bernays, *Neue Bruchstücke des Heraclitus von Ephesus, Rheinisches Museum für Philologie*, x. p. 242. χρυσὸν οἱ διζήμενοι γῆν πολλὴν ὀρύσσουσι καὶ εὕρισκονσι ὀλίγον. Clemens Stromat. iv. 2, p. 565 P.



rhetoric, and our grammar. It is commonly supposed that, as on all other subjects, so on the subject of language, Democritus took the opposite view of the dark thinker, nor can we doubt that Democritus represented language as due to *thésis*, i. e. institution, art, convention. None of these terms, however, can more than indicate the meaning of *thésis*. The lengthy arguments which are ascribed to him \* in support of his theory savour of modern thought, but the similes again, which go by his name, are certainly his own. Democritus called words *agálmata phônéenta*, statues in sound. Here, too, we have the pithy expression of ancient philosophy. Words are not natural images, images thrown by nature on the mirror of the soul; they are statues, works of art, only not in stone or brass, but in sound. Such is the opinion of Democritus, though we must take care not to stretch his words beyond their proper intent. If we translate *théseí* by artificial, we must not take artificial in the sense of arbitrary. If we translate *nómō* by conventional, we must not take it to mean accidental. The same philosopher would, for instance, have maintained that what we call sweet or sour, warm or cold, is likewise so *théseí* or conventionally, but by no means arbitrarily. The war-cries of *phýseí* or

\* Lersch, i. p. 14. Proclus, *ad Plat. Crat.* p. 6. 'Ο δὲ Δημόκριτος Ξέσει λέγων τὰ ὀνόματα, διὰ τεσσάρων ἐπιχειρημάτων τοῦτο κατεσκεύαζεν· ἐκ τῆς ἁμωνυμίας· τὰ γὰρ διάφορα πράγματα τῷ αὐτῷ καλοῦνται ὀνόματι· οὐκ ἄρα φύσει τὸ ὄνομα· καὶ ἐκ τῆς πολωνυμίας· εἰ γὰρ διάφορα ὀνόματα ἐπὶ τὸ αὐτὸ καὶ ἐν πρᾶγμα ἐφαρμόσουσιν, καὶ ἐπάλληλα, ὅπερ ἀδύνατον· τριτὸν ἐκ τῆς τῶν ὀνομάτων μεταθέσεως· διὰ τί γὰρ τὸν Ἀριστοκλέα μὲν Πλάτωνα, τὸν δὲ Τύρταμον Θεόφραστον μετωνομάσαμεν, εἰ φύσει τὰ ὀνόματα; ἐκ δὲ τῆς τῶν ὁμοίων ἐλλείψεως· διὰ τί ἀπὸ μὲν τῆς φρωνήσεως λέγομεν φρονεῖν, ἀπὸ δὲ τῆς δικαιοσύνης οὐκ ἔτι παρονομάζομεν; τύχη ἄρα καὶ οὐ φύσει τὰ ὀνόματα.

*thései*, which are heard through the whole history of these distant battles of thought, involved not only philosophical, but political, moral, religious interests. We shall best understand their meaning if we watch their application to moral ideas. *Philolaos*, the famous Pythagorean philosopher, held that virtue existed by nature, not by institution. What did he mean? He meant what we mean when we say that virtue was not an invention of men who agreed to call some things good and others bad, but that there is a voice of conscience within us, the utterance of a divine law, independent of human statutes and traditions, self-evident, irrefragable. Yet even those who maintained that morality was but another name for legality, and that good and bad were simply conventional terms, insisted strongly on the broad distinction between law and the caprice of individuals. The same in language. When Democritus said that words were not natural images, natural echoes, but works of art in sound, he did not mean to degrade language to a mere conglomerate of sound. On the contrary, had he, with his terminology, ascribed language to nature, nature being with him the mere concurrence of atoms, he would have shown less insight into the origin, less regard for the law and order which pervade language. Language, he said, exists by institution; but how he must have guarded his words against any possible misapprehension, how he must have protested against the confusion of the two ideas, conventional and arbitrary, we may gather from the expression ascribed to him by a later scholiast, that words were statues in sound, but statues not made by the hands of men, but by the gods them-

selves.\* The boldness and pregnancy of such expressions are the best guarantee of their genuineness, and to throw them aside as inventions of later writers would betray an utter disregard of the criteria by which we distinguish ancient and modern thought.

Our present object, however, is not to find out what these early philosophers thought of language—I am afraid we shall never be able to do that—but only to guard against their memory being insulted, and their names abused for sanctioning the shallow wisdom of later ages. It is sufficient if we only see clearly that, with the ancient Greeks, language was not considered as mere *onomatopœia*, although that name means, literally, making of names. I should not venture to explain what Pythagoras meant by saying, ‘the wisest of all things is Number, and next to Number, that which gives names.’ † But of this I feel certain, that by the Second in Wisdom in the universe, even though he may have represented him exoterically as a human being, as the oldest and wisest of men, ‡ Pythagoras did not mean the man who, when he heard a cow say moo! succeeded in repeating that sound and fixed it as the name of the animal. As to Plato and Aristotle, it is hardly necessary to defend them against the imputation of tracing language back to *onomatopœia*. Even *Epicurus*, who is reported to have said that in the first formation of language men

\* *Olympiodorus ad Plat. Philebum*, p. 242, ὅτι ἀγάλματα φωνήεντα καὶ ταῦτα ἐστὶ τῶν θεῶν, ὡς Δημόκριτος. It is curious that Lersch, who quotes this passage (iii. 19), should, nevertheless, have ascribed to Democritus the opinion of the purely human origin of language. (i. 13.)

† Lersch, *l. c.* i. 25.

‡ *Ibid.* *l. c.* i. 27.



acted unconsciously, moved by nature, as in coughing, sneezing, lowing, barking, or sighing, admitted that this would account only for one half of language, and that some agreement must have taken place before language really began, before people could know what each person meant by these uncouth utterances.\* In this *Epicurus* shows a more correct appreciation of the nature of language than many who profess to hold his theories at present. He met the objection that words, if suggested by nature, ought to be the same in all countries, by a remark in which he anticipated Humboldt, viz., that human nature is affected differently in different countries, that different views are formed of things, and that these different affections and views influence the formation of words peculiar to each nation. He saw that the sounds of nature would never have grown into articulate language without passing through a second stage, which he represents as an agreement or an understanding to use a certain sound for a certain conception. Let us substitute for this Epicurean idea of a conventional agreement an idea which did not exist in his time, and the full elaboration of which in our own time we owe to the genius of *Darwin*;—let us place instead of

\* Diogenes Laërtius, *Epicurus*, § 75. "Ὅθεν καὶ τὰ ὀνόματα ἐξ ἀρχῆς μὴ θέσει γενέσθαι, ἀλλ' αὐτὰς τὰς φύσεις τῶν ἀνθρώπων καθ' ἕκαστα ἔθνη ἴδια πάσχουσας πάθη, καὶ ἴδια λαμβάνουσας φαντάσματα, ἰδίως τὸν ἀέρα ἐκπέμπειν, στελλόμενον ὑφ' ἑκάστων τῶν πάθων καὶ τῶν φαντασμάτων, ὡς ἂν ποτε καὶ ἡ παρὰ τοὺς τόπους τῶν ἐθνῶν διαφορὰ εἴη. "Υστερον δὲ κοινῶς καθ' ἕκαστα ἔθνη τὰ ἴδια τεθῆναι, πρὸς τὸ τὰς δηλώσεις ἦττον ἀμφιβόλους γενέσθαι ἀλλήλοις, καὶ συντομοτέρως δηλουμένας· τινὰ δὲ καὶ οὐ συνωρόμενα πράγματα εἰσφέροντας, τοὺς συνειδότας παρεγγυῆσαι τινὰς φθόγγους ὧν τοὺς μὲν ἀναγκασθέντας ἀναφωνῆσαι, τοὺς δὲ τῷ λογισμῷ ἐλομένους κατὰ τὴν πλείστην αἰτίαν οὕτως ἐρμηνεύσαι.—Lersch, i. 39.

agreement, *Natural Selection*, or, as I called it in my former Lectures, *Natural Elimination*, and we shall then arrive, I believe, at an understanding with *Epicurus*, and even with some of his modern followers. As a number of sensuous impressions, received by man, produce a mental image or a perception, and secondly, as a number of such perceptions produce a general notion, we may understand that a number of sensuous impressions may cause a corresponding vocal expression, a cry, an interjection, or some imitation of the sound that happens to form part of the sensuous impressions; and, secondly, that a number of such vocal expressions may be merged into one general expression, and leave behind the root as the sign belonging to a general notion. But as there is in man a faculty of reason which guides and governs the formation of sensuous impressions into perceptions, and of perceptions into general notions, the gradual formation of roots out of mere natural cries or imitations takes place under the same rational control. General notions are not formed at random, but according to law, that law being our reason within, corresponding to the reason without—to the reason, if I may so call it, of nature. Natural selection, if we could but always see it, is invariably rational selection. It is not any accidental variety that survives and perpetuates itself; it is the individual which comes nearest to the original intention of its creator, or what is best calculated to accomplish the ends for which the type or species to which it belongs was called into being, that conquers in the great struggle for life. So it is in thought and language. Not every random perception is raised to the dignity of a general notion, but only the constantly recurring, the

strongest, the most useful; and out of the endless number of general notions that suggest themselves to the observing and gathering mind, those only survive and receive definite phonetic expression which are absolutely requisite for carrying on the work of life. Many perceptions which naturally present themselves to our minds have never been gathered up into general notions, and accordingly they have not received a name. There is no general notion to comprehend all blue flowers or all red stones; no name that includes horses and dogs, but excludes oxen and sheep. The Greek language has never produced a word to express *animal* as opposed to *man*, and the word *zôon*, which, like *animal*, comprises all living creatures, is post-Homeric.\* *Locke* has called attention to the fact that in English there is a special word for killing a man, namely, *murder*, while there is none for killing a sheep; that there is a special designation for the murder of a father, namely, *parricide*, but none for the murder of a son or a neighbour. 'Thus the mind,' he writes,† 'in mixed modes, arbitrarily unites into complex ideas such as it finds convenient; whilst others that have altogether as much union in nature are left loose, and never combined into one idea because they have no need of one name.' And again, 'Colshire, drilling, filtration, cohobation, are words standing for certain complex ideas, which, being seldom in the minds of any but the few whose particular employments do at every turn suggest them to their thoughts, those names of them are not generally understood but by smiths and chymists,

\* Curtius, *Grundzüge*, i. 78.

† Locke, *On the Understanding*, iii. 5, 6.



who having framed the complex ideas which these words stand for, and having given names to them or received them from others upon hearing of these names in communication, readily conceive those ideas in their minds; as by *cohobation*, all the simple ideas of distilling and the pouring the liquor distilled from anything back upon the remaining matter, and distilling it again. Thus we see that there are great varieties of simple ideas, as of tastes and smells, which have no names, and of modes many more, which either not having been generally enough observed, or else not being of any great use to be taken notice of in the affairs and concerns of men, they have not had names given to them, and so pass not for species.\*

Of course, when new combinations arise, and again and again assert their independence, they at last receive admittance into the commonwealth of ideas and the republic of words. This applies to ancient even more than to modern times—to the early ages of language more than to its present state. It was an event in the history of man when the ideas of father, mother, brother, sister, husband, wife were first conceived and first uttered. It was a new era when the numerals from one to ten had been framed, and when words like law, right, duty, virtue, generosity, love, had been added to the dictionary of man. It was a revelation—the greatest of all revelations—when the conception of a Creator, a Ruler, a Father of man, when the name of God was for the first time uttered in this world. Such were the general notions that were wanted and that were coined into intellectual currency. Other notions started up, lived for a time,

\* Locke, *l. c.* ii. 18, 7.



and disappeared again when no longer required. Others will still rise up, unless our intellectual life becomes stagnant, and will receive the baptism of language. Who has thought about the changes which are brought about apparently by the exertions of individuals, but for the accomplishment of which, nevertheless, individual exertions would seem to be totally unavailing, without feeling the want of a word, that is to say, in reality, of an idea, to comprehend the influence of individuals on the world at large and of the world at large on individuals—an idea that should explain the failure of a *Huss* in reforming the Church, and the success of a *Luther*, the defeat of a *Pitt* in carrying parliamentary reform, and the success of a *Russell*? How are we to express that historical process in which the individual seems to be a free agent and yet is the slave of the masses whom he wants to influence, in which the masses seem irresistible, and are yet swayed by the pen of an unknown writer? Or, to descend to smaller matters, how does a poet become popular? How does a new style of art or architecture prevail? How, again, does fashion change?—how does what seemed absurd last year become recognised in this, and what is admired in this become ridiculous in the next season? Or take language itself. How is it that a new word, such as *to shunt*, or a new pronunciation, such as *gold* instead of *goold*, is sometimes accepted, while at other times the best words newly coined or newly revived by our best writers are completely ignored and fall dead? We want an idea that is to exclude caprice as well as necessity—that is to include individual exertion as well as general co-operation—an idea applicable neither to the unconscious building of bees nor to the

conscious architecture of human beings, yet combining within itself both these operations, and raising them to a new and higher conception. You will guess both the idea and the word, if I add that it is likewise to explain the extinction of fossil kingdoms and the origin of new species—it is the idea of *Natural Selection* that was wanted, and being wanted it was found, and being found it was named. It is a new category—a new engine of thought; and if naturalists are proud to affix their names to a new species which they discover, Mr. Darwin may be prouder, for his name will remain affixed to a new idea, a new genus of thought.

There are languages which do not possess numerals beyond four. All beyond four is lumped together in the general idea of *many*. There are dialects, such as the *Hawaiian*, in which \* black and blue and dark-green are not distinguished, nor bright yellow and white, nor brown and red. This arises from no obtuseness of sense, for the slightest variation of tint is immediately detected by the people, but from sluggishness of mind. In the same way the *Hawaiians* are said to have but one term for love, friendship, gratitude, benevolence, esteem, &c., which they call indiscriminately *aloha*, though the same people distinguish in their dictionary between *aneane*, a gentle breeze, *matani*, wind, *pui*, blowing or puffing with the mouth, and *hano*, blowing through the nose, asthma.† It is the same in the lower classes of our own country. People who would never use such words as quadruped, or mineral, or beverage, have

\* *The Polynesian*, September 27, 1862.

† Hale, *Polynesian Lexicon*, s. v.

different names for the tail of a fox, the tail of a dog, the tail of a hare.\*

*Castrèn*, the highest authority on the languages, literature, and civilization of the *Northern Turanian* races, such as the *Finns, Lapps, Tatars, and Mongolians*, speaks of tribes which have no word for *river*, though they have names for the smallest *rivulet*; no word for *finger*, but names for the *thumb*, the *ring-finger*, &c.; no word for *berry*, but many names for *cranberry*, *strawberry*, *blueberry*; no word for *tree*, but names for *birch*, *fir*, *ash*, and other trees.† He states in another place (p. 18) that in Finnish the word for *thumb* gradually assumed the meaning of *finger*, the word for *waterberry* (*empetrum nigrum*) the meaning of *berry*.

But even these, the most special names, are really general terms, and express originally a general quality, nor is there any other way in which they could have been formed. It is difficult to place ourselves in the position of people with whom the framing of new ideas and new words was the chief occupation of their life.‡ But suppose we had no word for *dog*; what could we do? If we, with a full-grown language at our command, became for the first time acquainted with a dog, we should probably discover some similarity between it and some other animal, and call it accordingly. We might call it a tame wolf, just as the inhabitants of *Mallicolo*,§ when they saw the first dogs that had been sent to them from the *Society Islands*, called them *broodàs*, their name for *pig*.

\* Pott, *Etymologische Forschungen*, ii. 439.

† *Vorlesungen über Finnische Mythologie*, p. 11.

‡ Daniel Wilson, *Prehistoric Man*, Third Chapter.

§ Pott, *Etymologische Forschungen*, ii. 138.



Exactly the same happened in the island of *Tanna*. Here, too, the inhabitants called the dogs that were sent to them *pigs* (*buga*). It would, however, very soon be felt as an inconvenience not to be able to distinguish between a dog and a pig, and some distinguishing mark of the dog would have to be chosen by which to name it. How could that be effected? It might be effected by imitating the barking of the animal, and calling it *bow-wow*; yet, strange to say, we hardly ever find a civilized language in which the dog was so called. What really took place was this. The mind received numerous impressions from everything that came within its ken. A dog did not stand before it at once, properly defined and classified, but it was observed under different aspects—now as a savage animal, now as a companion, sometimes as a watcher, sometimes as a thief, occasionally as a swift hunter, at other times as a coward or an unclean beast. From every one of these impressions a name might be framed, and after a time the process of natural elimination would reduce the number of these names, and leave only a few, or only one, which, like *canis*, would become the proper name of dog.

But in order that any such name could be given, it was requisite that general ideas, such as roving, following, watching, stealing, running, resting, should previously have been formed in the mind, and should have received expression in language. These general ideas are expressed by roots. As they are more simple and primitive, they are expressed by more simple and primitive roots, whereas complex ideas found expression in secondary radicals. Thus *to go* would be expressed by *sar*, to creep by *sarp*; to shout by *nad*, to rejoice by *nand*, to join by *yu* or *yuj*, to

glue together by *yaut*. We thus find in Sanskrit and in all the Aryan languages *clusters of roots*, expressive of one common idea, and differing from each other merely by one or two additional letters, either at the end or at the beginning. The most natural supposition is that which I have just stated, namely, that as ideas grew and multiplied, simple roots were increased and became diversified. But the opposite view might likewise be defended, namely, that language began with variety, that many special roots were thrown out first, and from them the more general roots elaborated by leaving out those letters which constituted the specific differences of each.

Much may be said in support of either of these views, nor is it at all unlikely that both processes, that of accretion and that of elimination, may have been at work simultaneously. But the fact is that we do not know even the most ancient of the Aryan languages, the Sanskrit, till long after it had passed through its radical and agglutinative stages, and we shall never know for certain by what slow degrees it advanced through both, and became settled as an inflectional language. Chronologically speaking, the question whether *sarp* existed before *sar*, is unanswerable; logically, no doubt, *sar* comes first, but we have seen enough of the history of speech to know that what ought to have been according to the strict laws of logic is very different from what has been according to the pleasure of language.\*

What it is of the greatest importance to observe is

\* On clusters of roots, or the gradual growth of roots, see some interesting remarks by Benfey, *Kurze Sanskrit Grammatik*, § 60 seq., and Pott, *Etymologische Forschungen*, ii. p. 283. Bopp, *Vergleichende Grammatik*, § 109 a, 3, 109 b, 1.

this, that out of many possible general notions, and out of many possible general terms, those only become, through a process of natural selection, typical in each language which are now called the roots, the fertile germs of that language. These roots are definite in form and meaning: they are what I called *phonetic types*, firm in their outline, though still liable to important modifications. They are the '*specific centres*' of language, and without them the science of language would be impossible.

All this will become clearer by a few examples. Let us take a root and follow it through its adventures in its way through the world. There is an Aryan root *MAR*, which means to crush, to pound, to destroy by friction. I should not venture to say that those are mistaken who imagine they perceive in this root the grating noise of some solid bodies grinding against each other. Our idiosyncrasies as to the nature of certain sounds are formed, no doubt, very much through the silent influence of the languages which we speak or with which we are acquainted. It is perfectly true also that this jarring or rasping noise is rendered very differently in different languages. Nevertheless, there being such a root as *mar*, meaning to pound, it is natural to imagine that we hear in it something like the noise of two mill-stones, or of a metal-crushing engine.\* But let us mark at once the

\* The following remarks of St. Augustine on this subject are curious:—'Donec perveniatur eo ut res cum sono verbi aliqua similitudine concinat, ut cum dicimus æris tinnitum, equorum hinnitum, ovium balatum, tubarum clangorem, stridorem catenarum (perspicis enim hæc verba ita sonare ut ipsæ res quæ his verbis significantur). Sed quia sunt res quæ non sonant, in his similitudinem tactus valere, ut si leniter vel aspere sensum tangunt, lenitas vel asperitas literarum ut tangit auditum sic eis



difference between a mere imitation of the inarticulate groaning and moaning noises produced by crushing hard substances, and the articulate sound *mar*. Every possible combination of consonants with final *r* or *l* was suggested; *kr*, *tr*, *chr*, *glr*, all would have answered the purpose, and may have been used, for all we know, previous to the first beginning of articulate speech. But, as soon as *mr* had got the upperhand, all other combinations were discarded; *mr* had conquered, and became by that very fact the ancestor of a large family of words. If, then, we either follow the history of this root *MAR* in an ascending line and spreading direction, or if we trace its offshoots back in a descending line to that specific germ, we must be able to explain all later modifications, as necessitated by phonetic and etymological laws; in all the various settings, the jewel must be the same, and in all its various corruptions the causes must be apparent that produced the damage.

I begin, then, with the root *MAR*, and ascribe to it the meaning of grinding down. In all the words that

nomina peperit: ut ipsum *lene* cum dicimus leniter sonat, quis item *asperitatem* non et ipso nomine asperam judicet? *Lene* est auribus cum dicimus *voluptas*, asperum cum dicimus *crux*. Ita res ipsæ adficiunt, ut verba sentiuntur. *Mel*, quam suaviter gustum res ipsa, tam leniter nomine tangit auditum, *acre* in utroque asperum est. *Lana* et *vepres* ut audiuntur verba, sic illa tanguntur. Hæc quasi cunabula verborum esse crediderunt, ubi sensus rerum cum sonorum sensu concordarent. Hinc ad ipsarum inter se rerum similitudinem processisse licentiam nominandi; ut cum verbi causa *crux* propterea dicta sit, quod ipsius verbi asperitas cum doloris quem *crux* efficit asperitate concordat, *crura* tamen non propter asperitatem doloris sed, quod longitudine atque durtia inter membra cetera sint ligno similiora sic appellata sint.—Augustinus, *De dialectica*, as corrected by Crecelius in Hoefler's *Zeitschrift*, iv. 152.



are derived from *mar* there must be no phonetic change, whether by increase, decrease, or corruption, that cannot be supported by analogy; in all the ideas expressed by these words there must always be a connecting link by which the most elevated and abstract notions can be connected, directly or indirectly, with the original conception of 'grinding.' In the phonetic analysis, all that is fanciful and arbitrary is at once excluded; nothing is tolerated for which there is not some precedent. In the web of ideas, on the contrary, which the Aryan mind has spun out of that one homely conception we must be prepared not only for the orderly procession of logical thought, but frequently for the poetic flights of fancy. The production of new words rests on poetry as much, if not more, than on judgment; and to exclude the poetical or fanciful element in the early periods of the history of human speech would be to deprive ourselves of the most important aid in unravelling its early beginnings.

Before we enter on our survey of this family of words, we must bear in mind (1) that *r* and *l* are cognate and interchangeable; therefore *mar*=*mal*.

2. That *ar* in Sanskrit is shortened to a simple vowel, and then pronounced *ri*; hence *mar*=*mri*.

3. That *ar* may be pronounced *ra*,\* and *al*, *la*; hence *mar*=*mra*, *mal*=*mra*.

4. That *mra* and *mra* in Greek are changed into *mbro*, *mblo*, and, after dropping the *m*, into *bro* and *blo*.

In Sanskrit we find *malana* in the sense of rubbing

\* In Sanskrit we have *marditâ* and *mradiâtâ*, he will grind to pieces, as the future of *mard*.

or grinding, but the root does not seem in that language to have yielded any names for mill. This may be important historically, if it should indicate that real mills were unknown previous to the Aryan separation. In Latin, Greek, German, Celtic, Slavonic, the name for mill is throughout derived from the root *mar*. Thus, Latin *mola*,\* Greek *mýlē*, Old High-German *muli*, Irish *meile*, Bohemian *mlyn*, Lithuanian *malunas*. From these close coincidences among all the members of the Northern branch of the Aryan family, it has been concluded that mills were known previous to the separation of the Northern branch, though it ought to be borne in mind that some of these nations may have borrowed the name from others who were the inventors of mills.

With the name for mill we have at the same time the names for *miller*, *mill-stone*, *milling*, *meal*. In Greek *mýlos*, mill-stone; *mýllô*, I mill. In Gothic *malan*, to mill; *mele*, meal; *muljan*, to rub to pieces.

What in English are called the mill-teeth are the *mýlitai* in Greek; the *molâres*, or grinders, in Latin.

To anyone acquainted with the living language of England, the transition from *milling* to *fighting* does not require any long explanation. Hence we trace back to *mar* without difficulty the Homeric *már-namai*, I fight, I pound, as applied to boxers in the *Odyssey*.† In Sanskrit, we find *mṛi-nâ-mi* used in the more serious sense of smashing, i.e. killing.‡ We

\* See Pott, *Etym. Forsch.* (I.) i. 220. Kuhn, *Indische Studien*, i. 359. Curtius, *G. E.* i. 302.

† *Od.* xviii. 31.

Ζῶσαι νῦν, ἵνα πάντες ἐπιγνώσῃ καὶ οἶδε

Μαργαμένους· πῶς δ' ἂν σὺ νεοτέρῳ ἀνδρὶ μάχοιο.

‡ *Rig-Veda*, vi. 44, 17: 'prá mṛiṇa jahí cha;' strike (them) down and kill them.

shall now understand more readily the Greek *môlos* in *môlos Arēos*, the toil and moil of war, and likewise the Greek *môlôps*, a weal, originally a blow, a contusion.

Hitherto we have treated *mar* as a transitive verb, as expressive of the action of grinding exerted on some object or other. But most verbs were used originally intransitively as well as transitively, and so was *mar*. What then would *mar* express if used as an intransitive verb, if expressive of a mere condition or status? It would mean 'to be wearing away,' 'to be in a state of decay,' 'to crumble away as if ground to dust.' We say in German, *sich aufreiben*, to become exhausted; and *aufgerieben* means nearly destroyed. Goethe says, '*Die Kraft der Erregbarkeit nimmt mit dem Leben ab, bis endlich den aufgeriebenen Menschen nichts mehr auf der leeren Welt erregt als die künftige*;' 'Our excitability decreases with our life, till at last nothing can excite the ground-down mortal in this empty world except the world to come.' What then is the meaning of the Greek *marainô* and *marasmós*? *Marainô*, as an intransitive verb, means to wear out; as *nósos maráinei me*, illness wears me out; but it is used also as a neuter verb in the sense of to wither away, to die away. Hence *marasmós*, decay, the French *marasme*. The adjective *môlys*, formed like *môlos*, means worn out, feeble, and a new verb, *môlýnomai*, to be worn out, to vanish.

The Sanskrit *mûrchh*, to faint, is derived from *mar* by a regular process for forming inchoative verbs; it means to begin to die.

Now let us suppose that the ancient Aryans wanted to express for the first time what they constantly saw around them, namely, the gradual wearing away of



the human frame, the slow decay which at last is followed by a complete breaking up of the body. How should they express what we call dying or death? One of the nearest ideas that would be evoked by the constant impressions of decay and death was that expressed by *mar*, the grinding of stone to dust. And thus we find in Latin *mor-i-or*, I die, *mortuus*, dead, *mors*, death. In Sanskrit, *mṛiye*, I die, *mṛitá*, dead, *mṛityu*, death. One of the earliest names for *man* was *márta*, the dying, the frail creature, a significant name for man to give to himself; in Greek *brotós*, mortal. Having chosen that name for himself, the next step was to give the opposite name to the gods, who were called *ámbrotoi*, without decay, immortal, and their food *ambrosía*, immortality. In the Teutonic languages these words are absent, but that *mar* was used in the sense, if not of dying, at least of killing, we learn from the Gothic *maurthr*, the English *murder*. In Old Slavonic we find *mrěti*, to die, *morǔ*, pestilence, death; *smrěti*, death; in Lithuanian *mir-ti*, to die, *smertis*, death.

If *morior* in Latin is originally to decay, then what causes decay is *morbus*, illness.

In Sanskrit the body itself, our frame, is called *múrti*, which originally would seem to have meant decay or decayed, a corpse, rather than a *corpus*.

The Sanskrit *marman*, a joint, a member, is likewise by Sanskrit grammarians derived from *mar*. Does it mean the decaying members? or is it derived from *mar* in its original sense of grinding, so as to express the movement of the articulated joints? The Latin *membrum* is *memrum*, and this possibly by reduplication derived from *mar*, like *mémbletai* from

*mélô*, *mémblōka* from *mol* in *émolon*, the present being *bōskō*.

Let us next examine the Latin *mōra*. It means *delay*, and from it we have the French *demeurer*, to dwell. Now *mora* was originally applied to time, and in *mora temporis* we have the natural expression of the slow dying away, the gradual wasting away of time. 'Sine morā,' without delay, originally without decay, without loss of time.

From *mar* in the secondary, but definite sense of withering, dying, we have the Sanskrit *maru*, a desert, a dead soil. There is another desert, the sea, which the Greeks called *atrýgeton*, unfruitful, barren. The Aryans had not seen that watery desert before they separated from each other on leaving their central homes. But when the Romans saw the Mediterranean, they called it *māre*, and the same word is found among the Celtic, the Slavonic, and the Teutonic nations.\* We can hardly doubt that their idea in applying this name to the sea was the dead or stagnant water as opposed to the running streams (*l'eau vive*), or the unfruitful expanse. Of course there is always some uncertainty in these guesses at the original thoughts which guided the primitive framers of language. All we can do is to guard against mixing together words which may have had an independent origin; but if it is once established that there is no other root from which *mare* can be derived more regularly than from *mar*, to die (Bopp's derivation from the Sk. *vāri*, water, is not tenable), then we are at liberty to draw some connecting line between the root and its offshoot,

\* Curtius, *Zeitschrift*, i. 30. Slav. *mōre*; Lith. *marios* and *marés*; Goth. *marei*; Ir. *muir*.

and we need not suppose that in ancient days new words were framed less boldly than in our own time. Language has been called by Jean Paul 'a dictionary of faded metaphors:' so it is, and it is the duty of the etymologist to try to restore them to their original brightness. If, then, in English we can speak of dead water, meaning stagnant water, or if the French\* use *eau morte* in the same sense, why should not the Northern Aryans have derived one of their names for the sea from the root *mar*, to die? Of course they would have other names besides, and the more poetical the tribe, the richer it would be in names for the ocean. The Greeks, who of all Aryan nations were most familiar with the sea, called it not the dead water, but *thálassa* (*tarássô*), the commotion, *hâls*, the briny, *pélagos* (*plázô*), the tossing, *póntos*, the high-road. †

Let us now return to the original sense of *mar* and *mal*, which was, as we saw, to grind or to pound, chiefly applied to the grinding of corn and to the blows of boxers. The Greeks derived from it one of their mythological characters, namely, *Moliôn*, a word which, according to Hesychius, would mean a fighter in general, but which, in the fables of Greece, is chiefly known by the two *Moliônes*, the millers, who had one body, but two heads, four feet, and four hands. Even *Herakles* could not vanquish them when they fought against him in defence of their uncle *Augeias* with his herd of three thousand oxen. He killed them afterwards by surprise. These heroes having been called originally *Moliônes* or *Molionidae*, i. e.

\* Pott, Kuhn's *Zeitschrift*, ii. 107.

† Curtius, Kuhn's *Zeitschrift* i. 33.



pounders, were afterwards fabled to have been the sons of *Molionē*, the mill, and *Aktōr*, the corn-man. Some mythologists \* have identified these twins with thunder and lightning, and it is curious that the name of *Thor's* thunderbolt should be derived from the same root; for the hammer of *Thor* *Miölnir* † means simply the smasher. Again, among the Slavonic tribes, *molnija* is a name for lightning; and in the Serbian songs *Munja* is spoken of as the sister of *Grom*, the thunder, and has become a mythological personage.

Besides these heroic millers, there is another pair of Greek giants, known by the name of *Aloadae*, *Otos* and *Ephialtes*. In their pride they piled *Ossa* on *Olympus*, and *Pelion* on *Ossa*, like another Tower of Babel, in order to scale the abode of the gods. They were defeated by *Apollo*. The name of these giants has much the same meaning as that of the *Moliones*. It is derived from *alōē'*, a threshing-floor, and means threshers. The question, then, is whether *alōē'*, threshing-floor, and *áleuron* and *tà áleura*, wheat-flour, can be traced back to the root *mal*. It is sometimes said that Greek words may assume an initial *m* for euphony's sake. That has never been proved. But it can be proved by several analogous cases that Greek words, originally beginning with *m*, occasionally drop

\* Friedreich, *Realien in der Iliade und Odyssee*, p. 562. Preller, *Griechische Mythologie*, ii. 165.

† Grimm, *Deutsche Mythologie*, 164, 1171. 'The holy mawle' (maul, maillet, malleus) is referred by Grimm to the hammer of Thor. 'The holy mawle, which they fancy hung behind the church-door, which, when the father was seaventie, the sonne might fetch to knock his father on the head, as effete and of no more use.'—Haupt's *Zeitschrift*, v. 72.



that *m*. This, no doubt, is a violent change, and a change apparently without any physiological necessity, as there is no more difficulty in pronouncing an initial *m* than in pronouncing an initial vowel. However, there is no lack of analogies; and by analogies we must be guided. Thus *móschos*, a tender shoot, exists also as *óschos* or *óschē*, a young branch. Instead of *mía*, one, in the feminine, we find *ía* in Homer. Nay, instead of our very word *dleuron*, wheaten flour, another form, *máleuron*, is mentioned by *Helladius*.\* Again, if we compare Greek and Latin, we find that what the Romans called *mola*—namely, meal, or rather the grits of spelt, coarsely ground, which were mixed with salt, and thus strewed on the victims at sacrifices—were called in Greek *oulai* or *olai*, though supposed to be barley instead of spelt.† On the strength of these analogies we may, I believe, admit the possibility of an initial *m* being dropped in Greek, which would enable us to trace the names both of the *Moliones* and *Aloadae* back to the root *mar*. And if the *Moliones* and *Aloadae* ‡ derive their names from the root *mar*, we can hardly doubt that *Mars* and *Ares*, the prisoner of the *Aloadae*, came both from the same source. In Sanskrit the root *mar* yields *Marut*, the storm, literally the pounder or smasher; §

\* *μῶλωψ*, a weal, seems connected with *οὐλαί*, scars.

† Cf. Buttman, *Lexilogus*, p. 450.

‡ *Otos* and *Ephialtes*, the wind (*vâta*) and the hurricane.

§ Professor Kuhn takes *Marut* as a participle in *at*, and explains it as dying or dead. He considers the *Maruts* were originally conceived as the souls of the departed, and that because the souls were conceived as ghosts, or spirits, or winds, the *Maruts* assumed afterwards the character of storm-deities. Such a view, however, finds no support in the hymns of the Veda. In *Pilumnus*, the brother of *Picumnus*, both companions of *Mars*, we have a name

and in the character of the *Maruts*, the companions of *Indra* in his daily battle with *Vṛitra*, it is easy to discover the germs of martial deities. The same root would fully explain the Latin *Mars*,\* *Martis*; and, considering the uncertain character of the initial *m*, the Greek *Árēs*, *Áreōs*. *Marmar* and *Marmor*, old Latin names for *Mars*, are reduplicated forms; and in the Oscan *Mâmers* the *r* of the reduplicated syllable is lost. *Mâvors* is more difficult to explain,† for there is no instance in Latin of *m* in the middle of a word being changed into *v*. But although etymologically there is no difficulty in deriving the Indian name *Marut*, the Latin name *Mars*, and the Greek name *Ares*, from one and the same root,‡ there is certainly neither in the legends of *Mars* nor in those

of similar import, viz. a pounder. *Jupiter Pistor*, too, was originally the god who crushes with the thunderbolt (Preller, *Römische Mythologie*, p. 173), and the *Molæ Martis* seem to rest on an analogous conception of the nature of *Mars*.

\* The suffix in *Mars*, *Martis*, is different from that in *Marut*. The Sanskrit *Marut* is *Mar-vat*; *Mars*, *Martis*, is formed, like *pars*, *partis*, which happens to correspond with Sanskrit *par-us* or *par-van*. The Greek *Árēs* is again formed differently, but the Æolic form, *Áreus*, would come nearer to *Marut*.—Kuhn, *Zeitschrift*, i. 376.

† See Corssen, in Kuhn's *Zeitschrift*, ii. 1–35.

‡ That *Marut* and *Mars* were radically connected, was first pointed out by Professor Kuhn, in Haupt's *Zeitschrift*, v. 491; but he derived both words from *mar* in the sense of dying. Other derivations are discussed by Corssen, in Kuhn's *Zeitschrift*, ii. 1. He quotes Cicero (*Nat. Deor.* ii. 28): 'Jam qui magna verteret Mavors;'; Cedrenus (*Corp. Byz. Niebuhr*, t. i. p. 295, 21 ff.): ὄρι τὸν Μάρτεμ οἱ Ῥωμαῖοι μόρτεμ ἐκάλουν οἰονεὶ θάνατον, ἢ κινητήν τῶν τεχνῶν, ἢ τὸν παρ' ἀβρένων καὶ μόνων τιμώμενον; Varro (L.L. v. § 73, ed. O. Müller). 'Mars ab eo quod maribus in bello præest, aut quod ab Sabinis acceptus, ibi est Mamers.' See also Leo Meyer, in Kuhn's *Zeitschrift*, v. 387.

of *Ares* any very distinct trace of their having been representatives of the storm. *Mars* at Rome and *Ares* in Thracia, though their worship was restricted to small territories, both assumed there the character of supreme tutelary deities. The only connecting link between the classical deities *Mars* and *Ares* and the Indian *Maruts* is their warlike character; and if we take *Indra* as the conqueror of winter, as the destroyer of darkness, as the constant victor in the battle against the hostile powers of nature, then he, as the leader of the *Maruts*, who act as his army, assumes a more marked similarity with *Mars*, the god of spring, the giver of fertility, the destroyer of evil.\* In *Ares*, Preller, without any thought of the relationship between *Ares* and the *Maruts*, discovered the personification of the sky as excited by storm.†

\* See Preller, *Römische Mythologie*, p. 300, seq.

† Preller, *Griechische Mythologie*, p. 202-3. 'Endlich deuten aber auch verschiedene bildliche Erzählungen in der Ilias eine solche Naturbeziehung an, besonders die Beschreibung der Kämpfe zwischen *Ares* und *Athena*, welche als Göttin der reinen Luft und des Aethers die natürliche Feindin des *Ares* ist, und gewöhnlich sehr unbarmherzig mit ihm umgeht. So Il. v. 583 ff., wo sie ihn durch *Diomedes* verwundet, *Ares* aber mit solchem Getöse niederrasselt (ἔβραχε), wie neuntausend oder zehntausend Männer in der Schlacht zu lärmen pflegen, worauf er als dunkles Gewölk zum Himmel emporfährt. Ebenso Il. xxi. 400 ff., wo *Athena* den *Ares* durch einen Steinwurf verwundet, er aber fällt und bedeckt sieben Morgen Landes im Fall, und seine Haare vermischen sich mit dem Staube, seine Waffen rasseln: was wieder ganz den Eindruck eines solchen alten Naturgemäldes macht, wo die Ereignisse der Natur, Donnerwetter, Wolkenbruch, gewaltiges Stürmen und Brausen in der Luft als Acte einer himmlischen Göttergeschichte erscheinen, in denen gewöhnlich *Zeus*, *Hera*, *Athena*, *Hephästos*, *Ares* und *Hermes* als die handelnden Personen auftreten. Indessen ist diese allgemeine Bedeutung des



We have hitherto examined the direct offshoots only of the root *mar*, but we have not yet taken into account the different modifications to which that root itself is liable. This is a subject of considerable importance, though at the same time beset with greater difficulties and uncertainties. I stated in a former Lecture that Hindu grammarians have reduced the whole wealth of their language to about 1,700 roots. These roots once granted, there remained not a single word unexplained in Sanskrit. But the fact is that many of these roots are clearly themselves derivatives. Thus, besides *yu*, to join, we found *yuj*, to join, and *yudh*, to join in battle. Here *j* and *dh* are clearly modificatory letters, which must originally have had some meaning. Another root, *yaut*, in the sense of joining or glueing together, must likewise be considered as a dialectic variety of *yuj*.

Let us apply this to our root *MAR*. As *yu* forms *yudh*, so *mar* forms *mardh* or *mṛidh*, and this root exists in Sanskrit in the sense of destroying, killing; hence *mṛidh*, enemy.\*

Again, as *yu* produces *yuj*, so *mar* produces *marj* or *mriḥ*. This is a root of very common occurrence. It means to rub, but not in the sense of destroying, like *mṛidh*, but in the sense of cleaning or purifying. This is its usual meaning in Sanskrit, and it explains the Sanskrit name for cat, namely, *mârjâra*, literally the animal that always rubs or cleans itself. In Greek

Ares bald vor der speciellen des blutigen Kriegsgottes zurückgetreten.' See also *Il.* xx. 51.

Αὔε δ' Ἄρης ἐτέρωθεν, ἐρεμνῆ λαίλαπι Ἴσος.—*Il.* ix. 4.

Ἔως δ' ἀνεμοὶ δύο πόντον ὀρίνετον ἰχθυόεντα,

Βορέης καὶ Ζέφυρος, τῷ τε Θρήκηθεν ἄπτον.

\* *Rv.* vi. 53. 4. 'vī mṛidhaḥ jahi,' kill the enemies.

we find *omórg-ny-mi* in the same sense. But this general meaning became still more defined in Greek, Latin, German, and Slavonic, and by changing *r* into *l* the root *malg* was formed, meaning to rub or stroke the udder of the cow, i.e. to milk. Thus *mélgō*, and *amélgō*, in Greek, mean to milk; in Latin, *mulgēre* has the same meaning. In Old High-German we find the substantive *milchu*, and from it new verbal derivatives in the sense of milking. In Lithuanian, *milzti* means both to milk and to stroke. These two cognate meanings are kept asunder in Latin by *mulgēre*, as distinct from *mulcēre*, to stroke, and we thus discover a third modification of *mar* with final guttural or palatal tenuis, namely, *march*, like Sanskrit *yâch*, to ask, from *yâ*, to go (ambire or adire). Formed by a similar process, though for a different purpose, is the Latin *marcus*, a large hammer or pestle, which was used at Rome as a personal name, *Marcus*, *Marcus*, *Marcianus*, *Marcellus*, and occurs again in later times in the historical name of *Charles Martel*. In Sanskrit, on the contrary, the verb *mṛśi*, with final palatal *ś*, expresses the idea of gentle stroking, and with certain prepositions comes to mean to revolve, to meditate, to think. As *mori*, to die, meant originally to wither, so *marcere* exhibits the same idea in a secondary form. It means to droop, to faint, to fade, and is supported by the adjective *marcidus*. In Greek we have to mention the adjective *malakós*. It means soft and smooth, originally rubbed down or polished; and it comes to mean at last weak, or sick, or effeminate.\*

One of the most regular modifications of *mar*

\* Cf. Latin *lēvis*; ἀμαλός, if for μαμαλος, soft, may belong to the same root. We have to consider, however, the Attic ἀμαλός.

would be *mrâ*, and this, under the form of *mlâ*, means in Sanskrit to wither, to fade away. In Greek, *ml* being frequently rendered by *bl*, we can hardly be wrong in referring to this base *blâx*, meaning slack in body and in mind, and the Gothic *malsk-s*, foolish.\* Soft and foolish are used synonymously in many languages, nor is it at all unlikely that the Greek *môros*, foolish, may come from our root *mar*, and have meant at first soft.

Here we see how different meanings play into each other; how what from one point of view is looked upon as worn down and destroyed, is from another point of view considered as smooth and brilliant, and how the creative genius of man succeeded in expressing both ideas by means of the same radical element. We saw that in *omórgnymi* the meaning fixed upon was that of rubbing or wiping clean, in *amélgô* that of rubbing or milking; and we can see how a third sense, that of rubbing in the sense of tearing off or plucking off, is expressed in Greek by *mérgô* or *amérgô*.

If we suppose our root *mar* strengthened by means of a final labial, instead of the final guttural which we have just been considering, we have *marp*, a base frequently used by Greek poets. It is generally translated by catching (and identified with *harpázô*), but we perceive traces of its original meaning in such expressions as *gêras émarpse*,† old age ground him down; *chthóna márpte podóîn* (Il. xiv. 228), he struck or pounded the soil with his feet.

Let us keep to this new base, *marp*, and consider

\* Curtius, *G. E.* i. 303.

† Od. xxiv. 390.



that it may assume the forms of *malp* and *mlap*; let us then remember that *ml*, in Greek, is interchangeable with *bl*, and we arrive at the new base, *blap*, well known in the Greek *bláptō*, I damage, I hinder, I mar. This *bláptō* still lives in the English *to blame*, the French *blâmer*, for *blasmer*, which is a corruption of *blasphémer*. The Greek *blasphēmēîn*, again, stands for *blapsiphēmēîn*, i.e. to use damaging words; and in *blapsi* we see the verb *bláptō*, the legitimate offspring of our root *mar*.

One of the most prolific descendants of *mar* is the root *mard*. It occurs in Sanskrit as *mṛidnâti* (9th conj.), and as *mradati* (1st conj.), in the sense of rubbing down; but it is likewise used, particularly if joined with prepositions, in the sense of to squash, to overcome, to conquer. From this root we have the Sanskrit *mṛidu*, soft,\* the Latin *mollis* (*mard*, *mald*, *mall*), the Old Slavonic *mladu* (*maldu*), and, though formed by a different suffix, the English *mellow*. In all these words what is ground down to powder was used as the representative of smoothness, and was readily transferred to moral gentleness and kindness. Dust itself was called by the same root in its simplest form, namely, *mṛid*, which, after meaning dust, came to mean soil in general, or earth.

The Gothic *malma*, sand, belongs to the same class of words; so does the Modern German *zermalmten*, to grind to pieces, and the Gothic *malwjan*, used by Ulfilas in the same sense.

In Latin this root has thrown out several offshoots. *Malleus*, a hammer, stands probably for *mardeus*; and

\* Curtius (*G. E.* i. 92) points out the analogous case of Greek *τέπην*, tender, if derived from *τερ*, as in *τείρω*. If so, *terra* also, dust, might be explained like Sanskrit *mṛid*, dust, earth.



even *martellus*, unless it stands for *marcellus*, claims the same kin. In a secondary form we find our root in Latin as *mordēre*, to bite, originally to grind or worry.

In English, *to smart* has been well compared with *mordēre*, the *s* being a formative letter with which we shall meet again. 'A wound smarts,' means a wound bites or hurts. It is thus applied to every sharp pain, and in German *Schmerz* means pain in general.\*

This root *mard*, the Greek *mēldô*, to make liquid, assumes in English regularly the form *malt*, or *melt*; nor is there any doubt that the English *to melt* meant originally to make soft, if not by the blows of the hammer, at least by the licking of the fire and the absorbing action of the heat. The German *schmelzen* has the same power, and is used both as a transitive and an intransitive verb. Now let us watch the clever ways of language. An expression was wanted for the softening influence which man exercises on man by looks, gestures, words, or prayers. What could be done? The same root was taken which had conveyed before the idea of smoothing a rough surface, of softening a hard substance; and, with a slight modification, the root *mard* became fixed as the Sanskrit *mṛid*, or *mṛil*, to soften, to propitiate.† It was used in that sense chiefly with regard to the gods, who were to be propitiated by prayers and sacrifices. It was likewise used in an intransitive sense of the gods themselves, who were implored to melt, to be-

\* Cf. Ebel, in Kuhn's *Zeitschrift*, vii. 226, where *σμερδαλέος* is likewise traced to this root, and the Gothic *marzjan*, to mar. See also Benary, Kuhn's *Zeitschrift*, iv. 48.

† The lingual *ḍ* appears regularly in Sanskrit *mṛiṇmaya*, made of earth.

come softened and gracious; and prayers which we now translate by 'Be gracious to us,' meant originally 'Melt to us, O gods.'

From this source springs the Gothic *mild*, the English *mild*, originally soft or gentle. The Lithuanian takes from it its name for love, *meile*; and in Greek we find *meilia*, gladdening gifts or appeasements, and such derivatives as *meilissô*, to soothe, and *meilichos*, gentle.

This was one aspect of the process of melting; but there was a second, equally natural, namely, that of melting or dying away in the sense of desiring, yearning, grieving after a thing. We might say a man melts in love, in grief (in German *er zerschmilzt*, *er vergeht vor Liebe*), and the Greeks said in the same sense *meledainô*, I melt, i.e. I care for, *meledônê*, anxiety, grief. *Meldômenos*, too, is explained by Hesychius in the sense of desiring.\* But more than this. We saw before that there is sufficient evidence for the occasional disappearance of the initial *m* in the root *mar*. We therefore are justified in identifying the Greek *êldomai* with an original *mêldomai*. And what does *êldomai* mean in Greek? It means to die for a thing, to desire a thing;† that is to say, it means exactly what it ought to mean if it is derived from the root which we have in *mêldô*, I melt.

Nay, we may go still another step farther. That *mar* was raised to *marp*, we saw in Greek *mârpôtô*, I grasp. *Mêlpein*, too, is used in Greek in the sense

\* Cf. Curtius, *G. E.* ii. 167.

† In Wallachian, *dor* means desire, but it is in reality the same as Italian *duolo*, pain. Cf. Diez, s. v. Analogous constructions in Latin, *Corydon ardebat Alexin*.

of propitiating,\* originally of softening or melting. If, then, we look again for corresponding forms without *m*, we should find *élpomai*, which now means I hope, but which originally would have meant I desire. It is not without importance that Hesychius mentions the very form which we should have expected, namely, *mólpis*, instead of the more usual *élpis*, hope.†

We have throughout these investigations met on several occasions with an *s* prefixed to *mar*, and we have treated it simply as a modificatory element added for the purpose of distinguishing words which it was felt desirable to keep distinct. Without inquiring into the real origin of this *s*, which has lately been the subject of violent disputes between Professors Pott and Curtius, we may take it for granted that the Sanskrit root *smar* is closely related to the root *mar*; nor is it difficult ‡ to discover how the meaning of *smar*, namely, to remember, could have been elaborated out of *mar*, to grind. We saw over and over again that the idea of melting glided into that of loving, hoping, and desiring, and we shall find that the original meaning of *smar* in Sanskrit is to desire, not to remember. Thus Sk. *smara* is love, very much like the Lithuanian *meile*, love, i. e. melting. From this meaning of desiring, new meanings branched off, such as dwelling on, brooding over, musing over, and then recollecting. In the other Aryan languages the initial specific *s* does not appear. We have *memor* in Latin, *memoria*, *memorare*, all in the special sense of re-

\* Curtius, *G. E.* i. 293, μέλπειν τὸν θεόν ?

† *Ibid.* ii. 167.

‡ Curtius mentions *smar* as one of the roots which, if not from the beginning, 'had, at all events before the Aryan separation, assumed an entirely intellectual meaning.'—*G. E.* i. 84.



membering; but in Greek *mermairô* means simply I brood, I care, I mourn; *mérinna* is anxiety, and even *mártyr* need not necessarily mean a man who remembers, but a man who cares for, who cherishes, who holds a thing.\*

In unravelling this cluster of words, it has been my chief object to trace the gradual growth of ideas, the slow progress of the mind from the single to the general, from the material to the spiritual, from the concrete to the abstract. To rub down or to polish leads to the idea of propitiation; to wear off or to wither are expressions applied to the consuming feeling of hopes deferred and hearts sickening, and ideas like memory and martyrdom are clothed in words taken from the same source.

The fates and fortunes of this one root *mar* form but a small chapter in the history and growth of the Aryan languages; but we may derive from this small chapter some idea as to the power and elasticity of roots, and the unlimited sway of metaphor in the formation of new ideas.

\* Cf. *ióμωρος*, *έγχεσίμωρος*, in the sense of caring for arrows, spears, &c., Benary, Kuhn's *Zeitschrift*, iv. 53; and *ἱστορες θεοί*, *Ἄγραυλος*, *Ἐννάλιος*, *Ἄρης*, *Ζεύς*, Preller, *Griechische Mythologie*, p. 205.

## LECTURE VIII.

## METAPHOR.

FEW philosophers have so clearly perceived the importance of language in all the operations of the human mind, few have so constantly insisted on the necessity of watching the influence of words on thought, as *Locke* in his *Essay concerning Human Understanding*. Of the four books into which this great work is divided, one, the third, is entirely devoted to Words or Language in general. At the time when *Locke* wrote, but little attention had been paid to the philosophy of language, and the author, afraid that he might seem to have given more prominence to this subject than it deserved, thought it necessary to defend himself against such a charge in the following words:—‘What I have here said concerning words in this third book will possibly be thought by some to be much more than what so slight a subject required. I allow, it might be brought into a narrower compass; but I was willing to stay my reader on an argument that appears to me new, and a little out of the way (I am sure it is one I thought not of when I began to write); that by searching it to the bottom, and turning it on every side, some part or other might meet with every one’s thoughts, and give occasion to the most averse or negligent to reflect on a general miscarriage, which, though of great conse-

quence, is little taken notice of. When it is considered what a pudder is made about essences, and how much all sorts of knowledge, discourse, and conversation are pestered and disordered by the careless and confused use and application of words, it will, perhaps, be thought worth while thoroughly to lay it open. And I shall be pardoned if I have dwelt long on an argument which I think, therefore, needs to be inculcated; because the faults men are usually guilty of in this kind are not only the greatest hindrances of true knowledge, but are so well thought of as to pass for it. Men would often see what a small pittance of reason and truth, or possibly none at all, is mixed with those huffing opinions they are swelled with, if they would but look beyond fashionable sounds, and observe what ideas are, or are not, comprehended under those words with which they are so armed at all points, and with which they so confidently lay about them. I shall imagine I have done some service to truth, peace, and learning, if, by an enlargement on this subject, I can make men reflect on their own use of language, and give them reason to suspect, that since it is frequent for others, it may also be possible for them, to have sometimes very good and approved words in their mouths and writings, with very uncertain, little, or no signification. And, therefore, it is not unreasonable for them to be wary herein themselves, and not to be unwilling to have these examined by others.\*

And again, when summing up the results of his inquiries, Locke says: 'For since the things the mind contemplates are none of them, besides itself, present

\* Locke, *On the Understanding*, iii. 5, 16.



to the understanding, it is necessary that something else, as a sign or representation of the thing it considers, should be present to it; and these are ideas. And because the scene of ideas that make one man's thoughts cannot be laid open to the immediate view of another, nor laid up anywhere but in the memory—a no very sure repository—therefore, to communicate our thoughts to one another, as well as record them for our own use, signs of our ideas are also necessary. Those which men have found most convenient, and therefore generally make use of, are articulate sounds. *The consideration, then, of ideas and words as the great instruments of knowledge, makes no despicable part of their consideration, who would take a view of human knowledge in the whole extent of it. And, perhaps, if they were distinctly weighed and duly considered, they would afford us another sort of logic and critic, than what we have been hitherto acquainted with.'*

But, although so strongly impressed with the importance which language, as such, claims in the operations of the understanding, Locke never perceived that general ideas and words are inseparable, that the one cannot exist without the other, and that an arbitrary imposition of articulate sounds to signify definite ideas, is an assumption unsupported by any evidence. Locke never seems to have realized the intricacies of the names-giving process, and though he admits frequently the difficulty, nay, sometimes the impossibility, of our handling any general ideas without the outward signs of language, he never questions for a moment the received theory that at some time or other in the history of the world men had accumulated a treasure of anonymous general



conceptions, to which, when the time of intellectual and social intercourse had arrived, they prudently attached those phonetic labels which we call words.

The age in which Locke lived and wrote was not partial to those inquiries into the early history of mankind which have, during the last two generations, engaged the attention of the most eminent philosophers. Instead of gathering the fragments of the primitive language, poetry, and religion, not only of the Greeks and Romans, but of all the nations of the world, and instead of trying to penetrate, as far as possible, into the real and actual life of the fathers of the human race, and thus to learn how both in our thoughts and words we came to be what we are, the great schools of philosophy in the 18th century were satisfied with building up theories how language might have sprung into life, how religion might have been revealed or invented, how mythology might have been put together by priests, or poets, or statesmen, for the purposes of instruction, of amusement, or of fraud. Such systems, though ingenious and plausible, and still in full possession of many of our handbooks of history and philosophy, will have to give way to the spirit of what may be called the *Historical School* of the 19th century. The principles of these two schools are diametrically opposed; the one begins with theories without facts, the other with facts without theories. The systems of *Locke*, *Voltaire*, and *Rousseau*, and in later times of *Comte*, are plain, intelligible, and perfectly rational; the facts collected by men like *Wolf*, *Niebuhr*, *F. Schlegel*, *W. von Humboldt*, *Bopp*, *Burnouf*, *Grimm*, *Bunsen*, and others, are fragmentary, the inductions to which they point incomplete and obscure, and opposed to many of our received ideas.

Nevertheless, the study of the antiquity of man, the Palæontology of the human mind, can never again be allowed to become the playground of mere theorizers, however bold and brilliant, but must henceforth be cultivated in accordance with those principles that have produced rich harvests in other fields of inductive research. It is no want of respect for the great men of former ages to say that they would have written differently if they had lived in our days. *Locke*, with the results of Comparative Philology before him, would have cancelled, I believe, the whole of his third book 'On the Human Understanding;' and even his zealous and ingenious pupil, *Horne Tooke*, would have given us a very different volume of 'Diversions of Purley.' But in spite of this, there are no books which, with all their faults—nay, on account of these very faults—are so instructive to the student of language as *Locke's* Essay, and *Horne Tooke's* Diversions; nay, there are many points bearing on the later growth of language which they have handled and cleared up with greater mastery than even those who came after them.

Thus the fact that all words expressive of immaterial conceptions are derived by metaphor from words expressive of sensible ideas was for the first time clearly and definitely put forward by *Locke*, and is now fully confirmed by the researches of comparative philologists. All roots, i.e. all the material elements of language, are expressive of sensuous impressions, and of sensuous impressions only; and as all words, even the most abstract and sublime, are derived from roots, comparative philology fully endorses the conclusions arrived at by *Locke*. This is what *Locke* says (iii. 4, 3):—

‘ It may also lead us a little toward the original of all our notions and knowledge, if we remark, how great a dependence our words have on common sensible ideas ; and how those, which are made use of to stand for actions and notions quite removed from sense, have their rise from thence, and, from obvious sensible ideas are transferred to more abstruse significations, and made to stand for ideas that come not under the cognizance of our senses: e. g. *to imagine, apprehend, comprehend, adhere, conceive, instil, disgust, disturbance, tranquillity, &c.*, are all words taken from the operations of sensible things, and applied to certain modes of thinking. *Spirit*, in its primary signification is breath; *angel*, a messenger; and I doubt not, but *if we could trace them to their sources, we should find, in all languages, the names which stand for things that fall not under our senses, to have had their first rise from sensible ideas.* By which we may give some kind of guess, what kind of notions they were and whence derived, which filled their minds, who were the first beginners of languages; and how nature, even in the naming of things, unawares suggested to men the originals and principles of all their knowledge; whilst, to give names, that might make known to others any operations they felt in themselves, or any other ideas that come not under their senses, they were fain to borrow words from ordinary known ideas of sensation, by that means to make others the more easily to conceive those operations they experimented in themselves, which made no outward sensible appearances; and then, when they had got known and agreed names, to signify these internal operations of their own minds, they were sufficiently furnished to make known by words all their other



ideas, since they could consist of nothing but either of outward sensible perceptions, or of the inward operations of their minds about them; we having, as has been proved, no ideas at all, but what originally came either from sensible objects without, or what we feel within ourselves from the inward workings of our own spirits, of which we are conscious to ourselves within.'

This passage, though somewhat involved and obscure, is a classical passage, and has formed the subject of many commentaries, both favourable and unfavourable. Some of Locke's followers, particularly Horne Tooke, used the statement that all abstract words had originally a material meaning, in order to prove that all our knowledge was restricted to sensuous knowledge; and such was the apparent cogency of their arguments, that, to the present day, those who are opposed to materialistic theories consider it necessary to controvert the facts alleged by Locke and Horne Tooke, instead of examining the cogency of the consequences that are supposed to flow from them. Now the facts stated by Locke seem to be above all doubt. *Spiritus* is certainly derived from a verb *spirare*, which means to draw breath. The same applies to *animus*. *Animus*, the mind, as Cicero says,\* is so called from *anima*, air. The root is *an*, which in Sanskrit means to blow, and which has given rise to the Sanskrit and Greek words for wind, *an-ila*, and *án-emos*. Thus the Greek *thymós*, the soul, comes from *thýein*, to rush, to move violently, the Sanskrit *dhu*, to shake. From *dhu* we have in Sanskrit *dhûli*,

\* Cicero, *Tuscul.* i. 9, sub fin. Locke, *Human Understanding*, iv. 3, 6, note (ed. London, 1836, p. 412). 'Anima sit animus ignisve nescio,' &c.

*dust*, which comes from the same root, and *dhûma*, smoke, the Latin *fumus*. In Greek, the same root supplied *thýella*, storm-wind, and *thymós*, the soul, as the seat of the passions. Plato guesses correctly when he says (*Crat.* p. 419) that *thymos*, soul, is so called ἀπὸ τῆς θύσεως καὶ ζέσεως τῆς ψυχῆς. *To imagine* certainly meant in its original conception to make pictures, to picture to ourselves; but even to picture is far too mixed an idea to have been expressed by a simple root. *Imago*, picture, stands for *mimago*, as *imitor* for *mimitor*, the Greek *miméomai*, all from a root *mâ*, to measure, and therefore meaning originally to measure again and again, to copy, to imitate. *To apprehend* and *to comprehend* meant to grasp at a thing and to grasp a thing together; *to adhere* to one's opinions was literally to stick to one's opinions; *to conceive* was to take and hold together; *to instil* was to drop or pour in; *to disgust* was to create a bad taste; *to disturb* was to throw into disorder; and *tranquillity* was calmness and particularly the smoothness of the sea.

Look at any words expressive of objects which cannot fall under the immediate cognisance of the senses, and you will not have much difficulty in testing the truth of Locke's assertion that such words are invariably derived from others which originally were meant to express the objects of the senses.

I begin with a list of Kafir metaphors:—

Words	Literal meaning	Figurative meaning
beta . . .	beat . . .	punish
dhlelana . . .	to eat together . . .	to be on terms of intercourse
fa . . .	to be dying . . .	to be sick
hlala . . .	to sit . . .	to dwell, live, continue

Words	Literal meaning	Figurative meaning
ihlati . . .	bush . . .	refuge
ingcala . . .	flying-ant . . .	uncommon dexterity
inncwadi . . .	kind of bulbous plant	book, glass
inja . . .	dog . . .	a dependant
kolwa . . .	to be satisfied . . .	to believe
lila . . .	to cry . . .	to mourn
mnandi . . .	sweet . . .	pleased, agreeable
gauka . . .	to be snapped asunder	to be quite dead
umsila . . .	tail . . .	court messenger
zidhla . . .	to eat oneself . . .	to be proud
akasiboni . . .	he does not see us . . .	he is above noticing us
nikela indhlebe . . .	give the ears . . .	listen attentively
ukudhla ubomi . . .	to eat life . . .	to live
ukudhla umntu . . .	to eat a person . . .	to confiscate his property
ukumgekeza inkloko, to break his head . . .		to weary one
ukunuka umntu . . .	to smell a person . . .	to accuse one of witchcraft*

*Tribulation*, anxiety, is derived from *tribulum*, a sledge used by the ancient Romans for rubbing out the corn, consisting of a wooden platform, studded underneath with sharp pieces of flint or with iron teeth.† The similarity between the state of mind that had to be expressed and the state of the grains of corn shaken in a *tribulum* is evident, and so striking that, if once used, it was not likely to be forgotten again. This *tribulum*, again, is derived from the verb *terere*, to rub or grind. Now suppose a man's mind so oppressed with the weight of his former misdeeds that he can hardly breathe, or look up, or resist the pressure, but feels crushed and ground to dust within himself, that man would describe his state of mind as a state of *contrition*, which means 'being ground to pieces,' from the same verb *terere*, to grind.

\* Appleyard, *l. c.* p. 70.

† See White, *Latin-English Dictionary*, s. v.



The French *penser*, to think, is the Latin *pensare*, which would mean to weigh, and lead us back to *pendere*, to hang. 'To be in suspense' literally means to be hung up, and swaying to and fro. 'To suspend judgment' means to hang it up, to keep it from taking effect.

*Doubt*, again, the Latin *dubium*, expresses literally the position between two points, from *duo*, just as the German *Zweifel* points back to *zwei*, two.

*To believe* is generally identified with the German *belieben*, to be pleased with a thing, to approve of it; the Latin *libet*, it pleases. But *to believe*, as well as the German *glauben*, meant originally more than simply to approve of a thing. Both words must be traced back to the root *lubh*, which has retained its original meaning in the Sanskrit *lobha*, desire, and the Latin *libido*, violent, irresistible desire. The same root was taken to express that irresistible passion of the soul, which makes man break apparently through the evidence of the senses and the laws of reason (*credo quia absurdum*), and drives him, by a power which nothing can control, to embrace some truth which alone can satisfy the natural cravings of his being. This is belief in its truest sense, though it dwindles down in the course of time to mean no more than to suppose, or to be pleased, just as *I love*, which is derived from the same root as *to believe*, comes to mean, I like.

*Truth* has been explained by Horne Tooke as that which a man *troweth*. This, however, would explain very little. *To trow* is but a derivative verb, meaning to make or hold a thing true. But what is *true*? *True* is the Sanskrit *dhruva*,\* and means firm, solid anything that will hold; from *dhar*, to hold.

\* Kuhn's *Zeitschrift*, vii. 62.



Another word for *true* in Sanskrit is *satya*, an adjective formed from the participle present of the auxiliary verb *as*, to be. *Sat* is the Latin *ens*, being; from it *satya*, true, the Greek *eteós*,\* the English *sooth*. If I say that *sat* is the Latin *ens*, the similarity may not seem very striking. Yet Latin *ens* clearly stands for *sens*, which appears in *præ-sens*. The nominative singular of *sat* is *san*, because in Sanskrit you cannot have a word ending in *ns*. But the accusative sing. is *santam*=*sentem*, the nom. plur. *santas*=*sentes*; so that there can be no doubt as to the identity of the two words in Sanskrit and Latin.

And how did language express what, if it were a rational conception at all, would seem to be the most immaterial of all conceptions—namely, *nothing*? It was expressed in the only way in which it could be expressed—namely, by the negation of, or the comparison with, something real and tangible. It was called in Sanskrit *asat*, that which is not being; in Latin *nihil*, i. e. *nihilum*,† which stands for *nifilum*,

\* See Pott, *Etymologische Forschungen*, ii. p. 364; Kern, in Kuhn's *Zeitschrift*, viii. 400. It should be remembered that in *satya*, the *t* belongs to the base, and that the derivative element is not *tya*, Greek *τιός*, but *ya*. Whether *εδς* represents the same suffix as *ya* in Sanskrit may be doubtful. See, however, Bopp, *Vergleich. Gr.* (2), § 109 a, 2 (p. 212); and § 956. *Sattva* in Sanskrit means being and a being.

† Cf. Kuhn, *Zeitschrift*, i. 544. Dietrich mentions similar cases of shortening, such as *cognitus* and *nôtus*, *pejëro* and *jûro*. Bopp has clearly given up the etymology of *nihil*, which he proposed in the first edition of his *Comparative Grammar*, as it is suppressed in the second. It is to be regretted that even so careful a scholar as Mr. White, in his excellent *Latin-English Dictionary*, should still quote from the first edition only of Bopp's work. As to *h* taking the place of *f*, we know that in Spanish every Latin *f* is represented by *h*, e. g. *hablar*=*fabulari*, *hijo*=

i. e. *ne-filum*, and means 'not a thread or shred.' In French *rien* is actually a mere corruption of *rem*, the accusative of *res*, and retains its negative sense even without the negative particle by which it was originally preceded. Thus *ne-pas* is *non-passum*, not a step; *ne-point* is *non-punctum*, not a point. The French *néant*, Italian *niente*, are the Latin *non ens*. And now observe for a moment how fables will grow up under the charm of language. It was perfectly correct to say, 'I give you nothing,' i.e. 'I give you not even a shred.' Here we are speaking of a relative nothing; in fact, we only deny something, or decline to give something. It is likewise perfectly correct to say, on stepping into an empty room, 'There is nothing here,' meaning not that there is absolutely nothing, but only that things which we expect to find in a room are not there. But by dint of using such phrases over and over again, a vague idea is gradually formed in the mind of a Nothing, and *Nihil* becomes the name of something positive and real. People at a very early time began to talk of the Nothing as if it were something; they talked and trembled at the idea of *annihilation*—an idea utterly inconceivable, except in the brain of a madman. *Annihilation*, if it meant anything, could etymologically—and in this case, we may add, logically too—mean nothing but to be reduced to a something which is not a shred—surely no very fearful state,

*filius*, *hierro*=*ferrum*, *hilo*=*filum*. But in Latin itself these two letters are frequently interchangeable. Instead of *hircus*, the Sabines said *fircus*; instead of *hædus*, *fædus*; instead of *harena*, *farena*. Nay, double forms are mentioned in Latin, such as *hordeum* and *fordeum*; *hostis* and *fostis*; *hariolus* and *fariolus*. See Corssen, *Aussprache der Lateinischen Sprache*, p. 46.

considering that in strict logic it would comprehend the whole realm of existence, exclusive only of what is meant by *shred*. Yet what speculations, what fears, what ravings, have sprung from this word *Nihil*—a mere word, and nothing else! We see things grow and decay, we witness the birth and death of living things, but we never see anything lost or annihilated. Now, what does not fall within the cognizance of our senses, and what contradicts every principle of our reasoning faculties, has no right to be expressed in language. We may use the names of material objects to express immaterial objects, if they can be rationally conceived. We can conceive, for instance, powers not within the ken of our senses, yet endowed with a material reality. We can call them *spirits*, literally breezes, though we understand perfectly well that by spirits we mean something else than mere breezes. We can call them *ghosts*, a name connected with *gust*, *yeast*, *gas*, and other almost imperceptible vapours. But a Nothing, an absolute Nothing, that is neither visible, nor conceivable, not imaginable, ought never to have found expression, ought never to have been admitted into the dictionary of rational beings.

Now, if we consider how people talk about the Nothing, how poets make it the subject of the most harrowing strains; how it has been, and still is, one of the principal ingredients in most systems of philosophy—nay, how it has been dragged into the domain of religious thought, and, under the name of *Nirvâna*, has become the highest goal of millions among the followers of *Buddha*—we may perhaps, even at this preliminary stage of our inquiries, begin to appreciate the power of language over thought, and feel less



surprise at the ancient nations for having allowed the names of natural objects, the sky, the sun, the moon, the dawn, and winds, to assume the character of supernatural powers or divine personalities, or for having offered worship and sacrifice to such abstract names as Fate, Justice, or Victory. There is as much mythology in our use of the word Nothing as in the most absurd portions of the mythological phraseology of India, Greece, and Rome: and if we ascribe the former to a disease of language, the causes of which we are able to explain, we shall have to admit that in the latter, language has reached to an almost delirious state, and has ceased to be what it was meant to be, the expression of the impressions received through the senses, or of the conceptions of a rational mind.

But to return to Locke's statement, that all names of *immaterial* objects are derived from the names of material objects. Many philosophers, as I remarked, instead of grappling manfully with the conclusions that are supposed to flow from Locke's observation, have preferred to question the accuracy of his observation.

*Victor Cousin*, in his 'Lectures on the History of Philosophy during the Eighteenth Century,'\* endeavours to controvert Locke's assertion by the following process:—'I shall give you two words,' he says, 'and I shall ask you to trace them back to primitive words expressive of sensible ideas. Take the word *je*, I. This word, at least in all languages known to me, is not to be reduced, not to be decomposed, primitive; and it expresses no sensible idea, it represents nothing but the meaning which the mind attaches to it; it is

\* Paris, 1841. Vol. ii. p. 274.

a pure and true sign, without any reference to any sensible idea. The word *être*, to be, is exactly in the same case; it is primitive and altogether intellectual. I know of no language in which the French verb *être* is rendered by a corresponding word that expresses a sensible idea; and therefore it is not true that all the roots of language, in their last analysis, are signs of sensible ideas.'

Now it must be admitted that the French *je*, which is the Sanskrit *aham*, is a word of doubtful etymology. It belongs to the earliest formations of Aryan speech, and we need not wonder that even in Sanskrit the materials out of which this pronoun was formed should have disappeared. We can explain in English such words as *myself* or *your honour*, but we could not attempt, with the means supplied by English alone, to analyse *I*, *thou*, and *he*. It is the same with the Sanskrit *aham*, a word carried down by the stream of language from such distant ages, that even the Vedas, as compared with them, are but, as it were, of yesterday. But though the etymology of *aham* is doubtful, it has never been doubtful to any scholar that, like all other words, it must have an etymology; that it must be derived either from a predicative or from a demonstrative root. Those who would derive *aham* from a predicative root, have thought of the root *ah*, to breathe, to speak.\* Those who would derive it

\* I thought it possible, in my *History of Sanskrit Literature*, p. 21, to connect *ah-am* with Sanskrit *âha*, I said, Greek  $\eta$ , Latin *ajo* and *nego*, nay, with Gothic *ahma* (instead of *agma*), spirit, but I do so no longer. Nor do I accept the opinion of Benfey (*Sanskrit Grammatik*, § 773), who derives *aham* from the pronominal root *gha* with a prosthetic *a*. It is a word which, for the present, must remain without a genealogy.

from a demonstrative root, refer us to the Vedic *gha*, the later *ha*, *this*, used like the Greek *hóde*. How the pronoun of the first person is expressed in Chinese we saw in an earlier Lecture, and although such expressions as 'servant says,' instead of 'I say,' may seem to us modern and artificial, they are not so in Chinese, and show at all events that even so colourless an idea as *I* may meet with signs sufficiently pale and faded to express it.\*

With regard to *être*, to be, the case is different. *Être* † is the Latin *esse*, changed into *essere* and contracted. The root, therefore, is *as*, which, in all the Aryan languages, has supplied the material for the auxiliary verb. Now even in Sanskrit, it is true, this root *as* is completely divested of its material character; it means *to be*, and nothing else. But there is in Sanskrit a derivative of the root *as*, namely, *ásu*, and in this *asu*, which means the vital breath, the original meaning of the root *as* has been preserved. *As*, in order to give rise to such a noun as *asu*, must have meant *to breathe*, then *to live*, then *to exist*, and it must have passed through all these stages before it could have been used as the abstract auxiliary verb which we find not only in Sanskrit but in all Aryan languages. Unless this one derivative *asu*, life, had been preserved in Sanskrit, it would

\* Jean Paul, in his *Levana*, p. 32, says, "'I' is—excepting God, the true I and true Thou at once—the highest and most incomprehensible that can be uttered by language, or contemplated. It is there all at once, as the whole realm of truth and conscience, which, without "I," is nothing. We must ascribe it to God, as well as to unconscious beings, if we want to conceive the being of the One and the existence of the others.'

† Cf. Diez, *Lexicon*, s. v. *essere*.



have been impossible to guess the original material meaning of the root *as*, to be; yet even then the student of language would have been justified in postulating such a meaning. And even in French, though *être* may seem an entirely abstract word, the imperfect *j'étais*, the participle *été* are clearly derived from Latin *stare*, to stand, and show how easily so definite an idea as *to stand* may dwindle down to the abstract idea of *being*. If we look to other languages, we shall find again and again the French verb *être* rendered by corresponding words that expressed originally a sensible idea. Our verb *to be* is derived from Sanskrit *bhû*, which, as we learn from Greek *phÿō*, meant originally to grow.\* *I was* is connected with the Gothic *visan*, which means *to dwell*.

But though on this point the student of language must side with Locke, and admit, without one single exception, the material character of all words, nothing can be more convincing than the manner in which *Victor Cousin* disposes of the conclusions which some philosophers, though certainly not Locke himself, seem inclined to draw from such premises. 'Further,' he writes, 'even if this were true, and absolutely true, which is not the case, we could conclude no more than this. Man is at first, by the action of all his faculties, carried out of himself and toward the external world; the phenomena of the external world strike him first, and hence these phenomena receive the first names. The first signs are borrowed from sensible objects, and they are tinged to a certain extent by their colours. When man afterwards turns

\* See M. M.'s *Essay on the Aryan and Aboriginal Languages of India*, p. 344.



back on himself, and lays hold more or less distinctly of the intellectual phenomena which he had always, though somewhat vaguely, perceived; if, then, he wants to give expression to the new phenomena of mind and soul, analogy leads him to connect the signs he seeks with those he already possesses: for analogy is the law of each growing or developed language. Hence the metaphors to which our analysis traces back most of the signs and names of the most abstract moral ideas.'

Nothing can be truer than the caution thus given by Cousin to those who would use Locke's observation as an argument in favour of an one-sided sensualistic philosophy.

*Metaphor* is one of the most powerful engines in the construction of human speech, and without it we can hardly imagine how any language could have progressed beyond the simplest rudiments. Metaphor generally means the transferring of a name from the object to which it properly belongs to other objects which strike the mind as in some way or other participating in the peculiarities of the first object. The mental process which gave to the root *mar* the meaning of *to propitiate* was no other than this, that men perceived some analogy between the smooth surface produced by rubbing and polishing and the smooth expression of countenance, the smoothness of voice, and the calmness of looks produced even in an enemy by kind and gentle words. Thus, when we speak of a crane, we apply the name of a bird to an engine. People were struck with some kind of similarity between the long-legged bird picking up his food with his long beak and their rude engines for lifting weights. In Greek, too, *géranos* has both

meanings. This is metaphor. Again, cutting remarks, glowing words, fervent prayers, slashing articles, all are metaphor. *Spiritus* in Latin meant originally blowing, or wind. But when the principle of life within man or animal had to be named, its outward sign, namely, the breath of the mouth, was naturally chosen to express it. Hence in Sanskrit *asu*, breath and life; in Latin *spiritus*, breath and life. Again, when it was perceived that there was something else to be named, not the mere animal life, but that which was supported by this animal life, the same word was chosen, in the Modern Latin dialects, to express the spiritual as opposed to the mere material or animal element in man. All this is metaphor.

We read in the Veda, ii. 3, 4:—‘Who saw the first-born when he who had no form (lit. bones) bore him that had form? Where was the life (*asuh*), the blood (*asrik*), the self (*âtma*) of the earth? Who went to ask this from any that knew it?’

Here *breath*, *blood*, *self*, are so many attempts at expressing what we should call cause.

But let us now consider for a moment that what philosophers, and particularly Locke, have pointed out as a peculiarity of certain words, such as *to apprehend*, *to comprehend*, *to understand*, *to fathom*, *to imagine*, *spirit* and *angel*, must have been, in reality, a peculiarity of a *whole period* in the early history of speech. No advance was possible in the intellectual life of man without metaphor. Most roots that have yet been discovered, had originally a material meaning, and a meaning so general and comprehensive† that they could

\* M. M., *History of Sanskrit Literature*, p. 20.

† The specialization of general roots is more common than the generalization of special roots, though both processes must be admitted.

easily be applied to many special objects. We meet with roots meaning to strike, to shine, to creep, to grow, to fall, but we never meet with primitive roots expressive of states or actions that do *not* fall under the cognisance of the senses, nor even with roots expressive of such special acts as 'raining, thundering, hailing, sneezing, trying, helping.' Yet Language has been a very good housewife to her husband, the human Mind; she has made very little go a long way. With a very small store of such material roots as we just mentioned, she has furnished decent clothing for the numberless offspring of the Mind, leaving no idea, no sentiment unprovided for, except, perhaps, the few which, as we are told by some poets, are inexpressible.

Thus from roots meaning to shine, to be bright, names were formed for sun, moon, stars, the eyes of man, gold, silver, play, joy, happiness, love. With roots meaning to strike, it was possible to name an axe, the thunderbolt, a fist, a paralytic stroke, a striking remark, and a stroke of business. From roots meaning to go, names were derived for clouds, for ivy, for creepers, serpents, cattle and chattel, moveable and immoveable property. With a root meaning to crumble, expressions were formed for sickness and death, for evening and night, for old age and for the fall of the year.

We must now endeavour to distinguish between two kinds of metaphor, which I call *radical* and *poetical*. I call it *radical* metaphor when a root which means to shine is applied to form the names, not only of the fire or the sun, but of the spring of the year, the morning light, the brightness of thought, or the joyous outburst of hymns of praise. Ancient lan-



guages are brim full of such metaphors, and under the microscope of the etymologist every word almost discloses traces of its first metaphorical conception.

From this we must distinguish *poetical* metaphor, namely, when a noun or verb, ready made and assigned to one definite object or action, is transferred poetically to another object or action. For instance, when the rays of the sun are called the hands or fingers of the sun, the noun which means hand or finger existed ready made, and was, as such, transferred poetically to the stretched out rays of the sun. By the same process the clouds are called mountains, the rain-clouds are spoken of as cows with heavy udders, the thunder-cloud as a goat or as a goat-skin, the sun as a horse, or as a bull, or as a giant bird, the lightning as an arrow, or as a serpent.

What applies to nouns, applies likewise to verbs. A verb such as 'to give birth' is used, for instance, of the night producing, or, more correctly, preceding the day, as well as of the day preceding the night. The sun, under one name, is said to beget the dawn, because the approach of daylight gives rise to the dawn; under another name the sun is said to love the dawn, because he follows her as a bridegroom follows after his bride; and lastly, the sun is said to destroy the dawn, because the dawn disappears as soon as the sun has risen. From another point of view the dawn may be said to give birth to the sun, because the sun seems to spring from her lap; she may be said to die or disappear after having given birth to her brilliant son, because as soon as the sun is born, the dawn must vanish. All these metaphors, however full of contradictions, were perfectly intelligible to the ancient poets, though to our modern understanding they are

frequently riddles difficult to solve. We read in the Rig-Veda (x. 189),\* where the sunrise is described, that the dawn comes near to the sun, and breathes her last when the sun draws his first breath. The commentators indulge in the most fanciful explanations of this expression without suspecting the simple conception of the poet, which after all is very natural.

Let us consider, then, that there was, necessarily and really, a period in the history of our race when all the thoughts that went beyond the narrow horizon of our every-day life had to be expressed by means of metaphors, and that these metaphors had not yet become what they are to us, mere conventional and traditional expressions, but were felt and understood half in their original and half in their modified character. We shall then perceive that such a period of thought and speech must be marked by features very different from those of any later age.

One of the first results would naturally be that objects in themselves quite distinct, and originally conceived as distinct by the human intellect, would nevertheless receive the same name. If there was a root meaning to shine forth, to revive, to gladden, that root might be applied to the dawn, as the burst of brightness after the dark night, to a spring of water, gushing forth from the rock and gladdening the heart of the traveller, and to the spring of the year, that awakens the earth after the death-like rest of winter. The spring of the year, the spring of water, the dayspring, would thus go by the same name, they would be what Aristotle calls *homonymous* or *namesakes*. On the other hand, the same object might strike the human mind in various ways. The sun

\* See M. M., *Die Todtenbestattung der Brahmanen*, p. xi.

might be called the warming and generating, but likewise the scorching and killing; the sea might be called the barrier as well as the bridge, and the high-road of commerce; the clouds might be spoken of as bright cows with heavy udders, or as dark and roaring demons. Every day that dawns in the morning might be called the twin of the night that follows the day, or all the days of the year might be called brothers, or so many head of cattle which are driven to their heavenly pasture every morning, and shut up in the dark stable of *Augeias* at night. In this manner one and the same object would receive many names, or would become, as the Stoics called it, *polyonymous*, many-named—having many *alias's*. Now it has always been pointed out as a peculiarity of what we call ancient languages, that they have many words for the same thing, these words being sometimes called *synonymes*; and likewise, that their words have frequently very numerous meanings. Yet what we call ancient languages, such as the Sanskrit of the Vedas or the Greek of Homer, are in reality very modern languages; that is to say, they show clear traces of having passed through many, many successive periods of growth and decay, before they became what we know them to be in the earliest literary documents of India and Greece. What, then, must have been the state of these languages in their earlier periods, before many names, that might have been and were applied to various objects, were restricted to one object, and before each object, that might have been and was called by various names, was reduced to one name! Even in our days we confess that there is a great deal in a name; how much more must that have been the case during the primitive ages of man's childhood!



The period in the history of language and thought which I have thus endeavoured to describe as characterised by what we may call two tendencies, the *homonymous* and the *polyonymous*,\* I shall henceforth call the *mythic* or *mythological period*, and I shall try to show how much that has hitherto been a riddle in the origin and spread of myths becomes intelligible if considered in connection with the early phases through which language and thought must necessarily pass.

Before I enter, however, on a fuller explanation of my meaning, I think it right to guard from the beginning against two mistakes, to which the name of *Mythic Period* might possibly give rise. What I call a period is not so in the strict sense of the word: it has no fixed limits that could be laid down with chronological accuracy. There is a time in the early history of all nations in which the mythological character predominates to such an extent that we may speak of it as the mythological period, just as we might call the age in which we live the age of discoveries. But the tendencies which characterize the mythological period, though they necessarily lose much of that power with which, at one time, they swayed every intellectual movement, continue to work under different disguises in all ages, even in our own, though perhaps the least given to metaphor, poetry, and mythology.

Secondly, when I speak of a mythological period, I do not use *mythological* in the restricted sense in which it is generally used, namely, as being necessarily connected with stories about gods, heroes, and heroines. In the sense in which I use *mythological*, it

\* Augustinus, *De Civ. Dei*, vii. 16. 'Et aliquando unum deum res plures, aliquando unam rem deos plures faciunt.'



is applicable to every sphere of thought and every class of words, though, from reasons to be explained hereafter, religious ideas are most liable to mythological expression. Whenever any word, that was at first used metaphorically, is used without a clear conception of the steps that led from its original to its metaphorical meaning, there is danger of mythology; whenever those steps are forgotten and artificial steps put in their places, we have mythology, or, if I may say so, we have diseased language, whether that language refers to religious or secular interests. Why I use the term mythological in this wide sense, a sense not justified by Greek or Roman usage, will appear when we come to see how what is commonly called mythology is but a part of a much more general phase through which all language has at one time or other to pass.

After these preliminary remarks, I now proceed to examine some cases of what I called *radical* and *poetical metaphor*.

Cases of radical metaphor, though numerous in radical and agglutinative languages, are less frequent in inflectional languages, such as Sanskrit, Greek, and Latin. Nor is it difficult to account for this. It was the very inconvenience caused by words which failed to convey distinctly the intention of the speaker that gave the impulse to that new phase of life in language which we call *inflectional*. Because it was felt to be important to distinguish between the *bright one*, i.e. the sun, and the *bright one*, i.e. the day, and the *bright one*, i.e. wealth, therefore the root *vas*, to be bright, was modified by inflection, and broken up into *Vi-vas-vat*, the sun, *vas-ara*, day, *vas-u*, wealth. In a radical and in many an agglutinative language,

the mere root *vas* would have been considered sufficient to express, *pro re natâ*, any one of these meanings. Yet inflectional languages, too, yield frequent instances of radical metaphor, some of which, as we shall see, have led to very ancient misunderstandings, and, in course of time, to mythology.

There is, for instance, in Sanskrit, a root *ark* or *arch*, which means to be bright; but, like most primitive verbs, it is used both in a transitive and intransitive sense, thus meaning both *to be bright* and *to make bright*. Only 'to make bright' meant more in that ancient language than it means with us. To make bright meant to cheer, to gladden, to celebrate, to glorify, and it is constantly used in these different senses by the ancient poets of the Veda. Now, by a very simple and intelligible process, the meaning of this root *arch* might be transferred to the sun, or the moon, or the stars; all of them might be called *arch* or *rich* without any change in the outward appearance of the root. For all we know, *rich*, as a substantive, may really have conveyed all these meanings during the earliest period of the Aryan languages. But if we look at the fully developed branches of that family of speech, we find that in this, its simplest form, *rich* has been divested of all meanings, except one; it only means a song of praise, a hymn, that gladdens the heart and brightens the countenance of the gods, or that makes their power effulgent and manifest.\* The other meanings, however, which *rich* might have expressed were not entirely given up; they were only rendered

\* The passage in the *Vâjasaneyi Sanhitâ*, 13, 39, 'riché tvâ ruché tvâ,' contains either an isolated remnant of the original import of the root, preserved in a proverbial phrase, or it is an etymological play.

more definite by new and distinct grammatical modifications of the same root. Thus, in order to express light or ray, *archi* was formed, a masculine, and very soon also a neuter, *archis*. Neither of these nouns is ever used in the sense of praise which clings to *rich*; they have only the sense of light and splendour.

Again, quite regularly, a new derivative was formed, namely, *arkáh*, a masculine. This likewise means light, or ray of light, but it has been fixed upon as the proper name of the light of lights, the sun. *Arkáh*, then, by a very natural metaphor, became one of the many names of the sun; but by another metaphor, which we explained before, *arkáh*, with exactly the same accent and gender, was also used in the sense of hymn of praise. Now here we have a clear case of radical metaphor in Sanskrit. It was not the noun *arkáh*, in the sense of sun, that was, by a bold flight of fancy, transferred to become the name of a hymn of praise, nor *vice versâ*. The same root *arch*, under exactly the same form, was bestowed independently on two distinct conceptions. If the reason of the independent bestowal of the same root on these two distinct ideas, sun and hymn, was forgotten, there was danger of mythology, and we actually find in India that a myth sprang up, and that hymns of praise were fabled to have proceeded from or to have originally been revealed by the sun.

Our root *arch* offers us another instance of the same kind of metaphor, but slightly differing from that just examined. From *rich* in the sense of shining, it was possible to form a derivative *rikta*, in the sense of lighted up, or bright. This form does not exist in Sanskrit, but as *kt* in Sanskrit is liable to be changed



into *ks*,\* we may recognise in *riksha* the same derivative of *rich*. *Riksha*, in the sense of bright, has become the name of the bear, so called either from his bright eyes or from his brilliant tawny fur.† The same name *riksha* was given in Sanskrit to the stars, the bright ones. It is used as a masculine and neuter in the later Sanskrit, as a masculine only in the Veda. In one passage of the Rig-Veda, i. 24, 10, we read as follows :—‘These stars fixed high above, which are seen by night, whither did they go by day?’ The commentator, it is curious to observe, is not satisfied with this translation of *riksha* in the sense of stars in general, but appeals to the tradition of the *Vâjasa-neyins*, in order to show that the stars here called *rikshas* are the same constellation which in later Sanskrit is called ‘the Seven Rishis,’ or ‘the Seven Sages.’ They are the stars that never seem to set

\* Kuhn, in the *Zeitschrift für die Wissenschaft der Sprache*, i. 155, was the first to point out the identity of Sk. *riksha* and Greek *ἄρκτος* in their mythological application. He proved that *ksh* in Sanskrit represented an original *kt*, in *takshan*, carpenter, Gr. *τέκτων*; in *kshi*, to dwell, *κρίω*; in *vakshas*, Lat. *pectus*. Curtius, in his *Grundzüge*, added *kshan*, to kill, Gr. *κταν*; Aufrecht (Kuhn’s *Zeitschrift*, viii. 71), *kshi*, to kill, *κτε*; Leo Meyer (v. 374), *ksham*, earth, Gr. *χθών*. To these may be added *kshi*, to possess, *κράομαι*; and perhaps *kshu*, to sneeze, *πρίω*, if it stands for *κρίω*.

† Grimm (*D. W.* s. v. Auge and Bär) compares *riksha*, Bär, not only with *ἄρκτος*, *ursus*, Lith. *lokis* (instead of *olkis*, *orkis*), Irish *art* (instead of *arct*), but also with Old High-German *elah*, which is not the bear but the elk, the *alces* described by Cæsar, *B. G.* vi. 27. This *alces*, however, the Old High-German *elah*, would agree better with *riśa* or *riśya*, some kind of roebuck, mentioned in the Veda (*Rv.* viii. 4. 10), with which Weber (*K. Z.* vi. 320) has well compared *ircus*, the primitive form of *hircus* (*Quintil.* i. 5, 20).

during the night, and therefore the question whither they went by day would be specially applicable to them. Anyhow, the tradition is there, and the question is whether it can be explained. Now, remember, that the constellation here called the *Rikshas*, in the sense of the bright ones, would be homonymous in Sanskrit with the Bears. Remember also, that, apparently without rhyme or reason, the same constellation is called by Greeks and Romans *the Bear*, in the singular, *árktos* and *ursa*. There may be some similarity between that constellation and a waggon or wain, but there is not a shadow of a likeness with a bear. You will now perceive the influence of words on thought, or the spontaneous growth of mythology. The name *riksha* was applied to the bear in the sense of the bright fuscous animal, and in that sense it became most popular in the later Sanskrit, and in Greek and Latin. The same name, in the sense of the bright ones, had been applied by the Vedic poets to the stars in general, and more particularly to that constellation which, in the northern parts of India, was the most prominent. The etymological meaning of *riksha*, as simply the bright stars, was forgotten, the popular meaning of *riksha*, bear, was known to everybody. And thus it happened that when the Greeks had left their central home and settled in Europe, they retained the name of *Árktos* for the same unchanging stars, but not knowing why these stars had originally received that name, they ceased to speak of them as *árktoi*, or many bears, and spoke of them as the Bear, the Great Bear, adding a bear-ward, the *Arcturus* (*oûros*, ward), and in time even a Little Bear. Thus the name of the Arctic regions rests on a misunderstanding of a name framed thousands of years ago in

Central Asia, and the surprise with which many a thoughtful observer has looked at these seven bright stars, wondering why they were ever called the bear, is removed by a reference to the early annals of human speech.

On the other hand, the Hindus also forgot the original meaning of *riksha*. It became a mere name, apparently with two meanings, star and bear. In India, however, the meaning of bear predominated, and as *riksha* became more and more the established name of the animal, it lost in the same degree its connection with the stars. So when, in later times, their Seven Sages had become familiar to all under the name of the Seven Rishis, the seven Rikshas, being unattached, gradually drifted towards the Seven Rishis, and many a fable sprang up as to the seven poets dwelling in the seven stars. Such is the origin of a myth.

The only doubtful point in the history of the myth of the Great Bear is the uncertainty which attaches to the exact etymological meaning of *riksha*, bear. We do not see why of all other animals the bear should have been called the bright animal.\* It is true that the reason of many a name is beyond our reach, and that we must frequently rest satisfied with the fact that such a name is derived from such a root, and therefore had originally such a meaning. The bear was the king of beasts with many northern nations, who did not know the lion; and it would be difficult to say why the ancient Germans called him *Goldfusz*, golden-footed. But even if the derivation of *riksha*

\* See, however, Welcker's remarks on the wolf in his *Griechische Götterlehre*, p. 64.



from *arch* were given up, the later chapters in the history of the word would still remain the same. We should have *riksha*, star, derived from *arch*, to shine, mixed up with *riksha*, bear, derived from some other root, such as, for instance, *arś* or *riś*, to hurt; but the reason why certain stars were afterwards conceived as bears would not be affected by this. It should also be stated that the bear is little known in the Veda. In the two passages of the Rig-Veda where *riksha* occurs, it is explained by *Sâyana*, in the sense of hurtful and of fire, not in that of bear. In the later literature, however, *riksha*, bear, is of very common occurrence.

Another name of the Great Bear, or originally the Seven Bears, or really the seven bright stars, is *Septemtriones*. The two words which form the name are occasionally used separately; for instance, '*quas nostri septem soliti vocitare triones.*'\* Varro (L. L. vii. 73-75), in a passage which is not very clear, tells us that *triones* was the name by which, even at his time, ploughmen used to call oxen when actually employed for ploughing the earth.† If we could quite depend on the fact that oxen were ever called *triones*, we might accept the explanation of Varro, and should have to admit that at one time the seven stars were conceived as seven oxen. But as a matter of fact, *trio* is never used in this sense, except by Varro, for the purpose of an etymology, nor are the seven stars ever again spoken of as seven oxen, but only as 'the oxen and the shaft,'

\* Arat. in *N. D.* ii. 41, 105.

† *Triones enim boves appellantur a bubulcis etiam nunc maxime quom arant terram; e quis ut dicti valentes glebarii qui facile proscindunt glebas, sic omnis qui terram arabant a terra terriones, unde triones ut dicerentur e detrito.*



*boves et temo*, a much more appropriate name. *Boōtes*, too, the ploughman or cow-driver, given to the same star which before we saw called *Arcturus*, or bear-keeper, would only imply that the waggon (*hāmāxa*) was conceived as drawn by two or three oxen, but not that all the seven stars were ever spoken of as oxen. Though, in matters of this kind, it is impossible to speak very positively, it seems not improbable that the name *triones*, which certainly cannot be derived from *terra*, may be an old name for star in general. We saw that the stars in Sanskrit were called *star-as*, the strewers of light; and the Latin *stella* is but a contraction of *sterula*. The English *star*, the German *Stern*, come from the same source. But besides *star*, we find in Sanskrit another name for star, namely, *târâ*, where the initial *s* of the root is lost. Such a loss is by no means unfrequent,\* and *trio*, in Latin, might therefore represent an original *strio*, star. The name *strio*, star, having become obsolete, like *riksha*, the *Septentriones* remained a mere traditional name; and if, as Varro tells us, there was a vulgar name for ox in Latin, namely, *trio*, which then would have to be derived from *tero*, to pound, the peasants speaking of the *Septem triones*, the seven stars, would naturally imagine themselves speaking of seven oxen.

But as I doubt whether the seven stars ever suggested by themselves the picture of seven animals, whether bears or cows, I equally question whether the seven were ever spoken of as *temo*, the shaft. Varro says they were called ‘*boves et temo*,’ ‘oxen and shaft,’ but not that they were called both oxen and shaft. We can well imagine the four stars being taken for

\* See Kuhn, *Zeitschrift*, iv. 4 seq.

oxen, and the three for the shaft; or again, the four stars being taken for the cart, one star for the shaft, and two for the oxen; but no one, I think, could ever have called the seven together the shaft. But then it might be objected that *temo*, in Latin, means not only shaft, but carriage, and should be taken as an equivalent of *hámaza*. This might be, only it has never been shown that *temo* in Latin meant a carriage. Varro,\* no doubt, affirms that it was so, but we have no further evidence. For if Juvenal says (Sat. iv. 126), '*De temone Britanno excidet Arviragus*,' this really means from the shaft, because it was the custom of the Britons to stand fighting on the shafts of their chariots.† And in the other passages,‡ where *temo* is supposed to mean car in general, it only means our constellation, which can in no wise prove that *temo* by itself ever had the meaning of car.

*Temo* stands for *tegmo*, and is derived from the root *taksh*, which likewise yields *tignum*, a beam. In French, too, *le timon* is never a carriage, but the shaft, the German *Deichsel*, the Anglo-Saxon *þixl* or *þisl*,§

\* L. L. vii. 75. *Temo dictus a tenendo, is enim continet jugum. Et plaustrum appellatum, a parte totum, ut multa.*

† Cæs. *B. G.* iv. 33, v. 16.

‡ Stat. *Theb.* i. 692. Sed jam temone supino Languet hyperboreæ glacialis portitor Ursæ.

Stat. *Theb.* i. 370. Hyberno deprensus navita ponto, Cui neque temo piger, neque amico sidere monstrat Luna vias.

Cic. *N. D.* ii. 42 (vertens Arati carmina) Arctophylax, vulgo qui dicitur esse Bootes, Quod quasi temone adjunctam præ se quatit Arcton.

Ovid, *Met.* x. 447. Interque triones Flexerat obliquo plaustrum temone Bootes.

Lucan, lib. iv. v. 523. Flexoque Ursæ temone paverent.

Propert. iii. 5, 35. Cur serus versare boves et plaustra Bootes.

§ In A.S. *þisl* is used as a name of the constellation of Charles's Wain; like *temo*.

words which are themselves, in strict accordance with Grimm's law, derived from the same root (*tvaksh*, or *taksh*) as *temo*. The English *team*, on the contrary, has no connection with *temo* or *timon*, but comes from the Anglo-Saxon verb *teon*, to draw, the German *ziehen*, the Gothic *tiuhan*, the Latin *duco*. It means *drawing*, and a team of horses means literally a draught of horses, a line of horses, *ein Zug Pferde*. The verb *teon*, however, like the German *ziehen*, had likewise the meaning of bringing up, or rearing; and as in German *ziehen*, *Zucht*, and *züchten*, so in Anglo-Saxon *team* was used in the sense of issue, progeny; *teamian* (in English, for distinctness sake, spelt *to teem*) took the sense of producing, propagating, and lastly of abounding.

According to the very nature of language, mythological misunderstandings such as that which gave rise to the stories of the Great Bear must be more frequent in ancient than in modern dialects. Nevertheless, the same mythological accidents will happen even in modern French and English. To speak of the seven bright stars, the Rikshas, as the Bear, is no more than if in speaking of a *walnut* we were to imagine that it had anything to do with a *wall*. *Walnut* is the A.S. *wealh-hnut*, in German *Wälsche Nuss*. *Wälsch* in German means originally foreigner, barbarian, and was especially applied by the Germans to the Italians. Hence Italy is to the present day called *Welschland* in German. The Saxon invaders gave the same name to the Celtic inhabitants of the British Isles, who are called *wealh* in Anglo-Saxon (plur. *wealas*). Hence the *walnut* meant originally the foreign nut. In Lithuanian the walnut goes by the name of the 'Italian nut,' in



Russian by that of 'Greek nut.'\* What Englishman, in speaking of *walnut*, thinks that it means foreign or Italian nut? But for the accident that walnuts are no wall fruit, I have little doubt that by this time schoolmasters would have insisted on spelling the word with two *l*'s, and that many a gardener would have planted his walnut trees against the wall.

There is a soup called Palestine soup. It is made, I believe, of artichokes called *Jerusalem artichokes*, but the Jerusalem artichoke is so called from a mere misunderstanding. The artichoke, being a kind of sunflower, was called in Italian *girasole*, from the Latin *gyrus*, circle, and *sol*, sun. Hence Jerusalem artichokes and Palestine soups!

One other instance may here suffice, because we shall have to return to this subject of modern mythology. One of the seven wonders of the Dauphiné in France is *la Tour sans venin*,† the Tower without poison, near Grenoble. It is said that poisonous animals die as soon as they approach it. Though the experiment has been tried, and has invariably failed, yet the common people believe in the miraculous power of the locality as much as ever. They appeal to the name of *la Tour sans venin*, and all that the more enlightened among them can be made to concede is that the tower may have lost its miraculous character in the present age, but that it certainly possessed it in former days. The real name, however, of the tower and of the chapel near it is *San Verena* or *Saint Vrain*. This became *san veneno*, and at last *sans venin*.

\* Pott, *E. F.* ii. 127. Itóliskas rěssutys ; Gréczkoĩ orjech. The German *Lamberts-nuss* is *nux Lombardica*. Instead of walnut we find *welshnut*, *Philos. Transact.* xviii. p. 819, and *walshnut* in Gerarde's *Herbal*. In the Index to the *Herbal* walnut is spelt with two *l*'s, and classed with wallflower.

† Brosses, *Formation Mécanique des Langues*, ii. 133.

But we must return to ancient mythology. There is a root in Sanskrit, GHAR, which, like *ark*, means to be bright and to make bright.\* It was originally used of the glittering of fat and ointment. This earliest sense is preserved in passages of the Veda, where the priest is said to brighten up the fire by sprinkling butter on it. It never means sprinkling in general, but always sprinkling with a bright fatty substance (*beglitzern*).† From this root we have *ghṛita*, the modern *ghee*, melted butter, and in general anything fat (*Schmalz*), the fatness of the land and of the clouds. Fat, however, means also bright, and hence the dawn is called *ghṛitápratikâ*, bright-faced. Again, the fire claims the same name, as well as *ghṛitánirñij*, with garments dripping with fat or with brilliant garments. The horses of Agni or fire, too, are called *ghṛitáprishthâh*, literally whose backs are covered with fat; but, according to the commentator, well fed and shining. The same horses are called *vîtaprishtha*, with beautiful backs, and *ghṛitasnâh*, bathed in fat, glittering, bedewed. Other derivatives of this root *ghar* are *ghṛinâ*, heat of the sun; in later Sanskrit *ghṛinâ*, warmth of the heart or pity, but likewise heat or contempt. *Ghrîni*, too, means the burning heat of the sun. *Gharmâ* is heat in general, and may be used for anything that is hot, the sun, the fire, warm milk, and even the kettle. It is identical with Greek *thermós*, and Latin *formus*, warm.

Instead of *ghar* we also find the root *har*, a slight modification of the former, and having the same mean-

\* Cf. Kuhn's *Zeitschrift*, i. 154, 566; iii. 346 (Schweizer), iv. 354 (Pictet).

† *Rv.* ii. 10, 4. 'Jígharmy agním havíshâ ghṛiténa,' I anoint or brighten up the fire with oblations of fat.

ing. This root has given rise to several derivatives. Two very well-known derivatives are *hári* and *harít*, both meaning originally bright, resplendent. Now let us remember that though occasionally both the sun and the dawn are conceived by the Vedic poets as themselves horses,\* that is to say, as racers, it became a more familiar conception of theirs to speak of the sun and the dawn as drawn by horses. These horses are very naturally called *hári*, or *harít*, bright and brilliant; and many similar names, such as *aruná*, *arushá*, *rohít*, &c.,† are applied to them, all expressive of brightness of colour in its various shades. After a time these adjectives became substantives. Just as *harinâ*, from meaning bright brown, came to mean the antelope, as we speak of a bay instead of a bay horse, the Vedic poets spoke of the *Harits* as the horses of the Sun and the Dawn, of the two *Haris* as the horses of Indra, of the *Rohits* as the horses of Agni or fire. After a time the etymological meaning of these words was lost sight of, and *hari* and *harit* became traditional names for the horses which either represented the Dawn and the Sun, or were supposed to be yoked to their chariots. When the Vedic poet says, 'The Sun has yoked the Harits for his course,' what did that language originally mean? It meant no more than what was manifest to every eye, namely, that the bright rays of light which are seen at dawn before sunrise, gathered in the east, rearing up to the sky, and bounding forth in all directions with the quickness of lightning, draw forth the light of the sun, as horses draw the car of a warrior. But who

\* M. M.'s *Essay on Comparative Mythology*, p. 82. *Böhtlingk-Roth, Wörterbuch*, s. v. *aśva*.

† Cf. M. M.'s *Essay on Comparative Mythology*, pp. 81-83.



can keep the reins of language? The bright ones, the *Harits*, run away like horses, and very soon they who were originally themselves the dawn, or the rays of the Dawn, are recalled to be yoked as horses to the car of the Dawn. Thus we read (Rv. vii. 75, 6), 'The bright brilliant horses are seen bringing to us the shining Dawn.'

If it be asked how it came to pass that rays of light should be spoken of as horses, the most natural answer would be that it was a poetical expression such as any one might use. But if we watch the growth of language and poetry, we find that many of the later poetical expressions rest on the same metaphorical principle which we considered before as so important an agent in the original formation of nouns, and that they were suggested to later poets by earlier poets, i.e. by the framers of the very language which they spoke. Thus in our case we can see that the same name which was given to the flames of fire, namely, *vahni*, was likewise used as a name for horse, *vahni* being derived from a root *vah*, to carry along. There are several other names which rays of light and horses share in common, so that the idea of horse would naturally ring through the mind whenever these names for rays of light were touched. And here we are once again in the midst of mythology; for all the fables of Helios, the sun, and his horses, flow irresistibly from this source.

But more than this. Remember that one of the names given to the horses of the sun was *Harit*; remember also that originally these horses of the sun were intended for the rays of the dawn, or, if you like, for the Dawn itself. In some passages the Dawn is simply called *a'svâ*, the mare, originally the racing



light. Even in the Veda, however, the *Harits* are not always represented as mere horses, but assume occasionally, like the Dawn, a more human aspect. Thus, vii. 66, 15, they are called the Seven Sisters, and in another passage (ix. 86, 37) they are represented with beautiful wings. Let us now see whether we can find any trace of these Harits or bright ones in Greek mythology, which, like Sanskrit, is but another dialect of the common Aryan mythology. If their name exists at all in Greek, it could only be under the form of *Charis*, *Charites*. The name, as you know, exists, but what is its meaning? It never means a horse. The name never passed through that phase in the minds of the Greek poets which is so familiar in the poetry of the Indian bards. It retained its etymological meaning of lustrous brightness, and became, as such, the name of the brightest brightness of the sky, of the dawn. In Homer, *Charis* is still used as one of the many names of *Aphrodite*, and, like Aphrodite, she is called the wife of *Hephæstos*.\* *Aphrodite*, the sea-born, was originally the dawn, the most lovely of all the sights of nature, and hence very naturally raised in the Greek mind to the rank of goddess of beauty and love. As the dawn is called in the Veda *Duhitâ Divah*, the daughter of *Dyaus*,

\* *Il.* xviii. 382:

τὴν δὲ ἴδε προμολοῦσα Χάρις λιπαροκρήδεμνος  
καλὴ τὴν ὤπνιε περικλυτός Ἀμφιγυήεις.

In the *Odyssey*, the wife of Hephæstos is Aphrodite; and Nägelsbach, not perceiving the synonymous character of the two names, actually ascribed the passage in *Od.* viii. to another poet, because the system of names in Homer, he says, is too firmly established to allow of such variation. He likewise considers the marriage of Hephæstos as purely allegorical. (*Homerische Theologie*, p. 114.)

*Charis*, the dawn, is to the Greeks the daughter of *Zeus*. One of the names of *Aphrodite*, *Argynnis*, which the Greeks derived from a name of a sacred place near the *Cephissus*, where *Argynnis*, the beloved of *Agamemnon* had died, has been identified \* with the Sanskrit *arjunî*, the bright, the name of the dawn. In progress of time the different names of the dawn ceased to be understood, and *Eos*, *Ushas*, as the most intelligible of them, became in Greece the chief representative of the deity of the morning, drawn, as in the Veda, by her bright horses. *Aphrodite*, the sea-born, also called *Enalia* † and *Pontia*, became the goddess of beauty and love, and was afterwards degraded by an admixture of Syrian mythology. *Charis*, on the contrary, was merged in the *Charites*, ‡ who, instead of being, as in India, the horses of the dawn, were changed by an equally natural process into the attendants of the bright gods, and particularly of *Aphrodite*, whom 'they wash at Paphos and anoint with oil,' § as if in remembrance of their descent from the root *ghar*, which, as we saw, meant to anoint, to render brilliant by oil.

It has been considered a fatal objection to the history of the word *Charis*, as here given, that in Greek

\* Sonne, in Kuhn's *Zeitschrift*, x. 350. *Rv.* i. 49, 3. *Arjuna*, a name of *Indra*, mentioned in the *Brâhmaṇas*, &c.

† Cf. *Ápyâ yóshâ*, *Rv.* x. 10, 4; *ápyâ yóshaṇâ*, 11, 2.

‡ Kuhn, *Zeitschrift*, i. 518, x. 125. The same change of one deity into many took place in the case of the *Moirâ*, or fate. The passages in Homer where more than one *Moirâ* are mentioned, are considered as not genuine (*Od.* vii. 197, *Il.* xxiv. 49); but Hesiod and the later poets are familiar with the plurality of the *Moiras*. See Nægelsbach, *Nachhomerische Theologie*, p. 150. Welcker, *Griechische Götterlehre*, p. 53.

§ *Od.* vii. 364.

it would be impossible to separate *Charis* from other words of a more general meaning. 'What shall we do,' says Curtius,\* with *cháris*, *chará*, *chairô*, *charízomai*, *charíeis*?' Why, it would be extraordinary if such words did not exist, if the root *ghar* had become withered as soon as it had produced this one name of *Charis*. These words which Curtius enumerates are nothing but collateral offshoots of the same root which produced the *Harits* in India and *Charis* in Greece. One of the derivatives of the root *har* was carried off by the stream of mythology, the others remained on their native soil. Thus the root *dyu* or *div* gives rise among others to the name of *Zeus*, in Sanskrit *Dyaus*, but this is no reason why the same word should not be used in the original sense of heaven, and produce other nouns expressive of light, day, and similar notions. The very word which in most Slavonic languages appears in the sense of brightness, has in Illyrian, under the form of *zora*, become the name of the dawn.† Are we to suppose that *Charis* in Greek meant first grace, beauty, and was then raised to the rank of an abstract deity? It would be difficult to find another such deity in Homer, originally a mere abstract conception,‡ and yet made of such flesh and bone as *Charis*, the wife of *Hephæstos*. Or shall we suppose that *Charis* was first, for some reason or other, the wife of *Hephæstos*, and that her name afterwards dwindled down to mean splendour§ or charm in general; so that another goddess, *Athene*, could be said to shower *charis* or charms upon a man?

\* Curtius, *G. E.* i. 97.

† Pictet, *Origines*, i. 155. Sonne, Kuhn's *Zeitschrift*, x. 354.

‡ See Kuhn, *Herabholung des Feuers*, p. 17.

§ Sonne, *l. c.* x. 355-6.



To this, too, I doubt whether any parallel could be found in Homer. Everything, on the contrary, is clear and natural, if we admit that from the root *ghar* or *har*, to be fat, to be glittering, was derived, besides *harit*, the bright horse of the sun in Sanskrit, and *Charis*, the bright dawn in Greece, *cháris* meaning brightness and fatness, then gladness and pleasantness in general, according to a metaphor so common in ancient language. It may seem strange to us that the *cháris*, that indescribable grace of Greek poetry and art, should come from a root meaning to be fat, to be greasy. Yet as fat and greasy infants grow into 'airy, fairy Lilians,' so do words and ideas. The Psalmist (cxxxiii. 2) does not shrink from even bolder metaphors. 'Behold, how good and how pleasant (*charíen*) it is for brethren to dwell together in unity! It is like the precious ointment upon the head that ran down upon the beard, even Aaron's beard: that went down to the skirts of his garments.' After the Greek *cháris* had grown, and assumed the sense of charm, such as it was conceived by the most highly-cultivated of races, no doubt it reacted on the mythological *Charis* and *Charites*, and made them the embodiment of all that the Greeks had learnt to call lovely and graceful, so that in the end it is sometimes difficult to say whether *cháris* is meant as an appellative or as a mythological proper name. Yet though thus converging in the later Greek, the starting-points of the two words were clearly distinct—as distinct at least as those of *arka*, sun, and *arka*, hymn of praise, which we examined before, or as *Dyaus*, Zeus, a masculine, and *dyaus*, a feminine, meaning heaven and day. Which of the two is older, the appellative or the proper name, *Charis*, the bright dawn, or *cháris*, love-

liness, is a question which it is impossible to answer, though Curtius declares in favour of the priority of the appellative. This is by no means so certain as he imagines. I fully agree with him when he says that no etymology of any proper name can be satisfactory which fails to explain the appellative nouns with which it is connected; but the etymology of *Charis* does not fail here. On the contrary, it lays bare the deepest roots from which all its cognate offshoots can be fully traced both in form and meaning, and it can defy the closest criticism, both of the student of comparative philology and of the lover of ancient mythology.\*

In the cases which we have hitherto examined, a mythological misunderstanding arose from the fact that one and the same root was made to yield the names of different conceptions; that after a time the two names were supposed to be one and the same, which led to the transference of the meaning of one to the other. There was one point of similarity between the *bright* bear and the *bright* stars to justify the ancient framers of language in deriving from the same root the names of both. But when the similarity in quality was mistaken for identity in substance, mythology became inevitable. The fact of the seven bright stars being called *Arktos*, and being supposed to mean the bear, I call mythology, and it is important to observe that this myth has no connection whatever with religious ideas or with the so-called gods of antiquity. The legend of *Kallisto*, the beloved of *Zeus*, and the mother of *Arkas*, has nothing to do with the original naming of the stars. On the contrary, *Kallisto*

\* See Appendix at the end of this Lecture.

was supposed to have been changed into the *Arktos*, or the Great Bear, because she was the mother of *Arkas*, that is to say, of the Arcadian or bear race, and her name, or that of her son, reminded the Greeks of their long-established name of the Northern constellation. Here, then, we have mythology apart from religion, we have a mythological misunderstanding very like in character to those which we alluded to in 'Palestine soup' and *La Tour sans venin*.

Let us now consider another class of metaphorical expressions. The first class comprehended those cases which owed their origin to the fact that two substantially distinct conceptions received their name from the same root, differently applied. The metaphor had taken place simultaneously with the formation of the words; the root itself and its meaning had been modified in being adapted to the different conceptions that waited to be named. This is *radical metaphor*. If, on the contrary, we take such a word as *star* and apply it to a *flower*; if we take the word *ship* and apply it to a *cloud*, or *wing* and apply it to a *sail*; if we call the *sun horse*, or the *moon cow*; or with verbs, if we take such a verb as *to die* and apply it to the setting sun, or if we read—

'The moonlight *clasps* the earth,  
And the sunbeams *kiss* the sea.'\*

we have throughout *poetical metaphors*. These, too, are of very frequent occurrence in the history of early language and early thought. It was, for instance, a very natural idea for people who watched the golden beams of the sun playing as it were with the foliage of the trees, to speak of these outstretched rays as

\* Cox, *Tales of the Gods and Heroes*, p. 55.



hands or arms. Thus we see that in the Veda,\* *Savitar*, one of the names of the sun, is called *golden-handed*. Who would have thought that such a simple metaphor could ever have caused any mythological misunderstanding? Nevertheless, we find that the commentators of the Veda see in the name *golden-handed*, as applied to the sun, not the golden splendour of his rays, but the gold which he carries in his hands, and which he is ready to shower on his pious worshippers. A kind of moral is drawn from the old natural epithet, and people are encouraged to worship the sun because he has gold in his hands to bestow on his priests. We have a proverb in German, ‘*Morgenstunde hat Gold im Munde*,’ ‘Morning-hour has gold in her mouth,’ which is intended to inculcate the same lesson as,

‘Early to bed, and early to rise,  
Makes a man healthy, and wealthy, and wise.’

But the origin of the German proverb is mythological. It was the conception of the dawn as the golden light, some similarity like that between *aurum* and *aurora*, which suggested the proverbial or mythological expression of the ‘golden-mouthed Dawn’—for many proverbs are chips of mythology. But to return to the golden-handed Sun. He was not only turned into a lesson, but he also grew into a respectable myth. Whether people failed to see the natural meaning of the golden-handed Sun, or whether they would not see it, certain it is that the early theolo-

\* i. 22, 5, *hiraṇyapāṇim ūtaye Savitâram upa hvaye.*

i. 35, 9, *hiraṇyapāṇiḥ Savitâ vicharshaṇiḥ ubhe dyâvâpṛithivî antar iyate.*

i. 35, 10, *hiraṇyahasta.*



gical treatises of the Brahmans\* tell of the Sun as having cut his hand at a sacrifice, and the priests having replaced it by an artificial hand made of gold. Nay, in later times the Sun, under the name of Savitar, becomes himself a priest, and a legend is told how at a sacrifice he cut off his hand, and how the other priests made a golden hand for him.

All these myths and legends which we have hitherto examined are clear enough; they are like fossils of the most recent period, and their similarity with living species is not to be mistaken. But if we dig somewhat deeper, the similarity is less palpable, though it may be traced by careful research. If the German god *Tyr*, whom Grimm identifies with the Sanskrit sun-god,† is spoken of as one-handed, it is because the name of the golden-handed Sun had led to the conception of the sun with one artificial hand, and afterwards, by a strict logical conclusion, to a sun with but one hand. Each nation invented its own story how *Savitar* or *Tyr* came to lose their hands; and while the priests of India imagined that *Savitar* hurt his hand at a sacrifice, the sportsmen of the North told how *Tyr* placed his hand, as a pledge, into the mouth of the wolf, and how the wolf bit it off. Grimm compares the legend of *Tyr* placing his hand, as a pledge, into the mouth of the wolf, and thus losing it, with an Indian legend of *Sûrya* or *Savitar*, the sun, laying hold of a sacrificial animal and losing his hand by its bite. This explanation is possible, but it wants confirmation, particularly as the one-handed German god *Tyr* has been accounted for in some other way. *Tyr*

\* Kaushîtaki-brâhmaṇa, l. c. and Sâyaṇa.

† *Deutsche Mythologie*, xlvii. p. 187.

is the god of victory, as Wackernagel points out, and as victory can only be on one side, the god of victory might well have been thought of and spoken of as himself one-handed.\*

It was a simple case of poetical metaphor if the Greeks spoke of the stars as the eyes of the night. But when they speak of Argos the all-seeing (*Panóptēs*), and tell of his body being covered with eyes, we have a clear case of mythology.

It is likewise perfectly intelligible when the poets of the Veda speak of the Maruts or storms as singers. This is no more than when poets speak of the music of the winds; and in German such an expression as 'The wind sings' (*der Wind singt*) means no more than the wind blows. But when the Maruts are called not only singers, but musicians—nay, wise poets in the Veda †—then again language has exceeded its proper limits, and has landed us in the realm of fables.

Although the distinction between *radical* and *poetical* metaphor is very essential, and helps us more than anything else toward a clear perception of the origin of fables, it must be admitted that there are cases where it is difficult to carry out this distinction. If modern poets call the clouds mountains, this is clearly poetical metaphor; for mountain, by itself, never means cloud. But when we see that in the Veda the clouds are constantly called *parvata*, and that *parvata* means, etymologically, knotty or rugged, it is difficult to say positively whether in India the clouds were called mountains by a simple poetical metaphor, or whether both the clouds and the moun-

\* *Schweitzer Museum*, i. 107.

† *Rv.* i. 19, 4 ; 38, 15 ; 52, 15. Kuhn, *Zeitschrift*, i. 521. ;

tains were from the beginning conceived as full of ruggedness and undulation, and thence called *parvata*. The result, however, is the same, namely, mythology; for if in the Veda it is said that the Maruts or storms make the mountains to tremble (i. 39, 5), or pass through the mountains (i. 116, 20), this, though meaning originally that the storms made the clouds shake, or passed through the clouds, came to mean, in the eyes of later commentators, that the Maruts actually shook the mountains or rent them asunder.

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#### APPENDIX TO LECTURE VIII.

Dr. Sonne, in several learned articles published in 'Kuhn's Zeitschrift' (x. 96, 161, 321, 401), has subjected my conjecture as to the identity of *harit* and *châris* to the most searching criticism. On most points I fully agree with him, as he will see from the more complete statement of my views given in this Lecture; and I feel most grateful to him for much additional light which his exhaustive treatise has thrown on the subject. We differ as to the original meaning of the root *ghar*, which Dr. Sonne takes to be effusion or shedding of light, while I ascribe to it the meaning of glittering and fatness; yet we meet again in the explanation of such words as *ghriṇâ*, pity; *hâras*, wrath; *hriṇi*, wrath; *hriṇîte*, he is angry (p. 100). These meanings Dr. Sonne explains by a reference to the Russian *kraska*, colour; *krasnoï*, red, beautiful; *krasa*, beauty; *krasnjetï*, to blush; *krasovatïjsja*, to rejoice. Dr. Sonne is certainly right in doubting the



identity of *chairō* and Sanskrit *hriṣh*, the Latin *horreo*, and in explaining *chairō* as the Greek form of *ghar*, to be bright and glad, conjugated according to the fourth class. Whether the Sanskrit *haryati*, he desires, is the Greek *thélei*, seems to me doubtful.

Why Dr. Sonne should prefer to identify *cháris*, *cháritos*, with the Sanskrit *hári*, rather than with *harít*, he does not state. Is it on account of the accent? I certainly think that there was a form *cháris*, corresponding to *hári*, and I should derive from it the accusative *'chárin*, instead of *cháríta*; also adjectives like *charíeis* (*harivat*). But I should certainly retain the base which we have in *harít*, in order to explain such forms as *cháris*, *cháritos*. That *chárít* in Greek ever passed through the same metamorphosis as the Sanskrit *harít*, that it ever to a Greek mind conveyed the meaning of horse, there is no evidence whatever. Greek and Sanskrit myths, like Greek and Sanskrit words, must be treated as co-ordinate, not as subordinate; nor have I ever, as far as I recollect, referred Greek myths or Greek words to Sanskrit as their prototypes. What I said about the *Charites* was very little. On page 81 of my 'Essay on Comparative Mythology,' I said:—

'In other passages, however, they (the Harits) take a more human form; and as the Dawn, which is sometimes simply called *aśvâ*, the mare, is well known by the name of the sister, these *Harits* also are called the Seven Sisters (vii. 66, 15); and in one passage (ix. 86, 37) they appear as the *Harits* with beautiful wings. *After this I need hardly say that we have here the prototype of the Grecian Charites.*'

If on any other occasion I had derived Greek from Sanskrit myths, or, as Dr. Sonne expresses it, ethnic

from ethnic myths, instead of deriving both from a common Aryan or pro-ethnic source, my words might have been liable to misapprehension.\* But as they stand in my essay, they were only intended to point out that after tracing the *Harits* to their most primitive source, and after showing how, starting from thence, they entered on their mythological career in India, we might discover there, in their earliest form, the mould in which the myth of the Greek *Charites* was cast, while such epithets as 'the sisters,' and 'with beautiful wings,' might indicate how conceptions that remained sterile in Indian mythology, grew up under a Grecian sky into those charming human forms which we have all learned to admire in the Graces of Hellas. That I had recognised the personal identity, if we may say so, of the Greek *Charis*, the Aphrodite, the Dawn, and the Sanskrit *Ushas*, the dawn, will be seen from a short sentence towards the end of my essay, p. 86:—

'He (*Eros*) is the youngest of the gods, the son of *Zeus*, the friend of the *Charites*, also the son of the chief *Charis*, *Aphrodite*, in whom we can hardly fail to discover a female *Eros* (an *Ushâ*, dawn, instead of an *Agni aushasya*)'.

Dr. Sonne will thus perceive that our roads, even where they do not exactly coincide, run parallel, and that we work in the same spirit and with the same objects in view.

\* I ought to mention, however, that Mr. Cox, in the Introduction to his *Tales of the Gods and Heroes*, p. 67, has understood my words in the same sense as Dr. Sonne. 'The horses of the sun,' he writes, 'are called *Harits*; and in these we have the prototype of the Greek *Charites*—an inverse transmutation, for while in the other instances the human is changed into a brute personality, in this the beasts are converted into maidens.'

## LECTURE IX.

## THE MYTHOLOGY OF THE GREEKS.

TO those who are acquainted with the history of Greece, and have learnt to appreciate the intellectual, moral, and artistic excellencies of the Greek mind, it has often been a subject of wonderment how such a nation could have accepted, could have tolerated for a moment, such a religion. What the inhabitants of the small city of Athens achieved in philosophy, in poetry, in art, in science, in politics, is known to all of us; and our admiration for them increases tenfold if, by a study of other literatures, such as the literatures of India, Persia, and China, we are enabled to compare their achievements with those of other nations of antiquity. The rudiments of almost everything, with the exception of religion, we, the people of Europe, the heirs to a fortune accumulated during twenty or thirty centuries of intellectual toil, owe to the Greeks; and, strange as it may sound, but few, I think, would gainsay it, that to the present day the achievements of these our distant ancestors and earliest masters, the songs of Homer, the dialogues of Plato, the speeches of Demosthenes, and the statues of Phidias stand, if not unrivalled, at least unsurpassed by anything that has been achieved by their descendants and pupils. *How* the Greeks came to be what they were, and how, alone of all other nations,



they opened almost every mine of thought that has since been worked by mankind; how they invented and perfected almost every style of poetry and prose which has since been cultivated by the greatest minds of our race; how they laid the lasting foundation of the principal arts and sciences, and in some of them achieved triumphs never since equalled, is a problem which neither historian nor philosopher has as yet been able to solve. Like their own goddess Athene, the people of Athens seems to spring full armed into the arena of history, and we look in vain to Egypt, Syria, or India for more than a few of the seeds that burst into such marvellous growth on the soil of Attica.

But the more we admire the native genius of Hellas, the more we feel surprised at the crudities and absurdities of what is handed down to us as their religion. Their earliest philosophers knew as well as we that the Deity, in order to be Deity, must be either perfect or nothing—that it must be one, not many, and without parts and passions; yet they believed in many gods, and ascribed to all of them, and more particularly to Jupiter, almost every vice and weakness that disgraces human nature. Their poets had an instinctive aversion to everything excessive or monstrous; yet they would relate of their gods what would make the most savage of the Red Indians creep and shudder:—how that Uranos was maimed by his son Kronos—how Kronos swallowed his own children, and, after years of digestion, vomited out alive his whole progeny—how Apollo, their fairest god, hung Marsyas on a tree and flayed him alive—how Demeter, the sister of Zeus, partook of the shoulder of Pelops who had been butchered and

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roasted by his own father, Tantalus, as a feast for the gods. I will not add any further horrors, or dwell on crimes that have become unmentionable, but of which the most highly cultivated Greek had to tell his sons and daughters in teaching them the history of their gods and heroes.

It would indeed be a problem, more difficult than the problem of the origin of these stories themselves, if the Greeks, such as we know them, had never been startled by this, had never asked, How can these things be, and how did such stories spring up? But be it said to the honour of Greece, that although her philosophers did not succeed in explaining the origin of these religious fables, they certainly were, from the earliest times, shocked by them. Xenophanes, who lived, as far as we know, before Pythagoras, accuses\* Homer and Hesiod of having ascribed to the gods everything that is disgraceful among men—stealing, adultery, and deceit. He remarks that † men seem to have created their gods, and to have given to them their own mind, voice, and figure; that the Ethiopians made their gods black and flat-nosed, the

\* Πάντα θεοῖς ἀνέθηκαν Ὀμηρός θ' Ἡσιόδός τε,  
ὅσσα παρ' ἀνθρώποισιν ὀνειδέα καὶ ψόγος ἐστίν. . . .

Ὡς πλεῖστ' ἐφθέγγαντο θεῶν ἀθεμίστια ἔργα,  
κλέπτειν μοιχεύειν τε καὶ ἀλλήλους ἀπατεύειν.

Cf. *Sextus Emp. adv. Math.* i. 289, ix. 193.

† Ἀλλὰ βροτοὶ δοκέουσι θεοὺς γεγενῆσθαι,  
τὴν σφετέρην τ' αἴσθησιν ἔχειν φωνὴν τε δέμας τε. . . .

Ἄλλ' εἴτοι χεῖράς γ' εἶχον βόες ἢ λέοντες,  
ἢ γράψαι χεῖρεςσι καὶ ἔργα τελεῖν ἄπερ ἄνδρες,  
καὶ κε θεῶν ιδέας ἔγραφον καὶ σώματ' ἐποιοῦν  
τοιαῦθ' οἷόν περ καὶ αὐτοὶ δέμας εἶχον ὁμοῖον,  
ἵπποι μὲν θ' ἵπποισι, βόες δέ τε βουσίν ὁμοῖα.

Cf. *Clem. Alex. Strom.* v. p. 601 C.

Thracians red-haired and blue-eyed—just as cows or lions, if they could but draw, would draw their gods like cows and lions. He himself declares, in the most unhesitating manner—and this nearly 600 years before our era—that ‘God \* is one, the greatest among gods and men, neither in form nor in thought like unto men.’ He calls the battles of the Titans, the Giants, and Centaurs, the inventions of former generations † (πλάσματα τῶν προτέρων), and requires that the Deity should be praised in holy stories and pure strains.

Similar sentiments were entertained by most of the great philosophers of Greece. *Heraclitus* seems to have looked upon the Homeric system of theology, if we may so call it, as flippant infidelity. According to *Diogenes Laertius*, ‡ *Heraclitus* declared that *Homer*, as well as *Archilochus*, deserved to be ejected from public assemblies and flogged. The same author relates § a story that *Pythagoras* saw the soul of *Homer* in the lower world hanging on a tree, and surrounded by serpents, as a punishment for what he had said of the gods. No doubt the views of these philosophers about the gods were far more

\* Εἷς θεὸς ἔν τε θεοῖσι καὶ ἀνθρώποισι μέγιστος,  
οὗ τι δέμας θνητοῖσι ὁμοίος οὐδὲ νόημα.

Cf. *Clem. Alex. l. c.*

† Cf. *Isocrates*, ii. 38 (*Nägelsbach*, p. 45).

‡ Τόν θ' Ὀμηρον ἔφασκεν ἄξιον ἐκ τῶν ἀγώνων ἐκβάλλεσθαι καὶ ῥαπίζεσθαι, καὶ Ἀρχιλόχον ὁμοίως.—*Diog. Laert.* ix. 1.

§ Ἡσέβησε εἰ μὴ ἡλληγόρισε, Ὀμηρος. *Bertrand, Les Dieux Protecteurs*, p. 143.

§ Φησὶ δ' Ἱερώνυμος κατελθόντα αὐτὸν εἰς ἄδου τὴν μὲν Ἡσιόδου ψυχὴν ἰδεῖν πρὸς κίονι χαλκῷ δεδεμένην καὶ τρίζουσαν, τὴν δ' Ὀμήρου κρεμαμένην ὑπὸ δένδρον καὶ ὄφεις περὶ αὐτὴν ἀνθ' ὧν εἶπον περὶ θεῶν.—*Diog. Laert.* viii. 21.

exalted and pure than those of the Homeric poets, who represented their gods as in many cases hardly better than man. But as religion became mixed up with politics, it was more and more dangerous to pronounce these sublimer views, or to attempt to explain the Homeric myths in any but the most literal sense. *Anaxagoras*, who endeavoured to give to the Homeric legends a moral meaning, and is said to have interpreted the names of the gods allegorically—nay, to have called Fate an empty name, was thrown into prison at Athens, from whence he only escaped through the powerful protection of his friend and pupil Pericles. *Protagoras*, another friend of Pericles,\* was expelled from Athens, and his books were publicly burnt, because he had said that nothing could be known about the gods, whether they existed or no.† *Socrates*, though he never attacked the sacred traditions and popular legends, ‡ was suspected of being no very strict believer in the ancient Homeric theology, and he had to suffer martyrdom. After the death of Socrates greater freedom of thought was permitted at Athens in exchange for the loss of political liberty. Plato declared that many a myth

\* Δοκεῖ δὲ πρῶτος, καθά φησι Φαῖωρινος ἐν παντοδαπῇ ἱστορίᾳ, τὴν Ὀμήρου ποιήσιν ἀποφύνασθαι εἶναι περὶ ἀρετῆς καὶ δικαιοσύνης· ἐπὶ πλέον δὲ προστῆναι τοῦ λόγου Μητρόδωρον τὸν Δαμψακηνόν, γινώριμον ὄντα αὐτῶν, ὃν καὶ πρῶτον σπουδάσαι τοῦ ποιητοῦ περὶ τὴν φυσικὴν πραγματείαν.—Diog. Laert. ii. 11.

† Περί μὲν θεῶν οὐκ ἔχω εἰδέναι οὐθ' ὡς εἰσίν, οὐθ' ὡς οὐκ εἰσίν· πολλὰ γὰρ τὰ κωλύοντα εἰδέναι, ἢ τ' ἀδηλότης καὶ βραχυὸς ὦν ὁ βίος τοῦ ἀνθρώπου. Διὰ ταύτην δὲ τὴν ἀρχὴν τοῦ συγγράμματος ἐξελέθη πρὸς Ἀθηναίων· καὶ τὰ βιβλία αὐτοῦ κατέκαυσαν ἐν τῇ ἀγορᾷ, ὑπὸ κήρυκος ἀναλεξάμενοι παρ' ἐκάστου τῶν κεκτημένων.—Diog. Laert. ix. 51. Cicero, *Nat. Deor.* i. 23, 63.

‡ Grote, *History of Greece*, vol. i. p. 504.



had a symbolical or allegorical meaning, but he insisted, nevertheless, that the Homeric poems, such as they were, should be banished from his Republic.\* Nothing can be more distinct and outspoken than the words attributed to *Epicurus*: 'The gods are indeed, but they are not as the many believe them to be. Not he is an infidel who denies the gods of the many, but he who fastens on the gods the opinions of the many.' †

In still later times an accommodation was attempted between mythology and philosophy. *Chrysippus* (died 207), after stating his views about the immortal gods, is said to have written a second book to show how these might be brought into harmony with the fables of Homer. ‡

And not philosophers only felt these difficulties about the gods as represented by Homer and Hesiod; most of the ancient poets also were distressed by the same doubts, and constantly find themselves involved in contradictions which they are unable to solve. Thus, in the *Eumenides* of *Æschylus* (v. 640), the Chorus asks how Zeus could have called on Orestes to avenge the murder of his father, he who

\* Οὗς Ἡσιόδός τε, εἶπον, καὶ Ὅμηρος ἡμῖν ἐλεγέτην καὶ οἱ ἄλλοι ποιηταί· οὔτοι γάρ που μύθους τοῖς ἀνθρώποις ψευδεῖς συντιθέντες ἔλεγόν τε καὶ λέγουσιν.—Plat. *Polit.* β. 377 d. Grote, *History*, i. 593.

† Diog. Laert. x. 123. Ritter and Preller, *Historia Philosophiæ*, p. 419. Θεοὶ μὲν γὰρ εἰσιν· ἐναργῆς δὲ ἐστὶν αὐτῶν ἡ γυνῶσις· οἷους δ' αὐτοὺς οἱ πολλοὶ νομίζουσιν οὐκ εἰσίν· οὐ γὰρ φυλάττουσιν αὐτοὺς οἷους νομίζουσιν. ἀσεβῆς δ' οὐχ ὁ τοὺς τῶν πολλῶν θεοὺς ἀναιρῶν, ἀλλ' ὁ τὰς τῶν πολλῶν δόξας θεοῖς προσάπτων.

‡ In secundo autem libro Homeri fabulas accommodare voluit ad ea quæ ipse primo libro de diis immortalibus dixerit.—Cic. *Nat. Deor.* i. 15. Bertrand, *Sur les Dieux Protecteurs* (Rennes, 1858), p. 38.

himself had dethroned his father and bound him in chains. *Pindar*, who is fond of weaving the traditions of gods and heroes into his songs of victory, suddenly starts when he meets with anything dishonourable to the gods. 'Lips,' he says,\* 'throw away this word, for it is an evil wisdom to speak evil of the gods.' His criterion in judging of mythology would seem to have been very simple and straightforward, namely, that nothing can be true in mythology that is dishonourable to the gods. The whole poetry of *Euripides* oscillates between two extremes: he either taxes the gods with all the injustice and crimes they are fabled to have committed, or he turns round and denies the truth of the ancient myths because they relate of the gods what is incompatible with a divine nature. Thus, while in the *Ion*,† the gods, even Apollo, Jupiter, and Neptune, are accused of every crime, we read in another play: ‡ 'I do not

\* *Olymp.* ix. 38, ed. Boekh. Ἀπό μοι λόγον τοῦτον, στόμα, ρίψον· ἐπεὶ τό γε λοιδορῆσαι θεοὺς ἐχθρὰ σοφία.

† *Ion*, 444, ed. Paley:

Εἰ δ', οὐ γὰρ ἔσται, τῷ λόγῳ δὲ χρῆσθαι,  
 δίκας βιαίων δώσεται ἀνθρώποις γάμων,  
 σὺ καὶ Ποσειδῶν Ζεὺς θ' ὅς οὐρανοῦ κρατεῖ,  
 ναοὺς τίνοντες ἀδικίας κενώσετε. . . .  
 οὐκέτ' ἀνθρώπους κακοὺς  
 λέγειν δίκαιον, εἰ τὰ τῶν θεῶν κακὰ  
 μιμούμεθ', ἀλλὰ τοὺς διδάσκοντας τάδε.

Cf. *Herc. fur.* 339.

‡ *Herc. fur.* 1341, ed. Paley:

Ἐγὼ δὲ τοὺς θεοὺς οὔτε λέκτρ' ἄ μὴ θέμις  
 στέργειν νομίζω, δεσμά τ' ἐξάπτειν χεροῖν  
 οὔτ' ἤξιωσα πώποτ' οὔτε πείσομαι,  
 οὐδ' ἄλλον ἄλλον δεσπότην πεφυκέναι.  
 δεῖται γὰρ ὁ θεός, εἴπερ ἔστ' ὄντως θεός,  
 οὐδενός· ἄοιδῶν οἶδε δύστηνοι λόγοι.

See *Euripides*, ed. Paley, vol. i. Preface, p. xx.

think that the gods delight in unlawful marriages, nor did I ever hold or shall ever believe that they fasten chains on their hands, or that one is lord of another. For a god, if he is really god, has no need of anything: these are the miserable stories of poets!' Or, again:\* 'If the gods commit anything that is evil, they are no gods.'

These passages, to which many more might be added, will be sufficient to show that the more thoughtful among the Greeks were as much startled at their mythology as we are. They would not have been Greeks if they had not seen that those fables were irrational, if they had not perceived that the whole of their mythology presented a problem that required a solution at the hand of the philosopher. If the Greeks did not succeed in solving it, if they preferred a compromise between what they knew to be true and what they knew to be false, if the wisest among their wise men spoke cautiously on the subject or kept aloof from it altogether, let us remember that these myths, which we now handle as freely as the geologist his fossil bones, were then living things, sacred things, implanted by parents in the minds of their children, accepted with an unquestioning faith, hallowed by the memory of the departed, sanctioned by the state, the foundation on which some of the most venerable institutions had been built up and established for ages. It is enough for us to know that the Greeks expressed surprise and dissatisfaction at these fables: to explain their origin was a task left to a more dispassionate age.

The principal solutions that offered themselves to the Greeks, when enquiring into the origin of their

\* Eur. *Fragm. Belleroph.* 300: εἰ θεοί τι δρῶσιν αἰσχρὸν, οὐκ εἰσὶν θεοί.



mythology, may be classed under three heads, which I call *ethical, physical, historical*, according to the different objects which the original framers of mythology were supposed to have had in view.\*

Seeing how powerful an engine was supplied by religion for awing individuals and keeping political communities in order, some Greeks imagined that the stories telling of the omniscience and omnipotence of the gods, of their rewarding the good and punishing the wicked, were invented by wise people of old for the improvement and better government of men.† This view, though extremely shallow, and supported by no evidence, was held by many among the ancients; and even Aristotle, though admitting, as we shall see, a deeper foundation of religion, was inclined to consider the mythological form of the Greek religion as invented for the sake of persuasion, and as useful for the support of law and order. Well might Cicero, when examining this view, exclaim, ‘Have not those who said that the idea of immortal gods was made up by wise men for the sake of the commonwealth, in order that those who could not be led by reason might be led to their duty by religion, destroyed all religion from the bottom?’‡ Nay, it would seem to follow that if the useful portions of mythology were invented by wise men, the immoral stories about gods and men must be ascribed to foolish poets—a view, as we saw before, more than hinted at by Euripides.

A second class of interpretations may be compre-

\* Cf. Augustinus, *De Civ. Dei*, vii. 5. De paganorum secretiore doctrina physicisque rationibus.

† Cf. Wagner, *Fragm. Trag.* iii. p. 102. Nägelsbach, *Nach-homerische Theologie*, pp. 435, 445.

‡ Cic. *N. D.* i. 42, 118.

hended under the name of *physical*, using that term in the most general sense, so as to include even what are commonly called *metaphysical* interpretations. According to this school of interpreters, it was the intention of the authors of mythology to convey to the people at large a knowledge of certain facts of nature, or certain views of natural philosophy, which they did in a phraseology peculiar to themselves or to the times they lived in, or, according to others, in a language that was to veil rather than to unveil the mysteries of their sacred wisdom. As all interpreters of this class, though differing on the exact original intention of each individual myth, agree in this, that no myth must be understood literally, their system of interpretation is best known under the name of *allegorical*, allegorical being the most general name for that kind of language which says one thing but means another.\*

So early a philosopher as *Epicharmus*, † the pupil of Pythagoras, declared that the gods were really wind, water, earth, the sun, fire, and the stars. Not long after him, *Empedocles* (about 444 B.C.) ascribed to the names of Zeus, Here, Aïdoneus, and Nestis, the

\* Cf. Müller, *Prolegomena*, p. 335, n. 6. ἄλλο μὲν ἀγορεύει, ἄλλο δὲ νοεῖ. The difference between a myth and an allegory has been simply but most happily explained by Professor Blackie, in his article on Mythology in *Chambers' Cyclopædia*: 'A myth is not to be confounded with an allegory; the one being an unconscious act of the popular mind at an early stage of society, the other a conscious act of the individual mind at any stage of social progress.'

† Stobæus, *Flor.* xci. 29 :—

Ὁ μὲν Ἐπίχαρμος τοὺς θεοὺς εἶναι λέγει  
Ἄνέμους, ὕδωρ, γῆν, ἥλιον, πῦρ, ἀστέρας.

Cf. Bernays, *Rhein. Mus.* 1853, p. 280. Kruseman, *Epicharmi Fragmenta*, Harlemi, 1834.

meaning of the four elements, fire, air, earth, and water.\* Whatever the philosophers of Greece successively discovered as the first principles of being and thought, whether the air of *Anaximenes* † (about 548) or the fire of *Heraclitus* ‡ (about 503), or the Nous, the mind, of *Anaxagoras* (died 428), was gladly identified by them with Jupiter or other divine powers. Anaxagoras and his school are said to have explained the whole of the Homeric mythology allegorically. With them Zeus was mind, Athene, art; while *Metrodorus*, the contemporary of Anaxagoras, 'resolved not only the persons of Zeus, Here, and Athene, but also those of Agamemnon, Achilles, and Hector, into various elemental combinations and physical agencies, and treated the adventures ascribed to them as natural facts concealed under the veil of allegory.' §

Socrates declined this labour of explaining all fables allegorically as too arduous and unprofitable; yet he, as well as Plato, frequently pointed to what they called the *hypónoia*, the under-meaning, if I may say so, of the ancient myths.

There is a passage in the eleventh book of Aristotle's

\* Plut. *de Plac. Phil.* i. 30: 'Ἐμπεδοκλῆς φύσιν μηδὲν εἶναι, μῆξιν δὲ τῶν στοιχείων καὶ διάστασιν. γράφει γὰρ οὕτως ἐν τῷ πρώτῳ φυσικῷ.

Τέσσαρα τῶν πάντων ριζώματα πρῶτον ἄκουε ·

Ζεὺς ἀργῆς Ἥρη τε, φερέσειος ἠδ' Ἀἰδωνεύς,

Νῆσις θ' ἢ δακρύοις τέγγει κρούνωμα βρότειον.

† Cic. *N. D.* i. 10. Ritter and Preller, § 27.

‡ Clem. Alex. *Strom.* v. p. 603 D. Ritter and Preller, § 38. Bernays, *Neue Bruchstücke des Heraklit*, p. 256: ἐν τὸ σοφὸν μῦθον λέγεσθαι ἐθέλει, καὶ οὐκ ἐθέλει Ζηνὸς οὐνομα.

§ Syncellus, *Chron.* p. 149, ed. Paris. 'Ἐρμηνεύουσι δὲ οἱ Ἀναξαγόρειοι τοὺς μυθώδεις θεοὺς, νοῦν μὲν τὸν Δία, τὴν δὲ Ἀθηνᾶν τέχνην. Grote, vol. i. p. 563. Ritter and Preller, *Hist. Phil.* § 48. Lobeck, *Aglaoph.* p. 156. Diog. Laert. ii. 11.



Metaphysics which has often been quoted\* as showing the clear insight of that philosopher into the origin of mythology, though in reality it does not rise much above the narrow views of other Greek philosophers.

This is what Aristotle writes:—

‘It has been handed down by early and very ancient people, and left, in the form of myths, to those who came after, that these (the first principles of the world) are the gods, and that the divine embraces the whole of nature. The rest has been added mythically, in order to persuade the many, and in order to be used in support of laws and other interests. Thus they say that the gods have a human form, and that they are like to some of the other living beings, and other things consequent on this, and similar to what has been said. If one separated out of these fables, and took only that first point, that they believed the first essences to be gods, one would think that it had been divinely said, and that while every art and every philosophy was probably invented ever so many times and lost again, these opinions had, like fragments of them, been preserved until now. So far only is the opinion of our fathers, and that received from our first ancestors, clear to us.’

The attempts at finding in mythology the remnants of ancient philosophy, have been carried on in different ways from the days of Socrates to our own time. Some writers thought they discovered astronomy, or other physical sciences in the mythology of Greece: and in our own days the great work of Creuzer ‘*Symbolik und Mythologie der alten Völker*’ (1819–21), was written with the one object of proving that

\* Bunsen, *Gott in der Geschichte*, vol. iii. p. 532. *Ar. Met.* xi. 8, 19.

Greek mythology was composed by priests, born or instructed in the East, who wished to raise the semi-barbarous races of Greece to a higher civilization and a purer knowledge of the Deity. There was, according to Creuzer and his school, a deep mysterious wisdom, and a monotheistic religion veiled under the symbolical language of mythology, which language, though unintelligible to the people, was understood by the priests, and may be interpreted even now by the thoughtful student of mythology.

The third theory on the origin of mythology I call the *historical*. It goes generally by the name of *Euhemerus*, though we find traces of it both before and after his time. Euhemerus was a contemporary of Alexander, and lived at the court of Cassander, in Macedonia, by whom he is said to have been sent out on an exploring expedition. Whether he really explored the Red Sea and the southern coasts of Asia we have no means of ascertaining. All we know is that, in a religious novel which he wrote, he represented himself as having sailed in that direction to a great distance, until he came to the island of Panchæa. In that island he said that he discovered a number of inscriptions (*ἀναγραφαί*, hence the title of his book, *Ἱερά Ἀναγραφή*) containing an account of the principal gods of Greece, but representing them, not as gods, but as kings, heroes, and philosophers, who after their death had received divine honours among their fellow-men.\*

\* Quid? qui aut fortes aut claros aut potentes viros tradunt post mortem ad deos pervenisse, eosque esse ipsos quos nos colere, precari, venerarique solemus, nonne expertes sunt religionum omnium? Quæ ratio maxima tractata ab Euhemero est, quam

Though the book of Euhemerus itself, and its translation by Ennius, are both lost, and we know little either of its general spirit or of its treatment of individual deities, such was the sensation produced by it at the time, that Euhemerism has become the recognised title of that system of mythological interpretation which denies the existence of divine beings, and reduces the gods of old to the level of men. A distinction, however, must be made between the complete and systematic denial of all gods, which is ascribed to Euhemerus, and the partial application of his principles which we find in many Greek writers. Thus Hecataeus, a most orthodox Greek,\* declares that Geryon of Erytheia was really a king of Epirus, rich in cattle; and that Cerberus, the dog of Hades, was a certain serpent inhabiting a cavern on Cape Tænarus.† Ephorus converted Tityos into a bandit, and the serpent Python‡ into a rather troublesome person, Python by name, *alias* Dracon, whom Apollo killed with his arrows. According to Herodotus, an equally orthodox writer, the two black doves from Egypt which flew to Libya and Dodona, and directed the people to found in each place an oracle of Zeus, were in reality women who came from Thebes. The one that came to Dodona was called a dove, because, he says, speaking a foreign tongue, she seemed to utter sounds like a bird, and she was called a black dove on account of her black Egyptian colour. This explanation he represents not as a guess of his own, but as founded

noster et interpretatus et secutus est præter cæteros Ennius.—  
Cic., *De Nat. Deor.* i. 42.

\* Grote, *History of Greece*, vol. i. p. 526.

† Strabo, ix. p. 422. Grote, *H. G.* i. p. 552.

‡ Possibly connected with the Vedic Ahir Budhnya.



on a statement made to him by Egyptian priests; and I count it therefore as an historical, not as a merely allegorical interpretation. Similar explanations become more frequent in later Greek historians, who, unable to admit anything supernatural or miraculous as historical fact, strip the ancient legends of all that renders them incredible, and then treat them as narrations of real events, and not as fiction.\* With them, Æolus, the god of the winds, became an ancient mariner skilled in predicting weather; the Cyclopes were a race of savages inhabiting Sicily; the Centaurs were horsemen; Atlas was a great astronomer, and Scylla a fast-sailing filibuster. This system, too, like the former, maintained itself almost to the present day. The early Christian controversialists, St. Augustine, Lactantius, Arnobius, availed themselves of this argument in their attacks on the religious belief of the Greeks and Romans, taunting them with worshipping gods that were no gods, but known and admitted to have been mere deified mortals. In their attacks on the religion of the German nations, the Roman missionaries recurred to the same argument. One of them told the Angli in England that *Woden*, whom they believed to be the principal and the best of their gods, from whom they derived their origin, and to whom they had consecrated the fourth day in the week, had been a mortal, a king of the Saxons, from whom many tribes claimed to be descended. When his body had been reduced to dust, his soul was buried in hell, and suffers eternal fire.† In many of our handbooks of mythology and history, we still

\* Grote, i. 554.

† Kemble, *Saxons in England*, i. 338. *Legend. Nova*, fol. 210 b.

find traces of this system. Jupiter is still spoken of as a ruler of Crete, Hercules as a successful general or knight-errant, Priam as an eastern king, and Achilles, the son of Jupiter and Thetis, as a valiant champion in the siege of Troy. The siege of Troy still retains its place in the minds of many as a historical fact, though resting on no better authority than the carrying off of Helena by Theseus and her recovery by the Dioskuri, the siege of Olympus by the Titans, or the taking of Jerusalem by Charlemagne, described in the chivalrous romances \* of the Middle Ages.

In later times the same theory was revived, though not for such practical purposes, and it became during the last century the favourite theory with philosophical historians, particularly in France. The comprehensive work of the Abbé Banier, 'The Mythology and Fables of Antiquity, explained from History,' secured to this school a temporary ascendancy in France; and in England, too, his work, translated into English, was quoted as an authority. His design was, as he says, † 'to prove that, notwithstanding all the ornaments which accompany fables, it is no difficult matter to see that they contain a part of the history

\* Grote, i. 636. 'The series of articles by M. Fauriel, published in the *Revue des deux Mondes*, vol. xiii., are full of instruction respecting the origin, tenor, and influence of the romances of chivalry. Though the name of Charlemagne appears, the romancers are really unable to distinguish him from Charles Martel, or from Charles the Bald (pp. 537-39). They ascribe to him an expedition to the Holy Land, in which he conquered Jerusalem from the Saracens,' &c.

† *The Mythology and Fables of the Ancients, explained from History*, by the Abbé Banier. London, 1739, in six vols. Vol. i. p. ix.

of primitive times.' It is useful to read these books, written only about a hundred years ago, if it were but to take warning against a too confident spirit in working out theories which now seem so incontrovertible, and which a hundred years hence may be equally antiquated. 'Shall we believe,' says Abbé Banier—and no doubt he thought his argument unanswerable—'shall we believe in good earnest that Alexander would have held Homer in such esteem, had he looked upon him only as a mere relater of fables? and would he have envied the happy lot of Achilles in having such a one to sing his praises?\*' . . . When Cicero is enumerating the sages, does he not bring in Nestor and Ulysses?—would he have given mere phantoms a place among them? Are we not taught by Cicero (*Tusc. Quæst. i. 5*) that what gave occasion to feign that the one supported the heavens on his shoulders, and that the other was chained to Mount Caucasus, was their indefatigable application to contemplate the heavenly bodies? I might bring in here the authority of most of the ancients: I might produce that of the primitive Fathers of the Church, Arnobius, Lactantius, and several others, who looked upon fables to be founded on true histories; and I might finish this list with the names of the most illustrious of our moderns, who have traced out in ancient fictions so many remains of the traditions of the primitive ages.' How like in tone to some incontrovertible arguments used in our own days! And again:† 'I shall make it appear that Minotaur with Pasiphaë, and the rest of that fable, contain nothing but an intrigue of the Queen of Crete with a captain named Taurus,

\* Vol. i. p. 21.

† Vol. i. p. 29.



and the artifice of Dædalus, only a sly confident. Atlas bearing heaven upon his shoulders was a king that studied astronomy with a globe in his hand. The golden apples of the delightful garden of the Hesperides, and their dragon, were oranges watched by mastiff dogs.'

As belonging in spirit to the same school, we have still to mention those scholars who looked to Greek mythology for traces, not of profane, but of sacred personages, and who, like *Bochart*, imagined they could recognise in Saturn the features of Noah, and in his three sons, Jupiter, Neptune, and Pluto, the three sons of Noah, Ham, Japhet, and Shem.\* *G. J. Vossius*, in his learned work, '*De Theologia Gentili et Physiologia Christiana, sive De Origine et Progressu Idolatriæ*,' † identified Saturn with Adam or with Noah, Janus and Prometheus with Noah again, Pluto with Japhet or Ham, Neptune with Japhet, Minerva with Naamah, the sister of Tubal Cain, Vulcanus with Tubal Cain, Typhon with Og, king of Bashan, &c. Gerardus Cræsus, in his '*Homerus Ebræus*,' maintains that the *Odyssey* gives the history of the patriarchs, the emigration of Lot from Sodom, and the death of

\* *Geographia Sacra*, lib. i. l. c. : 'Noam esse Saturnum tam multa docent ut vix sit dubitandi locus.' Ut Noam esse Saturnum multis argumentis constitit, sic tres Noæ filios cum Saturni tribus filiis conferenti, Hamum vel Chamum esse Jovem probabunt hæ rationes.—Japhet idem qui Neptunus. Semum Plutonis nomine detruserunt in inferos.—Lib. i. c. 2. Jam si libet etiam ad nepotes descendere; in familia Hami sive Jovis Hammonis, Put est Apollo Pythius; Chanaan idem qui Mercurius.—Quis non videt Nimrodum esse Bacchum? Bacchus enim idem qui *bar-chus*, i. e. Chusi filius. Videtur et Magog esse Prometheus.

† *Amsterdami*, 1668, pp. 71, 73, 77, 97. Og est iste qui a Græcis dicitur Τυφῶν, &c.

Moses, while the Iliad tells the conquest and destruction of Jericho. *Huet*, in his '*Demonstratio Evangelica*,'\* went still further. His object was to prove the genuineness of the books of the Old Testament by showing that nearly the whole theology of the heathen nations was borrowed from Moses. Moses himself is represented by him as having assumed the most incongruous characters in the traditions of the Gentiles; and not only ancient lawgivers like Zoroaster and Orpheus, but gods like Apollo, Vulcan, and Faunus, are traced back by the learned and pious bishop to the same historical prototype. And as Moses was the prototype of the Gentile gods, his sister Miriam or his wife Zippora were supposed to have been the models of all their goddesses.†

You are aware that Mr. Gladstone, in his interesting and ingenious work on Homer, takes a similar view, and tries to discover in Greek mythology a dimmed image of the sacred history of the Jews; not so dimmed, however, as to prevent him from recognising, as he thinks, in Jupiter, Apollo, and Minerva, the faded outlines of the three Persons of the Trinity.

\* Parisiis, 1677.

† Caput tertium. I. Universa propemodum Ethnicorum Theologia ex Mose, Mosisve actis aut scriptis manavit. II. Velut illa Phœnicum. Tautus idem ac Moses. III. Adonis idem ac Moses. IV. Thammus Ezechielis idem ac Moses. V. Πολύωνμος fuit Moses. VI. Marnas Gazensium Deus idem ac Moses.—Caput quartum. VIII. Vulcanus idem ac Moses. IX. Typhon idem ac Moses.—Caput quintum. II. Zoroastres idem ac Moses.—Caput octavum. III. Apollo idem ac Moses. IV. Pan idem ac Moses. V. Priapus idem ac Moses, &c. &c.—p. 121. Cum demonstratum sit Græcanicos Deos, in ipsa Mosis persona larvata, et ascititio habitu contacta provenisse, nunc probare aggredior ex Mosis scriptionibus, verbis, doctrina, et institutis, aliquos etiam Græcorum eorundem Deos, ac bonam Mythologiæ ipsorum partem manasse.



In the last number of one of the best edited quarterlies, in the 'Home and Foreign Review,' a Roman Catholic organ, Mr. F. A. Paley, the well-known editor of 'Euripides,' advocates the same sacred Euhemerism. 'Atlas,' he writes, 'symbolizes the endurance of labour. He is placed by Hesiod close to the garden of the Hesperides, and it is *impossible to doubt* that here we have a tradition of the garden of Eden, the golden apples guarded by a dragon being the apple which the serpent tempted Eve to gather, or the garden kept by an angel with a flaming sword.' \*

Though it was felt by all unprejudiced scholars that none of these three systems of interpretation was in the least satisfactory, yet it seemed impossible to suggest any better solution of the problem; and though at the present moment few, I believe, could be found who adopt any of these three systems exclusively—who hold that the whole of Greek mythology was invented for the sake of inculcating moral precepts, or of promulgating physical or metaphysical doctrines, or of relating facts of ancient history, many have acquiesced in a kind of compromise, admitting that some parts of mythology might have a moral, others a physical, others an historical character, but that there remained a great body of fables, which yielded to no tests whatever. The riddle of the Sphinx of Mythology remained unsolved.

The first impulse to a new consideration of the mythological problem came from the study of comparative philology. Through the discovery of the

\* *Home and Foreign Review*, No. 7, p. 111, 1864:—'The Cyclopes were probably a race of pastoral and metal-working people from the East, characterised by their *rounder* faces, whence arose the story of their one eye.'—*F. A. P.*



ancient language of India, the so-called Sanskrit, which was due to the labours of Wilkins,\* Sir W. Jones, and Colebrooke, some eighty years ago, and through the discovery of the intimate relationship between that language and the languages of the principal races of Europe, due to the genius of Schlegel, Humboldt, Bopp, and others, a complete revolution took place in the views commonly entertained of the ancient history of the world. I have no time to give a full account of these researches; but I may state it as a fact, suspected, I suppose, by no one *before*, and doubted by no one *after* it was enunciated, that the languages spoken by the Brahmans of India, by the followers of Zoroaster and the subjects of Darius in Persia; by the Greeks, by the Romans; by Celtic, Teutonic, and Slavonic races, were all mere varieties of one common type—stood, in fact, to each other in the same relation as French, Italian, Spanish, and Portuguese stand to each other as modern dialects of Latin. This was, indeed, ‘the discovery of a new world,’ or, if you like, the recovery of an old world. All the landmarks of what was called the ancient history of the human race had to be shifted, and it had to be explained, in some way or other, how all these languages, separated from each other by thousands of miles and thousands of years, could have originally started from one common centre.

On this,† however, I cannot dwell now; and I must proceed at once to state how, after some time, it was discovered that not only the radical elements of all these languages which are called Aryan or Indo-European—not only their numerals, pronouns, prepo-

\* Wilkins, *Bhagavadgita*, 1785.

† *Lectures on the Science of Language*, First Series, p. 147 seq.

sitions; and grammatical terminations—not only their household words, such as father, mother, brother, daughter, husband, brother-in-law, cow, dog, horse, cattle, tree, ox, corn, mill, earth, sky, water, stars, and many hundreds more, were identically the same, but that each possessed the elements of a mythological phraseology, displaying the palpable traces of a common origin.

What followed from this for the Science of Mythology? Exactly the same as what followed for the Science of Language from the discovery that Sanskrit, Greek, Latin, German, Celtic, and Slavonic had all one and the same origin. Before that discovery was made, it was allowable to treat each language by itself, and any etymological explanation that was in accordance with the laws of each particular language might have been considered satisfactory. If Plato derived *theós*, the Greek word for god, from the Greek verb *théein*, to run, because the first gods were the sun and moon, always running through the sky;\* or if Herodotus † derived the same word from *tithénai*, to set, because the gods set everything in order, we can find no fault with either. But if we find that the same name for god exists in Sanskrit and Latin, as *deva* and *deus*, it is clear that we cannot accept any etymology for the Greek word that is not equally applicable to the corresponding terms in Sanskrit and Latin. If we knew French only, we might derive the French *feu*, fire, from the German *Feuer*. But if we see that the same word exists in Italian as *fuoco*, in Spanish as *fuego*, it is clear that we must look for an etymology applicable to all three, which we find in the Latin *focus*, and not

\* Plat. *Crat.* 397 C.

† Her. ii. 52.

in the German *Feuer*. Even so thoughtful a scholar as Grimm does not seem to have perceived the absolute stringency of this rule. Before it was known that there existed in Sanskrit, Greek, Latin, and Slavonic, the same word for *name*, identical with the Gothic *namô* (gen. *namins*), it would have been allowable to derive the German word from a German root. Thus Grimm ('Grammatik,' ii. 30) derived the German *Name* from the verb *nehmen*, to take. This would have been a perfectly legitimate etymology. But when it became evident that the Sanskrit *nâman* stood for *gnâ-man*, just as *nomen*, for *gnomen* (cognomen, ignominia), and was derived from a verb *gnâ*, to know, it became impossible to retain the derivation of *Name* from *nehmen*, and at the same time to admit that of *nâman* from *gnâ*.\* Each word can have but one etymology, as each living being can have but one mother.

Let us apply this to the mythological phraseology of the Aryan nations. If we had to explain only the names and fables of the Greek gods, an explanation such as that which derives the name of *Zeus* from the verb *zên*, to live, would be by no means contemptible. But if we find that *Zeus* in Greek is the same word as *Dyaus* in Sanskrit, *Ju* in *Jupiter*, and *Tiu* in *Tuesday*, we perceive that no etymology would be satisfactory that did not explain all these words together. Hence it follows, that in order to understand the origin and meaning of the names of the Greek gods, and to enter into the original intention of the fables told of each, we must not confine our view within the Greek horizon, but must take into account the collateral

\* Grimm, *Geschichte der Deutschen Sprache*, p. 153. Other words derived from *gnâ*, are *notus*, *nobilis*, *gnarus*, *ignarus*, *ignoro*, *narrare* (*gnarigare*), *gnômôn*, *I ken*, *I know*, *uncouth*, &c.



evidence supplied by Latin, German, Sanskrit, and Zend mythology. The key that is to open one must open all; otherwise it cannot be the right key.

Strong objections have been raised against this line of reasoning by classical scholars; and even those who have surrendered Greek etymology as useless without the aid of Sanskrit, protest against this desecration of the Greek Pantheon, and against any attempt at deriving the gods and fables of Homer and Hesiod from the monstrous idols of the Brahmans. I believe this is mainly owing to a misunderstanding. No sound scholar would ever think of deriving any Greek or Latin word from Sanskrit. Sanskrit is not the mother of Greek and Latin, as Latin is of French and Italian. Sanskrit, Greek, and Latin are sisters, varieties of one and the same type. They all point to some earlier stage when they were less different from each other than they now are; but no more. All we can say in favour of Sanskrit is, that it is the eldest sister; that it has retained many words and forms less changed and corrupted than Greek and Latin. The more primitive character and transparent structure of Sanskrit have naturally endeared it to the student of language, but they have not blinded him to the fact, that on many points Greek and Latin—nay, Gothic and Celtic—have preserved primitive features which Sanskrit has lost. Greek is co-ordinate with, not subordinate to Sanskrit; and the only distinction which Sanskrit is entitled to claim is that which Austria used to claim in the German Confederation—to be the first among equals, *primus inter pares*.

There is, however, another reason which has made any comparison of Greek and Hindu gods more particularly distasteful to classical scholars. At the very

beginning of Sanskrit philology attempts were made by no less a person than Sir W. Jones\* at identifying the deities of the modern Hindu mythology with those of Homer. This was done in the most arbitrary manner, and has brought any attempt of the same kind into deserved disrepute among sober critics. Sir W. Jones is not responsible, indeed, for such comparisons as *Cupid* and *Dipuc* (dîpaka); but to compare, as he does, modern Hindu gods, such as Vishṇu, Śiva, or Kṛishṇa, with the gods of Homer was indeed like comparing modern Hindustāni with ancient Greek. Trace Hindustāni back to Sanskrit, and it will be possible then to compare it with Greek and Latin; but not otherwise. The same in mythology. Trace the modern system of Hindu mythology back to its earliest form, and there will then be some reasonable hope of discovering a family likeness between the sacred names worshipped by the Aryans of India and the Aryans of Greece.

This was impossible at the time of Sir William Jones; it is even now but partially possible. Though Sanskrit has now been studied for three generations, the most ancient work of Sanskrit literature, the Rig-Veda, is still a book with seven seals. The wish expressed by Otfried Müller in 1825, in his 'Prolegomena to a Scientific Mythology,' 'Oh that we had an

\* Sir W. Jones, *On the Gods of Greece, Italy, and India*. (Works, vol. i. p. 229.) He compares Janus with Gaṇeśa, Saturn with Manu Satyavrata, nay, with Noah; Ceres with Śrî, Jupiter with Divaspati and with Śiva (τριοφθαλμος=trilochana), Bacchus with Bâgîśa, Juno with Pârvatî, Mars with Skanda, nay, with the Secander of Persia, Minerva with Durgâ and Sarasvatî, Osiris and Isis with Îsvara and Îśî, Dionysos with Râma, Apollo with Kṛishṇa, Vulcan with Pâvaka and Viśvakarman, Mercury with Nârada, Hekate with Kâlî.



intelligible translation of the Veda!' is still unfulfilled; and though of late years nearly all Sanskrit scholars have devoted their energies to the elucidation of Vedic literature, many years are still required before Otfried Müller's desire can be realized. Now Sanskrit literature without the Veda is like Greek literature without Homer, like Jewish literature without the Bible, like Mohammedan literature without the Koran; and you will easily understand how, if we do not know the most ancient form of Hindu religion and mythology, it is premature to attempt any comparison between the gods of India and the gods of any other country. What was wanted as the only safe foundation, not only of Sanskrit literature, but of Comparative Mythology—nay, of Comparative Philology—was an edition of the most ancient document of Indian literature, Indian religion, Indian language—an edition of the *Rig-Veda*. Eight of the ten books of the Rig-Veda have now been published in the original, together with an ample Indian commentary, and there is every prospect of the two remaining books passing through the press in four or five years. But, after the text and commentary of the Rig-Veda are published, the great task of translating, or, I should rather say, deciphering these ancient hymns still remains. There are, indeed, two translations; one by a Frenchman, the late M. Langlois, the other by the late Professor Wilson; but the former, though very ingenious, is mere guesswork, the latter is a reproduction, and not always a faithful reproduction, of the commentary of Sâyaṇa, which I have published. It shows us how the ancient hymns were misunderstood by later grammarians, and theologians, and philosophers; but it does not attempt a critical restora-



tion of the original sense of these simple and primitive hymns by the only process by which it can be effected—by a comparison of every passage in which the same words occur. This process of deciphering is a slow one; yet, through the combined labours of various scholars, some progress has been made, and some insight been gained into the mythological phraseology of the Vedic Rishis. One thing we can clearly see, that the same position which Sanskrit, as the most primitive, most transparent of the Aryan dialects, holds in the science of language, the Veda and its most primitive, most transparent system of religion, will hold in the science of mythology. In the hymns of the Rig-Veda we still have the last chapter of the real Theogony of the Aryan races: we just catch a glimpse, behind the scenes, of the agencies which were at work in producing that magnificent stage-effect witnessed in the drama of the Olympian gods. There, in the Veda, the Sphinx of Mythology still utters a few words to betray her own secret, and shows us that it is man, that it is human thought and human language combined, which naturally and inevitably produced that strange conglomerate of ancient fable which has perplexed all rational thinkers, from the days of Xenophanes to our own time.

I shall try to make my meaning clearer. You will see that a great point is gained in comparative mythology if we succeed in discovering the original meaning of the names of the gods. If we knew, for instance, what *Athene*, or *Here*, or *Apollo* meant in Greek, we should have something firm to stand on or to start from, and be able to follow more securely the later development of these names. We know, for instance, that *Selene* in Greek means moon, and know-

ing this, we at once understand the myths that she is the sister of *Helios*, for *helios* means sun; that she is the sister of *Eos*, for *eos* means dawn;—and if another poet calls her the sister of *Euryphaëssa*, we are not much perplexed, for *euryphaëssa*, meaning wide-shining, can only be another name for the dawn. If she is represented with two horns, we at once remember the two horns of the moon; and if she is said to have become the mother of *Erse* by *Zeus*, we again perceive that *erse* means *dew*, and that to call Erse the daughter of *Zeus* and *Selene* was no more than if we, in our more matter-of-fact language, say that there is dew after a moonlight night.

Now one great advantage in the Veda is that many of the names of the gods are still intelligible, are used, in fact, not only as proper names, but likewise as appellative nouns. *Agni*, one of their principal gods, means clearly fire; it is used in that sense; it is the same word as the Latin *ignis*. Hence we have a right to explain his other names, and all that is told of him, as originally meant for fire. *Vâyu* or *Vâta* means clearly *wind*, *Marut* means *storm*, *Parjanya* rain, *Savitar* the sun, *Ushas*, as well as its synonyms, *Urvaśî*, *Ahanâ*, *Saranyû*, means *dawn*; *Prithivî* earth, *Dyâvâprithivî*, *heaven* and *earth*. Other divine names in the Veda which are no longer used as appellatives, become easily intelligible, because they are used as synonyms of more intelligible names (such as *urvaśî* for *ushas*), or because they receive light from other languages, such as *Varuna*, clearly the same word as the Greek *ouranós*, and meaning originally the sky.

Another advantage which the Veda offers is this, that in its numerous hymns we can still watch the gradual growth of the gods, the slow transition of appellatives

into proper names, the first tentative steps towards personification. The Vedic Pantheon is held together by the loosest ties of family relationship; nor is there as yet any settled supremacy like that of Zeus among the gods of Homer. Every god is conceived as supreme, or at least as inferior to no other god, at the time that he is praised or invoked by the Vedic poets; and the feeling that the various deities are but different names, different conceptions of that Incomprehensible Being which no thought can reach, and no language express, is not yet quite extinct in the minds of some of the more thoughtful Rishis.



## LECTURE X.

## JUPITER, THE SUPREME ARYAN GOD.

THERE are few mistakes so widely spread and so firmly established as that which makes us confound the religion and the mythology of the ancient nations of the world. How mythology arises, necessarily and naturally, I tried to explain in my former Lectures, and we saw that, as an affection or disorder of language, mythology may infect every part of the intellectual life of man. True it is that no ideas are more liable to mythological disease than religious ideas, because they transcend those regions of our experience within which language has its natural origin, and must therefore, according to their very nature, be satisfied with metaphorical expressions. Eye hath not seen, nor ear heard, neither hath it entered into the heart of man.\* Yet even the religions of the ancient nations are by no means inevitably and altogether mythological. On the contrary, as a diseased frame presupposes a healthy frame, so a mythological religion presupposes, I believe, a healthy religion. Before the Greeks could call the sky, or the sun, or the moon *gods*, it was absolutely necessary that they should have framed to themselves some idea of the godhead. We cannot speak of King Solomon unless we first know what, in a general way, is meant by King, nor could

\* 1 *Cor.* ii. 9. *Is.* lxiv. 4.

a Greek speak of gods in the plural before he had realized, in some way or other, the general predicate of the godhead. Idolatry arises naturally when people say 'The sun is god,' i. e. when they apply the predicate god to that which has no claim to it. But the more interesting point is to find out what the ancients meant to predicate when they called the sun or the moon gods; and until we have a clear conception of this, we shall never enter into the true spirit of their religion.

It is strange, however, that while we have endless books on the mythology of the Greeks and Romans, we have hardly any on their religion, and most people have brought themselves to imagine that what we call religion—our trust in an all-wise, all-powerful, eternal Being, the Ruler of the world, whom we approach in prayer and meditation, to whom we commit all our cares, and whose presence we feel not only in the outward world, but also in the warning voice within our hearts—that all this was unknown to the heathen world, and that their religion consisted simply in the fables of Jupiter and Juno, of Apollo and Minerva, of Venus and Bacchus. Yet this is not so. Mythology has encroached on ancient religion, it has at some times wellnigh choked its very life; yet through the rank and poisonous vegetation of mythic phraseology we may always catch a glimpse of that original stem round which it creeps and winds itself, and without which it could not enjoy even that parasitical existence which has been mistaken for independent vitality.

A few quotations will explain what I mean by ancient religion, as independent of ancient mythology. Homer who, together with Hesiod, made the theogony

or the history of the gods for the Greeks—a saying of Herodotus which contains more truth than is commonly supposed—Homer, whose every page teems with mythology, nevertheless allows us many an insight into the inner religious life of his age. What did the swineherd Eumaios know of the intricate Olympian theology? Had he ever heard the name of the Charites or of the Harpyias? Could he have told who was the father of Aphrodite, who were her husbands and her children? I doubt it: and when Homer introduces him to us, speaking of this life and the higher powers that rule it, Eumaios knows only of just gods, ‘who hate cruel deeds, but honour justice and the righteous works of man.’\*

His whole view of life is built up on a complete trust in the Divine government of the world, without any such artificial supports as the Erinyes, the Nemesis, or Moira.

‘Eat,’ says the swineherd to Ulysses, ‘and enjoy what is here,† for God will grant one thing, but another he will refuse, whatever he will in his mind, for he can do all things.’ (Od. xiv. 444; x. 306.)

This surely is religion, and it is religion untainted by mythology. Again, the prayer of the female slave, grinding corn in the house of Ulysses, is religion in the truest sense. ‘Father Zeus,’ she says, ‘thou who rulest over gods and men, surely thou hast just thundered from the starry heaven, and there is no cloud anywhere. Thou showest this as a sign to some one. Fulfil now, even to me, miserable wretch! the prayer

\* *Od.* xiv. 83.

† There is nothing to make us translate θεός by a god rather than by God; but even if we translated it a god, this could here only be meant for Zeus. (Cf. *Od.* iv. 236.) Cf. Welcker, p. 180.



which I may utter.' When Telemachos is afraid to approach Nestor, and declares to Mentor that he does not know *what* to say,\* does not Mentor or Athene encourage him in words that might easily be translated into the language of our own religion? 'Telemachos,' she says, 'some things thou wilt thyself perceive in thy mind, and others a divine spirit will prompt; for I do not believe that thou wast born and brought up without the will of the gods.'

The omnipresence and omniscience of the Divine Being is expressed by Hesiod in language slightly, yet not altogether, mythological:—

πάντα ἰδὼν Διὸς ὀφθαλμὸς καὶ πάντα νοήσας,†  
The eye of Zeus, which sees all and knows all;

and the conception of Homer that 'the gods themselves come to our cities in the garb of strangers, to watch the wanton and the orderly conduct of men,'‡ though expressed in the language peculiar to the childhood of man, might easily be turned into our own sacred phraseology. Anyhow, we may call this religion—ancient, primitive, natural religion: imperfect, no doubt, yet deeply interesting, and not without

\* *Od.* iii. 26 :

Τηλέμαχ', ἄλλα μὲν αὐτὸς ἐνὶ φρεσὶ σῆσι νοήσεις,  
"Ἄλλα δὲ καὶ δαίμων ὑποθήσεται· οὐ γὰρ οἴω  
Οὐ σε θεῶν ἀέκητι γενέσθαι τε τραφέμεν τε.

Homer uses θεός and δαίμων for God.

† *Erga*, 267.

‡ *Od.* xvii. 483 :

'Ἀντίνο', οὐ μὲν κάλ' ἔβαλες δύστηνον ἀλήτην,  
Οὐλόμεν', εἰ δὴ πού τις ἐπουράνιος θεός ἐστιν.  
Καὶ τε θεοὶ ξείνοισι εἰκότες ἄλλοδαποῖσιν,  
Παντοῖοι τελέθοντες, ἐπιστροφῶσι πόλῃας,  
'Ἀνθρώπων ὕβριν τε καὶ εὐνομίην ἐφορῶντες.

a divine afflatus. How different is the undoubting trust of the ancient poets in the ever-present watchfulness of the gods, from the language of later Greek philosophy, as expressed, for instance, by Protagoras. 'Of the gods,' he says, 'I am not able to know either that they are or that they are not; for many things prevent us from knowing it, the darkness, and the shortness of human life.'\*

The gods of Homer, though, in their mythological aspect, represented as weak, easily deceived, and led astray by the lowest passions, are nevertheless, in the more reverend language of religion, endowed with nearly all the qualities which we claim for a divine and perfect Being. The phrase which forms the keynote in many of the speeches of Odysseus, though thrown in only as it were parenthetically,

θεοὶ δὲ τε πάντα ἴσασιν, 'the Gods know all things,' †

gives us more of the real feeling of the untold millions among whom the idioms of a language grow up, than all the tales of the tricks played by Juno to Jupiter, or by Mars to Vulcan. At critical moments, when the deepest feelings of the human heart are stirred, the old Greeks of Homer seem suddenly to drop all learned and mythological metaphor, and to fall back on the universal language of true religion. Everything they feel is ordered by the immortal gods; and though they do not rise to the conception of a Divine Providence which ordereth all things by eternal laws, no event, however small, seems to happen in the Iliad in which the poet does not recognise the active

\* Welcker, *Griechische Götterlehre*, p. 245.

† *Od.* iv. 379, 468.

interference of a divine power. This interference, if clothed in mythological language, assumes, it is true, the actual or bodily presence of one of the gods, whether Apollo, or Athene, or Aphrodite; yet let us observe that Zeus himself, the god of gods, never descends to the battle-field of Troy. He was the true god of the Greeks before he became enveloped in the clouds of Olympian mythology; and in many a passage where *theós* is used, we may without irreverence translate it by God. Thus, when Diomedes exhorts the Greeks to fight till Troy is taken, he finishes his speech with these words: 'Let all flee home; but we two, I and Sthenelos, will fight till we see the end of Troy: *for we came with God.*'\* Even if we translated 'for we came with a god,' the sentiment would still be religious, not mythological; though of course it might easily be translated into mythological phraseology, if we said that Athene, in the form of a bird, had fluttered round the ships of the Greeks. Again, what can be more natural and more truly pious than the tone of resignation with which Nausikaa addresses the shipwrecked Ulysses? 'Zeus,' she says, for she knows no better name, 'Zeus himself, the Olympian, distributes happiness to the good and the bad, to every one, as he pleases. And to thee also *he* probably has sent this, and you ought by all means to bear it.' Lastly, let me read the famous line, placed by Homer in the mouth of Peisistratos, the son of Nestor, when calling on Athene, as the companion of Telemachos, and on Telemachos himself, to pray to the gods before taking their meal: 'After thou hast offered thy libation and prayed, as it

\* *Il.* ix. 49.



is meet, give to him also afterwards the goblet of honey-sweet wine to pour out his libation, because I believe that he also prays to the immortals, *for all men yearn after the gods.*\*

It might be objected that no truly religious sentiment was possible as long as the human mind was entangled in the web of polytheism; that god, in fact, in its true sense, is a word which admits of no plural, and changes its meaning as soon as it assumes the terminations of that number. The Latin *ædes* means, in the singular, a sanctuary, but in the plural it assumes the meaning of a common dwelling-house; and thus *theós*, too, in the plural, is supposed to be divested of that sacred and essentially divine character which it claims in the singular. When, moreover, such names as Zeus, Apollo, and Athene are applied to the Divine Being, religion is considered to be out of the question, and hard words, such as idolatry and devil-worship, are applied to the prayers and praises of the early believers. There is a great amount of incontestible truth in all this, but I cannot help thinking that full justice has never been done to the ancient religions of the world, not even to those of the Greeks and Romans, who, in so many other respects, are acknowledged by us as our teachers and models. The first contact between Christianity and the heathen religions was necessarily one of uncompromising hostility. It was the duty of the Apostles and the early Christians in general to stand forth in the name of the only true God, and to prove to the world that their God had nothing in common with the idols worshipped at Athens and at Ephesus. It was the

\* πάντες δὲ θεῶν χατέουσ' ἄνθρωποι.—*Od.* iii. 48.

duty of the early converts to forswear all allegiance to their former deities, and if they could not at once bring themselves to believe that the gods whom they had worshipped had no existence at all, except in the imagination of their worshippers, they were naturally led on to ascribe to them a kind of demoniacal nature, and to curse them as the offspring of that new principle of Evil \* with which they had become acquainted in the doctrines of the early Church. In St. Augustine's learned arguments against paganism, the heathen gods are throughout treated as real beings, as demons who had the power of doing real mischief.† I was told by a missionary, that among his converts in South Africa he discovered some who still prayed to their heathen deities; and when remonstrated with, told him that they prayed to them in order to avert their wrath; and that, though their idols could not hurt so good a man as he was, they might inflict serious harm on their former worshippers. Only now and then, as in the case of the *Fatum*,‡ St.

\* Thus in the *Old Testament* strange gods are called devils (*Deut.* xxxii. 17), 'They sacrificed unto devils, not to God; to gods whom they knew not, to new gods that came newly up, whom your fathers feared not.'

† *De Civitate Dei*, ii. 25: Maligni isti spiritus, &c. Noxii dæmones quos illi deos putantes colendos et venerandos arbitrabantur, &c. *Ibid.* viii. 22: (Credendum dæmones) esse spiritus nocendi cupidissimos, a justitia penitus alienos, superbia tumidos, invidentia lividos, fallacia callidos, qui in hoc quidem aëre habitant, quia de cæli superioris sublimitate dejecti, merito irregressibilis transgressionis in hoc sibi congruo carcere prædamnati sunt.

‡ *De Civitate Dei*, v. 9: Omnia vero fato fieri non dicimus, imo nulla fieri fato dicimus, quoniam fati nomen ubi solet a loquentibus poni, id est in constitutione siderum cum quisque conceptus aut

Augustine acknowledges that it is a mere name, and that if it is taken in its etymological sense, namely, as that which has once been spoken by God, and is therefore immutable, it might be retained. Nay, the same thoughtful writer goes even so far as to admit that the mere multiplicity of divine names might be tolerated.\* Speaking of the goddess Fortuna, who is also called Felicitas, he says: 'Why should two names be used? But this can be tolerated: for one and the same thing is not uncommonly called by two names. But what,' he adds, 'is the meaning of having different temples, different altars, different sacrifices?' Yet through the whole of St. Augustine's work, and through all the works of earlier Christian divines, as far as I can judge, there runs the same spirit of hostility blinding them to all that may be good, and true, and sacred, and magnifying all that is bad, false, and corrupt in the ancient religions of mankind. Only the Apostles and immediate disciples of Our Lord venture to speak in a different and, no doubt, in a more truly Christian spirit of the old

natus est (quoniam res ipsa inaniter asseritur), nihil valere monstramus. Ordinem autem causarum, ubi voluntas Dei plurimum potest, neque negamus, neque fati vocabulo nuncupamus, nisi forte ut fatum a fando dictum intelligamus, id est, a loquendo: non enim abnuere possumus esse scriptum in literis sanctis, *Semel locutus est Deus, duo hæc audiui; quoniam potestas est Dei, et tibi, Domine, misericordia, quia tu reddes unicuique secundum opera ejus.* Quod enim dictum est, *semel locutus est*, intelligitur immobiliter, hoc est, incommutabiliter est locutus, sicut novit incommutabiliter omnia quæ futura sunt, et quæ ipse facturus est. Hac itaque ratione possemus a fando fatum appellare, nisi hoc nomen jam in alia re soleret intelligi, quo corda hominum nolumus inclinari.

\* *De Civ. Dei*, iv. 18.



forms of worship.\* For even though we restrict 'the sundry times and divers manners in which God spake in times past unto the fathers by the prophets' to the Jewish race, yet there are other passages which clearly show that the Apostles recognised a divine purpose and supervision even in the 'times of ignorance' at which, as they express it, 'God winked.'† Nay, they go so far as to say that God in times past *suffered (elase)*‡ all nations to walk in their own ways. And what can be more convincing, more powerful than the language of St. Paul at Athens?§—

'For as I passed by, and beheld your devotions, I found an altar with this inscription, To the Unknown God. Whom therefore ye ignorantly worship, him declare I unto you.

'God that made the world and all things therein, seeing that he is Lord of heaven and earth, dwelleth not in temples made with hands;

'Neither is worshipped with men's hands, as though he needed any thing, seeing he giveth to all life, and breath, and all things;

'And hath made of one blood all nations of men for to dwell on all the face of the earth, and hath determined the times before appointed, and the bounds of their habitation;

'That they should seek the Lord, if haply they might feel after him, and find him, though he be not far from every one of us:

'For in him we live, and move, and have our being;

\* Cf. Stanley's *The Bible: its Form and its Substance*, Three Sermons preached before the University of Oxford, 1863.

† *Acts* xv

‡ *Acts* xiv. 16.

§ *Acts* xvii. 23.

as certain also of your own poets have said, For we are also his offspring.'\*

These are truly Christian words, this is the truly Christian spirit in which we ought to study the ancient religions of the world: not as independent of God, not as the work of an evil spirit, as mere idolatry and devil-worship, not even as mere human fancy, but as a preparation, as a necessary part in the education of the human race—as a 'seeking the Lord, if haply they might feel after him.' There *was* a *fulness* of time, both for Jews and for Gentiles, and we must learn to look upon the ages that preceded it as necessary, under a divine purpose, for filling that appointed measure, for good and for evil, which would make the two great national streams in the history of mankind, the Jewish and the Gentile, the Semitic and the Aryan, reach their appointed measure, and overflow, so that they might mingle together and both be carried on by a new current, 'the well of water springing up into everlasting life.'

And if in this spirit we search through the sacred ruins of the ancient world, we shall be surprised to find how much more of true religion there is in what is called Heathen Mythology than we expected. Only, as St. Augustine said, we must not mind the names, strange and uncouth as they may sound on our ears. *We* are no longer swayed by the just fears which filled the hearts of early Christian writers; we can afford to be generous to Jupiter and to his worshippers. Nay, we ought to learn to treat the ancient religions with some of the same reverence and awe with which we

\* Kleanthes says, ἐκ τοῦ γὰρ γένος ἐσμὲν; Aratus, πατὴρ ἀνδρῶν ... τοῦ γὰρ γένος ἐσμὲν (Welcker, *Griechische Götterlehre*, pp. 183, 246).

approach the study of the Jewish and of our own. 'The religious instinct,' as Schelling says, 'should be honoured even in dark and confused mysteries.' We must only guard against a temptation to which an eminent writer and statesman of this country has sometimes yielded in his work on Homer, we must not attempt to find Christian ideas—ideas peculiar to Christianity—in the primitive faith of mankind. But, on the other hand, we may boldly look for those fundamental religious conceptions on which Christianity itself is built up, and without which, as its natural and historical support, Christianity itself could never have been what it is. The more we go back, the more we examine the earliest germs of every religion, the purer, I believe, we shall find the conceptions of the Deity, the nobler the purposes of each founder of a new worship. But the more we go back, the more helpless also shall we find human language in its endeavours to express what of all things was most difficult to express. The history of religion is in one sense a history of language. Many of the ideas embodied in the language of the Gospel would have been incomprehensible and inexpressible alike, if we imagine that by some miraculous agency they had been communicated to the primitive inhabitants of the earth. Even at the present moment missionaries find that they have first to educate their savage pupils, that is to say, to raise them to that level of language and thought which had been reached by Greeks, Romans, and Jews at the beginning of our era, before the words and ideas of Christianity assume any reality to their minds, and before their own native language becomes strong enough for the purposes of translation. Words and thoughts here, as elsewhere, go together; and from one point of view the true



history of religion would, as I said, be neither more nor less than an account of the various attempts at expressing the Inexpressible.

I shall endeavour to make this clear by at least one instance, and I shall select for it the most important name in the religion and mythology of the Aryan nations, the name of *Zeus*, the god of gods (*theòs theôn*), as Plato calls him.

Let us consider, first of all, the fact, which cannot be doubted, and which, if fully appreciated, will be felt to be pregnant with the most startling and the most instructive lessons of antiquity—the fact, I mean, that *Zeus*, the most sacred name in Greek mythology, is the same word as *Dyaus* \* in Sanskrit, *Jovis* † or *Ju* in *Jupiter* in Latin, *Tiw* in Anglo-Saxon, preserved in *Tiwsdæg*, *Tuesday*, the day of the Eddic god *Týr*; *Zio* in Old High-German.

This word was framed once, and once only: it was not borrowed by the Greeks from the Hindus, nor by the Romans and Germans from the Greeks. It must have existed before the ancestors of those primeval races became separate in language and religion; before they left their common pastures, to migrate to the right hand and to the left, till the hurdles of their sheepfolds grew into the walls of the great cities of the world.

\* *Dyaus* in Sanskrit is the nominative singular; *Dyu* the inflectional base. I use both promiscuously, though it would perhaps be better always to use *Dyu*.

† *Jovis* in the nom. occurs in the verse of Ennius, giving the names of the twelve Roman deities:—

Juno, Vesta, Minerva, Ceres, Diana, Venus, Mars,  
Mercurius, Jovi', Neptunus, Vulcanus, Apollo.

*Dius* in *Dius Fidius*, i. e. *Ζεὺς πίστιος*, belongs to the same class of words. Cf. Hartung, *Religion der Römer*, ii. 44.

Here, then, in this venerable word, we may look for some of the earliest religious thoughts of our race, expressed and enshrined within the imperishable walls of a few simple letters. What did *Dyu* mean in Sanskrit? How is it used there? What was the root which could be forced to reach to the highest aspirations of the human mind? We should find it difficult to discover the radical or predicative meaning of *Zeus* in Greek; but *dyaus* in Sanskrit tells its own tale. It is derived from the same root which yields the verb *dyut*, and this verb means *to beam*. A root of this rich and expansive meaning would be applicable to many conceptions: the dawn, the sun, the sky, the day, the stars, the eyes, the ocean, and the meadow, might all be spoken of as bright, gleaming, smiling, blooming, sparkling. But in the actual and settled language of India, *dyu*, as a noun, means principally *sky* and *day*. Before the ancient hymns of the Veda had disclosed to us the earliest forms of Indian thought and language, the Sanskrit noun *dyu* was hardly known as the name of an Indian deity, but only as a feminine, and as the recognised term for sky. The fact that *dyu* remained in common use as a name for *sky* was sufficient to explain why *dyu*, in Sanskrit, should never have assumed that firm mythological character which belongs to *Zeus* in Greek; for as long as a word retains the distinct signs of its original import and is applied as an appellative to visible objects, it does not easily lend itself to the metamorphic processes of early mythology. As *dyu* in Sanskrit continued to mean *sky*, though as a feminine only, it was difficult for the same word, even as a masculine, to become the germ of any very important mythological formations. Language must die before it can enter into a new stage of mythological life.

Even in the Veda, where *dyu* occurs as a masculine, as an active noun, and discloses the same germs of thought which in Greece and Rome grew into the name of the supreme god of the firmament, *Dyu*, the deity, the lord of heaven, the ancient god of light, never assumes any powerful mythological vitality, never rises to the rank of a supreme deity. In the early lists of Vedic deities, *Dyu* is not included, and the real representative of Jupiter in the Veda is not *Dyu*, but *Indra*, a name of Indian growth, and unknown in any other independent branch of Aryan language. *Indra* was another conception of the bright sunny sky, but partly because its etymological meaning was obscured, partly through the more active poetry and worship of certain Rishis, this name gained a complete ascendancy over that of *Dyu*, and nearly extinguished the memory in India of one of the earliest, if not *the* earliest, name by which the Aryans endeavoured to express their first conception of the Deity. Originally, however—and this is one of the most important discoveries which we owe to the study of the Veda—originally *Dyu* was the bright heavenly deity in India as well as in Greece.

Let us examine, first, some passages of the Veda in which *dyu* is used as an appellative in the sense of sky. We read (Rv. i. 161, 14): ‘The Maruts (storms) go about in the sky, Agni (fire) on earth, the wind goes in the air; Varuṇa goes about in the waters of the sea,’ &c. Here *dyu* means the sky, as much as *prithivī* means the earth, and *antariksha* the air. The sky is frequently spoken of together with the earth, and the air is placed between the two (*antariksha*). We find expressions such as ‘*heaven and earth* ;’\* *air*

\* Rv. i. 39, 4: nahí . . . ádhi dyávi ná bhûmyâm.



and heaven;\* and heaven, air, and earth.† The sky, *dyu*, is called the third, as compared with the earth, and we meet in the Atharva-Veda with expressions such as ‘in the third heaven from hence.’‡ This, again, gave rise to the idea of three heavens. ‘The heavens,’ we read, ‘the air, and the earth (all in the plural) cannot contain the majesty of Indra;’ and in one passage the poet prays that his glory may be ‘exalted as if heaven were piled on heaven.’§

Another meaning which belongs to *dyu* in the Veda is day.|| So many suns are so many days, and even in English *yestersun* was used instead of *yesterday* as late as the time of Dryden. *Divâ*, an instrumental case with the accent on the first syllable, means by day, and is used together with *nâktam*,¶ by night. Other expressions, such as *divé dive*, *dyâvi dyâvi*, or *ânu dyân*, are of frequent occurrence to signify day by day.\*\*

But besides these two meanings *Dyu* clearly conveys a different idea as used in some few verses of the Veda. There are invocations in which the name of *Dyu* stands first, and where he is invoked together with other beings who are always treated as gods. For instance (Rv. vi. 51, 5):—

\* Rv. vi. 52, 13: antârikshe . . . dyâvi.

† Rv. viii. 6, 15: na dyâvaḥ índram ójasâ ná antâriksḥâṇi vajriṇam ná vivyachanta bhûmayāḥ.

‡ Ath. Veda, v. 4, 3: tritîyasyâm itāḥ divî (fem.).

§ Rv. vii. 24, 5: divî iva dyâm údhi naḥ śrômatam dbâḥ.

|| Rv. vi. 24. 7: ná yâm járanti śarâdaḥ ná mâsâḥ ná dyâvaḥ Índram avakarśáyanti (Him whom harvests do not age, nor moons; Indra, whom days do not wither).

Rv. vii. 66, 11: ví yé dadhúḥ śarâdam mâsam ât áhar.

¶ Rv. i. 139, 5.

\*\* Rv. i. 112, 25: dyúbhiḥ aktúbhiḥ pári pátam asmân. Protect us by day and by night, ye *Aśvin*.

‘Dyaus (Sky), father, and Pṛithivî (Earth), kind mother, Agni (Fire), brother, ye Vasus (Bright ones), have mercy upon us!’ \*

Here Sky, Earth, and Fire are classed together as divine powers, but Dyaus, it should be remarked, occupies the first place. This is the same in other passages where a long list of gods is given, and where Dyaus, if his name is mentioned at all, holds always a prominent place.†

It should further be remarked that Dyaus is most frequently called *pitar* or *father*, so much so that *Dyaushpitar* in the Veda becomes almost as much one word as Jupiter in Latin. In one passage (i. 191, 6), we read, ‘Dyaus is father, Pṛithivî, the earth, your mother, Soma your brother, Aditi your sister.’ In another passage (iv. 1, 10),‡ he is called Dyaus the father, the creator.

We now have to consider some still more important passages in which *Dyu* and *Indra* are mentioned together as father and son, like *Kronos* and *Zeus*, only that in India *Dyu* is the father, *Indra* the son; and *Dyu* has at last to surrender his supremacy which *Zeus* in Greek retains to the end. In a hymn addressed to *Indra*, and to *Indra* as the most powerful god,

\* Dyaus pitar pṛithivî mâtâr ádhruk  
 Zeū(ς), πατὴρ πλατεῖα μητρὸς ἀρεκ(ές)  
 Ágne bhrâtar vasavaḥ mṛilâta nah.  
 Ignis frater ——— be mild nos.

† *Rv.* i. 136, 6: Námaḥ Divé bṛihaté ródasibhyâm, then follow Mitrâ, Vâruṇa, Índra, Agní, Aryamán, Bhága. Cf. vi. 50, 13. Dyaúḥ devébhiḥ pṛithivî samudraśh. Here, though Dyaus does not stand first, he is distinguished as being mentioned at the head of the devas, or bright gods.

‡ Dyaúsh pitâ janitâ.  
 Ζεύς, πατήρ, γενετήρ.

we read (Rv. iv. 17, 4): '*Dyu*, thy parent, was reputed strong, the maker of Indra was mighty in his works; he (who) begat the heavenly Indra, armed with the thunderbolt, who is immoveable, as the earth, from his seat.'

Here, then, *Dyu* would seem to be above Indra, just as Zeus is above Apollo. But there are other passages in this very hymn which clearly place *Indra* above *Dyu*, and thus throw an important light on the mental process which made the Hindus look on the son, on Indra,\* the *Jupiter pluvius*, the conquering light of heaven, as more powerful, more exalted, than the bright sky from whence he arose. The hymn begins with asserting the greatness of Indra, which even heaven and earth had to acknowledge; and at Indra's birth, both heaven and earth are said to have trembled. Now heaven and earth, it must be remembered, are, mythologically speaking, the father and mother of Indra, and if we read in the same hymn that Indra 'somewhat excels his mother and his father who begat him,'† this can only be meant to express the same idea, namely, that the active god who resides in the sky, who rides on the clouds, and hurls his bolt at the demons of darkness, impresses the mind of man at a later time more powerfully than the serene expanse of heaven and the wide earth beneath. Yet *Dyu* also must formerly have been

\* *Indra*, a name peculiar to India, admits of but one etymology, i. e. it must be derived from the same root, whatever that may be, which in Sanskrit yielded *indu*, drop, sap. It meant originally the giver of rain, the *Jupiter pluvius*, a deity in India more often present to the mind of the worshipper than any other. Cf. Benfey, *Orient und Occident*, vol. i. p. 49.

† iv. 17, 12: Kíyat svit Índraḥ ádhi eti mâtúḥ Kíyat pitúḥ janitúḥ yáh jajána.



conceived as a more active, I might say, a more dramatic god, for the poet actually compares Indra, when destroying his enemies, with Dyu as wielding the thunderbolt.\*

If with this hymn we compare passages of other hymns, we see even more clearly how the idea of Indra, the conquering hero of the thunderstorm, led with the greatest ease to the admission of a father who, though reputed strong before Indra, was excelled in prowess by his son. If the dawn is called *divijâh*, born in the sky, the very adjective would become the title-deed to prove her the daughter of Dyu; and so she is called. The same with Indra. He rose from the sky; hence the sky was his father. He rose from the horizon where the sky seems to embrace the earth; hence the earth must be his mother. As sky and earth had been invoked before as beneficent powers, they would the more easily assume the pater-  
nity of Indra; though even if they had not before been worshipped as gods, Indra himself, as born of heaven and earth, would have raised these parents to the rank of deities. Thus *Kronos* in the later Greek mythology, the father of Zeus, owes his very existence to his son, namely, to Zeus *Kronion*, *Kronion* meaning originally the son of time, or the ancient of days.† *Uranos*, on the contrary, though suggested by *Uranion*, the heavenly, had evidently, like Heaven and Earth, enjoyed an independent existence before he was made the father of *Kronos*, and the grandfather of Zeus; for we find his prototype in the Vedic god *Varuṇa*. But while in India *Dyu* was raised to be

\* iv. 17, 13 : vibhanjanúh aśanimân iva dyaúh.

† Welcker, *Griechische Götterlehre*, p. 144. Zeus is also called *Kronios*. *Ibid.* pp. 150, 155, 158.

the father of a new god, *Indra*, and by being thus raised became really degraded, or, if we may say so, shelved, Zeus in Greece always remained the supreme god, till the dawn of Christianity put an end to the mythological phraseology of the ancient world.

We read, i. 131, 1: \*—

‘Before Indra the divine Dyu bowed, before Indra bowed the great Prithivî.’

Again, i. 61, 9: † ‘The greatness of Indra indeed exceeded the heavens (i.e. dyaus), the earth and the air.’

i. 54, 4: ‡ ‘Thou hast caused the top of heaven (of dyaus) to shake.’

Expressions like these, though no doubt meant to realize a conception of natural phenomena, were sure to produce mythological phraseology, and if in India *Dyu* did not grow to the same proportions as Zeus in Greece, the reason is simply that *dyaus* retained throughout too much of its appellative power, and that Indra, the new name and the new god, absorbed all the channels that could have supported the life of Dyu. §

Let us see now how the same conception of Dyu, as the god of light and heaven, grew and spread in Greece. And here let us observe what has been pointed out by others, but has never been placed in so clear a light as of late by M. Bertrand in his lucid work, ‘*Sur les Dieux Protecteurs*’ (1858),—that whereas all other deities in Greece are more or less

\* *Índrâya hí dyaúḥ ásurāḥ únamnata índrâya mahî prithivî várîmabhiḥ.*

† *Asyá ít evá prá ririche mahitvám diváh prithivyáh pári antárikshât.*

‡ *Tvám diváh bñihatáh sánu kopayaḥ.*

§ Cf. *Buttmann, Ueber Apollon und Artemis, Mythologus*, i. p. 8.

local or tribal, Zeus was known in every village and to every clan. He is at home on Ida, on Olympus, at Dodona. While Poseidon drew to himself the Æolian family, Apollo the Dorian, Athene the Ionian, there was one more powerful god for all the sons of Hellen, Dorians, Æolians, Ionians, Achæans, the Panhellenic Zeus. That Zeus meant sky we might have guessed perhaps, even if no traces of the word had been preserved in Sanskrit. The prayer of the Athenians:—

Ἵσον Ἵσον, ᾧ φίλε Ζεῦ, κατὰ τῆς ἀρούρας τῶν Ἀθηναίων  
καὶ τῶν πεδίων.

(Rain, rain, O dear Zeus, on the land of the Athenians and on the fields!)

is clearly addressed to the sky, though the mere addition of 'dear,' in 'O dear Zeus,' is sufficient to change the sky into a personal being.

The original meaning of *Zeús* might equally have been guessed from such words as *Diosēmia*, portents in the sky, i. e. thunder, lightning, rain; *Diipētēs*, swollen by rain, *lit.* fallen from heaven; *éndios*, in the open air, or at midday; *eúdios*, calm, *lit.* well-skyed, and others. In Latin, too, *sub Jove frigido*, under the cold sky, *sub diu*, *sub dio*, and *sub divo*, under the open sky, are palpable enough.\* But then it was always open to say that the ancient names of the gods were frequently used to signify either their abodes or their special gifts—that *Neptunus*, for instance, was used for the sea, *Pluto* for the lower regions, *Jupiter* for the sky, and that this would in no way prove that these names originally meant sea, lower world, sky. Thus Nævius said, *Cocus edit Neptunum*,

\* *Dium fulgur appellabant diurnum quod putabant Jovis, ut nocturnum Summani.*—Festus, p. 57.



*Venerem, Cererem*, meaning, as Festus tells us, by Neptune fishes, by Venus vegetables, by Ceres bread.\* Minerva is used both for mind in *pingui Minerva* and for threads of wool.† When some ancient philosophers, as quoted by Aristotle, said that Zeus rains not in order to increase the corn, but from necessity,‡ this no doubt shows that these early positive philosophers looked upon Zeus as the sky, and not as a free personal divine being; but again it would leave it open to suppose that they transferred the old divine name of Zeus to the sky, just as Ennius, with the full consciousness of the philosopher, exclaimed, ‘*Aspice hoc sublime candens quod invocant omnes Jovem.*’ An expression like this is the result of later reflection, and it would in no way prove that either Zeus or Jupiter meant originally sky.

A Greek at the time of Homer would have scouted the suggestion that he, in saying *Zeús*, meant no more than sky. By Zeus the Greeks meant more than the visible sky, more even than the sky personified. With them the name Zeus was, and remained, in spite of all mythological obscurations, the name of the Supreme Deity; and even if they remembered that originally it meant sky, this would have troubled them as little as if they remembered that *thymos*, mind, originally meant blast. Sky was the nearest approach to that conception which in sublimity, brightness, and infinity transcended all others as much as the bright blue sky transcended all other things visible on earth. This is of great importance. Let us bear in mind that the perception of God is one of those which, like

\* Festus, p. 45.

† Arnobius, v. 45.

‡ Grote, *History of Greece*, i. 501, 539.

the perceptions of the senses, is realized even without language. We cannot realize general conceptions, or, as they are called by philosophers, nominal essences, such as *animal*, *tree*, *man*, without names; we cannot reason, therefore, without names or without language. But we can see the sun, we can greet it in the morning and mourn for it in the evening, without necessarily naming it, that is to say, comprehending it under some general notion. It is the same with the perception of the Divine. It may have been perceived, men may have welcomed it or yearned after it, long before they knew how to name it. Yet very soon man would long for a name, and what we know as the prayer of Jacob, 'Tell me, I pray thee, thy name,'\* and as the question of Moses, 'What shall I say unto them if they shall say to me, What is his name?'† must at an early time have been the question and the prayer of every nation on earth.

It may be that the statement of Herodotus (ii. 52) rests on theory rather than fact, yet even as a theory the tradition that the Pelasgians for a long time offered prayer and sacrifice to the gods without having names for any one of them, is curious. Lord Bacon states the very opposite of the West Indians, namely, that they had names for each of their gods, but no word for god.

As soon as man becomes conscious of himself, as soon as he perceives himself as distinct from all other things and persons, he at the same moment becomes conscious of a Higher Self, a higher power without which he feels that neither he nor anything else would

\* *Genesis* xxxii. 29.

† *Exodus* iii. 13.

have any life or reality. We are so fashioned—and it is no merit of ours—that as soon as we awake, we feel on all sides our dependence on something else, and all nations join in some way or other in the words of the Psalmist, ‘It is He that hath made us, and not we ourselves.’ This is the first *sense* of the Godhead, the *sensus numinis* as it has been well called; for it is a *sensus*—an immediate perception, not the result of reasoning or generalizing, but an intuition as irresistible as the impressions of our senses. In receiving it we are passive, at least as passive as in receiving from above the image of the sun, or any other impressions of the senses, whereas in all our reasoning processes we are active rather than passive. This *sensus numinis*, or, as we may call it in more homely language, *faith*, is the source of all religion; it is that without which no religion, whether true or false, is possible.

Tacitus\* tells us that the Germans applied the names of gods to that hidden thing which they perceived by reverence alone. The same in Greece. In giving to the object of the *sensus numinis* the name of *Zeus*, the fathers of Greek religion were fully aware that they meant more than sky. The high and brilliant sky has in many languages and many religions † been regarded as the abode of God, and the name of the abode might easily be transferred to him who abides in Heaven. Aristotle (‘*De Cælo*,’ i. 1, 3) remarks that ‘all men have a suspicion of gods, and all assign to them the highest place.’ And again

\* *Germania*, 9: deorumque nominibus appellant secretum illud quod sola reverentia vident.

† See Carrière, *Die Kunst im Zusammenhang der Culturentwicklung*, p. 49.



(*l. c. i. 2, 1*) he says, 'The ancients assigned to the gods heaven and the space above, because it was alone eternal.' The Slaves, as Procopius states,\* worshipped at one time one god only, and he was the maker of the lightning. *Perkunas*, in Lithuanian, the god of the thunderstorm, is used synonymously with *deivaitis*, deity. In Chinese *Tien* means sky and day, and the same word, like the Aryan *Dyu*, is recognised in Chinese as the name of God. Even though, by an edict of the Pope in 1715, Roman Catholic missionaries were prohibited from using *Tien* as the name for God, and ordered to use *Tien chu*, Lord of heaven, instead, language has proved more powerful than the Pope. In the Tataric and Mongolic dialects, *Tengri*, possibly derived from the same source as *Tien*, signifies 1, heaven, 2, the God of heaven, 3, God in general, or good and evil spirits.† The same meanings are ascribed by Castrèn to the Finnish word *Jumala*, thunderer.‡ Nay, even in our own language, 'heaven' may still be used almost synonymously with God. The prodigal son, when he returns to his father, says, 'I will arise and go to my father, and will say unto him, Father, I have sinned against heaven and before thee.'§ Whenever we thus find the name of heaven used for God, we must bear in mind that those who originally adopted such a name

\* Welcker, *l. c. i. 137, 166.* Proc. de bello Gothico, 3, 14.

† Castrèn, *Finnische Mythologie*, p. 14. Welcker, *Griechische Götterlehre*, p. 130. Klaproth, *Sprache und Schrift der Uiguren*, p. 9. Boehtlingk, *Die Sprache der Jakuten, Wörterbuch*, p. 90, s. v. tagara. Kowalewski, *Dictionnaire Mongol-Russe-Français*, t. iii. p. 1763.

‡ Castrèn, *l. c. p. 24.*

§ *Luke xv. 18.*

were transferring that name from one object, visible to their bodily eyes, to another object grasped by another organ of knowledge, by the vision of the soul. Those who at first called God Heaven, had something within them that they wished to call—the growing image of God; those who at a later time called Heaven God, had forgotten that they were predicating of Heaven something that was higher than Heaven.

That Zeus was originally to the Greeks the Supreme God, the true God—nay, at some times their only God—can be perceived in spite of the haze which mythology has raised around his name.\* But this is very different from saying that Homer believed in one supreme, omnipotent, and omniscient being, the creator and ruler of the world. Such an assertion would require considerable qualification. The Homeric Zeus is full of contradictions. He is the subject of mythological tales, and the object of religious adoration. He is omniscient, yet he is cheated; he is omnipotent, and yet defied; he is eternal, yet he has a father; he is just, yet he is guilty of crime. Now these very contradictions ought to teach us a lesson. If all the conceptions of Zeus had sprung from one and the same source, these contradictions could not have existed. If Zeus had simply meant God, the Supreme God, he could not have been the son of Kronos or the father of Minos. If, on the other hand, Zeus had been a merely mythological personage, such as Eos, the dawn, or Helios, the sun, he could never have been addressed as he is addressed in the famous prayer of Achilles. In looking through Homer and other Greek writers, we have no difficulty in collecting a number of passages in which the Zeus that is mentioned is clearly conceived as their su-

\* Cf. Welcker, p. 129 seq.

preme God. For instance, the song of the Pleiades at Dodona,\* the oldest sanctuary of Zeus, was: 'Zeus was, Zeus is, Zeus will be, a great Zeus.' There is no trace of mythology in this. In Homer,† Zeus is called 'the father, the most glorious, the greatest, who rules over all, mortals and immortals. He is the counsellor, whose counsels the other gods cannot fathom (Il. i. 545). His power is the greatest (Il. ix. 25),‡ and it is he who gives strength, wisdom, and honour to man. The mere expression, 'father of gods and men,' so frequently applied to Zeus and to Zeus alone, would be sufficient to show that the religious conception of Zeus was never quite forgotten, and that in spite of the various Greek legends as to the creation of the human race, the idea of Zeus as the father and creator of all things, but more particularly as the father and creator of man, was never quite extinct in the Greek mind. It breaks forth in the unguarded language of Philoetios in the Odyssey, who charges Zeus § that he does not pity men *though it was he who created them*; and in the philosophical view of the universe put forth by Kleanthes or by Aratus it assumes that very form under which it is known to all of us, from the quotation of St. Paul, '*For we are also his offspring.*' Likeness with God (*homoioútēs theô*) was the goal of Pythagorean ethics,|| and according

\* Welcker, p. 143. *Paus.* 60, 12, 5.

† *Ibid.*, p. 176.

‡ 'Jupiter omnipotens regum rerumque deûmque Progenitor genitrixque deûm.'

Valerius Soranus, in Aug., *De Civ. Dei*, vii. 10.

§ *Od.* xx. 201 :

Ζεῦ πάτερ, οὗ τις σεῖο θεῶν ὀλοώτερος ἄλλος ·  
οὐκ ἐλεαίρεις ἄνδρας ἐπὴν δὴ γείνεται αὐτός.

|| *Cic. Leg.* i. 8. Welcker, *Gr. Götterlehre*, i. 249.



to Aristotle, it was an old saying that everything exists from God and through God.\* All the greatest poets after Homer know of Zeus as the highest god, as the true god. 'Zeus,' says Pindar,† 'obtained something more than what the gods possessed.' He calls him the eternal father, and he claims for man a divine descent.

'One is the race of men,‡ one that of the gods. We both breathe from one mother; but our powers, all sundered, keep us apart, so that the one is nothing, while the brazen heaven, the immoveable seat, endureth for ever. Yet even thus we are still, whether by greatness of mind or by form, like unto the immortals, though we know not to what goal, either by day or by night, destiny has destined us to haste on.'

'For the children of the day, what are we, and what not? Man is the dream of a shadow. But if there comes a ray sent from Zeus, then there is for men bright splendour and a cheerful life.' §

\* *De Mundo*, 6. Welcker, *Griechische Götterlehre*, vol. i. p. 240.

† Pind. *Fragm.* v. 6. Bunsen, *Gott in der Geschichte*, ii. 351. *Ol.* 13, 12.

‡ Pind. *Nem.* vi. 1 (cf. xi. 43; xii. 7):

"Ἐν ἀνδρῶν, ἐν θεῶν γένος· ἐκ μιᾶς δὲ πνέομεν  
ματρὸς ἀμφότεροι· διείργει δὲ πᾶσα κεκριμένα  
δύναμις, ὡς τὸ μὲν οὐδὲν, ὁ δὲ χάλκεος ἀσφαλὲς αἰὲν ἔδος  
μένει οὐρανός. ἀλλὰ τι προσφέρομεν ἔμπαυ ἢ μέγαν  
νόον ἦτοι φύσιν ἀθανάτοις,  
καίπερ ἑφάμεριαν οὐκ εἰδότες οὐδὲ μετὰ νύκτας ἄμμε πότμος  
οἶαν τίν' ἔγραψε δραμεῖν ποτὶ στάθμαν.

§ Pind. *Pyth.* viii. 95 :

'Ἐπάμεροι· τί δέ τις; τί δὲ οὐ τις; σκιᾶς ὄναρ  
ἄνθρωπος. ἀλλ' ὅταν αἴγλα διδόσδοτος ἔλθῃ,  
λαμπρὸν φέγγος ἔπεστιν ἀνδρῶν  
καὶ μείλιχος αἰών.

Æschylus again leaves no doubt as to his real view of Zeus. His Zeus is a being different from all other gods. 'Zeus,' he says, in a fragment,\* 'is the earth, Zeus the air, Zeus the sky, Zeus is all and what is above all.' 'All was given to the gods,' he says, 'except to be lords, for free is no one but Zeus.'† He calls him the lord of infinite time;‡ nay, he knows that the name Zeus § is but indifferent, and that behind that name there is a power greater than all names. Thus the Chorus in the Agamemnon says:—

'Zeus, whoever he is, if this be the name by which he loves to be called—by this name I address him. For, if I verily want to cast off the idle burden of my thought, proving all things, I cannot find one on whom to cast it, except Zeus only.'

'For he who before was great, proud in his all-conquering might, he is not cared for any more; and he who came after, he found his victor and is gone. But he who sings wisely songs of victory for Zeus, he will find all wisdom. For Zeus leads men in the way of wisdom, he orders that suffering should be our best school. Nay, even in sleep there flows from the heart suffering reminding us of suffering, and wisdom comes to us against our will.'

\* Cf. Carrière, *Die Kunst*, vol. i. p. 79.

† *Prom. vincetus*, 49:

ἅπαντ' ἐπράχθη πλὴν θεοῖσι κοιρονεῖν,  
ἐλεύθερος γὰρ οὐτις ἐστὶ πλὴν Διός.

‡ *Supplices*, 574: Ζεὺς αἰῶνος κρέων ἀπαύστου.

§ Kleantes, in a hymn quoted by Welcker, ii. p. 193, addresses Zeus:

Κύδιστ' ἀθανάτων, πολυώνυμε, παγκρατὲς αἰεὶ, χαῖρε Ζεῦ.

Most glorious among immortals, with many names, almighty, always hail to thee, Zeus!

One more passage from Sophocles, \* to show how with him too Zeus is, in true moments of anguish and religious yearning, the same being whom we call God. In the 'Electra,' the Chorus says:—

'Courage, courage, my child! There is still in heaven the great Zeus, who watches over all things and rules. Commit thy exceeding bitter grief to him, and be not too angry against thy enemies, nor forget them.'

But while in passages like these the original conception of Zeus as the true god, the god of gods, preponderates, there are innumerable passages in which Zeus is clearly the sky personified, and hardly differs from other deities, such as the sun-god or the goddess of the moon. The Greek was not aware that there were different tributaries which entered from different points into the central idea of Zeus. To him the name Zeus conveyed but one idea, and the contradictions between the divine and the natural elements in his character were slurred over by all except the few who thought for themselves, and who knew, with Socrates, that no legend, no sacred myth, could be true that reflects discredit on a divine being. But to us it is clear that the story of Zeus descending as golden rain into the prison of Danaë was meant for the bright sky delivering the earth from the bonds of winter, and awakening in her a new life by the golden showers of spring. Many of the stories that are told about the love of Zeus for human or half-

\* *Electra*, v. 188 :

θάρσει μοι, θάρσει, τέκνον.  
 ἔτι μέγας οὐρανῶ  
 Ζεύς, ὅς ἐφορᾷ πάντα καὶ κρατύνει·  
 ᾗ τὸν ὑπεραλγῆ χόλον νέμουσα,  
 μήθ' οἷς ἐχθαιρεὺς ὑπεράχθεο μήτ' ἐπιλάθου.



human heroines have a similar origin. The idea which we express by the phrase, 'King by the grace of God,' was expressed in ancient language by calling kings the descendants of Zeus.\* This simple and natural conception gave rise to innumerable local legends. Great families and whole tribes claimed Zeus for their ancestor; and as it was necessary in each case to supply him with a wife, the name of the country was naturally chosen to supply the wanting link in these sacred genealogies. Thus *Æacus*, the famous king of *Ægina*, was fabled to be the offspring of Zeus. This need not have meant more than that he was a powerful, wise, and just king. But it soon came to mean more. *Æacus* was fabled to have been really the son of Zeus, and Zeus is represented as carrying off *Ægina* and making her the mother of *Æacus*.

The Arcadians (*Ursini*) derived their origin from *Arkas*; their national deity was *Kallisto*, another name for *Artemis*.† What happens? *Arkas* is made the son of *Zeus* and *Kallisto*; though, in order to save the good name of *Artemis*, the chaste goddess, *Kallisto* is here represented as one of her companions only. Soon the myth is spun out still further. *Kallisto* is changed into a bear by the jealousy of *Here*. She is then, after having been killed by *Artemis*, identified with *Arktos*, the Great Bear, for no better reasons than the *Virgin* in later times with the zodiacal sign of *Virgo*.‡ And if it be asked why the constellation of

\* *Il.* ii. 445, διοτρεφέες. *Od.* iv. 691, θεῖοι. *Callim. Hym. in Jovem*, 79, ἐκ Διὸς βασιλῆες. *Bertrand, Dieux Protecteurs*, p. 157. *Kemble, Saxons in England*, i. p. 335. *Cox, Tales of Thebes and Argos*, 1864, Introduction, p. i.

† Müller, *Dorier*, i. 372. *Jacobi*, s. v. *Kallisto*.

‡ *Maury, Légendes Pieuses*, p. 39, n.

the Bear never sets, an answer was readily given—the wife of Zeus had asked Okeanos and Thetis not to allow her rival to contaminate the pure waters of the sea.

It is said that *Zeus*, in the form of a bull, carried off *Europa*. This means no more, if we translate it back into Sanskrit, than that the strong rising sun (vṛishan) carries off the wide-shining dawn. This story is alluded to again and again in the Veda. Now *Minos*, the ancient king of Crete, required parents; so Zeus and Europa were assigned to him.

There was nothing that could be told of the sky that was not in some form or other ascribed to Zeus. It was Zeus who rained, who thundered, who snowed, who hailed, who sent the lightning, who gathered the clouds, who let loose the winds, who held the rainbow. It is Zeus who orders the days and nights, the months, seasons, and years. It is he who watches over the fields, who sends rich harvests, and who tends the flocks.\* Like the sky, Zeus dwells on the highest mountains; like the sky, Zeus embraces the earth; like the sky, Zeus is eternal, unchanging, the highest god.† For good and for evil, Zeus the sky and Zeus the god are wedded together in the Greek mind, language triumphing over thought, tradition over religion.

And strange as this mixture may appear, incredible as it may seem that two ideas like god and sky should have run into one, and that the atmospheric changes of the air should have been mistaken for the acts of Him who rules the world, let us not

\* Welcker, p. 169.

† Bunsen, *Gott in der Geschichte*, ii. 352: 'Gott vermag aus schwarzer Nacht zu erwecken fleckenlosen Glanz, und mit schwarzlockigem Dunkel zu verhüllen des Tages reinen Strahl.'—Pindar, *Fragm.* 3.

forget that not in Greece only, but everywhere, where we can watch the growth of early language and early religion, the same, or nearly the same, phenomena may be observed. The Psalmist says (xviii. 6), 'In my distress I called upon the Lord, and cried unto my God: he heard my voice out of his temple, and my cry came before him, even into his ears.'

7. 'Then the earth shook and trembled; the foundations also of the hills moved and were shaken, because he was wroth.'

8. 'There went up smoke out of his nostrils, and fire out of his mouth devoured: coals were kindled by it.'

9. 'He bowed the heavens also, and came down: and darkness was under his feet.'

10. 'And he rode upon a cherub, and did fly: yea, he did fly upon the wings of the wind.'

13. 'The Lord also thundered in the heavens, and the Highest gave his voice; hailstones and coals of fire.'

14. 'Yea, he sent out his arrows, and scattered them; and he shot out lightnings, and discomfited them.'

15. 'Then the channels of waters were seen, and the foundations of the world were discovered at thy rebuke, O Lord, at the blast of the breath of thy nostrils.'

Even the Psalmist in his inspired utterances must use our helpless human language, and condescend to the level of human thought. Well is it for us if we always remember the difference between what is said and what is meant, and if, while we pity the heathen for worshipping stocks and stones, we are not our-



selves kneeling down before the frail images of human fancy.\*

And now, before we leave the history of *Dyu*, we must ask one more question, though one which it is difficult to answer. Was it by the process of radical or poetical metaphor that the ancient Aryans, before they separated, spoke of *dyu*, the sky, and *dyu*, the god? i.e., was the object of the *sensus luminis*, the sky, called *dyu*, light, and the object of the *sensus numinis*, God, called *dyu*, light, by two independent acts; or was the name of the sky, *dyu*, transferred ready-made to express the growing idea of God, living in the highest heaven? † Either is possible. The latter view could be supported by several analogies, which we have examined before, and where we found that names expressive of sky had clearly been transferred to the idea of the Godhead, or, as others would put it, had gradually been purified and sublimed to express that idea. There is no reason why this should not be admitted. Each name is in the beginning imperfect, it necessarily expresses but one side of its object, and in the case of the names of God the very fact of the insufficiency of one single name would lead to the creation or adoption of new names, each expressive of a new quality that was felt to be essential and useful for recalling new phenomena in which the presence of the Deity had been discovered. The unseen and incom-

\* Dion Chrysostomus, 12, p. 404 r. Welcker, *Griechische Götterlehre*, i. p. 246.

† Festus, p. 32: Lucetium Jovem appellabant quod eum lucis esse causam credebant. Macrob. *Sat.* i. 15: unde et Lucetium Sallii in carmine canunt, et Cretenses Δία τὴν ἡμέραν vocant, ipsi quoque Romani Diespitrem appellant, ut diei patrem. Gell. v. 12, 6. Hartung, *Religion der Römer*, ii. 9.

prehensible Being that had to be named was perceived in the wind, in the earthquake, and in the fire, long before it was recognised in the still small voice within. From every one of these manifestations the divine *secretum illud quod solâ reverentiâ vident* might receive a name, and as long as each of these names was felt to be but a name no harm was done. But names have a tendency to become things, *nomina* grew into *numina*, *ideas* into *idols*, and if this happened with the name *Dyu*, no wonder that many things which were intended for Him who is above the sky were mixed up with sayings relating to the sky.

Much, however, may be said in favour of the other view. We may likewise explain the synonymousness of sky and God in the Aryan languages by the process of radical metaphor. Those who believe that all our ideas had their first roots in the impressions of the senses, and that nothing original came from any other source, would naturally adopt the former view, though they would on reflection find it difficult to explain how the sensuous impressions left by the blue sky, or the clouds, or the thunder and lightning, should ever have yielded an essence distinct from all these fleeting phenomena—how the senses by themselves should, like Juno in her anger, have given birth to a being such as had never been seen before. It may sound like mysticism, but it is nevertheless perfectly rational to suppose that there was in the beginning the perception of what Tacitus calls *secretum illud*, and that this secret and sacred thing was at the first burst of utterance called *Dyu*, the light, without any special reference to the bright sky. Afterwards, the bright sky being called for another reason *Dyu*, the light, the mythological process would be equally intelligible

that led to all the contradictions in the fables of Zeus. The two words *dyu*, the inward light, and *dyu*, the sky, became, like a double star, one in the eyes of the world, defying the vision even of the most powerful lenses. When the word was pronounced, all its meanings, light, god, sky, and day, vibrated together, and the bright *Dyu*, the god of light, was lost in the *Dyu* of the sky. If *Dyu* meant originally the bright Being, the light, the god of light, and was intended, like *asura*, as a name for the Divine, unlocalized as yet in any part of nature, we shall appreciate all the more easily its applicability to express, in spite of ever-shifting circumstances, the highest and the universal God. Thus, in Greek, Zeus is not only the lord of heaven, but likewise the ruler of the lower world, and the master of the sea.\* But though recognising in the name of Zeus the original conception of light, we ought not to deceive ourselves and try to find in the primitive vocabulary of the Aryans those sublime meanings which after many thousands of years their words have assumed in our languages. The light which flashed up for the first time before the inmost vision of their souls was not the pure light of which St. John speaks. We must not mix the words and thoughts of different ages. Though the message which St. John sent to his little children, 'God is light, and in him is no darkness at all,' † may remind us of something similar in the primitive annals of human language; though we may highly value the coincidence, such as it is, between the first stammerings of religious life

\* Welcker, *Griechische Götterlehre*, i. p. 164. II. ix. 457, Ζεὺς τε καραθόριος. The Old Norse *tyr* is likewise used in this general sense. See Grimm, *Deutsche Mythologie*, p. 178.

† *St. John, Ep.* I. i. 5 ; ii. 7.



and the matured language of the world's manhood; yet it behoves us, while we compare, to discriminate likewise, and to remember always that words and phrases, though outwardly the same, reflect the intentions of the speaker in ever-varying angles.

It was not my intention to enter at full length into the story of Zeus as told by the Greeks, or the story of Jupiter as told by the Romans. This has been done, and well done, in books on Greek and Roman Mythology. All I wished to do was to lay bare before your eyes the first germs of Zeus and Jupiter which lie below the surface of classical mythology, and to show how those germs cling with their fibres to roots that stretch in an uninterrupted line to India—nay, to some more distant centre from which all the Aryan languages proceeded in their world-wide expansion.

It may be useful, however, to dwell a little longer on the curious conglomeration of words which have all been derived from the same root as Zeus. That root in its simplest form is DYU.

DYU, raised by Guṇa to DYŌ (before vowels dyav);  
 raised by Vṛiddhi to DYĀU (before vowels dyâv).

DYU, by a change of vowels into semi-vowels, and of semi-vowels into vowels, assumes the form of

DIV, and this is raised by Guṇa to DEV,  
 by Vṛiddhi to DĀIV.

I shall now examine these roots and their derivatives more in detail, and, in doing so, I shall put together those words, whether verbal or nominal, which agree most closely in their form, without refer-

ence to the usual arrangements of declension and conjugation adopted by practical grammarians.

The root *dyu* in its simplest form appears as the Sanskrit verb *dyu*, to spring or pounce on something.\* In some passages of the Rig-Veda, the commentator takes *dyu* in the sense of shining, but he likewise admits that the verbal root may be *dyut*, not *dyu*. Thus, Rv. i. 113, 14: 'The Dawn with her jewels shone forth (*adyaut*) in all the corners of the sky; she the bright (*devî*) opened the dark cloth (the night). She who awakens us comes near, Ushas with her red horses, on her swift car.'

If *dyu* is to be used for nominal, instead of verbal purposes, we have only to add the terminations of declension. Thus we get with *bhis*, the termination of the instrumental plural, corresponding to Latin *bus*, *dyu-bhis*, meaning on all days, *toujours*; or the acc. plural *dyûn*, in *anu dyûn*, day after day.

If *dyu* is to be used as an adverb, we have only to add the adverbial termination *s*, and we get the Sanskrit *dyu-s* in *pârvedyus*, i. e. on a former day, yesterday, which has been compared with *prôizá*, the day before yesterday. The last element, *za*, certainly seems to contain the root *dyu*; but *za* would correspond to Sanskrit *dya* (as in *adya*, to-day), rather than to *dyus*. This *dyus*, however, standing for an original *dyut*, appears again in Latin *diû*, by day, as in *noctû diûque*, by night and by day. Afterwards *diû* † came to mean a lifelong day,

\* The French *éclater*, originally to break forth, afterwards to shine, shows a similar transition. Cf. Diez, *Lex. Comp.* s. v. *schiantare*.

† In *dum*, this day, then, while; in *nondum*, not yet (*pas encore*, i. e. *hanc horam*); in *donicum*, *donec*, now that, *lorsque*;

a long while, and then in *diuscule*, a little while, the *s* reappears. This *s* stands for an older *t*, and this *t*, too, reappears in *diutule*, a little while, and in the comparative *diut-ius*, longer (*interdius* and *interdiû*, by day).

In Greek and Latin, words beginning with *dy* are impossible. Where Sanskrit shows an initial *dy*, we find in Greek that either *dy* is changed to *z*, or the *y* is dropped altogether, leaving simply *d*.\* Even in Greek we find that dialects vary between *dia* and *za*; we find Æolic † *zabállō*, instead of *diabállō*, and the later Byzantine corruption of *diábolos* appears in Latin as *zabulus*, instead of *diabolus*. Where, in Greek, initial *z* varies dialectically with initial *d*, we shall find generally that the original initial consonants were *dy*. If, therefore, we meet in Greek with two such forms as *Zeús* and Bœotian *Deús*, we may be certain that both correspond to the Sanskrit *Dyu*, raised by Guṇa to *Dyo*. This form, *dyo*, exists in Sanskrit, not in the nominative singular, which by Vṛiddhi is raised to *Dyâus*, nom. plur. *Dyâvah*, but in such forms as the locative *dyâvi* ‡ (for *dyo-i*), &c.

In Latin, initial *dy* is represented by *j*; so that *Jû* in

and in *denique*, and now, lastly, the same radical element *dyu*, in the sense of day, has been suspected; likewise in *biduum*. In Greek *δῆν*, long, *δη*, now, have been referred to the same source.

\* See Schleicher, *Zur Vergleichenden Sprachengeschichte*, p. 40.

† Mehlhorn, *Griechische Grammatik*, § 110.

‡ The acc. singular *dyâm*, besides *divam*, is a mere corruption of *dyâvam*, like *gâm* for *gâvam*. The coincidence of *dyâm* with the Greek acc. sing. *Zῆν* is curious. Cf. Leo Meyer, in Kuhn's *Zeitschrift*, v. 373. *Zeύν* also is mentioned as an accusative singular. As to nominatives, such as *Zῆς* and *Zács*, gen. *Zavrós*, they are too little authenticated to warrant any conjectures as to their etymological character. See Curtius, *Grundzüge*, ii. p. 188.



*Jupiter* corresponds exactly with Sanskrit *Dyo*. *Jōvis*, on the contrary, is a secondary form, and would in the nominative singular represent a Sanskrit form *Dyāvih*. Traces of the former existence of an initial *dj* in Latin have been discovered in *Diovis*, according to Varro (L. L. v. 10, 20), an old Italian name for Jupiter, that has been met with under the same form in Oscan inscriptions. *Vējōvis*, too, an old Italian divinity, is sometimes found spelt *Vēdjōvis*.

That the Greek *Zēn*, *Zēnos*, belongs to the same family of words, has never been doubted; but there has been great diversity of opinion as to the etymological structure of the word. I explain *Zēn*, as well as Latin *Jan*, the older form of *Janus*, as representing a Sanskrit *dyav-an*, formed like *rājan*, but with *Guṇa*. Now as *yuvan*, *jūvenis*, is contracted to *jūn* in *jūnior*, so *dyavan* would in Latin become *Jan*, following the third declension,\* or, under a secondary form, *Jān-us*. *Janus-pater*, in Latin, was used as one word, like *Jupiter*. He was likewise called *Junonius* and *Quirinus*,† and was, as far as we can judge, another personification of *Dyu*, the sky, with special reference, however, to the year. The month of January owes its name to him. Now as *Ju* : *Zeus* = *Jān* : *Zēn*, only that in Greek *Zēn* remained in the third or consonantal declension, instead of migrating, as it might have done, under the form *Zēnos*, *ou*, into the second. The Latin *Jūnō*, *Junon-is*, would correspond to a Greek *Zēnōn*, as a feminine.

The second form, *DIV*, appears in Sanskrit in the

\* Tertullian, *Apol.* c. 10: 'a Jano vel Jane, ut Sallii volunt.' Hartung, *Religion der Römer*, ii. 218.

† Gell. v. 12, 5.

oblique cases, gen. *divas*, dat. *dive*, inst. *divâ*, acc. *divam*, &c. For instance (Rv. i. 50, 11), 'O Sun, that risest now, and mountest up to the higher sky (*úttarâm divam*, fem.), destroy the pain of my heart and my paleness!'

Rv. i. 54, 3: 'Sing to the mighty *Dyu* (divé bṛihaté, masc.) a mighty song.'

Rv. i. 7, 3: 'Indra made the sun rise to the sky (diví), that he might see far and wide; he burst open the rock for the cows.'

These forms are most accurately represented in the Greek oblique case, *DiFós*, *DiFí*, *DiFa*.

In Latin the labial semi-vowel, the so-called digamma, is not necessarily dropped, as we saw in *Jovis*, *Jovem*, &c. It is dropped, however, in *Diespiter*, and likewise in *dium* for *divum*, sky, from which *Diána*, instead of *Divána*, the heavenly (originally Deiana), while in *div-ínus* the final *v* of the root *div* is preserved.

In Sanskrit there are several derivatives of *div*, such as *diva* (neuter), sky, or day; *divasa* (m. n.), sky and day; *divya*, heavenly; *dina* (m. n.), day, is probably a contraction of *divana*. In Lithuanian we find *diena*. The Latin *diês* would correspond to a Sanskrit *divas*, nom. sing. *divás*, masc.

If, lastly, we raise *div* by Guṇa, we get the Sanskrit *deva*, originally bright, afterwards god. It is curious that this, the etymological meaning of *deva*, is passed over in the Dictionary of Boehtlingk and Roth. It is clearly passed over intentionally, and in order to show that in all the passages where *deva* occurs in the Veda it may be translated by god or divine. That it may be so translated would be difficult to disprove; but that there are many passages where the original

meaning of bright is more appropriate, can easily be established. Rv. i. 50, 8: 'The seven Harits (horses) carry thee on thy chariot, brilliant (deva) Sun, thee with flaming hair, O far-seeing!' No doubt we might translate the divine Sun; but the explanation of the commentator in this and similar passages seems more natural and more appropriate. What is most interesting in the Veda is exactly this uncertainty of meaning, the half-physical and half-spiritual intention of words such as *deva*. In Latin *deus* no longer means brilliant, but simply god. The same applies to *theós* in Greek, to *dievas* in Lithuanian.

But in Sanskrit we can watch the formation of the general name for deity. The principal objects of the religious poetry of the Vedic bards were those bright beings, the Sun, the Sky, the Day, the Dawn, the Morn, the Spring—who might all be called *deva*, brilliant. These were soon opposed to the powers of night and darkness, sometimes called *adeva*, literally, not bright, then ungodly, evil, mischievous. This contrast between the bright, beneficent, divine, and the dark, mischievous, demoniacal beings, is of very ancient date. *Druh*,\* mischief, is used as a name of darkness or the night, and the Dawn is said to drive away the hateful darkness of *Druh* (vii. 75, 1; see also i. 48, 8; 48, 15; 92, 5; 113, 12). The Âdityas are praised for preserving man from *Druh* (viii. 47, 1), and Maghavan or Indra is implored to bestow on his worshippers the light of day, after having driven away the many ungodly *Druhs*

\* See Kuhn, *Zeitschrift*, i. 179 and 193, where θέλω, τελέιν, ἀπρεκής, Zend *Druhhs*, German *trügen* and *lügen*, are all, with more or less certainty, traced back to *druh*. In A. S. we find *dreoh-læcan*, magicians; *dry*, magician; *dolh*, a wound.



(iii. 3119: *druháh ví yâhi bahuláh ádevîh*). 'May he fall into the ropes of *Druh*,' is used as a curse (vii. 59, 8); and in another passage we read, 'The Druhs follow the sins of men' (vii. 61, 5). As the ghastly powers of darkness, the *Druh* or the *Rakshas*, are called *adeva*, so the bright gods are called *adruh* (vii. 66, 18, *Mitra* and *Varuṇa*). *Deva* being applied to all the bright and beneficent manifestations in which the early Aryans discovered the presence of something supernatural, undecaying, immortal, it became in time the general name for what was shared in common by all the different gods or names of God. It followed, like a shadow, the growth of the purer idea of the Godhead, and when that had reached its highest goal it was almost the only word which had retained some vitality in that pure but exhausting atmosphere of thought. The *Ādityas*, the *Vasus*, the *Asuras*, and other names, had fallen back in the onward race of the human mind towards the highest conception of the Divine; the *Devas* alone remained to express *theós*, *deus*, God. Even in the *Veda*, where these glimpses of the original meaning of *deva*, brilliant, can still be caught, *deva* is likewise used in the same sense in which the Greeks used *theós*. The poet (x. 121, 8) speaks of

'Him who among the gods was alone god.'  
 Yaḥ deveshu adhi devaḥ ekaḥ âsît.

A last step brings us in Sanskrit to *Daiva*, derived from *deva*, and this is used in the later Sanskrit to express fate, destiny.

There is but little to be said about the corresponding words in the Teutonic branch, fragments of which have been collected by that thoughtful scholar, Jacob

Grimm.\* In name the Eddic god *Týr* (gen. *Tys*, acc. *Ty*) answers to the Vedic *Dyu*, and the Old Norse name for *dies Martis* is *Tysdagr*. Although in the system of the Edda *Odhin* is the supreme god, and *Tyr* his son, traces remain to show that in former days *Tyr*, the god of war, was worshipped as the principal deity by the Germans.† In Anglo-Saxon the name of the god does no longer occur independently, but traces of it have been discovered in *Tiwesdæg*, Tuesday. The same applies to Old High-German, where we find *Ziestac* for the modern *Dienstag*. Kemble points out names of places in England, such as *Tewesley*, *Tewing*, *Tiwes mere*, and *Tewes þorn*, and names of flowers,‡ such as the Old Norse *Týsfiola*, *Týrhjalm*, *Týsviðr*, as containing the name of the god.

Besides this proper name, Grimm has likewise pointed out the Eddic *tívar*, nom. plur., the gods.

Lastly, whatever may have been said against it, I think that Zeuss and Grimm were right in connecting the *Tuisco* mentioned by Tacitus with the Anglo-Saxon *Tiw*, which, in Gothic, would have sounded *Tiu*. The Germans were considered by Tacitus, and probably considered themselves, as the aboriginal inhabitants of their country. In their poems, which Tacitus calls their only kind of tradition and annals, they celebrated as the divine ancestors of their race, *Tuisco*, sprung from the Earth, and his son *Mannus*. They looked, therefore, like the Greeks, on the gods as the ancestors of the human family, and they believed that in the beginning life sprang from

\* *Deutsche Mythologie*, p. 175.

† Grimm, *Deutsche Mythologie*, p. 179.

‡ Kemble, *Saxons in England*, i. p. 351. These had first been pointed out by Grimm, *Deutsche Mythologie*, p. 180.

that inexhaustible soil which gives support and nourishment to man, and for which in their simple language they could find no truer name than Mother Earth. It is easy to see that the *Mannus* here spoken of by Tacitus as the son of *Tuisco*, meant originally man, and was derived from the same root *man*, to measure, to think, which in Sanskrit yielded *Manu*.\* *Man*, or, in Sanskrit, *Manu*, or *Manus*, was the proudest name which man could give to himself, the Measurer, the Thinker, and from it was derived the Old High-German *mennisc*, the Modern German *Mensch*. This *mennisc*, like the Sanskrit *manushya*, was originally an adjective, a patronymic, if you like: it meant the son of man. As soon as *mennisc* and *manushya* became in common parlance the recognised words for man, language itself supplied the myth, that *Manus* was the ancestor of the *Manushyas*. Now *Tuisco* seems but a secondary form of *Tiu*, followed by the same suffix which we saw in *mennisc*, and without any change of meaning. Then why was *Tuisco* called the father of *Mannu*? Simply because it was one of the first articles in the primitive faith of mankind, that in one sense or other they had a father in heaven. Hence *Mannu* was called the son of *Tuisco*, and this *Tuisco*, as we know, was, originally, the Aryan god of light. These things formed the burden of German songs to which Tacitus listened. These songs they sang before they went to battle, to stimulate their courage, and to prepare to die. To an Italian ear it must have been a wild sound, reverberated from their shields, and hence called *barditus* (shield-song, Old Norse *bardhi*, shield). Many

\* On *Manu* and *Minos*, see Kuhn, *Zeitschrift*, iv. 92. The name of *Śaryāta*, the son of *Manu*, could hardly be compared with *Krêta*.



a Roman would have sneered at such poetry and such music. Not so Tacitus. The emperor Julian, when he heard the Germans singing their popular songs on the borders of the Rhine, could compare them to nothing but the cries of birds of prey. Tacitus calls them a shout of valour (*concentus virtutis*). He likewise mentions (*Ann. ii. 88*) that the Germans still kept up the memory of *Arminius* in their songs, and he describes (*Ann. ii. 65*) their night revellings, where they sang and shouted till the morning called them to fresh battles.

The names which Tacitus mentions, such as *Mannus*, *Tuisco*, &c., he could of course repeat by ear only, and if one considers the difficulties of such a task, it is extraordinary that these names, as written down by him, should lend themselves so easily to etymological explanation. Thus Tacitus states not only that *Mannus* was the ancestor of the German race, but he likewise mentions the names of his three sons, or rather the names of the three great tribes, the *Ingævones*, *Isçævones*, and *Herminones*, who derived their origin from the three sons of *Mannus*. It has been shown that the *Ingævones* derive their name from *Yng*, *Yngo*, or *Yngvio*, who, in the *Edda* and in the *Beowulf*, is mentioned as living first with the Eastern Danes and then proceeding on his car eastward over the sea. There is a northern race, the *Ynglings*, and their pedigree begins with *Yngvi*, *Njörðr*, *Frayr*, *Fiölnir* (*Odin*), *Svegdir*, all names of divine beings. Another genealogy, given in the *Ynglinga-saga*, begins with *Njörðr*, identifies *Frayr* with *Yngvi*, and derives from him the name of the race.

The second son of *Mannus*, *Isco*, has been identified by Grimm with *Askr*, another name of the first-born

man. *Askr* means likewise ash-tree, and it has been supposed that the name *ash* thus given to the first man came from the same conception which led the Greeks to imagine that one of the races of man sprang from ash-trees (ἐκ μελιᾶν). Alcuin still uses the expression, son of the ash-tree, as synonymous with man.\* Grimm supposes that the *Iscavones* lived near the Rhine, and that a trace of their name comes out in *Asciburgium* or *Asciburg*, on the Rhine, where, as Tacitus had been wildly informed, an altar had been discovered dedicated to *Ulysses*, and with the name of his father *Laërtes*.†

The third son of *Mannus*, *Irmino*, has a name decidedly German. *Irmin* was an old Saxon god, from whom probably both *Arminius* and the *Herminones* derived their names.

The chief interest of these German fables about *Tuisco*, *Mannus*, and his sons, is their religious character. They give utterance to the same sentiment which we find again and again among the Aryan nations, that man is conscious of his descent from heaven and from earth, that he claims kindred with a father in heaven, though he recognises with equal clearness that he is made of the dust of the earth. The Hindus knew it when they called *Dyu* their father, and *Prithivî* their mother; Plato ‡ knew it when he said that the Earth, as the mother, brought forth men, but God was the shaper; and the Germans knew it, though Tacitus tells us confusedly, that they sang of *Mannus* as the son of *Tuisco*, and of *Tuisco* as sprung from the earth.

\* Ampère, *Histoire Littéraire de la France*, iii. 79.

† *Germania*, c. 3.

‡ *Polit.* p. 414: καὶ ἡ γῆ αὐτοὺς μήτηρ οὔσα ἀνῆκε—ἀλλ' ὁ θεὸς πλάττω. Welcker, *Griechische Götterlehre*, i. p. 182.

This is what Grimm says of the religious elements hidden in German mythology: \*—

‘In our own heathen mythology ideas which the human heart requires before all others, and in which it finds its chief support, stand forth in bold and pure relief. The highest god is there a father, old-father, grandfather, who grants to the living blessing and victory, to the dying a welcome in his own mansions. Death is called “going home,” *Heimgang*, return to our father. By the side of the god stands the highest goddess as mother, old-mother, grandmother, a wise and pure ancestress of the human race. The god is majestic, the goddess beaming with beauty. Both hold their circuit on earth and are seen among men, he teaching war and weapons, she sewing, spinning, and weaving. He inspires the poem, she cherishes the tale.’

Let me conclude with the eloquent words of a living poet: †—

‘Then they looked round upon the earth, those simple-hearted forefathers of ours, and said within themselves, “Where is the All-Father, if All-Father there be? Not in this earth; for it will perish. Nor in the sun, moon, or stars; for they will perish too. Where is He who abideth for ever?” Then they lifted up their eyes, and saw, as they thought, beyond sun, and moon, and stars, and all which changes and will change, the clear blue sky, the boundless firmament of heaven.

‘That never changed; that was always the same. The clouds and storms rolled far below it, and all the

\* Grimm, *Deutsche Mythologie*, xl. 1.

† C. Kingsley, *The Good News of God*. 1859, p. 241.



bustle of this noisy world; but there the sky was still, as bright and calm as ever. The All-Father must be there, unchangeable in the unchanging heaven; bright, and pure, and boundless like the heavens; and like the heavens, too, silent and far off.

‘So they named him after the heaven, Tuisco—the God who lives in the clear heaven, the heavenly Father. He was the Father of gods and men; and man was the son of Tuisco and Hertha—heaven and earth.’

## LECTURE XI.

## MYTHS OF THE DAWN.

AFTER having, in my last Lecture, gathered together the fragments of the most ancient and most exalted deity worshipped once by all the members of the Aryan stock, I shall, to-day, examine some of the minor deities, in order to find out whether they too can be referred to the earliest period of Aryan speech and Aryan thought—whether they too existed before the Aryans broke up in search of new homes; and whether their memory was preserved more or less distinctly in later days in the poems of Homer and the songs of the Veda. These researches must necessarily be of a more minute kind, and I have to ask for your indulgence if I here enter into details which are of little general interest, but which, nevertheless, are indispensable, in order to establish a safe basis for speculations very apt to mislead even the most cautious inquirer.

I begin with the myth of *Hermes*, whose name has been traced back to the Vedic *Saramâ*. My learned friend Professor Kuhn,\* who was the first to analyse the meaning and character of *Saramâ*, arrived at the conclusion that *Saramâ* meant storm, and that the Sanskrit word was identical with the Teutonic

\* In Haupt's *Zeitschrift für Deutsches Alterthum*, vi. p. 119 seq.

storm, and with the Greek *hormê*. No doubt the root of *Saramâ* is *sar*, to go, but its derivation is by no means clear, there being no other word in Sanskrit formed by *ama*, and with *guṇa* of the radical vowel.\* But admitting that *Saramâ* meant originally the runner, how does it follow that the runner was meant for storm? It is true that *Saranyu*, masc., derived from the same root, is said to take in later Sanskrit the meaning of wind and cloud, but it has never been proved that *Saranyû*, fem., had these meanings. The wind, whether as *vâta*, *vâyû*, *marut*, *pavana*, *anila*, &c., is always conceived as a masculine in Sanskrit, and the same applies generally to the other Aryan languages. This, however, would be no insurmountable objection, if there were clear traces in the Veda of *Saramâ* being endowed with any of the characteristic qualities of the wind. But if we compare the passages in which she is mentioned with others in which the power of the storm is described, we find no similarity whatever. It is said of *Saramâ* that she espied the strong stable of the cows (i. 72, 8), that she discovered the cleft of the rock, that she went a long journey, that she was the first to hear the lowing of the cows, and perhaps that she led the cows out (iii. 31, 6). She did this at the instance of *Indra* and the *Angiras* (i. 62, 3); *Brihaspati* (i. 62, 3) or *Indra* (iv. 16, 8) split the rock, and recovered the cows, which cows are said to give food to the children of man (i. 62, 3; 72, 8); perhaps, to the offspring of *Saramâ* herself (i. 62, 3). *Saramâ* appears in time

\* See Uṇâdi-Sûtras, ed. Aufrecht, iv. 48. *Sârmaḥ*, as a substantive, running, occurs *Rv.* i. 80, 5. The Greek *ὄρη*, corresponds with this word in the feminine, but not with *saramâ*.



before *Indra* (iv. 16, 8), and she walks on the right path (iv. 45, 7 and 8).

This is about all that can be learnt from the Rig-Veda as to the character of *Saramâ*, with the exception of a hymn in the last book, which contains a dialogue between her and the *Panîs*, who had robbed the cows. The following is a translation of that hymn:—

The *Panîs* said: 'With what intention did *Saramâ* reach this place? for the way is far, and leads tortuously away. What was your wish with us? How was the night?\* How did you cross the waters of the *Rasâ*?' (1.)

*Saramâ* said: 'I come, sent as the messenger of *Indra*, desiring, O *Panîs*, your great treasures; this preserved me from the fear of crossing, and thus I crossed the waters of the *Rasâ*.' (2.)

The *Panîs*: 'What kind of man is *Indra*, O *Saramâ*, what is his look, he as whose messenger thou camest from afar? Let him come hither, and we will make friends with him, and then he may be the cowherd of our cows.' (3.)

*Saramâ*: 'I do not know that he is to be subdued, for it is he himself that subdues, he as whose messenger I came hither from afar. Deep streams do not overwhelm him; you, *Panîs*, will lie prostrate, killed by *Indra*.' (4.)

The *Panîs*: 'Those cows, O *Saramâ*, which thou desirest, fly about the ends of the sky, O darling.

\* *Paritakmyâ* is explained in the Dictionary of Boehtlingk and Roth in the sense of random travelling. It never has that sense in the Veda, and as *Saramâ* comes to the *Panîs* in the morning, the question, how was the night, is perfectly natural.

Who would give them up to thee without fighting? for our weapons too are sharp.' (5.)

*Saramâ*. 'Though your words, O *Paṇis*, be unconquerable,\* though your wretched bodies be arrow-proof,† though the way to you be hard to go, *Brihaspati* will not bless you for either.'‡ (6.)

The *Paṇis*: 'That store, O *Saramâ*, is fastened to the rock; furnished with cows, horses, and treasures. *Paṇis* watch it who are good watchers; thou art come in vain to this bright place.' (7.)

*Saramâ*: 'Let the *Rishis* come here fired with *Soma*, *Ayâsya* (Indra's) and the ninefold *Angiras*; they will divide this stable || of cows; then the *Paṇis* will vomit out this speech.'¶ (8.)

The *Paṇis*: 'Even thus, O *Saramâ*, thou art come hither driven by the violence of the gods; let us make thee our sister, do not go away again; we will give thee part of the cows, O darling.' (9.)

*Saramâ*: 'I know nothing of brotherhood or sisterhood; *Indra* knows it and the awful *Angiras*. They seemed to me anxious for their cows when I came; therefore get away from here, O *Paṇis*, far away.'\*\* (10.)

'Go far away, *Paṇis*, far away; let the cows come out straight; the cows which *Brihaspati* found hid away, *Soma*, the stones, and the wise *Rishis*.' (11.)

In none of these verses is there the slightest indication of *Saramâ* as the representative of the

\* *asenyâ*, not hurtful, B. R.

† *anishavyâ*, not to be destroyed, B. R.

‡ *Ubhayâ*, with the accent on the last syllable, is doubtful.

§ Cf. i. 62, 7, and B. R. s. v.

|| *ûrva* is called *drilḥa*, Rv. i. 72, 8.

¶ Will be sorry for their former speech.

\*\* *varīyah*, in das Weite.

storm, nor do the explanations of Indian commentators, which have next to be considered, point at all in that direction.

*Sâyana*, in his commentary on the Rig-Veda (i. 6, 5), tells the story of *Saramâ* most simply. The cows, he says, were carried off by the *Paṇis* from the world of the gods and thrown into darkness; *Indra*, together with the *Maruts*, or storms, conquered them.

In the *Anukramaṇikâ*, the index to the Rigveda-saṅgīhā (x. 103), the story is related in fuller detail. It is there said that the cows were hidden by the demons, the *Paṇis*; that *Indra* sent the dog of the gods, *Saramâ*, to look for the cows; and that a parley took place between her and the *Paṇis*, which forms the 108th hymn of the last book of the Rig-Veda.

Further additions to the story are to be found in *Sâyana's* Commentary on iii. 31, 5. The cows are there called the property of the *Angiras*, and it was at their instance that *Indra* sent the dog, and then, being apprised of their hiding-place, brought them back to the *Angiras*. So, at least, says the commentator, while the text of the hymn represents the seven sages, the *Angiras*, as taking themselves a more active part in effecting the breach in the mountain. Again, in his commentary on Rv. x. 108, *Sâyana* adds that the cows belonged to *Brihaspati*, the chief-priest of *Indra*, that they were stolen by the *Paṇis*, the people of *Vala*, and that *Indra*, at *Brihaspati's* instance, sent the dog *Saramâ*. The dog, after crossing a river, came to the town of *Vala*, and saw the cows in a secret place; whereupon the *Paṇis* tried to coax her to stay with them.

As we read the hymn in the text of the Rig-Veda, the parley between *Saramâ* and the *Paṇis* would



seem to have ended with *Saramâ* warning the robbers to flee before the wrath of *Indra*, *Bṛihaspati*, and the *Angiras*. But in the *Bṛihaddevatâ* a new trait is added. It is there said that although *Saramâ* declined to divide the booty with the *Paṇis*, she asked them for a drink of milk. After having drunk the milk, she recrossed the *Rasâ*, and when she was asked after the cows by *Indra*, she denied having seen them. *Indra* thereupon kicked her with his foot, and she vomited the milk, and ran back to the *Paṇis*. *Indra* then followed her, killed the demons, and recovered the cows.

This faithlessness of *Saramâ* is not alluded to in the hymn, and in another passage, where it is said that *Saramâ* found food for her offspring (Rv. i. 62, 3), *Sâyana* merely states that *Saramâ*, before going to look for the cows, made a bargain with *Indra* that her young should receive milk and other food, and then proceeded on her journey.

This being nearly the whole evidence on which we must form our opinion of the original conception of *Saramâ*, there can be little doubt that she was meant for the early dawn, and not for the storm. In the ancient hymns of the Rig-Veda she is never spoken of as a dog, nor can we find there the slightest allusion to her canine nature. This is evidently a later thought,\* and it is high time that this much-talked-of greyhound should be driven out of the Vedic Pantheon. There are but few epithets of *Saramâ* from which we might form a guess as to her character. She is called *supadî*, having good feet, or quick, an

\* It probably arose from *Sârameya* being used as a name or epithet of the dogs of Yama. See page 476.

adjective which never occurs again in the Rig-Veda. The second epithet, however, which is applied to her, *subhagâ*, fortunate, beloved, is one she shares in common with the Dawn; nay, which is almost a stereotyped epithet of the Dawn.

But more than this. Of whom is it so constantly said, as of *Saramâ*, that she appears before *Indra*, that *Indra* follows her? It is *Ushas*, the Dawn, who wakes first (i. 123, 2); who comes first to the morning prayer (i. 123, 2). The Sun follows behind, as a man follows a woman (Rv. i. 115, 2).\* Of whom is it said, as of *Saramâ*, that she brings to light the precious things hidden in darkness? It is *Ushas*, the Dawn, who reveals the bright treasures that were covered by the gloom (i. 123, 6). She crosses the water unhurt (vi. 64, 4); she lays open the ends of heaven (i. 92, 11); those very ends where, as the *Panîs* said, the cows were to be found. She is said to break the strongholds and bring back the cows (vii. 75, 7; 79, 4). It is she who, like *Saramâ*, distributes wealth among the sons of men (i. 92, 3; 123, 3). She possesses the cows (i. 123, 12, &c.); she is even called the mother of the cows (iv. 52, 2). She is said to produce the cows and to bring light (i. 124, 5); she is asked to open the doors of heaven, and to bestow on man wealth of cows (i. 48, 15). The Angiras, we read, asked her for the cows (vi. 65, 5), and the doors of the dark stable are said to be opened by her (iv. 51, 2). In one place her splendour is said to be spreading as if she were driving forth cattle (i. 92, 12); in another the splendours of the dawn are themselves called a drove of

\* *Comparative Mythology*, p. 57. *Oxford Essays*, 1856.

cows (iv. 51, 8; 52, 5). Again, as it was said of *Saramâ*, that she follows the right path, the path which all the heavenly powers are ordained to follow, so it is particularly said of the Dawn that she walks in the right way (i. 124, 3; 113, 12). Nay, even the *Panîs*, to whom *Saramâ* was sent to claim the cows, are mentioned together with *Ushas*, the Dawn. She is asked to wake those who worship the gods, but not to wake the *Panîs* (i. 124, 10). In another passage (iv. 51, 3) it is said that the *Panîs* ought to sleep in the midst of darkness, while the Dawn rises to bring treasures for man.

It is more than probable, therefore, that *Saramâ* was but one of the many names of the Dawn; it is almost certain that the idea of storm never entered into the conception of her. The myth of which we have collected the fragments is clear enough. It is a reproduction of the old story of the break of day. The bright cows, the rays of the sun or the rain-clouds—for both go by the same name—have been stolen by the powers of darkness, by the Night and her manifold progeny. Gods and men are anxious for their return. But where are they to be found? They are hidden in a dark and strong stable, or scattered along the ends of the sky, and the robbers will not restore them. At last in the farthest distance the first signs of the Dawn appear; she peers about, and runs with lightning quickness, it may be, like a hound after a scent,\* across the darkness of the sky. She is looking

\* *Erigone*, the early-born, also called *Aletis*, the rover, when looking for the dead body of her father, *Ikarius* (the father of *Penelope* is his namesake), is led by a dog, *Maira*. See Jacobi's *Mythologie*, s. v. *Ikarius*.



for something, and, following the right path, she has found it. She has heard the lowing of the cows, and she returns to her starting-place with more intense splendour.\* After her return there rises *Indra*, the god of light, ready to do battle in good earnest against the gloomy powers, to break open the strong stable in which the bright cows were kept, and to bring light, and strength, and life back to his pious worshippers. This is the simple myth of *Saramâ*; composed originally of a few fragments of ancient speech, such as: 'the *Paṇis* stole the cows,' i. e. the light of day is gone; 'Saramâ looks for the cows,' i. e. the Dawn is spreading; 'Indra has burst the dark stable,' i. e. the sun has risen.

All these are sayings or proverbs peculiar to India, and no trace of *Saramâ* has yet been discovered in the mythological phraseology of other nations. But let us suppose that the Greeks said, '*Saramâ* herself has been carried off by *Paṇi*, but the gods will destroy her hiding-place and bring her back.' This, too, would originally have meant no more than that the Dawn who disappears in the morning will come back in the gloaming, or with the light of the next day. The idea that *Paṇi* wished to seduce *Saramâ* from her allegiance to *Indra*, may be discovered in the ninth verse of the Vedic dialogue, though in India it does not seem to have given rise to any further myths. But many a myth that only germinates in the Veda may be seen breaking forth in full bloom in Homer. If, then, we may be allowed a guess, we should recognise in *Helen*, the sister of the *Dioskuroi*,

\* *Eeriboia*, or *Eriboia*, betrays to *Hermes* the hiding-place where *Arcs* was kept a prisoner. *Il.* v. 385.

the Indian *Saramâ*, their names being phonetically identical,\* not only in every consonant and vowel, but even in their accent. Apart from all mythological considerations, *Saramâ* in Sanskrit is the same word as *Helena* in Greek; and unless we are prepared to ascribe such coincidences as *Dyaus* and *Zeus*, *Varuṇa* and *Uranos*, *Śarvara* and *Cerberus*, to mere accident, we are bound to trace *Sarâmâ* and *Helène* back to some point from which both could have started in common. The siege of Troy is but a repetition of the daily siege of the East by the solar powers that every evening are robbed of their brightest treasures in the West. That siege, in its original form, is the constant theme of the hymns of the Veda. *Saramâ*, it is true, does not yield in the Veda to the temptation of *Paṇi*, yet the first indications of her faithlessness are there, and the equivocal character of the twilight which she represents would fully account for the further developement of the Greek myth. In the Iliad, *Brisêis*, the daughter of *Brises*, is one of the first captives taken by the advancing army of the West. In the Veda, before the bright powers reconquer the light that had been stolen by *Paṇi*, they are said to have conquered the offspring of *Brisaya*. That daughter of *Brises* is restored to Achilles when his glory begins to set, just as all the first loves of solar heroes return to them in the last moments of their earthly career.† And as the Sanskrit name *Paṇi* betrays the former presence of an *r*,‡ *Paris* himself

\* As to Sk. *m* = Greek *n*, see Curtius, *Grundzüge*, ii. 121.

† See Cox, *Tales of Argos and Thebes*, Introduction, p. 90.

‡ I state this very hesitatingly, because the etymology of *Paṇi* is as doubtful as that of *Paris*, and it is useless almost to compare

might be identified with the robber who tempted *Saramâ*. I lay no stress on *Helen* calling herself a dog (Il. vi. 344), but that the beautiful daughter of Zeus, (*duhitâ Divah*), the sister of the *Dioskuroi*, was one of the many personifications of the Dawn, I have never doubted. Whether she is carried off by *Theseus* or by *Paris*, she is always reconquered for her rightful husband; she meets him again at the setting of his life, and dies with him pardoned and glorified. This is the burden of many a Dawn myth, and it is the burden of the story of *Helen*.

But who was *Sâramêya*? His name certainly approaches very near to *Hermeias*, or *Hermes*, and though the exact form corresponding to *Sâramêya* in Greek would be *Hêremeias*, yet in proper names a slight anomaly like this may pass. Unfortunately, however, the Rig-Veda tells us even less of *Sâramêya* than of *Saramâ*. It never calls any special deity the son of *Saramâ*, but allows us to take the name in its appellative sense, namely, connected with *Saramâ* or the dawn. If *Hermeias* is *Sâramêya*, it is but another instance of a mythological germ withering away in one country, and spreading most luxuriantly in another. *Dyaus* in the Veda is the mere shadow of a deity if compared

mythological names, without first discovering their etymological intention. Mr. Cox, in his Introduction to the *Tales of Argos and Thebes* (p. 90), endeavours to show that *Paris* belongs to the class of bright solar heroes. Yet if the germ of the *Iliad* is the battle between the solar and nocturnal powers, *Paris* surely belongs to the latter, and he whose destiny it is to kill *Achilles* in the *Western gates*,

ἤματι τῷ ὅτε κέν σε Πάρις καὶ Φοῖβος Ἀπόλλων  
Ἑσθλὸν ἰόντ' ὀλέσωσιν ἐνὶ Σκαιῆσι πύλῃσιν.

could hardly have been himself of solar or vernal lineage.



with the Greek *Zeus*; *Varuṇa*, on the contrary, has assumed much greater proportions in India than *Uranos* in Greece, and the same applies to *Vṛitra*, as compared with the Greek *Orthros*. But though we know so little about *Sâramêya* in the Veda, the little we know of him is certainly compatible with a rudimentary *Hermes*. As *Sâramêya* would be the son of the twilight, or, it may be, the first breeze of the dawn, so *Hermes* is born early in the morning. (Hom. Hym. Merc. 17.) As the Dawn in the Veda is brought by the bright *Harits*, so *Hermes* is called the leader of the *Charites* (ἡγεμῶν Χαρίτων). In the seventh book of the Rig-Veda (vii. 54, 55) we find a number of verses strung together as it would seem at random, to be used as magical formulæ for sending people to sleep.\* The principal deity invoked is *Vâstoshpati*, which means lord or guardian of the house, a kind of *Lar*. In two of these verses, the being invoked, whatever it be, is called *Sâramêya*, and is certainly addressed as a dog, the watch-dog of the house. In the later Sanskrit also, *sâramêya* is said to mean dog. *Sâramêya*, if it is here to be taken as the name of a deity, would seem to have been a kind of tutelary deity, the peep of day conceived as a person, watching unseen at the doors of heaven during the night, and giving his first bark in the morning. The same morning deity would naturally have been supposed to watch over the houses of man. The verses addressed to him do not tell us much:—

‘Guardian of the house, destroyer of evil, who assumest all forms, be to us a helpful friend.’ (1.)

‘When thou, bright *Sâramêya*, openest thy teeth,

\* In viii. 47, 14, *Ushas* is asked to carry off sleeplessness.

O red one, spears seem to glitter on thy jaws as thou swallowest. Sleep, sleep.' (2.)

'Bark at the thief, *Sâramêya*, or at the robber, O restless one! Now thou barkest at the worshippers of *Indra*; why dost thou distress us? Sleep, sleep!' (3.)

It is doubtful whether the guardian of the house (*Vâstoshpati*), addressed in the first verse, is intended to be addressed in the next verses; it is equally doubtful whether *Sâramêya* is to be taken as a proper name at all, or whether it simply means *ἔπος*, bright, or speckled like the dawn. But if *Sâramêya* is a proper name, and if he is meant for the guardian of the house, no doubt it is natural to compare him with the *Hermes propylaeos*, *prothyraeos*, and *pronaos*, and with the *Hermae* in public places and private houses in Greece.\* Dr. Kuhn thinks that he can discover in

\* M. Michel Bréal, who has so ably analysed the myth of Cacus (*Hercule et Cacus; Étude de Mythologie Comparée*, Paris, 1863), and whose more recent essay, *Le Mythe d'Œdipe*, constitutes a valuable contribution to the science of mythology, has sent me the following note on Hermes as the guardian of houses and public places, which, with his kind permission, I beg to submit to the consideration of my readers:—

'A propos du dieu Hermès, je demande à vous soumettre quelques rapprochements. Il me semble que l'explication d'Hermès comme dieu du crépuscule n'épuise pas tous les attributs de cette divinité. Il est encore le protecteur des propriétés, il préside aux trouvailles : les bornes placées dans les champs, dans les rues et à la porte des temples, ont reçu, au moins en apparence, son nom. Est-ce bien là le même dieu, ou n'avons-nous pas encore ici un exemple de ces confusions de mots dont vous avez été le premier à signaler l'importance ? Voici comment je m'explique cet amalgame.

'Nous avons en grec le mot *ἔρμα*, qui désigne une pierre, une borne, un poteau ; *ἔρμιν* et *ἔρμεις*, le pied du lit ; *ἔρμακες*, des tas de pierres ; *ἔρμάν*, un banc de sable ; *ἔρμαρίζω*, veut dire je charge

*Sâramêya* the god of sleep, but in our hymn he would rather seem to be a disturber of sleep. One other coincidence, however, might be pointed out. The guardian of the house is called a destroyer of evil, more particularly of illness, and the same power is sometimes ascribed to *Hermes*. (Paus. ix. 22, 2.)

We may admit, then, that *Hermes* and *Sâramêya* started from the same point, but their history diverged very early. *Sâramêya* hardly attained a definite personality, *Hermes* grew into one of the principal gods of Greece. While *Saramâ*, in India, stands on the threshold that separates the gods of light from the gods of darkness, carrying messages from one to the other, and inclining sometimes to the one, sometimes to the other, *Hermes*, the god of the twilight, betrays

un vaisseau de son lest, et *έρμογλυφεύς* désigne d'une manière générale un tailleur de pierres. Il est clair que tous ces mots n'ont rien de commun avec le dieu Hermès.

‘Mais nous trouvons d'un autre côté le diminutif *έρμίδιον* ou *έρμάδιον*, que les anciens traduisent par “petite statue d'Hermès.” Je crois que c'est ce mot qui a servi de transition et qui nous a valu ces pierres grossièrement taillées, dans lesquelles on a voulu reconnaître le dieu, devenu dès-lors le patron des propriétaires, malgré sa réputation de voleur. Quant à *έρμαιον*, qui désigne les trouvailles, je ne sais si c'est à l'idée d'Hermès ou à celle de borne (comme marquant la limite de la propriété) qu'il faut rapporter ce mot.

‘Il resterait encore à expliquer un autre attribut d'Hermès—celui de l'éloquence. Mais je ne me rends pas bien compte de la vraie nature du rapport qui unit le mot Hermès avec les mots comme *έρμηνεύω*, *έρμηνεία*.

‘J'ai oublié de vous indiquer d'où je fais venir les mots comme *έρμα*, etc. Je les crois dérivés du verbe *είργω*, *έργω*, en sorte que *έρμα* serait pour *έργμα*, et de la même famille que *έρκος*. L'esprit rude est-il primitif? Cela ne me paraît pas certain. Peut-être ces mots sont-ils de la même famille que le latin *arcere*, *erctum*, *ercules*, etc.’



his equivocal nature by stealing, though only in fun, the herds of *Apollo*, but restoring them without the violent combat that is waged for the same herds in India between *Indra*, the bright god, and *Vala*, the robber. In India the Dawn brings the light, in Greece the Twilight is itself supposed to have stolen it, or to hold back the light,\* and *Hermes*, the twilight, surrenders the booty when challenged by the sun-god *Apollo*. Afterwards the fancy of Greek poets takes free flight, and out of common clay gradually models a divine image. But even in the *Hermes* of Homer and other poets, we can frequently discover the original traits of a *Sâramêya*, if we take that word in the sense of twilight, and look on *Hermes* as a male representative of the light of the morning. He loves *Herse*, the dew, and *Aglauros*, her sister; among his sons is *Kephalos*, the head of the day. He is the herald of the gods, so is the twilight, so was *Saramâ*, the messenger of *Indra*. He is the spy of the night (*νυκτὸς ὀπωπυγίηρ*); he sends sleep and dreams; the bird of the morning, the cock, stands by his side. Lastly, he is the guide of travellers, and particularly of the souls who travel on their last journey; he is the *Psychopompos*. And here he meets again, to some extent, with the Vedic *Sâramêya*. The Vedic poets have imagined two dogs belonging to *Yama*, the lord of the departed spirit. They are called the messengers of *Yama*, blood-thirsty, broad-snouted, brown, four-eyed, pale, and *sâramêya*, the dawn-children. The departed is told to pass them by on his way to the Fathers, who

\* A similar idea is expressed in the Veda (v. 79, 9), where *Ushas* is asked to rise quickly, that the sun may not hurt her with his light, like a thief.

are rejoicing with *Yama*; *Yama* is asked to protect the departed from these dogs; and, finally, the dogs themselves are implored to grant life to the living and to let them see the sun again. These two dogs represent one of the lowest of the many conceptions of morning and evening, or, as we should say, of Time, unless we comprehend in the same class of ideas the 'two white rats,' which, in the fable, gnaw the root the culprit laid hold of when, followed by a furious elephant, he rushed into a well and saw at the bottom the dragon with open jaws, and the four serpents in the four corners of the well. The furious elephant is explained by the Buddhist moralist as death, the well as the earth, the dragon as hell, the four serpents as the four elements, the root of the shrub as the root of human life, the two white rats as sun and moon, which gradually consume the life of man.\* In Greece, *Hermes*, a child of the Dawn, with its fresh breezes, was said to carry off the soul of the departed; in India, Morning and Evening,† like two dogs, were fabled to watch for their prey, and to lay hold of those who could not reach the blessed abode of the Father. Greece, though she recognised *Hermes* as the guide of the souls of the departed, did not degrade him to the rank of a watch-dog of *Hades*.

\* Cf. Stanislas Julien, *Les Avadânas, Contes et Apologues Indiens* (Paris, 1859), vol. i. p. 190. Dr. Rost, *The Chinese and Japanese Repository*, No. v. p. 217. *History of Barlaam and Josaphat*, ascribed to John of Damascus (about 740 A.D.), chap. xii.; *Fables of Pilpay*; *Gesta Romanorum* (Swane's translation, vol. ii. No. 88), &c.

† Day and Night are called the outstretched arms of death, Kaushîtaki br. ii. 9: atha mṛityor ha vâ etau vrâjabâhû yad ahorâtre.

These watch-dogs, *Kerberos* and *Orthros*, represent, however, like the two dogs of *Yama*, the gloom of the morning and evening, here conceived as hostile and demoniacal powers. *Orthros* is the dark spirit that is to be fought by the Sun in the morning, the well-known Sanskrit *Vṛitra*; but *Hermes*, too, is said to rise *óρθριος*, in the gloom of the morning. *Kerberos* is the darkness of night, to be fought by *Herakles*, the Night herself being called *Śarvarî*\* in Sanskrit. *Hermes*, as well as *Kerberos*, is called *trikephalos*, † with three heads, and so is *Trisiras*, the brother of *Saranyû*, another name of the Dawn. ‡

There is one point still to be considered, namely, whether, by the poets of the Veda, the dawn is ever conceived as a dog, and whether there is in the hymns themselves any foundation for the later legends which speak of *Saramâ* as a dog. Professor Kuhn thinks that the word *śúna*, which occurs in the Veda, is a secondary form of *śvan*, meaning dog, and that such passages as ‘*śunám huvema maghávânám Índram*’ (iii. 31, 22) should be translated, ‘Let us invoke the dog, the mighty Indra.’ If this were so, we might prove, no doubt, that the Dawn also was spoken of as a dog. For we read (iv. 3, 11): ‘*Śunám náraḥ pári sadan ushásam*,’ ‘Men surrounded the dog, the Dawn.’ But

\* See M.M., ‘*Ist Bellerophon Vṛitrahan?*’ in Kuhn’s *Zeitschrift*, v. 149.

† *Hermes trikephalos*, Gerhard, *Gr. Myth.* 281, 8.

‡ That *Kerberos* is connected with the Sanskrit *śarvarî*, night, was pointed out by me in the *Transactions of the Philol. Soc.*, April 14, 1848. *Śabala*, a corruption of *śarvara*, is vindicated as the name of daybreak, *syâma*, black, as the name of nightfall, by the *Kaushîtaki-brâhmaṇa*, ii. 9 seq. (*Ind. Stud.* ii. 295.) This, no doubt, is an artificial explanation, but it shows a vague recollection of the original meaning of the two dogs.



does *śuna* ever mean dog? Never, it would seem, if used by itself. In all the passages where this word *śunām* occurs, it means for the sake of happiness, auspiciously.\* It is particularly used with verbs meaning to invoke (hve), to worship (parisad), to pray (īḍ).† There is not a single passage where *śunām* could be taken for dog. But there are compounds in which *śuna* would seem to have that meaning. In viii. 46, 28, *Śunâ-ishitam* most likely means carried by dogs, and in *Śunâsîrau* we have the name of a couple of deities, the former of which is said to be *Śuna*, the latter *Sîra*. *Yâska* recognises in *Śuna* a name of *Vâyû*, or the wind, in *Sîra* a name of *Aditya*, or the sun. Another authority, *Śaunaka*, declares *Śuna* to be a name of *Indra*, *Sîra* a name of *Vâyû*. *Âśvalâ-yana* (*Śrauta-sûtra*, ii. 20) declares that *Sunâsîrau* may be meant for *Vâyû*, or for *Indra*, or for *Indra* and *Sûrya* together. This shows, at all events, that the meaning of the two names was doubtful, even among early native theologians. The fact is that the *Śunâsîrau* occur but twice in the Rig-Veda, in a harvest hymn. Blessings are pronounced on the plough, the cattle, the labourers, the furrow, and among the rest the following words are addressed to the *Śunâsîrau*:—

‘O *Śunâsîrau*, be pleased with this prayer. The milk which you make in heaven, pour it down upon this earth.’ (5.) And again:—

\* i. 117, 18; iii. 31, 22; iv. 3, 11; 57, 4; 57, 8; vi. 16, 4; x. 102, 8; 126, 7; 160, 5.

† Of *śván*, we find the nominative *śvâ* (vii. 55, 5; x. 86, 4); the accusative *śvánam* (i. 161, 13; ix. 101, 1; 101, 13); the genitive *śunaḥ* (i. 182, 4; iv. 18, 3; viii. 55, 3); the nom. dual *śvánâ* (ii. 39, 4), and *śvánau*, x. 14, 10; 14, 11. Also *śvâpadaḥ*, x. 16, 6.

‘ May the ploughshares cut the earth with good luck! May the ploughers with the oxen follow with good luck! May *Parjanya* (the god of rain) give good luck with fat and honey! May the *Śunâsîrau* give us good luck!’

Looking at these passages, and at the whole hymn from which they are taken, I cannot agree with Dr. Roth, who, in his notes to the Nirukta, thinks that *Sîra* may in this compound mean the ploughshare, and *Śuna* some other part of the plough. *Sîra* might have that meaning, but there is nothing to prove that *śuna* ever meant any part of the plough. It will appear, if we read the hymn more attentively, that its author clearly addresses the two *Śunâsîrau* differently from the plough, the ploughshare, the furrow. They are asked to send rain from heaven, and they are addressed together with *Parjanya*, himself a deity, the god of rain. There is another verse quoted by *Āśvalâyana*, in which Indra is called *Śunâsîra*.\* What the exact meaning of the word is we cannot tell. It may be *Śuna*, as Dr. Kuhn would suggest, the dog, whether meant for *Vâyu* or *Indra*, and *Sîra*, the sun or the furrow; or it may be a very old name for the dog-star, called the Dog and the Sun, and in that case *sîra*, or its derivative *sairya*, would give us the etymon of *Seirios*.† But all this is doubtful, and there is nothing, at all events, to justify us in ascribing to *śuna* the meaning of dog in any passage of the Veda.

In the course of our investigations as to the original meaning of *Saramâ*, we had occasion to allude to

\* *Indram vayam śunâsîram asmin yajne havâmahe, sa vâjeshu pra no svishat.*

† Curtius, *Grundzüge*, ii. 128, derives *Σείριος* from *svar*, which, however, would have given *σῦριος* or *σείριος*, rather than *σειριος*.

another name, derived from the same root *sar*, and to which the meaning of *cloud* and *wind* is equally ascribed by Professor Kuhn, namely, *Saranyû*, fem.

Where *saranyû* is used as a masculine, its meaning is by no means clear. In the 61st hymn of the tenth book it is almost impossible to find a continuous thread of thought. The verse in which *Saranyu* occurs is addressed to the kings *Mitra* and *Varuna*, and it is said there that *Saranyu* went to them in search of the cows. The commentator here explains *Saranyu* unhesitatingly by *Yama* (*saraṇaśila*). In the next verse *Saranyu* is called a horse, just as *Saranyû* (fem.) is spoken of as a mare; but he is called the son of him, i.e., according to *Sâyana*, of *Varuna*.\* In iii. 32, 5, *Indra* is said to cause the waters to come forth together with the *Saranyus*, who are here mentioned very much like the *Angiras* in other places, as helpers of *Indra* in the great battle against *Vritra* or *Vala*. In i. 62, 4, the common epithets of the *Angiras* (*navagva* and *daśagva*) are applied to the *Saranyus*, and there too *Indra* is said to have torn *Vala* asunder with the *Saranyus*. I believe, therefore, we must distinguish between the *Saranyus* in the plural, a name of like import as that of the *Angiras*, possibly as that of the *Maruts*, and *Saranyu* in the singular, a name of the son of *Varuna* or of *Yama*.

Of *Saranyû*, too, as a female deity, we learn but little from the hymns of the *Rig-Veda*, and though we ought always to guard against mixing up the ideas of the *Rishis* with those of their commentators, it must

\* He is called there *jaranyu*, from a root which in Greek may have yielded *Gorgô*. Cf. Kuhn, *Zeitschrift*, i. 460. *Erinyes* and *Gorgons* are almost identified in Greek.



be confessed that in the case of *Saranyû* we should hardly understand what is said of her by the Rishis without the explanations given by later writers, such as *Yâska*, *Saunaka*, and others. The classical and often-quoted passage about *Saranyû* is found Rv. x. 17, 2:—

‘*Tvashtar* makes a wedding for his daughter, thus saying the whole world comes together; the mother of *Yama*, being wedded, the wife of the great *Vivasvat* has perished.’

‘They hid the immortal from the mortals, making one like her they have given her to *Vivasvat*. But she bore the *Aśvins* when this happened, and *Saranyû* left two couples \* behind.’

*Yâska* (xii. 10) explains: ‘*Saranyû*, the daughter of *Tvashtar*, had twins from *Vivasvat*, the sun. She placed another like her in her place, changed her form into that of a horse, and ran off. *Vivasvat*, the sun, likewise assumed the form of a horse, followed her and embraced her. Hence the two *Aśvins* were born, and the substitute (*Savarnâ*) bore *Manu*.’ *Yâska* likewise states that the first twins of *Saranyû* are by etymologists supposed to be *Madhyama* and *Mâdhyamikâ Vâch*, by mythologists *Yama* and *Yamî*; and he adds at the end, in order to explain the disappearance of *Saranyû*, that the night vanishes when the sun rises. This last remark, however, is explained or corrected by the commentator, † who says that *Ushas*,

\* One couple, according to Dr. Kuhn, *Zeitschrift für Vergleichende Sprachforschung*, i. p. 441.

† *Samkshepato Bhâshyakâro* ‘rtham nirâha. *Âdityasya* ‘Ushâ jâyâsa, sâdityodaye ‘ntardhîyate. It is possible, of course, to speak of the dawn both as the beginning of the day, and as the end of the night.

the Dawn, was the wife of *Aditya*, the sun, and that she, and not the night, disappears at the time of sunrise.

Before proceeding further, I shall add a few particulars from Śaunaka's *Bṛihaddevatâ*. He says that *Tvashtar* had a couple of children, *Saranyû* and *Trisiras* (Trikephalos); that he gave *Saranyû* to *Vivasvat*, and that she bore him *Yama* and *Yamî*: they were twins, but *Yama* was the elder of the two. Then *Saranyû* made a woman like herself, gave her the children, and went away. *Vivasvat* was deceived, and the substitute (*Savarṇâ*) bore him a child, *Manu*, as bright as his father. Afterwards *Vivasvat* discovered his mistake, and assuming himself the form of a horse, rushed after *Saranyû*, and she became in a peculiar manner the mother of *Nâsatya* and *Dasra*, who are called the two *Aśvins*, or horsemen.

It is difficult to say how much of these legends is old and genuine, and how much was invented afterwards to explain certain mythological phrases occurring in the Rig-Veda.

*Saranyû*, the water-woman,\* as the daughter of *Tvashtar* (maker), who is also called *Savitar* (creator), *Viśvarûpa*, having all forms (x. 10, 5)—as the wife of *Vivasvat* (also called *Gandharva*, x. 10, 4), as the mother of *Yama*—as hidden by the immortals from the eyes of mortals—as replaced by another wife, and again as the mother of the *Aśvins*—all this is ancient, and confirmed by the hymns of the Rig-Veda. But the

\* In x. 10, 4, I take *Gandharva* for *Vivasvat*, *Apyâ Yoshâ* for *Saranyû*, in accordance with *Sâyana*, though differing from Professor Kuhn. In the next verse *janitâ* is not father, but creator, and belongs to *Tvashtâ savitâ viśvarûpah*, the father of *Saranyû*, or the creator in general in his solar character of *Savitar*.

legend of *Saranyû* and *Vivasvat* assuming the form of horses, may be meant simply as an explanation of the name of their children, the *Aśvins* (equini or equites). The legend of *Manu* being the son of *Vivasvat* and *Savarnâ* may be intended as an explanation of the names *Manu Vaivasvata*, and *Manu Sâvarṇi*.

Professor Kuhn has identified *Saranyû* with the Greek *Erinyes*. With this identification I fully agree. I had arrived independently at the same identification, and we had discussed the problem together before Dr. Kuhn's essay was published. But our agreement ends with the name; and after having given a careful, and, I hope, impartial consideration to my learned friend's analysis, I feel confirmed rather than shaken in the view which I entertained of *Saranyû* from the first. Professor Kuhn, adopting in the main the views of Professor Roth, explains the myth as follows:—'*Tvashtar*, the creator, prepares the wedding for his daughter *Saranyû*, i.e. the fleet, impetuous, dark, storm-cloud (*Sturmwolke*), which in the beginning of all things soared in space. He gives to her as husband *Vivasvat*, the brilliant, the light of the celestial heights—according to later views, which, for the sake of other analogies, I cannot share, the sun-god himself. Light and cloudy darkness beget two couples of twins: first, *Yama*, i.e. the twin, and *Yamâ*, the twin-sister (a word which suggests itself); secondly, the two *Aśvins*, the horsemen. But after this the mother disappears, i.e. the chaotic, storm-shaken dimness; the gods hide her, and she leaves behind two couples. To *Vivasvat* there remains, as his wife, but one like her, an anonymous woman, not further to be defined. The latest tradition (*Vishṇu Purāṇa*, p. 266) calls her *Chhâyâ*, shadow, i.e. the myth knows of no other wife to give to him.'



Was this the original conception of the myth? Was *Saranyû* the storm-cloud, which in the beginning of all things was soaring in infinite space? Is it possible to form a clear conception of such a being, as described by Professor Roth and Professor Kuhn? And if not, how is the original idea of *Saranyû* to be discovered?

There is but one way, I believe, for discovering the original meaning of *Saranyû*, namely, to find out whether the attributes and acts peculiar to *Saranyû* are ever ascribed to other deities whose nature is less obscure. The first question, therefore, we have to ask is this—Is there any other deity who is said to have given birth to twins? There is, namely, *Ushas*, the Dawn. We read (iii. 39, 3) in a hymn which describes the sunrise under the usual imagery of *Indra* conquering darkness and recovering the sun:—

‘The mother of the twins has borne the twins; the tip of my tongue falls, for she approaches; the twins that are born assume form—they, the conquerors of darkness, that have come at the foot of the sun.’

We might have guessed from the text itself, even without the help of the commentator, that the ‘mother of the twins’ here spoken of is the Dawn; but it may be stated that the commentator, too, adopts this view.

The next question is, Is there any other deity who is spoken of as a horse, or rather, as a mare? There is, namely, *Ushas*, the Dawn. The sun, no doubt, is the deity most frequently spoken of as a horse.\* But the Dawn also is not only called rich in horses, and represented as carried by them, but she is herself compared to a horse. Thus, i. 30, 29, and iv. 52, 2, †

\* *Comparative Mythology*, p. 82.

† *ásve ná chitre arushi*; or better, *ásveva chitre*.

the Dawn is likened to a mare, and in the latter passage she is called at the same time the friend of the *Aśvins*. In the *Mahâbhârata* (*Âdiparva*, 2,599) the mother of the *Aśvins* is said to have the form of a mare, *vaḍavâ*.\*

Here, then, we have a couple, the Sun and the Dawn, that might well be represented in legendary language as having assumed the form of a horse and a mare.

The next question is, Who could be called their children? and in order to answer this question satisfactorily, it will be necessary to discuss somewhat fully the character of a whole class of Vedic deities. It is important to observe that the children of *Saranyû* are spoken of as twins. The idea of twin powers is one of the most fertile ideas in ancient mythology. Many of the most striking phenomena of nature were comprehended by the ancients under that form, and were spoken of in their mythic phraseology as brother and sister, husband and wife, father and mother. The Vedic Pantheon particularly is full of deities which are always introduced in the dual, and they all find their explanation in the palpable dualism of nature, Day and Night, Dawn and Gloaming, Morning and Evening, Summer and Winter, Sun and Moon, Light and Darkness, Heaven and Earth. All these are dualistic or correlative conceptions. The two are conceived as one, as belonging to each other; nay, they sometimes share the same name. Thus we find *Ahorâtre* † (not in *Rig-Veda*), day and

\* Kuhn, *Zeitschrift*, i. 523.

† A distinction ought to be made between *ahorâtrah*, or *ahorâtram*, the time of day and night together, a *νυχθημερον*,

night, but also *Ahanî* (i. 123, 7), the two days, i.e. day and night. We find *Ushâsânâktâ* (i. 122, 2), dawn and night, *Nâktoshâsâ* (i. 13, 7; 142, 7), night and dawn, but also *Ushâsau* (i. 188, 6), the two dawns, i.e. dawn and night. There is *Dyāvâprithivî*, heaven and earth (i. 143, 2), *Prithivîdyāvâ*, earth and heaven (iii. 46, 5), but also *Dyāvâ* (iii. 6, 4). Instead of *Dyāvâprithivî*, other compounds such as *Dyāvâkshâmâ* (iii. 8, 8), *Dyāvâbhûmî* (iv. 55, 1), are likewise met with in the text, *Dyuniśâu*, day and night, in the commentary (iii. 55, 15). Now as long as we have to deal with such outspoken names as these, there can be little doubt as to the meaning of the praises bestowed on them, or of the acts which they are said to have performed. If Day and Night, or Heaven and Earth, are praised as sisters, even as twin-sisters, we can hardly call this as yet mytho-

which is a masculine or neuter, and *ahorâtré*, the compound dual of *ahan*, day, and *râtrî*, night, meaning the day and the night, as they are frequently addressed together. This compound I take to be a feminine, though, as it can occur in the dual only, it may also be taken for a neuter, as is done by the commentary to Pânini, ii. 4, 28; 29, but not by Pânini himself. Thus A.V. vi. 128, 3, *Ahorâtrâbhyâm*, as used in the dual, does not mean twice twenty-four hours, but day and night, just as *sûryâchandra-masâbhyâm*, immediately after, means sun and moon. The same applies to A.V. x. 7, 6; 8, 23; Chând. Up. viii. 4, 1; Manu, i. 65; and other passages given by Boehtlingk and Roth, s. v. In all of these the meaning, 'two nycthemerons,' would be entirely inappropriate. That *ahorâtre* was considered a feminine as late as the time of the Vâjasaneyi-sanhitâ, is shown by a passage xiv. 30, where *ahorâtre* are called *adhipatnî*, two mistresses. *Ahorâtre* does not occur in the Rig-Veda. *Ahorâtrâni* occurs once in the tenth book. A passage quoted by B. R. from the Rig-Veda, where *ahorâtrâh* is said to occur as masc. plur., does not belong to the Rig-Veda at all.



logical language, though no doubt it may be a beginning of mythology. Thus we read, i. 123, 7:—

‘One goes away, the other comes near, the two *Ahans* (Day and Night) walk together. One of the two neighbours created darkness in secret, the Dawn flashed forth on her shining car.’

i. 185, 1: ‘Which of the two is first, which is last? How are they born, ye poets? Who knows it? These two support everything that exists; the two *Ahans* (Day and Night) turn round like wheels.’\*

In iv. 55, 3, Dawn and Night (*Ushâsânâktâ*) are spoken of as distinct from the two *Ahans* (Day and Night).

In v. 82, 8, *Savitar*, the sun, is said to walk before them.

In x. 39, 12, the daughter of the sky, i.e. the Dawn, and the two *Ahans*, Day and Night, are said to be born when the *Âsvins* put the horses to their car.

In a similar manner the *Dyâvâprithivî*, Heaven and Earth, are spoken of as sisters, as twins, as living in the same house (i. 159, 4), &c.

It is clear, however, that instead of addressing dawn and gloaming, morning and evening, day and night, heaven and earth by their right names, and as feminines, it was possible, nay, natural, to speak of light and darkness as male powers, and to address the author of light and darkness, the bringers of day and night, as personal beings. And so we find, corresponding to the former couples, a number of correlative deities, having in common most of the characteristics of the former, but assuming an independent mythological existence.

\* Or like things belonging to a wheel, spokes, &c.

The best known are the *Aśvins*, who are always spoken of in the dual. Whether *aśvin* means possessed of horses, horseman, or descendants of *Aśva*,\* the sun, or *Aśvâ*, the dawn, certain it is that the same conception underlies their name and the names of the sun and the dawn, when addressed as horses. The sun was looked upon as a racer, so was the dawn, though in a less degree, and so were, again, the two powers which seemed incorporated in the coming and going of each day and each night, and which were represented as the chief actors in all the events of the diurnal play. This somewhat vague but, for this very reason, I believe, all the more correct character of the two *Aśvins* did not escape even the later commentators. *Yâska*, in the twelfth book of his *Nirukta*, when explaining the deities of the sky, begins with the two *Aśvins*. They come first, he says, of all the celestial gods, they arrive even before sunrise. Their name is explained in the usual fanciful way of Indian commentators. They are called *Aśvin*, *Yâska* says, from the root *aś*, to pervade; because the one pervades everything with moisture, the other with light. He likewise quotes *Aurṇavâbha*, who derives *Aśvin* from *aśva*, horse. But who are these *Aśvins*? he asks. 'Some,' he replies, 'say they are heaven and earth, others day and night, others sun and moon; and the legendarians maintain that they were two virtuous kings.'

Let us consider next the time when the *Aśvins* appear. *Yâska* places it after midnight, as the light begins gradually to withstand the darkness of the night; and this agrees perfectly with the indications to be found in the *Rig-Veda*, where the *Aśvins* appear

\* Cf. *Kṛiśâśvinaḥ*, *Pāṇ.* iv. 2, 66.

before the dawn, 'when Night leaves her sister, the Dawn, when the dark one gives way to the bright (vii. 71, 1);' or 'when one black cow sits among the bright cows' (x. 61, 4, and vi. 64, 7).

Yâska seems to assign to the one the overcoming of light by darkness, to the other the overcoming of darkness by light.\* Yâska then quotes sundry verses to prove that the two *Âsvins* belong together (though one lives in the sky, the other in the air, says the commentator), that they are invoked together, and that they receive the same offerings. 'You walk along during the night like two black goats.† When, O *Âsvins*, do you come here towards the gods?'

In order to prove, however, that the *Âsvins* are likewise distinct beings, another half-verse is added, in which the one is called *Vâsâtya* (not *Nâsatya*), the son of Night, the other the son of Dawn.

More verses are then quoted from the Rig-Veda—those before quoted coming from a different source—where the *Âsvins* are called *ihéhajâtâu*, born here and there, i.e. on opposite sides, or in the air and in the sky. One is *jishnu*, victorious, he who bides in the air; the other is *subhaga*, happy, the son of *Dyu*, or the sky, and here identified with *Âditya* or the sun. Again: 'Wake the two who harness their cars in

\* The words of Yâska are obscure, nor does the commentator throw much light on them. 'Tatra yat tamo 'nupravishtam jyotishi tadbhâgo madhyamaḥ, tan madhyamasya rūpam. Yaj jyotis tamasy anupravishtam tadbhâgam tadrūpam âdityaḥ (sic). Tâv etau madhyamottamâv iti svamatam âchâryasya.' *Madhyama* may be meant for *Indra*, *Uttama* for *Âditya*; but in that case the early *Âsvin* would be *Aditya*, the sun, the late *Âsvin*, *Indra*. Dr. Kuhn (*l. c.* p. 442) takes *madhyama* for *Agni*.

† *Petvau* is explained by *mesha*, not by *megha*, as stated by Dr. Roth. Cf. *Rv.* x. 39, 2, ajâ iva.



the morning! Ásvins, come hither, for a draught of this Soma.'

Lastly: 'Sacrifice early, hail the Ásvins! Not in the dreary evening is the sacrifice of the gods. Nay, some person different from us sacrifices and draws them away. The sacrificer who comes first is the most liked.'

The time of the *Ásvins* is by Yâska supposed to extend to about sunrise; at that time other gods appear and require their offerings, and first of all *Ushas*, the Dawn.\* Here, again, a distinction is made between the dawn of the air (who was enumerated in the two preceding books, together with the other mid-air deities), and the dawn of the sky, a distinction which it is difficult to understand. For though in the verse which is particularly said to be addressed to the dawn of the air, she is said to appear in the eastern half of the *rajas*, which *rajas* Yâska takes to mean mid-air, yet this could hardly have constituted a real distinction in the minds of the original poets. 'These rays of the dawn have made a light in the eastern half of the welkin; they adorn themselves with splendour, like strong men unsheathing their weapons: the bright cows approach the mothers' (of light, *bhâso nirmâtryah*).

Next in time is *Sûryâ*, a female *Sûrya*, i.e. the sun as a feminine, or, according to the commentator, the Dawn again under a different name. In the Rig-Veda, too, the Dawn is called the wife of *Sûrya* (*sûryasya yóshâ*, vii. 75, 5), and the Ásvins are sometimes called the husbands of *Sûryâ*

\* *Rv.* i. 46, 14: *yuvóh ushâh ánu śríyam párijmanoh upá acharat.*

(Rv. iv. 43, 6). It is said in a Brâhmaṇa that *Savitar* gave *Sûryâ* (his daughter?) to King *Soma* or to *Prajâpati*. The commentator explains that *Savitar* is the sun, *Soma* the moon, and *Sûryâ* the moonlight, which comes from the sun. This, however, seems somewhat fanciful, and savours decidedly of later mythology.

Next in time follows *Vṛishâkapâyî*, the wife of *Vṛishâkapi*. Who she is is very doubtful.\* The commentary says that she is the wife of *Vṛishâkapi*, and that *Vṛishâkapi* is the sun, so called because he is enveloped in mist (*avaśyâvân*, or *avaśyâyavân*). Most likely † *Vṛishâkapâyî* is again but another conception or name of the Dawn, as the wife of the Sun, who draws up or drinks the vapours from the earth. Her son is said to be *Indra*, her daughter-in-law *Vâch*, here meant for thunder (?), a genealogy hardly in accordance with the rest of the hymn from which our verse is taken, and where *Vṛishâkapâyî* is rather the wife than the mother of *Indra*. Her oxen are clouds of vapour, which *Indra* swallows, as the sun might be said to consume the vapours of the morning. It is difficult, on seeing the name of *Vṛishâkapi*, not to think of *Erikapæos*, an Orphic name of *Protogonos*, and synonymous with *Phanes*, *Helios*, *Priapos*, *Dionysos*; but the original conception of *Vṛishâkapi* (*vṛishan*, bull, irrigator; *kapi*, ape or tremulous) is not much clearer than that of *Erikapæos*, and we should only be explaining *obscurum per obscurius*.

Next in order of the deities of the morning is our

\* According to Dr. Kuhn, the Evening-twilight, *l. c.* p. 441, but without proof.

† This is the opinion of Durga, who speaks of Ushas, *vṛishâkapâyavasthâyâm*.

*Saranyû*, explained simply as dawn, and followed by *Savitâr*, whose time is said to be when the sky is free from darkness and covered with rays.

We need not follow any further the systematic catalogue of the gods as given by *Yâska*. It is clear that he knew of the right place of the two *Aśvins*, and that he placed the activity of the one at the very beginning of day, and hence that of the other at the very beginning of night. He treats them as twins, born together in the early twilight.

*Yâska*, however, is not to be considered as an authority, except if he can be proved to agree with the hymns of the Rig-Veda, to which we now return.

The preponderating idea in the conception of the *Aśvins* in the hymns of the Rig-Veda is that of correlation, which, as we saw, they share in common with such twin-deities as heaven and earth, day and night, &c. That idea, no doubt, is modified according to circumstances, the *Aśvins* are brothers, Heaven and Earth are sisters. But if we remove these outward masks, we shall find behind them, and behind some other masks, the same actors, Nature in her twofold aspect of daily change—morning and evening, light and darkness—aspects which may expand into those of spring and winter, life and death; nay, even of good and evil.

Before we leave the *Aśvins* in search of other twins, and ultimately in search of the twin-mother, *Saranyû*, the following hymn may help to impress on our minds the dual character of these Indian *Dioskuroi*.

‘Like the two stones\* you sound for the same

\* Used at sacrifices for crushing and pressing out the juice of the Soma plant.



object.\* You are like two hawks rushing toward a tree with a nest; † like two priests reciting their prayers at a sacrifice; like the two messengers of a clan called for in many places.' (1.)

'Coming early, like two heroes on their chariots, like twin-goats, you come to him who has chosen you; like two women, beautiful in body; like husband and wife, wise among their people.' (2.)

'Like two horns, come first towards us; like two hoofs, rushing on quickly; like two birds, ye bright ones, every day, come hither, like two charioteers, ‡ O ye strong ones!' (3.)

'Like two ships, carry us across; like two yokes, like two naves of a wheel, like two spokes, like two fellows; like two dogs that do not hurt our limbs; like two armours, protect us from destruction!' (4.)

'Like two winds, like two streams, your motion is eternal; like two eyes, come with your sight towards us! Like two hands, most useful to the body; like two feet, lead us towards wealth.' (5.)

'Like two lips, speaking sweetly to the mouth; like two breasts, feed us that we may live. Like two nostrils, as guardians of the body; like two ears, be inclined to listen to us.' (6.)

'Like two hands, holding our strength together;

\* *Tádídártham* is used almost adverbially in the sense of 'for the same purpose.' Thus, *Rv.* ix. 1, 5, 'We come to see every day for the same purpose.' As to *jar*, I take it in the usual sense of sounding, making a noise, and, more particularly, praising. The stones for pressing out the Soma are frequently spoken of as themselves praising, while they are being handled by the priests (*v.* 37, 2).

† *Nidhi*, originally that where something is placed, afterwards treasure.

‡ *Rathyâ*. Cf. *v.* 76, 1.

like heaven and earth, drive together the clouds. O *Aśvins*, sharpen these songs that long for you, as a sword is sharpened with a whetstone.' (7.)

Like the two *Aśvins*, who are in later times distinguished by the names of *Dasra* and *Nâsatya*, we find another couple of gods, *Indra* and *Agni*, addressed together in the dual, *Indrâgnî*, but likewise as *Indrâ*, the two *Indras*, and *Agnî*, the two *Agnis* (vi. 60, 1), just as heaven and earth are called the two heavens, and the *Aśvins* the two *Dasras*, or the two *Nâsatyas*. *Indra* is the god of the bright sky, *Agni* the god of fire, and they have each their own distinct personality; but when invoked together, they become correlative powers and are conceived as one joint deity. Curiously enough, they are actually in one passage called *aśvinâ*\* (i. 109, 4), and they share several other attributes in common with the *Aśvins*. They are called brothers, they are called twins; and as the *Aśvins* were called *ihehajâte*, born here and there, i. e. on opposite sides, in the East and in the West, or in heaven and in the air, so *Indra* and *Agni*, when invoked together, are called *ihehamâtarâ*, they whose mothers are here and there (vi. 59, 2). Attributes which they share in common with the *Aśvins* are *vṛishaṇâ*, bulls, or givers of rain; † *vṛitrahaṇâ*, destroyers of *Vṛitra*, ‡ or of the powers of darkness; § *sambhuvâ*, § givers of happiness;

\* Dr. Kuhn, *l. c.* p. 450, quotes this passage and others, from which, he thinks, it appears that *Indra* was supposed to have sprung from a horse (x. 73, 10), and that *Agni* was actually called the horse (ii. 35, 6).

† *Indra* and *Agni*, i. 109, 4; the *Aśvins*, i. 112, 8.

‡ *Indra* and *Agni*, i. 108, 3; the *Aśvins*, viii. 8, 9 (*vṛitrahantamâ*).

§ *Indra* and *Agni*, vi. 60, 14; the *Aśvins*, viii. 8, 19; vi. 62, 5.

*supânî*, with good hands; *vîlupânî*,\* with strong hands; *jenyâvasû*, with genuine wealth. † But in spite of these similarities, it must not be supposed that *Indra* and *Agni* together are a mere repetition of the *Aśvins*. There are certain epithets constantly applied to the *Aśvins* (*śubhaspatî*, *vâjinîvasû*, *sudânû*, &c.), which, as far as I know, are not applied to *Indra* and *Agni* together; and *vice versâ* (*sadaspatî*, *sahurî*). Again, there are certain legends constantly told of the *Aśvins*, particularly in their character as protectors of the helpless and dying, and resuscitators of the dead, which are not transferred to *Indra* and *Agni*. Yet, as if to leave no doubt that *Indra*, at all events, coincides in some of his exploits with one of the *Aśvins* or *Nâsatyas*, one of the Vedic poets uses the compound *Indra-Nâsatyau*, *Indra* and *Nâsatya*, which, on account of the dual that follows, cannot be explained as *Indra* and the two *Aśvins*, but simply as *Indra* and *Nâsatya*.

Besides the couple of *Indrâgni*, we find some other, though less prominent couples, equally reflecting the dualistic idea of the *Aśvins*, namely, *Indra* and *Varuṇa*, and *Indra* and *Vishṇu*, and, more important than either, *Mitra* and *Varuṇa*. Instead of *Indrâ-Varuṇâ*, we find again *Indrâ*, ‡ the two *Indras*, and *Varuṇâ*, the two *Varunas* (iv. 41, 1). They are called *sudânû* (iv. 41, 8); *vṛishaṇâ* (vii. 82, 2); *śambhû* (iv. 41, 7); *mahâvasû* (vii. 82, 2). *Indrâ-Vishṇû* are actually called *dasrâ*, the usual name of the *Aśvins* (vi. 69, 7). Now *Mitra* and *Varuṇa* are clearly intended for day

\* *Indra* and *Agni*, *supânî*, i. 109, 4; the *Aśvins*, *vîlupânî*, vii. 73, 4.

† *Indra* and *Agni*, viii. 38, 7; the *Aśvins*, vii. 74, 3.

‡ As in Latin *Castores* and *Polluces*, instead of *Castor et Pollux*.



and night. They, too, are compared to horses (vi. 67, 4), and they share certain epithets in common with the twin-gods, *sudânû* (vi. 67, 2), *vṛishanau* (i. 151, 2). But their character assumes much greater distinctness, and though clearly physical in their first conception, they rise into moral powers, far superior in that respect to the *Aśvins* and to *Indrâgnî*. Their physical nature is perceived in a hymn of *Vasishtha* (vii. 63):—

‘The sun, common to all men, the happy, the all-seeing, steps forth; the eye of Mitra and Varuṇa, the bright; he who rolls up darkness like a skin.’

‘He steps forth, the enlivener of men, the great waving light of the sun; wishing to turn round the same wheel which his horse *Etaśa* draws, joined to the team.’

‘Shining forth, he rises from the lap of the dawn, praised by singers, he, my god Savitar, stepped \* forth, who never misses the same place.’

‘He steps forth, the splendour of the sky, the wide-seeing, the far-aiming, the shining wanderer; surely, enlivened by the sun, do men go to their tasks and do their work.’

‘Where the immortals made a walk for him, there he follows the path, soaring like a hawk. We shall worship you, *Mitra* and *Varuṇa*, when the sun has risen, with praises and offerings.’

‘Will *Mitra*, *Varuṇa*, and *Aryaman* bestow favour on us and our kin? May all be smooth and easy to us! Protect us always with your blessings!’

The ethic and divine character of *Mitra* and *Varuṇa* breaks forth more clearly in the following hymn (vii. 65):—

\* *Chhad* as *scandere*, not as *scondere*.

‘When the sun has risen I call on you with hymns, *Mitra* and *Varuṇa*, full of holy strength; ye whose imperishable divinity is the oldest, moving on your way with knowledge of everything.’\*

‘For these two are the living spirits among the gods; they are the lords; do you make our fields fertile. May we come to you, *Mitra* and *Varuṇa*, where they nourish days and nights.’

‘They are bridges made of many ropes leading across unrighteousness, difficult to cross to hostile mortals. Let us pass, *Mitra* and *Varuṇa*, on your way of righteousness, across sin, as in a ship across the water.’

Now if we inquire who could originally be conceived as the father of all these correlative deities, we can easily understand that it must be some supreme power that is not itself involved in the diurnal revolutions of the world, such as the sky, for instance, conceived as the father of all things, or some still more abstract deity, like *Prajâpati*, the lord of creation, or *Tvashtar*, the fashioner, or *Savitar*, the creator. Their mother, on the contrary, must be the representative of some place in which the twins meet, and from which they seem to spring together in their diurnal career. This place may be either the dawn or the gloaming, the sunrise or the sunset, the East or the West, only all these conceived not as mere abstractions, but as mysterious beings, as mothers, as powers containing within themselves the whole mystery of life and death brought thus visibly before the eyes of the thoughtful worshipper. The dawn, which to us is merely a beautiful sight, was to the early gazer and thinker the problem of all problems. It was the

\* The last sentence is doubtful.

unknown land from whence rose every day those bright emblems of a divine power which left in the mind of man the first impression and intimation of another world, of power above, of order and wisdom. What we simply call the sunrise, brought before their eyes every day the riddle of all riddles, the riddle of existence. The days of their life sprang from that dark abyss which every morning seemed instinct with light and life. Their youth, their manhood, their old age, all were to the Vedic bards the gift of that heavenly mother who appeared bright, young, unchanged, immortal every morning, while everything else seemed to grow old, to change, and droop, and at last to set, never to return. It was there, in that bright chamber, that, as their poets said, mornings and days were spun, or, under a different image, where morning and days were nourished (x. 37, 2; vii. 65, 2), where life or time was drawn out (i. 113, 16). It was there that the mortal wished to go to meet Mitra and Varuṇa. The whole theogony and philosophy of the ancient world centred in the Dawn, the mother of the bright gods, of the sun in his various aspects, of the morn, the day, the spring; herself the brilliant image and visage of immortality.

It is of course impossible to enter fully into all the thoughts and feelings that passed through the minds of the early poets when they formed names for that far far East from whence even the early dawn, the sun, the day, their own life, seemed to spring. A new life flashed up every morning before their eyes, and the fresh breezes of the dawn reached them like greetings wafted across the golden threshold of the sky from the distant lands beyond the mountains, beyond the clouds, beyond the dawn, beyond 'the immortal sea



which brought us hither.' The Dawn seemed to them to open golden gates for the sun to pass in triumph, and while those gates were open their eyes and their minds strove in their childish way to pierce beyond the limits of this finite world. That silent aspect awakened in the human mind the conception of the Infinite, the Immortal, the Divine, and the names of dawn became naturally the names of higher powers. *Saranyû*, the Dawn, was called the mother of Day and Night, the mother of *Mitra* and *Varuṇa*, divine representatives of light and darkness; the mother of all the bright gods (i. 113, 19); the face of *Aditi* (i. 113, 19).\* Now, whatever the etymological meaning of *Aditi*,† it is clear that she is connected with the Dawn—that she represents that which is beyond the dawn, and that she was raised into an emblem of the Divine and the Infinite. *Aditi* is called the *nâbhir amritasya, umbilicus immortalitatis*, the cord that connects the immortal and the mortal. Thus the poet exclaims (i. 24, 1): 'Who will give us back to the great *Aditi* (to the Dawn, or rather to her from whom we came), that I may see father and mother?' *Āditya*, literally the son of *Aditi*, became the name, not only of the sun, but of a class of seven ‡ gods, and of gods in general. Rv. x. 63, 2: 'You gods who are born of *Aditi*, from the water, who are born of the earth, hear my calling here.' As everything came from *Aditi*, she is called not only the mother of *Mitra*, *Varuṇa*, *Aryaman*, and of the *Ādityas*, but likewise, in a promis-

\* Rv. viii. 25, 3: tá mââtá—mahí jajâna Aditih. Cf. viii. 101, 15; vi. 67, 4.

† Boehtlingk and Roth derive *aditi* from *a* and *diti*, and *diti* from *dâ* or *do*, to cut; hence literally the *Infinite*. This is doubtful, but I know no better etymology.

‡ Rv. ix. 114, 3: Devâh Ādityâh yé saptâ.

cuous way, the mother of the Rudras (storms), the daughter of the Vasus, the sister of the Âdityas.\* 'Aditi is the sky,† Aditi the air, Aditi is mother, father, son; all the gods are Aditi, and the five tribes; Aditi is what is born, Aditi what will be born.'‡ In later times she is the mother of all the gods.§

In an 'Essay on Comparative Mythology,' published in the 'Oxford Essays' of 1856, I collected a number of legends || which were told originally of the Dawn. Not one of the interpretations there proposed has ever, as far as I am aware, been controverted by facts or arguments. The difficulties pointed out by scholars such as *Curtius* and *Sonne*, I hope I have removed by a fuller statement of my views. The difficulty which I myself have most keenly felt is the monotonous character of the dawn and sun legends. 'Is everything the Dawn? Is everything the Sun?' This question I had asked myself many times before it was addressed to me by others. Whether, by the remarks on the prominent position occupied by the dawn in the involuntary philosophy of the ancient world, I have succeeded in partially removing that objection, I cannot tell, but I am bound to say that my own researches lead me again and again to the dawn and the sun as the chief burden of the myths of the Aryan race.

I will add but one more instance to-day, before I return to the myth of *Saranyû*. We saw how

\* *Rv.* viii. 101, 15.

† Cf. *Rv.* x. 63, 3.

‡ *Rv.* i. 89, 10.

§ See Boehtlingk and Roth, s. v.

|| Eos and Tithonos; Kephalos, Prokris, and Eos; Daphne and Apollo; Urvaśî and Purûravas; Orpheus and Eurydice; Charis and Eros.

many names of different deities were taken from one and the same root, *dyu* or *div*. I believe that the root *ah*,\* which yielded in Sanskrit *Ahanâ* (Aghnyâ, i.e. Ahnyâ), the Dawn, *ahan* and *ahar*,† day, supplied likewise the germ of *Athênê*. First, as to letters, it is known that Sanskrit *h* is frequently the neutral exponent of guttural, dental, and labial soft aspirates. *H* is guttural, as in *arh* and *argh*, *ranh* and *rangh*, *mah* and *magh*. It is dental, as in *vrih* and *vridh*, *nah* and *naddha*, *saha* and *sadha*, *hita* instead of *dhita*, *hi* (imperative) and *dhi*. It is labial, as *grah* and *grabh*, *nah* and *nâbhi*, *luh* and *lubb*. Restricting our observation to the interchange of *h* and *dh*, or *vice versa*, we find, first, in Greek dialects, variations such as *órnichos* and *órnithos*, *íchma* and *íthma*.‡ Secondly, the root *ghar* or *har*, which, in Sanskrit, gives us

\* The root *ah* is connected with root *dah*, from which *Daphne* (cf. *as*, from which *ásru*, and *das*, from which *δάκρυ*). Curtius mentions the Thessalian form, *δαύχνη* for *δάφνη*. (*Griech. Et.* ii. 68). He admits my explanation of the myth of Daphnê as the dawn, but he says, 'If we could but see why the dawn is changed into a laurel! Is it not from mere homonymy? The dawn was called *δάφνη*, the burning, so was the laurel, as wood that burns easily; the two, as usual, were supposed to be one.' See *Etym. M.* p. 250, 20; *δανχμόν εὔκαυστον ξύλον*; Hesych. *δανχμόν εὔκαυστον ξύλον δάφνης* (l. *εὔκαυστον ξύλον, δάφνην*, Ahrens, *Dial. Græc.* ii. 532). Legerlotz in Kuhn's *Zeitschrift*, vii. 292.

† Is Ἀχιλλεύς, the mortal solar hero, *Aharyu*? The change of *r* into *l* begins in the Sanskrit *Ahalyâ*, who is explained by Kumârilâ as the goddess of night, beloved and destroyed by Indra (see M. M.'s *History of Sanskrit Literature*, p. 530). As Indra is called *ahalyâyai jârah*, it is more likely that she was meant for the dawn. *Leuke*, the island of the blessed, the abode of heroes after their death, is called *Achillêa*. *Schol. Pind. Nem.* 4, 49. Jacobi, *Mythologie*, p. 12. Ἀχαιός might be *Ahasya*, but *Achivus* points in another direction.

‡ Cf. Mehlhorn, *Griech. Grammatik*, p. 111.



*gharma*, heat, is certainly the Greek *ther*, which gives us *thermós*, warm.\* If it be objected that this would only prove the change of Sanskrit *h* into Greek  $\vartheta$  as an initial, not as a final, we can appeal to Sanskrit *guh*, to hide, Greek *keúthō*; possibly to Sanskrit *rah*, to remove, Greek *lath*.† In the same manner, then, the root *ah*, which in Greek would regularly appear as *ach*, might likewise there have assumed the form *ath*. As to the termination, it is the same which we find in *Sel-ênê*, the Sanskrit *ânâ*. *Athênê*, therefore, as far as letters go, would correspond to a Sanskrit *Ahânâ*, which is but a slightly differing variety of *Ahanâ*,‡ a recognised name of the dawn in the Veda.

What, then, does *Athênê* share in common with the Dawn? The Dawn is the daughter of *Dyu*, *Athênê* the daughter of *Zeus*. Homer knows of no mother of *Athênê*, nor does the Veda mention the name of a mother of the Dawn, though her parents are spoken of in the dual (i. 123, 5).

The extraordinary birth of *Athênê*, though post-Homeric, is no doubt of ancient date, for it seems no more than the Greek rendering of the Sanskrit phrase that Ushas, the Dawn, sprang from the head of *Dyu*, the *mûrdhâ divah*, the East, the forehead of the sky. In Rome she was called *Capta*, i.e. *Capita*, head-goddess, in Messene *Koryphasia*, in Argos *Akria*.§ One of the principal features of the Dawn in the

\* See Curtius, *Griechische Etymologie*, ii. 79.

† Schleicher, *Compendium*, § 125, and p. 711. Raumer, *Gesammelte Sprachwissenschaftliche Schriften*, p. 84.

‡ On changes like *ana* and *âna*, see Kuhn, *Herabkunft des Feuers*, p. 28.

§ Gerhard, *Griechische Mythologie*, § 253, 3 h. Preller, *Römische Mythologie*, p. 260, n.

Veda is her waking first (i. 123, 2), and her rousing men from their slumber. In Greece, the cock, the bird of the morning, is next to the owl, the bird of *Athênê*. If *Athênê* is the virgin goddess, so is *Ushas*, the dawn, *yuvatih*, the young maid, *arepasâ tanvâ*, with spotless body. From another point of view, however, husbands have been allotted both to *Athênê* and to *Ushas*, though more readily to the Indian than to the Greek goddess.\* How *Athênê*, being the dawn, should have become the goddess of wisdom, we can best learn from the Veda. In Sanskrit, *budh* means to wake and to know; † hence the goddess who caused people to wake was involuntarily conceived as the goddess who caused people to know. Thus it is said that she drives away darkness, and that through her those who see little may see far and wide (i. 113, 5). 'We have crossed the frontier of this darkness,' we read; 'the dawn shining forth gives light' (i. 92, 6). But light (*vayinâ*) has again a double meaning, and means knowledge much more frequently and distinctly than light. In the same hymn (i. 92, 9) we read:—

'Lighting up all the worlds, the Dawn, the eastern, the seer, shines far and wide; waking every mortal to walk about, she received praise from every thinker.'

Here the germs of *Athênê* are visible enough. That she grew into something very different from the Indian *Ushas*, when once worshipped as their tutelary deity by the people of the Morning-city of Attica, needs no remark. But though we ought carefully to watch any other tributary that enters into the later growth of the bright, heaven-sprung goddess, we need

\* Gerhard, *Griechische Mythologie*, § 267, 3.

† *Rv.* i. 29, 4: *sasântu tyâḥ árâtayaḥ bôdhantu sûra rââtayaḥ.*

not look, I believe, for any other spring-head than the forehead of the sky, or Zeus.

Curious it is that in the mythology of Italy, *Minerva*, who was identified with *Athênê*, should from the beginning have assumed a name apparently expressive of the intellectual rather than the physical character of the Dawn-goddess. *Minerva*, or *Menerva*,\* is clearly connected with *mens*, the Greek *ménos*, the Sanskrit *manas*, mind; and as the Sanskrit *śiras*, Greek *kéras*, horn, appears in Latin *cervus*, so Sanskrit *manas*, Greek *ménos*, in Latin *Menerva*. But it should be considered that *mâne* in Latin is the *morning*, *Mânia*, an old name of the mother of the Lares;† that *mânare* is specially used of the rising sun;‡ and that *Mâtuta*, not to mention other words of the same kin, is the Dawn. From this it would appear that in Latin the root *man*, which in the other Aryan languages is best known in the sense of thinking, was at a very early time put aside, like the Sanskrit *budh*, to express the revived consciousness of the whole of nature at the approach of the light of the morning; unless there was another totally distinct root, peculiar to Latin, expressive of that idea. The two ideas certainly seem to hang closely together; the only difficulty being to find out whether 'wide awake' led on to 'knowing,' or *vice versâ*. Anyhow I am inclined to admit in the name of *Minerva* some recollection of the idea expressed in *Matuta*, and even in *promenervare*, used

\* Preller, *Römische Mythologie*, p. 258.

† Varro, L. L. 9, 38, § 61, ed. Müller.

‡ Manat dies ab oriente. Varro, L. L. 6, 2, 52, § 4. Manare solem antiqui dicebant, quum solis orientis radii splendorem jacere cœpissent. Festus, p. 158, ed. Müller.



in the *Carmen saliare*\* in the sense of to admonish, I should suspect a relic of the original power of rousing.

The tradition which makes Apollo the son of Athene,† though apparently modern and not widely spread, is yet by no means irrational, if we take Apollo as the sun-god rising from the brightness of the Dawn. Dawn and Night frequently exchange places, and though the original conception of the birth of *Apollo* and *Artemis* was no doubt that they were both children of the night, *Lêtô* or *Latona*, yet even then the place or the island in which they are fabled to have been born is *Ortygia*, afterwards called *Delos*, or *Delos*, afterwards called *Ortygia*, or both *Ortygia* and *Delos*.‡ Now *Delos* is simply the bright island; but *Ortygia*, though localized afterwards in different places,§ is the dawn, or the dawn-land. *Ortygia* is derived from *ortyx*, a quail. The quail in Sanskrit is called *vartikâ*, i.e. the returning bird, one of the first birds that return with the return of spring. The same name, *Vartikâ*, is given in the Veda to one of the many beings delivered or revived by the *Aśvins*, i.e. by day and night; and I believe *Vartikâ*, the returning, is again one of the many names of the Dawn. The story told of her is very short. ‘She was swallowed, but she was delivered by the *Aśvins*’ (i. 112, 8). ‘She was delivered by them from the mouth of the wolf’ (i. 117, 6; 116, 14; x. 39, 13). ‘She was delivered by the *Aśvins* from agony’ (i. 118, 8). All these are but legendary repetitions of the old saying, ‘the Dawn or the quail

\* Festus, p. 205. Paul. Diac. p. 123. Minerva dicta quod bene moneat.

† Gerhard, *l. c.* § 267, 3.

‡ Jacobi, p. 574, n.

§ Gerhard, *Griechische Mythologie*, § 335, 2.

comes,' 'the quail is swallowed by the wolf,' 'the quail has been delivered from the mouth of the wolf.' Hence *Ortygia*, the quail-land, the East, 'the glorious birth,' where Leto was delivered of her solar twins, and *Ortygia*, a name given to *Artemis*, the daughter of *Leto*, as born in the East.

The Dawn, or rather the mother of the dawn, and of all the bright visions that follow in her train, took naturally a far more prominent place in the religious ideas of the young world than she who was called her sister, the gloaming, or the evening, the end of the day, the approach of darkness, of cold, and, it may be, of death. In the dawn there lay all the charms of a beginning and of youth, and, from one point of view, even the night might be looked upon as the offspring of the dawn, as the twin of the day. As the bright child waned, the dark child grew; as the dark flew away, the bright returned; both were born of the same mother—both seemed to have emerged together from the brilliant womb of the East. It was impossible to draw an exact line, and to say where the day began and where it ended, or where the night began and where it ended. When the light enters into the darkness, as the Brahmans said, then the one twin appears; when the darkness enters the light, then the other twin follows. 'The twins come and go,' this was all the ancient poets had to say of the racing hours of day and night; it was the last word they could find, and, like many a good word of old, this too followed the fate of all living speech; it became a formula, a saw, a myth.

We know who was the mother of the twins; it was the dawn, who dies in giving birth to morning and evening; or, if we adopt the view of *Yâska*, it was

the night, who disappears when the new couple is born. She may be called by all the names of the dawn, and even the names of the night might express one side of her character. Near her is the stand from whence the horses of the sun start on their diurnal journey ;\* near her is the stable which holds the cows, i.e. the bright days following one after the other like droves of cattle, driven out by the Sun every morning to their pastures, carried off by robbers every night to their gloomy cave, but only to be surrendered by them again and again, after the never-doubtful battle of the early twilight.

As the dawn has many names, so her offspring too is polyonymous; and as her most general name is that of *Yamasûh*, † or Twin-mother, so the most general name of her offspring too is *Yamau*, the twins. Now we have seen these twins as men, the *Aśvins*, *Indra* and *Agni*, *Mitra* and *Varuṇa*. We have seen how the same powers might be conceived as women, as day and night, and thus we find them represented not only as sisters, but as twin sisters. For instance, *Rv.* iii. 55, 11 :—

‘The two twin sisters ‡ have made their bodies to differ; one of them is brilliant, the other dark: though the dark one and the bright are two sisters, the great divinity of the gods is *one*.’

By a mere turn of the mythological kaleidoscope, these two sisters, day and night, instead of being the

\* Hence, I believe, the myth of *Aśvattha*, originally horse-stand, then confounded with *aśvattha*, *ficus religiosa*. See, however, Kuhn, *Zeitschrift*, i. p. 467.

† *Rv.* iii. 39, 3. *Yamasûh*, *yamau yamalau sûta iti yamasûr usho'bhimânini devatâ. Sâ yamâ yamalâv Aśvinâv atroshaḥ-kâle 'sûta.*

‡ *Yamyâ*, a dual in the feminine; cf. v. 47, 5.



twin children of the dawn, appear in another poem as the two mothers of the sun. Rv. iii. 55, 6 :—

‘ This child which went to sleep in the West walks now alone, having two mothers, but not led by them; these are the works of Mitra and Varuṇa, but the great divinity of the gods is *one*.’

In another hymn, again, the two, the twins, born here and there (*ihehajâte*), who carry the child, are said to be different from his mother (v. 47, 5), and in another place one of the two seems to be called the daughter of the other (iii. 55, 12).

We need not wonder, therefore, that the same two beings, whatever we like to call them, were sometimes represented as male and female, as brother and sister, and again as twin-brother and twin-sister. In that mythological dialect the day would be the twin-brother, *Yama*, the night, the twin-sister, *Yamî* :— and thus we have arrived at last at a solution of the myth which we wished to explain. A number of expressions had sprung up, such as ‘ the twin-mother,’ i.e. the Dawn; ‘ the twins,’ i.e. Day and Night; ‘ the horse-children,’ or ‘ horsemen,’ i.e. Morning and Evening; ‘ Saranyû is wedded by Vivasvat,’ i.e. the Dawn embraces the sky; ‘ Saranyû has left her twins behind,’ i.e. the Dawn has disappeared, it is day; ‘ Vivasvat takes his second wife,’ i.e. the sun sets in the evening twilight; ‘ the horse runs after the mare,’ i.e. the sun has set. Put these phrases together, and the story, as told in the hymn of the Rig-Veda, is finished. The hymn does not allude to *Manu*, as the son of *Savarnâ*, it only calls the second wife of *Vivasvat* by that name, meaning thereby no more than what the word implies, a wife similar to his first wife, as the gloaming is similar to the dawn. The fable of *Manu* is probably of

a later date. For some reason or other, *Manu*, the mythic ancestor of the race of man, was called *Sâvarṇi*, meaning, possibly, the Manu of all colours, i.e. of all tribes or castes. The name may have reminded the Brahmans of *Savarṇâ*, the second wife of Vivasvat, and as *Manu* was called *Vaivasvata*, the worshipper, afterwards the son, of Vivasvat, the *Manu Sâvarṇi* was naturally taken as the son of *Savarṇâ*. This, however, I only give as a guess till some more plausible explanation of the name and myth of *Manu Sâvarṇi* can be suggested.

But it will be necessary to follow still further the history of *Yama*, the twin, properly so called. In the passage examined before, *Saranyû* is simply called the mother of *Yama*, i.e. the mother of the twin, but his twin-sister, *Yamî*, is not mentioned. Yet *Yamî*, too, was well known in the Veda, and there is a curious dialogue between her and her brother, where she (the night) implores her brother (the day) to make her his wife, and where he declines her offer because, as he says, 'they have called it sin that a brother should marry his sister' (x. 10, 12).

The question now arises whether *Yama*, meaning originally twin, could ever be used by itself as the name of a deity? We may speak of twins; and we saw how, in the hymns of the Veda, several correlative deities are spoken of as twins; but can we speak of a twin, and give that name to an independent deity, worshipped without any reference to its complementary deity? The six seasons, each consisting of two months, are called the six twins (Rv. i. 164, 15); but no single month could therefore properly be called the twin.\*

\* As to *yamau* and *yamâh*, see *Rv.* x. 117, 9; v. 57, 4; x. 13, 2.

Nothing can be clearer than such passages as x. 8, 4 :  
 ‘Thou, O Vasu (sun), comest first at every dawn!  
 thou wast the divider of the two twins,’ i. e. of day and  
 night, of morning and evening, of light and darkness,  
 of Indra and Agni, &c.

Let us now look to a verse (Rv. i. 66, 4) where  
 Yama by itself is supposed to mean the twin, and  
 more particularly Agni. The whole hymn is addressed  
 to Agni, fire, or light, in his most general character.  
 I translate literally :—

‘Like an army let loose, he wields his force, like  
 the flame-pointed arrow of the shooter. Yama is  
 born, Yama will be born, the lover of the girls, the  
 husband of the wives.’

This verse, as is easily seen, is full of allusions,  
 intelligible to those who listened to the poets, but to  
 us perfect riddles, to be solved only by a comparison  
 of similar passages, if such passages can be found.  
 Now, first of all, I do not take *Yama* as a name of  
*Agni*, or as a proper name at all. But recollecting  
 the twinship of Agni and Indra, as representatives of  
 day and night, I translate :—

‘(One) twin is born, (another) twin will be born,’ i. e.  
 Agni, to whom the hymn is addressed, is born, the  
 morning has appeared; his twin, or, if you like, his  
 other self, the evening, will be born.

The next words, ‘the lover of the girls,’ ‘the hus-  
 band of the wives,’ contain, I believe, a mere repetition  
 of the first hemistich. The light of the morning, or  
 the rising sun, is called the lover of the girls, these  
 girls being the dawns, from among whom he rises.  
 Thus (i. 152, 4) it is said : ‘We see him coming forth,  
 the lover of the girls,\* the unconquerable.’

\* Sâyaṇa rightly explains *kaninâm* by *ushasân*.



Rv. i. 163, 8, the sun-horse, or the sun as horse, is addressed:—

‘After thee there is the chariot; after thee, Arvan, the man; after thee, the cows; after thee, the host of the girls.’

Here the cows and the girls are in reality but two representations of the same thing—the bright days, the smiling dawns.

Rv. ii. 15, 7, we read of *Parâvrij*, a name which, like *Chyâvana* \* and other names, is but a mask of the sun returning in the morning after his decline in the evening:—

‘He (the old sun), knowing the hiding-place of the girls, rose up manifest, he the escaper; the lame (sun) walked, the blind (sun) saw; Indra achieved this when fired with Soma.’

The hiding-place of the girls is the hiding-place of the cows, the East, the home of the ever-youthful dawns; and to say that the lover of the girls † is there, is only a new expression for ‘the twin is born.’

Lover (*jârah*), by itself, too, is used for the rising sun:—

Rv. vii. 9, 1: ‘The lover woke from the lap of the Dawn.’

Rv. i. 92, 11: ‘The wife (Dawn) shines with the light of the lover.’

What, then, is the meaning of ‘the husband of the wives?’ Though this is more doubtful, I think it not unlikely that it was meant originally for the evening sun, as surrounded by the splendours of the gloam-

\* In i. 116, 10, it is said that the *Aśvins* restored the old *Chyâvana* to be again the husband of the girls.

† *Pūshan* is called the lover of his sister, the husband of his mother (vi. 55, 4 and 5; x. 3, 3: *svāsâram jârah abhî eti paschât*).

ing, as it were by a more serene repetition of the dawn. The Dawn herself is likewise called the wife (iv. 52, 1); but the expression 'husband of the wives' is in another passage clearly applied to the sinking sun. Rv. ix. 86, 32: 'The husband of the wives approaches the end.'\* If this be the right interpretation, 'the husband of the wives' would be the same as 'the twin that is to be born;' and the whole verse would thus receive a consistent meaning:—

'One twin is born (the rising sun, or the morning), another twin will be born (the setting sun, or the evening); the lover of the girls (the young sun), the husband of the wives' (the old sun).

The following translations of this one line, proposed by different scholars, will give an idea of the difficulty of Vedic interpretation:—

*Rosen*: 'Sociatæ utique Agni sunt omnes res natæ, sociatæ illi sunt nascituræ, Agnis est pronubus puellarum, maritus uxorum.'

*Langlois*: 'Jumeau du passé, jumeau de l'avenir, il est le fiancé des filles, et l'époux des femmes.'

*Wilson*: 'Agni, as Yama, is all that is born; as Yama, all that will be born: he is the lover of maidens, the husband of wives.'

*Kuhn*: 'The twin (Agni) is he who is born; the twin is what is to be born.'

*Benfey*: 'A born lord, he rules over births; the suitor of maidens, the husband of wives.'

There is, as far as I know, no other passage in the Rig-Veda where *Yama*, used by itself in the sense of

\* Nishkrīta, according to B.R., a rendezvous; but in our passage, the original meaning, to be undone, seems more appropriate.

twin, has been supposed to apply to *Agni* or the sun. But there are several passages, particularly in the last book, in which Yama occurs as the name of a single deity. He is called king (x. 14, 1); the departed acknowledge him as king (x. 16, 9). He is together with the Pitars, the fathers (x. 14, 4), with the Angiras (x. 14, 3), the Atharvans, Bhṛigus (x. 14, 6), the Vasishṭhas (x. 15, 8). He is called the son of *Vivasvat* (x. 14, 5), and an immortal son of *Yama* is mentioned (i. 83, 5). Soma is offered to him at sacrifices (x. 14, 13), and the departed fathers will see Yama, together with *Varuṇa* (x. 14, 7), and they will feast with the two kings (x. 14, 10). The king of the departed, Yama, is likewise the god of death (x. 165, 4),\* and two dogs are mentioned who go about among men as his messengers (x. 14, 12). Yama, however, as well as his dogs, is likewise asked to bestow life, which originally could have been no more than to spare life (x. 14, 14; 14, 12).

Is it possible to discover in this *Yama*, the god of the departed, one of the twins? I confess it seems a most forced and artificial designation; and I should much prefer to derive this *Yama* from *yam*, to control. Yet his father is *Vivasvat*, and the father of the twins was likewise *Vivasvat*. Shall we ascribe to *Vivasvat* three sons, two called the twins, *Yamau*, and another called *Yama*, the ruler? It is possible, yet it is hardly credible; and I believe it is better to learn to walk in the strange footsteps of ancient speech, however awkward they may seem at first. Let us imagine, then, as well as we can, that *Yama*, twin,

\* *Rv.* i. 38, 5. The expression, 'the path of Yama,' may be used in an auspicious or inauspicious sense.



was used as the name of the evening, or the setting sun, and we shall be able perhaps to understand how in the end Yama came to be the king of the departed and the god of death.

As the East was to the early thinkers the source of life, the West was to them *Nirriti*, the *exodus*, the land of death. The sun, conceived as setting or dying every day, was the first who had trodden the path of life from East to West—the first mortal—the first to show us the way when our course is run, and our sun sets in the far West. Thither the fathers followed Yama; there they sit with him rejoicing, and thither we too shall go when his messengers (day and night, see p. 476) have found us out. These are natural feelings and intelligible thoughts. The question is, Were they the thoughts and feelings that passed through the minds of our forefathers when they changed *Yama*, the twin-sun, the setting sun, into the ruler of the departed and the god of death?

That *Yama's* character is solar, might be guessed from his being called the son of *Vivasvat*. *Vivasvat*, like *Yama*, is sometimes considered as sending death. Rv. viii. 67, 20: 'May the shaft of *Vivasvat*, O *Āditya*, the poisoned arrow, not strike us before we are old!'

*Yama* is said to have crossed the rapid waters, to have shown the way to many, to have first known the path on which our fathers crossed over (x. 14, 1 and 2). In a hymn addressed to the sun-horse, it is said that '*Yama* brought the horse, *Trita* harnessed him, *Indra* first sat on him, the *Gandharva* took hold of his rein.' And immediately after, the horse is said to be *Yama*, *Āditya*, and *Trita* (i. 163, 2 and 3). Again, of the three heavens, two are said to belong to

*Savitar*, one to *Yama* (i. 35, 6). *Yama* is spoken of as if admitted to the company of the gods (x. 135, 1). His own seat is called the house of the gods (x. 135, 7); and these words follow immediately on a verse in which it is said: 'The abyss is stretched out in the East, the outgoing is in the West.' \*

These indications, though fragmentary, are sufficient to show that the character of *Yama*, such as we find it in the last book of the Rig-Veda, might well have been suggested by the setting sun, personified as the leader of the human race, as himself a mortal, yet as a king, as the ruler of the departed, as worshipped with the fathers, as the first witness of an immortality to be enjoyed by the fathers, similar to the immortality enjoyed by the gods themselves. That the king of the departed should gradually have assumed the character of the god of death, requires no explanation. This, however, is the latest phase of *Yama*, and one that in the early portions of the Veda belongs to *Varuṇa*, himself, as we saw before, like *Yama*, one of the twins.

The mother of all the heavenly powers we have just examined, is the Dawn with her many names, *πολλῶν ὀνομάτων μορφῆ μιᾷ*, *Aditi*, the mother of the gods, or *Apyâ yoshâ*, the water-wife, *Saranyû*, the running light, *Ahanâ*, the bright, *Arjunî*, the brilliant, *Urvaśî*, the wide, &c. Beyond the Dawn, however, another infinite power was suspected, for which neither the language of the Vedic Rishis, nor that of any other poets or prophets, has yet suggested a fitting name.

If, then, as I have little doubt, the Greek *Erînyis* is

\* Other passages to be consulted, *Rv.* i. 116, 2; vii. 33, 9; ix. 68, 3, 5; x. 12, 6; 13, 2; 13, 4; 53, 3; 64, 3; 123, 6.

the same word as the Sanskrit *Saranyû*,\* it is easy to see how, starting from a common thought, each deity assumed its peculiar aspect in India and in Greece. The Night was conceived by Hesiod as the mother of War, Strife, and Fraud, but she is likewise called the mother of Nemesis, or Vengeance.† *Æschylus* calls the Erinyes the daughters of Night, and we saw before a passage from the Veda (vii. 61, 5) where the Druh's, the mischievous powers of night, were said to follow the sins of man. 'The Dawn will find you out' was a saying but slightly tainted by mythology. 'The Erinyes will haunt you' was a saying which not even Homer would have understood in its etymological sense. If the name of Erinys is sometimes applied to *Dêmêtêr*,‡ this is because *Dêô* was *Dyâvâ*, and *Dêmêtêr*, *Dyâvâ mâtar*, the Dawn, the mother,§ corresponding to *Dyaush pitar*, the sky, the father. *Erinys Demeter*, like *Saranyû*, was changed into a mare, she was followed by *Poseidon*, as a horse, and two children were born, a daughter (*Despoina*), and *Areion*. *Poseidon*, if he expressed the sun rising from the sea, would approach to *Varuna*, who, in one passage of the Veda, was called the father of the horse or of *Yama*.

And now, after having explained the myth of *Saranyû*, of her father, her husband, and her children, in what I think its original sense, it remains to state, in a few words, the opinions of other scholars who

\* The loss of the initial aspirate is exceptional, but, as such, confirmed by well-known analogies. See Curtius, *Griechische Etymologie*, ii. 253 ; i. 309.

† M. M.'s *Essay on Comparative Mythology*, p. 40.

‡ Pausanias, viii. 25 ; Kuhn, *l. c.* i. 152.

§ See Pott, in Kuhn's *Zeitschrift*, vi. p. 118, n.



have analysed the same myth before, and have arrived at different conceptions of its original import. It will not be necessary to enter upon a detailed refutation of these views, as the principal difference between these and my own theory arises from the different points which we have chosen in order to command a view into the distant regions of mythological thought. I look upon the sunrise and sunset, on the daily return of day and night, on the battle between light and darkness, on the whole solar drama in all its details that is acted every day, every month, every year, in heaven and in earth, as the principal subject of early mythology. I consider that the very idea of divine powers sprang from the wonderment with which the forefathers of the Aryan family stared at the bright (deva) powers that came and went no one knew whence or whither, that never failed, never faded, never died, and were called immortal, i. e. unfading, as compared with the feeble and decaying race of man. I consider the regular recurrence of phenomena an almost indispensable condition of their being raised, through the charms of mythological phraseology, to the rank of immortals, and I give a proportionately small space to meteorological phenomena, such as clouds, thunder, and lightning, which, although causing for a time a violent commotion in nature and in the heart of man, would not be ranked together with the immortal bright beings, but would rather be classed either as their subjects or as their enemies. It is the sky that gathers the clouds, it is the sky that thunders, it is the sky that rains; and the battle that takes place between the dark clouds and the bright sun, which for a time is covered by them, is but an irregular repetition of that more momentous struggle which takes

place every day between the darkness of the night and the refreshing light of the morning.

Quite opposed to this, the solar theory, is that proposed by Professor Kuhn, and adopted by the most eminent mythologists of Germany, which may be called the meteorological theory. This has been well sketched by Mr. Kelly in his 'Indo-European Tradition and Folk-lore.' 'Clouds,' he writes, 'storms, rains, lightning, and thunder, were the spectacles that above all others impressed the imagination of the early Aryans, and busied it most in finding terrestrial objects to compare with their ever-varying aspect. The beholders were at home on the earth, and the things of the earth were comparatively familiar to them; even the coming and going of the celestial luminaries might often be regarded by them with the more composure because of their regularity; but they could never surcease to feel the liveliest interest in those wonderful meteoric changes, so lawless and mysterious in their visitations, which wrought such immediate and palpable effects, for good or ill, upon the lives and fortunes of the beholders. Hence these phenomena were noted and designated with a watchfulness and wealth of imagery which made them the principal groundwork of all the Indo-European mythologies and superstitions.'

Professor Schwartz, in his excellent essays on Mythology,\* ranges himself determinately on the same side:—

'If, in opposition to the principles which I have carried out in my book "On the Origin of Mythology,"

\* *Der heutige Volksglaube und das alte Heidenthum*, 1862 (p. vii.). *Der Ursprung der Mythologie*, 1860.

it has been remarked that in the development of the ideas of the Divine in myths, I gave too much prominence to the phenomena of the wind and thunderstorms, neglecting the sun, the following researches will confirm what I indicated before, that originally the sun was conceived implicitly as a mere accident in the heavenly scenery, and assumed importance only in a more advanced state in the contemplation of nature and the formation of myths.'

These two views are as diametrically opposed as two views of the same subject can possibly be. The one, the solar theory, looks to the regular daily revolutions in heaven and earth as the material out of which the variegated web of the religious mythology of the Aryans was woven, admitting only an interspersion here and there of the more violent aspects of storms, thunder and lightning; the other, the meteoric theory, looks upon clouds and storms and other convulsive aspects of nature as causing the deepest and most lasting impression on the minds of those early observers who had ceased to wonder at the regular movements of the heavenly bodies, and could only perceive a divine presence in the great strong wind, the earthquake, or the fire.

In accordance with this latter view, we saw that Professor Roth explained *Saranyû* as the dark storm-cloud soaring in space in the beginning of all things, and that he took *Vivasvat* for the light of heaven.\* Explaining the second couple of twins first, he took them, the *Aśvins*, to be the first bringers of light, preceding the dawn (but who are they?), while he dis-

\* *Zeitschrift der Deutschen Morgenländischen Gesellschaft*, iv. p. 425.



covered in the first couple, simply called *Yama*, the twin-brother, and *Yamî*, the twin-sister, the first created couple, man and woman, produced by the union of the damp vapour of the cloud and the heavenly light. After their birth he imagines that a new order of things began, and that hence, their mother—the chaotic, storm-tossed twilight—was said to have vanished. Without laying much stress on the fact that, according to the Rig-Veda, *Saranyû* became first the mother of *Yama*, then vanished, then bare the *Ásvins*, and finally left both couples of children, it must be observed that there is not a single word in the Veda pointing to *Yama* and *Yamî* as the first couple of mortals—as the Indian Adam and Eve—or representing the first creation of man as taking place by the union of vapour and light. If *Yama* had been the first created of men, surely the Vedic poets, in speaking of him, could not have passed this over in silence. Nor is *Yima*, in the Avesta, represented as the first man or as the father of mankind.\* He is one of the first kings, and his reign represents the ideal of human happiness, when there was as yet neither illness nor death, neither heat nor cold; but no more. The tracing of the further development of *Yima* in Persia was one of the last and one of the most brilliant discoveries of Eugène Burnouf. In his article, 'Sur le Dieu Homa,' published in the 'Journal

\* Spiegel, *Érân*, p. 245. 'According to one account, the happiness of Jima's reign came to an end through his pride and untruthfulness. According to the earlier traditions of the *Avesta*, Jima does not die, but, when evil and misery begin to prevail on earth, retires to a smaller space, a kind of garden or Eden, where he continues his happy life with those who remained true to him.'

Asiatique,' he opened this entirely new mine for researches into the ancient state of religion and tradition, common to the Aryans before their schism. He showed that three of the most famous names in the epic poetry of the later Persians, *Jemshid*, *Feridún*, and *Garshasp*, can be traced back to three heroes mentioned in the Zend-Avesta as the representatives of three of the earliest generations of mankind, *Yima-Kshaêta*, *Thraêtana*, and *Kereśaspa*, and that the prototypes of these Zoroastrian heroes could be found again in the *Yama*, *Trita*, and *Kṛiśâśva* of the Veda. He went even beyond this. He showed that, as in Sanskrit the father of *Yama* is *Vivasvat*, the father of *Yima* in the Avesta is *Vivanghvat*. He showed that as *Thraêtana*, in Persia, is the son of *Athwya*, the patronymic of *Trita* in the Veda is *Aptya*. He explained the transition of *Thraêtana* into *Feridún* by pointing to the Pehlevi form of the name, as given by Neriosengh, *Phredun*. Burnouf, again, it was who identified *Zohâk*, the tyrant of Persia, slain by Feridun, whom even Firdusi still knows by the name of *Ash dahâk*, with the *Aji dahâka*, the biting serpent, as he translates it, destroyed by *Thraêtana* in the Avesta. Nowhere has the transition of physical mythology into epic poetry—nay, history—been so luculently shown as here. I may quote the words of Burnouf, one of the greatest scholars that France, so rich in philological genius, has ever produced:—

‘ Il est sans contredit fort curieux de voir une des divinités indiennes les plus vénérées, donner son nom au premier souverain de la dynastie ario-persanne ; c'est un des faits qui attestent le plus évidemment l'intime union des deux branches de la grande famille

qui s'est étendue, bien des siècles avant notre ère, depuis le Gange jusqu'à l'Euphrate.' \*

Professor Roth has pointed out some more minute coincidences in the story of Jemshid, but his attempt at changing *Yama* and *Yima* into an Indian and Persian *Adam* was, I believe, a mistake.

Professor Kuhn was right, therefore, in rejecting this portion of Professor Roth's analysis. But, like Professor Roth, he takes *Saranyû* as the storm-cloud, and though declining to recognise in *Vivasvat* the heavenly light in general, he takes *Vivasvat* as one of the many names of the sun, and considers their first-born child, *Yama*, to mean *Agni*, the fire, or rather the lightning, followed by his twin-sister, the thunder. He then explains the second couple, the *Aśvins*, to be *Agni* and *Indra*, the god of the fire and the god of the bright sky, and thus arrives at the following solution of the myth:—'After the storm is over, and the darkness which hid the single cloud has vanished, *Savitar* (the sun) embraces once more the goddess, the cloud, who had assumed the shape of a horse running away. He shines, still hidden, fiery and with golden arm, and thus begets *Agni*, fire; he lastly tears the wedding veil, and *Indra*, the blue sky, is born.' The birth of *Manu*, or man, he explains as a repetition of that of *Agni*, and he looks upon *Manu*, or *Agni*, as the Indian Adam, and not, as Professor Roth, on *Yama*, the lightning.

It is impossible, of course, to do full justice to the speculations of these eminent men on the myth of *Saranyû* by giving this meagre outline of their views.

\* *On the Veda and Zendavesta*, by M. M., p. 31.



Those who take an interest in the subject must consult their treatises, and compare them with the interpretations which I have proposed. I confess that, though placing myself in their point of view, I cannot grasp any clear or connected train of thoughts in the mythological process which they describe. I cannot imagine that men, standing on a level with our shepherds, should have conversed among themselves of a dark storm-cloud soaring in space, and producing by a marriage with light, or with the sun, the first human beings, or should have called the blue sky the son of the cloud because the sky appears when the storm-cloud has been either embraced or destroyed by the sun. However, it is not for me to pronounce an opinion, and I must leave it to others, less wedded to particular theories, to find out which interpretation is more natural, more in accordance with the scattered indications of the ancient hymns of the Veda, and more consonant with what we know of the spirit of the most primitive ages of man.

## LECTURE XII.

## MODERN MYTHOLOGY.

WHAT I mean by Modern Mythology is a subject so vast and so important, that in this, my last Lecture, all I can do is to indicate its character, and the wide limits within which its working may be discerned. After the definition which on several occasions I have given of Mythology, I need only repeat here that I include under that name every case in which language assumes an independent power, and reacts on the mind, instead of being, as it was intended to be, the mere realization and outward embodiment of the mind.

In the early days of language the play of mythology was no doubt more lively and more widely extended, and its effects were more deeply felt, than in these days of mature speculation, when words are no longer taken on trust, but are constantly tested by means of logical definition. When language sobers down, when metaphors become less bold and more explicit, there is less danger of speaking of the sun as a horse, because a poet had called him the heavenly racer, or of speaking of Selene as enamoured of Endymion, because a proverb had expressed the approach of night by the longing looks of the moon after the setting sun. Yet under a different form Language retains her silent charm; and if it no longer

creates gods and heroes, it creates many a name that receives a similar worship. He who would examine the influence which words, mere words, have exercised on the minds of men, might write a history of the world that would teach us more than any which we yet possess. Words without definite meanings are at the bottom of nearly all our philosophical and religious controversies, and even the so-called exact sciences have frequently been led astray by the same Siren voice.

I do not speak here of that downright abuse of language when writers, without maturing their thoughts and arranging them in proper order, pour out a stream of hard and misapplied terms which are mistaken by themselves, if not by others, for deep learning and height of speculation. This sanctuary of ignorance and vanity has been wellnigh destroyed; and scholars or thinkers who cannot say what they wish to say consecutively and intelligibly have little chance in these days, or at least in this country, of being considered as depositaries of mysterious wisdom. *Si non vis intelligi debes negligi.* I rather think of words which everybody uses, and which seem to be so clear that it looks like impertinence to challenge them. Yet, if we except the language of mathematics, it is extraordinary to observe how variable is the meaning of words, how it changes from century to century, nay, how it varies slightly in the mouth of almost every speaker. Such terms as *Nature, Law, Freedom, Necessity, Body, Substance, Matter, Church, State, Revelation, Inspiration, Knowledge, Belief*, are tossed about in the wars of words as if everybody knew what they meant, and as if everybody used them exactly in the same sense; whereas most people, and



particularly those who represent public opinion, pick up these complicated terms as children, beginning with the vaguest conceptions, adding to them from time to time, perhaps correcting likewise at haphazard some of their involuntary errors, but never taking stock, never either inquiring into the history of the terms which they handle so freely, or realizing the fullness of their meaning according to the strict rules of logical definition. It has been frequently said that most controversies are about words. This is true; but it implies much more than it seems to imply. Verbal differences are not what they are sometimes supposed to be—merely formal, outward, slight, accidental differences, that might be removed by a simple explanation, or by a reference to ‘Johnson’s Dictionary.’\* They are differences arising from the more or less perfect, from the more or less full and correct conception attached to words: it is the mind that is at fault, not the tongue merely.

If a child, after being taught to attach the name of *gold* to anything that is yellow and glitters, were to maintain against all comers that the sun is gold, the child no doubt would be right, because in his mind the name ‘gold’ means something that is yellow and glitters. We do not hesitate to say that a flower is edged with gold—meaning the colour only, not the substance. The child afterwards learns that there are other qualities, besides its colour, which are peculiar to real gold, and which distinguish gold from similar substances. He learns to stow away every one of

\* ‘Half the perplexities of men are traceable to obscurity of thought, hiding and breeding under obscurity of language.’—*Edinb. Review*, Oct. 1862, p. 378.

these qualities into the name *gold*, so that at last gold with him means no longer anything that glitters, but something that is heavy, malleable, fusible, and soluble in *aqua regia*;\* and he adds to these any other quality which the continued researches of each generation bring out. Yet in spite of all these precautions, the name *gold*, so carefully defined by the philosophers, will slip away into the crowd of words, and we may hear a banker discussing the market value of gold in such a manner that we can hardly believe he is speaking of the same thing which we last saw in the crucible of the chemist. You remember how the expression 'golden-handed,' as applied to the sun, led to the formation of a story which explained the sun's losing his hand, and having it replaced by an artificial hand made of gold. That is Ancient Mythology. Now if we were to say that of late years the supply of gold has been very much increased, and if from this we were to conclude that the increase of taxable property in this country was due to the discovery of gold in California, this would be Modern Mythology. We should use the name *gold* in two different senses. We should use gold in the one case as synonymous with realized wealth, in the other as the name of the circulating medium. We should commit the same mistake as the people of old, using the same word in two slightly varying senses, and then confounding one meaning with the other.

For let it not be supposed that even in its more naked form mythology is restricted to the earliest ages of the world.

Though one source of mythology, that which arises

\* Cf. Locke, iii. 9, 17.

from *radical* and *poetical* metaphor, is less prolific in modern than in ancient dialects, there is another agency at work in modern dialects which, though in a different manner, produces nearly the same results, namely, *phonetic decay*, followed by *popular etymology*. By means of phonetic decay many words have lost their etymological transparency; nay, words, originally quite distinct in form and meaning, assume occasionally the same form. Now, as there is in the human mind a craving after etymology, a wish to find out, by fair means or foul, why such a thing should be called by such a name, it happens constantly that words are still further changed in order to make them intelligible once more; or, when two originally distinct words have actually run into one, some explanation is required, and readily furnished, in order to remove the difficulty.

'La Tour sans venin' is a case in point, but it is by no means the only case.

From Anglo-Saxon *blót*, sacrifice, *blotan*, to kill for sacrifice, was derived *blessian*, to consecrate, to bless. In modern English, *to bless* seems connected with *bliss*, the Anglo-Saxon *blis*, joy, with which it had originally nothing in common.

*Sorrow* is the Anglo-Saxon *sorh*, the German *Sorge*; its supposed connection with *sorry* is merely imaginary, for the Anglo-Saxon for sorry is *sárig*, from *sár*, a wound, a sore.

In German, most people imagine that *Sündfluth*, the deluge, means the sin-flood; but *Sündfluth* is but a popular etymological adaptation of *sinfluot*, the great flood.

Many of the old signs of taverns contain what we may call hieroglyphic mythology. There was a



house on Stoken Church Hill, near Oxford, exhibiting on its sign-board, 'Feathers and a Plum.' The house itself was vulgarly called the *Plum and Feathers* :\* it was originally the *Plume of Feathers*, from the crest of the Prince of Wales.

*A Cat with a Wheel* is the corrupt emblem of St. Catherine's Wheel; the *Bull and Gate* was originally intended as a trophy of the taking of Boulogne by Henry VIII., it was the Boulogne Gate; and the *Goat and Compasses* have taken the place of the fine old Puritan sign-board, 'God encompasseth us.' †

There is much of this kind of popular mythology floating about in the language of the people, arising from a very natural and very general tendency, namely, from a conviction that every name must have a meaning. If the real and original meaning has once been lost, chiefly owing to the ravages of phonetic decay, a new meaning is at first tentatively, but very soon dogmatically, assigned to the changed name.

At Lincoln, immediately below the High Bridge, there is an inn bearing now the sign of the Black Goats. It formerly had the sign of the Three Goats, a name derived from the three gowts or drains by which the water from the Swan Pool, a large lake which formerly existed to the west of the city, was conducted into the bed of the Witham, below. A public-house having arisen on the bank of the princi-

\* Brady, *Clavis Calendaria*, vol. ii. p. 13.

† Trench, *English Past and Present*, p. 223 :—

'The George and Cannon = the George Canning.

The Billy Ruffian = the Bellerophon (ship).

The Iron Devil = the Hironnelle.

Rose of the Quarter Sessions = la rose des quatre saisons.'

pal of these three gowts, in honour, probably, of the work when it was made, the name became corrupted into the Three Goats—a corruption easily accomplished in the Lincolnshire dialect.\*

In the same town, a flight of steps by which the ascent is gained from about midway of what is called the New Road to a small ancient gateway, leading towards the Minster Yard, is called the *Grecian Stairs*. These stairs were originally called the *Greesen*, the early English plural of a *gree* or step. When *Greesen* ceased to be understood, *Stairs* was added by way of explanation, and the *Greesen Stairs* were, by the instinct of popular etymology, changed into *Grecian Stairs*.†

\* See the Rev. Francis C. Massingberd, in the *Proceedings of the Archæological Institute*, Lincoln, 1848, p. 58. Gowt is the same word as the German *Gosse*, gutter.

† See the Rev. Francis C. Massingberd, in the *Proceedings of the Archæological Institute*, Lincoln, 1848, p. 59. The learned antiquary quotes several passages in support of the plural *greesen*. Thus Acts xxi. 40, instead of 'And when he had given him license, Paul stood on the *stairs*,' Wickliffe has: 'Poul stood on the *greesen*.' Shakespeare paraphrases *grize* (as he writes) by steps:—

Let me speak like yourself; and lay a sentence

Which, as a *grize* or *step*, may help these lovers

Into your favour.

*Othello*, Act 1, Sc. iii.

In *Hackluyt's Voyages*, vol. ii. p. 57, we read: 'The king of the said land of Java hath a most brave and sumptuous palace, the most loftily built that I ever saw, and it hath most high *greeses*, or *stayers*, to ascend up to the rooms therein contained.'

'In expensis Stephani Austeswell, equitantis ad Thomam Ayleward, ad loquendum cum ipso apud Havant, et inde ad Hertynge, ad loquendum cum Dominâ ibidem, de evidenciis scrutandis de *Pe de Gre* progenitorum hæredum de Husey, cum vino dato eodem tempore, xx. d. ob.' From the Rolls of Winchester College, temp. Hen. IV., communicated by Rev. W. Gunner, in *Proceedings of Archæolog. Inst.*, 1848, p. 64.

One of our Colleges at Oxford is now called and spelt *Brasenose*. Over the gate of the College there is a Brazen Nose, and the arms of the College display the same shield, and have done so for several centuries. I have not heard of any legend to account for the startling presence of that emblem over the gate of the College, but this is simply owing to the want of poetic imagination on the part of the Oxford Ciceroni. In Greece, Pausanias would have told us ever so many traditions commemorated by such a monument. At Oxford, we are simply told that the College was originally a brewhouse, and that its original name, *brasen-huis* (braserie), was gradually changed to *brazenose*.

Brasenose was founded in the commencement of the reign of Henry VIII., by the joint liberality of William Smyth, Bishop of Lincoln, and Sir Richard Sutton. The foundation-stone was laid on June 1, 1509, and the charter entitling it 'The King's Hall and College of Brasenose,' is dated January 15, 1512. This college stands upon the site of no less than four ancient halls, viz., Little University Hall, described by some antiquaries as one of those built by Alfred, and which occupied the north-east angle near the lane; Brasenose Hall, whence the name of the College, situated where the present gateway now stands; Salisbury Hall, the site of a part of the present library; and Little St. Edmund Hall, which was still more to the southward, about where is now the chapel. The name of Brasenose is supposed, with the greater probability, to have been derived from a *Brasinium*, *Brasen-huis*, or brewhouse, attached to the hall built by Alfred; more vulgarly, from some students removed to it from the temporary University



of Stamford, where the iron ring of the knocker was fixed in a nose of brass.\*

Instances of the same kind of popular etymology—which occasionally leads to popular mythology—are to be found in proverbs. There is an English proverb, 'to know a hawk from a handsaw,' which was originally, 'to know a hawk from a hernshaw,' a kind of heron.†

The French *buffetier*, a man who waits at the *buffet*, which was a table near the door of the dining-hall for poor people, travellers, and pilgrims, to help themselves to what was not wanted at the high table, has been changed in English into a beef-eater; ‡ and it is no doubt a vulgar error that these tall stalwart fellows are chiefly fed on beef.

One of the most curious instances of the power of popular etymology and mythology is seen in the English *Barnacle*. It is not often that we can trace a myth from century to century through the different stages of its growth, and it may be worth while to analyse this fable of the Barnacle more in detail.

Barnacles, in the sense of spectacles, seem to be connected with the German word for spectacles, namely, *Brille*.§ This German word is a corruption of *beryllus*. In a Vocabulary of 1482 we find *brill*, *parill*, a mas-

\* Parker, *Handbook of Oxford*, p. 79.

† Wilson, *Pre-historic Man*, p. 68. Cf. Pott, *Doppelung*, p. 81. Förstemann, *Deutsche Volksetymologie*, in Kuhn's *Zeitschrift*, vol. i. Latham, *History of the English Language*.

‡ Cf. Trench, *English Past and Present*, p. 221.

§ Cf. Grimm, *D. W.* s. v. Brill. Mr. Wedgwood derives *barnacles*, in the sense of spectacles, from Limousin *bourgna*, to squinny; Wall. *boirgni*, to look through one eye in aiming; Lang. *borni*, blind; *bornikel*, one who sees with difficulty; *berniques*, spectacles. *Vocab. du Berri*.

culine, a precious stone, shaped like glass or ice (*eise*), *berillus* item or *bernlein*.\* Sebastian Frank, in the beginning of the sixteenth century, still uses *barill* for eye-glass. The word afterwards became a feminine, and, as such, the recognised name for spectacles.

In the place of *beryllus*, in the sense of precious stone, we find in Provençal *berille*; † and in the sense of spectacles, we find the Old French *bericle*. ‡ *Bericle* was afterwards changed to *bésicles*, § commonly, but wrongly, derived from *bis-cyclus*.

In the dialect of Berri || we find, instead of *bericle* or *besicle*, the dialectic form *berniques*, which reminds us of the German form *Bern-lein*. ¶ An analogous form is the English *barnacle*, originally spectacles fixed on the nose, and afterwards used in the sense of *irons* put on the noses of horses to confine them for shoeing, bleeding, or dressing.\*\* *Brille* in German is used in a similar sense of a piece of leather with spikes, put on the noses of young animals that are to be weaned. The formation of *bernicula* seems to have been *beryll-licula*, and, to avoid the repetition of *l*, *berynicula*. As to the change of *l* into *n*, see *melanconico*, *flomena*, &c. Diez, 'Grammatik,' p. 190.

*Barnacle*, in the sense of cirrhopode, can hardly be

\* 'Berillus (gemma, speculum presbiterorum aut veterum, d. i. brill).' Diefenbach, *Glossarium Latino-Germanicum*. 'Eise' may be meant for crystal.

† Raynouard, *Lexique Roman*.

‡ *Dict. du vieux Français*, Paris, 1766, s. v.

§ *Dict. Prov.-Français*, par Avril, 1839, s. v.

|| *Voc. du Berri*, s. v.

¶ In the *Dict. du vieux Français*, Paris, 1766, *bernicles* occurs in the sense of *rien*, *nil*.

\*\* Skinner derives *barnacle*, 'frænum quod equino rictui injicitur,' from *bear* and *neck*.

anything but the diminutive of the Latin *perna*; *pernacula* being changed into *bernacula*.\* Pliny † speaks of a kind of shells called *pernæ*, so called from their similarity with a leg of pork.

The bodies of these animals are soft, and enclosed in a case composed of several calcareous plates; their limbs are converted into a tuft of jointed *cirrho* or fringes, which can be protruded through an opening in the sort of a mantle which lines the interior of the shell. With these they fish for food, very much like a man with a casting-net; and as soon as they are immersed in sea-water by the return of the flood, their action is incessant. They are generally found fixed on rocks, wooden planks, stones, or even on living shells; and after once being fixed, they never leave their place of abode. Before they take to this settled life, however, they move about freely, and, as it would seem, enjoy a much more highly organized state of life. They are then furnished with eyes, antennæ, and limbs, and are as active as any of the minute denizens of the sea.

There are two families of *Cirrhopodes*. The first, the *Lepadidæ*, are attached to their resting-place by a

\* Cf. Diez, *Grammatik*, p. 256. Bolso (pulsus), brugna and prugna (prunum), &c. *Berna*, instead of *Perna*, is actually mentioned in the *Glossarium Latino-Germanicum*, mediæ et infimæ ætatis, ed. Diefenbach; also in Du Cange, *berna*, *suinbache*. Skinner derives barnacle from *bearn*, filius, and A. S. *aac*, *oak*. Wedgwood proposes the Manx *bayrn*, a cap, as the etymon of *barnacle*; also *barnagh*, a limpet, and the Gaelic *bairneach*, barnacle; the Welsh *brenig*, limpet.

† Plin. *H. Nat.* 32, 55: 'Appellantur et pernæ concharum generis, circa Pontias insulas frequentissimæ. Stant velut suillo crure longo in arena defixæ, hiantesque, qua limpitudo est, pedali non minus spatio, cibum venantur.'



flexible stalk, which possesses great contractile power. The shell is usually composed of two triangular pieces on each side, and is closed by another elongated piece at the back, so that the whole consists of five pieces.

The second family, the *Balanidæ*, or sea-acorn, has a shell usually composed of six segments, the lower part being firmly fixed to the stone or wood on which the creature lives.

These creatures were known in England at all times, and they went by the name of *Barnacles*, i. e. *Bernaculæ*, or small muscles. Their name, though nearly identical in sound with *Barnacles*, in the sense of spectacles, had originally no connection whatever with that term, which was derived, as we found, from *beryllus*.

But now comes a third claimant to this name of *Barnacle*, namely, the famous *Barnacle Goose*. There is a goose called *Bernicla*; and though that goose has sometimes been confounded with a duck (the *Anas niger minor*, the *Scoter*, the French *Macreuse*), yet there is no doubt that the Barnacle goose is a real bird, and may be seen drawn and described in any good Book on Birds.\* But though the bird is a real bird, the accounts given of it, not only in popular, but in scientific works, form one of the most extraor-

\* Linnæus describes it, sub 'Aves, Anseres,' as 'No. 11, Bernicla, A. fusca, capite collo pectoreque nigris, collari albo. Branta s. Bernicla. Habitat in Europa boreali, migrat super Sueciam.'

Willoughby, in his *Ornithology*, book iii., says: 'I am of opinion that the Brant-Goose differs specifically from the Bernacle, however writers of the History of Birds confound them, and make these words synonymous.' Mr. Gould, in his 'Birds of Europe,' vol. v., gives a drawing of the *Anser leucopsis*, Bernacle Goose, l'oise bernache, sub No. 350; and another of the *Anser Brenta*, Brent Goose, l'oise cravant, sub No. 352.

dinary chapters in the history of Modern Mythology.

I shall begin with one of the latest accounts, taken from the 'Philosophical Transactions,' No. 137, January and February 1677-8. Here, in 'A Relation concerning Barnacles, by Sr. Robert Moray, lately one of His Majesties Council for the Kingdom of Scotland,' we read (p. 925):—

'In the Western Islands of Scotland much of the Timber, wherewith the Common people build their Houses, is such as the West-Ocean throws upon their Shores. The most ordinary Trees are Firr and Ash. They are usually very large, and without branches; which seem rather to have been broken or worn off, than cut; and are so Weather-beaten, that there is no Bark left upon them, especially the Firrs. Being in the Island of East, I saw lying upon the shore a cut of a large Firr-tree of about  $2\frac{1}{2}$  foot diameter, and 9 or 10 foot long; which had lain so long out of the water that it was very dry: And most of the Shells, that had formerly cover'd it, were worn or rubb'd off. Only on the parts that lay next the ground, there still hung multitudes of little Shells; having within them little Birds, perfectly shap'd, supposed to be Barnacles.

'The Shells hung very thick and close one by another, and were of different sizes. Of the colour and consistence of Muscle-Shells, and the sides or joynts of them joyned with such a kind of film as Muscle-Shells are; which serves them for a Hing to move upon, when they open and shut. . . .

'The Shells hang at the Tree by a Neck longer than the Shell. Of a kind of Filmy substance, round, and hollow, and creassed, not unlike the Wind-pipe of a Chicken; spreading out broadest where it is fastened to the Tree, from which it seems to draw and convey

the matter which serves for the growth and vegetation of the Shell and the little Bird within it.

‘ This Bird in every Shell that I opened, as well the least as the biggest, I found so curiously and completely formed, that there appeared nothing wanting, as to the internal parts, for making up a perfect Sea-fowl: every little part appearing so distinctly, that the whole looked like a large Bird seen through a concave or diminishing Glass, colour and feature being every where so clear and neat. The little Bill like that of a Goose, the Eyes marked, the Head, Neck, Breast, Wings, Tail, and Feet formed, the Feathers every where perfectly shap’d, and blackish coloured; and the Feet like those of other Water-fowl, to my best remembrance. All being dead and dry, I did not look after the Internal parts of them. . . . Nor did I ever see any of the little Birds alive, nor met with any body that did. Only some credible persons have assured me they have seen some as big as their fist.’

Here, then, we have so late as 1677 a witness who, though he does not vouch to having seen the actual metamorphosis of the Barnacle shell into the Barnacle goose, yet affirms before a scientific public that he saw within the shell the bill, the eyes, head, neck, breast, wings, tail, feet, and feathers of the embryo bird.

We have not, however, to go far back before we find a witness to the actual transformation, namely, John Gerarde, of London, Master in Chirurgie. At the end of his ‘Herball,’ published in 1597, we have not only a lively picture of the tree, with birds issuing from its branches, swimming away in the sea or falling dead on the land, but we also read the following description (p. 1391):—

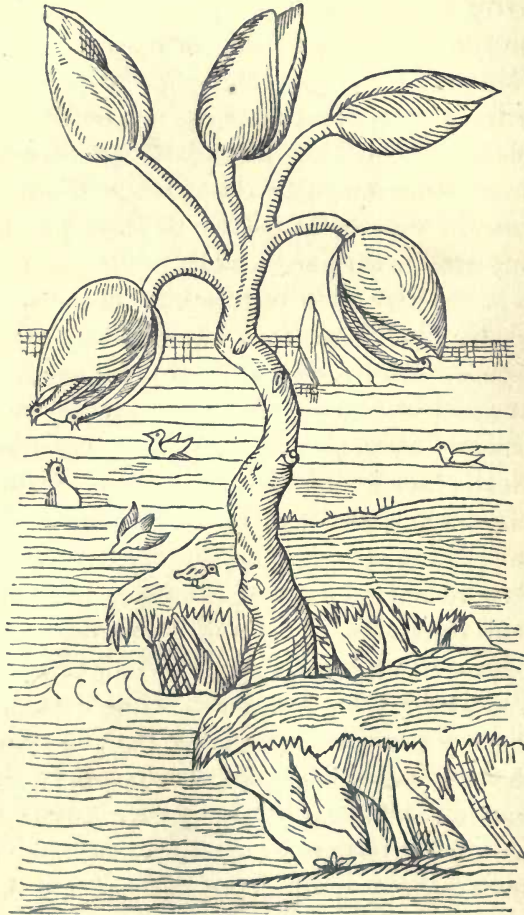


‘ There are founde in the north parts of Scotland, and the Ilands adjacent, called Orchades, certaine trees, whereon doe growe certaine shell fishes, of a white colour tending to russet; wherein are contained little living creatures: which shels in time of maturitie doe open, and out of them grow those little living foules, whom we call Barnakles, in the north of England Brant Geese, and in Lancashire tree Geese; but the other that do fall upon the land, perish and come to nothing: thus much by the writings of others, and also from the mouths of people of those parts, which may very well accord with truth.

‘ But what our eies have seene, and hands have touched, we shall declare. There is a small Ilande in Lancashire called the Pile of Foulders, wherein are found the broken peeces of old and brused ships, some whereof have beene cast thither by shipwracke, and also the trunks or bodies with the branches of old and rotten trees, cast up there likewise: whereon is found a certaine spume or froth, that in time breedeth unto certaine shels, in shape like those of the muskle, but sharper pointed, and of a whitish colour; wherein is contained a thing in forme like a lace of silke finely woven, as it were together, of a whitish colour; one ende whereof is fastened unto the inside of the shell, even as the fish of Oisters and Muskles are; the other ende is made fast unto the belly of a rude masse or lumpe, which in time commeth to the shape and forme of a Bird: when it is perfectly formed, the shel gapeth open, and the first thing that appeereth is the foresaid lace or string; next come the legs of the Birde hanging out; and as it groweth greater, it openeth the shell by degrees, till at length it is all come fourth, and hangeth only by the bill; in short

space after it commeth to full maturitie, and falleth into the sea, where it gathereth feathers, and groweth to a foule, bigger then a Mallard, and lesser then a

Fig. 29.



COPIED FROM GERARDE'S 'HERBALL.'

Goose; having blacke legs and bill or beake, and feathers blacke and white, spotted in such manner as is our Magge-Pie, called in some places a Pie-Annet,

which the people of Lancashire call by no other name than a tree Goose; which place aforesaide, and all those parts adjoining, do so much abound therewith, that one of the best is bought for three pence: *for the truth heerof, if any doubt, may it please them to repaire unto me, and I shall satisfie them by the testimonie of good witnesses.*'

That this superstition was not confined to England, but believed in by the learned all over Europe, we learn from *Sebastian Munster*, in his *Cosmographia Universalis*, 1550, dedicated to Charles V. He tells the same story, without omitting the picture; and though he mentions the sarcastic remark of *Aeneas Sylvius*, about miracles always flying away to more remote regions, he himself has no misgivings as to the truth of the bird-bearing tree, vouched for, as he remarks, by *Saxo Grammaticus*. This is what he writes: — 'In Scotia inveniuntur arbores, quæ producunt fructum foliis conglomeratum: et is cum opportuno tempore decidit in subjectam aquam, reviviscit convertiturque in avem vivam, quam vocant anserem arboreum. Crescit et hæc arbor in insula Pomonia, quæ haud procul abest a Scotia versus aquilonem. Veteres quoque Cosmographi, præsertim Saxo Grammaticus mentionem faciunt hujus arboris, ne putes esse figmentum a novis scriptoribus excogitatum.' \*

The next account of these extraordinary geese I shall take from *Hector Boece* (1465–1536), who in 1527 wrote his history of Scotland in Latin, which soon after was translated into English. The history is preceded by a *Cosmography and Description of Albion*, and here we read, in the fourteenth chapter: †—

\* Seb. Munster, p. 49.

† 'The hystory and Croniclis of Scotland, with the Cosmo-



‘Of the nature of claik geis, and of the syndry maner of thair procreation, And of the Ile of Thule, capitulo xiiii.

‘Restis now to speik of the geis generit of the see namit clakis. Sum men belevis that thir clakis growis on treis be the nebbis. Bot thair opinioun is vane. And becaus the nature and procreatioun of thir clakis is strange, we have maid na lytyll lauboure and deligence to serche ye treuth and verite yairof, we have salit throw ye seis quhare thir clakis ar bred, and I fynd be gret experience, that the nature of the seis is mair relevant caus of thair procreatioun than ony uthir thyng. And howbeit thir geis ar bred mony syndry wayis, thay ar bred ay allanerly by nature of the seis. For all treis that ar cassin in the seis be proces of tyme apperis first wormeetin, and in the small boris and hollis thairof growis small wormis. First thay schaw thair heid and feit, and last of all thay schaw thair plumis and wyngis. Finaly quhen thay ar cumyn to the just mesure and quantite of geis, thay fle in the aire, as othir fowlis dois, as was notably provyn in the yeir of god ane thousand iiii hundred lxxxx in sicht of mony pepyll besyde the castell of Petslego, ane gret tre was brocht be alluvion and flux of the see to land. This wonderfull tre was brocht to the lard of the ground, quhilk sone efter gart devyde it be ane saw. Apperit than ane multitude of wormis thrawing thaym self out of syndry hollis and boris of this tre. Sum of thaym war rude as

graphy and dyscription thairof, compilit be the noble clerk maister Hector Boece channon of Aberdene. Translatit laity in our vulgar and commoun langage, be maister Johne Bellenden Archedene of Murray, And Imprentit in Edinburgh, be me Thomas Davidson, prenter to the Kyngis nobyll grace’ (about 1540).

thay war bot new schapin. Sum had baith heid, feit, and wyngis, bot thay had no fedderis. Sum of thaym war perfit schapin fowlis. At last the pepyll havand ylk day this tre in mair admiration, brocht it to the kirk of Sanct Androis besyde the town of Tyre, quhare it remanis yit to our dayis. And within two yeris efter hapnit sic ane lyk tre to cum in at the firth of Tay besyde Dundee wormeetin and hollit full of young geis in the samyn maner. Siclike in the port of Leith beside Edinburgh within few yeris efter hapnit sic ane lyke cais. Ane schip namit the Christofir (efter that scho had lyin iii yeris at ane ankir in ane of thir Ilis, wes brocht to leith. And becaus hir tymmer (as aperit) failyeit, sho was brokin down. Incontinent aperit (as afore) al the inwart partis of hir wormeetin, and all the hollis thairof full of geis, on the samyn maner as we have schawin. Attoure gif ony man wald allege be sane argument, that this Christofer was maid of fir treis, as grew allanerly in the Ilis, and that all the rutis and treis that growis in the said Ilis, ar of that nature to be fynaly be nature of the seis resolvit in geis, We preif the cuntre thairof be ane notable example schawin afore our ene. Maister Alexander Galloway person of Kynkell was with ws in thir Ilis, gevand his mynd with maist ernist besynes to serche the verite of thir obscure and mysty downtis. And be adventure listit up ane see tangle hyngand full of mussill schellis fra the rute to the branchis. Sone efter he opnit ane of thir mussyll schellis, bot than he was mair astonist than afore. For he saw na fische in it bot ane perfit schapin foule smal and gret ay effering to the quantite of the schell. This clerk knawin ws richt desirus of sic uncouth thingis, come haistely with the said tan-

gle, and opnit it to ws with all circumstance afore rehersit. Be thir and mony othir reasonis and examplis we can not beleif that thir clakis ar productit be ony nature of treis or rutis thairof, bot allanerly by the nature of the Occeane see, quhilk is the caus and production of mony wonderful thingis. And becaus the rude and ignorant pepyl saw oftymes the frutis that fel of the treis (quhilkis stude neir the see) convertit within schort tyme in geis, thai belevit that thir geis grew apou the treis hingand be thair nebbis siclik as appillis and uthir frutis hingis be thair stalkis, bot thair opinioun is nocht to be sustenit. For als sone as thir appillis or frutis fallis of the tre in the see flude, thay grow first wormeetin. And be schort process of tyme ar alterat in geis.'

Let us now go back to the twelfth century, and we shall find, in the time of Henry II. (1154-89), exactly the same story, and even then so firmly established that Giraldus Cambrensis found it necessary to protest against the custom then prevailing of eating these Barnacle geese during Lent, because they were not birds, but fishes. This is what Giraldus says in his 'Topographia Hiberniæ: '\*—

\* Silvester Giraldus Cambrensis, *Topographia Hiberniæ*, in *Anglica, Normannica, Hibernica, Cambrica, a veteribus scripta*. Frankofurti, 1603, p. 706 (under Henry II., 1154-89).

'Sunt et aves hic multæ quæ Bernacæ vocantur: quas mirum in modum contra naturam natura producit: Aucis quidem palustribus similes, sed minores. Ex lignis namque abiegnis per æquora devolutis, primo quasi gummi nascuntur. Dehinc tamquam ab alga ligno cohærente conchylibus testis ad liberiolem formationem inclusæ, per rostra dependent: et sic quousque processu temporis firmam plumarum vestituram indutæ vel in aquas decidunt, vel in aëris libertatem volatu se transferunt, ex succo ligneo marinoque occulta nimis admirandaque seminii ratione



‘There are in this place many birds which are called *Bernacæ*: against nature, nature produces them in a most extraordinary way. They are like marsh-geese, but somewhat smaller. They are produced from fir timber tossed along the sea, and are at first like gum. Afterwards they hang down by their beaks as if from a seaweed attached to the timber, surrounded by shells, in order to grow more freely. Having thus, in process of time, been clothed with a strong coat of feathers, they either fall into the water or fly freely away into the air. They derive their food and growth from the sap of the wood or the sea, by a secret and most wonderful process of alimentation. I have frequently, with my own eyes, seen more than a thousand of these small bodies of birds, hanging down on the sea-shore from one piece of timber, enclosed in shells, and already formed. They do not breed and lay eggs, like other birds; nor do they ever hatch any eggs; nor do they seem to build nests in any corner of the earth. Hence bishops and clergymen in some parts of Ireland do not scruple to dine off these birds at the time of fasting, because they are not flesh, nor born of flesh. But these are

alimenta simul incrementaque suscipiunt. Vidi multoties oculis meis plusquam mille minuta hujusmodi avium corpuscula, in littore maris ab uno ligno dependentia testis inclusa et jam formata. Non ex harum coitu (ut in avibus assolet) ova gignuntur, non avis in earum procreatione unquam ovis incubat: in nullis terrarum angulis vel libidini vacare vel nidificare videntur. Unde et in quibusdam Hiberniæ partibus, avibus istis tamquam non carnis quia de carne non natis, episcopi et viri religiosi jejuniorum tempore sine delictu vesci solent. Sed hi quidem scrupulose moventur ad delictum. Si quis enim ex primi parentis carni quidem, licet de carne non nati, femore comedisset, eum a carnium esu non immunem arbitrarer.’

N N

thus drawn into sin; for if a man during Lent had dined off a leg of Adam, our first parent, who was not born of flesh, surely we should not consider him innocent of having eaten what is flesh.'

Then follows more to the same effect, which we may safely leave out. What is important is this, that in the twelfth century the belief in the miraculous transformation of the Barnacle-shell into the Barnacle-geese was as firmly established as in the seventeenth century; and that on that belief another belief had grown up, namely, that Barnacle-geese might safely be eaten during Lent.

How long before Giraldus the fable existed, I cannot tell; but it must not be supposed that, during the five centuries through which we have traced its existence, it was never contradicted. It was contradicted by Albertus Magnus (died 1280), who declares that he saw these birds lay eggs and hatch them.\* It was contradicted by Roger Bacon (died 1294). Æneas Sylvius†

\* Barbates mentiendo quidam dicunt aves : quas vulgus bonngas (baumgans ?) vocat : eo quod ex arboribus nasci dicuntur a quibus stipite et ramis dependent : et succo qui inter corticem est nutritæ : dicunt etiam aliquando ex putridis lignis hæc animalia in mari generari : et præcipue ex abietum putredine, afferentes quod nemo unquam vidit has aves coire vel ovare : et hoc omnino absurdum est : quia ego et multi mecum de sociis vidimus eas et coire et ovare et pullos nutrire sicut in ante habitis diximus : hæc avis caput habet quasi pavonis. Pedes autem nigros ut cygnus : et sunt membrana conjuncti digiti ad natandum : et sunt in dorso cinereæ nigredinis : et in ventre subalbide, aliquantum minores anseribus.—*De Animalibus*, lib. xxiii. p. 186.

† ' Scribit tamen Eneas Sylvius de hac arbore in hunc modum : " Audiveramus nos olim arborem esse in Scotia, quæ supra ripam fluminis enata fructus produceret, anetarum formam habentes, et eos quidem cum maturitati proximi essent sponte sua decidere, alios in terram, alios in aquam, et in terram dejectos putrescere, in

(afterwards Pope Pius II., 1458–64), when on a visit to King James (1393–1437; reigned 1424–37), inquired after the tree, and he complains that miracles will always flee farther and farther; for when he came to Scotland to see the tree, he was told that it grew farther north in the Orchades. In 1599, Dutch sailors, who had visited Greenland, gave a full description of how they found there the eggs of the Barnacle-geese (whom they in Dutch called *rotgansen*); how they saw them hatching, and heard them cry *rot, rot, rot*; how they killed one of them with a stone, and ate it, together with sixty eggs.\*

Nevertheless, the story appeared again and again, and the birds continued to be eaten by the priests during Lent without any qualms of conscience. *Aldrovandus*, in his 'Ornithologia' 1603, (lib. xix.), tells us of an Irish priest, of the name of Octavianus, who assured him with an oath on the Gospel that he had seen the birds in their rude state and handled them. And *Aldrovandus* himself, after weighing all the evidence for and against the miraculous origin of the Barnacle goose, arrives at the conclusion that it is better to err with the majority than to argue against so many eminent writers.† In 1629 a Count Maier

aquam vero demersos, mox animatos enatare sub aquis et in ærem plumis penisque evolare. De qua re cum avidius investigaremus dum essemus in Scotia apud Jacobum regem, hominem quadratum et multa pinguedine gravem, didicimus miracula semper remotius fugere, famosamque arborem non in Scotia, sed apud Orchades insulas inveniri."—Seb. Munster, *Cosmographia*, p. 49.

\* *Trois Navigations faites par les Hollandais au Septentrion*, par Gerard de Vora. Paris, 1599, p. 112.

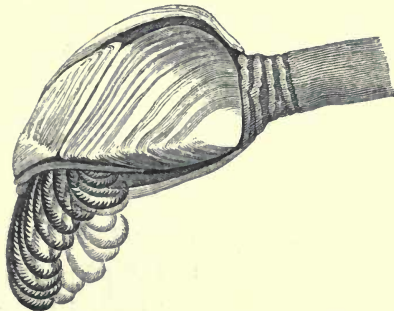
† 'Malim tamen cum pluribus errare quam tot scriptoribus clarissimis oblatrare quibus præter id quod de ephemero dictum est, favet etiam quod est ab Aristotele proditum, genus scilicet tes-



published at Frankfort a book, 'De Volucris Arborea' (On the Tree-bird), in which he explains the whole process of its birth, and indulges in some most absurd and blasphemous speculations.\*

But how did this extraordinary story arise? Why should anybody ever have conceived the idea that a bird was produced from a shell; and this particular bird, the Barnacle-geese, from this particular shell, the Barnacle-shell? If the story was once started, there are many things that would keep it alive; and its vitality has certainly been extraordinary. There are certain features about this Barnacle-shell which to

Fig. 30.



a careless observer might look like the first rudiments of a bird; and the feet, in particular, with which these animals catch their food and convey it into the shell, are decidedly like very delicate feathers. The fact, again, that this fable of the shell-geese offered an excuse for eating these birds during Lent would, no

tatum quoddam navigiis putrescente fæce spumosa adnasci.' (P. 173, line 47).

\* The fourth chapter has the following heading: 'Quod finis proprius hujus volucris generationis sit ut referat duplici suâ naturâ, vegetabili et animali, Christum Deum et hominem, qui quoque sine patre et matre, ut ille, existit.'

doubt, form a strong support of the common belief, and invest it, to a certain extent, with a sacred character. In Bombay, where, with some classes of people, fish is considered a prohibited article of food, the priests call it sea-vegetable, under which name it is allowed to be eaten. No one would suspect Linnæus of having shared the vulgar error; nevertheless, he retained the name of *anatifera*, or duck-bearing, as given to the shell, and that of *Bernicla*, as given to the goose.

I believe it was language which first suggested this myth. We saw that the shells were regularly and properly called *bernaculæ*. We also saw that the Barnacle-geese were caught in Ireland. It was against the Irish bishops that Giraldus Cambrensis wrote, blaming them for their presumption in eating these birds during Lent; and we learn from later sources that the discovery made by the Irish priests was readily adopted in France. Now Ireland is called *Hibernia*; and I believe these birds were originally called *Hibernicæ*, or *Hiberniculæ*. The first syllable was dropped, as not having the accent, just as it was dropped in the Italian *il verno*, winter, instead of *il iverno*. This dropping of the first syllable is by no means unusual in Latin words which, through the vulgar Latin of the monks, found their way into the modern Romance dialects; \* and we actually find in the mediæval Latin dictionaries the word *hybernagium* in the truncated form of *bernagium*.† The birds, therefore, being called *Hiberniculæ*, then *Berniculæ*, were synonymous with

\* Cf. Diez, *Rom. Gr.* p. 162: *rondine* = hirundo.  
*vescovo* = episcopus.  
*chiesa* = ecclesia.

† Cf. Du Cange. 'Bernagium, pro Hybernagium, ni fallor, miscellum frumentum.'

the shells, equally called *Bernaculæ*; and as their names seemed one, so the creatures were supposed to be one. Everything afterwards seemed to conspire to confirm the first mistake, and to invest what was originally a good Irish *canard* with all the dignity of scientific, and the solemnity of theological truth.

It should be mentioned, however, that there is another derivation of the name *Bernacula*, which was suggested to Gesner by one of his correspondents. 'Joannes Caius,' he says, 'writes to me in a letter: "I believe that the bird which we call *Anser brendinus*, others *Bernaclus*, ought to be called *Bernclacus*; for the old Britons and the modern Scots called, and call, the wild goose *Clake*. Hence they still retain the name which is corrupted with us, *Lake* or *Fenlake*, i. e. lake-goose, instead of *Fencklake*; for our people frequently change letters, and say *bern* for *bren*.'" ('*Historia Animalium*,' lib. iii. p. 110.)

His idea, therefore, was, that the name was derived from Scotch; that in Scotch the bird was called *Bren clake*; that this was pronounced *Bernclake*, and then Latinized into *bernclacus*. There is, however, this one fatal objection to this etymology, that among the very numerous varieties of the name *Bernacula*,\* not one comes at all near to *Bernclacus*.

\* The name even in Latin varies. In ornithological works the following names occur, all intended for the same bird, though I do not wish to vouch for their correctness or authenticity:—

English: Bernacle, Scotch goose.

Scotch: Clakis or claiks, clak-guse, claik-gees, Barnacle.

Orcades: Rodgans.

Dutch: Ratgans.

German: Baumgans.

Danish: Ray-gaas, Radgaas.

Norwegian: Raatne-gans, goul, gagl.



Otherwise *clake* or *claik* certainly means goose; and the Barnacle-goose, in particular, is so called.\* As to *Bran*, it means in compounds dark, such as the A.S. *branwyrt*, blackberry, different from *brunewyrt*, brownwort, water betony; and Jamieson gives us as Scotch *branded*, *brannit*, adj., having a reddish-brown colour, as if singed by fire; a *branded* cow being one almost entirely brown. A *brant-fox* is a fox with black feet. *Branta*, we saw, was a name given to the Barnacle-goose; and it was said to be given to it on account of its dark colour.

How easily in cases like this a legend grows up to remove any difficulty that might be felt at names no longer understood, can be proved by many a mediæval legend, both sacred and profane. The learned editor of the 'Munimenta Gildhallæ Londinensis,' Mr. H.

Iceland: Helsingen.

French: Bernache, Cane à collier. Nonnette, Religieuse; Macquerolle, (?) Macreuse. (?)

Latin: Bernicula, Bernacula, Bernacla, Bernicla, Bernecla, Bernecela (Fred. II. Imp., *de Arte Venandi*), Bernaca, Bernicha, Bernecha, Berneca, Bernichia, Branta (ab atro colore anser scoticus), Bernesta, Barnaces (Brompton, p. 1072), Barliata (Isidorus), Barbata (Albertus Magnus).

Cf. Ducange, s. v. *Menage*, s. v. *Bernache*. Diefenbach, *Glossarium Latino-Germanicum*: 'Galli has aves *Macquerolles* et *Macreuses* appellant, et tempore Quadragesimali ex Normannia Parisios deferunt. Sed revera deprehensum est a Batavis, anseres hosce ova parere,' &c. (Willoughby).

Another name is given by Scaliger. Julius Cæsar Scaliger, ad Arist. de Plantis, libr. i.:—'Anates (inquit, melius dixisset Anseres) Oceani, quas Armorici partim *Crabrans*, partim *Bernachias* vocant. Eæ creantur ex putredine naufragiorum, pendenteque rostro a matrice, quoad absolutæ decidant in subjectas aquas, unde sibi statim victum quærunt: visendo interea spectaculo pensiles, motitantesque tum pedes, tum alas.'

\* Brompton, *Chronicle of Ireland*, col. 1072, ap. Jun.

T. Riley, tells us in his Preface (p. xviii.) that, in the fourteenth and beginning of the fifteenth century, trading, or buying and selling at a profit, was known to the more educated classes under the French name *achat*, which in England was written, and probably pronounced, *acat*. To *acat* of this nature, Whittington was indebted for his wealth; and as, in time, the French became displaced here by the modern English, the meaning of the word probably became lost, and thereby gave the opportunity to some inventive genius, at a much later period, of building a new story on the double meaning of an old and effete word.\*

You know the story of St. Christopher. The 'Legenda Aurea' † says of him that he was a Canaanite, very tall and fearful to look at. 'He would not serve anybody who had himself a master; and when he heard that his lord was afraid of the devil, he left him and became himself the servant of the devil. One day, however, when passing a Cross, he observed that his new master was afraid of the Cross, and learning that there was one more powerful than the devil, he left him to enter the service of Christ. He was instructed by an old hermit, but being unable to fast or to pray, he was told to serve Christ by carrying travellers across a deep river. ‡ This he did,

\* *Rerum Britannicarum Mediæ Ævi Scriptores, Munimenta Gildhallæ Londinensis*, vol. i. Liber Albus. London, 1859. As I have not been able to trace the story of Whittington to its earliest form, I must leave to Mr. Riley all the credit and responsibility of this explanation.

† *Legenda Aurea*, cap. 100.

‡ According to a late Latin hymn, it was the Red Sea through which Christopher carried the travellers.

until one day he was called three times, and the third time he saw a child that wished to be carried across the river. He took him on his shoulders, but his weight was such that he could hardly reach the opposite shore. When he had reached it, the Child said to him that he had carried Christ Himself on his shoulders, in proof whereof, the stick which he had used for many years, when planted in the earth, grew into a tree.' Many more miracles are said to have happened to him afterwards, till at last he suffered the death of a martyr.

It is clear, and it is not denied even by Roman Catholic writers, that the whole legend of St. Christopher sprang from his name, which means 'he who bears Christ.' That name was intended in a spiritual sense, just as St. Ignatius took the name of *Theophorus*,\* 'he who bears God,' namely, in his heart. But, as in the case of St. Ignatius, the people who martyred him, when tearing out his heart, are said to have found it miraculously inscribed with the name of God, so the name of *Christophorus* led to the legend just quoted. Whether there was a real Christophorus who suffered martyrdom under Decius, in Lycia, 250 A.D., we cannot tell; but even Alban Butler, in his 'Lives of the Saints,' admits that 'there seem to

' O sancte Christophore,  
 Qui portasti Jesum Christum,  
 Per mari rubrum,  
 Nec franxisti crurum,  
 Et hoc est non mirum,  
 Quia fuisti magnum virum.'

\* 'The accent placed on the penultima of *Ἐεοφόρος*, as the word is written in the saint's acts, denotes it of an active signification, one that carrieth God; but of the passive, carried of God, if placed on the antepenultima.'—Alban Butler, *Lives of the Saints*, vol. ii. p. 1.



be no other grounds than his name for the vulgar notion of his great stature, the origin of which seems to have been merely allegorical, as Baronius observes, and as Vida has expressed in an epigram on this saint:—

‘Christophore, infixum quod eum usque in corde gerebas,  
Pictores Christum dant tibi ferri humeris.’\*

‘The enormous statues of St. Christopher, still to be seen in many Gothic cathedrals, expressed his allegorical wading through the sea of tribulations, by which the faithful meant to signify the many sufferings through which he arrived at eternal life.’ Before he was called Christophorus his name was Reprobus; so says the ‘*Legenda Aurea*.’ Others, improving on the legend, represent his original name to have been *Offerus*,† the second part of *Christoferus*, thus showing a complete misunderstanding of the original name.

Another legend, which is supposed to owe its origin to a similar misunderstanding, is that of Ursula and the 11,000 Virgins, whose bones are shown to the present day in one of the churches of Cologne. This extravagant number of martyred virgins, which is not specified in the earlier legends, is said to have arisen from the name of one of the companions of Ursula being *Undecimella* ‡—an explanation very plausible,

\* *Vida*, Hymn. 26, t. ii. p. 150.

† Maury, *Légendes Pieuses*, p. 53.

‡ ‘L’Histoire de sainte Ursule et des onze mille vierges doit son origine à l’expression des vieux calendriers, Ursula et Undecimella, VV. MM., c’est-à-dire sainte Ursule et sainte Undecimelle, vierges et martyres.’—Maury, p. 214.

though I must confess that I have not been able to find any authority \* for the name *Undecimella*.

It would be a great mistake to suppose that these and other legends were invented and spread intentionally. They were the natural productions of the intellectual soil of Europe, where the seeds of Christianity had been sown before the wild weeds of the ancient heathen mythology were rooted up and burnt. They are no more artificial, no more the work of individuals, than the ancient fables of Greece, Rome, or India; nay, we know that the Church, which has sometimes been accused of fostering these superstitions, endeavoured from time to time to check their rapid growth, but in vain. What happened at that time was what will always happen when the great masses are taught to speak the language before they have learnt to think the thoughts of their rulers, teachers, apostles, or missionaries. What in the mind of the teacher is spiritual and true becomes in the mouth of the pupil material and frequently false. Yet, even in their corrupt form, the words of the teachers retain their sacred character; they soon form an integral part of that foundation on which the religious life of a whole nation is built up, and the very teachers tremble lest in trying to place each stone in its right position, they might shake the structure which it took centuries to build up. St. Thomas (died 1274) asked Bonaventura (died 1271) whence he received the force and unction which he displayed

\* Jacobus a Voragine, *Legenda Aurea*, cap. 158. Galfredus, *Monumetensis*, lib. v. cap. 16. *St. Ursula und ihre Gesellschaft*. Eine kritisch-historische Monographie, von Johann Hubert Kessel. Köln, 1863.

in all his works. Bonaventura pointed to a crucifix hanging on the wall of his cell. 'It is that image,' he said, 'which dictates all my words to me.' What can be more simple, more true, more intelligible? But the saying of Bonaventura was repeated, the people took it literally, and, in spite of all remonstrances, they insisted that Bonaventura possessed a talking crucifix. A profane miracle took the place of a sacred truth; nay, those who could understand the truth, and felt bound to protest against the vulgar error, were condemned by the loud-voiced multitude as disbelievers of miracles. Pictures frequently added a new sanction to these popular superstitions. Zurbaran painted a saint (Pierre Nolasque) before a speaking crucifix. Whether the artist meant it literally or symbolically, we do not know. But the crowds took it in the most literal sense, and who was the bold preacher who would tell his congregation the plain, though, no doubt, the more profound, meaning of the miraculous picture which they had once learnt to worship?

It was a common practice of early artists to represent martyrs that had been executed by the sword, as carrying their heads in their hands.\* The people who saw the sculptures could read them in one sense only, and they firmly believed that certain martyrs miraculously carried their heads in their hands after they had been beheaded.† Several saints were repre-

\* Maury, p. 207.

† *Ibid.*, *Légendes Pieuses*, p. 287: 'Cette légende se trouve dans les vies de saint Denis, de saint Ovide, de saint Firmin d'Amiens, de saint Maurice, de saint Nicaise de Reims, de saint Soulange de Bourges, de saint Just d'Auxerre, de saint Lucain, de sainte Esperie, de saint Didier de Langres, et d'une foule d'autres.'



sented with a dove either at their side or near their ear. The artist intended no more than to show that these men had been blessed with the gifts of the Holy Ghost; but the people who saw the images firmly believed that the Holy Ghost had appeared to their saint in the form of a dove.\* Again, nothing was more usual for an artist than to represent sin and idolatry under the form of a serpent or a dragon. A man who had fought bravely against the temptations of the world, a pagan king who had become a convert to Christianity,† was naturally represented as a St. George fighting with the dragon, and slaying it. A missionary who had successfully preached the Gospel and driven out the venomous brood of heresy or idolatry, became at once a St. Patrick, driving away every poisonous creature from the Hibernian island.‡

Now it should be observed how in all these cases the original conception of the word or the picture is far higher, far more reverend, far more truly religious than the miraculous petrification which excites the superstitious interest of the people at large. If Constantine or Clovis, at the most critical moments of their lives, felt that the victory came from the hands of the Only True God, the God revealed by Christ, and preached in the cities of the whole Roman Empire by the despised disciples of a crucified Lord, surely this shows the power of Christianity in a far more majestic light than when we are told that these royal converts saw, or imagined they saw, a flag

\* Maury, p. 182.

† *Ibid.*, 135. Eusebius, *de Vita Const.*, ed. Heinicher, Lipsiæ, 1830, p. 150.

‡ *Ibid.*, p. 141.

with a Cross, or with the inscription, '*In hoc signo vinces.*'\*

If Bonaventura felt the presence of Christ in his lonely cell, if the heart of Ignatius was instinct with the spirit of God, we can understand what is meant, we can sympathize, we can admire, we can love. But if we are told that the one merely possessed a talking crucifix, and that the heart of the other was inscribed with the four Greek letters, ΘΕΟΣ, what is that to us?

Those old pictures and carved images of saints fighting with dragons, of martyrs willing to lay down their lives for the truth, of inspired writers listening intently to the voice of God, lose all their meaning and beauty if we are told that they were only men of bodily strength who chanced to kill a gorilla-like monster, or beings quite different from ourselves, who did not die even though their heads had been severed from their trunks, or old men carrying doves on each shoulder. Those doves whispering into the ears of the prophets of old were meant for the Spirit of God descending like a dove and lighting upon them; and the pious sculptors of old would have been horrified at the idea that these birds could ever be mistaken for real animals in a bodily shape, dictating to the prophets the words they should write down.

Everything is true, natural, significant, if we enter with a reverend spirit into the meaning of ancient

\* Similar stories are told of Alfons, the first King of Portugal, who is said to have seen a brilliant cross before the battle of Ourique, in 1139, and of Waldemar II., of Denmark. The red cross of Denmark, the Danebrog, dates from Waldemar's victory over the Esthonians in 1219. See Dahlmann, *Geschichte von Dänemark*, vol. i. p. 368.

art and ancient language. Everything becomes false, miraculous, and unmeaning, if we interpret the deep and mighty words of the seers of old in the shallow and feeble sense of modern chroniclers.

There is a curious instance of mistaken interpretation which happened long before the days of Galileo. Earthquakes in later Greek were called *Theomēnia*, which literally means the Anger of God. The expression was probably suggested by the language of the Bible, where we meet with passages such as (Psalm civ. 32), 'He looketh on the earth, and it trembleth; he toucheth the hills, and they smoke.' It was in itself a most appropriate term, but it very soon lost its etymological significancy, and became the conventional and current name for earthquake. Nevertheless it kept up in people's mind the idea that earthquakes were more immediately produced by the wrath of God, and differed in this way from thunderstorms, or famine, or pestilence. Here was the source of mischief. The name of *Theomēnia*,\* which was qtrue in i ts original conception, became falsified

\* *θεομηνία*, ira divina [Eustath. p. 891, 24]: τὴν θεομηνίαν Διὸς λέγει μάστιγα (Stephani Thesaurus, Didot).

Tzetzes, *Historiarum variarum Chiliades*, ed. Kiesseling, Lipsiæ, 1826, v. 727 (cf. Grote, vol. i. p. 539):—

ἂν συμφορὰ κατέλαβε πόλιν θεομηνία, εἴτ' οὖν λιμὸς, εἴτε λοιμὸς, εἴτε καὶ βλάβος ἄλλο.

Theophanes Contin. (p. 673), (Symeon Magister, *De Michaele et Theodora*).

ἐν μιᾷ νυκτὶ συνέβη γενέσθαι σεισμοὶ μεγάλοι· καὶ αὐτὸς ὁ Φῶτιος ἀναβάς ἐπὶ τοῦ ἄμβωνος δημηγορῆσαι, εἶπεν ὅτι οἱ σεισμοὶ οὐκ ἐκ πλήθους ἁμαρτιῶν ἀλλ' ἐκ πλησμονῆς ὕδατος γίνονται. Joannes Malalas (Bonnæ, 1831), p. 249: τῆς αὐτῆς πόλεως Ἀντιοχείας ληφθείσης ὑπὸ ἐναντίων, ὡσαύτως δὲ καὶ θεομηνίας γενομένης καὶ διαφόρων σεισμῶν καὶ ἐμπρησμῶν.



by an inadequate interpretation. And what happened? People who, like Photius, ventured to assign natural causes that produced earthquakes, were cried down by a thoughtless multitude as unbelievers and heretics.

We have lastly to consider one class of words which exercise a most powerful influence on the mind. They rule the mind instead of being ruled by it, and they give rise to a kind of mythology, the effects of which are most widely extended, even at the present day. I pointed out in a former Lecture that, besides such abstract names as *virtue*, *fortune*, *felicity*, *peace*, and *war*, there are others of a slightly different character, which equally lend themselves to mythological personification. A name like the Latin *virtus* was originally intended to express a quality, manliness, the quality of a man, or rather every good quality peculiar to man. As long as this noun was used merely as a noun of quality, as an adjective changed into a substantive, no mischief could arise.

Abstract nouns were originally collective nouns, and the transition is very easy from a plural, such as 'the clerics' (*clerici*), to a collective or abstract noun, such as 'the clergy' (*clericatus*). *Humanitas* meant originally 'all men,' 'mankind;' but *kind*, literally *genus*, came, like *genus*, to express what constitutes *kind*, the qualities which all members of a kind share in common, and by which one particular kind or kin is distinguished from all other kinds or kins.

But when the mind, led away by the outward semblance of the word *virtus*, conceived what was intended merely as a collective predicate, as a personal subjective essence, then the mischief was done: an adjective had become a substantive, a predicate

had been turned into a subject; and as there could not be any real and natural basis on which this spurious being could rest, it was placed, almost involuntarily, on the same pedestal on which the statues of the so-called divine powers had been erected; it was spoken of as a supernatural or a divine being. *Virtus*, manliness, instead of being possessed by man, was herself spoken of as possessing, as ruling, as inciting man. She became a power, a divine power, and she soon received temples, altars, and sacrifices, like other more ancient gods. Many of those more ancient gods owed their origin to exactly the same intellectual confusion. We are apt to imagine that *Day, Night, Dawn, Spring, Heaven, Earth, River*, are substantial beings, more substantial at least than *Virtue* or *Peace*. But let us analyse these words, let us look for the substantial basis on which they rest, and we shall find that they evade our touch almost as much as the goddesses of *Virtue* and *Peace*. We can lay hold of something in everything that is individual, we can speak of a pebble, a daisy, a horse, or of a stone, a flower, an animal, as independent beings; and although their names are derived from some general quality peculiar to each, yet that quality is substantiated in something that exists, and resists further analysis. But if we speak of the Dawn, what do we mean? Do we mean a substance, an individual, a person? Certainly not. We mean the time which precedes the rising of the sun. But then, again, what is Time? what is there substantial, individual, or personal in time, or any portion of time? Yet Language cannot help herself; all the nouns which she uses are either masculine or feminine—for neuters are of later date—and if the name of the Dawn has once been formed, that name

will convey to every one, except to the philosopher, the idea of a substantial, if not of an individual and personal being. We saw that one name of the dawn in Sanskrit was *Saranyû*, and that it coincided literally with the Greek *Erinyes*. It was originally a perfectly true and natural saying that the rays of the Dawn would bring to light the works of darkness, the sins committed during the night. We have a proverb in German:—

‘Kein Faden ist so fein gesponnen,  
Er kommt doch endlich an der Sonnen.’  
No thread on earth so fine is spun,  
But comes at last before the sun.

The expression that the Erinyes, *Saranyû*, the Dawn, finds out the criminal, was originally quite free from mythology; it meant no more than that crime would be brought to light some day or other. It became mythological, however, as soon as the etymological meaning of Erinyes was forgotten, and as soon as the Dawn, a portion of time, assumed the rank of a personal being.

The *Weird Sisters* sprang from the same source. *Weird* meant originally *the Past*.\* It was the name given to the first of the three *Nornas*, the German *Parcæ*. They were called *Urðr*, *Verðandi*, and *Skuld*, Past, Present, and Future,† ‘das Gewordene,’ ‘das Werdende,’ ‘das (sein) Sollende.’ They expressed exactly the same idea which the Greeks expressed by the thread which has been spun, the thread that passes through the fingers, and the thread that

\* Grimm, *D. M.* p. 376. *Geschichte der Deutschen Sprache*, p. 665.

† Is *Elysium* another name for future, *Zukunft*, *avenir*, and derived from *ἔρχομαι*, *ἤλυθον* ?



is still on the distaff; or by *Lachesis*, singing what has been (*tà gegonóta*), *Klotho*, what is (*tà ónta*), and *Atropos*, what will be (*tà méllonta*).

In Anglo-Saxon, *Wyrd* occurs frequently in the sense of Destiny or Fate.

Beowulf, v. 915:—‘Gæð â wyrd swâ hiô sceal,’  
Fate goes ever as it must.

The *Weird Sisters* were intended either as destiny personified, or as *fatidicæ*, prophesying what is to befall man. Shakespeare retains the Saxon name, Chaucer speaks of them as ‘*the fatal sustrin*.’

Again, when the ancient nations spoke of the Earth, they no doubt meant originally the soil on which they stood; but they soon meant more. That soil was naturally spoken of as their mother, that is to say, as supplying them with food; and this one name, Mother, applied to the Earth, was sufficient to impart to it the first elements of personality, if not of humanity. But this Earth, when once spoken of as an individual, was felt to be more than the soil enclosed by hurdles, or walls, or mountains.

To the mind of the early thinkers the Earth became an infinite being, extending as far as his senses and his thoughts could extend, and supported by nothing, not even by the Elephant and the Tortoise of later Oriental philosophy. Thus the Earth grew naturally and irresistibly into a vague being, real, yet not finite; personal, yet not human; and the only name by which the ancient nations could call her, the only category of thought under which she could be comprehended, was that of a goddess, a bright, powerful, immortal being, the mother of men, the beloved of the sky, the Great Mother.

Now, it is perfectly true that we in our modern

languages do not speak any more of gods and goddesses; but have we in our scientific and unscientific vocabularies none of those nondescript beings, like Earth, or Dawn, or Future? Do we never use terms which, if rigorously analysed, would turn out to be without any substantial basis, resting like the Earth on the Elephant, and the Elephant on the Tortoise—but the Tortoise swinging in infinite space?

Take the word *Nature*. *Natura*, etymologically, means she who gives birth, who brings forth! But who is she, or he, or it? The ancient nations made a goddess of her—and this we consider a childish mistake—but what is *Nature* with us? We use the word readily and constantly, but when we try to think of Nature as a being, or as an aggregate of beings, or as a power, or as an aggregate of powers, our mind soon drops: there is nothing to lay hold of, nothing that exists or resists.

What is meant by the expression, that fruits are produced by Nature? Nature cannot be meant here as an independent power, for we believe no longer in a *Gæa* or *Tellus*, a *Mother Earth*, bringing forth the fruits on which we live (*zeitōros*). *Gæa* was one of the many names of the Divine;—is Nature more or less to us?

Let us see what naturalists and philosophers can tell us about Nature.

Buffon says: 'I have always spoken of the Creator, but you have only to drop that word, and put in its place the power of Nature.'

'Nature,' he says again, 'is not a thing, for it would be all; Nature is not a being, for that being would be God.'

'Nature is a living power,' he adds, 'immense, all-



embracing, all-vivifying ; subject to the first Being, it has commenced to act at His command alone, and continues to act by His consent.'

Is this more intelligible, more consistent, than the fables of *Gæa*, the mother of *Uranos*, the wife of *Uranos*?

Cuvier thus speaks of Nature : \*—

'By one of those figures of speech to which all languages are liable, Nature has been personified; all beings that exist have been called "the works of Nature;" the general relations of these beings among themselves have been called "the laws of Nature." By thus considering Nature as a being endowed with intelligence and will, though secondary and limited in its powers, people have brought themselves to say that she watches constantly over the support of her works, that she does nothing in vain, that she always acts by the simplest means. It is easy to see the puerility of those philosophers who have conferred on Nature a kind of individual existence, distinct from the Creator, from the laws which He has imposed on the movement, and from the properties and forms which He has given to His creatures; and who represent Nature as acting on matter by means of her own power and reason. As our knowledge has advanced in astronomy, physics, and chemistry, those sciences have renounced the paralogisms which resulted from the application of figurative language to real phenomena. Physiologists only have still retained this habit, because with the obscurity in which physiology is still enveloped, it was not possible for them to deceive themselves or others as to their profound ignorance of vital

\* See some excellent articles by M. Flourens, in the *Journal des Savants*, October 1863, p. 623.

movements, except by attributing some kind of reality to the phantoms of their imagination.'

Nature, if we believed all that is said of her, would be the most extraordinary being. She has horrors (*horror vacui*), she indulges in freaks (*lusus naturæ*), she commits blunders (*errores naturæ, monstra*). She is sometimes at war with herself, for, as Giraldus told us, 'Nature produced barnacles against Nature;' and of late years we have heard much of her power of selection.

Nature is sometimes used as meaning simply matter, or everything that exists apart from spirit. Yet more frequently Nature is supposed to be itself endowed with independent life, to be working after eternal and invariable laws. Again, we sometimes hear Nature used so as to include the spiritual life and the intellectual activity of man. We speak of the spiritual nature of man, of the natural laws of thought, of natural religion. Even the Divine Essence is not necessarily excluded, for the word *nature* is sometimes used so as to include that First Cause of which everything else is considered as an emanation, reflection, or creation.

But while *nature* seems thus applicable promiscuously to things material and spiritual, human and divine, language certainly, on the other hand, helps us to distinguish between the works of nature and the works of man, the former supplying materials for the physical, the latter for the historical sciences; and it likewise countenances the distinction between the works both of nature and of man on one side, and the Divine agencies on the other: the former being called natural and human, the latter supernatural and superhuman.

But now consider the havoc which must needs follow if people, without having clearly perceived the meaning of Nature, without having agreed among themselves as to the strict limits of the word, enter on a discussion upon the *Supernatural*. People will fight and call each other very hard names for denying or asserting certain opinions about the Supernatural. They would consider it impertinent if they were asked to define what they mean by the Supernatural: and yet it is as clear as anything can be that these antagonists connect totally different ideas, and ideas of the vaguest character, with this term.

Many attempts have been made to define the supernatural or the miraculous, but in every one of these definitions the meaning of nature or the natural is left undefined.

Thus Thomas Aquinas explained a miracle as that which happens out of the order of nature (*præter ordinem naturæ*), while St. Augustine had worded his definition far more carefully in saying that we call miracles what God performs out of the usual course of nature, *as known to us* (*contra cognitum nobis cursum solitumque naturæ*). Others defined miracles as events exceeding the powers of nature (*opus excedens naturæ vires*); but this was not considered enough, because miracles should not only exceed the powers of nature, but should violate the order of nature (*cum ad miraculum requiratur, nedum ut excedat vires naturæ, sed præterea ut sit præter ordinem naturæ*). Miracles were divided into three classes—1. Those above nature (*supra naturam*); 2. Those against nature (*contra naturam*); 3. Those beyond nature (*præter naturam*). But where nature ended and the supernatural began was never ex-



plained. Thomas Aquinas went so far as to admit *miracles quoad nos*, and St. Augustine maintained that, according to human usage, things were said to be against nature which are only against the course of nature, *as known to mortals*. (Dici autem humano more contra naturam esse quod est contra naturæ usum mortalibus notum.) All these fanciful definitions may be seen carefully examined by Benedict XIV. in the first part of the fourth book of his work 'De Servorum Dei Beatificatione et Beatorum Canonizatione:' yet should we look in vain either there or anywhere else for a definition of what is natural.\*

Here a large field is open to the student of language. It is his office to trace the original meaning of each word, to follow up its history, its changes of form and meaning in the schools of philosophy or in the marketplace and the senate. He ought to show how frequently different ideas are comprehended under one and the same term, and how frequently the same idea is expressed by different terms. These two tendencies in language, *Homonymy* and *Polyonymy*, which favoured, as we saw, the abundant growth of early mythology, are still asserting their power in fostering the growth of philosophical systems. A history of such terms as *to know* and *to believe*, *Finite* and *Infinite*, *Real* and *Necessary*, would do more than anything else to clear the philosophical atmosphere of our days.

The influence which language exercises over our thoughts has been felt by many philosophers, most of all by Locke. Some thought that influence inevitable, whether for good or evil; others supposed that it

\* See an excellent article lately published in the *Edinburgh Review*, 'On the Supernatural,' ascribed to one of our most eminent statesmen.

could be checked by a proper definition of words, or by the introduction of a new technical language. A few quotations may be useful to show how independent thinkers have always rebelled against the galling despotism of language, and yet how little it has been shaken. Thus Bacon says:—

‘And lastly, let us consider the false appearances that are imposed upon us by words, which are framed and applied according to the conceit and capacities of the vulgar sort; and although we think we govern our words, and prescribe it well,—*loquendum ut vulgus, sentiendum ut sapientes*,—yet certain it is, that words, as a Tartar’s bow, do shoot back upon the understanding of the wisest, and mightily entangle and pervert the judgment. So as it is almost necessary in all controversies and disputations to imitate the wisdom of the mathematicians, in setting down in the very beginning the definitions of our words and terms, that others may know how we accept and understand them, and whether they concur with us or no. For it cometh to pass, for want of this, that we are sure to end there where we ought to have begun, which is in questions and differences about words.’

Locke says:—

‘I am apt to imagine that, were the imperfections of language, as the instruments of knowledge, more thoroughly weighed, a great many of the controversies that make such a noise in the world would of themselves cease; and the way to knowledge, and perhaps peace too, lie a great deal opener than it does.’

Wilkins, when explaining the advantages of his philosophical language, remarks:—

‘This design will likewise contribute much to the



clearing of some of our modern differences in religion; by unmasking many wild errors, that shelter themselves under the disguise of affected phrases; which, being philosophically unfolded, and rendered according to the genuine and natural importance of words, will appear to be inconsistencies and contradictions. And several of those pretended mysterious profound notions, expressed in great swelling words, whereby some men set up for reputation, being this way examined, will appear to be either nonsense, or very flat and jejune. And though it should be of no other use but this, yet were it in these days well worth a man's pains and study; considering the common mischief that is done, and the many impostures and cheats that are put upon men, under the disguise of affected insignificant phrases.'

Among modern philosophers, Brown dwells most strongly on the same subject:—

'How much the mere materialism of our language has itself operated in darkening our conceptions of the nature of the mind, and of its various phenomena, is a question which is obviously beyond our power to solve, since the solution of it would imply that the mind of the solver was itself free from the influence which he traced and described: But of this, at least, we may be sure, that it is almost impossible for us to estimate the influence too highly, for we must not think that its effect has been confined to the works of philosophers. It has acted much more powerfully, in the familiar discourse and silent reflections of multitudes, that have never had the vanity to rank themselves as philosophers,—thus incorporating itself, as it were, with the very essence of human thought.

'In that state of social life, in which languages had

their origin, the inventor of a word probably thought of little more than the temporary facility which it might give to himself and his companions in communicating their mutual wants and concerting their mutual schemes of co-operation. He was not aware that with this faint and perishing sound, which a slight difference of breathing produced, he was creating that which was afterwards to constitute one of the most imperishable of things, and to form, in the minds of millions, during every future age, a part of the complex lesson of their intellectual existence,—giving rise to lasting systems of opinions, which, perhaps, but for the invention of this single word, never could have prevailed for a moment, and modifying sciences, the very elements of which had not then begun to exist. The inventor of the most barbarous term may thus have had an influence on mankind, more important than all which the most illustrious conqueror could effect by a long life of fatigue, and anxiety, and peril, and guilt.

‘A few phrases of Aristotle achieved a much more extensive and lasting conquest; and are perhaps even at this moment exercising no small sway on the very minds which smile at them with scorn.’\*

Sir W. Hamilton, in his ‘Lectures on Metaphysics,’ ii. p. 312, remarks:—‘To objects so different as the images of sense and the unpicturable notions of intelligence, different names ought to be given; and, accordingly, this has been done wherever a philosophical nomenclature of the slightest pretensions to perfection has been formed. In the German language, which is now the richest in metaphysical ex-

\* Brown, *Works*, i. p. 341.

pressions of any living tongues, the two kinds of objects are carefully distinguished. In our language, on the contrary, the terms *idea*, *conception*, *notion*, are used almost as convertible for either; and the vagueness and confusion which is thus produced, even within the narrow sphere of speculation to which the want of the distinction also confines us, can be best appreciated by those who are conversant with the philosophy of the different countries.'

I shall, in conclusion, give two or three instances to indicate the manner in which I think the Science of Language might be of advantage to the philosopher.

Knowledge, or to know, is used in modern languages in at least three different senses.

First, we may say, a child knows his mother, or a dog knows his master. This means no more than that they recognise one present sensuous impression as identical with a past sensuous impression. This kind of knowledge arises simply from the testimony of the senses, or sensuous memory, and it is shared in common by man and animal. The absence of this knowledge we call *forgetting*—a process more difficult to explain than that of remembering. Locke has treated of it in one of the most eloquent passages of his 'Essay concerning Human Understanding' (ii. 10, 5):—  
 'The memory of some men, it is true, is very tenacious, even to a miracle; but yet there seems to be a constant decay of all our ideas, even of those which are struck deepest, and in minds the most retentive; so that if they be not sometimes renewed by repeated exercise of the senses, or reflection on those kind of objects which, at first, occasioned them, the print wears out, and, at last, there remains nothing to be seen. Thus the ideas, as well as children of ou



youth, often die before us; and our minds represent to us those tombs to which we are approaching; where though the brass and marble remain, yet the inscriptions are effaced by time, and the imagery moulders away. The pictures drawn in our minds are laid in fading colours; and if not sometimes refreshed, vanish and disappear. How much the constitution of our bodies, and the make of our animal spirits, are concerned in this, and whether the temper of the brain make this difference, that in some it retains the characters drawn on it like marble, in others like freestone, and in others little better than sand, I shall not here inquire: though it may seem probable that the constitution of the body does sometimes influence the memory; since we oftentimes find a disease quite strip the mind of all its ideas, and the flames of a fever, in a few days, calcine all those images to dust and confusion, which seemed to be as lasting as if graved in marble.'

Secondly, we may say, I know this to be a triangle. Here we have a general conception, that of triangle, which is not supplied by the senses alone, but elaborated by reason, and we predicate this of something which we perceive at the time by our senses. We recognise a particular sensuous impression as falling under the general category of triangle. Here you perceive the difference. We not only recognise what we see, as the same thing we had seen before, but we must previously have gathered certain impressions into one cluster, and have given a name to this cluster, before we can apply that name whenever the same cluster presents itself again. This is knowledge denied to the animal, and peculiar to man as a reasoning being. All syllogistic knowledge falls under this

head. The absence of this kind of knowledge is called *ignorance*.

Thirdly, we say that man knows there is a God. This knowledge is based neither on the evidence of the senses, nor on the evidence of reason. No man has ever seen God, no man has ever formed a general conception of God. Neither sense nor reason can supply a knowledge of God. What are called the proofs of the existence of God, whether *ontological*, *teleological*, or *kosmological*, are possible only after the idea of God has been realized within us. Here, then, we have a third kind of knowledge, which imparts to us what is neither furnished by the organs of sense, nor elaborated by our reason, and which nevertheless possesses evidence equal, nay, superior, to the evidence of sense and reason. The absence of this knowledge is sometimes called *spiritual darkness*.

Unless these three kinds of knowledge are carefully distinguished, the general question, How we know, must receive the most contradictory answers.

'To believe' likewise expresses in modern English several very different kinds of assent. When we speak of our belief in God, or in the immortality of the soul, or in the divine government of the world, or in the sonship of Christ, we want to express a certainty independent of sense-evidence and reason, yet more convincing than either, evidence not to be shaken either by the report of the senses or by the conclusion of logical arguments. It is the strongest assent which creatures made as we are can give.

But when we say that we believe that Our Lord suffered under Pontius Pilate, or lived during the reign of Augustus, we do not intend to say that



we believe this with the same belief as the existence of God, or the immortality of the soul. The assent we give to these events is based on historical evidence, which is only a subdivision of sense-evidence, supplemented by the evidence of reason. If facts could be brought forward to show that our chronology was wrong, and that Augustus was emperor fifty years sooner or later, we should willingly give up our belief that Christ and Augustus were contemporaries. Belief in these cases means no more than that we have grounds, sensuous or argumentative, for admitting certain facts. I saw the revolution at Paris in February 1848: this is sense-evidence. I saw men who had seen the revolution at Paris in July 1830: this is sense-evidence, supplemented by argumentative evidence. I saw men who had seen men that had seen the revolution at Paris in July 1789: this is again sense-evidence, supplemented by argument. The same chain carries us back to the remotest times, but where its links are weak or broken, no power of belief can restore them. It is impossible to assent to any historical facts, as such, without the evidence of sense or reason. We may be as certain of historical facts as of our own existence, or we may be uncertain. We may either give or deny our assent, or we may give our assent provisionally, conditionally, doubtfully, carelessly. But we can as little believe a fact, using to believe in its first sense, as we can reason with our senses, or see with our reason. If, nevertheless, to believe is used to express various degrees of assent to historical facts, it is of great importance to bear in mind that the word thus used does not express that supreme certainty which is conveyed in our

belief in God and Immortality (*credo in*), a certainty never attainable by 'cumulative probabilities.'\*

To believe is used in a third sense when we say, 'I believe it is going to rain.' 'I believe' here means no more than 'I guess.' The same word, therefore, conveys the highest as well as the lowest degree of certainty that can be predicated of the various experiences of the human mind, and the confusion produced by its promiscuous employment has caused some of the most violent controversies in matters of religion and philosophy.

The Infinite, we have been told over and over again, is a negative idea, it excludes only, it does not include anything; nay, we are assured, in the most dogmatic tone, that a finite mind cannot conceive the Infinite. A step farther carries us into the very abyss of Metaphysics. There is no Infinite, we are told, for as there is a Finite, the Infinite has its limit in the Finite, it cannot be Infinite. Now all this is mere playing on words without thoughts. Why is infinite a negative idea? Because *infinite* is derived from *finite* by means of the negative particle *in*! But this is a mere accident, it is a fact in the history of language, and no more. The same idea may be expressed by the Perfect, the Eternal, the Self-existing, which are positive terms, or contain at least no negative element. That negative words may express positive ideas was known perfectly to Greek philosophers such as Chrysippus, and they would as little have thought of calling *immortal* a negative idea as they would have considered *blind* positive. The true idea of the Infinite is neither a

\* Dr. Newman, *Apologia pro vita sua*, p. 324.

negation nor a modification of any other idea.\* The Finite, on the contrary, is in reality the limitation or modification of the Infinite, nor is it possible, if we reason in good earnest, to conceive of the Finite in any other sense than as the shadow of the Infinite. Even Language will confess to this, if we cross-examine her properly. For whatever the etymology of *finis* may be, whether it be derived from *findere* or *figere*,† whether it means that which cuts or that which is fixed, it is clear that it stands for something which by means of the senses is inapprehensible. We admit in mathematical reasoning that points, lines, and planes can never be presented to the eye. It is the same in the world at large. No finger, no razor, has ever touched the end of anything: no eye has laid hold of the horizon which divides heaven and earth, or of the line which separates green from yellow, or unites yellow with white. No ear has ever caught the point where one key enters into another. Our senses never convey to us anything finite or definite, their impressions are always relative, measured by degrees, but by degrees of an infinite scale. It is maintained by some authorities‡ that the ear can take in 38,000 vibrations in one second. This is the highest note. The lowest number of

\* On the different kinds of infinity, see Roger Bacon, *Opus Tertium*, cap. 51 (ed. Brewer, p. 194). Of the positive infinite he says: ‘et dicitur infinitum non per privationem terminorum quantitatis, sed per negationem corruptionis et non esse.’ Oxford of the nineteenth century need not be ashamed, as far as metaphysics are concerned, of Oxford of the thirteenth.

† Bopp, *Vergleichende Grammatik*, iii. p. 248. Schweizer, in Kuhn’s *Zeitschrift*, iii. p. 357.

‡ See p. 103.



vibrations producing musical sound is sixteen in one second. Between these two points lies the sphere of our musical perceptions, but there is in reality a *progressus ad infinitum* on either side. The same applies to colour. Wherever we look, we never find a real end, a seizable *finis*. *Finis*, therefore, and the *Finite* express something which the senses by themselves do not supply, something that in our sensuous experience is purely negative, a name of something which, in the language of the senses, has no existence at all. But it has existence in the language of reason. Reason, which has as much right as the senses, postulates the *Finite* in spite of the senses; and when we speak reasonably, the *Finite*, i.e. the measures of space and time, the shades of colour, the keys of sound, &c., all these become to us the most positive elements of thought. Now it is our reason on which we pride ourselves most, we like to be called rational beings, and we are apt to look down on the two other organs of knowledge as of less importance. But there are, besides Reason, the two other organs of knowledge, Sense and Faith, all three together constituting our being, neither subordinate to the other, but all coequal. Faith, for I can find no better name in English, is that organ of knowledge by which we apprehend the Infinite, i. e. whatever transcends the ken of our senses and the grasp of our reason. The Infinite is hidden from the senses, it is denied by Reason, but it is perceived by Faith, and it is perceived, if once perceived, as underlying both the experience of the senses and the combinations of reason. What to our reason is merely negative, the In-finite, becomes to our faith positive, the Infinite, and if our eyes are once opened, we see even with our

senses straight into that endless All by which we are surrounded on every side, and without which the fleeting phenomena of the senses and the wonderful cobwebs of our reason would be vanity, and nothing but vanity.

Not even the Natural Sciences, which generally pride themselves on the exactness of their language, are free from words which, if rigorously analysed, would turn out to be as unsubstantial as Nemesis and the Erinys. Naturalists used to speak of *Atoms*, things indivisible, which are mere conceptions of the mind, as if they were real, in the sensuous sense of the word, whereas it is impossible for the senses to take cognizance of anything that cannot be divided, or is incommensurable. Chymists speak of *imponderable* substances, which is as impossible a conception as that of atoms. Imponderable means what cannot be weighed. But to weigh is to compare the gravity of one body with that of another. Now, it is impossible that the weight of any body should be so small as to defy comparison with the weight of some other body; or, if we suppose a body without weight and gravity, we speak of a thing which cannot exist in the material world in which we live, a world governed without mercy by the law of gravity.

Every advance in physical science seems to be marked by the discarding of some of these mythological terms, yet new ones spring up as soon as the old ones are disposed of. Till very lately, *Caloric* was a term in constant use, and it was supposed to express some real matter, something that produced heat. That idea is now exploded, and heat is understood to be the result of *molecular and ethereal vibrations*. All matter is supposed to be immersed in a



highly elastic medium, and that medium has received the name of *Ether*. No doubt this is a great advance—yet what is *Ether*, of which everybody now speaks as of a substance—heat, light, electricity, sound, being only so many different modes or modifications of it? *Ether* is a myth—a quality changed into a substance—an abstraction, useful, no doubt, for the purposes of physical speculation, but intended rather to mark the present horizon of our knowledge than to represent anything which we can grasp either with our senses or with our reason. As long as it is used in that sense, as an algebraic  $x$ , as an unknown quantity, it can do no harm—as little as to speak of the Dawn as *Erinys*, or of Heaven as *Zeus*. The mischief begins when language forgets itself, and makes us mistake the Word for the Thing, the Quality for the Substance, the *Nomen* for the *Numen*.

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