THE ORIGIN AND PHILOSOPHY OF LANGUAGE

LUDWIG NOIRE

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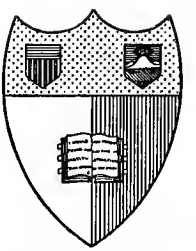

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THE ORIGIN AND PHILOSOPHY OF LANGUAGE

The Origin and Philosophy of Language

By

Ludwig Noiré

"No reason without speech;
No speech without reason."
Max Müller.

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"The Word is the thought incarnate."—Müller.

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THE ORIGIN OF LANGUAGE.

THE ORIGIN OF LANGUAGE.[1]

"The evolution of variety from unity," says Geiger, "seems to be the great fundamental law of all development of nature and of mind. This law, in language also, leads us back to a very insignificant germ, to a primitive sound, which expressed the sole and infinitely limited subject-matter that man first took notice of or beheld with interest, and out of which the whole wealth of language, nay—I am unhesitatingly convinced—of all languages, through untold millenniums, has been slowly unfolded."

The great merit of L. Geiger—who was unfortunately too early lost to science—is that of having shown how human reason and language were originally contained in one and the same germ; that we cannot say that reason created language, but that the contrary is true, that reason was gradually matured and strengthened through the instrumentality of the representative signs of sensory perception; that, accordingly, the word was beyond question the element first in point of time, and that more universal, more correct, more clear, and more conscious ideas were first attained and formed through words, and after a long course of development led through words to the present state of mature rational thought.

[1]From *Die Welt als Entwickelung des Geistes*, by Ludwig Noiré, Chap IX, Part III. (Leipsic: Velt & Co.)

The childish and anthropomorphic view, that God said to Adam, "This is a dog, This is an elephant," still held the minds of men captive in the eighteenth century, with the single difference, that the philosophers of that day put human reason in the place of God, and imagined that men by a kind of conventional agreement or pact had given names to things—in short, that they had *invented* language. As if an inventive act of this character did not demand a prodigious power of mind—a degree of intellect and wisdom that must have been infinitely greater than that at present possessed by the whole human race! It is a fundamental error of human thinking, that we are naturally predisposed to attribute conscious purpose, reflection, and knowledge, which now generally guide us in our daily affairs, universally to human acts, and that we attempt to explain the latter by the former. Ceres alone foresaw the stupendous results that were to follow the insignificant beginnings of agriculture. Copernicus did not think of the dangerous consequences that his new doctrine involved for Christianity. And the historical Luther,—if he were to return to-day to earth,—would break out in violent anger at the constantly extending emancipation of the human mind that has sprung from his original reformatory ideas, and at the progress of rational thought, subversive of all positive creed. The result of a course of development is frequently as different from its point of origination as the flowering plant from the seed out of which it has grown.

HERDER'S THEORY.

The first to rise well above this anthropomorphic view was *Herder,* whose divinatory genius in so many other fields discerned truths that science only later demonstrated by the help of accumulations of material, and who, even where he erred, never failed to give forth the most pregnant suggestions. The fundamental idea of his prize-essay, *Ueber den Ursprung der Sprache* (Upon the Origin of Language), is substantially this: "Man," says he, "gives proof of reflection, when, amid the hovering dream of images that flit before his senses, he collects himself into a moment of wakefulness, to dwell voluntarily upon some particular image, to survey it in a brighter and steadier light, and to abstract from it certain characteristics that establish that *this* is *this* object and no other." This he illustrates by the following example: "A man sees, for instance, a lamb. It passes, as an image, otherwise before his vision than it does before that of other animals. Whenever man is placed so that he must know a sheep, he is not disturbed by any instinct (as the wolf or the lion); the sheep stands before him exactly and entirely as represented by his senses. White, smooth, woolly. His thoughtfully operating mind seeks a characteristic mark. The sheep *bleats.* The characteristic is found. The inner sense is at work. The bleating—that which produced the strongest impression upon his mind, that which sprang forth and disengaged itself from all other qualities accessible to sight and touch—that remains in his mind. The sheep, let us say, returns. White, smooth, woolly. Our man looks, touches, meditates, again seeks a char-

acteristic mark. The sheep bleats; and now he recognises it. He feels inwardly: "Thou art the Bleating One!" he has humanly recognised it, for he has distinctly recognised it; that is, recognised it by, and called it by, a characteristic feature. By a *characteristic,* a *mark!* And what else is this than an inner *mark*-word, a verbal cue? He recognised the sheep by its bleating. This was the comprehended token by which the mind clearly hit upon an idea. What else is this than a word? And what is all human language but a collection of such words."

This theory Max Müller has called the Bow-wow theory, and rejected it.

It cannot be denied that as an hypothesis of the origin of language there is a good deal of truth contained in Herder's statement of things. The most important points to be noted are, that it (1) explains how a visual image or percept is transformed into the phonetic word; and that (2) it makes the creation of language first appear as attached primarily to single characteristic marks.

The weak points of the view lie in the facts (1) that Herder leaves the origin of the word as a result of the necessity of communication, entirely unnoticed: and it is surely to be assumed that impulse of feeling and the necessity of communication both potently influenced the origin of the first word; and (2) that the so-called onomatopoetic creation of language, that is, the designation of things by the sounds they make, has not yet been confirmed by any extant language. Single words, like *cuckoo,* and the like, prove nothing; and many names that appear to us as imitations can

be traced back to other roots that show no imitational origin whatsoever. All the languages we know, on the contrary reveal an inner conceptual connection between words that denote some crying, sounding object, and primitive roots designating some *human* activity. Herder himself, at a later period, gave up his theory of imitations of sound, and again adopted that of the revelation of language. His work on the "Origin of Language," however, still remains the earliest really philosophical work on the subject, and may claim the merit of having pointed out the true road upon which an explanation is to be sought.

THE INTERJECTIONAL THEORY.

Another attempt at explanation is that which seeks to derive language from interjections, and which Max Müller accordingly calls the Pooh-pooh theory. This also possesses a certain degree of probability, for account is taken herein of the necessity of giving vent to inner emotion by sounds and ejaculations, as also of the endeavor to communicate with others, and above all, of the example of animals, whose neighing, barking, roaring, crowing, and so forth, might seem to represent a prototype—an abortive effort to acquire phonetic speech. But in the investigation of known human languages this principle, unfortunately, does not find any kind of confirmation; no more so than does the attempt to regard the separate letters or sounds of a word as symbolical vehicles of its meaning —as the *w* in *wind* and *wave,* the *l* in *fluo, light, love,* and so forth. Serious philological science regards all such attempts as failures, or at best as ingenious diversions.

MAX MULLER'S THEORY.

The theory propounded by Max Müller himself, which has been jocosely called the Ding-dong theory, is even less tenable. This distinguished scholar thinks, that in every being a peculiar typical sound was planted; that originally in man there existed a copious phonetic world—a real spring-time of speech—that tunefully responded to the impressions of reality. This is a true *petitio principii,* and explains nothing. For we are still compelled to ask how and when this world of sound passed into man, and how man came to apply it to things; and we should be obliged always to fall back to the stage at which the first sound came forth. And then we should be no farther ahead than before.

Still it is quite easy to understand why so eminent a scholar as Max Müller should have hit upon this singular idea. He was probably led astray by his observation of children, to whom we usually turn when in search of information concerning anything primitively human. Now, it is true, daily experience teaches that there exists in children an impulse to speech, an incitation to language, and that they early strive to call objects by the names they have heard. And it has frequently been my experience that highly intelligent men, to whom I had propounded Geiger's theory of the priority of words to concepts, at once resorted to the following counter-argument: "But look at children. No sooner do they perceive things than they designate them by words of their own creation, which bear scarcely any similarity to those which have been taught them. What is that but an awakening of

the instinct of speech?" This, it must be admitted, is true. But the genuine science of today is no longer satisfied with reasoning of this kind. It demands an explanation of the word; it demands an account of its origin.

The speech-instinct of the child is the repetition of that long line of development which, we must assume, proceeded from the origin of language up to the present day. So long as the child does not feel this instinct, so long as it merely contemplates, touches, cries, asks for food, and so on, up to that time it represents the period of speechless humanity—the time at which human nature had not as yet separated from animal nature. And the fact, too, that the child even during this period, before it begins to form concepts, actually evinces an interest in *objects,* grasps at them, and throws them away, this fact might seem to suggest that even speechless humanity handled certain working-tools of its own. But the language-instinct is a thing ingrafted in the child during a long succession of generations. Our scientific curiosity, however, asks for information concerning a time shrouded in the deepest darkness, when the "word was made flesh, and dwelt among us," when instinctive life first began to pass into the clear consciousness of speaking humanity.

GEIGER'S RESEARCHES.

To Geiger the further honor is due of having shown that the oldest root-words, at least as far back as they can be traced, express a human act, a human gesture; and he rightly observes that this act must probably have been that which was the *most interesting* to man,

that of which he *first had knowledge,* which most strongly riveted his *attention,* and which *sympathetically re-echoed in his breast.* This fact is to be particularly noted. In our intercourse with our fellow-beings our countenance gradually assumes an expression like that of the human counterpart before us; tears and laughter are contagious; when we see a person in imminent danger of life, we ourselves anxiously go through the very movements which the person must make to escape from the danger he is in: the imitation of human actions is so natural to us that we immediately feel and reproduce the cheerful expression of joy, the convulsion and depression of pain, as well as scorn and menace. In view of this fact Geiger believes that the first cry of language must have been an aping reflex of the face of another, accompanied—from the fact that it was the result of emotion—by sound. (Here, of course, we should have had visual percept and speech-sound in one.) And he held that a sound of this kind, periodically repeated, must have recalled to mind a definite perception, sensation, or visual image, and that thus the first word, of whose content, of course, we can have no idea, might have originated.

Be this as it may, it remains indisputable that everywhere in the designations of things we meet with human action as that which first rendered objects interesting. This human activity, is, of course, as yet entirely identical with animal activity. The Greek δέρω, to flay, counts among its descendants δέρμα, skin, δόρυ, wood, δρῦς, tree, and the English *tree.* Skin is *that which is pulled off;* wood that which is

stripped of bark; and so, tree. This same law, with wonderful consistency, appears also in a number of words that, judging them from their present meaning, scarcely seem to exhibit any connection whatsoever. *Night,* through the notion dark, black, is carried back to the Sanskrit root *ang,* Latin *ungo,* to dye, to smear; *ground* and *terra* to a root denoting to grind, to crumble; *corn* denotes something that has been husked; *thunder* (a word that certainly sounds onomatopoetic), according to Max Müller, must be referred to the Sanskrit root *tan,* to stretch, and is akin to *tone* or the sound peculiar to a stretched cord. In the same manner *tener,* tender, must be derived from *thin,* and the latter again from the fact of tension. *Schreiben,* γράφω, and *scribere,* as well as the English *write* and the German *Riss,* are identical with a root denoting *ritzen,* to scratch. From the root *da,* to bind, are derived words of the following meanings: yoke, gird, husband, twins, sister, house, and innumerable others. Language designates tools by words that correspond to the human acts which they promote; they are *actively* symbolised, so to speak. Scissors, hatchets, and saws are things that shear (Swedish *skâra,* sickle), hack, and saw. Everywhere, in all the formations of words with which we are familiar, the conceptual element is seen to prevail, but nowhere do we find direct imitation of the sounds of nature. The names of the majority of animals and plants designate the creatures and things to which they refer, by *color;* and almost in all languages we recognise as the most primitive roots, human and animal acts symbolised in the form of some characteristic gesture or posture; and even

in historical times we find, that the development and growth of language follow exactly the same course. The abstract *figure* is traceable to a word that denotes to *knead* a soft clay. The beautiful German word *Dichter* (poet) suggests the primitive untutored bard, who was originally wont to *dictate* to a scribe the words of his own invention. And, moreover, if the imitation of the sounds of nature had originally been the principle according to which words were formed, it certainly would have occupied an extensive place in languages, and would have long remained perceptible and continued perhaps in active operation down to the present day.

It is unmistakable that we have approached through this explanation considerably nearer to the dark depths from which the fountain of speech first bubbled. The further question,—elsewhere touched upon—as to whether man first possessed tools or speech, Geiger decides in favor of the latter; and he bases his argument upon the fact, that the names of tools and of the results they bring about, are expressed by roots that denote human physical acts; hence, that all words denoting grinding (*mahlen*), milling, and the like, were originally connected with *mal, mar* (*mordeo,* which meant to bruise, to crush with the fingers, and probably also to crush with the teeth. *Sculpo* to cut out with a chisel, is a collateral form of *scalpo,* which originally meant to scratch with the nails. The root *ve,* the basis of our *weave,* is traced back by Geiger, with a reference to *vimen,* with (willow), to the oldest practised art; namely, the twisting of branches into lodge-nests for primitive man, which afterwards led to weaving or plaiting, an art possessed by all savage tribes.

But I must confess that to my mind this last argument possesses very little weight. Man, it is true, did not have complicated, or even perfect, tools before the possession of speech,—perhaps not even mill-stones; but I am inclined to doubt, whether, notwithstanding this fact, he might not have designated crushing with *stones* and *teeth* interchangeably by the *same* root, as well as all scraping with the hands and a stone, which latter in this case would merely be a part of the hand.

There is also something far-fetched in Geiger's hypothesis respecting the origin of the first word. His sympathetic aping reflection of a gesture with accompanying speech-sound, I must admit, seems a rather bold abstraction, in which Geiger manifestly wished to comprise the three factors met with in the oldest roots: (1) the phonetic word, (2) the visual percept, and (3) human posture or gesture as the expression of an act.

NOIRE'S CONCEPTION.

Now I take it that man, who like the ape and other animals is a social being, very early acquired a power of communication, that is, a language of gesture or attitude. Nothing stands in the way of such an assumption, since we find this faculty very distinctly marked and extensively represented throughout the entire animal kingdom. Animals are trained to the expression of significant gestures, as birds are to song, which is at the same time the expression of an inner emotion and a kind of communication, being intended either to allure the female, or to entertain the brooding bird. It is therefore not at all impossible, that in the case of primeval men, living gregariously, gestures were developed with a definite conceptual content, es-

tablished as such, and transmitted by training to after generations. We must, of course, conceive these gestures as a summons to some appointed act or task, as we find to be the case with ants, termites, bees, etc. It would suffice now for some vehement animated gesticulatory action of this kind to be accompanied in every instance by a peculiar sound—let us call to mind, for example, the many different sounds by which a dog accompanies his signs of joy, grief, submission, repentance, and impatience—and in consequence thereof this gesture could very well be recalled to mind by the sound; while, following the law of development, the former would gradually recede, and the latter ultimately attain absolute supremacy. As stated, this is highly *possible,* and it increases in probability when we take note of the fact that savage nations, ignorant persons, and people who do not perfectly understand a language, are always wont to emphasise their words by lively gesticulation.

A *possible* origin of this kind ought to satisfy completely our inquisitiveness; agreeably to what Dugald Stewart, quoted by Max Müller, maintains:

"In examining the history of mankind, as well as in examining the phenomena of the material world, when we cannot trace the process by which an event *has been* produced, it is often of importance to be able to show how it *may have been* produced by natural causes. Thus, although it is impossible to determine with certainty what the steps were by which any particular language was formed, yet if we can show, from the known principles of human nature, how all its various parts *might* gradually have arisen, the mind is not only to a certain degree satisfied, but a check is given to that indolent philosophy which refers to a miracle whatever appearances, both in the natural and moral worlds, it is unable to explain."

Any one who will survey the successive development of things as they start from the simplest ele-

ments, and through continued combinations effected by the influence of the external world, early deviate so much from their origin that the latter is scarcely longer recognisable, will surely admit that the most cutting sneer to be levelled at speculative philosophy, in its confidence of victory, would be to demand it to construct a camel *a priori*. But empiric historical science has also cause to be modest, notwithstanding that it follows the much surer road, constantly controlled by present events, of inference from that which now exists to what before existed; in which process it employs as basis the solid foundation of innumerable facts, upon which it constructs ever narrowing stages reaching up to an apex of unity, while the speculative method endeavors to rest its complete structure upon that apex.

I shall try to show by an example, how abundantly also inductive science has cause to be satisfied with the possibility of explanation. I shall suppose that after the lapse of a few thousand years literary tradition had suffered an interruption, and that the world was entirely left in the dark concerning the scientific researches of our present epoch. Electricity will, by that time, have become of tremendous importance, and have found application in all departments of life. Let us suppose now that some historian starts the question (as the case is in our own time with the question of fire) of how and in what manner humanity at first obtained possession and knowledge of this wonderful natural agency. Does anybody really fancy that the historian by continuous and successive influences would ultimately light upon the fact that once

upon a time a certain physicist had hung up frog's-legs by iron hooks upon copper rods? Certainly not. But a thousand possibilities will occur to him, and with these he will rest satisfied.

I shall now, in addition to those above set forth, submit another hypothesis, which also conforms to experience as deduced from animal life, and the possibility of which will hardly be contested by any one.

If we examine the phonetic utterances of the animal world, we shall find that their foundation is a variety of inner impulses, but that there is always present the endeavor to make these impulses intelligible to others. We find, principally, three kinds of sounds; viz.:

1. *Calls of Allurement, or Summons.* These are an expression of emotion, accompanied by an obscure percept, and they aim at influencing the will and acts of a kindred being.

2. *War-Cries.* Also the expression of emotion. They endeavor to arouse fear and dismay in an enemy.

3. *Calls of Warning.* Only among social animals. Emotion co-operates. The percept prevails. Endeavor to work upon the will of others by arousing a similar percept.

It is not difficult to discern in these three categories the subsoil of human speech. All three have this in common with one another, that they spring from the inner world of emotion, and strive in turn to awaken emotion—the first and third a kindred, and the second an opposite emotion. In the first there is present also either an obscure percept, as, for instance, that of a female, or a still clearer one, as when the hen

calls her brood to newly discovered food. So, too, in the third, is the percept of impending danger, which by the cry, is also excited in distant or dispersed companions.

The first human sound that deserved the name of word, could not have differed from these animal sounds except by a higher degree of luminousness in the percepts or images which accompanied it and were awakened by it. Discipline must have helped to bring it about that such a sound—just as the notes of a bird—upon being often repeated, became a kind of representative sign, which, along with the sensation, also excited the faint image. Such sounds are interjections. But interjections are not adapted to the formation of language, because the emotional element still prevails in them to such an extent that clear and tranquil percepts cannot form, and, therefore, cannot originate from the same. On the other hand, we are able to imagine many possible ways in which a sound as yet involved in the animal stage of development could become the representative of a definite, independent percept.

Should any one interpose, that for such a huge edifice my hypothesis assumes a much too narrow basis, let him call to mind the example I cited above, in which, from the twitching of a frog's leg, through continuous combinations and mental efforts, the mysterious, hardly dreamed of, domain of electricity was put within the reach of human knowledge and power. What we call chance has demonstrably played a principal part at the beginning of the most important and difficult advances of human civilisation. Such is the

case with the acquisition of the agency of fire, which, like tools, language, and religion, constitutes a truly distinctive characteristic of man; how variously may we not imagine its origin to have been, and how many accidents may not have borne an active share in that origin! At all events, the task required human energy, and, as Geiger says, we have reason to admire the boldness that accomplished that feat, never before achieved, when man, for the first time, approached the dreaded flame and carried aloft over the earth the burning log of wood—an inspired act, without precedent in the animal world, and of immeasurable consequence to the development of human civilisation. And if we compare the oldest form of implement for the production of fire by friction—as it is still found among savage tribes, and even among civilised nations in certain religious practices—which was a simple piece of wood bored into a softer piece and set on fire by continuous twirling; when we compare such an implement with the holes that are found bored in the same way in stone axes, we are readily led to assume that accident was the origin of this acquisition, and that from this single thing and its further retention and application all the rest resulted.

I assume that antecedently to the rise of language, men lived together in herds or tribes. War, at that time, was the universal natural state; war against animals of other species, as well as against neighboring tribes of the same species. It is not improbable that a peculiar sound or call united the members of each single tribe, so that by setting up their cry they could call together those who were distant, dispersed, or had

lost their way, or could mutually encourage one another when engaged in battle with a neighboring tribe. Let us suppose now that once a member of one tribe had warned his companions of the approach of another tribe, by imitating the call or cry of the latter; we should have here the origin of the first human word, for this would be an instance where consciously and intentionally an idea had been excited in the minds of like and kindred creatures.

We have thus, in the most natural manner, conducted into the province of the human word that which we found in the animal state—namely, the call of allurement, the war-cry, and the call of warning.

Geiger truly observes that "the thing of greatest interest to man has always been man," and seeks, accordingly, for the oldest designation of language in the expression of human acts. But I should be greatly surprised if *man as man* was not earlier manifest and noticeable than any of his single acts, even his most expressive pantomime or gesture. This latter is always an abstraction, and it seems to me that, not its immediate perceptive knowledge of course, but its being comprehended and designated by a *word,* must have involved an enormous antecedent development. Man *entire,* on the other hand, is a perfectly concrete, known, and ever-recurring *fact.* Look at the animal world. Animals, aside from that which interests and affects their sensual life, wherein they are guided by instinct, first of all acquire intelligent knowledge of individuals of their own species, their friends and their foes, other animals, and men. The marmot knows his enemies, attacks the dog, assails man and tries to dis-

able him. The dog knows his master: the dog of Ulysses recognised his master when no one else knew him.

* * *

I now ask the reader to accompany me in the following course of observation:

In addition to the instincts of nutrition, movement, and the like, which find their immediate expression through the life of the senses, there are further present in young animals and men, born in them, certain *obscure ideas* or *percepts,* and among these ideas is found, because it is the most natural of all, the idea or percept of beings that are exactly like themselves. Just as the bird builts its nest, so does the infant know its mother, who from the beginning constitutes its *entire world.* It conceives, at the very outset, the entire external world as *constituted like itself* (WILL AGAINST WILL).[2]

The child cries, it gets angry, it has desires, it is

[2]As a characteristic instance, let me quote the following passage from Weitzel's Autobiography. This man, the son of a turbulent period,—that preceding the French Revolution,—in describing the impressions of his youth, when as a boy only six years old, he indignantly vents his rage against the existing social injustices, bewails his own sufferings and his mother's wretchedness. He says: "In this frame of mind many a time I went out into the open air, and shook my clenched fists at the heavens, uttering imprecations and curses. 'May God be punished for this,' I exclaimed, 'may the Holy Mother of God be punished for this!' Under the impression that the abused divinities were incensed at my conduct, I challenged them to destroy me by a blast of lightning: 'Do me some harm,' I frantically exclaimed, 'kill me if you dare!' "—This naïve anthropomorphism brings back to my mind the touching reply of Lafontaine's old maid-servant to the harsh words of the ecclesiastical zealot, who, after embittering the last days of the poet's life by sanctimonious austerities, still expressed his apprehension that the departed one might, after all, have gone to hell. She said: *"Dieu n' aura jamais le courage de le damner."*

amiable. Its most natural perceptual idea, therefore, is that of being like itself, the representation of a distinct personality, which, since it appears to it as a mother administering nutrition, love, and care, is indeed the most important and the most interesting of all things about it. The first word that a child learns is that which denotes its mother; that word bursts forth from its emotional life, from the impulse of its will, and is accompanied by an actual represented image.

Are we not, accordingly, justified in the inference, that the *primum cognitum* was also the *primum appellatum?* That is, that the most natural, the most intelligible, and the most interesting percept, first and before all, was the cause of the first word.

Among the philosophers who have given their attention to this subject, this view has been both rejected (Leibnitz) and accepted (Condillac, Locke, Adam Smith). Some maintain that the earliest words were proper names; others, that they were nouns appellative. Max Müller decides the question in this way. He assumes three stages: the first is where the object is designated after some quality or attribute *(cavea,* cave, from Sanskrit root *ku,* to hide), where, accordingly, a general idea is applied to a particular object and becomes its proper name, just as in the case in which a man first received the name of *Great Head;* secondly, that this proper name is thereupon transferred to all, or to many things like it; and, thirdly, that these names are thereby raised to the rank of appellatives or names of a genus.

This solution suffers from the drawback that it is

not a solution. When Max Müller says, "The first thing really known is the general," we are entitled to ask, How came man by the knowledge and the designation of this "general"? To be sure, at a time when men were already in the possession of a couple of hundred words by which they designated acts, qualities, and characteristics, they may very naturally have applied such roots to the characterisation of things—called their river, for example, *Ach* (water) or *Rhine* (the flowing), their sea *Saivs* (the agitated), their lake *Meer* (originally: a soft, marshy mass). A name of this kind might then continue a proper name, or become an appellative. Even at the present day we may understand *sea* both as proper name and general concept, specialised by adjectives: as "the White Sea," "the Black Sea." Permutations of this kind have taken place at all times and are being continually employed even at the present day. The "Red one," the "Black one," in this sense, become proper names; Tartuffe and Eulenspiegel, in French, are names appellative. The magnet (derived from the city of Magnesia) has given the designation of "magnetic" to one of the most generally diffused forces, qualities—that is, attributes—of things.

Of this problem I myself shall now attempt a solution, and, as I trust, with somewhat better success. By two examples I shall briefly illustrate the subject as conceived by the eminent men referred to:

Adam Smith, Condillac, and Locke say: A child calls every man "papa," every young man "uncle" or "Charley," or something similar; hence proper names were the first names.

Leibnitz says: Children call every person *man,* and use most frequently such words as *thing, plant, animal;* hence general terms were the first words.

But how easily this contradiction is dissipated when we take into consideration the fact that from the start there is presented to the child, on the one hand, only a limited number of words, and on the other, an equally limited number of sensory perceptions. Both these classes, now, are mixed up with one another; that is, with some *one* certain word the child associates a number of similar sensory percepts, which it confounds and interchanges, because as yet it does not know their differences. And the words which the child most frequently hears from its parents are either very special in character, denoting beings that it meets oftenest, as papa, uncle, and the like, or words of a very general significance; which stands to reason, since one cannot at once teach a child words like "forget-me-not," "rhinoceros," "shoe-maker," and so forth. Naturally, therefore, the child arranges all the facts of its experience under the head of words like those above cited, and since it soon learns to distinguish "papa" and "uncle" from all other beings, the general terms at the second stage of its development alone remain to it. But no inference can properly be drawn from facts of this kind, because we are not concerned here with words invented by the child itself, but with others that have been communicated to it from a higher stage of culture. The child's activity is at first one of generalisation; that is, of connecting phenomena that repeatedly occur, with some one word that stands at its disposal. Only later does it learn to classify and sub-

divide correctly, as when it hears that "the Rhine is a river," "the Hudson is a river," "the Mississippi is a river."

From observations of this sort but one thing can inferentially be established. Namely, this: that language at its origin designated by its first words those objects that were the most striking and the most interesting to man, and proceeded then, by the help of these words, to generalise—that is, to attach similar things to some single word. The marked importance of some object, which constantly occurred in some particular, isolated form, naturally must have led to the attribution of some particular name to that object, and proper names, accordingly, very probably belong to the oldest words of humanity.

The science of language has proved that the roots from which the words of today have risen, originally denoted definite acts. But considering the endless flux of the meanings of words and of the contents of concepts, it is very difficult to assert that those meanings —which are the furthermost limits that science by retrogressive inference has reached—were their original primitive meanings; in other words, that the root *da* at its origin means to bind, *gâ* to go, *mar* to grind. Even Geiger's ingenious hypothesis, that the first word originated from the imitation of a facial gesture accompanied by the simultaneous utterance of sound, is somewhat forced; for here we miss the element of *communication,* which even in the animal world was considerably developed, and from which, doubtless, also human speech sprung.

The single and individual acts of man, as we have

remarked, are also abstractions, the representation and connection of which by means of the word cannot be put at the beginning, for the cogent reason that in infant development we observe that the child fixes by words only that which is *personal* and thus of frequent recurrence, whereas flitting and transient acts and gestures only affect its sensory life, make the child cry or laugh, but do not produce calm reflection. We are much inclined, therefore, to assign such roots as "biting," "grinning," "rubbing," "smearing," and so forth, to the *second stage* of the evolution of language. We cannot regard them as the original starting-point of language.

On the contrary, for reasons that have been partly alleged, we should rather assume that the names of individual men, the names by which they were called, and proper names, were the earliest words. This, moreover, explains a problem that has long occupied the attention of the most eminent thinkers; namely, how man, amidst the universal flight of phenomena and the concourse of the things of the external world, was able to fix and retain the particular, and, at once by the aid of the word, to raise it to the *general concept*. This is a faculty genuinely and purely human; one which we must endeavor to bring home to ourselves as distinctly as possible. We listen to the human words so naturally imitated by the parrot, or to a dog that barks at us and manifestly tries to tell us something in his own language; and all this affords us great satisfaction, for we perceive in it, distinctly drawn, the line of demarcation between man and beast. But to hear an animal *consciously* utter even a *single* human word, would fill us with dismay.

* * *

As we have stated, the creation of language, the greatest miracle of which consists in the phenomenon that amidst the universal dissolution and flux of intuitions it isolates by the phonetic word a single percept, and by degrees condenses that percept into a mental image, as something subsisting by itself,—this creation of language can only owe its existence to some natural and immediate contingency. It must originally have operated with regard to objects whose duration, stability, and isolation from other natural phenomena had been discovered and established beyond the shadow of a doubt; whose mental representation, as well by means of inner capacity of comprehension (innate representative power of things like us) as by the constant recurrence of the real object itself, became so clear, so fixed, and unequivocal, that it could be said that the representation of this object sprang forth with the word from the head of man, like Pallas, in full and complete panoply! But this object must have been our companion and homologue MAN, and hence the names by which men were called, their appellations, were *the first words*.[3]

[3] I recently read an observation by Spielhagen in the *Gegenwart*, which harmonises clearly with my view: "The uninterrupted, rushing stream of impressions will change and widen the old channel that the impressions of youth have dug in our thought and sensation, and will obliterate the images that apparently no longer possess any meaning of interest for us. I say *apparently*, for, in reality, such is not the case. Even those who have travelled farthest, those who have been most buffeted about by fate, even those who have risen to the highest pinnacle of fortune, despite their broad range of vision and exalted station, will constantly surprise themselves in the act of unconsciously comparing their present great world with the limited one of their childhood and youth, and that they will always class new men and people under

But are we able to conceive of a way in which these proper names could have become actual general names, and *general concepts* thus begun their silent yet continuous operation? I do not believe that this can prove so difficult a task. It would suffice that a number of such sounds were given, and that the images of the individuals thus denoted should be constantly called to mind by the utterance of the sound; in such a case, in time, some peculiar feature of some one of these objects might, at the utterance of the word, gradually become excited in the mind of the hearer and become attached to the word itself. I intentionally leave this exposition in its present vague and general form, because a person cannot be too cautious in speaking of that primeval time of transition from animality to humanity, and because every step forward must be made with the utmost circumspection. I merely recall to mind, that in the case even of people of the present day, baptismal names are during early childhood usually not employed as appellations or names by which children are called, but that some name is *invented,* suggestive of some striking peculiarity of the child, or often in imitation of some favorite sound uttered by the child itself. We might, accordingly, merely reverse the process we are considering, by supposing in a given individual the presence of some peculiar movement of the mouth, with a showing of the teeth, and to fancy this peculiarity also present in another person, and finally, to imagine that the

the head of a few categories based upon a limited number of prototypes, which they regard as normal—the few men, namely, who have decisively influenced their early lives, or at least have witnessed with interest the evolution of their youthful years."

name of the former (phonetically, perhaps, connected with the peculiarity in question) be transferred to the latter individual. In an hypothesis of this kind we should have the first beginning of the formation of the concept. "What a feeble beginning!" the reader will exclaim. But let him bear in mind how faint, upon the whole, are all beginnings in the organic world. It is an unquestionable result of modern linguistic research, that the names of most animals are derived from *colors*. The variety and heterogeneousness of colors were circumstances that very early interested man. Hence, may it not be legitimate to infer that the appellation of some certain man who was distinguished by a certain color, and thus necessarily brought to mind that color, was in the lapse of time conferred upon others who were conspicuous by reason of the same characteristic, and that by degrees it was transferred to animals, and finally became a generic name?

We have spoken of the part that appellations and proper names very probably played in the formation of language. I leave it to the reader to follow out the hypothesis I have advanced, and shall only compare my theory with those that other philosophers have propounded, to point out wherein it differs from theirs and wherein it may be justified in opposition to theirs.

1) In Herder's otherwise ingenious theory the element that occasions and forcibly produces speech-utterance is entirely relegated to the background. We cannot see what could have induced man to imitate the bleating of the lamb, and to attach the concept of the lamb to that imitation. According to this theory,

primitive man must have been a meditative philosopher, an embryonic scientist; but this he surely was not.

2) The theory of proper names upheld by Condillac, Adam Smith, and the rest, bears throughout the stamp of the eighteenth century, which with its customary subjective bias attributed to primitive man the reflective powers and intelligent purpose of later eras. According to Adam Smith two savages are supposed to agree in denoting a pond, a tree, and a cave by a given peculiar sound, and later to have conferred these proper names upon other objects. But even a tacit agreement of this character, the very perception, in fact, of the pond or tree as independent things, required a capacity of thought that could be the result only of centuries of employment of speech.

3) Geiger's theory—incontestably the profoundest of all that have hitherto been advanced—is based on the fact of science that in all languages the object is never immediately translated into the word, but that a concept is in every case evolved from a concept, and sound from sound. "Even proper names," says Geiger, "were all originally words that had a meaning." As far back as the science of language leads us to the most primitive meanings of roots, from which all words have been formed, the roots denote some human act plainly exhibited in gesture or attitude.

When we take into consideration the fact that language unquestionably originated in the necessity of *communication* (the parent of speech) it does not seem impossible that a sound summoning men to some works or other may have been the first word, as yet of

very indefinite content, but which afterwards through various similar sounds became differentiated. But just the most important element of the soul of language is here lacking—that tranquillity which is so necessary for reflection and the incipient fixation of percepts. Cries of this kind are and will remain interjections, the essential office of which is to bring about an immediate effect without the help of any further representation, especially as they are enforced by perfectly significant gestures, which in themselves constitute a sufficient language.

Proper names are, to be sure, words of a meaning. But if we recall to mind the particular occasions upon which at the present day we are led to designate a *being* by a *name*—to repeat, as it were, the primitive process of creation—we shall find that it is upon the occasion of the millions of cases in which we bestow a *proper name* upon a man or animal. The fact that among the thousands of proper names from certain plausible motives we should pick out just this or that name; that the Indian should call his offspring Sleeper, Runner, or Cat—this does not in the least detract from the importance of the fact. Thus, when for a long time we call a child by some endearing name, like Da-da, Ba-ba, or the like, we actually bestow upon the child a new name, suggested by some correspondent peculiarity. We have, therefore, thing and name, and not concept from concept. This point must not be underrated. It clearly speaks, in addition to the reasons previously adduced, in favor of the primitiveness of appellations, or names by which individuals were called. Once again let me repeat that the *rep-*

resentation or percept of a congeneric being is the clearest of all perceptual representations: the calling bird possesses it as distinctly as it does the innate percept of its nest. The perception of limbs, of parts, or of acts, is an advanced abstraction. But the percept and recognition of congeneric man was so natural to the primeval human being that he applied it to everything, and believed that every force acting upon him emanated from a will like his own—just as a dog will bark at the wind because he believes that it blows intentionally against him. And the most natural, simplest, most innate, and, at the same time, the most interesting percept must have been earliest fixed by a sound, and have shaped itself into the first word.

I revert again, in conclusion, to the hypothetical example before adduced, in which the war-cry of a tribe was supposed to become, among neighboring tribes, the designation of that tribe. If it is true, as it certainly must be, that the tribal community during the earliest periods of social life wholly *absorbs* and *subordinates* the individual so that he can scarcely as yet be conceived as individualised, the hypothesis which I advanced as the possible origin of speech obtains a certain degree of probability; and granting that at any time but a *single* representation became connected with the word, it follows that the hitherto dormant power of creation of language must have been thereby stimulated, and have begun its at first hidden and humble activity, until at last the day dawned when the original springlets broadened into a river, and the rivers into the boundless ocean of the human minds as evolved through language.

Let the reader but endeavor to recall to mind when and under what circumstances the most immediately and hardly controllable impulse to utter a sound arises, and he will be obliged to admit that it is at the moment of the highest exultation of happiness (the huzza of the mountaineers), or of deepest sorrow. This impulse is not granted to insociable beings. Beasts of prey have only decoy-calls and sounds that excite fear. Cold-blooded animals possess no utterance of the kind whatsoever. Hence the most primitive impulse to the utterance of sound originated first of all in the feeling of sympathy, and had the power, also, to awaken sympathy.

But there is a fact of observation far more important still, to the effect that whenever a *common feeling* becomes very intense, particularly when a common sensation, or the consciousness and impulse of common action, takes possession of men, sound spontaneously and involuntarily awakes in the vibratory organs of our body and bursts irresistibly forth. Any one, who as a boy, has been caught with the enthusiasm of juvenile combat, or any one who on some important emergency has lent a helping hand to some urgent work, for example, to pull ashore a ship in distress—will at once understand the truth of this remark. The howl of the baboon, in putting a pack of dogs to flight, is the prototype of this impulse within the animal world.

Sounds like these, accordingly, must have been established and developed with certain peculiarities during that pre-linguistic period when man still lived as an associate member of a tribe or herd, and it is a

perfectly consistent inference to assume that the diversities and contrasts of the separate tribes were attached and clung to these highly characteristic sounds.

In this way I have accepted and fully utilised in my hypothesis all that is undoubtedly true in the theory propounded by Max Müller, which, we will remember, was, that a certain sound is peculiar to every being, and that the spontaneous utterance of this sound is the most immediate expression of its nature.

What I regard as the chief excellence of my hypothesis is this: that it alone can explain how man, amidst the fleeting, ever-dissolving world of phenomena, acquired the faculty to *isolate* a thing, to *retain* it and to *unite it with the word as a permanent perceptual existence,* a faculty denied all animals, and which in the course of natural development has led to general concepts and to the origin of human reason.

The first words were appellations of tribes or individual men; and their perceptual content comprised all that was known or observed of these tribes and men.

Even at the present day these words of all words are the most significant. Let the reader only ask himself whether he knows of any word replete with greater significance than that representing a beloved being, or than words like: The Romans, Shakespeare, Beethoven.

* * *

But to close. In the statements above presented, I have endeavored, by the aid of the established results of modern linguistic research, to construct the lines by which a point is to be approximately deter-

mined which otherwise must have remained inaccessible to research.

The reader must not forget that I have merely sought, in my hypothesis, to disclose the *possible* origin of language. In this obscure province, of course, certainty can never be attained. In conclusion, therefore I shall propound another hypothesis, which likewise comprehends the possible origin of speech, and which is likewise worthy of our attention.

It is a peculiarity of the law of evolution, which will be found corroborated in the most various fields, that a number of co-operating forces or factors may produce a direction of development which is virtually amazing when it is discovered that the development makes directly in favor of some apparently wholly immaterial element, and is even guided by the latter. We are very apt to forget, herein, that the stronger forces balance one another, and that the significant factor—like the drop of water that causes the glass to run over—naturally gains a decided preponderance. I shall give a few examples.

That Louis Napoleon, in the year 1849, could open the way to his subsequent political success was owing in great measure to the circumstance that the other national parties were engaged in violent quarrels; that no reconciliation or mediation seemed possible, and that partly weary of internal strife, and partly prompted by the notion that the "president" would prove a *mannequin,"* an *"imbécille,"* the people at last accepted his dominancy. Such really is the rational explanation of the historical evolution of France for a period of more than twenty years. And from

exactly similar causes—from the implacable hatred of Legitimists, Orleanists, Bonapartists, and Socialists—grew up the septennate of MacMahon. We thus see that from the co-operation of different forces there frequently results an intermediate phenomenon, which is entirely different, the individual traits therein not being recognisable.

I shall further illustrate this point by a notable example borrowed from æsthetics. In Schiller's beautiful ballad "The Cranes of Ibicus" (*Die Kraniche des Ibykus*) the exclamation of the murderer: "Behold, Timotheus, the Cranes of Ibicus!" (*Sieh da, sieh da, Timotheus, die Kraniche des Ibykus*) has been misunderstood by most readers. Or, they will say that it is trivial, that the poet suddenly drops from his lofty style into the commonplace. This is a great mistake, a lack of sound æsthetic discernment. One thinks that the impressive chorus of the Eumenides ought to have been followed by a divine voice, crying: The murderer of Ibicus is Timotheus! Another maintains that the murderer, deeply affected, ought to have rushed into the midst of the arena, and exclaimed: I committed the deed! A third believes that the cranes ought to have pounced on the murderer and thus drawn upon him the revenge of the people. But the great poet skilfully avoided such lame methods, and chose an intermediate expedient that implies and includes the ones above suggested. For, in that the murderer at the appearance of the cranes utters his indiscreet cry, (1) the cranes have actually fulfilled their mission (we behold the stately, ominous flight of the silent accusers, amidst the stillness of the crowded

amphitheatre); (2) the Eumenides also have revealed their power, because amid general consternation and awful silence the name of the murderer loudly resounded; (3) the murderers have really and truly, against their wish, impeached themselves.

It would thus be well for our æsthetical critics, instead of attempting to shine by their own feeble light, ever and deferentially to seek instruction and enlightenment from the grand and inspired instincts of our great poets.

But to revert to the subject of language. At its origin we had to assume *two* main factors; namely, visual representation, or the inner perceptual image that man wished to excite in his fellow-men, and the means to effect this excitement—gesture or pantomime. Under the impulse of the moment this gesture was at all times accompanied by an inarticulate sound. If the reader ever witnessed untutored deaf and dumb people trying to express their wants by means of gesture-language, he will thoroughly understand what I mean. Gesture, accordingly, is the main point; sound is only an accompanying subsidiary element.

Now, this sound which with different gestures, took on peculiar modifications, by virtue of this very differentiation was able to attain a still more significant kind of independence.[4] And if we merely suppose

[4]There is still another phenomenon within the domain of human activity that presents a striking analogy to this process; namely, the assumption by money of the function of exchange of goods. Money has become, in the true sense of the word, a representative entity. Still, in the beginning, when trade by barter existed, the precious metal was obviously a subordinate medium of exchange, because its practical value was inferior to almost all other things that served the needs of man. But its various properties—its divisibility, its capacity of being easily preserved for a

two primitive roots, for example *He, he,* or *Ge, ge,* the call accompanied by the represented idea that the individual called *is to come,* and *Haw, haw,* denoting that he is *to go*—we already have an origin of language from which the same roots might evolve into others. In anticipation of the shallow irony of opposing critics, I shall baptise this theory of mine the *Gee-haw* theory, and ask whether even the calls of peasants to their horses are not also a kind of creation of language.

This hypothesis gains a high degree of probability from the fact that as far as our knowledge reaches, the oldest roots were really the expression of human gestures.

In this theory are also very distinctly represented all the impulses and motives which must be supposed to have operated in the first creation of language; namely, (1) the necessity of communication, (2) the

long time, and many other advantages—soon caused it to be received instead of all the others, as a universal medium of exchange. When more rapid circulation was demanded, a new species of representation—bills of exchange and paper money—took the place of metallic currency. Money, upon the whole, is a highly instructive subject for the theory of evolution, because in money the characteristics of evolution are symbolised as a particular distinct phenomenon, extending over great historical periods of time. As the word serves the mind alone, and is detached from the things, so money serves only to effect the exchange of objects, for it never occurs to one to consider its practical value adaptable for any other purpose, as for ornaments, etc. Such is the essential nature of function. In the same manner in animal organisms, the originally homogeneous parts, through constant activity, that is, through evolution, have been fitted for the assumption of certain functions. I believe, that if in the days of trade by barter we had told anybody that the time would come when we could pay for houses and commodities with a few pieces of rag paper, the man would have regarded us as crazy, just as the adversaries of the theory of evolution regard him who now maintains that the nerves, those wonderful conductors of sensation, were actually evolved up to this function from originally homogeneous, equally sentient elementary cells.

sound emanating from common and concerted effort, (3) the gesture that originates from the perceptual image, and that naturally (4) is transformed into a gesture that tallies as closely as possible with this representation, and finally (5) the fixation of the connection between sound and perceptual image, which is effected through frequent reiteration.

THE LOGOS THEORY.

The designation which I wish to give to my theory of the origin of language is the *Logos Theory*. Two other designations, the *Sympathy Theory*, and the *Causality Theory*, may, perhaps, also be suitable; but they are incomplete, as they only embrace certain single parts of the organic analysis with which we have to deal. The *Logos Theory*, on the contrary, fixes the centre of gravity of the question at the very point where it must be sought—namely, in the origin of the CONCEPT and in the union of the various contrary things that had to meet and organically combine, in order that human speech and thought—the greatest of miracles, and the pride of creation—might arise and be developed. The Mimetic and Interjectional theories of language are explanations of thought that appeal to such people only as do not think.

I shall start, in the present investigation, from a comparison of language with poetry.

Poetry, even at the present day, is essentially a creation of language, that is, a creation of concepts. And, so, too, all primitive creation of language was poetry—lofty, ideal poetry. When, amidst the discordant, noisy, many-voiced choir of utterances indicative of will and sensation, there was heard, for the first time on earth, a sound that conveyed a clear, intelligible sense, an objective meaning, that sound

signalised a moment replete with sublimest poetry—for then dawned the sixth day of the creation of the world.

Examining the method of poetical utterance, we find that *external* always acts upon *external*. This relation, which is one of *cause* and *effect*, is the fundamental rule of all cognition and comprehension of the perceptible world. Everything must be referred to this principle; through it all must be expressed; without it no utterance is possible. In all the following examples, therefore, it must be tacitly assumed; because, manifestly, whatever is internal as regards speech and thinking, actually exists only when it attains to expression, that is, when an external phenomenon is offered that strikes the senses. This first category, accordingly, of the four which I assume,[1] is distinguished from its fellows by the fact that here only the purely mechanical process is regarded, while the inner factor, the Will, apparently is not taken into account. This, however, is the real source of intuitive perception, the highest excellence of all poetry.

Says Horace: "Thou seest how Mount Soracte stands forth, white, clothed with a mantle of deep snow—the groaning branches bend beneath its weight —rivers and brooks, rigid with frost, are arrested in their course." All of which is external causality, external change, highly characteristic by reason of its contrast to the previous natural state of things, when Mount Soracte was clothed in green, when the trees

[1]That part of the chapter of the original which explains the other three categories is omitted. The other three are: the effect of *external* on *internal;* of *internal* on *external;* and of *internal* on *internal.*

spread forth their branches, and the brooks sped restlessly along.

The converse of the last condition is illustrated in the following parallel German and Latin statements:

"Diffugere nives, redeunt jam gramina campis,
Arboribusque comae."

"Vom Eise befreit sind Strom und Bäche
Durch des Frühlings holden belebenden Blick."

"Es lacht der Mai,
Der Wald ist frei
Von Reif und Eisgehänge;
Der Schnee ist fort,
Am grünen Ort
Erschallen Lustgesänge."

[Snow disappears, and already the grass in the meadow is sprouting,
Foliage covers the trees.]

[Released from ice are brook and river
By the quickening glance of the gracious spring.]

[May smiles in glee
The woods are free
From ice to branches clinging;
The last snow yields,
In fresh green fields
The birds are gaily singing.]

All these, once again, are *external* changes, conceived as causality—the more effective and the more expressive, the stronger the *contrasts* that connect them. In this passage, however, as it ever is in poetry, the internal, the animate, is revealed in utterance like *"holden, belebenden Blick," "Es lacht der Mai," "Lustgesänge"* and *"Vom Eise befreit."* Grand and sublime poetical passages frequently owe their beauty to the manifest disproportion between cause and effect, wherein a trifling external cause produces some tremendous effect, which vividly illuminates and sets in

relief the power and might of the author and originator. To this class belongs pre-eminently that celebrated passage of the Bible: "And God said, Let there be light: and there was light."

The simple *word* is here the cause. Haydn has musically interpreted the last word of this passage by an endless strain of widely diverging accords, illustrating the immensity of the effect in contrast with the simple motive word of command. Händel has expressed the opposite effect in his wonderful work "Israel in Egypt": "And he commanded the sea. And the sea became dry," by introducing the command as overpowering and omnipotent, whilst representing the effect *pianissimo*—the sea humbly obeying. Both composers strove to express the same by opposite methods. Haydn depicts the majesty of the Creator by the greatness of the effect; Händel, by the audible diminution of the effect, which, nevertheless, is *conceived* as great.

Here belongs also that sublime passage of Homer, in which Zeus, by the mere movement of his dark eyebrows, and by a nod of the head, causes great Olympus to tremble—a passage, the beauties of which three Roman poets have imitated:—

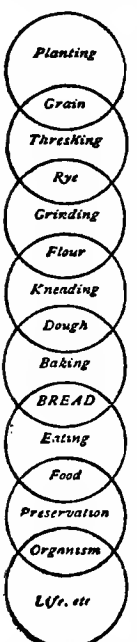
Horace: Cuncta supercilio moventis.
Virgil: Annuit et totum nutu tremefecit Olympum.
Ovid: Concussit terque quaterque
Cæsarem cum qua terras, mare, sidera movit.

Here, in order that the soul may vividly apprehend the overpowering might of the Thunderer, a mechanical effect is to be assumed throughout,—the effect of external upon external. Of course, I do not deny that in the humbly obeying sea we may also assume an ethical effect, and, at the same time, a mythological

form of expression. Here is portrayed the living God, who has created all things, whose voice, therefore, is listened to with trembling and awe, and is forthwith obeyed by every created being.

* * *

What the Logos is, how many contradictions it must reconcile in order to become what its name purports, may be seen generally from my work. The independence of our percepts, due to their having assumed in the mind definite lines of demarcation, and to their having been placed at the disposal of the intellect, so that they can be summoned forth at any time by the word and the general concept—such is the highest achievement of the Logos. With this performance, the Logos entered into existence. This character of combining and distinguishing, it still preserves in all its functions, as from the beginning so to the present day, when infinitely complicated mental operations are performed with instinctive certainty and lightning rapidity, so that it seems almost impossible to follow the course of the individual threads. For the sake of greater clearness I shall attempt to show, by means of the accompanying cut, what elements of thought of a simpler order, and likewise concepts, may be contained in a single concept, and how through the reciprocal interaction of these concepts and of the per-



cepts which they control, a concatenation of ideas converges in that concept, and likewise again radiates from it. The concept BREAD is chosen. In our cut the concept is developed genetically toward the top, and teleologically towards the bottom. Proceeding from the top and bottom, respectively, the concept becomes ever more special, that is, it includes more definitions. Starting from the middle, it passes into ever more general concepts, which by reason of their more general character can all be predicated of the notion BREAD, or be referred to it.

By an illustration of this kind it can be graphically shown, how ideas can assume for man the part of things real; how man has acquired the power of bringing together in his representative faculty the most remote objects, and how he has thereby been enabled to accomplish the great miracles of human industry and commerce. But all this would be utterly inconceivable without concepts, which impart to percepts their unity and self-dependence, and bring about and multiply their rational connection. Hence, also, no animal can ever advance a single step beyond *present* perceptive representation, can never escape from the constraint which Nature has put about the narrow sphere of its wants. Unfortunately, however, in apparent contravention of this rule, ants to the present day carry on a regular and methodical species of agriculture, keep live-stock and domestics, like we! Nay, they have even been caught in conversations and social entertainments of a full quarter of an hour's duration—Heaven save the mark!

* * *

The perception of *causality subsisting between things!* Verily, this constitutes such a simple, plain, and at the same time obvious and convincing means of distinguishing the Logos, human reason, from animal intelligence, that it seems inconceivable that this manifest and clear boundary-line should not long ago have been noted, and established as such. That this causality could be grasped by the mind, one of the two causal members must at the start have necessarily existed as a *percept* or *representation* only, and its connection with the others been effected by thinking, that is by means of the concept. In "dug here" the present aspect of the phenomenon refers to a past activity as *cause;* in "thing for digging" reference is made to a future activity as aim. In both cases *two* representations or percepts must be simultaneously *present*—one of which, accordingly, can only be present by *representation;* but this can be attained only through the concept, the word. Therefore, man only, and the animal never, will be found in the possession of tools.

The *acts* of a cognising man, through the percepts that illuminate consciousness, seem to be connected with one another, that is, governed by inner necessity.

Yet who could remain blind to the truth, that the percepts connected with the will are the most natural and most primitive of all; that *practical* thinking, if I may use this expression, or, thinking guided by interest and founded on the subjective basis of will, must alone be placed at the beginning of this development, seeing that even today it forms the life-interest of the majority of men? The emancipation of our

thought from our desires and wants constitutes every advance towards theoretical knowledge, and it certainly follows thence, that originally thought was wholly coalesced with will; that percepts, accordingly, in the consciousness of primitive men, were not arranged in any causal, genetic, or intellectual connection, but simply in the order in which through instinctive impulses and emotion they had entered their various incidental or natural connections. The will for a long time remained absolute autocrat; all speech aimed at practical effects, sympathetical agreement, and incitation to common action. From the earliest, instinctive utterances of will, which, in the shape of sounds simultaneously uttered, encouraged men to perform the primitive acts of digging, plaiting, etc., up to the kindling eloquence of the popular orator who fired the souls of his audience with martial enthusiasm, by his vivid picture of desecrated graves and temples, of cities laid waste, of women and children dragged away into captivity—throughout the same law unceasingly operates, the action of will upon will through the *sympathetic* frame of mind and its attendant percepts. Everywhere we find imitation, everywhere will, everywhere activity. And for this reason my theory, which erects upon this basis all that exists, has justly received the name of the *Sympathy Theory*.

We see the active causality of our will produce effects, and, as it were in a dream, create forms, which upon being taken up by the senses (passive causality), are converted into percepts, to enter again our consciousness as the reflected activity of volition. This, however, is not a succession, although it may appear

to us as such, but actual simultaneousness, *unity,* the essence of causality and reason. One of the most important aspects of my theory is therefore aptly expressed by the designation *Causality Theory.*

But the most important element is still lacking—the *free,* regular, and well-arranged combination of the percepts, as guided and irradiated by the light of cognition, in a word, the Logos. For, despite the unity of causality in the cases hitherto considered, the percept still strongly clings to the will, to sensation, and direct sensory intuition. To release it (the percept) from this bondage of coarse, empirical reality, to elevate it irrevocably into the ideal sphere in which with perfect mental freedom it can enter innumerable other combinations—to achieve this miracle, causality must emancipate itself, and become a powerful and ever ready instrument of the human mind.

Causality gained freedom solely through the rise of concepts and words. The oldest words, *dig, plait, bind, separate,* have no other content than that of causal relation—the connection of two sensually perceptible percepts that constitute their causal members, the *Logos.*

The causal relation implied in all concepts and words, that is their verbal fluidity, which has its true basis in its derivation from activity, taken together with the substantiality of the percepts themselves, renders possible their union and junction with one another. In this manner words and concepts are brought together and unified in the human *judgment,* and with this we have reached abstract thought, and its ultimate principle, the "ground of cognition," represent-

ing the second class in the Schopenhauerian distribution. But all judgments, of whatever kind they may be, have as their final condition merely intuitive percepts, from which they proceed, to which they redescend from their abstract altitude, and with reference to which, perforce, they must find their application.

The union of percepts with percepts, of concepts with concepts, of judgments with judgments constitutes, accordingly, the essential character of thought. But all this is *Logos,* and, consequently, my theory of language is most fittingly and properly designated the *Logos Theory.*

THE ORIGIN OF REASON.

THE ORIGIN OF REASON.[1]

If I were to tell a man who had never seen ice and was wondering what had happened to a lake in winter, "The water is frozen," this would be an explanation. This explanation contains two elements, viz.:

(1) *A sound,* which certainly cannot contribute in the least to the explication of the matter.

(2) *A concept,* which in its accurate acceptance likewise implies no more than the phenomenon itself, as present before us and as received by us.

Why is this simple statement then accepted as satisfactory? Here is a difficult question, and it may not be answered without a consideration of the nature and origin of reason. Locke has dealt with the problem and deduced from it the uncertainty and mere seemingness of most human knowledge.

The distinctive feature of my answer to the man is that the phenomenon is generalized by the concept "frozen" or, more correctly, included under a general definition.

Concepts are generalizations, and it is these generalized concepts that constitute the substance of human knowledge.

[1]Translated from the German by T. J. McCormack.

When it is real cold, all living creatures feel it. But only the human being can say: "I am cold." A man can say this on a hot summer's day, he can think it, even when not affected by it. Why? Because he possesses general concepts.

And how has he come to possess them? This is the most perplexing of the questions that touch humanity, for it touches the *origin of reason,* and reason is man.

If I should say, "Man thinks because he speaks; he has general concepts because he has words," I know that nine-tenths of my readers would shake their heads and say: "No. Man speaks because he thinks." All great truths are known first as paradoxes, and a long time elapses before people become accustomed to them, before they leave the old way of thinking and accommodate themselves to the new. How long it was before men would distrust their eyes, and believe that it was the earth that revolved and not the sun!

Words are the fixed points which define the limits of the concepts they have brought into existence. Without words there would be only fleeting, shadowy and disorderly impressions. An idea has never existed in man without its material counter part, the word. And yet I do not say that with every word as a sound there must be an accompanying idea. Parrots imitate our words, yet produce only sounds; to them they are sounds and nothing else, just as the words of an unknown tongue are mere sounds to us. The sound is

dead, the word is alive and the life of a word is in the idea.

The great problem is, how ideas are united with sounds and thus made alive. This question has engaged the attention of philosophers of all ages, while great acumen and imaginative talent have been exercised in its solution. System upon system arose wherein fancy and imagination were given full scope, and I firmly believe there is no topic upon which so great a variety of opinions has been expressed and so many treatises written as upon the origin of language. It was intuitively felt that this was the point to place the lever, and that, if their efforts to move the rock which buried the secret would be successful, a fountain of everlasting and living truth would leap forth to clarify the province of human thought and human activity.

Yet, to reach this point, the flights of fancy were first to be restrained. This was accomplished by comparative philology. Its cardinal and motive principle was: There is a methodical, a scientific line of investigation which will lead to this secret and its elucidation. Critical thought and not dogmatic doctrine must guide us here, and careful investigations of empirical facts are to form the basis of all our conclusions. Whatever the ultimate result of our efforts may be, it is not permissible to determine it beforehand and employ it hypothetically, be its merits what they may. Modern science has materially modified the ideas of former times. The interest which, from the time of

Plato to the eighteenth century, fettered philosophical thought to such topics as these, has been displaced by new interests of a totally different character. How radical these changes have been needs no better illustration than the fact that the *Société de Linguistique* in Paris, ranking among its members the foremost philologists of France, declares in one of the best clauses of its constitution, "it will accept no manner of contribution relating to the origin of language or the construction of a universal tongue."[2]

Thereafter imaginative works ceased to figure in this realm. This was necessary and beneficent if we consider what they had achieved. Yet philosophy, too, was banished from the province of philological investigation—a province in which philosophy is ordained to act a vital part—and this was unwise.

For what else is philosophy than the discovering of comprehensive and general points of view in *all* sciences? It is not the empirical material gathered together; it is the wonderful power of thought that has raised Copernicus, Galileo, Kepler and Newton to the rank of heroes in Natural Science.

With that interdict the question of the origin of language was banished from its natural and true sphere. The question was occasionally touched upon by the physiological and evolutionary theories of Helmholtz, Darwin, Broca and Kussmaul, and at times was discussed in the empty phraseology of a degenerate pseudo-philosophy.

[2]Max Müller, in a lecture delivered before the University of Cambridge, May 28, 1868.

It would have been, in my estimation, more worthy of a philogical society that included the master-minds of science to have said: "No philosophy has the right to advance an opinion upon the origin of reason, the nature of thought—its highest problems—without having first recognized and taken cognizance of the results of comparative philology; for language is the body of thought and both came into being together." Instead of this, the society divorced philosophy from philology, and said: "Look about thee for another source of information on the origin of language; there is nothing known of it here and we shall not trouble ourselves further about subjects that lie beyond our jurisdiction." Thus disowned, philosophy asked: "At least tell me of the nature of human speech and wherein it differs from that of animals, with which it is so commonly compared. I must have some principle to guide me in my speculative peregrinations." No information on that point either; that's not within our province. Thou shalt find what thou want'st in Brehm's *Animal Life;* he has drawn up the complete vocabulary of a singularly clever parrot. That will show thee how far the linguistic power of an animal goes." Thus the philologists said; and no less a considerable man than Friedrich Müller takes compassionate leave in these words: "The difference between the language of man and that of brute creation is quantitative and not qualitative."

This certainly simplifies the matter greatly, for it thus becomes a question of mere calculation. Brehm's

"singularly clever" parrot, that Mezzofanti of brute creation, could use in the neighborhood of 150 words with intelligent discrimination; on the other hand, the total vocabulary of English miners in certain districts counts but 300. It is now plain how many words the parrot will have to learn to arrive at that stage of intelligence the English miner has attained and thus be able to verify his claim to universal suffrage. It would be a great step forward for all parrots, and they could at once politely request that the nonsensical prattlers of their human kindred should not be honored with their name.

But levity aside. In order that the reader may profit by this discussion, I propose to specify an infallible criterion wihch will, in every case, enable him to avoid confusion when oracular wisdom speaks of the identity or analogy of human and animal speech.

One hundred years ago (1781) a plain and simple man, Immanuel Kant, gave the world a commonplace looking book. It was printed on gray paper, was highly inaccurate and bore the strange title, *Critique of Pure Reason*. This book had manifold and important consequences, which cannot be enumerated here. One of them which is perhaps best known is that Berlin, after Hegel, derived from this book its name the *"City of Pure Reason."*

We may read to-day in the aforesaid book (Johann Friedrich Hartknoch published it at Riga) all manner of strange and useful things, as, for example: That the whole business of the human reason is with repre-

sentations (not with mere sensations), and that these representations, arranged, co-ordinated and moulded by concepts, become objects which are the only true content of all our rational thinking, and that our thought therefore assumes an objective character throughout. And it follows thence that if we deviate from the paths of empirical cognition, we shall lose ourselves in hallucinations, extravagances and in the mazes of a cognitive activity that has overstepped its true limits.

Representations and objects then which are given by the senses, but are moulded and formed by reason and stamped by concepts! Now we may reveal to the reader the promised secret. It is this: Every word in human speech had, originally, reference to an object which was signified by a word, and words have, at the very start, first received meaning and intelligibility from those representations.

Let us return to the example given at the start. "The water is frozen" and "I am freezing." Should the question be put to the reader how the concept and word "freezing" have arisen, the chances are a thousand to one that he will launch into one of the current theories as to the origin of language and answer, "From a sensation, of course!" Freezing, shivering and chattering with the teeth was the original symptom. You can hear it plainly in the word freeze, frost, *frigus, froid!* What a chill runs over one when it is mentioned! It stands to reason that people should personify other things, such as plants and water, and say

of them, they freeze, they are frozen. Is not man the "measure of all things" according to Protagoras, and does not man imprint his own being on every other existing thing?

And yet, how so easy, natural and reasonable this all sounds, it is positively wrong. According to the revelations of Kant, it is not possible that the sensation of freezing has become a concept and a word otherwise than through the long and round-about way of representations of external objects and thus frozen (*frigus*, ῥῖγος, ῥιγέω) water must have found a lingual or (what is the same thing) a rational designation long before; and without such designation or an analogous form of concept the sensation could never have found expression or association whatever.

This follows unavoidably from the doctrine of Kant. And strange! Comparative philology, without knowing or dreaming of Kant, has fully established this origin and natural growth of concepts after its own fashion and by its own empirical methods.

Yet, instead of being converted by this great and marvelous coincidence to the belief of the great genius that had divined these results with prophetic glance, it still continues to reject the aid of philosophy, even in those depths where empiricism cannot penetrate, and places its sole dependence upon instruments that the hard and rocky soil defies. Far from following the path of science, it seems to have devoted itself to fumbling and groping about in regions of darkness, whence only the light of philosophy can be its guide

and illuminate its path to further empiric investigation.

Thus it is that comparative philology has yet to learn from Kant, if it will ever keep in view the true purpose of its mission, "the history of the human mind."

THE PHILOSOPHY OF LANGUAGE.

DARWIN AND MAX MULLER.

The idea of cosmic evolution, in my opinion the greatest conception ever formed by the human intellect, is at the present day stirring and agitating the minds of all. The name of Darwin suggests the idea of mighty opposing forces, and the passionate controversy which inflames the minds of men spreads from the sphere of science down to the regions of daily talk, and is fought out in a gigantic ever-growing mass of popular literature. Just as formerly there used to be no department of science that did not at some point or other come in collision with religious tradition and ecclesiastical orthodoxy, so that a clear understanding with and emancipation from these powers became the first condition of life and action to the awakening sciences, so at the present day there is no department of human knowledge but is compelled to bring its own supreme and ultimate problems into relation with the idea of evolution; nay, even to regard itself as a mere branch of the great tree whose roots are lost in the immeasurable past, while its topmost shoots reach into the broad bright space of heaven, and its blossoms give gay promise of the fruit that is to ripen for later generations. This mighty tree is the science of Man.

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It is only by the study of its own past that the human mind is enabled to solve the great riddle, and attain a clearer understanding of itself and its place in the universe, and at the same time to acquire a guiding star, a compass in the dark kingdom of futurity, which will preserve it from the vain wanderings and useless expenditure of force so frequent and fatal in the past. With a clear consciousness of the aim and a firmer grasp of the means, the future development of the human race will leave all previous attainments far behind. Indeed, it is hardly too much to affirm that the course of a few more centuries will enable our race to look back upon this enlightened, cultivated and refined nineteenth century of ours as a period of barbarism and ignorance.

The idea of development, as has often been remarked, is by no means a novel one. Its germs may be traced back to that chosen people whose enlightened glance first sought to trace the presiding influence of reason in creation, back to the earliest Greek philosophers; among whom notably the deep-souled Herakleitos, 'the Obscure,' conceived the world as an eternal Becoming, with upward striving and downward fall (this is how I understand *ἡ ὁδὸς ἄνω κάτω*): 2,400 years before Schopenhauer and Darwin, he proclaimed their most characteristic doctrine in their own words: *Ἡράκλειτος μὲν γὰρ ἀντικρὺς πόλεμον ὀνομάζει πατέρα καὶ βασιλέα καὶ κύριον πάντων.* Hate and strife lead to generation, all being proceeds from discord, the struggle for existence rules the world and is its vital principle; the *ἐκπύρωσις*, or reconversion into the primitive element of fire, alone promises concord and peace, like the 'negation of the will' or the Nirvâna of

Schopenhauer and the Buddhists. Like Schopenhauer and Darwin, he failed to recognise the presence, beside and above the hatred which breeds divisions and strife, of the other great universal principle, almighty Love, source of each new perfection, uniting and combining all things, suffering and enduring, pardoning and atoning, devoting and sacrificing all—even life itself.

In the classical literature of Germany, the idea of development presents itself from time to time with more or less clearness and conscious precision. In his lectures upon empirical anthropology Kant did not hesitate to assume as self-evident the descent of man from beings of inferior grade, i.e. from the lower animals. The mind of Lessing, impregnated as it was with the ideas of Spinoza, could not possibly pursue any course which was inconsistent with the education of the human race, by natural means and forces, into steadily developing enlightenment and independence. Herder's '*Thoughts on the Philosophy of History*' are simply a sketch of the development of the human race towards a gradually progressive perfection. He, too, bestows penetrating and, so far as the then state of empirical science allowed, comparative consideration upon the physical difference between man and animals, though he lays much more stress—and in this many modern Darwinians might take a lesson from him—upon the inner principle, the *mental* development, which is after all the chief thing, though, strange to say, it is almost entirely ignored, or only incidentally mentioned, by the modern school of evolutionists.

The question has been vigorously debated, whether Goethe can be claimed as a supporter of the Darwinian theory of descent, whether he is to be quoted, as by

Haeckel, as one of the founders of the doctrine, or regarded, on the contrary, as an adherent of the theory of types. I must confess the controversy seems to me an idle one. The juvenile enthusiasm which took possession of the octogenarian poet when he heard how the French Academy had listened with lively sympathy and interest to the controversy between Cuvier and Geoffroy de St. Hilaire, while the political storms of the July Revolution were raging outside their walls, this very enthusiasm itself shows that the question for him lay not merely between one scientific theory and another, but between the victory or defeat of a whole system, namely, of a view of the universe, in which mind as well as matter was allowed its place. This may sound paradoxical when Darwinism is the subject of discussion, but it will only do so to the thoughtless majority who make no distinction between materialism and monism, which are as far apart as the poles. To show that this was the case, I will quote Goethe's own significant expressions, together with Lazarus Geiger's comments upon them:[1]—

'When the July Revolution broke out, and the faithful Eckermann found his master in a lively state of excitement about the great events which were taking place in Paris, he began to talk about the errors of the fallen ministry; upon which Goethe replied: "We don't seem to understand each other; I have nothing to say about those people, my concern is about a very different matter. I am speaking of the controversy, of such supreme scientific importance, between Cuvier and Geoffroy de St. Hilaire, which has at last broken out openly in the Academy. From henceforward, in France as elsewhere, *natural science will recognise the supremacy of mind over matter;* the great maxims of creation will

[1] *Zur Entwickelungsgeschichte der Menschheit,* p. 114.

reveal themselves, and we shall penetrate the mysteries of the divine laboratory. This event is incredibly precious to me, and I have a right to rejoice that I am alive to witness the victory won at last by the cause to which my life has been devoted, and which I have made peculiarly my own." The idea of which Goethe already witnessed the victory in the spirit, of which he hailed the proclamation by Geoffroy de St. Hilaire,—the idea of *cosmic evolution*,—will, I doubt not, do as much for the world's freedom as any other great world-historical thought of the past. For sooner or later we shall learn from it what man may expect and demand from himself, from humanity and from nature.'

Anyone who, like Schiller, makes the specific character of mankind to consist in freedom, and like him regards liberty and authority as the two great subjects of human interest,[2] is necessarily compelled to reject the notion that the human will is guided or influenced by any superhuman, or extra-human will, however exalted, noble, and pure the conception of it may be. The fact that man is his own creator is alone able to lend value, dignity, and elevation to his being: the abundant powers which have procured him supremacy over the rest of the planet interest us alone if they are the product of his own efforts, not if they are merely cast into his lap by fortune; and in no other light can we regard any higher being to whose favour man may be assumed to owe his precedence. The true kernel and substance of universal history in Schiller's eyes was the image of the human race wrestling its way to an ever higher level of liberty, force and morality. In this sense was the sketch conceived of that Jena Inaugural address of which Carlyle has said: 'There has perhaps never been in Europe another course of

[2] *'Freiheit und Herrschaft, der Menschheit gross Gegenstände.'*

history sketched on principles so magnificent and philosophical.' After he had carried the picture of primæval savagery back to its remotest stage, and contrasted with it the glittering image of contemporary culture, he says in conclusion:—

'What opposite pictures! Who would suspect the refined European of the eighteenth century of being a brother—a few more steps advanced—of the modern Canadian, or the ancient Celt. All these powers and experiences, these æsthetic impulses, these creations of reason, have been implanted and developed in man during the progress of a few centuries; all of these wonders of art, these colossal triumphs of industry, have all been educed from this beginning. What roused those to life, what lured these into being? What conditions had the human race to pass through between the two extreme points: how did man, the unsociable troglodyte, develop into the intelligent thinker, the cultivated man of the world? This is the question to which Universal History supplies the answer.'

The few centuries of which Schiller speaks in this passage are no longer enough for the historian of mankind. Pre-historic science allows us to glance into a vast abysmal past, for which the measures of former chronology are as inadequate as a mundane foot-rule for the distances of Sirius. The further we recede into obscurity, the slower naturally we must expect to find the course of progress. There was a time when men did not know the use of fire, when they were destitute of the very simplest instruments such as we can now hardly dissever from the conception of humanity; and yet even then man was already himself—for man had the gift of speech.

It seems, then, that, with the exception of one short luminous period, the actual realm of human

history is enveloped in profound obscurity: an immeasurable past, replete with riddles and mystery, for the interpretation of which only a few dumb witnesses spring from the bosom of earth, forces itself upon the mind of the enquirer as a problem only to be worked out with difficulty and by slow degrees. What then, we may well ask, is the need, where the sense of venturing rashly beyond these distant borders, and seeking to discover connecting links common to human kind with other beings (in whom the characteristic of humanity—reason—is wanting), in order that man may be brought into genealogical relationship with the latter? And yet this is the question which does most to stimulate our curiosity, and the consideration of this question—which for us is the supreme one, since it concerns the genesis of man—is not to be evaded; however often we may set it aside as presumptuous and unanswerable, so often it will present itself anew, and refuse to be silenced till the ghost of the problem is laid by its solution.

The ideas of Lamarck and Darwin are founded upon a comparison of the innumerable organic forms which cover the surface of our globe, and possess, in spite of almost infinite variation, a kind of internal coherence or similarity of nature which it is impossible to deny. Schiller says of the savage tribes whose customs and mode of life were brought to the knowledge of Europe by modern voyages of discovery:—

'We see nations in the most various stages of civilisation encamped around us, like children of different ages clustered round a grown-up person, who remind him by their example of what he once was himself, and of the point from which he started. A wise hand seems to have spared these tribes until

the exact moment when our own culture has made sufficient progress to allow of our making a useful application of the discovery to ourselves, and by the help of this mirror restoring the lost beginnings of our race.'

What Schiller here maintains to be possible and desirable within the limits of the specific notion of humanity—namely, to explain and interpret the present as a vast development of the past—is extended by Darwinism so as *to include* man as the last link of a much greater, almost invisibly prolonged, chain of development, of which the first link would have to be sought in the most rudimentary form of animal life, the, to all appearance, formless and structureless Amœbæ. What Schiller says of primitive, wholly uncivilised races, is applied by the theory of descent to the countless forms of the animal kingdom; these answer to the real infancy of our race, the chrysalis state, the stages which it had to pass through before it could attain to human culture and thereby to its present height of development. A brilliant Frenchman spoke of a *postérité contemporaine,* referring to the judgment of foreigners upon the productions of domestic literature; and we might describe the manifold forms of animal life as an *antiquité contemporaine,* since Nature herself seems to have preserved in them an image of our own original embryonic state, and to have spread out before us innumerable copies of it only to encourage reflective comparison and earnest meditation on our origin.

While acknowledging ungrudgingly the high scientific value of Darwinism, the philosophic thinker has no right to close his eyes to its foibles, its incomplete-

ness and its one-sidedness; and it should also be expressly and emphatically distinguished from the Monistic doctrine of development.

Praise has often, and rightly, been bestowed upon the calm caution of Darwin's proceedings, who, like a true naturalist, only began to draw his conclusions after he had collected together an imposing mass of materials, based upon observations carefully sifted and verified. And it seems to me that we may fairly expect the gallant band of naturalists who fight under his banner to accept all the obligations imposed by their own motto, *Natura non facit saltus*. As it serves for the Alpha and Omega of their practical observations and theoretic inferences; as it is the tacit premise and the avowed conclusion of all their labours, it ought also to be rigidly respected in their whole procedure, and we ought not to have to complain of rash guesses by which things heretofore divided by immeasurable chasms and abysses are brought together or deduced one from the other.

The one-sidedness of contemporary Darwinism consists mainly in its endeavour to refer everything to *external* causes, while *internal* qualities, as it seems, are ignored or undervalued.

To take an illustration: when it is observed that white foxes are to be met with mostly in the Polar regions, the phenomenon admits of an obvious explanation upon Darwinian principles. The white colour is an example of protective mimicry; the animal escapes the pursuit of its natural enemies more easily when it is the colour of the surrounding snow; and if we assume the same conditions to continue unchanged for a sufficient time, it is easy to imagine how foxes of

every other colour might die out and the white alone survive. In this case external circumstances alone are considered; for the gradual protective adaptation to the conditions given is simply the result of a selection accomplished under the compulsion of these same conditions. The will, the inner disposition of the animal itself, need not be taken into consideration at all. Here, accordingly, Darwinism is within its rights, though, if we are to be perfectly candid, it must be confessed that the word used to explain the fact—that is to say, *heredity*—is itself an unsolved mystery, or a mere word of which the meaning is still to be sought.

But the case is altogether different when the animal escapes from the dangers which threaten it on all sides by the development of appropriate mental qualities, to borrow human expressions, such as caution or cunning, or by the increasing delicacy of its sense-perceptions, or whatsoever else, when this development is the result of continuous practice in encountering and avoiding those dangers: for here we have to do with a conjoint physical and psychic progress, effected by the will, or individual effort, by the energetic impulse of self-assertion and self-preservation, which in the course of generations rises to astounding heights.

Is not the first result like a gift of chance, or the lucky number of a lottery, while the latter may be compared with the wealth acquired by painful industry? Those who refer only to external, purely mechanical causes, when dealing with cases of the latter kind, have hardly understood, let alone mastered, the

great problem of the doctrine of development, and they have certainly no right to a voice in matters of philosophy.

The heretical assumption that mind and consciousness can be traced back to material forms, and the consequent confusion of the external and internal qualities of things, have hindered Darwinism from entering on a serious philosophic examination of its true principles and speculative premises; this want of critical reserve has made itself fatally visible in the rash inferences and thoughtless disregard of real discrepancies which characterise their attempts to compare and connect things radically heterogeneous in their nature and circumstances.

If the whole animated world is to be derived from an organised cell, and yet the assumption only slipped in, as it were by the way, with a cavalier *'Accordez-nous seulement ce petit bout, nous en déduirons le reste,'* the proceeding betrays as complete and naïve ignorance of the magnitude and difficulty as well as of the real gist of the problem, as that of Sir William Thomson and his disciple Helmholtz, who would have the germs of organic life imported by meteorites from distant worlds, or that of Haeckel, who suspects carbon itself to be the actual vehicle of life: the latter, indeed, a very instructive illustration of modern myth-making—*nomina-numina.*

Is it really so hard to understand the impossibility of finding the starting-point for a theory of the universe in matter, the conception of which is only the secondary element of our knowledge, while the immediate element of certainty is given by consciousness, feeling, will?

It is time to recognise the truth that, when a chemist shows us how oxygen and hydrogen, acids and alkalies, rush into combination, he is only exhibiting a process which remains absolutely unintelligible to us as long as we regard it from a merely mechanical point of view, whilst it becomes plain and simple as soon as we compare it with analogous processes in ourselves, e.g. with the functions of respiration or nutrition, since the mental qualities, the feeling, impulse, or will, which we associate with those processes, are what we are best acquainted with in ourselves.

Still more grave is the error or self-deception of the Darwinians who attempt to explain the nature of man, the eternal riddle of the Sphinx, the great mystery of the universe, partly by external, i.e. negative, causes, partly out of mere corporeal factors. *'Love's Labour's Lost,'* or *'Much Ado about Nothing,'* are the comments that suggest themselves when we contemplate the ant-like industry of the anthropologists who fill the world with their appeals, and imagine themselves to be on the verge of discoveries when they have collected a few more cranial measurements or statistics about blue and black eyes, and dark or fair hair. The whole affair will be brought to an end by its own excesses, and will only serve to raise a smile when posterity looks back on the pitiful disproportion between the means employed and the result aimed at.

Still less, however, can the gap which severs man from other animals be bridged by ingenious physiological terms, such as brachycephalous or makrocephalous, or arbitrary classifications, like *homo alalus,* a compound which reminds us strongly of the traditional xylosideros, or 'wooden iron,' or even by the

observation that the bodily structure of man is not distinguished from that of beasts by any specific anatomical mark. The latter argument indeed may be used directly against the theory of Darwinism. For it is an obvious retort, that if the notorious superiority of man is unattended by any marked bodily divergence from the animal type, the superiority must have some other cause; and this brings us round directly to the assumption of some self-subsisting substance independent of the body, i.e. the human soul.

At this point it is necessary to notice the attitude which Professor Max Müller has taken up and hitherto maintained in relation to Darwinism. All those who, with more or less skill and candor, have taken up arms against the Darwinian theory, have put the name of Max Müller in the front rank as a crushing argument, a mighty bulwark, entrenched behind which they could discharge their own feeble shafts against the great disturber of the public peace. And in this they are not, from one point of view, much to blame, for it is my firm conviction *that Max Müller is the only equal, not to say superior, antagonist, who has entered the arena against Darwin.*

'There is in man a something, I am not afraid to call it for the present an occult quality, which distinguishes him from every animal without exception. We call this something reason when we think of it as an internal energy, and we call it language when we perceive and grasp it as an external phenomenon. No reason without speech, no speech without reason. Language is the Rubicon which divides man from beast, and no animal will ever cross it. I may express my conviction that the science of language will yet enable

us to withstand the extreme theories of the Darwinians, and to draw a hard and fast line between man and brute. Let the experiment be tried, and the most intelligent of apes be reared and trained among men: he will not speak, he will remain brutish; while the rudest human waif from the most savage tribe will promptly acquire from human intercourse this first characteristic of humanity.'

With these weighty arguments our hero confronted undauntedly all the onslaughts of irate Darwinians, and concluded resolutely his defence of the seemingly abandoned fortress.

'Here is reason, here language, here humanity. None shall pass here; none penetrate into the sanctuary who cannot tell me first how reason, how speech, was born.'

And the shouting bands of the assailants were struck dumb, for they could give no answer.

MAX MULLER AND THE DOCTRINE OF DEVELOPMENT.

The principles of development as applied to language have found no more determined advocate than Max Müller in his letter to Chevalier Bunsen *'On the Turanian Languages,'* published in 1853, and in several chapters of his lectures on the science of language. But, as already intimated, I distinguish expressly between Darwinism and the monistic theory of development.

In his otherwise admirably luminous and profound *'Lectures on Darwin'* there is one vulnerable point, namely, when he lays down the alternative: 'Either Kant is in the right or Darwin; one excludes the other.' It is true that Kant regards reason as what is given immediately, as the necessary, indisputable base of all knowledge, so that it might naturally be inferred that he admitted it to be an irreducible, special gift vouchsafed to man by the divine influence. But in many passages of his writings he lets it be clearly seen that human reason has not existed from eternity, and therefore must be conceived as having arisen from natural causes through the co-operation of natural forces. When he lays down the distinction between 'receptive sensation' and 'spontaneous thought,' according to

which animal life and human reason appear to occupy two distinct camps, on the one hand, as Schopenhauer has pointed out, he took the matter too easily; while, on the other, he expressly conceded that both sensation and thought, by the co-operation of which all knowledge is effected, might after all prove to be derived from a common root.

Still, the reference to Kant may be justified, especially in England, where the great discoveries made by the author of the *'Kritik der reinen Vernunft'* continue for the most part a *terra incognita.* The same, indeed, may be said of many, if not of most of the German representatives of Darwinism, who seem to know about Kant only just what serves their own purpose; e.g. the theory of the origin of the solar system, which under the name of the La Place-Kantian cosmogony is taught even in secondary schools. The important fact is overlooked or ignored, that materialism, as long as Kant was alive or the influence of his spirit active among the teachers of philosophy, did not so much as dare to open its mouth.

Reason, the peculiar gift of man, which marks him off from every other being, is the source and starting-point of all knowledge. So Kant affirms, and Max Müller coincides, only adding that reason and the gift of speech are accorded to man at the same moment. *Ratio et oratio* are one, they are related to each other like body and mind, the outer and the inner; they are distinguishable but not separable. Without speech there can be no thought, as the Greeks felt when they used the same word ὁ λόγος for both. Speech is therefore the most faithful mirror of the human mind; it contains a wealth of wisdom in itself, and throws much

valuable light both upon the intellectual life of the primitive world and upon the degrees of external culture reached by the race in a hoary antiquity of which every other remaining trace has been obliterated. The treasure chest is there, and the key to open it is comparative philology. No praises, no glorification of this science can exaggerate its real importance.

'I make bold to say that during the last hundred, and still more during the last fifty years, Oriental studies have contributed more than any other branch of scientific research to change, to purify, to clear, and intensify the intellectual atmosphere of Europe, and to widen our horizon in all that pertains to the science of man, in history, philology, theology, and philosophy. We have not only conquered and annexed new worlds to the ancient empire of learning, but we have leavened the old world with ideas that are already fermenting even in the daily bread of our schools and universities.'[1]

'But let us look at what has been achieved by the masters of comparative philology, and many others, who followed their banners. The East, formerly a land of dreams, of fables, and fairies, has become to us a land of unmistakable reality: the curtain between the West and the East has been lifted, and our old forgotten home stands before us again in bright colours and definite outlines. Two worlds, separated for thousands of years, have been reunited as by a magic spell, and we feel rich in a past that may well be the pride of our noble Aryan family. We say no longer vaguely and poetically *Ex Oriente Lux*, but we know that all the most vital elements of our knowledge and civilisation—our languages, our alphabets, our figures, our weights and measures, our art, our religion, our traditions, our very nursery stories—come to us from the East; and we must confess that but for the rays of Eastern light, whether Aryan or Semitic or Hamitic, that called forth the hidden germs of the dark and dreary West, Europe, now the very light of the world, might have

[1]Max Müller: *Chips from a German Workshop*, vol. iv. p. 322.

remained for ever a barren and forgotten promontory of the primeval Asiatic continent. We live, indeed, in a new world; the barrier between the West and the East, that seemed insurmountable, has vanished. The East is ours; we are its heirs, and claim by right our share in its inheritance. We know what it was for the Northern nations, the old barbarians of Europe, to be brought into spiritual contact with Rome and Greece, and to learn that beyond the small poor world in which they had moved, there was an older, richer, brighter world, the ancient world of Rome and Athens, with its arts and laws, its poetry and philosophy, all of which they might call their own, and make their own by claiming the heritage of the past. We know how, from that time, the classical and Teutonic spirits mingled together, and formed that stream of modern thought on whose shores we ourselves live and move. A new stream is now being brought into the same bed, the stream of Oriental thought, and already the colours of the old stream show very clearly the influence of that new tributary. Look at any of the important works published during the last twenty years, not only on language, but on literature, mythology, law, religion, and philosophy, and you will see on every page the working of a new spirit. I do not say that the East can ever teach us new things, but it can place before us old things, and leave us to draw from them *lessons more strange and startling than anything dreamt of in our philosophy.*

'Before all, a study of the East has taught us the same lesson which the Northern nations once learnt in Rome and Athens, that there are other worlds beside our own; that there are other religions, other mythologies, other laws, and that the history of philosophy from Thales to Hegel is not the whole history of human thought. In all these subjects the East has supplied us with parallels, and with all that is implied in parallels; viz., the possibility of comparing, measuring, and understanding. The *comparative spirit* is the truly scientific spirit of our age, nay, of all ages. An empirical acquaintance with single facts does not constitute knowledge in the true sense of the word. All human knowledge begins with the Two or the Dyad, the comprehension of two single

things as one. If in these days we may still quote Aristotle, we may boldly say that "there is no science of that which is unique." A single event may be purely accidental; it comes and goes, it is inexplicable, it does not call for an explanation. But as soon as the same fact is repeated, the work of comparison begins, and the first step is made in that wonderful process which we call generalisation, and which is at the root of all intellectual knowledge and of all intellectual language. This primitive process of comparison is repeated again and again, and when we now give the title of *Comparative* to the highest kind of knowledge in every branch of science, we have only replaced the old world *intelligent* (i. e. interligent), or inter-twining, by a new and more expressive term, *comparative*.[1]

As Greek was the language of humanity in the fifteenth century and onwards till the eighteenth, till the age of Lessing, Goethe and Schiller, so Sanskrit is the language of the world for the nineteenth century and its immediate successors.

'The fact is, the time has not yet come when the full importance of Sanskrit philology can be appreciated by the public at large. It was the same with Greek philology. When Greek began to be studied by some of the leading spirits of Europe, the subject seemed at first one of purely literary curiosity. When its claims were pressed on the public, they were met by opposition, and even ridicule; and those who knew least of Greek were most eloquent in their denunciations. Even when its study had become more general, and been introduced at universities and schools, it remained in the eyes of many a mere accomplishment—its true value for higher than scholastic purposes being scarcely suspected. At present we know that the revival of Greek scholarship affected the deepest interests of humanity, that it was in reality a revival of that consciousness which links large portions of mankind together, connects the living with the dead, and thus

[1] *Chips from a German Workshop*, vol. iv. p. 344.

secures to each generation the full intellectual inheritance of our race. Without that historical consciousness, the life of man would be ephemeral and vain. The more we can see backward, and place ourselves in real sympathy with the past, the more truly do we make the life of former generations our own, and are able to fulfil our own appointed duty in carrying on the work which was begun centuries ago in Athens and at Rome. But while the unbroken traditions of the Roman world, and the revival of Greek culture among us, restored to us the intellectual patrimony of Greece and Rome only, and made the Teutonic race in a certain sense Greek and Roman, the discovery of Sanskrit will have a much larger influence. Like a new intellectual spring, it is meant to revive the broken fibres that once united the South-eastern with the North-western branches of the Aryan family; and thus to re-establish the spiritual brotherhood, not only of the Teutonic, Greek, and Roman, but likewise of the Slavonic, Celtic, Indian, and Persian branches. It is to make the mind of man wider, his heart larger, his sympathies world-embracing; it is to make us truly *humaniores,* richer and prouder in the full perception of what it is meant to be. This is the real object of the more comprehensive studies of the nineteenth century; and though the full appreciation of this their true import may be reserved to the future, no one who follows the intellectual progress of mankind attentively can fail to see that, even now, the comparative study of languages, mythologies, and religions has widened our horizon; that much which was lost has been regained; and that a new world, if it has not yet been occupied, is certainly in sight.'[2]

And what is it after all that thus suddenly stirs the heart of the grave student, the diligent labourer in the toilsome quarries of philology, so that with poetic enthusiasm, like Moses looking down upon the Land of Promise, he proclaims to children and children's children the advent of a new, glorious, unimagined era of intellectual light? How comes he to this *rôle* of new

[2]M. Müller: *Chips,* vol. iv. p. 361.

inspired prophet? It is because he knows that through these newly disclosed treasures, which his own labours have done so much to bring to light, men will be enabled 'to reconstruct the lost beginnings of our race,' and to draw up into the light of day, link by link and century by century, the chain which unites our life to-day with the long-forgotten generations of the past, and to free at least a portion of it from the obscuring débris of ages; in fact, to cast new light upon the great riddle of the world, the human mind, the human race and its unique and marvellous destiny upon earth.

Max Müller's services with regard to the publication of the Vedas are too well known for me to dwell on them here. On September 14, 1874, he laid the last sheets of the 'Rig-Veda with the Commentary of *Sâyanâkârya*' before the Congress of Orientalists, then sitting in London, only alluding briefly to the labors of which this gigantic work was the fruit. He himself said of this oldest book of the Aryan world:

'Its publication would have been simply impossible without the enlightened liberality of the Indian Goverment. For twenty-five years I find, that taking the large and small editions of the Rig-Veda together, I have printed every year what would make a volume of about six hundred pages octavo. Such a publication would have ruined any bookseller; for it must be confessed that there is little that is attractive in the Veda, nothing that could excite general interest. From an æsthetic point of view no one would care for the hymns of the Rig-Veda. . . . Nothing shows the change from the purely æsthetic to the purely scientific interest in the language and literature of India more clearly than the fact that for the last twenty-five years the work of nearly all Sanskrit scholars has been concentrated on the Veda. But I say again, there is little that is beautiful, in our sense of the word, to be found in the hymns of the Rig-Veda, and what little there is has

been so often dwelt on, that quite an erroneous impression as to the real nature of Vedic poetry has been produced in the mind of public. . . . When some years ago I had to publish the first volume of my translation, I intentionally selected a class of hymns which should in no way encourage such erroneous opinions.

'It was interesting to watch the disappointment. What, it was said, are these strange, savage, grotesque invocations of the Storm-gods, the inspired strains of the ancient sages of India? Is this the wisdom of the East? Is this the primæval revelation? Even scholars of high reputation joined in the outcry, and my friends hinted to me that they would not have wasted their life on such a book.

'Now, suppose a geologist had brought to light the bones of a fossil animal, dating from a period anterior to any in which traces of animal life had been discovered before, would any young lady venture to say, by way of criticism, "Yes, these bones are very curious, but they are not pretty?" Or suppose a new Egyptian statue had been discovered, belonging to a dynasty hitherto unrepresented by any statues, would even a schoolboy dare to say, "Yes, it is very nice, but the Venus of Milo is nicer?" Or suppose an old MS. is brought to Europe, do we find fault with it because it is not neatly printed? If a chemist discovers a new element, is he pitied because it is not gold? If a botanist writes on germs, has he to defend himself because he does not write on flowers? Why, it is simply because the Veda is so different from what it was expected to be, because it is not like the Psalms, not like Pindar, not like the Bhagavadgîtâ, it is because it stands alone by itself, and reveals to us the earliest germs of religious thought, such as they really were, it is because it places before us a language, more primitive than any we knew before, it is because its poetry is what you may call *savage, uncouth, rude, horrible,* it is for that very reason that it was worth while to dig and dig till the old buried city was recovered, showing us what man was, what we were before we had reached the level of David, the level of Homer, the level of Zoroaster, showing us the very candle of our thoughts, our words and our deeds,'[3]

[3] *Chips,* vol. iv. p. 374.

No comment is needed to show that the writer of these words has found in the history of human development, from its first tottering steps to its self-conscious maturity, a task to stimulate and an aim to employ the utmost energy and the richest gifts. His keen sight was able to detect traces of humanity in the recesses of an impenetrable past, where feebler eyes could see nothing but indistinguishable mist, and for that very reason thought the boundary between man and beast had disappeared.

The importance of the subject warrants me in adding yet a few more quotations from another writer, intellectually akin to Müller, in which, after having reached by an independent path substantially similar conclusions, he expresses his admiration for the newly breaking light in almost identical terms. I refer to Lazarus Geiger.

'The study of languages,' says this distinguished thinker,[4] 'has attained in our days to incomparable philosophical importance, since it provides a key to a side of the world and of life which natural science could not have reached, and casts light both upon what we are and what we have been, upon human reason and human history. . . . The eye ranges in imagination, through unfathomable distances, towards the moment of creation, and the great secret, the secret of human development, begins to stir in our minds with a dim promise of revelation.

We ask how the imagination of a people can be constituted, by what motives it can be governed, when we find the Persians tending dogs with such anxious care, and the Egyptians building sepulchres for the embalmed corpses of the sacred Apis, of which sixty-four generations were preserved at Memphis; and this question occupies us so much that the wiser doctrines of the same periods, which are

[4]Geiger: *Zur Entwickelungsgeschichte der Menschheit*, pp. 2, 12, 14.

not wanting either if we cared to hear them, meet with comparative neglect. This reminds us of an anecdote told by Max Müller about that, in our eyes, most important portion of Sanskrit literature, the Vedic writings. When the gifted Rosen, who died while in the prime of youth, was occupied in the British Museum in copying the Vedic poems, which he began to publish in the year 1838, the Brahmin Ram Mohun Roy, who was in London at the time, could not contain his astonishment at such an undertaking. The Upanishads were the most important part of the Veda to him, and seemed much more worthy of publication; for the latest portions of the Vedas contain a kind of mystical philosophy, in which it is possible to discover an approach to monotheism or pantheism, which seemed to the Hindoo reformer, as to so many others, to be the *ne plus ultra* of religious wisdom. But the primitive Vedic hymns, altogether heathenish, sometimes naïve and often simply quaint, in which the youth of mankind breathes with such delightful freshness, these are to us the true treasure of Indian literature, notwithstanding the secret feeling of shame with which the modern civilised Hindoo might be tempted to regard them. They contain no religious system that can be of value to us, but they are themselves a text book for the religious history of mankind.'

'Especial attention should be paid to the germs of speculation contained in the primitive collection of sacred poems, known as Rig-Veda Sanhita, the existence of which until the present day must be regarded as a piece of rare good fortune, if the human race is right in regarding *the knowledge of its own origin and of the laws of its growth* as an object of longing and desire. Unlike all other known literatures, in which we find everywhere new forms either rising from the ruins of an expiring past, or resulting from intercourse and the intermixture of ideas proper to distinct nations, in the Vedic hymns we seem to have to do with an original independent growth, not a secondary formation built up by the destruction of what went before, but a manifestation of fresh young human life, springing in full bloom directly from the bosom of nature, a spiritual form with words and deeds not yet petrified, and allowing us to watch in the act of becoming

what elsewhere is only to be met with as finished and completed. Hence it is that these hymns contain the key, not only to the subsequent development of India, nor even only to that of the kindred nations who started to a certain extent from the same root, but also in virtue of the natural unity which characterises the common course of development throughout its species, to all the creations of speculative energy which the world has seen, or, in other words, to the whole domain of reason, to all the lasting conquests won by it since the first moment when man began to form convictions out of retained *perceptions,* and manifold thought, belief and knowledge became a possibility."[5]

'The rise of philology as an independent science, apart from any outer or practical aim, as a science of the prehistoric condition of mankind, which dates from the beginning of the present century, is an event of incredible importance to the history of humanity. Comparative philology overturned the former confused ideas relating to the earliest civilisation and migration of primitive populations. Related and non-related nations were distinguished from each other, and a more delicate and unerring instrument was provided for the classification of races than that afforded by the indication of natural history or anthropology. Even the remotest distances of the past seemed by the light of hope to promise precise knowledge of the circumstances of periods of primitive antiquity, the very existence of which had hitherto been unrevealed by history."[6]

This complete agreement between two of the most distinguished intellects of the century, this unanimous tone of enthusiasm in referring to the new and abundant spring of knowledge which has broken out in our days from undreamt-of depths, is a sufficient testimony to the importance of the subject with which we are concerned. This is nothing less than the *history of*

[5]Geiger: *Ursprung und Entwickelung der menschlichen Sprache und Vernunft,* p. 119.

[6]Geiger: *Ursprung der Sprache,* p. 16.

human development, the solution, that is to say, of the most ancient and most sacred problem, a solution which for the first time seemed to come within the range of possibility when the discoveries of comparative philology revealed the stores of information preserved in the genealogies of words and notions, respecting the primitive ages of human thought, and the origin, growth and maturity of the supreme distinguishing mark of humanity, that which explains and makes possible all the rest—reason and speech (λόγος).

Whoever wishes to explain humanity must understand what is human; he must know the points upon which everything else turns, and from which everything else must be derived. Language contains the key to the problem, and whoever seeks it elsewhere will seek in vain.

Max Müller's aim and object, then, is to elucidate the doctrine of human development; only he has sought this doctrine where alone it was to be found, in the mind, in thought, that is to say, in language. The question as to the origin, the germ, the first beginning of this wonderful gift, he was content for the present to leave open or unanswered. As a philologist he was only concerned to use the materials provided by linguistic research to pave the way back to that past which had been hitherto lost in impenetrable night, and from this point of view he might consider that it would be time enough, when the primitive state of mankind had assumed a clearer outline in the light of philology, to begin to think of exploring the other side of the mountain range where the clue of philology begins to fail.

It might have been supposed that the modest caution

of such a plan would have received the approval of every intelligent thinker; to begin by understanding the problem in its relation to the human mind, to certify every step by a reference to the real body of thought, and to pursue this back to its ultimate root—what could be simpler or more scientific? But temperate reasoning fails to make itself heard above the storm of passionate controversy; and thus it came to pass that the violent Darwinians, who, after the manner of disciples, went far beyond the boundaries set by their master's judgment, began a campaign against Max Müller, in which first one philologist and then another was exalted at his expense, till compelled to retire before the successful defence of one who, in self-defence, was defending truth rather than himself.

The dignified candor of the words with which Max Müller begins his protest against the premature and inverted reasoning of the hyper-Darwinists shows to the more advantage by contrast with those violent attacks. He lays down, as the only test and standard, the one interest by which all scientific laborers alike should be inspired:

"The question is not, whether the belief that animals so distant as man, a monkey, an elephant, and a humming bird, a snake, a frog, and a fish, could all have sprung from the same parents is monstrous, but simply and solely whether it is *true*. If it is true, we shall soon learn to digest it. Appeals to the pride or humility of man, to scientific courage, or religious piety, are all equally out of place."[7]

I believe that in what precedes I have indicated with sufficient clearness, though but in general outline, what is the attitude assumed by Max Müller in relation

[7] M. Müller: *Lectures on Darwin.*

to the theory of Development, and to Darwinism in particular. He severs himself from the followers of Darwin, and indeed begins a critical attack, when, overlooking or dismissing offhand man's real characteristic,—reason and speech,—they treat external causes and structural transitions as a sufficient scientific explanation of the greatest marvel and mystery of creation. The narrowness of this view has been emphatically characterised by Lazarus Geiger also:

'We may obtain some idea of the skeleton and even of the external appearance of a lost animal species by the help of geological fragments; we can draw general inferences respecting an imperfectly developed race of men from primitive cranial remains, but it would be hard to form any idea, from the appearance of the fragments which we find in the Neanderthal, in what way the head, of which they formed part, carried on the business of thinking when it was alive.'[8]

'Fortunately (continues this gifted writer), the history of the mind also has its primæval remains, its deposits and petrefactions of another kind. They offer more instructive information than will perhaps be anticipated; if carefully pursued, they lead to unexpected, but, as I am persuaded, none the less assured results.'

To cast light upon the vast background of our past, the past of the human mind, as it is developed in language, and may be disclosed and interpreted by science, this has been the lifelong task, the supreme goal of all the labours of Max Müller. He himself has spoken plainly enough to this effect:

'Every man forms his own scheme of life, and every student must belong to some army and carry the plan of the campaign in his head to determine and direct the choice of his own march. I belong to those who say with Pope, "The

[8] *Zur Entwickelungsgeschichte der Menschheit*, p. 45.

proper study of mankind is man;" and when I set before myself the question, which was the right, or at least the most fruitful method for the study of mankind, the conviction soon formed itself in my mind that in order to know what man is now, we must first of all observe and establish what man has been and how he became what he is.'

SPEECH AND REASON.

The words 'origin of species' were the charm with which Darwin stirred men's minds, and roused into a flame the glowing ashes of dormant curiosity about the question, whether things in general and organic beings in particular have existed from all times as now, or whether they came into existence as it were, historically, by virtue of natural causes, and if so, of which.

This question, when transplanted into the realm of natural science and proposed for solution, with the help of the vast mass of materials furnished by accumulated observations, had the great recommendation of restoring philosophic thought and deductive method to the place of pure empiricism; though this had its justification in the vagaries of the philosophy of nature; and, indeed, as the exact method of sense-perception, must always form the indispensable and solid foundation of all natural science.

The nature of a *species* consists, as the name already indicates, in what is *special*, i.e. peculiar to itself. The particular marks itself off from the general, it becomes more independent, more original; it gains in character, in individuality. Accordingly, the doctrine of development has for its object, in concert

with historical enquiry, to trace back each particular appearance to its most nearly universal form; that is to say, in the case of living beings, to trace the species to its most general type, to pursue the stream of development backwards from the familiar and infinitely manifold data of the present to its earliest beginning, so far as may be possible to the ever limited power of human reason. And the final goal of its efforts will always be that moment, hid in the twilight of an immeasurable past, when our system, then a gigantic globe of vapour, broke from the deathlike slumber of universal oneness, and those first modifications accomplished themselves, out of which hereafter the *Wille zum Leben* wrestled its way to the joys and sorrows of mortal being in the person of countless individuals.

In the midst of this vast process of development, which fills the imagination with awe-struck wonder, and which is accomplished so silently and tranquilly that our reason, aware of the closer causal connection which binds the being of one moment to the becoming of the next, is forced towards the view that all is happening by the fixed, inexorable laws of necessity,—in the midst of this we see one star dawn on the horizon, within which is concealed the sacred mystery of a new species, called to a higher measure of freedom, consciousness and perfection, and occupying a place apart from all the rest of nature, since in it are laid the foundations of the kingdom of conscious mind, of the life which is ordered by individual foresight and choice.

This species is the human race; the dawning light which heralds its advent upon earth is reason. The contrast between this and the nearest analogues we can

find for it among beings of any other kind is so strong that we are always ready to set the latter aside offhand as mere natural impulse or *instinct,* which leaves us only the wiser by a word, a word to which any meaning, possible or impossible, may be attached or not attached at discretion.

Still, reason, or the mental life of man, constitutes a new specific distinction, without an exact parallel in any other part of nature, a differentiation which we must seek to derive from more general natural causes. No problem is at once so difficult and so well worthy of solution, except, perhaps, the kindred question regarding the first origin of organization and life.

The great law of progressive individualisation and specialisation, by which alone the unceasing course of cosmic development is to be explained and elucidated, must supply the foundations also of the life and growth of reason.

That whereby the functions of reason are accomplished, the inner organic tissue, the means whereby the whole of the material and spiritual universe is embraced, constructed and expressed, is afforded by those mysterious entities which have formed the object of study in every healthy system of philosophy up to the present day; sometimes they are called, in Platonic phrase, *ideas,* sometimes *notions,* but, for the most part, concepts or *conceptions.* They are the exclusive property of man—no other animal can ever participate in them; and it is, therefore, either crass misconception of the nature of the case, or simple misuse of language, when modern materialists speak of the 'thinking power of animals.'

Concepts cannot be formed without the help of

words. The sound, the word, is the body of the concept; language is thus the external side, the body of thought or reason. Thus it was that the one essential, which may, however, be considered from the two aspects, from without and from within, was designated by the Greeks by a single word, λόγος, which does not distinguish them, but includes them both.

There are certain truths which, in the earlier stages of development, are taken for granted by primitive thought as given directly and certainly in consciousness, which, however, become lost in the age of reflection, in consequence of a peculiar one-sidedness which has come to characterise the progress of thought, so that much mental effort has to be expended in rediscovering them. To this number must be reckoned the great and important truth that thought is accomplished by means of words alone, that thought is just as little possible without language as language without thought.

I said that this truth was matter of direct consciousness to the childlike thought of primitive peoples. As a confirmation of this I may quote the graphic expression of the Polynesians, who, according to Farrar, describe thinking as 'talking in the stomach,' i.e. internally. But the divine Plato also had no other definition to put into the mouth of Sokrates.

'"What do you mean by thinking?" asks Theætetus. Sokrates: "I mean the conversation which the soul holds with herself in considering of anything. I speak of what I scarcely know; but the soul when thinking appears to me to be just talking—asking questions of herself and answering them, affirming and denying."[1]

[1]Plato, *Theaet,* 189, 90, Jowett's translation, vol. iii. p. 416.

And how then does mankind come to lose this instinctive certainty? Because, in the first age of systematisation and reflection, men accustom themselves to speak of the idea or *thought* as something inward and spiritual with which the formal sound of the mere *word* is to be contrasted. And thus the error gained ground that thought was the *prius,* and had an independent existence in the human mind, before the existence of words as a token to express the process that was going on without them. 'The Philosophers,' says Hamann, 'have in all ages given truth a letter of divorce, in that they have put asunder those things which nature has joined together, and conversely.'

'The conception of cause,' says Goethe, 'is the source of infinite error.' If we look closely we shall see that this sentence applies to all the fundamental errors in which the human mind has been entangled for ages, and from which it will seek in vain to escape so long as it does not recognise their deep metaphysical root. From Demokritus and Epikurus onwards materialists continue credulously to repeat that the body is the cause of mind; they are unable to understand that causal relations cannot be established between things of altogether disparate quality any more than they can be affirmed of what is one and indivisible. And from Plato onwards, the idealists repeat that mind is the cause of bodies, so that they have no choice but to regard the world as a phantom, a creature of their own imagination, or else to bridge the chasm between mind and body by such *tours de force* as the *concursus divinus,* pre-established harmony and the like rash inventions. On the other hand, Spinoza's monism, Kant's criticism, and Schopenhauer's theory of will contain

the key of the problem in their hidden depths, for these great thinkers made the metaphysical base or conditions of the knowledge of the world the object of their investigations.

Whenever we start from one side of a thing and endeavor to deduce the other side of it causally from this, we land ourselves in hopeless contradictions: there is no escaping the vicious circle. The explanation of the most important, most truly human quality of mankind has not escaped this fate. The wheel of Ixion continues its giddy revolutions, bringing to the top in turn the words now 'Reason and therefore speech,' now again, 'Speech and therefore reason.' The truth that the two, *ratio* and *oratio,* are one and the same being, only conceived from different points of view, that one is the inner and spiritual, the other the outer and corporeal side of the monad, this truth, notwithstanding its distinct and convincing advocacy by the most illustrious thinkers of the last half century, has hardly begun to take root in the minds of those who have chosen as their especial study to unriddle the great problem of the human mind, and *a fortiori* has had no influence on the thoughts of the general educated public.

The most influential champion of this idea is Max Müller. As formerly Spinoza's great disciple, Goethe, formulated the fundamental monistic doctrine in the simple words, as indubitable as unambiguous: 'No mind without matter, no matter without mind;' so Max Müller with equal clearness and confidence:[2]

'Without speech no reason, without reason no speech.

[2]*Lectures on the Science of Language,* vol. ii. p. 73.

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.'

Further on he comments upon some acute observations of Locke, who appears to have been the first, before Herder, to call attention to the inseparable connection between speech and thought, and accordingly insisted on the need of serious philological criticism, in the interests of reason itself, in order that the speaker and the listener may no longer be misled by phrases of which they do not understand the sense.[3]

"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 realised.'

All want of clearness, all confusion, all the interminable debates as to whether thought and reason shall be ascribed to animals, to babies, and to untaught deaf-mutes, are merely verbal disputes, and proceed from the fact that the words used have not had associated with them the clear and definite matter of con-

[3]Ib. p. 76.

ception which belongs to them, but are employed in a general, vague and misty fashion.

'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,[4] it cannot reason on them, it cannot tell of them.'[5]

Similarly Lazarus Geiger:

'It is easy to see that blood is red and milk white; but to abstract the redness of blood from the collective impression, to find the same notion again in a red berry, and, in spite of its other differences, to include under the same head the red berry and the red blood—or the white milk and the white snow—this is something altogether different. No animal does this, for *this, and this only, is thinking.*'[6]

We thus arrive at the apparently paradoxical proposition: the so-called general conceptions are something special, something peculiarly and exclusively proper to the human reason; they embrace and comprehend the whole world, so far as this is within the scope of human powers of perception; they can, however, only become realised by means of their bodily equivalents, sensible sounds or words. Speech is not the garment, it is the body of reason. 'Without speech no reason, without reason no speech.'

[4]I have expressed this thought in the words: 'Language gives mankind a standpoint exterior to things and above them,' and I have given the grounds of it in detail in my *Einleitung und Begründung einer monistischen Erkenntnisstheorie*, p. 95, sq.

[5]Max Müller, *loc cit.* p. 77.

[6]Geiger: *Ursprung der Sprache*, p. 110.

After this it should not be difficult to perceive why all previous attempts to explain human reason and establish a satisfactory system of psychology and perception have proved abortive. The reason is that in all of them human reason was conceived as something absolute and irreducible, while its history and its past, which might have supplied the desired solution, were neglected, although a priceless instrument for the purpose lay ready to hand in comparative philology, which is nothing but the study of the history of this same reason itself. Take any animal away from its place in the chain of organic life, and its nature will remain for ever an insoluble problem; but viewed as a link in the progressive chain of development, we find its explanation in all that has gone before it.

What is required, then, is to apply what Darwin has done for organisms to that department of organic life to which we give the name of human notions, rational concepts or words. We want, in fact, a new 'origin of species.' Every notion, every word which presents itself in the course of the development, is something new and special, a fresh step towards specialisation and individualisation, which can never be conceived by itself nor thought of as breaking forth out of nothing by some *generatio æquivoca;* but as a new element of reason, generated by unbroken filiation from earlier elements, it serves to exalt, to heighten, and enrich the inner mental force which we call reason; and at the same time as a principle of explanation, as a token and monument of the growth of this reason, it serves to raise for a moment the thick veil of mystery in which it is enveloped.

Upon this track and thus retracing our steps to-

wards the past, we arrive at more and more simple elements, corresponding to the elementary state of the reason, till at last by the light of philological research, in conjunction with deductive philosophic speculation, we approach boldly towards the narrowing circle within which as yet there is neither thought nor speech, and where therefore the cradle and origin of reason is to be found.

Etymology, or the study of roots, a science founded and admirably worked out by German diligence, may form the pride and joy of an age otherwise to all appearance estranged from such ideal pursuits; and it is this science which may claim to furnish, from its hidden stores, the richest and most startling information about our proper nature, our prehistoric past, and the paths by which the human mind has attained to its present vigor, enlightenment, and perfection.

In language we possess, as it were, a magic mirror of the past of our race, and its external circumstances and vicissitudes. The science of language casts its rays into the primeval night from whence no other evidence can reach us. From this point of view she is a worthy sister of paleanthropology, the science of prehistoric man; for human thought attaches itself also to the dwellings, tools, arms and implements of human action, and where thought has left its vestiges, its voice is still heard by the keen and discerning senses of the investigator. But the words, the vestiges of language give clearer and more valuable information than any other relics, for they extend back to a time where even the threads of prehistoric research are broken off, when man was without tools, without fire, without any of

those contrivances which we are now accustomed to regard as indispensable attributes of humanity.

'There is a peculiar charm,' says Max Müller,[7] '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 civilised 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 Wallachia. 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 civilised 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.

'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 Britsh 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

[7] *Lectures*, vol. ii. p. 274.

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 to words, but no man can ever invent an entirely new word. We speak to all intent and purpose 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 earthborn sons of Man."[8]

But it is not the history of the outer world alone, nor, so to speak, the mere material conditions of human life in prehistoric ages which are mirrored for us in language and the strata so carefully distinguished and explored by our science. It is even more important to us as a record, a document revealing to us the emotions, the thought, and the feeling of a world long since mouldered into dust. And in this respect philology stands alone, and neither requires the help of any other science, nor can concede to any other the right to the work which is reserved for itself alone.

The history of language, as I have already said, is the history of the growth of human reason. And from this point of view the science of language has not only afforded precious information respecting the past history of reason, but it will also, we may hope, de-

[8] *Lectures*, vol. ii. p. 286.

liver us from the indescribable and vexatious blundering which verbal ambiguities, and confused thought issuing in the misuse of words, have brought upon the human race. To quote once more the words of Max Müller:

'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.*[9]

'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 well-nigh 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 us 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 enquiring into the history of the terms which they handle

[9] *Lectures*, vol. ii. p. 573.

so freely, or realising the fulness 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.

'Here' (continues our author, after showing by a number of well-chosen instances to what curious self-deceptions reason is exposed through her own creations) '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 market-place and the senate. He ought to know how frequently different ideas are comprehended under one and the same term, and how frequently the same idea is expressed by different terms. . . . 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."[10]

An historical criticism of language is alone able to furnish an empirical criticism of human reason. The fact that Max Müller fully recognised the nature of the task he proposed to himself, justified him in the profound utterance which has hitherto been so little understood: 'All future philosophy will be a philosophy of language.'

This great truth, ripened in the consciousness of the age, though first revealed in full to a single brain, and first proclaimed by a single eloquent voice with all the force of truth and conviction, still could not

[10] *Lectures*, vol. ii. p. 621.

appear suddenly in the world like a creation out of nothing. It is not an uncommon thing for two kindred minds to give expression simultaneously to the same thought without knowing of each other's existence. The history of science contains more than one instance of this kind, from the controversy about priority between Newton and Leibnitz down to the interpretation of hieroglyphs, from the discovery of oxygen to the formula of the principle of the conservation of force, about which such a dust has been raised of late, though at last the credit of it has been rightly assigned to the modest and illustrious thinker, Robert Mayer. In the same way, independently of Max Müller, the writer already quoted, Lazarus Geiger, has expressed with equal definiteness the essential point of future philosophy—'an empirical criticism of human reason through the criticism of language,' while the main outlines of the future edifice have been boldly traced in his thoughtful and profound works.

But such a thought must have precursors as well; it flashes more or less distinctly across the works of all those who are striving after the common goal, till at last it breaks like a thunder cloud and clears the atmosphere of the fogs and vapors of secular error and prejudices. Among these precursors of Müller and Geiger, the first place belongs to *Theodor Waitz,* whose writings unfortunately were little regarded and less esteemed during his lifetime, when all minds were under the spell of the Schelling-Hegelian phrase-mongering, and all healthy thought was stifled. A few quotations will suffice to show that the idea of a history of the development of thought and reason had occurred to him.

'In common with Kant' (he says), 'I can only conceive the task of philosophy as that of establishing a science which should explain the foundations of experience.

'Neither criticism nor construction, nor any combined application of the two, will lead to the desired goal; nothing can do this but *a history of the development of thought.*

'I have tried to found psychology upon unquestionable physiological facts, in order that it, and philosophy in general, might be made independent for the future of the wrangling of philosophical schools, which turns upon vague general notions as to which it is easy to dispute, because every one may attach a different meaning to them, until a *preliminary history of development* establishes the distinction between sound and unsuccessful attempts towards the formation of concepts. Speculation, which does not reach a ground of direct experience, is, and always will be, a subject of dispute."[11]

In his lectures on psychology Waitz expresses himself still more clearly; he lays down that, 'the function of psychology, in relation to other philosophic studies, is that of foundation, for the *formation of our ideas has a collective history,* upon which their substance is dependent. They become scientifically serviceable only when it appears that they are not merely individual or accidental products of an unconscious process, but *the necessary results of development,* the products of laws of universal application, i.e. of laws to which the cultivation of their inner life must be always and entirely subject.'

Waitz was thus well aware of what was required; he was only uncertain as to the means by which the goal was to be attained. With inexhaustible zeal he turned first to physiology, then to comparative psycho-

[11] *Grundlegung der Psychologie. .Preface.*

logy, and lastly to anthropology, as a contribution to which his epoch-making work, *'Die Anthropologie der Naturvölker'* was compiled.

But he passed unsuspectingly by the richest, clearest, most trustworthy source upon which the historian of the development of human reason can draw. The discovery of this source was reserved for Max Müller and L. Geiger.

MAX MULLER AND THE PROBLEM OF THE ORIGIN OF LANGUAGE

'However paradoxical it may seem, I maintain that we cannot possibly know individuals, or discover any means of accurately determining the individuality of a particular thing.

'General terms are not only influential in bringing languages to perfection, but also simply indispensable to their existence. Continuous speech would be absolutely impossible if there were only the proper names (*nomina propria*) of individual things, and no general names *(nomina appellativa).*'

In enunciating these weighty truths in his *'Nouveaux Essais sur l'Entendement humain,'*[1] Leibnitz threw fresh light upon the nature of language and thought. His precursor was Locke, who had declared that 'what words serve to denote are general ideas.'

'In this manner' (continues Leibnitz, speaking of the formation and origin of general ideas), 'the whole doctrine of genera and species—about which so much ado is made in the schools, and which has so little influence outside them—might be reduced wholly and solely to the formation of abstract ideas of greater or less comprehensiveness to which certain names are given.'

Are not these words still worthy of laying to heart? Do they not contain the great doctrine that, before

[1]Leibnitz: *New Essays on Human Understanding.* Chicago, 1916.

disputing about how the genera and species in the world are constituted, we should first come to an understanding as to what is meant by the words, and how such conceptions arise in thought, or in our mind? But this by the way.

If we look the problem of human language in the face, we shall be surprised and dazzled by the same marvel as in all the other creations of nature; namely, the vast and extravagant abundance and variety of forms joined with the incredible simplicity and paucity of the means. Who would believe, before his attention was called to it, that all human language has been produced by the various combinations of an insignificant number of sounds, and that all human thought is inseparably bound up with this seemingly unpromising instrument, and is accomplished solely through this simple, mechanical apparatus of articulate sound-production?

But, we have still to ask, what is the mental counterpart to this mechanism, to the word considered as a sound? What is the idea, the meaning of the words? And how does it come to pass that particular ideas come to be expressed by particular sounds and made intelligible thereby? Are they things of the outer world, which are simply retained by phonetic signs, and reproduced in the mind by their help, something in the manner of Cicero's dictum: *'Vocabula sunt notæ rerum,'* a dictum which seemed to all antiquity, down to the age of Leibnitz and Locke, to exhaust the whole problem?

If new light is to be thrown upon the important and obscure problem of the origin of language, these questions must be submitted to renewed and serious criti-

cism. And the time seems to have arrived when they must be more energetically and fruitfully attacked if the magnificent results of comparative philology are not to remain a mere heap of scientific material, but to prove a valuable possession for humanity and contribute to decide the ultimate and supreme questions of philosophy and anthropology.

The profound insight and philosophic temper of Max Müller is nowhere more evident than in his having been the first among the students of language to dive into these obscure abysses with the torch of empirical knowledge, which he himself had been among the first to kindle, in search of a satisfactory answer, such as is to be found nowhere else, to the question what is the origin of the human mind.

Müller took as his starting-point the view of Locke, quoted above, respecting the nature and essence of human speech. He quotes the words of the great English thinker, who, after having shown how universal ideas arise, how the mind, after having observed the same colour in chalk, in snow, and in milk, comprehends these several perceptions under the general idea of white, thus continues:—

'This I may be positive in, that the power of abstraction is not at all in brutes, so 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.'[2]

This power of abstraction, or having general ideas,

[2] *Lectures on the Science of Language*, vol. i. p. 405.

Max Müller continues, is realised by means of language and language only, which is the exclusive property of mankind, in virtue of its humanity. That which is language seen from without is reason seen from within. It is the obvious mark of distinction between man and beast. The origin of human development can therefore only be elucidated by the discovery of the origin of language. And if we ask what new contributions have been brought to light from the materials hitherto examined by comparative philology, in aid of this enquiry,

'The result,' says our author, 'if we look back on our former lectures, is 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 preceded the argument that language must have a divine origin. We shall hear no more of that wonderful instrument which can 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 Night's 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 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, we may say that no root was ever used as a noun or as a verb. But originally roots were thus used, and in Chinese we have fortunately preserved to us a representative of that primitive radical stage which, like the granite, underlies all other strata of human speech. Roots, therefore, are not, as is commonly maintained, merely scientific abstractions, but they were used originally as real words.

'What we want to find out is this, *What inward mental phase is it that corresponds to these roots, as the germs of human speech?*'

How much fresh and vivid truth in a simple form! How much to instruct and stimulate philosophic thought—but alas, for the majority of the philosophers of to-day only the voice of one crying in the wilderness! The problem of the origin of language is brought into a simple and concrete shape, and a narrow path pointed out which, even though its course lie through dim and tangled thickets, cannot fail to lead us to the goal at last. Seek the origin of these roots, of the residuum left in the crucible of the analyst; comparative philology will show you the development of linguistic life out of the germ-cell. *Omne vivum ex ovo;* and the *ova* which the physiology of languages has discovered in its empirical researches are roots. By their development and unin-

terrupted growth all the known languages of the world have reached their marvellous stature, and become the body of reason and the instrument of mind. By the help of these roots and their intellectual equivalent man has taken spiritual possession of the whole creation, as he, at the same moment, cast it in their mould and stamped it with their impress.

But once more, whence these roots? How were they formed? How made into a lasting possession? How did they receive their significance? When Max Müller's *Lectures* were delivered, two theories were chiefly in vogue among students of the theory of language, both of which he has the merit of having driven out of the temple of philological science.

These two theories, however, rested upon one common, general, and widely-spread error, an error so natural as to be readily excusable. As language expresses everything by sounds, the first thing seemed to be to discover the causal connection which was assumed to exist between the sound and its meaning, at least in the case of elementary sounds or roots.

The theory of onomatopœia, or the imitation of natural sounds, had always been a favourite with the philologist of ancient and modern times, and it was this to which Max Müller gave the name of the 'Bow-wow theory.' 'As any process in the external world,' observes Geiger, 'is only comparable with a word in so far as it is itself audible, and indeed only entirely comparable with a word of similar sound to its own, it is intelligible that the hypothesis should have been regarded as especially luminous and attractive.'

Even the divine *Plato,* in his incomparable dialogue the 'Kratylos,' had referred to the possibility of such

an origin for languages, though he immediately adds, with deeper insight: 'To imitate the voices of animals is by no means the same thing as to name them.' *Leibnitz* also wished to have the imitation of sounds recognised as a fruitful source of verbal roots, especially with reference to the voices of animals.

'To this number belongs the Latin word *coaxare;* which is used of frogs, and answers to the German *quaken.* The cries and noise of these animals seem to have furnished the origin of a number of other German words. Because of the noise made by frogs the word is applied nowadays to the empty talk and chatter of those who are called in the diminutive *Quackeler.* As, however, the cry or sound of an animal is a sign of life, by which the presence of a living animal is recognised without its being seen, the old German word *queck* (English "quick") is also derived from the same source; other still surviving traces of it are met with in *quick*-silver, in the German *erquicken,* to strengthen or refresh; while the weed that no efforts are able to extirpate from the field is called *Quecks* or *quick*-grass."[3]

It is hardly necessary to observe that these comparisons are untenable in substance.

Herder embraced the same view; he held that the observant human mind adopted the cries of animals as signs. Men said to the sheep, 'Thou are the bleater,' and proceeded to associate the cry of the animal with the idea of it. W. von Humboldt, too, in his suggestive work, *'Ueber die Verschiedenheit des menschlichen Sprachbaus,'* assumes the imitation of natural sounds to have been at least an important factor in the origin of language, though he was not blind to the difficulties and inadequacy of an hypothesis which would turn human language into a concert of animal cries:—

[3] *New Essays* book iii. chap. 2.

'This representation is in a way pictorial; as an image represents the way in which an object appears to the eye, language represents the way in which it is perceived by the ear. As the imitation here has always to deal with inarticulate tones, there is a constant struggle between articulation and this kind of representation, and according to the result of the contest the inarticulate element predominates so as hardly to deserve the name of language, or disappears so far as to be unrecognisable. For this reason it cannot be denied that there is a degree of rudeness about any language in which this element is conspicuous; it is feeble when there is a free and vigorous linguistic feeling, and it tends gradually to disappear with the progressive development and refinement of language.'

This theory, however plausible and seductive it may seem at first sight, is directly opposed to the facts of any language yet examined. This truth was clearly and resolutely maintained by Max Müller, until at length there was an end of these recurring attempts to find the origin of language in a source which, on approaching, proves to be a mirage in the desert sand.

'Our answer is,' he says,[4] 'that though there are names in every language formed by mere imitation of sound, yet these constitute a very small proportion of our dictionary. 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. . . . 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. . . . There are of course some names, such as *cuckoo,* 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 are unfit to express anything beyond the one object which they imitate. . . . As the word cuckoo predicates nothing

[4] *Lectures on the Science of Language,* vol. i. p. 409.

but the sound of a *particular* bird, it could never be applied for expressing any *general* quality in which other animals might share. . . . Cuckoo could never mean anything but the cuckoo, and while a word like *raven* has ever so many relations, from a rumor down to a row, cuckoo stands by itself like a stick in a living hedge. . . . Many more instances might be given to show how easily we are deceived by the constant connection of certain sounds and certain meanings in our own languages. . . . Most of these onomatopœias vanish (as in the case of thunder, katze, squirrel, &c.) as soon as we trace our own names 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 quotum, if cross-examined by the comparative philologist, and we are left in the end with a conviction, that though a 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.'

The second theory, which also has numbered distinguished representatives, deduced language from the natural cries expressive of human feeling, following in this the precedent of Epicurus, and among the moderns, of De Bosses[5] and Condillac. This view, which regarded the cries of joy and pain as the starting-

[5] *Traité de la Formation mécanique des Langues*, 1756. As this theory, in spite of its complete refutation by Max Müller, still possesses numerous adherents among naturalists, it may be mentioned, to save them from needless exercise of their imaginative powers, that this ingenious work contains everything in the semblance of reason which it is possible to put together upon an absurd foundation. They may read there how the *litera canina, r,* betokens what is disagreeable; how the tone of pain is deep, *oh, heu, hélas;* that of surprise higher, *oh, ah;* of joy short and recurring, *ha, ha, ha, he, he, he;* of displeasure and contempt labial, *fi, vae, puh, pfui;* that of doubt and negation nasal, *hum, hom, non, &c.;* and that all the most necessary words are derived from these sources.

point of human language, was aptly characterised by Max Müller as the 'Pooh-pooh!' or interjectional theory.

The conclusions of comparative philology were as fatal to this theory as to the preceding one. To quote again from Max Müller:[6]

'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 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, 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, "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."

'One short interjection may be more powerful, more to the point, more eloquent than a long speech. In fact, inter-

[6] *Lectures on the Science of Language*, vol. i. p. 420.

jections, 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.

'As to the attempts at deriving some of our words etymologically from mere interjections, they 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.'

Both theories, alike the Bow-wow and the Pooh-pooh theory, were finally demolished by the same philosophical reflection, the germ of which is contained in the words of Leibnitz cited at the beginning of this chapter:[7]

'If the constituent elements of human speech were either mere cries or the mimicking of the cries of nature, it would 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. It is clear also that if what puts a perfect distinction betwixt man and brutes is *the having of general ideas*, 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. All words, in beginning at least (and this is the only point which interests us), would have been the signs of individual impressions and individual perceptions, and would only gradually have been adapted to the expression of general ideas. 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 an individual, idea. Every name, if we analyse it, contains a predicate by which the object to which the name applies was known.'

[7] *Lectures on the Science of Language*, vol. i. p. 424.

In other words, it is not an account of the essence of language to say that a definite external object elicits a particular sound or cry from a sensitive, perceptive being—a view corresponding to Steinthal's theory of reflex-sounds: the essence of language lies in the fact that the sound serves to *say* something, that with the saying something is thought, and that something is *predicated* of the object thought and spoken about.

And in reference to this Max Müller enunciates a truth of incalculable importance, which will procure him the epithet, with the judicious, of 'the Darwin of the mind': for he puts forward, as an unquestionable result of philological enquiry, the *filiation of ideas* which is met with uninterruptedly in continuous development.

'Never,' he observes, 'in the history of language, so far as we are able to trace the course of its development, do we find an object or an idea associate itself all at once with a sound, for no apparent reason, as if by a kind of *generatio æquivoca*. The object exists only by the idea which we have of it, and to our consciousness the idea itself only exists by means of the sound which is the body, the symbol, so to speak, of the thought.'

Exactly the same results have been reached by Geiger; and to afford still further confirmation of Max Müller's view, I may quote some of the most important passages of this *'Ursprung der Sprache'*:

'In the nature of the mind, as in that of the body, there is no *saltus;* the one is developed out of as minute elements as the other.

'Slow development, differentiation of opposites from imperceptible variations, is historically the only cause of changes, on the one hand, in the meaning given to a word, and, on the other, in the meaning attached to the notions desig-

nated. . . . I have not succeeded in discovering any point at which a conception appears *that cannot be traced to some other conception,* and for which, therefore, the mind would be compelled to seek a sign outside, e.g. in a noise, nor yet any new impression giving occasion to a new vocal movement.'

Geiger rests his view, as appears from these words, upon the favourite idea of Leibnitz—*natura non facit saltum;* that, on the contrary, all changes are effected rather as transitions of the infinitely little—a thought which, as Leibnitz expressly notes, involves the question as to the interval between man and beast, which, however remote and inconceivable its existence, still must have been lived through, and which it is the especial object of the science of language and philosophy to reconstruct by their joint efforts as they try to reopen the choked-up source of the origin of speech.

The capital idea of the filiation or genealogical connection of all human conceptions had certainly presented itself to the versatile mind of the great Leibnitz, though not with the clearness possible to later students with a more abundant supply of scientific material. Indeed, there is scarcely any thought which agitates the minds of the present day but may be found in the germ in the writings of Leibnitz. Take, as an example, his refutation of the Lockian doctrine that all ideas have their roots in sensations and are derived from thence:

'Have you already forgotten, dear Philalethes, that our ideas reside originally in the soul, and that all thoughts proceed originally from that original base, without any other creature being able to exercise any direct influence upon the soul.'[8]

[8]Leibnitz *New Essays* IV. Chap. 4, Open Court Publishing Company, Chicago.

If this idea is sound—and all philological observation and research confirms and advocates it, and indeed could only become possible as a science by assuming its truth—then a foundation of inestimable solidity has been secured for further investigation, and the problem of the origin of language, which has hitherto hovered before us in the remote haze of distance, is brought at once within the attainable, clearly circumscribed boundary of the horizon.

The inferences which Max Müller deduced from this important elementary truth are, in their main features, somewhat as follows:

1. The sounds of language are at all times and everywhere significant. It is in virtue of this quality alone that they form a part of speech. The interjectional and imitative theories are herewith condemned.

2. Nothing in language is dead that has not once been alive. This explains and sets aside the apparent exceptions presented by inflection-terminations, infixes, affixes, and the whole formal apparatus of language. The word *fruchtbar* could not be formed unless the second syllable had a meaning, and though that meaning is lost to the feeling of contemporary speech, science shows us that it originally meant fruit-bearing.

3. Language passed from the simplest beginnings—monosyllabic, primary roots—first to secondary and tertiary roots, and then, through the luxuriant abundance of forms belonging to the polysynthetic or agglutinative stage, to the clearness and precision, to the wonderful richness of thought and expression belonging to modern and inflected languages. The cradle of speech is the goal of the science of language.

4. The mental counterpart of roots are certain fixed rational elements, nearly all of the nature of *predicates,* though a few, the pronominal class, are *demonstrative.* And as the roots, considered as sounds, are phonetic types, so their rational counterparts in the mind are rational types; those are phonetical types, these conceptual types, or rational concepts. These, we repeat, are the fixed forms or norms with which language—that is to say, rational thought—has stamped as its own the whole of creation.

5. The original mental content of the roots, their earliest meanings, so far as comparative philology can trace them, prove to have been only sensible perceptions or impressions.

As the last paragraph contains the boundary to which Max Müller has led his troops, and where he has left them encamped in view of the impregnable fortress, some further discussion must be allowed me here. For Max Müller himself ventured on an attack from this point, which could not but end in failure since this last proposition, though true as far as it goes, is not the whole truth.

His words are:

'All roots, *i.e.* all the material elements of language, are expressive of *sensuous impressions,* and of sensuous impressions only.'[9]

'The only definition we can give of language during that early state is, that it is the conscious expression in sound of *impressions received by all the senses.*'[10]

I said that, starting from this position, Max Müller has hazarded an onslaught upon the mysterious for-

[9] *Lectures on the Science of Language,* 9th edit. ii. p. 372.
[10] *Chips from a German Workshop,* ii. p. 54.

tress which hides the origin of reason and language from the eyes of mortals. The theory which he advances in conformity with this leading principle is as follows:[11]

'There is a law 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 was the same with man, the most highly organised of nature's works. 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 onomatopœia, he possessed likewise the faculty of giving more articulate expression to the rational conceptions of his mind. That faculty was not of his own making. It was an instinct, an instinct of the mind, as irresistible as any other instinct. So far as language is the production of that instinct, it belongs to the realm of nature. 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 conception, as it thrilled for the first time through the brain, a phonetic expression, became extinct when its object was fulfilled. 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, or from one root, we must suppose that the first settlement of the radical elements of language was

[11] *Lectures, vol. i. p.* 440. It should be remembered here that Professor Max Müller himself was never fully satisfied with his approximation to Heyse's theory, but regarded it rather in the light of a makeshift, and indeed in his lectures upon Darwin's philosophy of language has pursued the search for some other issue.

preceded by a period of unrestrained growth—the spring of speech—to be followed by many an autumn.'

I believe it will be in accordance with the purpose of the present essay if I mention here those (comparatively few) points on which Geiger separates himself from Max Müller, and enters upon what I venture to regard as a truer and more direct course towards the desired goal. These two points are:

1. A more consistent adherence to the vital principle that language is able to develop or derive ideas only from ideas. Geiger observes, with special reference to Max Müller's hypothesis:

'The assumption of a now exhausted power of linguistic creation, and the kindred one of a perfect condition for primeval man, is a resort to the incomprehensible, and not far removed from a confession that it will always in the nature of things be impossible for us to discover the true sense of primitive roots, or to explain the process of the formation of language.'

Geiger himself remains faithful to the principle that the process must have been the same at the origin as in all subsequent development of language, only indefinitely slower in operation. Accordingly he does not assume a number of vocal sounds with corresponding ideas to have existed in the beginning, but a *single sound,* excited by one definite idea.

'The key to the meaning of a word lies only in a preceding one. . . . The mass of meanings really contained in existing words converge at last to a single centre, but this can lie nowhere except in the first origin of language itself. . . . Why is it that words begin by meaning so little and in general mean less and less the further back we trace them?

I can give no other answer than this: Because in the beginning the sum of man's perception was not greater."[12]

2. Max Müller treats the 'impressions received by all the senses' as a source of the first workings of language, while Geiger allows this to hold good only of *perceptions derived from the sense of sight.*

'A conviction which has forced itself irresistibly on my mind, after consideration of all the linguistic material I have been able to obtain, is that the perception to the growth of which language bears witness in mankind is that which takes place through the sensation of sight. . . . The most essential characteristic of man is his power of distinguishing, and his interest in the distinction of, objects by visual perception."[13]

But in spite of these new and undeniably fruitful explanations, it was not reserved for Geiger to reach the final goal, as he hoped, and indeed, as appears from some indications, believed himself to have done. Comparative philology could not accomplish this by its own unaided methods; it was necessary for philosophy, the science of mind, to approach the problem simultaneously from another side, and then only the victorious advance could be made by the allied troops under the supreme command of philosophic thought.

After reading my book, *'On the Origin of Language,'* Max Müller wrote to me, and while acknowledging the progress made, continued:

'Now I come to my difficulties. The real problem seems to me to lie in the origin of thought, or, to put it briefly, in the transition from *perception* to *conception.* Explain to me how man becomes able to conceive "two," and you will have explained to me the origin of language.'

[12] *Ursprung der Sprache,* p. 130. [13] Ib. p. 142.

This is both true and profound. It is altogether impossible to pass from perception, that is to say, from a purely sensuous impression, to thought, just as it is impossible to derive mind from matter in motion. Cosmic evolution can only be conceived by assuming feeling, the origin of reason can only be reached by assuming conception.

Thus while all preceding writers on the philosophy of language, Max Müller and Geiger included, have followed the universal tradition in deriving language and thought from the passive element of PERCEPTION, I have entered upon the opposite course, and affirmed:

'Language is the CHILD OF WILL, of an active, not of a passive state; the roots of words contain the *proper activity of men,* and receive their significance from *the effects* of this activity in so far as it is phenomenal, *i.e.* visible. Human thought arises from a double root, the subjective activity, or the will, and the objective phenomenon which is accessible to the senses.'

Max Müller has since expressed his full assent to this view.

The task upon which philosophy and comparative philology are engaged is one of supreme importance, though only duly understood and estimated by the more intelligent few. The work is nothing less than to renew, to reconstruct, and complete on an empirical base the gigantic work done by Kant, to fathom and interpret the origin and growth of that supreme miracle of creation, the human reason. Such a task is far higher in importance even than theories of the rise and fall of planetary systems.[14]

[14]If this assertion seems too bold, I will quote an unimpeachable witness to its truth. Buckle, to my thinking the most pronounced

And when the solution has been uttered, in accordance with the conviction so confidently expressed by

and logical of modern determinists, *i. e.* of the philosophical school which recognizes everywhere only an iron system of natural laws, even Buckle found himself compelled to make the following admissions, which from his point of view are certainly not a little remarkable. 'The highest of our so-called laws of nature are as yet purely empirical. You are startled at that assertion; but it is literally true. Not one physical discovery that has ever been made has been connected with the laws of the mind that made it; and until that connection is ascertained, our knowledge has no *sure* basis. On the one side we have *mind;* on the other side we have matter. These two principles are so interwoven, they so act upon and perturb each other, that we shall never really know the laws of the one, unless we also know the laws of both. Everything is essential; everything hangs together and forms part of one single scheme, one grand and complex plan, of which the universe is the theatre. They who discourse to you of the laws of nature, as if those laws were binding on nature, or as if they formed part of nature, deceive both you and themselves. The laws of nature have their sole seat, origin, and function in the human mind.' (A. Buckle: *The Influence of Women on the Progress of Knowledge*—Lecture delivered 1858.) And to discover the laws of this mind in its essential function, thought, is the lofty aim of the science of language. For the rest these words of Buckle point unmistakably to a very welcome fact, which is accomplishing itself in the consciousness of the age, namely, that the reign of materialism is drawing to its close, and that a higher, nobler, and more worthy theory of the universe will take its place. Every indication seems to promise that the great synthesis which has been from all times the supreme goal of philosophy will accomplish itself, even before the close of the century. I may quote in proof of this another passage, from a recently published article in the *Revue des Deux Mondes* upon the doctrines of Epicurus: 'Epicure est le premier dans l'antiquité qui ait nié résolûment ce qui était hors des prises directes et de la portée des sens. A ce titre, il peut être considéré comme l'expression confuse et inconsciente du *positivisme* qui déclare qu'il n'y a pas d'objet pour l'esprit humain en dehors des lois de la nature. Il a le premier creusé le fossé qui s'élargit tous les jours et qui sépare la métaphysique de la science de la nature. Pour les esprits spéculatifs les questions d'origine et de fin sont les plus importantes de toutes, celles auxquelles tout le reste se rapporte; pour les autres il n'y a qu'une seule étude, celle des phénomènes et

Max Müller, and fully shared by the present writer, all future philosophy will be exclusively the philosophy of language.

de leur dépendance réciproque. . . ., demandant seulement à la nature morte les secrets qu'elle lui révèle pour éclairer le jeu et les ressorts de l'organisme vivant. Cette séparation date d'Epicure: si une telle gloire a été réservée à celui qui a divisé l'esprit humain en deux parties presque irréconciliables, quelle gloire n'attend pas celui qui fera cesser ce divorce et qui, *par la métaphysique et la physique réconciliées* dans une juste mesure d'indépendance et de services réciproques, reconstruira *l'unité scientifique de l'esprit humain.*—(E. Caro: *Revue des Deux Mondes,* Nov. 1878, p. 112).

MY OWN THEORY ON THE ORIGIN OF LANGUAGE

Although it is not the primary object of the present pages, the reader will perhaps not take it amiss if I venture to indicate briefly what is the solution of the problem suggested in my own work *'Der Ursprung der Sprache.'* I believe the best way of doing this will be to take the concluding words of the first series of Max Müller's *'Lectures on the Science of Language.'* which contain the last results of his varied and profound investigation into what he so strikingly calls 'the body of human thought,' and which he recommended to the attention of philosophic students as a starting-point for further inferences.

The reader will see from his own words how near he was to the real solution, and may indeed wonder how it was that he failed to force the last barrier which divided him from the mysterious birthplace of human thought, and to bring it into the full light of a satisfying and self-supporting explanation.

As we have already seen, one of Max Müller's chief merits is the emphatic and consistent opposition and successful resistance which he offers to the ancient and inveterate error, that *things* as such naturally con-

nect themselves in the human mind with *sounds,* which then, in some inexplicable way, turn into names, or audible tokens of the things.[1]

This error is the harder to exterminate,[2] as it rests upon an immovable conviction that the objective world, the world of things, which we perceive with our external senses, supplies the primary and indispensable, because the most natural, material for human knowledge, and therefore also contributes chiefly to the formation of human language; that, accordingly, people talked about the *bright sky* before they talked about a *bright intelligence,* of *breath* before *life,* of *blows* before *punishment,* as the *image* must be known and

[1]'Vocabula sunt *notae rerum*' had been said as long ago as by Cicero, and Herder chose this dictum for the motto to his epoch-making essay, *On the Origin of Language.*

[2]How deeply rooted this error is, appears from the fact that an otherwise meritorious philologist like M. Bréal relapses into it again and again, notwithstanding Max Müller's conclusive refutation. Thus, in connection with the root *bhar* he raises the question: 'Désignait-il le *porteur d'un fardeau,* ou le *fardeau* lui-même . . . . ou l'*enfant* que la mère porte dans son sein?' And again: 'Il n'est pas vraisemblable que dans la période monosyllabique il n'y eût pas encore de termes pour désigner le *soleil,* le *tonnerre,* la *flamme.* Mais du moment que ces mots sont entrés en contact avec les éléments pronominaux, pour former les verbes, leur sens est devenu plus fluide, et ils se *sont résolus en racines* signifiant *briller, retentir, brûler.*' (M. Bréal: *Les Racines des Langues Indo-Européennes,* p. 3, 4.) This is indeed inverting the order of things, and planting a tree with its leader in the ground, that the roots may grow upwards. The remark on p. 6, that the root *sarp* points to the name of a reptile, and that the names of the parts of the body, *pad* foot, *nâs* nose, *dant* tooth, *card* heart—all corresponding to the simplest ideas—must have existed *before* the verbal roots to which they are related, calls to mind Pott's jest and the remark appended to it by Curtius (*Griech. Etym.* p. 108). 'Pott gives as a ludicrous example of this method of proceeding, that the root *gen,* drawn out of *gena,* should have the signification "to be a cheek"; and, indeed, if we had to translate the root *as,* which Leo Mayer extracts from *asinus,* the only meaning that could be proposed for it would be indeed "to be an ass."'

named before the *imagination*. It is an undoubted truth, which philosophy and philology agree in admitting, that speech and language arrive far later at the point of designating mental qualities than sensible objects.[3] But it is one thing to maintain that these objects were the first material, the earliest objects of human thought and speech, and quite another thing to profess to answer the question how they first came to be known and named.

Let us hear Max Müller himself speak now:[4]

'There is a petrified philosophy in language, and if we examine the most ancient word for *name*, we find it *nâman* in Sanskrit, *nomen* in Latin, *namo* in Gothic. This *nâman* stands for *gnâman*, and is derived from the root *gnâ*, to know, and meant originally that by which we know a thing.

'And how do we know things?

'The first step towards the 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 only by means of our *general ideas*.

'At the very point where man parts company with the brute world, *at the very first flash of reason* as the manifestation of the light within us, there we see *the true genesis of*

[3]'Thus the fact that all words expressive of immaterial concepts are derived 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 as all words, even the most abstract and sublime, are derived from roots, comparative philology fully endorses the conclusions arrived at by Locke.'—Max Müller: *Lectures on the Science of Language*, vol. ii. p. 372.

[4]Max Müller: *Lectures on the Science of Language*, i. p. 432, sq.

language. Analyse any word you like, and you will find that it expresses a general idea peculiar to the individual to which 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.

'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 word *sarp*. An ancient word for man was the Sanskrit *marta*, the Greek *brotos*, the Latin *mortalis*. *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.

'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. 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 the less strong, the less happy, the less fertile words, and ended in the triumph of one word, 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, *rational 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.

'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 char-

acteristic of man; it was known also that the having of general ideas is that which puts a perfect distinction between 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 Onomatopœia and of Interjections. But though our modern philosophy did not know it, the ancient poets and framers of language must have known it.[5] For in Greek, language is *logos,* but *logos* means also reason, and *alagon* was chosen as the name, and the most proper name, for brute. No animal thinks and no animal 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 loud. *The word is the thought incarnate.*

'Now, the last question of all in our science is this: 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?

'The 400 or 500 roots which remain as the constituent elements in different families of language are not mere interjections, nor are they mere imitations. They may be called *phonetic types,* and whatever explanation the psychologist or the metaphysician may propose, to the student of language these roots are simply ULTIMATE FACTS.'

Here follows the attempt quoted in the preceding chapter to account for the origin of roots in accordance with Heyse's method. But the author adds immediately, with wise insistence on the distinction between what has been scientifically established and what is still mere hypothesis:

[5]Ancient philosophy, too, knew no higher term for the supreme ruling principle of order in the world than the two similarly related words νοῦς and λόγος.

'There may be some value in speculations of this kind, but I should not like to endorse them, for we have no right to say that a vague analogy *is 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.'

It was thus that Max Müller spoke and wrote in 1860; eighteen years later he was able to say with truth:

'Those who have read the "Lectures on the Science of Language" will remember how strongly I opposed any attempt on the part of the students of language to go beyond roots, such as we actually find them as the result of the most careful phonetic analysis. It was thought at the time that my protests against all attempts to ignore or skip those roots, and to derive any word or any grammatical form straight from mere cries or from imitations of natural sounds, were too vehement. But I believe it is now generally admitted, even by some of my former opponents, that the slightest concession to what, not ironically, but simply descriptively, I called the bow-wow and pooh-pooh theories in the practical analysis of words *would have been utter ruin to the character of the science of language.*'[6]

[6] *Contemporary Review*, February, 1878: *On the Origin of Reason*, p. 466.

He continues:

'But to show that a certain road, and the only safe road, leads us to a mountain wall, which from our side can never be scaled, is very different from saying that there is, or that there can be nothing behind that mountain wall. To judge from the manner in which some comparative philologists speak of roots, one would imagine that they were not only *indiscernibilia,* but Palladia fallen straight from the sky, utterly incomprehensible in their nature and origin.[7] It was in order to guard against such a view, that at the end of my Lectures I felt induced to add a few lines, just as a painter when he has finished a landscape dots in a few lines in the background to show that there is a world beyond. The science of language, I felt, had done its work when it had reduced the vague problem of the origin of language to a more definite form, viz. What is the origin of roots? How much has been gained by that change of front, those will best be able to appreciate who have studied the history of the innumerable attempts at discovering the origin of language during the last century.

'Beyond that point, however, where the student of language is able to lay the primary elements of language at the feet of philosophers, the science of language ALONE, apart from the science of thought, will not carry us. We must start afresh, and in a different direction; and it was in order to show to what quarter I looked for a solution of the last problem, the origin of roots, that I appealed to the fact that everything in nature when set in motion or struck, reacts, that it vibrates, and causes vibrations. This seemed to me the highest generalisation and at the same time the lowest

[7]This onesidedness and stubbornness prevails equally in the opposite camp among philosophers, who cannot make up their minds to recognize the dependence of thought upon language, and never abandon 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 skilfully attached those phonetic *labels* which we call words.'—Max Müller: *Lectures on the Science of Language,* ii. p. 371.

beginning of what is meant by language. The two problems, how mere cries, whether interjectional or imitative, could develop into phonetic types, and how mere sensations could develop into *rational concepts,* I left untouched, trusting that philosophers by profession would quickly perceive how some of the darkest points of psychology might be illuminated by the electric light of the science of language, and fully convinced that they would eagerly avail themselves of the materials placed before them and ready for use *to build up at last a sound and solid system of philosophy.'*

This appeal to the professed philosophers should have received, the candid reader might imagine, an immediate and hearty response. What a magnificent undertaking—worthy at once of its former development and useful and necessary to its future achievements—was here set before philosophy. How eagerly such an opportunity must be seized of rehabilitating herself in the eyes of the world, which for something like the last fifty years has looked upon all philosophy as simply a bore, a mass of indigestible quibbling, chaff by which no old birds are to be caught, only fit to stuff the empty heads of the professors with self-conceit and arrogance, and those of the students with nonsense and vain imaginations! *Hic Rhodus, hic salta!* Now is the time to prove your mettle! A philosophy that can solve such a problem as the present has given a pledge of substantial value and established an unassailable claim to universal respect. But what actually occurred? Max Müller will tell us:

'I confess I have often wondered at the apathy, particularly of the students of psychology, with regard to the complete revolution that has been worked before their eyes in the realm of language. They simply looked on as if it did not concern them. Why, if language were only the outward form

of thought, is it not clear that no philosophy, wishing to gain an insight into the nature of thought and particularly into its origin, could dispense with a careful study of language? What would Hobbes or Locke have given for Bopp's 'Comparative Grammar'? What should we say if biologists were to attempt to discover the nature and laws of organic life without ever looking at a living body? And where are we to find the living body of thought, if not in language? What are the two problems left unsettled at the end of the Science of Language:

'How do mere cries become phonetic types? and

'How can sensations be changed into concepts?

'What are these two, if taken together, but the highest problem of all philosophy, viz.:

'WHAT IS THE ORIGIN OF REASON?'

The position from which I started to attempt the solution of this problem may be stated, in accordance with the widest possible generalisations, in somewhat the following manner:

1. Language is a product of *association,* and of the community of feeling which is developed, intensified, and finally carried to perfection by community of life.

2. Language is a product of an active, not of a passive process; it is the child of *will,* not of sensation. In the place of sensations, the mere sense-impressions, from which it is and always will be impossible to extract anything in the nature of rational concepts—*i.e.* permanent typical classifications of reason always capable of being summoned up anew by the appropriate word—in the place of these we must set the active will, or spontaneous activity, which is indeed commonly recognised as present in the phenomena of animal life, but which the Monistic philosophy affirms to be at the root of all phenomena without exception.

3. From these two points we proceed to the fol-

lowing conclusion: There is not only a sympathy of joy and a sympathy of sorrow expressing themselves in the specific human forms of laughter and tears, as well as in the impulses towards common movements, out of which dancing, singing, and music develop themselves later, but there is also a sympathy of the will, of activity directed outwards which only becomes *phenomenally apparent in its effects.*

4. This common sympathetic activity was originally accompanied by sounds, which, as in games and dances, broke out from the violent stress or excitement of the common action, and as they recurred with every repetition of the particular form of activity they became so intimately associated with it as to acquire the power of *recalling the memory* of the action. This is the origin of human thought, for it is the origin of phonetic types (roots).

5. It follows of itself from the foregoing propositions that human thought has a double root:[8] first,

[8]This fact, which has been overlooked by all preceding philosophers, is nevertheless of supreme, I may even say of fundamental importance for all philosophy. For here for the first time we find a *terminus medius* between those two ever-distant poles, subject and object, the union of the activity and its effect in the ACTION. Though this is necessarily most clearly apparent in that creation of the human mind, language, yet it was by no inconsiderable labor that I was enabled to discover it there. This is due to the fact that the first, or subjective root, is obscured by the preponderance and brilliancy of the second, or objective root, so that it is either overlooked or treated as immaterial. At any rate, that which we now see so clearly in the life of the mind, lies at the base of all existence, and must serve us for a torch to illuminate and interpret the last and deepest secret of the world, the life of the individual. And already intimations of this truth are dawning upon the most distinguished scientific thinkers of the day. Thus the admirable Claude Bernard observes: 'Matière vivante et conditions extérieures: la vie résulte constamment du rapport réciproque de ces deux facteurs.'

the individual activity which, bound up with the man himself, is at his disposal always, to produce as much of the resolved effect as its development allows; and secondly, this effect itself, which becomes apparent, and as grasped in common by the sense of sight, lays the foundations for the possibility of a mutual understanding. It is only by means of this visible effect that the sounds acquire their meaning, and the more the effects, *i.e* the activities of the speech-constructing race, are specialised, the more significance will belong to their verbal roots.

6. Hence it is that the life of language stands in an indissoluble relation to the development of human action. And it is by no means a casual coincidence that, at the very time when the magnificent science of comparative philology is pursuing the origin of human conceptions to the roots buried beneath the accumulations of thousands of years, the science of Anthropology should have applied itself with equal zeal to the primeval history of human industry, as it is to be traced by the rudest stone implements, the earliest evidences of the existence of what Franklin called the tool-making animal, and which *we* call the not merely *gregarious,* but *cooperative* animal. And there is an equally significant and instructive parallel to be drawn between the matter of the two sciences, for just as when we go back to primitive ages the tools become more and more imperfect and undeveloped, so that the rough-hewn stone is the germ at once of hatchet, wedge, knife, hammer, saw, &c., so among words, the farther we trace their history backwards, the less significance they possess, the more molluscous their structure becomes, and instead of being able to grasp a

single precise meaning, the philologist finds as it were a jelly-like mass slipping through his hands.

7. About this, however, there is no doubt: the earliest meanings of verbal roots referred to human action. Philology might have arrived at this conclusion without extraneous help, for the most familiar, known, and intelligible of objects must always have been the self-determined action of man. An impartial glance at any dictionary of roots will serve to verify this assertion. We do not find there Sun and Moon, Nose and Mouth, Thou and I, nor yet anything about shining, flashing, or burning—no thoughtful etymologist, even if he found them, would allow them to pass as primitive intuitions; such is the power of truth!—what we do find are words signifying to dig, strike, scrape, scratch, to tear, numerous roots denoting to rub, and starting from that conception, to smear, anoint, and colour, others again for plaiting and binding, and others again which mean to share, or to divide.

If we consider for a moment seriously how thought, or in other words how language, could arrive at such a conception as that of shining, or flashing, we might imagine this to be one of the simplest and most natural intuitions. But this is not the case. Primitive man was dumb in the face of light, he could not *name* it, for the act of naming is not a mere outbreak of meaningless sound, it consists in assigning a *known* quality to the thing named. One of the two sources of thought is wanting in this case, and it is only when the element of personal activity has been added that it becomes possible to attain to such a conception.[9] Accordingly

[9]Jacob Grimm in his *Deutsche Grammatik* (ii. 85) speaks of the transitions from notions derived from one sense into those derived

we find in language that light and darkness, day and night, fire and sun, are only a colour, or rather something *coloured,* a conception at last intelligible to primitive man, who coloured, or painted, himself. To colour, however, goes back to smearing, or anointing, and these to rubbing, or grinding. How far we are still overshadowed by this line of primitive thought may be judged from the fact that even at the present day we speak of the *colouring* of the sky.

8. But not by any means everything that we are in the habit of regarding as human activity will find an equivalent expression in the most primitive collection of verbal roots. A naïve but highly unscientific theory of language, the direct descendant of the easy, rough and ready mode of explaining everything in vogue in the eighteenth century, which has numerous representatives even at the present day, supposes the

from another, as in the case of sound and colour, *e.g. hëllan* (sonare) *hëll* (sonorus, later lucidus), old high German *braht* (strepitus), new high German *pracht* (splendor) &c. and observes: 'It is a remarkable fact that in most of these cases the earlier meaning is taken from sound, the later from colour.' According to our theory, this is not at all surprising. What comes into evidence in these words is the element of force, energy, and this can only be reached by proceeding from the subjective root of voluntary activity. And it is the world of sound not of light that falls within this department. I can express a loud sound (*Schall, Hall, —skal*) by a violent blow, *Schlag,* which brings out the sound (c.f. *Donnerschlag*), but I cannot produce a bright light by my own action, and accordingly we meet in various languages with such expressions as *schreiende,* or *criant,* while in colloquial English we speak of 'loud' colours, or a 'noisy' taste. Similarly in the *Rig-Veda* we find, 'The fire cries with light' (vi. 3, 6), and 'The sun cries like a new-born child' (ix. 74, 1; cf. Max Müller, *Chips,* ii. p. 100). And so also the poet sings: 'La dove 'l *sol tace*' (Dante, *Inf.* i. 63) and 'Io venni in loco d'ogni *luce muto*' (ib. v. 28). And from these indications we may learn to what root and fundamental signification the Latin *clarus* must be traced. The original form is not, as the dictionaries have it, *clara luce,* but *clara voce.*

development of language to have begun with such notions as 'papa' and 'mamma,' eating and drinking, and the like, from which origin the rest of language is to have grown. This hypothesis also may be completely refuted by the study of roots. Such conceptions as hunger and thirst make their way into language, and therefore into thought, by long and circuitous paths only. For how is eating conceived? As a *division.* The German *Metzger* (butcher) and *Messer* (knife) take us back to the root *mat,* to divide, *mats* in Gothic is food (meat), *matjan,* is to eat. The German *Fleischer* is the Latin *carnifex,*[10] the Greek δαιτρός, that is to say, one who carves, or distributes portions, and to these words belong also δαίνυμαι, to feast, and δαίς, a meal. The Homeric verse:

Μοίρας δασσάμενοι δαίνυντ' ἐρικυδέα δαῖτα.—Od. γ 66.

offers an interesting example of the specialisation of different words out of one original rational concept. If in this sentence we take δαιτυμόνες as a subject, the thought in its original form would run somewhat thus: 'The dividers divided the parts, and divided the glorious division:[11] that is to say, the guest divided the portions and feasted on the glorious banquet. Similarly, the Hebrew *akal,* to eat, and *maakelet,* sacrificial knife, are related, not by any means that the latter is regarded as an instrument for eating, but that both words point to an earlier meaning of *akal,* the dividing or portioning out of food.

How is this to be explained? According to our

[10]In what we must presume to have been the original signification of the word.

[11]More easily in German: Die *Theiler theilten* die *Theile* und *theilten* die herrliche *Theilung.*

theory, which, indeed, receives a remarkable confirmation from the fact, for the simple reason that the object which received a name in the first instance was not *individual* eating and drinking; these are animal functions which are necessary to the preservation of life, and can be carried on without language; it was not till these actions were brought into the focus of common attention, just because they began a 'dividing' among the different members of the assembled community, that they were for the first time attended to, *conceived,* and *named* by the community, or, in other words, became the object of rational thought.

In the same way it is easy to understand how the ideas of dividing and of pasturing flocks came to run into one another: e. g. in the Greek *νέμω*, in reference to which Jacob Grimm gives numerous examples of the connection between the ideas of *taking* and *grazing*:[12] how the peasant calls the fields of the community the *Gemarkung,* a fact which throws new light on the old German *mark*—wood, which should on no account be explained, as by J. Grimm and Weigand, as 'the dark,' but referred with *mark, merken,* &c., to a word of (boundary-) *marking*: how the Gothic *faihu,* cattle, Sanskrit *paçu* (*pecu, pecu-nia*), originally meant the cattle that was tied up (from *paç, pâça,* bond); or, as Geiger has it, 'possession,' the same transition appearing in the Hebrew *miqneh,* the Gothic *skatts* (treasure) —Slav. *skot* (cattle), *cattle* itself—*capitale.*

All this proves afresh the perversity of the view which traces language to the imitation of natural noises, since, in the earliest utterances of the human tongue, instead of meeting with bellowing bulls and

[12] *Geschichte der Deutschen Sprache,* p. 29.

rustling woods, we find rather what we are accustomed to call abstractions, but which are, in fact, nothing but the *impress of human thought.*

9. Human thought, human thinking, is an active process, a self-conscious, self-confident activity, not as a crude materialism imagines, the accidental play of unconscious atoms. Common action is the source to which we have traced it, the foundation upon which it has rested ever since the first entrance of mankind into the kingdom of reason. During the hundreds of thousands of years which the human race must have passed through before reaching its present height of development, the union between the two has only become closer and more intimate. Language is the voice of the community. Even now the highest achievement possible is to order, direct, and apply the forces of individuals to a common end, in united, organised activity, that is to say, in work—for work is nothing but organised activity, whence it is that idlers excite the scorn of the community—whereby also the countless wonders of industry have become possible, and all the changes of the earth's surface which turn it into a lordly residence for man. It is, indeed, a marvellous reflection that all these results depend upon a feeble breathing, a spoken sound: that is to say, upon a slight vibration of the air!

The space allotted here only allows me to give a brief and meagre sketch of the arguments on which I have based the solution of the problem as stated by Max Müller; if, however, I have been successful in doing so, I shall have shown:

How rational concepts could and must arise by natural means;

How they could unite with sounds, which, though originally only utterances of an instinctive impulse, thereby acquire significance, and so become transformed into *phonetical types,* or roots;

And it will not be permissible to evade the concluding question: How the world of things, which we always assume to have its appropriate qualities characterised and denoted in language, was brought into the illuminated space of rational thought, or, what comes to the same thing, into the storehouse of linguistic expression? My theory must stand or fall with the answer to this question: if it is not borne out by the facts of the case, it is irretrievably condemned, if, however, it is in harmony with them, it receives a conspicuous confirmation which approaches to the highest degree of human certainty attainable.

But in order to answer this question aright, there is another belonging more properly to the domain of metaphysics which should be dealt with first; the question namely: What is a *thing?* Not to weary the reader with a prolonged metaphysical discussion, it will be enough to quote the definition given by Albert Lange in his meritorious *'History of Materialism:'* 'We give the name of *thing* to a group of phenomena, which, making abstraction of remoter relations and internal changes, we grasp and conceive as one.'[13]

It follows undoubtedly from this definition that things have no existence for animals; for even the most extreme Darwinian will hardly venture to maintain animals to be capable of this.

To men a tree is a single being or thing which

[13]Lange: *Geschichte des Materialismus,* 3rd edit. ii. p. 217.

grows from the root upwards and has a trunk and branches; but this is just what it can never be even to the most highly endowed ape that climbs about its stem and has accustomed dwellings and places of refuge under the well-known leafy roof. It is beyond the limits of possibility that any monkey tribe should ever endeavour to take up a tree by the roots and plant it in another spot. And if we find accounts in modern books of natural history of agricultural ants who sow their seeds and wait patiently till they come up, the mildest expression for such vagaries of the imagination is scientific lunacy.

How then does it come to pass that there are things for men?

Simply because he has the gift of speech, because he can give them a name. And I will add, that this, his highest faculty, is also the source of his most fatal errors, since he imagines whenever he finds a *word* that a *real being* or thing must exist to be designated by it. As Lazarus Geiger well observes:

'We see, in fact, words and thoughts wrestling together, and the latter hardly escape bondage;[14] nay, we see from the earliest known time to the present day how the nature of beings has been made the object of inquiry when the beings themselves *had no other reality* than that lent them by *the intuitions of the remote past* which associated them with these magic sounds.'[15]

[14]The same was said by Bacon (quoted by Max Müller, *Lectures*, i. Preface): '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 their judgment.'

[15]Geiger: *Ursprung und Entwickelung der menschlichen Sprache und Vernunft*, i. p. 100.

Naming a thing is not the same as *designating* or *denoting* it. I can describe something quite unknown to me, *e.g.* a place, in such a way that I could recognise it again; but naming is always significant, the attributing of an already known quality, an act of generalisation, of classification.

Naming also serves the purpose of indicating objects which are recognised in thought; the only essential is that the *differentiæ* of the thing should be already known objectively, in order that the name may be applied to them, that it may be classed by their help, or as Kant expresses it, that the thing may be *recognised* in the notion, *i.e.* the word. (Kant divides perception into sensation, reproduction in the imagination, and recognition in the idea.)

We have, however, no right to assume that man, in his primitive state, was already possessed of this wonderful intellectual faculty, this power of rational thought that rules us now with supreme sway and forms our truest nature, while by its help we grasp all the objects around us, conceive, explore, and at the same time indicate and name them. Such a course would be too easy, or indeed rather a mere *petitio principii,* an explanation by means of that which itself stands in most need of explanation.

No; man did not call names for the sake of naming, or use signs for the sake of signifying; but he used signs, and thereby attained to the power of using names also; or, in other words, of *betokening again by a sound what he had noted before.* How the latter step was taken has been pointed out above, and is indeed the most important part of my theory.

And how and why, we must inquire next, did men

come to use signs for things? Simply because they modified them for the purposes of their own life by their own action, by their associated efforts. Men dug caves, plaited twigs, stripped the beasts of their skin, the trees of their bark. Hence was developed the marvellous hitherto unexplained gift of abstraction, and this in the most natural way. Man learnt to conceive a thing as he learnt to create things. These things became possessed, for him, of an independent existence in his consciousness by means of the word associated with them. The period of spiritual creation began; the light glimmered feebly and inconspicuously at first which now illumines earth and heaven with its rays—the divine light of reason.

I will quote, in elucidation of what has been said above, a passage from my book 'On the origin of Language':

'The thing which derives its fixity from language is *an object of human action,* and the first germ of the newly created world of abstraction must always lie in the associated labour expended in changing or modifying surrounding natures. A den or cave is already an abstract idea, for it may be large or small, excavated in stone or sand, situated in one place or another; it may have been met with twice or thrice, and still it is always a thing of the same kind, and with the same word corresponding to it. When such a change in the external world has been effected, and has entered and been made at home in human consciousness never more to disappear,[16] the first step is herewith hewn, by the joint toil of rea-

[16]For what contributes to the fulfilment of life's work is spontaneous and of certain recurrence: '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

son and speech, in the hard rock, where a second and then others must follow, till æons hence the lofty summit is reached, and reason enthroned on high sees all the world beneath as the theatre where her might and glory is displayed, and ventures forth upon new flights through the unexplored realms of heaven not even here without a clue, any more than at the hour of her birth, afforded by her own—but now purely ideal—constructions."[17]

expressions which are *absolutely requisite for carrying on the work of life.*'—M. Müller, *Lectures*, ii. 340.

When Locke remarked that all words expressive of immaterial ideas are derived from words expressive of material subjects, he added: '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 language.' 'Nothing,' says Max Müller in the above cited article (*Contemporary Review*), 'is more likely than that their daily occupations should have supplied the first concepts through which the framers of language gradually laid hold of everything that attracted their attention. If they had a word for plaiting, they could derive from it not only the name of the spider, but likewise of the poet who weaves words and thoughts together. I agree with Aufrecht that we should derive from a root *vabh*, to spin, the Sanskrit *ûrnavâbhi*, spider, Greek *ὕφος*, web, and *ὕμνος*, poem; while Greek expressions, such as *δόλους καὶ μῆτιν*, *μύθους καὶ μήδεα*, *οἰκοδομήματα*, *ὄλβον*, *κηρὸν ὑφαίνειν*, show how many branches spring from one single stem.' Cf. also the Latin, *consuere dolos, texere fraudes;* the Homeric, *κακὰ φρεσὶ βυσσοδομεύων* (*Od.* 17, 66); the German, *Ränke schmieden;* and innumerable other instances of what we call the metaphorical life of language.

We have but to look at the most abstract sciences, at mathematics and astronomy, to see how even at the present day, remote as they seem to be from the fresh hues of reality, the same doom falls upon them. What is an arc, a chord, a radius, a circle? Take the first sentence that comes, *e.g.* the beginning of Kepler's first law: 'The areas swept out by the vector drawn from the sun, &c.' What is 'area'? A space made dry and stamped hard—a floor. What 'swept' is we know. What is 'vector'? one who rides or moves in a vehicle. What is to draw? Anglo-Saxon *dragan*, old high German *tracan*, to drag or carry. And if we ask why these notions are so deeply rooted in our consciousness and our memory, the answer is not hard to see, all that is wanted is—the will.

[17] L. Noiré: *Der Ursprung der Sprache*, p. 346.

And now I may say that my theory certainly tallies remarkably with and is confirmed by the fact that things are brought within the horizon of the human reason, or first grow into things, in proportion as they suffer the effects of human action and have names assigned to them accordingly. This law applies invariably to the oldest substantives, which, as we have seen, all belong necessarily to the objective world. Things were, so to speak, ticketed by the human action that spent itself upon them, and drew an ever increasing number of them within its range, and modified them in accordance with human requirements. The things thus marked out receive their names forthwith from the action of which they are made the object.

Thus a tree is characterised in primitive language as wood upon which some work has been spent, as something split, or barked, or to be burnt. Grain is that which we crush, pound, or *grind; ground,* and *terra,* take their names from grinding, crumbling; and the sea (*meer, mare, mor,*) in like manner cannot disown its relationship with *moor, morass,* a mass of the consistence of liquid mud. An animal is meat, spoil of the chase, or something flayed. The root for flay, or strip off, denotes at the same time either skin, fur, or flesh, for both are the work of human action and characterise a produced or phenomenal result. Thus again the scales of fishes are named from the idea of *shelling;* the shell of a fruit from that of *cracking and shelling* (*skar, skal*), after which the word came, by way of a drinking bowl (*Trinkschale*), to signify a human skull, because skulls as well as shells were used for drinking vessels.

Geiger, who was familiar with this law of the

development of meanings, though he did not succeed in deducing the necessary conclusions from it, has summed up his statement in a single sentence, which I transcribe, with notable modifications derived from my own theory:

'The process of naming advances from the common actions which exclusively interest the language-making race, and which are the one chief root of thought, to those things which are affected by human action, either in the way of generation or transformation, which is the second root. A multitude of implements are named genetically; the tree is traced, from the first moment of its treatment by human hands, through all the stages of its successive transformations to beams, boards, and tables. Passing steadily through every form, language reaches each one when, and only when, it is brought directly into passive relation with the special ever-stimulating subject of the linguistic faculty, the action of men.'[18]

The fact that Geiger did not draw the last and most important of conclusions on this subject leads him often to express surprise at the discovery of startling instances which are perfectly in accordance with the above law, but can only be certainly and adequately explained by my theory. Thus he says:

'Wood, the name of which in ὕλη and *materia* has come to furnish the substratum of every idea of matter in general, was the prevailing material in primitive times, and is derived from shaving, *e.g.* in ξύλον; and shaft, δόρυ, likewise named by the ancients from the fundamental notion of breaking off or stripping (δείρω), came to designate wood as a material. An especially important point about this word is its wide diffusion throughout all the branches of the Indo-germanic stock

[18]Geiger: *Ursprung und Entwickelung der menschlichen Sprache und Vernunft*, 1. p. 42. L. Noiré, *loc. cit.* p. 311..

of languages. (Hollun-*der, tree*[19]). Two reasons may be given why the notion of wood should be reached through that of stripping off the bark rather than from that of felling the tree; both have probably had a share in the result. In the first place the notion of wood is undoubtedly earlier than the possession of tools for felling trees; and in the second place, the phenomenal principle of naming holds good here, for the wood is the flesh of the tree which becomes visible when the bark is torn or flayed off. But it is in the highest degree remarkable that the tree takes its name from its wood, and thus borrows its designation as *living wood* from a mode of *human activity*."[20]

The reader who accepts my theory will see nothing wonderful in this, nor be surprised at the analogous transition of ideas in *wood* and *tree*.

He says elsewhere:

'In almost all cases we observe that the words for body are taken from the dead body, or corpse. Σῶμα as, indeed, had been observed by Aristarchos, is used by Homer for the dead body only. *Whence this eccentricity of language* to start from the notion of the corpse in order to name the human body itself?'[21]

I must confess that this seems to me so far from strange that I should be surprised rather if the case were otherwise. The rational perception of man starts from the objective world, and he ended by giving to his own body the name first applied to the disjointed limbs of animals or human beings. We speak now of our own flesh, skin, bones, &c., without thinking of the source of these conceptions, and yet the most cursory

[19]Sk. *drus* wood and tree, *dâru* wood spear; Goth, *triu* tree; Irish, *daur*, Old Slav, *drevo*.

[20]L. Geiger: *Ursprung und Entwickelung der menschlichen Sprache und Vernunft*, ii. p. 27.

[21]Ib. p. 136.

reflection will show that they could have no other natural origin than this. For the same reason we find most members of the human body conceived by language as joints, and accordingly etymologies like that given by Bopp for the 'doing organ' are impossible; *kara,* the hand, as Geiger justly observes, cannot be derived from *kar,* to make. Nor can *Bauch* (stomach) be the scientific œso-*phag*-us, its relations are rather with *Bug,* Eng. *bow, bow*els.

These few examples will suffice to show that my theory is in complete accordance with the facts of etymology; that language does not—as would follow from the interjectional theory—conceive objects in so far as they excite pleasure or disgust, even less, as the mimetic theory imagined, in as far as they are howling and roaring; nor yet, at least not in its earliest creations, in so far as they are active, but simply in so far as human action has touched, modified, reconstructed them; in a word, in so far as they have received *form.*

This is one of the most important and fruitful conclusions of comparative philology, and it agrees with this that even such things as are removed by nature from the reach of human influence nevertheless become objects of human thought in the same way as the rest, that is to say, they are named as they would be if the human hand had formed them.

Thus *Teich* (ditch, to dig), *lacus, Lache* and *Loch,* like the Celtic *loch,* all attach themselves to the fundamental notion of that which is dug; from the root *ku* or *sku* we have both the German *Höhle,* hole and hollow, as well as the Greek κοῖλος and the Latin *cælum, i. e.* the vault of heaven; similarly we still speak of the highest point of a mountain, though this point (*Spitze*)

is only what has been pointed, made into a point; so again the ideas of weaving, plaiting, and binding are applied not only to the mechanical acts of man, but to anything offering an analogous appearance, *e.g. Ranke, Winde, Schilf* (runners, bindweed and sedge). Thus *face* comes from *facies,* originally the make or shape of a thing, an expression repeated in modern languages, *feature* being evidently a mere corruption of *factura,* the make; thus the significant word *figure* is directly related to *fingo* and *figulus,* and points to a derivation from the potter's art; so, also, *forma,* if we compare it with Sk. *gharma* (pot), and *formaceus* (clayey). Thus we find that man could not designate his own form, nay, not even that dearest and most familiar object, the human countenance, except by associating it with an action of his own, and conceiving it as a product of the same.

This power of conceiving the world of things according to their forms, this division of the interchanging appearances of the outer world by sharp and definite outlines—a faculty which has been so developed that the scientific eye now discerns qualities of things which are still invisible to the material eye reinforced by the most powerful instruments—this power is the distinguishing human gift of *intuition.* It is wanting, except in a rudimentary degree, to animals, and in man himself is one of the fruits of language, and the creative, formative activity so closely connected therewith. The reader will easily realise how this is if he recalls the differences that exist between different kinds of human vision, between the way in which the products of his art appear to the eye of the master who is wont to create them himself

whether he be locksmith, mechanic, builder, or sculptor, and to that of the uninstructed layman.

Form is a general factor in all things; every progressive step towards the perfecting of human order and activity manifests itself thus. Nothing else touches the reason so closely as this, which is the mode of *filling space,* and appeals to the most intellectual of the senses, that of sight. For thought is the sight of the mind, and language, as I have said elsewhere, is woven of light and tones. Unceasing, unbroken progress in the formation of things is the fundamental rule of development; and even more unceasing, more unbroken, less obvious but not less certain progress is of the essence of language.

I have sketched in its most general traits the earliest period in the growth and development of language. There was a time when man, or, at least, the thought of man, knew neither man nor wife nor child, neither sun nor moon, no beast, no tree, no I nor thou, no here nor there, but instead a limited store of sounds with which he accompanied his action, and which associated themselves with the objects produced or modified by the action. This is the period of the objective creation of language.

A vast revolution must have been effected in the mental life of man when he began to lift his eyes, hitherto fixed upon the ground, upwards to the eternal stars, to the heavens standing fast for ever while he himself grew and withered and passed away, to the rosy dawn ushering in another day and chasing away the horrors of the night, to the clouds, chased by the storms, who after long languishing drought—

'gnädig ernst den langerflehten Regen
Mit Donnerstimmen und mit Windesbrausen
In wilden Strömen auf die Erde schütten.'

Such a revolution must have been effected—not necessarily on a sudden and without preparation, but slowly and gradually like every other development; the forces of nature must have been sympathetically felt and conceived by the kindling fancy as animated active beings, while objects passed imperceptibly into subjects, and language and thought assumed the character they wear to-day, which seems to us so natural that we delude ourselves it must have been the same always.

This period coincides with the origin of religion, which, as Geiger says, has exercised an incredible and almost boundless influence upon the development of human sentiment and feeling. The rise of mythology is a necessary and highly important stage in the development of language, that is to say, of the intellectual life of humanity. Linguistically, it may be described as the period in which *subjects* began to mark themselves off from the indefiniteness of the thought-process, and began to form themselves into independent existences.

Otfried Müller foresaw the truth of this:

'The mythological mode of expression, (he says) which turns everything into persons, and every relation into an act, is something so unique that we are forced to assume for its growth a special period in the civilisation of nations.[22]

[22]Otfried Müller: *Prolegomena zu einer wissenschaftlichen Mythologie,* p. 73.

And at this point I must stop, for here the master has begun to speak,[23] from whom we have to learn, and for the present *only* to learn.

[23]Max Müller: *Introduction to the Science of Religion.* Four Lectures dellvered at the Royal Instltutlon. (Longmans, 1878.) *On the Origin and Growth of Religion, as illustrated by the Religions of India.* (Longmans, 1878.)

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