



PROFESSOR WHITNEY ON THE ORIGIN OF LANGUAGE.

IT is remarkable that in the same month of July 1874 we find an anonymous writer in England saying :

“Few recent intellectual phenomena are more astounding than the ignorance of these elementary yet fundamental distinctions and principles (*i.e.*, as to the essence of language) exhibited by conspicuous advocates of the monistic hypothesis. Mr. Darwin, for example, does not exhibit the faintest indication of having grasped them.” *

Whilst in the United States the distinguished philologist, Professor W. D. Whitney, observes that :

“Mr. Darwin himself shows a remarkable moderation and soundness of judgment in his treatment of the element of language. . . . Very little exception is to be taken by a linguistic scholar to any of his statements. Though no master, such as Müller is, of the facts of many languages, his general view of speech in its anthropological relations, his sense of what it is to man, and how, is far truer than that of the scholar who has attempted by the evidence of language to overthrow his whole theory.” †

Truly no man is a prophet in his own country !

Professor Whitney is the first philologist of note, who has professedly taken on himself to combat the views of Professor Max Müller; and as the opinions of the latter most properly command a vast deal of respect in England, we think it will be a good service to direct the attention of English readers to this powerful attack, and, as we think, successful refutation of the somewhat dogmatic views of our Oxford linguist.

* *Quarterly Review*. “Primitive Man : Tylor and Lubbock,” p. 45.

† *North American Review*. “Darwinism and Language.”

The Professor's article is a review of Schleicher's book, "Über die Bedeutung der Sprache für die Naturgeschichte des Menschen,"* and of Max Müller's well-known lectures on "Mr. Darwin's Philosophy of Language"; but in fact the article deals almost entirely with the latter, Schleicher being dismissed with a single paragraph.

Turning to Müller the Professor happily observes:—"It is never entirely easy to reduce to a skeleton of logical statement a discussion as carried on by Müller, because he is careless of logical sequence and connection, preferring to pour himself out, as it were, over his subject, in a gush of genial assertion and interesting illustration." In taking up the cudgels, Müller is clearly impelled "by an over-mastering fear lest man should lose" "his proud position in the creation," if his animal descent is proved. He maintains the extraordinary position that if an insensible gradation could be established between ape and man, their minds would be *identical*, and that by a similar argument the distinction between black and white, hot and cold, a high and low note might be eliminated: he overlooks, too, "the undoubted and undisputed fact that species do actually vary in nature." The same line of proof would show that the stature of a man and boy were *identical*, because the boy passes through every gradation in attaining the one stature from the other. No one could maintain such a position, who grasped the doctrines of continuity, and of the differential calculus. Professor Whitney justly points out, that in biology the gradations are not infinitesimal, but are such as are observed in nature to exist between parent and offspring. According to what is called the "Darwinian theory," organisms are in fact *precisely* the result of a multiple integration of a complex function of a very great number of variables; many of such variables being bound together by relationships amongst themselves: an example of one such relationship being afforded by the law, which has been called "correlation of growth."

Professor Whitney says:

"As a linguist he (Professor Müller) claims to have found in language an endowment which has no analogies, and no preparations in even the beings nearest to man, and of which, therefore, no process of transmutation could furnish an explanation. Here is the pivot on which his whole argument rests and revolves."

And he urges that Müller does not argue his "case with moderation and acuteness, on strict scientific grounds and by scientific methods," in setting up language as *the* specific difference between man and animals. Many other writers in fact have adduced other differences as *the* correct ones; thus that he

"Alone is capable of progressive improvement; that he alone makes use of tools or fire, domesticates other animals, possesses property, or employs

* Translated into English by Dr. Bickers, under the title "Darwinism tested by the Science of Language."

language ; that no other animal is self-conscious, comprehends itself, has the power of abstraction, or possesses general ideas ; that man alone has a sense of beauty, is liable to caprice, has the feeling of gratitude, mystery, &c., believes on God, or is endowed with a conscience."*

Many of these asserted distinctions are successfully combated in "The Descent of Man."

Although Müller asserts that animals receive their knowledge through the senses only, and that no animal possesses "the faintest germs of the faculty, of abstracting and generalising," he elsewhere says that "if there is a *terra incognita* which excludes all positive knowledge, it is the mind of animals ;" the whole subject is transcendent. It seems strange that the same person should be involved in such profound ignorance, and yet have so complete a knowledge of the limits of the animal mind. Professor Whitney, however, justly points out that the minds of our fellow-men are a *terra incognita*, in exactly the same sense as are those of animals :

"Who, for example, can be sure that, if he had a friend's sensorium in his brain instead of his own, he would get precisely the same sensation of colour as at present from the green grass and the blue sky ?" . . . "We believe that the horse sees green, and tastes water, and feels pain, as confidently, and on nearly the same grounds, as we believe that our neighbour does the same."

It is true that with man we have an additional source of evidence in language, but it can hardly be asserted that this is the only one.

With reference to the denial of conceptual knowledge to animals, Mr. Darwin says :†—

"But when a dog sees another dog at a distance it is often clear that he perceives that it is a dog in the abstract ; for when he gets nearer, his whole manner suddenly changes, if the other dog be a friend. A recent writer remarks that in all such cases it is a pure assumption to assert, that the mental act is not essentially of the same nature in the animal as in the man. If either refers what he perceives with his senses to a mental concept, then so do both. Vide Mr. Hookham, letter to Professor M. Müller, 'Birmingham News,' May, 1873."

To most persons it will be sufficient to know, with Prof. Whitney, that—

"An animal like a dog perfectly knows what a man is, never confounds it with any other creature, knows what to fear and hope from it, in order to hold, with a confidence that is proof against all authority, the doctrine that an animal lower than myself possesses such germs of the faculty of generalizing as are distinct only in degree from those which I possess."

The allusion to authority in this passage refers to the attempt of Müller to crush his adversaries, by a reference to Kant, Hume, Berkeley, and Locke. But fortunately we live in an age, which

* "Descent of Man." Vol. i. p. 49.

† "Descent of Man." (New edition to be published shortly, p. 83.)

(except for temporary relapses) does not pay any very great attention to the pious founder, and which tries to judge for itself.

On examining the extract from Locke made by Müller, Prof. Whitney finds that the power of forming general ideas is denied to animals, simply on the ground that they do not talk, and observes that, "The fallacy lurking here is the assumption that, if general ideas were formed, they could not help finding expression in words; and that I can see no good ground for." Prof. Müller, however, adheres to and restates Locke's position in his own words; and reason is defined by him, as the *power* of forming and handling general concepts.

Prof. Whitney then says;

Reason "is that power over general concepts which we possess, and which is so much higher than anything possessed by brutes, that it is properly called by a different name. Again, 'handling' general concepts is an ambiguous and unscientific phrase, and involves, perhaps, more power than 'forming' them; we might fairly enough say that the effective management of ideas is possible only by means of a system of signs, which the brute confessedly has not. But to put the formation of general concepts at the very top, and the power of weighing probabilities and calculating results, even genius itself, far below, is to turn the natural order of things topsy-turvy. . . . Nor, once more, is articulate language, or language of any kind, the only intelligible manifestation of reason. There is rational conduct as well as rational speech, and it is quite as effective as speech. . . . Müller himself acknowledges . . . that, 'though the faculty of language may be congenital, all languages are traditional.' Unless, then, reason is a matter of tradition rather than of natural gift, a man may fail to have had any language handed down to him, and so may fail to give what Müller regards as the only possible evidence of reason, and yet may be rational."

In thorough consistency with himself, Müller would appear to hold that the born deaf and dumb have no concepts, "except such as can be expressed by less perfect symbols." If, however, they can form *any* concepts, they can, as Prof. Whitney urges, reason.

It is curious to observe that the Quarterly Reviewer, who is just as much bent as Prof. Max Müller on the dualistic hypothesis of man's origin, takes up the deaf and dumb man also.* He however, maintains that—

"The intellectual activity of their minds is indeed evidenced by the peculiar construction of their sentences. Mr. Tylor tells us (p. 25), 'Their usual construction is not "black horse" but "horse black," not "bring a black hat," but "hat black bring." . . . There can be no doubt that a society of dumb men would soon elaborate a gesture language of great complexity."

It seems, then, that the Reviewer is as much opposed to Müller as are the evolutionists; and on this point at least he seems to have sound sense on his side.

Müller asks, "Are concepts possible, or, at least, are concepts ever

* "Primitive Man," July, 1874, p. 46.

realised, without some form or outward body?" and answers the query by saying that "if the science of language has proved anything, it has proved that conceptual or discursive thought can be carried on in words only." He maintains that thought and language are as necessary to the existence of each other, as the peel to an orange. To this Prof. Whitney observes, that conceptions may be formed and yet not put before the consciousness of the conceiver, so that he "realises" what he is doing; complex thoughts are doubtless impossible without symbols, just as are the higher mathematics. Yet we know that dogs doubt and hesitate, and finally determine to act without any external determining circumstance.

Whitney very happily illustrates the independence of thought from language, by calling up our state of mind when casting about, "often in the most open manner, for new designations," for new forms of knowledge, or when "drawing distinctions, and pointing conclusions which words are then stretched or narrowed to cover." "If Müller had brought before him some wholly new animal he would find that he could shut his eyes and call up the image of it readily enough without any accompanying name."

It is a proof that we realised and conceived the idea of the texture and nature of a musical sound before we had a word for it, that we have had to borrow the expressive word "timbre" from the French.

Prof. Whitney says, however, that he is convinced that Müller does not quite understand "the theory of the antecedency of the idea to the word, in the minds of those who hold that theory." He cannot bear anything which seems to derogate from the dignity of language. Whitney fancies that Müller may only mean to deny "that men elaborate a great store of ideas, and then, by an after-thought, proceed to invent names" for them; and that he may mean that when a sign has been sought and found for a concept, it is used "as a necessary standing-ground from which to rise another step." And he illustrates this possible interpretation, by showing how much Müller has of late changed his position with respect to the "bow-wow" and "pooh-pooh" theories of language; for even he now says, "interjections and imitations are the only possible materials out of which human language could be formed." Although he still guards himself from being confused with the ordinary pooh-poohists, by holding that words come from roots, and roots from interjections and imitations, whilst *they* do not interpose the roots on the evolutionary road!

Professor Whitney says that human nature is the sum of certain endowments above and beyond those of animals. To human nature concrete speech does not belong, but only the capacities and tendencies for its development. Its development has been slow, as in other branches of human activity; but every race has worked out *some* system of verbal signs, just as every race uses some tools.

These results constitute the civilization of the race. The name of "reason" is due to the capacities, and not to the results themselves. The most important capacities for language have been memory, distinct conception, abstraction, reflection, and the review of our own mental processes; and, of not less importance, the power of adapting means to ends. The end of language is intercommunication.

"It is where speech cuts loose from its narrow and inextensible instinctive basis, and becomes, instead of a cry to relieve the speaker's own feelings, an utterance to bring a thought before another that its unlimited growth becomes possible and that its history begins; here it makes that transition from emotional to rational, upon which Müller with good reason lays so much stress."

The capacities, he continues, are not wanting in some of the lower animals, though their degree is so much lower than ours. Animals understand much that we try to signify to them; and it is in the largeness of our "power of connecting definite sounds with definite ideas,"* that lies our pre-eminence.

Professor Whitney thinks that we shall never discover the steps between "the wholly instinctive expression of the animals" and "the wholly conventional expression of man."

"The wishes and expectations of those (for there are such) who still look to find a connecting series are founded on a misapprehension, and are futile; their fear to find that nature has made a *saltus* in passing from the one to the other is equally in vain. There is neither *saltus* nor gradual transition in the case; no transition, because the two are essentially different; no *saltus*, because human speech is an historical development out of infinitesimal beginnings, which may have been of less extent even than the instinctive speech of many a brute. If we had the missing links supplied we should not find the more and more anthropoid beings possessing a larger and larger stock of definite articulations to which they by instinct attached definite ideas; there are no such elements in human language, present or traceable in the past; and as we approach man, the detailed instincts leading to definite acts or products diminish rather than increase; we should find those beings showing more and more plainly the essentially human power of adapting means to ends, both by reflection and unconscious action, in communication and expression, as in other departments of activity."

Professor Whitney agrees with Mr. Darwin in thinking that man does not owe his existence, *as man*, to language, but that language has enabled him to reach a higher level of manhood. And à propos to Mr. Darwin's opinion on this point, the *Quarterly Reviewer*, before alluded to, charges him† with contradicting himself in the *Descent of Man*, thus:—

"In one place (vol. i., p. 54) he attributes the faculty of speech in man to his having acquired a higher intellectual nature, while in another place (vol. ii., p. 391) he ascribes man's intellectual nature to his having acquired the faculty of speech."

* "Descent of Man."

† P. 45.

In all justice, however, the latter reference should have been given to pp. 390 and 391, and then we find as follows :—

Vol. i. p. 54—

“It is not the mere power of articulation that distinguishes man from other animals, for as every one knows parrots can talk; but it is his large power of connecting definite sounds with definite ideas; and this obviously depends on the development of the mental faculties.”

And Vol. ii. p. 390—

“A great stride in the development of the intellect will have followed as soon as, through a previous considerable advance, the half-art and half-instinct of language came into use; for the continued use of language will have reacted on the brain, and produced an inherited effect; and this again will have reacted on the improvement of language. P. 391—The large size of the brain in man . . . may be attributed in chief part . . . to the early use of some simple form of language . . .”

The asserted contradiction then lies in a skilful reading of the sentence on p. 391 *apart* from its context on p. 390.

With all deference to the great weight of Professor Whitney's opinion, I venture to think that he makes a dangerous assertion when he says that we shall never know anything of the transitional forms through which language has passed. It is ever a doubtful policy to assert that science is incapable of anything. Does Professor Whitney mean that it is impossible to track the Aryan languages higher than their roots, or to discover the imitational and interjectional sources of those roots? The attempt to do so has already been made, but with what degree of success I must leave professed philologists to judge. Count Liancourt and Mr. Pincott have just published a work on the “Primitive Laws of Language.”*

I will give a short sketch of their method, in the hope that competent judges may be induced to consider their views.

Our authors state their objections to the “bow-wow,” “pooh-pooh,” and “ding-dong” theories of language, but then proceed to expound their own theory of its origin; their views, however, *exactly* accord with what I, at least, have always thought I understood by the ordinarily received onomatopœic theory. The idea which, I believe, is new in their work is the reduction of the received roots of language (of which they state there are 1800 in Sanskrit) down to a very small number of still more primitive roots, and of these they give the onomatopœic origin. Whether or not they push this analysis to a fanciful extent, I will not pretend to say. The method will be best illustrated by some of their examples. They trace the words “and,” “other,” “or,” “either,” down to the Sanskrit “antara” and

* “Primitive and Universal Laws of Language.” By Count G. A. de Goddesand Liancourt and F. Pincott. London: W. H. Allen. 1874. These authors, by the bye, seem to agree with Müller in the point attacked by Whitney, for they say that “*man spoke before he reasoned.*”

"itara." The latter consists of two parts, "i" and "tara"; "i" is the root "to go," and "tara" is derived from the verbal base "trî," "to cross over." We meet "tara" again in the comparative "better," but it generally dwindles down to the mere letter r in comparatives. We meet trî again in trans:—

"The primitive meaning of trî is, however, 'cross over'; it is a compound formed of t., the remote definite='there' + rî='go,' and is, therefore, equivalent to 'go there,' *i.e.*, 'motion to that place.'"

Similarly "pri" is the origin of "præ," "pro," "forth," &c., and is derived from "pă" the sound "produced by a puff of breath," which "would aptly convey an idea like 'forth,'" and "rî," to "go." "Ri" they consider as a sort of intensified form of "i"; the letter r being one natural way of reduplicating and intensifying a sound. By methods such as above indicated, they reduce all the roots down to a few "onomatops,"—G the onomatop of "throat," "swallow," "seize," &c.,—I="here," denoting "self," "unity," "motion towards the speaker" and "motion in general"—L the onomatop of "tongue," "lick," "smear," "bright," &c.—P that of "puff," "forward," &c.—another P that of "suck," "drink," "nourish"—T the onomatop of definition, that which is exterior to self, "other," "there," "beyond," &c. This indication suffices to sketch the method pursued, and it will be interesting if some competent judge will criticize it.

Professor Whitney notwithstanding, I cannot see that it is wholly useless to speculate on some of the influences, which must have had their bearings on the formation of language,—whether or not we fancy that we can still trace the remains of such influences in languages, as they exist at present.

According to Mr. Darwin's views, man owes his extraordinary power of modulating the voice, and producing diversity of sounds, in great part to sexual selection. Doubtless in very early times his ape-like forefathers possessed vocal organs, with which they gave forth a limited number of significant cries, serving to convey various signals and emotions to their brethren; but Mr. Darwin's view is that the voice attained its present perfection by its constant use as a sexual charm (as in the case of the singing gibbons), and by the selection consequent on such use in courting. It is curious if man is indebted for language, not entirely to the vast utility of so perfect a means of intercommunication, but partly to the philoprogenitive nature of his ancestors!

Again, if this view is correct, music is antecedent to language. Mr. Spencer's view is exactly the other way, for he thinks that music owes its origin to the imitation of the various intonations, made use of in the verbal expression of the emotions; and these varied intonations he ascribes to purely physiological causes. Influenced by what

Mr. Spencer would call the "family bias," I cannot but think that my father's view is the more probable, since it serves far better to explain the strong emotional effect of music, and since the voice is so largely used in many other departments of the animal kingdom as a love-charm.

I have heard it suggested that though animals give significant cries, yet that as they are never known to approach conventionality, but continue stereotyped, we do not here see any real approach to language; for that the whole essence of language lies in its conventionality. But I think that this objection can be scarcely justified, for when one holds a stick, and gives it to a dog to worry, he growls—but yet in a way so very distinct from that of real anger, that one can only interpret the growl as a sort of conventional mark of his anger. Again, it has been asserted that all the cries of animals are purely emotional; yet I know a terrier, who has, untaught, invented a peculiar low bark, like "wuff!" which is never used except to mean "open the door." And the domestic cock has a well-known peculiar cry, only used to summon his wives to any food which he has found. The ease with which a conventionalised cry might be adopted by animals, is illustrated by the undoubted fact that the barking of dogs is a mode of giving tongue only learnt under domestication; for the dogs, which ran wild on the island of Juan Fernandez, had, after thirty-three years, quite lost the art, and some which were recaptured re-acquired it; and, further, individual wolves and jackals, kept in confinement, have learnt to bark like dogs.*

An animal giving various significant cries, and also practising singing, would hardly fail to make his cries yet more significant by imparting to them some of the intonations of his song, and this might easily give to such cries a much wider significance. It is said that savages when excited naturally speak in a sort of song, which would accord well with this view, though in no way contradictory of Mr. Spencer's.

It is clear, too, that in a much later stage of the development of language, when the metaphorical power, of which language exhibits such extraordinary diversity, had become somewhat developed, that the same quasi-word, or conventionalised cry or exclamation, might come to bear very widely different meanings according to its intonation; when however there came to be synonyms for the same object or idea, that word would be likely to survive the best, which differed from others, not merely in intonation, but in its consonants. This would at least be likely to hold good of languages still in a progressive condition. May not this possibly serve as an explanation of the fact that in such a fossilised language as Chinese, we find so great a variety of tones? Mr. Swinhoe told me that the same monosyllable

* Darwin: "Animal and Plants under Domestication," vol. i., p. 27.

had eight different meanings according to its intonation ! How great is the weakness to a tongue springing from this source, may be realized by what Mr. Swinhoe also told me, viz. : that a Chinaman barely understands another, when spoken to unexpectedly, so that it is usual to preface any remark by "look here," or "I wish to speak."

To return to Professor Whitney,—I do not understand the grounds on which he denies that any transitional stage is possible in the formation of language. He does not imagine that a language, however incomplete, sprang forth fully caparisoned from a single generation of anthropoid apes. It is surely probable that many generations of quasi-men passed away, who used a small vocabulary of conventionalised cries ; that these cries became more and more conventionalised, by departing more and more from the sounds or exclamations, from which they took their origin. Many roots would probably propagate themselves by fission, and give rise to new roots, gradually to become entirely separate from their onomatopœic originals. I should imagine that the imitative origin of quasi-words (serving alike as verbs, adjectives, and nouns) would in early times have served as a kind of *memoria technica* of their meanings. It is obvious that any system of verbal signs would have a much more retentive hold on the memory, when such signs had a relationship however feeble with the objects represented. An English child learns and remembers the word "baa-lamb," and calls a cow a "moo-cow," for long before he can keep the mere signs "lamb" and "cow" in his memory ; and he frequently begins by calling dogs and cows "bow-wows" and "moos," and continues to use these words, even after he pronounces these syllables in a quite conventionalised manner. And will not something of the same kind surely have taken place in the infancy of the human race ?

If the complete conventionalism and fossilisation of onomatopœic roots did not take place in a single generation,—and to me it seems impossible that it should have done so—then surely it is erroneous to say that there is no transitional stage of language possible ; and it is not absolutely chimerical to hope that *some* of the steps in such transitions may yet be discoverable, though such speculations must necessarily remain highly doubtful, and the results can never be tabulated along with those more certain results, to which we are led in other branches of science.

Again, Professor Whitney says that—

"Hovel, cottage, and palace do not grow by insensible gradation out of bees' cells, or birds' nests, or beavers' huts, or any other animal structures; they began when man, a shelterless creature, with no building instincts, felt the discomforting influences of external nature, and saw how, by the appropriate use of materials lying within his reach, they could be avoided."

But we know now that some of the anthropoid apes build themselves a platform to rest on, a hardly ruder piece of architecture, than the

shelter erected by the Fuegians ; such building is probably instinctive. Now, how can Professor Whitney know that an animal, endowed with high mental power, would not consciously extend such instinctive habits, and that the instinctiveness of the action would not gradually dwindle, and become displaced by a complete rationality ? When the orang, mentioned by Mr. Darwin, used a mat to shelter his back from the sun, he probably did it rationally, while he would also probably build his platform instinctively. May we not look at the conscious use of the mat, as a proof that instinct and rationality blend into one another ? It is true that we have but little evidence that an action performed wholly instinctively by one generation of animals, is ever performed partly rationally by the next, or that an act done instinctively in youth, is done rationally in later years, but we have no reason to deny its possibility, and it is even *à priori* probable. Although it has been asserted that instinct and reason vary inversely as one another, yet the best observers agree in maintaining that the very reverse is true, and that the more closely any supposed instinctive action of animals is watched, the more it is found blended with reason. Mr. L. H. Morgan, who has observed the habits of beavers probably more closely than any man alive, goes so far as to believe that their wonderful constructions are built entirely under the guidance of reason. And by experiments, Huber showed how immediately bees called in reason to help their cell-making instinct, when he placed them under new and anomalous conditions.

In conclusion, we recommend all who feel an interest in the subject to read Professor Whitney in the original, as his matter is already so much condensed, that any abstract, such as I have endeavoured to give, must do but feeble justice to it.

GEORGE H. DARWIN.