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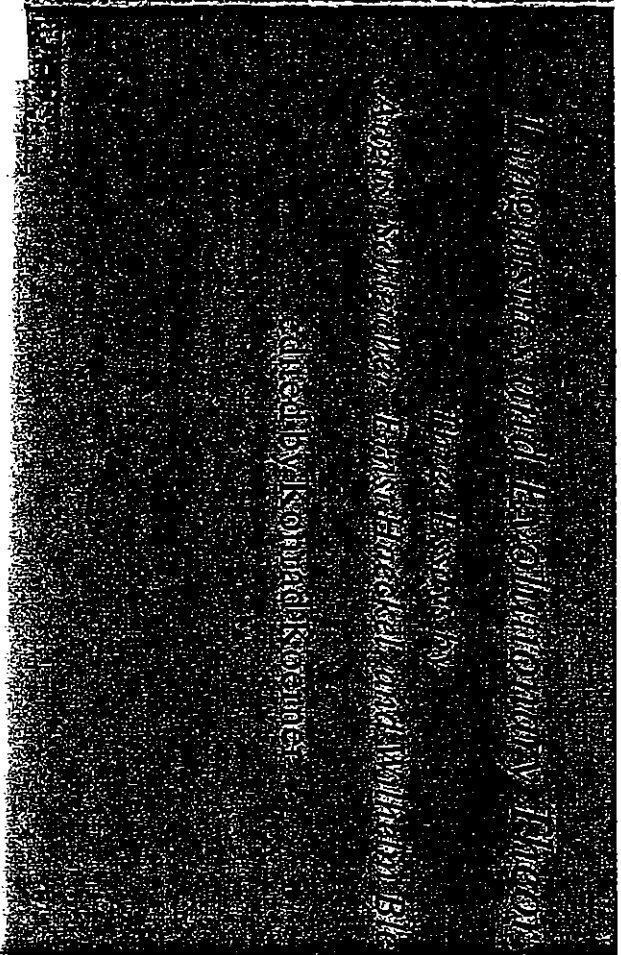
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AMSTERDAM CLASSICS IN LINGUISTICS VOL. 6

AMSTERDAM STUDIES  
IN THE  
THEORY AND HISTORY  
OF  
LINGUISTIC SCIENCE  
I  
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LINGUISTICS

Volume 6

AMSTERDAM CLASSICS IN LINGUISTICS VOL. 6



LINGUISTICS AND EVOLUTIONARY THEORY

AMSTERDAM STUDIES IN THE THEORY AND  
HISTORY OF LINGUISTIC SCIENCE

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Volume 6

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*Linguistics and Evolutionary Theory:*  
*Three Essays by August Schleicher, Ernst Haeckel,*  
*and Wilhelm Bleek*

LINGUISTICS  
AND  
EVOLUTIONARY THEORY

THREE ESSAYS

by

AUGUST SCHLEICHER, ERNST HAECKEL,  
AND WILHELM BLEEK

with an introduction by

J. PETER MAHER

edited by

KONRAD KOERNER  
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For

JOACHIM-HERMANN SCHARF

## ACKNOWLEDGEMENTS

Like the re-edition of August Schleicher's *Die Sprachen Europas* (Bonn, 1850),\* the present volume has taken much more time to complete than has been anticipated. The reasons for the delay are many, and need not to be recounted here. Encouragingly enough, the interest in this project has grown during the past five and more years, probably because of an unabated human curiosity about evolution and, more importantly, because of the growing recognition of the biological foundations of human speech. It is therefore more than mere coincidence that *Linguistics and Evolutionary Theory*, which brings together for the first time three essays in English translation by August Schleicher (1821-68), the most influential 19th-century historical-comparative linguist, and Wilhelm Bleek (1827-75), the distinguished specialist in African languages, introduced by the greatest popularizer of Darwinism in 19th-century Germany, Ernst Haeckel (1834-1919), should appear in the centenary of the death of Charles Darwin.

Completion of the project was greatly helped by the following: The Social Sciences and Humanities Research Council of Canada, whose research grant permitted me to avail myself of the rich resources of the Newberry Library's Bonaparte Collection during a six-week sojourn in Chicago; Professor Dr. Dr. Dr. h.c. Joachim-Hermann Scharf, Director Ephemeridum of the Akademie der Naturforscher Leopoldina in Halle, for supplying me with photographs of the original titles reproduced on pp. VIII, 2, and 74; Dr Desmond T. Cole, Professor of Bantu Languages at the University of Witwatersrand in Johannesburg, for supplying me with a photograph of the original title page of Bleek's *Über den Ursprung der Sprache* of 1867 (p. 84) as well as drawing my attention to biographical information on Bleek, and, last but not least, to Dr J. Peter Maher, Professor of Linguistics at Northeastern Illinois University in

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Linguistics and evolutionary theory :



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\*) A. Schleicher, *Die Sprachen Europas in systematischer Uebersicht*, new ed., with a preface and an introductory article by Konrad Koerner (Amsterdam: J. Benjamins, 1982), lxxi, 274 pp.

Chicago, for his friendship and forbearance in enduring the pressures I have been exercising on him in an effort to obtain from him the long-awaited introductory article.

May they all enjoy seeing this volume published.

The Newberry Library  
Chicago, October 1982

K. K.

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Ernst Haeckel  
(Zena).

#### EDITOR'S FOREWORD

1. August Reicher, 1863,  
Die Darwin'sche Theorie und die  
Spekulationsgesellschaft  
Opus des Anthropologen in zwei Hefen.
2. Wilhelm Bleek, 1868,  
Über den Ursprung der Sprache.  
Mit Memoiren des Verfassers.
3. Ernst Haeckel, 1868,  
Über die Entstehung und den  
Stammesbaum der Menschengeschlechter  
Amst. im Verlage Haeckel S. 54 mm. \*

The upsurge in both Christian and Muslim fundamentalism in recent years coincides with a renewed debate on evolutionism, a term frequently equated with 'Darwinism', as if there hadn't been evolutionist theories around prior to the appearance of *Origin of Species* in November 1859. Darwin's proposals have been discussed ever since they were first published some 120 years ago and have not ceased to fascinate educated laymen as well as scientists, not to mention historians of ideas and of science. In 1909, on the occasion of the 100th anniversary of Charles Darwin's birth, Arthur Oncken Lovejoy (1873-1962) published a lengthy paper in which he traced the 'argument for organic evolution' before the publication of Darwin's epoch-making book (Lovejoy 1909); and Peter Giles (1860-1935) addressed the question of the relation between linguistics and the concept of evolution, ignoring however the important work of Schleicher and others, while referring to Otto Jespersen (1860-1943) as the major representative of linguistic science, and this with little justification (Giles 1909; Diderichsen 1976b:274). In 1959, the centenary of *Origin of Species*, many other studies of Darwin, his forerunners, the impact of his work, etc. appeared, among which the late Loren C. Eiseley's (1907-1981) *Darwin's Century* stands out as the most comprehensive and substantive publication (Eiseley 1961, first published in 1958). The 100th anniversary of Darwin's death has again led to an avalanche of books, from which I shall mention only three titles: Dov Ospovat's study of the development of Darwin's theory of natural selection from 1838, the year he first read Thomas Robert Malthus (1766-1834), in whose *Essay on the Principle of Population* he found the concept of 'struggle of existence' put forward, and 1859 (Ospovat 1981; see also Ospovat 1979); D.F. Bratchell's monograph on the impact of Darwinism on 19th-century religious, scientific, and literary attitudes (Bratchell 1981), and Alfred Kelly's account of popularization of Darwinism in Germany between 1860 and 1914 (Kelly 1981), the period and country which interest us here most in the present context.

1) For instance the 1981 edition of *British Books in Print* (p.1312) lists 11 books by Darwin (many in several different editions), and 18 books on him.

No doubt, Darwin's *Origin of Species* had first and foremost a tremendous impact on Victorian England, in matters of science as well as religion, morals, and social attitudes in general (cf. Young 1970). But in regard to questions pertaining to language and, in particular, the science of language, England was at best in second place behind Germany. This does not mean that the question of the origin of speech was not discussed; indeed, it was Alfred Russel Wallace (1823-1913), the co-discoverer of the concept of 'natural selection',<sup>2</sup> who, with the publication of a paper on the origin of human races, in which he also touched upon the question of the development of the human brain (Wallace 1864), and subsequent articles (e.g., 1869) forced Darwin to turn his attention to this and related questions as well, especially in his *Descent of Man* (1871).<sup>3</sup> However, linguistics was much less developed in 19th-century Britain, with the result that the discussion of glottogony was largely reduced to an exchange among non-linguists, e.g., John Oliver Means' (1922-83) paper of 1870, which was preceded by the Rev. Frederic William Farrar's (1831-1903) amateurish disquisition of 1865, and the lexicographer Hensleigh Wedgwood's (1803-91) book *On Origin of Language*, in which the theory was advanced "that the whole of language would be found to spring from an imitative source, if the entire pedigree of every word were open before us" (Wedgwood 1866:154-55).<sup>4</sup> Darwin (1871:56, n.24) found the works of his two country-men 'most interesting', though he also refers to the English translation of August Schleicher's 1863 essay, perhaps at the suggestion of Ernst Haeckel (1834-1919), the strongest advocate of Darwinism in Germany (cf. Schmidt 1914). Darwin (1871:60, n.43) also refers to a little article by Farrar (1870), which is nothing more than a discussion of Schleicher's views. Perhaps more interestingly, Darwin published "A Biographical Sketch of an Infant" in 1877 in a response to a paper by French philosopher Hippolyte Taine (1828-1893) in the preceding year. However, by that time many studies by natural scientists and scholars had appeared that were devoted to questions of the origin and evolution of man, both in Britain and abroad. Among these, the work of Sir Charles Lyell (1797-1875), whose *Principles of Geology* (1830-32) was a

significant source of both Darwin's and Wallace's inspiration, played an important role (Lyell 1863), and the English translation of Carl Vogt's (1817-95) *Vorlesungen über den Menschen, seine Stellung in der Schöpfung und in der Geschichte der Erde* of 1863 (Vogt 1864), which Darwin discussed at length in *Descent of Man* (cf. Eiseley 1961:267-70). These were followed by similarly voluminous studies in 1866 by Friedrich Rolle (1827-87) and Ludwig Büchner (1824-99), two very influential German biologists of the period. Alexander Blikkers, the translator of Schleicher's 1863 essay on Darwinism and Linguistics, added a variety of other (albeit incomplete) references (see Schleicher 1869:10), which I have included in the Bibliography (below) whenever I was able to identify them.<sup>5</sup>

The present volume contains the response that Darwin's *Origin of Species* received in Germany during the 1860s from linguists particularly interested in the question of the origin and evolution of speech, still today regarded as the *differencia specifica* of man in contrast to the animal kingdom, including man's closest relative, the ape. Interestingly, the attention of both Schleicher (cf. Schleicher 1869:13-14) and Bleek, a cousin of Haeckel (cf. Bleek 1868:70), had to be drawn to Darwin's work by the biologist Haeckel, who originally had Schleicher, the ardent botanist, in mind, and not Schleicher, the linguist. However, once he had noted the possible relevance of Schleicher's observations for the evolution of man (as well as of human speech), Haeckel soon embarked on speculations of his own, citing the work of his friend and colleague at Jena as supporting the Darwinian hypothesis (cf. Haeckel 1863; 1868a, b). Since I have shown the influence that the 13 years older and already established Schleicher had on the young Haeckel in an earlier paper (Koerner 1981b), I would like to simply state here that Haeckel took the development of the Indo-European languages from a common ancestor through variation and selection, especially in the form of Schleicher's *Stammbaum* theory, as evidence for the general applicability of Darwin's findings to the evolution of man and to the origin and development of language. Contemporaries of Haeckel, including Wallace, were early on by no means so sure of these conclusions but recognized the difficulty in treating glottogony as something that has its source in the workings of 'natural selec-

2) Cf. Bedell (1968) for the fascinating story of this convergence of views between Darwin and Wallace, and how Lyell managed to ensure that Darwin retains the pride of place in this discovery.

3) For details, consult Eiseley (1961:287-324), "Wallace and the Brain".

4) Wedgwood was best known as the compiler of a 3-volume *Dictionary of English Etymology* (London: Trübner, 1859-65); he was also a brother-in-law of Charles Darwin.

5) Thus Blikkers mentions "Von Pelzen (1861)", which I believe to be the Austrian ornithologist August von Pelzelin (1825-91), but of whom I have been unable to find the work Blikkers appears to be referring to.

tion' and 'survival of the fittest'. Schleicher's (1865) sequel to his 'open letter' to Haeckel indeed points to the development of both the brain and the speech organs as the bases for tracing the evolution from 'man' before he was man, namely, when language appeared, to *homo loquens*. He argued:

With assumption of a material basis of language in the somatic character of man, the only compatible theory for the origin of language is one assuming an evolutionary theory of language together with that of the brain and the speech organs. (Schleicher 1865:20-21 = this volume, p.80)

Abel Hovelacque (1843-96), a French linguist who collaborated with Paul Broca (1824-1880), the famous physiologist and neurologist, reviewed Schleicher's essay positively, agreeing with Schleicher's view of languages developing in stages from simple to more complex structure.<sup>6</sup> Broca, who had published his discoveries of the speech centre from 1861 onwards, had taken notice of Darwin's *Origin of Species* by 1862, regarding Darwin's findings as a demonstration of Lamarck's hypothesis of the mutation of species advanced 50 years earlier in his *Zoologie philosophique* of 1809 (Broca 1863; cf. Mayr 1972). I do not know whether Hovelacque ever drew Broca's attention to Schleicher's work.

More than one hundred years later, during the 1970s, Schleicher's observations find an enthusiastic commentator in an anatomist with a profound interest in languages, especially non-Indo-European, including Chinese, African and Amerindian languages. In the meantime, many discoveries had been made, both in genetics and linguistics, with the result that Schleicher's claim that there must have been numerous original languages (*Ursprachen*), a claim he made before he had an opportunity to familiarize himself with *Origin of Species* (cf. Schleicher 1860:40), is now criticized: Joachim-Hermann Scharf (1973:143-44), for instance, regards Schleicher's rejection of a monophyletic origin of language in favour of a polyphyletic hypothesis as a

sign of the *Zeitgeist* to whom Schleicher paid tribute.<sup>7</sup> Schleicher's observation, however, that linguistic science "finds... no contradiction of the assumption that the simplest expression of thought through sound or that the languages of simplest structure are descended from vocal displays and mimicry, such as possessed by animals" (1865:20; this volume, pp. 79-80) is received with approval. In his view (Scharf 1973:145), this hypothesis agrees with findings of modern anthropologists and biologists (e.g., Hockett 1960; Marler 1973). In my opinion, this question has not yet been decided once and for all, despite various recent experiments in which monkeys appear to have been taught successfully the rudiments of man-made sign language. Schleicher agrees with Huxley's (1863) findings however, according to which language is the defining characteristic separating man from the nearest anthropoid apes (Schleicher 1865:14 = this volume, p. 78). He denies that these could express *thought* by means of sound (structured sound that is), and that this capacity is specific to man exclusively. Indeed Schleicher's proposal that the 'natural system' of man should not be arrived at on the basis of physical characteristics — he notes (pp. 16-17 = this volume, p. 79) that there is no parallelism between race and the language different peoples speak — but on the basis of language structure alone. With the help of a 'comparative anatomy of languages' (p. 19 = this volume, p. 79), Schleicher felt that the proof could be made that languages evolved from simple to more complex grammatical forms.

Schleicher had no first-hand knowledge of languages spoken outside Europe; as a result, he relied on reports from others when he argued that the languages of Indians in North America "are unfitted for historical life because of their endlessly complicated languages" and that they are, for that matter, destined to 'gradual extinction' (Schleicher 1865:28-29 = this volume, p. 82), a view hardly anyone would entertain nowadays. Language, whether complicated or simple in structure, is one thing, political and economic might is another.

Wilhelm Heinrich Immanuel Bleek (1827-75), who spent most of his life studying the languages of Africa, did not make any such statement, though he entertained the view that the various kinds of clicks found in many of these

6) See Hovelacque's review of the French translation of Schleicher's two 'Darwinian' essays, *La théorie de Darwin et la science du langage: De l'importance du langage pour l'histoire naturelle de l'homme* (Paris: Franck, 1868) in *Revue de Linguistique et de Philologie comparée* 2, 476-80 (1869). In a comment on the theories of the origin of language by one of his compatriots, Hovelacque cites at length from Schleicher's 1865 essay; see *Revue de Linguistique* ... 3, 102-107 (1869), pp. 103-105. On p. 106 Hovelacque points to the localisation of the speech centre in the human brain, though referring only indirectly to Broca's findings.

7) A certain Joseph Kuhl wrote a monograph on Darwin and linguistics in 1877, in which he argued that since it has been accepted that man has its origin in a single species, the single origin of language should also be accounted for by linguists (cf. Kuhl 1877:56 and elsewhere; on Schleicher, pp. 24ff.).



languages "must be made an object of special attention if we would arrive at even an approximate idea of the original vocal elements from which human language sprang" (Bleek 1869:52n). In other words, Bleek held to the idea that these sounds might well represent an early stage in language evolution, which he assumes to have begun with the 'involuntary utterance of a feeling' which became the sign of a particular feeling (p.49). More than 100 years later, the Africanist Roman Stopa (e.g., Stopa 1974) maintains similar views, namely, that the various clicks in Bushman have analogs in the sounds produced by Chimpanzees. Indeed, he holds that the language of the Bushmen is characterized by highly complex sounds, whose combinations produce a high number of synonyma and great redundancy of information.<sup>8</sup>

Interestingly enough, Bleek does not expatiate on his observations of African languages when he proposes his different stages of language evolution. He harks back to Herderian ideas of the late 18th century when he refers to the imitative origin of language (p.49) and the close ties between feeling (*Gemüth*) and the 'first words' (p.55), and speculates with few references to linguistic data. Indeed, when he characterizes the second stage of language evolution as lying "in the awakening of human cognition from an animal-like state of unconsciousness" (p.57), one feels reminded of Herder's (1772) concept of *Bewonnenheit*. In this development consciousness "awoke in man with the birth of the first words" (p.56), language and consciousness being closely tied together, each necessitating the other. Following the stage of simple, isolated words, combination of words and, subsequently, various kinds of affixation are characteristic of the next stages of language evolution. Fixed word order in 'isolating' languages — Bleek (p.68) notices the similarity between Chinese and English in this respect — and the development of grammatical categories belong to the later stages. On the issue of the nature of pronouns and their significance in glottogony Bleek stops his discussion. In this connection he distinguishes, as Schleicher had done on many occasions since 1850 (cf. Koerner 1982:14), between the 'developmental' phase of language (cf. Schleicher's *Sprachenentwicklung*) and the 'history' of language (*Sprachgeschichte*), i.e., the period which begins when spoken language enters recorded history by being committed to writing. This historical phase, Bleek argues (p.69), is no longer the sphere of language origin, which was the subject of his treatise.

8) Since click-consonants are found only in this geographical area, one might well argue that pre-

The reader of today may find a number of interesting proposals in both Schleicher's and Bleek's suggestions, as well as many confused ideas, especially in view of the rediscovery of the findings of the Bohemian monk Gregor Mendel (1822-84) and the establishment of modern genetics. Indeed, the reader of Schleicher's 'Darwinian' essays of 1863 and 1865 as well as of Bleek's 1867 monograph will notice that neither did in fact fully subscribe to Darwin's evolution theory. In Schleicher's case, it has been established by Maher (1966) that he had developed his ideas about language evolution before he had an opportunity to read *Origin of Species* (cf. Schleicher's own statement to this effect on p.16 of this volume). Indeed, as early as 1853, i.e., six years before the publication of Darwin's book, Schleicher published tree diagrams in two separate places (cf. Priestly 1975:301 and 302); he embraced Darwin as kindred spirit, whose findings were little more than "the unavoidable result of the principles recognized in the modern science of nature" (Schleicher 1869:29 = 1863:11-12). Schleicher remained for all purposes basically a pre-Darwinian evolutionist, notwithstanding his approval of Darwin once he had heard of his work.

Neither could Bleek's treatise have been influenced by Darwin's theory of evolution because it had been written several years before its publication; "it formed part of a work which competed in 1853 for the Volney prize" (Bleek 1869:ix), and in his lengthy preface of 1867 the author makes no visible effort to align his views with those advanced in *Origin of Species*. In Bleek's words, his treatise was undertaken from "the philological stand-point" and "the certainly undeniable fact of the immediate connection of the faculty of language in man with the peculiar constitution of his brain has not been taken into consideration" (p.xxix). It is understandable that Bleek's *Origin of Language*, despite the public endorsement it received from the famous biologist Ernst Haeckel, is not mentioned in Otto Marx's paper on "The History of the Biological Basis of Language"; but it is disappointing to see in the same article that the author left Schleicher's proposals about glottogony rather unexplored (cf. Marx 1967:459).

Both Schleicher and Bleek incurred the wrath of the Yale linguist William Dwight Whitney (1827-94) for their naturalistic views of language; Schleicher after his death in 1868 at age 47 (Whitney 1871). Bleek, who died at about the same untimely age, lived to see the criticism published (Whitney 1873).<sup>9</sup> In the annals of the discipline Bleek remains remembered for his *Com-*

9) Steinthal's (1872) review of the 1868 German version of Bleek was milder, though he defends

*parative Grammar of South African Languages* of 1862-69, which, though it remained incomplete, was "the first work of its type in the field" and "had a profound and enduring impact" (Cole 1971:9), whereas Schleicher's *Compendium der vergleichenden Grammatik der indogermanischen Sprachen* of 1861-62 remains the acknowledged synthesis of 19th-century historical-comparative linguistics until that period, though Schleicher remained also remembered for his excursions into the natural history of man and language.<sup>10</sup>

With a republication of Schleicher's *Die Sprachen Europas* of 1850, together with a detailed evaluation of his life and work, appearing at the same time as the present volume, there is no need to refer the reader to places where biographical information on him could be found. By contrast, Bleek's career is known only to specialists in African languages. I therefore mention several books in which biographical information on Bleek may be gleaned and in fact pictures of him found: Introduction to Robert Needham Cust's (1821-1909) *A Sketch of the Modern Languages of Africa* (London: Trübner & Co., 1883), with a picture of Bleek opposite p. xvi; Jan Antonie Engelbrecht's edition of Bleek's *Zulu Legends* (Pretoria: J. L. van Schaik, 1952), and Otto H. Spohr's edition of Bleek's *Natal Diaries* (Cape Town: A. A. Balkema, 1965).

Chicago, September

—Engelskirchen, December 1982.

K.K.

## INTRODUCTION

J. PETER MAHER

In standard historiography August Schleicher is termed a 'Darwinist'. The story is generally told thus:

In his youth an ardent Hegelian, Schleicher late in life came under the influence of Darwin and conceived his theory of language as a natural organism and of linguistics as a natural science. He even wrote a booklet, *About the Darwinian Theory and Linguistics*...

A dozen years after I put together this 'composite picture' of the oft-told tale, a remarkably similar re-telling was published:

Schleicher began as a Hegelian, but in the end he totally rejected idealism and turned to Darwinism (Stam 1976:234).

I first formulated the composite text in 1964 in a paper that appeared in print two years later (Maher 1966). At least one scholar who had included the Schleicher story in a first edition correctly dropped it from his second (Lehmann 1962:139; 21973). At least one other, oblivious of intervening improvements in knowledge, keeps it unchanged in two successive editions (Waterman 1970:31). Further paraphrases of this are found in Malmberg (1967:3), Sebeok (1963:466), Silverstein (1971:xxi), Fromkin & Rodman (1978:339), and others. (Sebeok and Silverstein indeed take an inordinately broad swipe at 'Schleicher's simple-minded Darwinism' and 'the naive linguistic Darwinism of August Schleicher', respectively.) A full catalogue of repeaters of this historiographic commonplace would be tedious; here I refer only to sources that are more or less influential or might influence a public that has grown too trusting of professorial asides and neglects primary sources.

It should be obvious from the gross resemblances between its retellings that this tale is a *locus communis* of the historiography. And in poetic justice to Schleicher, the 'cognates' could be drawn up in a *Stammbaum*. The various repetitions in recent literature seem traceable to influential sources late in the last and early in the present century. One of these was J. E. Sandys (1908:209 n.3):

<sup>10</sup> His 1863 essay was translated into Italian as late as 1965; cf. Tristano Botelli, *Per una storia della ricerca linguistica* (Naples: Morano), pp. 123-36 ("La teoria darwiniana e la scienza del linguaggio. Lettera aperta al Ernst Haeckel"). The 1868 French translation, preface by Michel Bréal (1832-1915), of the two 'Darwinian' essays (cf. note 6 above) have recently been reissued by Patrick Tort in his *Evolutionnisme et linguistique* (Paris: J. Vrin, 1980), pp. 59-91.

He was not a classical scholar ... he was a Darwinian botanist who handled language as if it were the subject matter of natural, and not of historical science.

A generation earlier we read an even likelier source, Delbrück (1882:40-41):

... with the works of August Schleicher (born 1821, died 1868) we are compelled to observe that an influence, recognized by himself, was exerted upon this scholar from two fields of science which lie outside the domain of philology, viz. Hegel's philosophy, of which he was an adherent in his youth, and modern natural science, for which in the latter part of his life he showed a passionate predilection.

Those who made such liberal use of the foregoing, however, did not read to the end of Delbrück's treatment of Schleicher, for (p.54) he writes:

... we can at once answer the question, how far the scientific tendency of Schleicher was materially influenced by natural science. ... nothing has been borrowed from natural science. ... Little as he would himself acknowledge it, he ... is in the essence of his being; — a philologist.

In his last paragraph of the sixth edition we find:

Die Wirkung der Darwin'schen Anschauungen auf die Sprache lässt sich nicht an Schleicher beobachten (Delbrück 1919:99; cf. 1880:44).

The tale of Schleicher's purported Darwinism, as the assiduous and scrupulous research of E.F.K. Koerner has established, owes its propagation in North America especially to the influential William Dwight Whitney, who — after Schleicher's untimely death — it must be noted, and not in his lifetime, heaped scorn on the ideas of a man who could no longer defend himself. (In our day, the intermediacy of Jakobson may also be suspected, judging from the asides indulged in, without verification, by several of his pupils.) Incadences appropriate to the USA's Moral Majority of the 1980s Whitney veritabily intones:

The eminent linguistic scholar Schleicher was also sorely infected with Darwinism, and sought to bring the science of language into relation with it in a couple of noted essays (Whitney 1873:294).

Though Whitney elsewhere quite rightly rejects and even ridicules some of Schleicher's philosophy, here his swipes are gratuitous, and they show that he is surprisingly ill informed about the place of Darwin in the evolution of evolutionism. He in fact held the same view as Schleicher, not Darwin, that the course of evolution — for one variety of evolutionists — was 'progress'; when he affirms: "Who would not belong to a race whose career is steadily up-

ward?" (Whitney 1873:293). But the much-told tale is not merely that; it is also, as informed anthropologists and linguists have long known, wholly apocryphal. Schleicher's evolutionism was whole and entire before he had ever heard the name of Charles Darwin. That was the argument of my first scholarly publication (Maher 1966).

Most recently the account of 'Schleicher's Darwinism' appears in a work pretending to greater authoritativeness than the aforementioned, where it is merely a passing matter, for this time the author is known as a specialist in the history of linguists, Hans Aarsleff.

Aarsleff's treatment of the 'Darwinism' issue is curious in the extreme, for he actually defends the equation of evolutionism with Darwinism, a misconception usually limited to Bible-belt fundamentalists. His readers may, mistakenly, assume that he has carefully researched and justified his position. That he relegates the matter to an endnote (Aarsleff 1982:320 n.3) is improper, since the question is far from trivial. And since he dismisses, without quotation, the arguments that I published in 1966, I can here usefully review these and add evidence that I have gathered in the meantime.

My earlier article on Schleicher (Maher 1966) at first attracted little attention, linguists' passions at the time being stirred more by tree diagrams and re-write rules. The first historiographer of linguistics to print critical notice was E.F.K. Koerner, who has meanwhile dedicated several important studies to Schleicher, his influence on the field, and to influences on him (e.g., Koerner 1972, 1975, 1981a, 1981b, 1982). Whereas readers qualified to pass judgment on the 1966 piece have uniformly adjudged it well-founded, Aarsleff dismisses it, out of hand. Hoenigswald's (1963) valuable article on Schleicher's training in philology under Friedrich Ritschl (1806-1876) is in fact passed over in total silence, and Wellek's (1956) informed arguments against the equation of Darwinism and evolutionism are, in the cited note, only obliquely mentioned, again without the courtesy of quotation.

Koerner's work, however, Aarsleff turns to again and again, and this largely in the endnotes, but also in the body of his paper on "Bréal and Schleicher" (Aarsleff 1982:298-334). Against Koerner Aarsleff hurls shrill charges of concocting "ad-hoc myths by which the conventional history is maintained" (Aarsleff 1982:320 n.1), and of "unreliability, whether it is a question of misrepresentation or plain ignorance of the items he reports on" (*op. cit.*, 327n.35). The Jeremiad brims over in a diapaason alleging Koerner's 'patent misrepresentation', then (plural) 'misrepresentations', followed by insinuations of his lack of "honesty and integrity in writing, citation, and editing" (*op. cit.*, 329n.48).

Omission and dismissal without citation of important work might indeed suggest an author's ignorance or lack of integrity, and thus I find Aarsleff's own lack of mention and mention without quotation in regard to my own work and that of Hoenigswald and Welck deserving of close scrutiny. Aarsleff has suggested some motivations for these practices. And it is paradoxical that Aarsleff's dark hints about German nationalism in the writings of others are counter-balanced by his indignation over the fact that "a German reviewer, writing in a reputable German journal, accused me [Aarsleff] of 'prejudice' pure and simple without the slightest effort to examine what I offered in support" (Aarsleff 1982:326n.31; 328n.44). Revealing, too, is his assurance that "the editor of a work in which Koerner 1976 has ... appeared was told of ... the misrepresentations of Koerner 1972b" (329.n.48); that editor seems not to have shared Aarsleff's assessment.

Next I must take up Aarsleff's dismissal of my 1966 article, as he for one reason or another, "didn't make the slightest effort to examine what I offered in support" of my conclusion that Schleicher was a pre-Darwinian evolutionist, a 'progressionist', not a Darwinian, i.e., a 'transformist' (*sic*), a distinction to be clarified below.

If, in 1982, a hundred years after Darwin's death, some biology student should write on his history of science exam that 'evolution(ism)' and 'Darwinism' were equivalent terms or that the theory of evolution began with Darwin, that poor soul would receive short shrift. He could be said to be operating "on the level of the most vulgar journalistic readings of Darwin", a formula I take from Aarsleff (1982:295), though he had another target in mind when he penned this turgid phrase.

Inexplicably for a historian and historiographer, Aarsleff defends the 'vulgar reading' that equates evolutionary theory with Darwin. I quote what he offers in support of his position (Aarsleff 1982:320n.3):

Maher 1966 argues that the "tale" of Schleicher's Darwinism is "wholly apocryphal," but this goes against the plain dictionary meaning of Darwinism and Darwinian, the latter meaning a follower of Darwinian as the term was used soon after 1859 of dozens of figures by themselves or others, even though what they claimed had little or no basis in an understanding of the *Origin of Species*. Schleicher's two pieces [1863, 1865] protest emphatic adherence to what he took to be Darwinism, though he had of course earlier, like others, treated language study as a natural science.

I have no quarrel with Aarsleff on three points:

- 1) Dictionary readings could well equate 'Darwinism' with 'evolution' as a factual statement of usage. (Thus the man in the street uses the words 'deduction' and 'imply' where the logician would use 'inference' and 'to infer'.) But even at that, the dictionary readings are not quite what Aarsleff implies.
- 2) That Schleicher began to call himself a 'Darwinist' after Haeckel introduced him in 1863 to the German translation of *Origin of Species* (Darwin 1860) was never questioned.
- 3) That there were pre-Darwinian evolutionists before Darwin was in fact a major argument in Maher (1966).

But Aarsleff's note would lead his readers to believe that I held contrary views on the above, and — whatever his reason — Aarsleff pays no attention to my central point, viz. that in calling Schleicher a Darwinist, the authors I have criticized are, firstly, merely repeating something they have never verified in primary sources and, secondly, in repeating that 'late in his life' Schleicher jumped on Darwin's bandwagon and began to treat 'language as a natural object and linguistics as a natural science', they believe and lead their readers to believe that he had earlier not done so. — Aarsleff's whole note is a *petitio principii*. A fitting epitaph for it would be one he has penned himself: "the accredited story is not to be history [*sic*], but to ensure that the faith is kept, that the mythical folk-history is respected" (Aarsleff 1982:328n.44).

Having given Aarsleff's reaction to my work a fair hearing, I can now resume the updating of my 1966 paper.

The idea that Schleicher was an opportunist and radically changed the direction of his work after hearing of Darwin (1859) is the one that dominates our historiography. The misconception that Darwin initiated evolutionary theory began immediately after the appearance of *Origin of Species*, as all Darwin scholars know. A contemporary witness, the philosopher Hans Vaihinger (1853-1923), helps us to appreciate this:

The idea of evolution became one of the fundamental elements of my mental outlook. Herder draws special attention to the evolution of spiritual life out of its first animal origins, and he regards man always as linked up with that Nature from which he has gradually evolved. Thus in 1869, when I first heard Darwin's name and when my schoolfriends told me about the new theory of man's animal ancestry, it was no surprise to me, because through my reading of Herder I was already familiar with the idea. In later years there has been much discussion as to whether Herder can be called a forerunner of Darwin. At any rate in my case Darwin's theory of descent added nothing new to what I had learnt from Herder. (Vaihinger 1924:xxiv)

Vaihinger's testimony shows that even well-informed and sympathetic scholars were not aware what Darwin's particular contribution to evolutionary theory was, viz. the principle that species 'change' through variation and selection of the concrete individuals of a population. The impression that Schleicher, or any other evolutionist, was a 'Darwinist' followed suit. Subsequently, the decline in interest and competence in historical linguistics, in the history of linguistics, and in historical science in general that prevails among mainstream linguists made possible the standard myth that Schleicher was a Darwinist.

Among living and recently deceased linguists, there have been exceptional cases of scholars well informed about the history of evolution. (They are typically anthropologists and philologists, too.) Alfred Louis Kroeber (1876-1960), for one, wrote:

Linguistics, very exceptionally, about 70 years before *Origin of Species*, became diachronically genetic through discovering evidence of [Indo-European] language relationship ... the line of investigation was scarcely affected by biological science ... after 1859 (Kroeber 1960:36; emphasis mine: JPM)

Another well-informed anthropological linguist, Joseph H. Greenberg (born 1915) wrote:

In the sense of transformism ... evolution was an accepted theory in linguistics earlier than in biology ... The essential likeness between genetic theories in language and the evolutionary hypothesis in biology was explicitly recognized by Schleicher ... He treats evolutionary theory in biology as, in principle, the equivalent of the genetic model of linguistic relationship ... the recognition of the fact "of evolution" in linguistic science preceded its general acceptance in biology. (Greenberg 1957:58).

Information in England was also correct; compare John Rupert Firth's (1890-1960) observation of 1935:

The evolutionary and comparative method had been used by philologists in the eighteenth century. Comparative Philology was, in fact, the first science to employ this method, and for a very good reason. Although the Bible may have delayed its application to anatomy, the idea of the unity of mankind and the eleventh chapter of Genesis beginning with 'the whole earth was of one language, and of one speech', followed by the confusion of Babel, actually prepared the ground for its use in the linguistic field. Curiously enough Trench makes this quite explicit in 'affiliating' changes of meaning on the one central meaning, "just as the races of men ... despite of all their present diversity and dispersion, have a central point of unity in that one pair from whom they all have descended". From the little I know of the

early Jewish Rabbi Grammarians I believe that it was from these medieval Semitic comparativists that Christian scholars took over the technical idea of linguistic unity; and that eventually towards the end of the eighteenth century in the atmosphere of evolutionism and the Romantic Reaction it became the key principle. This is the 'genesis' of *Ur- and genuin-, common, primitive, common, proto-*, and of the emphatic recurrence in French philology of such phrases as "*une langue une*" and "*unité linguistique*". (Firth 1957:16n.).

Having had an interest in biological evolution from childhood, which was quickened by debates among my own peers between fundamentalists and the (more knowledgeable) evolutionists, by the revelation of the Pittdown hoax in the early 1950s, and above all by the outpouring of literature on the centenary of the appearance of *Origin of Species* in 1959, I was surprised, to say the least, when at age thirty, on returning to graduate school to take a doctorate in linguistics, I read and heard the improbable tale of Schleicher's 'Darwinism'. Trained earlier in philology, I was well aware that not all sentences are novel creations but that many are common-places copied wholesale down through history. Rulon Wells encouraged me to research the historiography (and introduced me to Hoenigswald's important 1963 paper). Wells' lectures of summer 1964 in Bloomington in the history of linguistics were for me the first experience of hearing someone who had done his homework on the matter.

Like Firth, Hoenigswald looked to philology for the inspiration of Schleicher's Stammbaum and the evolutionary concept. In cosmology, geology, biology, and history, independently, a generation earlier, substantially the same view had been elaborated by Robin George Collingwood (1890-1943):

Modern cosmology could only have arisen from a widespread familiarity with historical studies, and in particular with historical studies of the kind that placed the conception of process, change, development in the centre of their picture and recognized it as the fundamental category of human thought. This kind of history appeared for the first time about the middle of the eighteenth century. (Collingwood, *The Idea of Nature*, Cambridge 1945:10)

Where Collingwood says 'history' and Hoenigswald has 'philology', Alfred Gercke equates the two: "history is philology, and philology is history" (Gercke & Norden 1912 I:35). One more scholar who has done his homework is René Wellek (b. 1914):

Evolutionism should be called Darwinism only when it implies the mechanistic explanation of the process (which was Darwin's special contribution) and when it uses such ideas as "survival of the fittest, natural selection, transformation of the species". (Wellek 1956:53.)

In sum, Darwinism means evolutionism only for the man in the street, be it in Vaininger's day or ours. Though the popular confusion set in fast after 1859, the historical truth is different.

"I feel as if my books came half out of Sir Charles Lyell's brain", was Darwin's own admission. Lyell (1797-1875), the founder of modern geology, provided the foundation for the work of Charles Robert Darwin (1809-1882) and Alfred Russell Wallace (1823-1913), whose article on evolutionary theory forced Darwin to publish much earlier than he wanted a much shorter *Origin of Species* than he had theretofore contemplated. It was in fact Lyell who arranged for the simultaneous publication of the theses of both Darwin and Wallace. Lyell, in a letter to the German naturalist Ernst Haeckel (1834-1919), later wrote: "Most of the zoologists forget that anything was written between the time of Lamarck and the publication of our friend's *Origin of Species*" (Eiseley 1958:102). And significantly it was Haeckel who introduced Darwin's work to his friend August Schleicher, because of Schleicher's long-standing passion for gardening. The upshot of these camaraderies was the booklet *Ueber die Darwinsche Theorie und die Sprachwissenschaft* (1863), with subtitle "Offenes Sendschreiben an Herrn Dr. Ernst Häckel, a[ußer-] [identlichen] Professor der Zoologie und Director des zoologischen Museums an der Universität Jena". (Its 1869 English translation has been reprinted in this volume.)

As Lyell lamented to Haeckel, Darwin's position relative to his predecessors was misunderstood even in the last quarter of the 19th century. Likewise Schleicher's: in 1884, sixteen years after Schleicher's death, we already read of 'Darwinian-Schleicherian spice' (Pott 1884:347) as also today among those who do not read their sources. But, as Koerner (1982) has suggested, August Friedrich Pott (1802-1887) was at least reacting to Schleicher's nasty remarks about etymology, a field championed by Pott (cf. also the remarks in Pott 1887: 15, 164, 172-73).

Schleicher's reputation, just as that of the other pre-Darwinian evolutionists, is eclipsed by the fame of Darwin. Yet, Schleicher knew well Darwin's own intellectual Stammbaum. In *Darwinsche Theorie* (p.12) he wrote: "What Lyell did for the life story of the earth, Darwin did for the life story of the inhabitants of the earth." In the next sentence: "Darwin's doctrine is no coincidental phenomenon, it is not the brainchild of an aberrant head, but *ein echtes und rechtes Kind unseres Jahrhunderts*". (See this volume, p.30). Further (1869:23), "Darwin's book ... appears to me to be in complete accord with the basic theories of philosophy that one finds more or less clearly known

and enunciated in the works of most natural scientists" (Schleicher 1863:8).

Schleicher's placement of Darwin, though he, too, missed the specific merit of Darwin's contribution, is correct. Meanwhile, Loren Eiseley (1958) has shown clearly Darwin's indebtedness, not only to Lyell, but to Edward Blyth (1810-1873) and Thomas Robert Malthus (1766-1834), both of whom developed the principle of natural selection. Theodosius Dobzhansky (1900-1976) should also be consulted here (Dobzhansky 1962).

Schleicher (1863:6) also cites the authors who have strongly influenced his own evolutionary view of language: "I, at least, know very well what I owe to the study of such works as Matthias Schleiden's *Wissenschaftliche Botanik* and Carl Vogt's *Physiologische Briefe* for the comprehension of the essence and the life (*Wesen und Leben*) of language." (Whitney-readers will note the irony of his appropriation of Schleicher's phraseology, *The Life of Language* for his 1875 book on general linguistics.)

Evolutionism was made explicit in 1809 by Lamarck; it was Darwin who vindicated the theory just when it stood in the greatest danger of being discarded, by giving it a satisfactory natural mechanism and "a convincing body of observations in support thereof". This is the *précis* written by Vere Gordon Childe (1893-1957), who continues:

The systems of Linnaeus and Buffon in the eighteenth century had already set out phyla, orders and genera of living organisms in an arrangement that was somewhat hierarchic. [...] In the eighteenth century, too, savants were becoming better acquainted with human societies fundamentally different from European. ... ethnographers of the eighteenth century sought to introduce order — and that an hierarchic one modelled on the *Systema Naturae* [of Linnaeus first published in 1735: JPM] into the growing mass of odd customs, rites, and beliefs that were being recorded with ever growing accuracy. By 1850 Herbert Spencer (1820-1903) in his *Social Statics*, had adumbrated an analogy between Society and Organism, an analogy tediously elaborated in his *Principles of Sociology* ... As organisms grow, so do societies ... evolution is inevitable (Childe 1962: 13-14).

*Origin of Species* appeared nearly a decade later, on the last Friday of November 1859, and was totally sold out in a matter of days. Schleicher, then, like so many of his contemporaries and predecessors was an evolutionist, but a pre-Darwinian evolutionist.

There were varieties and sorts of pre-Darwinian evolutionists, and Schleicher, to judge from his own words on the subject of evolution in the days before *Origin of Species* appeared, falls under the heading of 'Progressionist', which Eiseley (1958:95) characterizes as follows:

Here in the pre-Darwinian portion of the nineteenth century, we encounter what is really a combination of traditional Christianity overlaid with a wash of German romantic philosophy ...

Darwin (1859:366) believed in the inheritance of acquired traits, Schleicher holds that the potentiality for change is solely inherent in the ancestor: *Urvindogermanisch* was as much *Urkeltsisch* and *Urdeusisch* and *Urvitalisch* as a "seed is to be certain extent the plant"; and "the Indo-European Ursprache contains the conditions of its later processes."

An amazing recrudescence of this antique notion is found in Chomsky and Halle (1968:49), with their view that 'underlying forms' are 'remarkably' stable, a view retained despite himself by 'generative phonologists' of the 1960s who took diachronic sound-laws as isomorphic with synchronic rules.

A point of coincidence in Darwin and Schleicher is their acceptance of pangensis, by Darwin in the last edition of *Origin*, by Schleicher in *Deutsche Sprache* (1860:41, repr. in this volume, pp.68-69). For Schleicher, language develops spontaneously in a homogeneous group. And in his *Darwinsche Theorie* we read (Schleicher 1863, p.27): "Agreements in the structure of geographically neighboring language families are considered by us to be after-effects from the time of the earlier and earliest life of language." This is the stand against which Schleicher's pupil Johannes Schmidt (1843-1901) later directed his *Wellentheorie*. Schleicher, noting that Lithuanian dialects in the Russian Empire are phonologically more similar to Russian than the Lithuanian dialects in Prussia, did not want to see this reflecting wave effects, i.e., diffusion of culture through intermarriage, bilingualism and other acculturation but insisted it was the work of family-tree inheritance.

Schleicher's evolutionism is a development of Linnæus' *Systema Naturæ*, which presents phyla, orders, and genera in hierarchical order. In *Deutsche Sprache* (1860:47) and earlier in *Zur vergleichenden Sprachenschichte* (1848:27-28) Schleicher writes that language is first and foremost a natural organism because languages are ordered under genera, species, and subspecies. But Linnæus, it is to be noted, was no evolutionist; taxonomy for him did not contradict fixity of species. It was Goethe who rewrote 'class' as 'Urpflanze'.

Schleicher had two more reasons for taking linguistics as a natural science. Linguistics is also an empirical science, i.e., methodologically as well as materially that is, linguistics is a natural science because it is based on observation, just as the other natural sciences, unlike, he means, mathematics. But "It is the systematic [i.e. typological] part of linguistics that is a natural sci-

ence, not the historical", says Schleicher (1848:186) and goes on to say "if I'm not mistaken, Bopp said so, too, somewhere". There are two interesting points here. For one, Schleicher reveals that his source, or one of his sources, in the conception of linguistics as a natural science is the founder himself of Indo-European comparative grammar. The second point is that it is not historical linguistics, as the apocryphal story has it, that is a natural science, but typological linguistics.

The explanation of his second point is given in 1848 in Hegelian phrases, in 1860 in plain German. Professional linguists, it seems, have not read Schleicher's popularizing work, but his materialist conception of language evolution is most clearly enunciated in the popular *Deutsche Sprache*. He writes (p.47) "One need only convert the side-by-side arrangement of the System into the successive stages of the becoming" ("Man braucht nur das Nebeneinander des Systems in das Nacheinander des Werdens wandeln"). Which is a thesis he often expressed as far back as 1848 (pp.22-23). A class in the system equals a stage in development; for Schleicher. Language evolves with man; once the human level is reached, language is complete. After evolution from the subhuman, man enters the period of history; language is already perfect, so cannot by progressionist definition 'evolve', i.e., improve or progress any further, but only undergo change from its pristine perfection. This is *Verfall* "degeneration", for in 'progressionist' evolutionism Creation is finished. Schleicher says: "... Nature, in earlier epochs abounding in creative power, has in our time settled down to mere reproduction; she creates nothing new any more" (Schleicher 1848:17, cited by Streitberg 1897:365 and referred to p.368). At no point is the gap between Schleicher and Darwin so great as it is here. Darwin, after Lyell and James Hutton (1726-1797), had no Days of Creation with subsequent decay, but held to the belief that "... the system of animal life which had been maintained in the ancient sea, had not been different from that which now subsists" (Hutton 1795:175-76, quoted in Eiseley 1958:74-75.).

Uniformitarianism in sum is the concept that the origin of species proceeded in remote geological times according to the same natural principles that are operative today. — Schleicher, like Huxley, before he fell under Darwin's influence, was a progressionist. Evolution in the progressionist schema is the idea of less complex beings becoming, progressing to, the more complex. In this view language, once it is fully developed from sub-, or pre-language, cannot logically 'progress' any more. History shows only further changes, none of them effecting a progression to a higher rung on the



evolutionary ladder. And history shows no trace of a sub-language progressing toward full language. Language qua language exists; it changes. But what it changes into is no more language than what it changed from. Such change is not progression, as there is no ascent from larva to pupa to adult. The adult changes; however, this phase of change is not 'evolution' in the progressionist sense, but only in the developmentalist sense. Schleicher's 'corruption' (*Verfall*) matches Buffon's 'degeneration', under which a series may be 'transformed', but is not 'promoted' to a higher stage.

Darwinian evolution allows for transformation of species without attendant 'improvement'. An anachronistic exception is Marxism-Leninism, which sees each successive 'stage' of development as 'progress'. In the scenario of an egalitarian society overthrown by a slave-owning system, the latter is, by definition, 'progressive'. 'Progressive', too, in their turn were feudalism, capitalism and so on.

The least understood progressionist idea of Schleicher's is his distinction between 'evolution' and 'history': 'evolution' is the development of more complex beings from simpler, and 'history' is the account of the subsequent transformations of such complex beings. Thus, 'evolution' and 'history' are mutually exclusive by definition. Accordingly, there are two periods, teaches Schleicher in all his works, in the 'life of language': language evolution (*Sprachbildung*), i.e., phylogeny, and language history (*Sprachgeschichte*). 'History' he defines in the Hegelian sense, the necessary condition for which is "man's spiritual consciousness of his freedom". Moderns can understand this in terms of the human and the computer: the latter has no knowledge of itself.

One of Schleicher's more durable ideas is the relation between social and linguistic change. The more a people is 'historical', i.e., the more active it has been in civilization, the more its language structure has been worn away. Schleicher compares English with Icelandic in the Germanic family, as examples of more and less historically active peoples, with accordingly more and less eroded linguistic systems; he says the same of Hebrew vs. Arabic, Greek vs. Sanskrit, Germanic vs. Slavic and Baltic, Western-Indo-European vs. Eastern. The better a language has preserved its form, the less it has been involved in the process of history and the greater is the *Sprachgefühl* of the people, and correspondingly the integrity of the language (cf. *Deutsche Sprache*, pp. 36 and 65). Just as linguists a hundred years later, so Schleicher also loved to couch his ideas analogically in quasi-mathematical language: *Sprachgefühl* and Integrity stand in 'direct proportion' to each other; *Sprachgefühl* stands in 'inverse proportion' to sound laws and analogy (the

simplification of linguistic form, *loc. cit.*). Of Europeans, Romance peoples have the least *Sprachgefühl*, Germanic nations have but little more; Slavic *Sprachgefühl* is far stronger, and Lithuanian strongest of all. This particular doctrine is sometimes heard in courses in historical linguistics today, though without acknowledgement to Schleicher, or to anyone else. Did it originate with him?

The course of Schleicher's conception of language change could be drawn as a parabola: the upward swing is the evolution of language, from sub-language, the vertex is perfected language, the down-swing is history, degeneration, or fall from perfection (*Verfall*). As for the vertex, this can be sharper or flatter to depict the length of time a people has been historically inactive. The last stage with its attrition of linguistic form leads in extreme cases, teaches Schleicher, to what "the natural scientists call retrograde metamorphosis", which in a later jargon is 'atavism' (Eiseley 1958:269; Schleicher 1860:47).

The idea that linguistics is a natural science, as Schleicher's readers know, occurs at least as early as Bopp, in whose *Comparative Grammar* (1833), the first sentence of page one reads:

I intend in this book a comparative, comprehensive description of the Organism of the languages named in the title and an investigation of their physical and mechanical laws and of the origin of the forms designating the grammatical relationships.

Page vii of the second fascicle reads: "The flexions make up the Organism of a language". In paragraph 108, for instance, Bopp speaks of "languages with one-syllable roots, without capability of composition, hence without Organism, without grammar". In *Vocalismus* (1836:1), we further read: "Languages are to be regarded as natural bodies, which are constructed according to set laws, bear within them an inner principle of life, and again and again die out." Bopp designates historically discernible structural changes as 'sickness, mutilation, decay'.

Most linguists of the latter half of the 20th century would attribute the words of Bopp to the 'Darwinist' August Schleicher. The depth and breadth of their misinformation contrasts with Antoine Meillet's informed characterization of Bopp, regarding his view of language as a natural organism — and hence Schleicher, too — as a man of the 18th century!

But if Schleicher's evolutionism, as his Stammbaum diagram, is pre-Darwinian, as Darwin himself allowed, there have been linguistic Darwinists, in an informed sense of the word. Linguists past and present have dealt with vari-



ation and selection, with the genesis of the variants and the sociology of their selection and transmission.

The first sort of linguistic Darwinists is exemplified by those who calculat- ingly used Darwin's concepts and terminology, riding his coat tails. One such was Max Müller (1823-1900), who rephrased Grimm's term *Laufverschiebung* ("sound shift") to 'sound law'. Another, *pace* Aarsleff, who would make this figure the very antithesis of Schleicher, was Michel Bréal (1832-1915), who larded his prose with the Darwinian-sounding 'Law of Specialisation' 'Law of Differentiation', and 'Extinction of Useless Forms' (cf. Bréal 1900, chaps. I, II, VII).

A more thoughtful, less opportunistic adoption of Darwinism, which is really tantamount to what our generation knows as 'ecology', is Bloomfield (1933:365), who quite acceptably used a Darwinian-ecological frame of refer- ence in his description of sound change: "we picture phonetic change as a gradual favoring of some non-distinctive variants and a disfavoring of others". (Darwin's variation and selection are unmistakable here.) Another intelligent use of Darwin's variation-selection dynamics is the work of Jerzy Kurytowicz (1897-1978) in his 'laws of analogy'.

The term 'variation' ought of course direct attention to the work of Wil- liam Labov and his followers, who, no less than Bloomfield, chart evolution through selection of variants. Even if not expressly 'Darwinian', the cited scholars are the best examples of what this poorly understood term means. On the other hand, there are linguists in our day who ape a principle classically as- sociated with the name of the Darwinian *de carrière* Ernst Haeckel, the 'biogenetic law': 'ontogeny recapitulates ontogeny'. These are Noam Chomsky, Morris Halle, and their pupils James Foley, Theodore Lightner, and Sanford Schane; they assume that synchronic rule-systems 'recapitulate' diachronic developments. When no Neogrammarian diachronic treatment of a language tradition is available, as in the question of 'Spanish pluralization', the result is total disagreement among them. (For critique and literature, see Maher 1976, 1977, and Maher-Bomhard-Koerner 1982.)

In conclusion, there have been and there are 'Darwinists', in various de- fensible senses, in linguistics. Only in his support of Darwin after 1863 can Au- gust Schleicher be properly called a Darwinist; his own evolutionary concepts were absolutely pre-Darwinian and non-Darwinian.

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The contribution by Wilhelm Heinrich Immanuel Bleek (1827-75) to Af- rican linguistics, made in his mature years, is still today held in high esteem. He is the father of Bantu linguistics. His *Origin of Language* originally drafted many years before Darwin's book, on the other hand, is a tedious piece of juvenilia, heavy with arm-chair theory and empty of empirical flesh-and- bone; it helps us perceive why the Linguistic Society of Paris in 1866 estab- lished its (in)famous ban on articles dealing with language origins, an interest that only in the present decade has begun to re-surface as a 'legitimate' in- terest for serious linguists.

William Dwight Whitney cannot be too heavily blamed for his excess of bite in having to produce a review of this work and its contentious foreword by Bleek's cousin, Ernst Haeckel, who uses the opportunity to blow his own horn along the way. Some of the young Bleek's ideas, though today untenable, nonetheless have something of a 'modern' ring about them, for he was after all searching for 'implicational universals' in the manner of some contemporary or recent linguists: Bleek wanted to correlate language type with cultural pro- duct, or the lack of such, as for example his fancied link between pronoun-pre- fixing languages and the non-achievement of their speakers in science, inven- tion, poetry, or thought (xxiii). The English translation, a veritable Horatian purple-patchwork, doesn't help, either. For one thing, the difference be- tween biological 'sex' and grammatical 'gender' is lost in calling languages 'sexual' or not. Even here, however, some sense may be retrieved, for, unlike those (e.g., Schleicher) who saw in the isolative Chinese 'monosyllabism' a petrified primitive type, Bleek (1869: xxiiin.) correctly surmised what was em- pirically established a lifetime later, that early Chinese had actually had a morphology, the traces of which have been reconstructed from the modern tones, and that this was a general principle of tonogenesis.

Haeckel displays the racism typical of contemporary Europeans and even later colonists. It was hardly a German vice alone; all of the Empires, German, French, Russian, Austro-Hungarian, and British, as well as the Bel- gians and (in Greenland) the Danes, had their chance to prove that. The treat- ment of sets of their own nation and of unhappy border nations was hardly different. Even Otto Jespersen, in his oft-repeated anecdotes about the 'primitivity' of Basque or Cherokee (Hill 1952), of the 'effeminacy' of

Hawaiian and other peoples of sunny climes, and the 'manliness' and 'democraticness' of the English language reads almost like a transcript of Professor Henry Higgins' number "Why Can't the English" (from Lerner and Loewe's *My Fair Lady*).

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The lasting value of the present re-printing of the evolutionary linguistics of Bleek and Schleicher should be to dispel the lingering ignorance about evolutionism in linguistics. From their writings, it is manifestly clear that these scholars were no Darwinists, but pre-Darwinian Romantics. Whitney (1873:292, 294) has here been given a lopsided reading: it seems that only his denunciation and his ridicule of the metaphysics of those he incorrectly termed 'Darwinists' has been remembered; in this he was wrong. Where he was right was in saying that these (pre-Darwinian) evolutionary views constituted 'far the weakest and most valueless' (294) of the productions of Bleek or Schleicher. Otherwise, modern historical linguistics is firmly rooted in the enduring work of August Schleicher (cf. Koerner 1982).

## LINGUISTICS AND EVOLUTION THEORY

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Postscript: In the preceding bibliography (as well as in the References below), an effort has been made to include all items mentioned in the studies reprinted in the present volume as well as those referred to in J. Peter Maher's Introduction. However, especially several publications referred to in Alexander Bickler's Preface to his translation of Schleicher's (1863) essay, such as "Young 1865", "Pelzen 1861", and "O. E. Schmidt 1866", could not be identified. In the case of the second reference, at least its author, the Austrian ornithologist August von Pelzeln (1825-91), has been established. As far as the third item is concerned, only later publications by the same author (see Schmidt 1873a, b above) related to the present subject have been found.

For further references dealing with the subject, consult Gordon Winant Hewes's 2-volume bibliography on *Language Origins* (The Hague: Mouton, 1975).

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Engelskirchen (Bickenbach),  
December 1982  
K. K.

ADDENDA \*

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\* *Postscript*: Items inadvertently omitted in the preceding list, such as Wilhelm von Humboldt's (1767-1835) famous *Einführung* (Berlin: F. Dümler, 1836) to his posthumous work on the Kawi language of Java or Karl Heyse's (1797-1855) *System der Sprachwissenschaft* (ibid., 1856), can be gleaned from either Koerner (1975:809-827) or the same author's *Bibliographia Saussureana* (Metuchen, N.J.: Scarecrow Press, 1972), Part II ("Background Sources", pp.215-351). -- For other items mentioned in the studies here reprinted, consult the preceding bibliography on "Linguistics and Evolution Theory".

LINGUISTICS AND EVOLUTIONARY THEORY:  
THREE ESSAYS



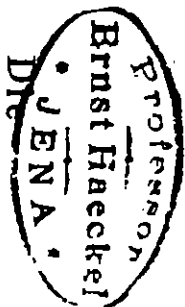
AUGUST SCHLEICHER

THE DARWINIAN THEORY AND  
THE SCIENCE OF LANGUAGE

Translated from the German

by

ALEXANDER V. M. BIKKERS



# Darwinsche Theorie

und

## die Sprachwissenschaft.

Offenes Sendschreiben an Herrn Dr. Ernst Haeckel, a. o. Pro-

fessor der Zoologie und Director des zoologischen

Museums an der Universität Jena und Frau,

*mit der Bitte, herzt. Abend dem Thee bei uns  
trinken zu wollen*

von

**Aug. Schleicher.**

*Jena, am 24ten Octbr.*

**Ernst-Haeckel-Haus**

*der Unversität*

**(Friedr. und Schöna)**

*Jena, Berggasse 7*

**Weimar**

Hermann Böhlaus

1863.

DARWINISM TESTED

BY THE

SCIENCE OF LANGUAGE.

# DARWINISM TESTED

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SCIENCE OF LANGUAGE.

*Translated from the German*

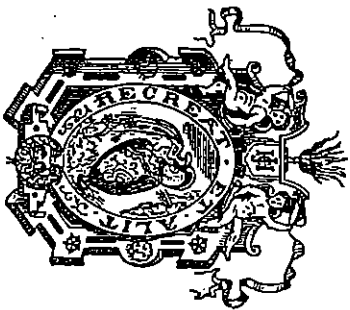
OF

PROFESSOR AUGUST SCHLEICHER,

*WITH PREFACE AND ADDITIONAL NOTES,*

BY

DR. ALEX. V. W. BIKKERS.



LONDON:

JOHN CAMDEN HOTTEN, 74 & 75, PICCADILLY.

1869.

## TRANSLATOR'S PREFACE.

**L**A W and order pervade the universe ; as we proceed in unbiased investigation of the realm of nature we see the clouds of wonder and ignorance dispelled by the torch of knowledge and truth. As the Italian poet has it :—

*La meraviglia  
Dell' ignoranz' è la figlia,  
E del saper  
La madre.*

I have always looked upon the idea of creation from nothing as so absurd, so inconsistent, so unphilosophical, as hardly to deserve the very name of an idea except by way of courtesy.

*My favourite study, glossology, or the science of language, was the first to convert*

me to Darwinism. Here, as elsewhere, I trusted to the grand principle of analogy which underlies so many more of the mysteries of nature.

Ever since 1864, when Fritz Mueller published his remarkable pamphlet, "Über Darwin," a test of Darwinism by one particular group of animals, the Crustacea, it occurred to me that other investigators of natural science might apply the main principles laid down in the "Origin of Species" to their own particular branch of study.

It is but fair to say that Dr. Mueller had been forestalled in his attempt by one of his countrymen, August Schleicher, a distinguished glossologist, and a Professor at the University of Jena. His open missive (or public letter) to Professor Ernst Haeckel, his learned colleague and the great champion of Darwinism in Germany, is the pamphlet here presented in an English garb.

As the translator of Dr. Mueller's treatise says of himself—"My chief object has been to furnish, as nearly as possible, a literal version of the original, regarding mere elegance of expression as of secondary importance in a scientific work." It is always hard to have to deal with any scientific dissertation written on a subject, the terminology of which is still unsettled, and in a language living on its own stock, possessing such words as *Entwicklungsgeschichte*, *Ursprache*, *Grundsprache*, *lautlich*, *Lautform*, and others of a similarly embarrassing nature.

Not the shadow of a doubt lurks in my own mind that the science of language, although still in its infancy, is the highest and at the same time the easiest test of Mr. Darwin's theory.

It is with such a conviction that I venture to issue this English translation of Professor Schleicher's brochure, not only as an addi-

tional witness to the soundness of Darwin's theory, nor even as a mere adding of material to the literature of Darwinism, already represented by the names of Bree and Daubeny (1860), of Von Pelzen (1861), of Rolle (1863), of Floarens (1864), of Hallier and Young (1865), of Haeckel and O. E. Schmidt (1866), of Professor Omboni (1867), of Buechner and Twemlow (1868), and last, not least, of Fritz Mueller, whose testimony hardly reached England before the beginning of this year.

The fruit of my labour may be regarded in no other light than that of an humble palm-leaf on the shrine of a man who has promulgated truth in his attempt to cut short the existence of error.

It may not be superfluous for the non-professional student of language to receive the additional assurance that all data furnished by the German glossologist, as far as his

own department is concerned, are acknowledged axiomata in the science of language, with the sole exception, perhaps, of the very bold statement (p. 47) concerning the impossibility of a common origin of speech, in which I for one do not concur.

Not until after I had finished my translation of Professor Schleicher's remarkable pamphlet did I receive information of the author's premature demise, which occurred at the close of the past year. I embrace this opportunity to express my sincere thanks to Professor Ernst Haeckel of the University of Jena for this and other valuable communications directly or indirectly connected with the subject of Darwinism.

A. V. W. B.

LONDON, Oct. 5th, 1869.

# DARWINISM TESTED

BY THE

SCIENCE OF LANGUAGE.

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**YOU** would leave me no peace until I began reading Bronn's translation\* of the much discussed work of Darwin "On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life." I have complied with your request; I have

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\* "Ueber die Entstehung der Arten in Thier- und Pflanzenreich durch naturliche Zuechtung, oder Erhaltung der vervollkommeneten Rassen im Kampfe ums Dasein." The work was translated from the second edition by Heinrich Georg Bronn, an eminent German naturalist, and published at Stuttgart in 1860.—T.

waded through the whole of the book, in spite of its being rather clumsily arranged, and heavily written in a curious kind of German, and the greater part of the work I was tempted to read again and again. My first thanks are now offered to you for those repeated inducements of yours which ended in my study of this incontestably remarkable work. In supposing that Darwin's "Origin of Species" would please me, you were thinking no doubt, in the first place, of my amateur gardening and botanizing. I confess that our gardening presents many and many an opportunity of observing for example that "struggle for life" which we are wont to decide in favour of our chosen pets, and which, in the language of ordinary life, goes by the name of "weeding." Another point, which the gardener may experience more often than he wishes, is how one

single plant is capable of spreading, as soon as it finds room and favourable opportunities. Finally, with regard to "the variation of species," to "inheritance," in a word, with respect to "selection," there also is a large field of observation and experience for a man who has so long ridden the hobby of cultivating in different directions one of our beautiful flowers that is most capable of variation.

Yet, my dear friend, you were not altogether on the right track, when you wished to make me acquainted with the remarkable book, on account of my love for gardening; Darwin's views and theory struck me in a much higher degree, when I applied them to the science of language.

What Darwin lays down of the animal creation in general, can equally be said of the organisms of speech—nay, it is quite accidentally that I pronounced an opinion



coinciding in a remarkable degree with Darwin's views on "the struggle for life," on the extinction of ancient forms, on the widely-spread varieties of individual species in the field of speech, as far back as the year 1860—that is to say, contemporaneously with the publication of the German Darwin.\* Can you wonder now that the book has made so strong an impression on me?

If you further wish to know what kind of an impression the "Origin of Species," has made upon me, I am quite willing to gratify your curiosity, and that of the public at large. To point out how the main features of Darwin's theory are applicable to the life of languages, or even, we might

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\* Professor Schleichner states in a foot-note that the original English edition, although published in November, 1859, was still unknown to him when he published his "Deutsche Sprache" (1860). The passage in his own work here alluded to will be found translated in the Appendix.—T.

say, how the development of human speech has already been unconsciously illustrative of the same, such a labour cannot fail to captivate you, the energetic champion of Darwinism. Moreover, I am inclined to believe that for others likewise my communication will not be altogether devoid of interest. Whilst, therefore, in the first place, I am addressing you, allowing myself the harmless pleasure of surprising you with an "open letter," I am, above all, appealing to the naturalists, whom I should wish to take more notice of language than they have hitherto done. I do not here exclusively refer to a physiological investigation of the various sounds of speech, a study which has made considerable progress of late, but also to the observation and application of linguistic varieties in their significance for the natural history of man. What if those linguistic varieties were

to form the basis of a natural system concerning the *unique genus homo*? Is not the history of the formation and progress of speech the main aspect of that of the development of mankind? Thus much is certain, that a knowledge of linguistic relationship is absolutely requisite for anybody who wishes to obtain sound notions about the nature and being of man.

It is my earnest desire that the natural history method should find more and more favour with those who investigate the subject of language in general. In this respect the following lines might induce a young glossologist\* to take a leaf out of

\* I am the first, as far as I know, to use this modern Germanism, or Jernaism, for the scientific, philosophical investigator of language; but a name had to be coined or adapted for the man of science, who is neither to be compared with the linguist nor to be confused with the philologist. The heart-rending complaints about innovation, about foreignisms—genus and species—will invariably be found to arise from

the books of able botanists and zoologists. I pledge them my word that they will never repent it, and, for my own part, I feel how much I am indebted to such works as Schleiden's "Science of Botany,"\* Carl Vogt's "Physiological Letters,"† &c., for my conception of the nature and life of speech.

Those books were the first to teach me the history of growth and development. We may learn from the experience of the naturalist, that nothing is of any importance to science but such *facts* as have been established by close objective ob-

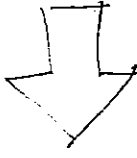
the side of those who are utterly ignorant of the nature of human speech. *Torveign* coin is not necessarily *base* coin; it is at least entitled to a fair test. If a French "smasher" offers us such a coin as "*bibliophile*" or "*patoisophile*," it will, of course, be refused by anybody who has not forgotten his government of the Greek verbs.—T.

\* An English translation by E. Lankester was published in 1849.—T.

† "Physiologische Briefe fuer Gebildete aller Staende," 3 parts. Stuttgart and Tuebingen, 1845-47, 8vo.—T.

ervation, and the proper conclusions derived from them; nor would such a lesson be lost upon several of my colleagues. All these trifling, futile interpretations, those fanciful etymologies, that vague groping and guessing—in a word, all that which tends to strip the study of language of its scientific garb, and to cast ridicule upon the science in the eyes of thinking people—all this becomes perfectly intolerable to the student who has learned to take his stand on the ground of sober observation. Nothing but the close watching of the different organisms and of the laws that regulate their life, nothing but our unabated study of the scientific object, that, and that alone, should form the basis also of *our* training. All speculations, however ingenious, when not placed on this firm foundation, are devoid of scientific value.

Languages are organisms of nature;



they have never been directed by the will of man; they rose, and developed themselves according to definite laws; they grew old, and died out. They, too, are subject to that series of phenomena which we embrace under the name of "life." The science of language\* is consequently a natural science; its method is generally altogether the same as that of any other natural science.† In this respect, the "Origin of Species," which you urged me to read, could not be said to lie so very far beyond my own department.

Darwin's book is, in my opinion, called forth by the tendency of our age, save that passage where the author, humouring the

\* "Dio Glottik," as the author says.—71.

† I argued this very point in the spring of the current year in a course of three lectures, "On the Formation and Progress of Human Speech," delivered to the members of the "Torquay Natural History Society."—71.

proverbial narrow-mindedness of his coun- trymen in matters of religion, delivers him- self of the scarcely consistent confession that his views are not incompatible with the idea of the creation. Of course it is not our intention to touch upon that point here, but the passage is one in which Darwin contradicts himself ; his statements admit only of the notion of a *gradual* formation and development of organisms, not by any means of the idea of a sudden starting from nothing. The only logical conclusion to be drawn from Darwin's theory is that the common beginning of all living organisms must be sought in that single cell, whence proceeded, in the course of ages and ages, the entire fulness of the now existing living beings and of those already recovered ; that simplest form of life is now to be found in those organisms which are still on the lowest stage of development, and likewise in the

embryo of higher beings. Darwin's book, then, it appears to me, is in perfect harmony with those fundamental notions of philo- sophy which we find more or less con- sciously or deliberately expressed by the greater part of those who have written on natural science. I will enter into some par- ticulars.

The tendency of modern thought is undeniably towards *nomism*. *Dualism*, whether you are pleased to define it as the contrast of spirit and nature, of contents and form, of appearance and reality, is no longer a firm ground to stand upon, if we wish to survey the field of modern science. To the latter there is no matter without spirit (without the unavoidable force that governs it), nor, on the other hand, any spirit without matter. We might say, perhaps, that there is neither matter nor spirit in the usual acceptation of the words, but only a

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fn  
"Spirite" "Matter" "

something which is the one and the other at the same time.\* It is true we are still without a philosophical system of monism, but the history of the development of modern philosophy is clearly indicative of a struggling for it. Besides, it should not be overlooked that the process of scientific labour has decidedly assumed a different aspect, *in consequence* of the modern way of thinking, and of looking at things in general. Whereas it was once customary first to prepare the system and then to mould the object accordingly, we now proceed exactly in the opposite direction. It is now more than ever necessary to occupy oneself with the most minute special study of the object, without thinking at all of a systematic upbuilding of the whole. We

\* To charge this view—which is founded on observation—with materialism is equally unjust as to lay it at the door of spiritualism.—A.

bear with the greatest placidity the lack of a philosophical system answering to the condition of the closest and minutest of our special investigations, convinced, as we are, that such a system cannot be framed as yet, or rather anxious to forbear from the attempt until we can command a satisfactory supply of reliable observations and trustworthy data from every sphere of human knowledge.

The importance which the observation of facts\* has acquired for science in general, but more especially for natural science, is the unavoidable result of the monistic principle, which does not look for anything behind the things, but looks upon the object as identical with its form or appearance. Observation is the foundation of modern knowledge; nothing else is acceptable but the necessary

\* Prior to the framing of a system.—T.

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conclusions arrived at through that channel. All *a priori* fabrics, all cut-and-dry systems, are not entitled to any higher consideration than any other witty trifling; their place is in the lumber-room of science.

Now observation teaches us that all living organisms, which fall at all within the proper reach of our observation, vary according to definite laws. These changes or varieties, this life, is the real essence or being of any organism; and we never know anything about the latter until we are cognizant of the former in their undivided entirety. In other words, so long as we are ignorant of how a thing arose we cannot be said to know it. The great importance which the developmental history and the scientific cognition of the life of the different organisms has assumed for the natural science of our time, is the necessary result of the principle of observation.

The importance of developmental history for the cognition of the individual organism is universally acknowledged. It was first of all applied to zoology and botany. It is well known that Lyell has represented the life of our planet as a series of regularly and gradually arising variations; a sudden and abrupt entering upon new phases of life is here equally unknown as in the life of any other organism of nature. Lyell appeals likewise to the observation of facts. Since the observation over a very short period of recent earthly life yields nothing more than the fact of a gradual variation, we are certainly not justified in pre-supposing anything to have been different in the past. I have always started with a similar view in examining the life of languages, which falls likewise within the range of our immediate observation during its ultimate, most recent and comparatively very short period of

existence. Yet this short time, a span of some thousands of years only, teaches us with a most positive certainty that the life of the organisms of speech runs on according to definite laws in variations perfectly gradual, and that we have not the slightest right to suppose that it has ever been otherwise.

Now Darwin, and those that preceded him, went a step further than the other zoologists and botanists; not only have individuals, said they, a life, but likewise the species and the races; they, as well, have arisen gradually; they, also, are subject to continual changes according to definite laws. Like all our modern scholars Darwin appeals to observation, although naturally spreading over a short period, just as in the life of our planet and in that of languages. Since the fact is noticeable that the species are not altogether constant or stationary, their capa-

bility of variation is clearly, however restrictedly, to be regarded as a point of observation. A mere accident—namely, the shortness of the period over which we are able to extend such observations as might be called practical—is the main reason why the variation of the species does not, on the whole, appear so very important. We have merely, consonantly with the results of other observations, to suppose that for thousands of millions of years there have been living beings in existence on our earth, and we shall soon understand how it was possible for the now-existing species and races to arise through continued gradual variations, analogous to those which have actually fallen under our own observation.

It appears, therefore, to me, that Darwin's theory is but the unavoidable result of the principles recognised in the modern science of nature. It is founded upon observation,

and is indeed an attempt at a history or development. Just what Lyell has done for the history of the life of the earth, Darwin has attempted for that of the inhabitants of our planet. The theory of "the origin of species" is, therefore, no accidental apparition, not the product of one individual head, but the true and legitimate offspring of our inquiring age. Darwin's theory is a necessity.

*The rules now, which Darwin lays down with regard to the species of animals and plants, are equally applicable to the organisms of languages, that is to say, as far as the main features are concerned.*

To demonstrate this proposition is the end and aim of these pages; but we did not deem it superfluous to point out in a general way how one common character pervades the whole cycle of the natural sciences—among which ranks the science of language

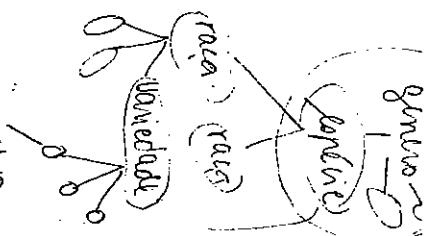
—namely, the modern principle of observation.

Let us now take up the origin of species, and consider how far it is possible to confront the science of language with the views represented by Darwin.

It is necessary to observe beforehand, that although the relationship in the specification of human speech is, in the main, identical with that in the realm of nature, yet the terminology of the glossologist is different from that of the naturalist. This I must request you not to lose sight of, for all that will follow depends upon it. What the naturalist terms a genus the glossologist calls a family, and such genera as are more closely related are often called the classes or branches of a family. I by no means deny that there is no more unanimity with regard to determining a genus or a family among the glossologists than among the zoologists and



Grundriss der  
deutschen



overlapped  
varieties of  
the common  
population

the botanists; this is a peculiarity recurring in all classification and specification, to which I shall have occasion to refer again.\* The species of a genus are what we call the languages of a family, the races of a species are with us the dialects of a language; the sub-dialects or patois correspond with the varieties of the species, and that which is characteristic of a person's mode of speaking corresponds with the individual. It is well known that the individuals of one and the same species are never altogether and absolutely identical; it is the same with the individual of speech; "native accent" is always more or less strongly developed.

What Darwin now maintains with regard

\* And which has beset the translator here with great difficulties, which he does not flatter himself that he has altogether surmounted.—T.

† *Vide* the one drawn up in the "Appendix" to Max Müller's first series of "Lectures on the Science of Language," p. 411 in the fourth edition.—T.

questões da classificação tipológica. Florenço-Darwin

to the variation of the species in the course of time, through which—when it does not reveal itself in all individuals in like manner and to the same extent—one form grows into several distinct other forms by a process of continual repetition, that has been long and generally recognised in its application to the organisms of speech. Such languages as we would call, in the terminology of the botanist or zoologist, the species of a genus, are for us the daughters of one stock-language,\* whence they proceeded by gradual variation. Where we are sufficiently familiar with any particular family of speech we draw up a genealogical table† similar to

\* I know no better word to render *Grundsprache*, since the term *primitive language* is the one which I have reserved for *Ursprache*.—T.

† *Vide* the one drawn up in the "Appendix" to Max Müller's first series of "Lectures on the Science of Language," p. 411 in the fourth edition.—T.

your source  
→ Wilson

the one which Darwin attempted for the species of animals and plants. Nobody doubts or denies any longer that the whole Indo-germanic\* family of speech—Indic, Iranian, (old Armenian, Persian, &c.,) Hellenic, Italic, (Latin, Oscan, Umbrian, with the daughters of the former,†) Keltic, Slavonic, Lithuanian, Teutonic or German, that all these languages, consisting of numerous species, races and varieties, have taken their origin from one single primitive form of the Indo-Germanic family; the same remark holds good with regard to the languages of the Semitic family, which is well

\* I would have taken the liberty of substituting our more usual appellation of *Aryan*, especially because I have already referred the naturalist to Dr. Meveller's tables, but for the author's own way of using the word; an inconsistent terminology is the cause of much misunderstanding.—T.

† That is to say, modern French, Italian, Spanish and Portuguese, Provençal as now spoken in some parts of the South of France, and Wallachian, forming the group of Romance or neo-Latin languages.

known to include Hebrew, Syriac, Arabic, &c.,\* as well as of all other families of speech.† By way of illustration, we add genealogical tree of the Arian family of speech representing what we imagine to be the gradual development of the same; in comparing this with Darwin's diagram, § one should not forget that the author of the "Origin of Species" had to draw up an ideal scheme, whereas we have represented the actual process of development of a given family. || Besides, it was not feasible to

\* The Aryan is the northern branch of the Semitic family.—T.

† There is one other family of speech already properly classified: the Turanian.—T.

‡ See after the Appendix.—T.

§ Page 130 of the fourth English edition.—T.

|| Better to be compared, and more in harmony, with Darwin's scheme, is the likewise ideal diagram of the development of the different species and sub-species of speech from one primitive form, which I have drawn up in my "*Deutsche Geschichte*," S. 28.—A.

make our table a correct picture in every respect; the sub-dialects (varieties) could merely be pointed out; the ramifications of the Iranic and Indic branch we were compelled to omit.

If our diagram could speak it would express itself most likely in the following strain:—

At a remote period of the existence of the human species, there was a language, a primitive language,\* which we can pretty clearly recognise in the so-called Indo-Germanic languages to which it has given birth.† This primitive language, after having been spoken for several generations—the people who used it probably increasing and extending meanwhile—gradually

\* "*Ursprache*" in the original.—T.

† In its application to grammatical forms I have made the experiment in my Compendium of the Comparative Grammar of the Indo-Germanic Languages. Weimar, Böhlau, 1861.2.—A.

Ursprache

assumed a different character in different parts of its domain, until at last it branched off into a couple of languages, or possibly into more than two, of which two only survived; the same applies to all ulterior ramification and division. Both these languages again submitted repeatedly to the process of ramification. The one branch or offshoot which, on account of its ulterior career, we will call the Slavonic. Teutonic divided in its turn through gradual re-ramification—Darwin's continual tendency to divergency of character—into Teutonic and Slavo-Lettic; of these the former became the mother of all the Germanic languages and dialects, whereas the latter gave rise to the Slavonic and Lithuanian (Baltic, Lettic) tongues. The other language which, by the process of ramification had developed itself out of the Indo-Germanic primitive form, the Ario - Græco - Italo - Keltic—

pardon the sesquipedalian combination—again divided into a couple of idioms of which the one, the Græco-Italo-Keltic, became the parent of Hellenic, Albanic, and of Italo-Keltic, the latter, so called because Italic and Keltic arose from it, whereas the other produced the Arian\* language, the closely connected stocks of the Indict as well as of the Iranic (Persic) class. It would be

\* The most ancient inhabitants of India and Irania (Persia) both called themselves Arians; hence the name for the common stock-language of Indic and Iranic.—A.

+ The stock-language of the Indic class has been preserved to us in the language in which the old religious hymns of the Indians, the Veda hymns, are written. From that idiom proceeded in one direction the middle-Indic forms, the Prākrit branches (further away the neo-Indic languages and dialects—*i.e.*, Bengalese, Marhattā, Hindostanee, and cognate tongues), and in another direction Sanscrit, a written or literary language, which was never the language of the people, but the medium of the post-Vedic Indian literature; in some measure the Latin of India, the written Latin of the Romans, which remains up to the present time the vernacular of the learned.—A.

superfluous to go on with the translation of our diagrams into words.\*

It would of course be easy to draw up a similar tree of any other family of speech of which the point of mutual kinship is sufficiently established.

In such languages and dialects as are closely related, we see an indication of recent separation from the common stock; the more any languages of the same family vary in character, the earlier we suppose was their migration from the native hearth, since we place the variety to the account of a longer individual development.

Now it is possible that you, my worthy colleague, and such naturalists as have not devoted themselves to the study of human speech, may feel inclined to ask

\* For further details I refer to my "Deutsche Sprache," S. 71, &c.—A.

place the  
connection

★

me whence we derive all this knowledge. To draw up a tree, similar to the one here adduced as illustrative of the development of speech, for such species of animals and plants as are sufficiently investigated, thereby supposing that they are descended from primitive forms, and to determine the latter in their principal features, is certainly not anything impracticable. But the question is whether it is admissible to suppose that such primitive forms ever did exist. Who gives you, glossologists, the right, you might ask, to give out that those stock and primitive languages which you have arrived at through the existing forms of speech, can be safely taken for realities? Who assures us that your genealogical trees are anything better than the productions of your imagination? How is it that you are so unanimously convinced of the variation of species, of the rami-

*darwinian*  
*or*  
*rearrangement*  
*of*  
*proto-languages*

fication of one form into several others in the course of ages, whereas we, zoologists and botanists, look upon all this as the *quæstio venata*, whilst several among us, considering the existence of the species spontaneous or beginningless, are coolly sitting in judgment over Darwin because he holds very much the same opinion, with regard to the animal and vegetable kingdom, as you do of the species of language?

Here is my answer. To trace the development of new forms from anterior ones is much easier, and can be executed on a larger scale, in the field of speech than in the organisms of plants and animals. For once the glossologist has an advantage over his brother naturalists in this respect. We are actually able to trace directly in many idioms that they have branched off into several languages, dialects &c., for we are in a position to follow the

*It is a very common thing to find...*

Genius

course of some, nay, of whole families of them during a period of more than two thousand years, since a faithful picture of them has been left us in writing. This, for instance, is the case with Latin. We know the ancient Latin quite as well as the Romance languages, its unmistakable offspring, partly through the process of ramification and partly through foreign influence, which you, gentlemen, would call crossing; we know the ancient Indic; we know the idioms which first emanated from it as well as its less distant offshoots, the neo-Indian dialects. So you see that we have a firm and solid ground to stand on for our observation. What we know now of those languages which, owing to an accident, we have been able to watch for so long a period of time, because the people who spoke them have been obliging enough to leave written records behind

from a comparatively early time, may be otherwise supposed in respect of other families of languages, which do not possess those exponents of their earlier forms. We therefore know positively from the observation of collected facts that languages change as long as they live, and for this knowledge we are indebted to the art of writing.

But for the invention of the art of writing the student of language would never have imagined, up to the present day, that such languages as Russian, German, and French, for example, are descended, after all, from one and the same stock. Nay it is quite possible that nobody would ever have hit upon the idea of a common origin for any languages whatsoever, however closely related, or ever would have supposed that a language is subject to any change at all. Without written records

we should be still worse off than the zoologists and botanists, who have at all events remains of anterior formations at their disposal, and whose scientific objects are generally more open to observation than languages. As it is, we are better off for materials of observation than the other naturalists, and therefore we have forestalled you in the idea of the non-creation of the species. Perhaps also the changes may have generally taken place in shorter periods of time in language than in the animal and vegetable kingdoms, so that the zoologist or botanist could only be favourably contrasted with us, if he had been able to observe in some genera at least a complete chain of what we might call pre-historic forms, and these moreover represented by specimens carefully preserved—that is to say, flesh and blood, leaf, blossom, and fruit. The kin-

ship of the different languages may consequently serve, so to speak, as a paradigmatic illustration of the origin of species, for those fields of inquiry which lack, for the present at least, any similar opportunities of observation. Besides, as we have already remarked, the difference in observing-material is merely quantitative, not specific, for it is an acknowledged fact that the capability of variation applies in a certain degree to the animal and vegetable kingdoms.

From what we have thus far stated with regard to the ramification of one primitive form into several others, gradually diverging the one from the other, it follows that it is impossible to draw any definite and distinct lines of demarcation for the different stages of human speech—that is to say, for language, dialect, patois, &c. The varieties indicated by these terms

have gradually developed themselves and grown out of each other; they differ more over characteristically in every group of languages. Thus, for instance, the relationship between the various languages of the Semitic family is essentially different from that between the offshoots of the Indo-Germanic stock, and quite distinct from both is the kinship of the Finnic languages (Finnish, the idioms of the Lapps and Magyars, &c.) This will explain the fact that no glossologist is as yet able actually to give a satisfactory definition of language in contradistinction to dialect, and so forth. What some call a language, others term a dialect, and *vice versa*. Even the field of the Indo-Germanic languages, however accurately explored, is a point in evidence. Thus many glossologists speak of the Slavonic dialects, others of the Slavonic languages; even

the various idioms which constitute the German or Teutonic language have sometimes been spoken of as dialects.

Darwin says\* in his book: "Certainly no clear line of demarcation has, as yet, been drawn between species and sub-species—that is, the forms which, in the opinion of some naturalists, come very near to, but do not quite arrive at, the rank of species; or, again, between sub-species and well-marked varieties, or between lesser varieties and individual differences. These differences blend into each other in an insensible series; and a series impresses the mind with the idea of an actual passage." Well, if for the terms species, sub-species, variety, we substitute the words language, dialect, patois, as used by the glossologist, Darwin's state-

\* Page 60 of the fourth original edition.—T.



ment holds perfectly good with regard to those divergences of speech in the bosom of one family, of which we have already illustrated the gradual process of development.

But how stands the fact with the creation of the genera? that is to say, in the glossologist's phraseology, with the self-development of those mother-languages which have given birth to the different families of speech? Do we here observe the same phenomenon as we did in the offshoots of a family; do those parent idioms again descend from a common stock, and all these in the end from one single primitive form of speech?

This question might be decided with greater certainty if we had examined the primitive form of a good many more families of speech through their descendants than we have done, but for the present

we are almost entirely unprepared, for that. Something however is to be arrived at with regard to the question raised, from the observation of such languages as we are sufficiently acquainted with.

Above all, the varieties of those special families of speech, which have been carefully examined, are so great and of such a nature, as to render it impossible for any unbiassed mind to believe in a common origin. Nobody, for example, is able to imagine a language that could have given birth, let us say, to Indo-Germanic and Chinese, to Semitic and Hottentot; \* nay, even if we take the primitive forms of more

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\* I think it hardly fair to put a whole family in juxtaposition with single offshoots, especially when morphologically belonging to different orders or stages of the species. I unreservedly admit that the Arian and Semitic are two clearly distinct systems of grammar, but does that touch the radical elements of the languages based upon either?—T.

Handwritten notes at top right of page 50.

cognate families, as of Indo-Germanic and Semitic, we cannot arrive at the conclusion that they have descended from a common parent. What we may call a material derivation of all languages from one common primitive form, we may safely suppose to be impossible.

But the question assumes a different aspect with regard to the form of speech.

Handwritten notes: "Hippologia", "Erdkunde", "at", "Selenite".

All the languages of a higher organization—as for instance the Indo-Germanic parent which we are able to examine—show by their construction, in a striking manner, that they have arisen from simpler forms, through a process of gradual development. The construction of all languages points to this, that the eldest forms were in reality alike or similar; and those less complex forms are preserved in some idioms of the simplest kind, as, for example, Chinese. In a word, the point from which all

languages had their issue were significant sounds, simple sound-symbols of perceptions, conceptions, and ideas, which might assume the functions of any grammatical form, although such functions were not denoted by any particular expression, although they were not organized, as we might say. In this remote stage of the life of speech, there is consequently no distinction in word or sound\* between verbs and nouns; there is neither declension nor conjugation. Let us endeavour by one example to illustrate our meaning. The oldest form of those words, which in modern German sound *That, gethan, thue, Thater, thactig*,† was at the dawn of the Indo-Germanic primitive language *dha*, its meaning, to put, to do: old Indic, *dha*;

Handwritten notes: "p. 54", "gramm.", "p. 54".

\* Lautlich.—T.

† The same holds good with the corresponding forms in English, *deed, done, do, doer, doing*.—T.

આવાપદોના ઉદાહરણો  
 da "omni-  
 તાલે અપેક્ષા કરવામાં આવે છે.

old Bactric, *da*, Greek, *9e*, Lettic and Slavonic, *de*, Gothic, *da*, high German, *ta*. Now this *dha* is found to be the common root of all the words given above, and although this cannot be demonstrated here, it is an established fact to any student of the Indo-Germanic family of speech. When this primitive idiom had reached a higher degree of development, certain particular relations began to be expressed by the agglutination or duplication of the radical elements, which still retained the function of words, and had an independent existence. To indicate, for instance, the first person of the present tense, one said *dha-dha-ma*; whence grew afterwards, as the result of the fusion of elements and the variability of roots, the trisyllable *dhadhami*, old Indic, *dadhāmi*; old Bactric, *dadhāmi*; Greek, *τισημι*; old high German, *tom*, *tuom*, for *tētomi*; modern German, *thue*. In that

આવાપદોના ઉદાહરણો  
 આવાપદોના ઉદાહરણો  
 આવાપદોના ઉદાહરણો

oldest form *dha*, slumbered the different grammatical relations, \* verbal and nominal, with all their modifications, unsevered as yet and undeveloped, as we may observe in those languages that have remained stationary on this simple stage of development. What we have shown by an illustration selected at random, applies to all Indo-Germanic words. You, and your fellow naturalists, will best understand my argument, when I characterize the radical elements as the *cells* of speech, not yet containing any particular organs for the functions of nouns, verbs, etc., and in which these functions (the grammatical relations,) are no more separated yet than

પગલ  
 "   
 મગલ  
 મગલ

\* Ernest Rénan is, so far as I know, the only glossologist who holds the opinion that all the so-called parts of speech had their respective functions elded out for them, so to say, at the very dawn of language. Does he imagine that they issued forth from an *arsenal* of human speech as "the blue-eyed maid" burst forth, speared and shielded, from the head-womb of thundering Jove?—T.

unwiederholbar (pol. etc.) = nicht (coll. etc.)

respiration and digestion are in the one-celled organisms, or in the ovary of the higher living beings.\*

We assume therefore that all languages have had the same (original form) When man had found his way from gesticulation and imitation of sound, to sounds expressive of meaning, these were yet mere forms of sound without any grammatical relation. Still, with regard to the sound-material of which they consisted, and in respect to the meaning which they expressed, those simplest beginnings of language differed among the different people; this is evinced by the diversity of languages that have developed themselves from those beginnings. We suppose, therefore, an innumerable multitude of primitive languages, but all alike, of one and the same form.

\* Compare K. Snell, "die Schoepfung des Menschen." Leipzig, 1863, S. 81, etc.—A.

of 16 p 80 do "significance"

die Verbindung von  
...  
= ...  
= ...  
= ...  
= ...

sem. related grammatical ...  
sem. related grammatical

Somewhat analogous is, probably, the origin of the vegetable and animal organisms; the simple cell is, no doubt, the common primitive form of those, as the simple root is that of the languages. The simplest forms of the later animal and vegetable life, the cells, we may likewise suppose to have originated in a multitude at a certain period of the life of our earth, just as the simplest words in the world of speech. These incipient forms of organic life, that could neither be called animals nor plants, afterwards developed themselves in various directions. Just so the radical elements of the languages.

Since we are able to observe within a historical period that the changes in any language, when used by any people under essentially similar conditions of life, are symmetrical in the mouths of all individuals who speak it, we assume in conse-

symmetrisch & ... = ...  
symmetrisch & ... = ...

quence thereof that language developed itself in a like manner in the case of like men. For the method which we have developed above, namely to conclude from the known to the unknown, does not allow us to suppose any other laws of life, in any period which lies beyond the range of our observation, than those which we have remarked over the course of observation to which we have had access.

*diversidade*  
*de idiomas*  
*humanos*

Under different circumstances languages develop themselves also in a different manner; nay, it is highly probable that the diversity of languages is in direct ratio to that of the conditions of man's life in general. The original dispersion of the languages over the earth must therefore have been a very regular one; neighbour-idioms must have more resembled each other than the vernaculars of men who lived in different parts of the world. Issuing from a certain

point, and in proportion as they deviated from it, the languages must have grouped themselves in continually increasing deviation from the stock-idiom, since geographical distance entails a growing variety of climate and vital conditions. Even now we imagine that we observe traces of the absolute necessity of that regular division of speech. The American languages (for instance, the idioms of the South-Sea Islands, clearly point to a common type in spite of all their variety. Nay, even on the European-Asiatic continent, where the linguistic relationship has been subject to such important change owing to historical events, even there we find, undeniably, certain groups of essentially similar branches of speech. Indo-Germanic, Finnic, Turlic, Tataric, Mongolic, Tungusic,\* as well as Dekhanic, (Tamilic etc.,)

\* The author's *mandchurisch*, not being very usual in our

all these idioms, for instance, resemble each other in the suffix-construction, that is to say in this, that all formative elements, all symbols of relation are grafted upon the termination of the root; they are never placed before or in the middle of the radical element.\*

Let the roots be represented by  $R$ , one or more suffixes by  $s$ , infixes by  $i$ , prefixes by  $p$ , and we shall be able to explain our meaning in a very few words, as follows: the verbal form of all the idioms named is denoted by the morphological formula  $R_s$ ; for the Indo-Germanic family it would be more correct to use the formula  $R_s$ , for  $R^r$  denotes any root

English terminology, I have taken the liberty of substituting Tungusic, the language to which the vernacular of the Mandshu tribes belongs.—T.

\* Exceptions, as, for instance, the augment of the Indo-Germanic verb, are merely apparent, but this we cannot enter into. Compare  $i, a$  on the augment my "Comp. der vgl. Gramm." &c. S. 292, s. 567.—A.

*Rx*  
*Rxs*  
*AMs*  
*AMs*  
*AMs*  
*AMs*

capable of regular change to the end of expressing relation, as, for instance, *Band*, *Bind-e*; *Flug*, *Flieg-e*, *Hog*; *grab*, *grub*; *reis*, *reise*;  $\acute{\epsilon}\lambda\epsilon\pi\tau\omega$ ,  $\lambda\epsilon\iota\tau\omega$ ,  $\lambda\acute{\epsilon}\lambda\omicron\upsilon\tau\alpha$ , and so forth. Other languages have more than one verbal form; the Semitic family for instance has  $R^r$ ,  $p R^r$ ,  $R_s$ ,  $p R_s$ , etc. Yet in spite of this great contrast to the Indo-Germanic family which is represented by the formula  $p R^r$  (being the prefix-construction), the two neighbours do again concur in this respect that they are the only idioms which are known for a certainty to have the radical form  $R^r$ .

Such striking analogies in the construction of families geographically allied we imagine to be the posthumous births from the time of the earlier and earliest career of human speech. The homes and hearths of those languages which are essentially analogous in their principle of

*que scia*  
*pa. a. scia*  
*a. m. w.*  
*paraventi*  
*flavonol*

*Handwritten notes*

construction, we hold to be not very remote from each other. The Floras and faunas of the isolated parts of the world present a characteristic type in a similar way as the languages do.

(4)  
nascimmo  
&  
morte;  
ciclos  
& novas  
famílias

Now we observe during historical periods how species and genera of speech disappear, and how others extend themselves at the expense of the dead. I only remind you, by way of illustration, of the spread of the Indo-Germanic family and the decay of the American languages. In the earlier times, when the languages were still spoken by comparatively weak populations, this dying out of forms of speech was, no doubt, of much more frequent occurrence, and, as the idioms of a higher organization must have existed for a very long time—as evinced by their superior development, by their senile forms, and by the slow variation of speech in general—it follows

→ aqui eu traria a questão da "seleção" ref. 62

that the pre-historic period of the life of speech must have been a much longer one than that which falls within the limits of historical record. Of course we have no knowledge of any language before the time that the people who spoke it committed its forms to writing. We must therefore suppose myriads of years, or at any rate a very long period, which witnessed the disappearance of organisms of speech and the breaking up of original relationship.\* It is very possible that many more species of speech perished during the course of that time than the number of those which have prolonged their existence up to the present day. This explains the possibility of so great an extension as for instance that of the Indo-Germanic, the Finnic, the Malay and

\* Comp. Deutsche Spraché, S. 41, etc.—A.





ing those groups of species which succumb to them in the struggle for existence."\*

Not a word of Darwin's need be changed here if we wish to apply this reasoning to the languages. Darwin describes here with striking accuracy the process of the struggle for existence in the field of human speech. In the present period of the life of man the descendants of the Indo-Germanic family are the conquerors in the struggle for existence; they are engaged in continual extension, and have already supplanted or de-throned numerous other idioms. The multitude of the Indo-Germanic species and sub-species is illustrated by our genealogical tree.

\* Unfortunately I have not the edition at hand from which the German translation has been made. It must have differed a good deal from the fourth edition used by myself, and this may account for, if not excuse, my not having used, perhaps, Mr. Darwin's exact words.—T.

The extinction of such a vast multitude of idioms entailed the death of many intermediate forms; the migration of the peoples caused the shifting of the original kinship of languages, so that it may now happen that idioms of essentially different form have all the appearance of neighbours, whereas no intermediate forms are found between them. Such, for instance, is the case with the Basque, a stray island in the Indo-Germanic Archipelago. Darwin says essentially the same of the relations of animals and plants.

This, my dear friend and colleague, is about what occurred to me as I studied your favourite Darwin, of whose theory you are such an energetic advocate and missionary, so much so that, as I have just been informed, you have even incurred the wrath of journalistic zealots. Of course no more than the principles of Darwinism

Lombard  
des  
marquises  
★

PROF. PAVY  
★

could be applied to the languages. The realm of speech is too widely different from both the animal and vegetable kingdoms to make the science of language a test of all Darwin's inductions and their details.

So much the more positive however, in the realm of speech, is the origin of species through gradual ramification and the preservation of the higher organisms in the struggle for existence. The two main points in Darwin's theory have this in common with many other important discoveries, that they are confirmed even in those spheres which at first had been left unnoticed.\*

\* Darwin briefly touches the point of languages, and rightly suspects that the mutual kinship of the same would be a confirmation of his theory.—A. Vide p. 498, 4th Edition.

language

bearers

APPENDIX.

Deutsche  
Sprache,  
1859

(See the Note, page 16.)

DURING so long a period, extending over thousands of years, the primitive relations might easily be shifted and disturbed, for languages are not as plants tied to their respective habitats; their bearers are nations capable of any change of seat and even of vernacular. Since we see in a less distant period, nay, up to the present day, how languages disappear and how the boundaries of speech are shifted, nothing is more natural than to suppose that many more languages disappeared, and that the shifting of the primitive

relationship of the geographical distribution of speech was much more violent, at a time when each language was the vernacular of a comparatively limited number of individuals. Thus arose the now observable anomalies in the distribution of languages over the earth, particularly in Asia and Europe.

We assume therefore that languages arose in a very great number; such as were neighbours resembling each other, although arising independently, and—taking Indo-Germanic or Semitic, say, as the centre—spreading more or less in this or the other direction. Many of these primitive languages now, or perhaps the greater part of them, died out in the course of ages; owing to this others gradually extended their territory, and the geographical distribution of languages was so much disturbed that it became im-

possible to discover hardly any traces of the primitive law of distribution.

Whilst therefore the surviving idioms, with the increase of the people that spoke them, gradually divided themselves into several branches (languages, dialects, &c.), many of the primitive languages which had arisen independently of each other, gradually died out. This very process—the decrease of the number of languages—is going on speedily and incessantly, even in our days, for instance in America. Here, likewise, let us be satisfied with the observation of the fact and leave it to philosophy to search for a clearer conception and explanation from the essence of mankind.

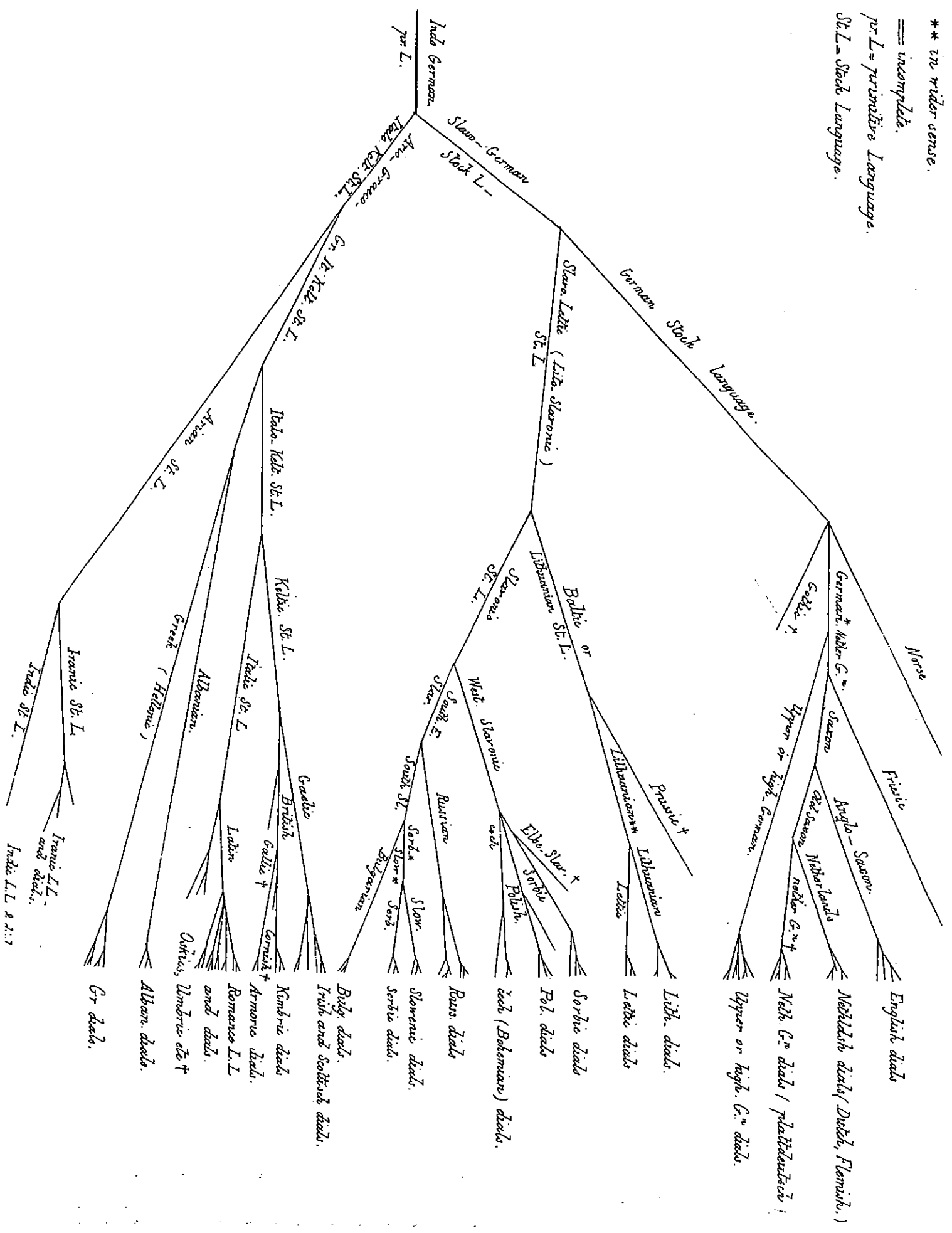
THE END.

\*\* in wider sense.

== incomplete.

pr. L. = primitive language.

St. L. = Stock Language.



AUGUST SCHLEICHER

ON THE SIGNIFICANCE OF LANGUAGE  
FOR THE  
NATURAL HISTORY OF MAN

Translated from the German

by

J. PETER MAHER

Über

[PREFACE]\*

## die Bedeutung der Sprache

für die

## Naturgeschichte des Menschen.

Von

**August Schleicher.**

**Weimar**

**Hermann Böhlau.**

1865.

[3] The following paper was presented, with some amplifications and clarifications, to a small private circle here in Jena. Its publication now serves to answer an objection which has been raised several times against my booklet on 'The Darwinian Theory and the Science of Language, Weimar 1863'. I was challenged for treating languages as material things, as real natural entities, which in fact I presumed there without argument. In what follows I seek indeed to show that they are just that. Thus the following may be considered an amplification of the cited work. Since I cannot however presume that readers of the present piece have access to the above work, I have had to discuss again certain matters dealt with there.

In 'The Darwinian Theory and the Science of Language' I unfortunately omitted a qualification of what I wrote there, which I allow myself to append here. It should be inserted at page 6, line 6 from the bottom [= page 20, beginning with line 13, of the (1869) English translation], and should read:

"Of course, only the descriptive natural sciences are meant here. The significance of the aprioristic, mathematical method for astronomy and physics can naturally not be questioned in the least."

Jena, End of December 1864.

Aug. Schleicher.

\* Items enclosed in square brackets constitute additions by the editor, unless marked differently. In particular, numbers in square brackets indicate the beginning of a new page in the original German text.

[7] A natural scientist in our day would hardly doubt that the activity of a given organ, whether the digestive organs, the glands, the brain, the muscles, etc. is dependent upon the character of that organ. <sup>1</sup> The gait of different animals, even the gait of particular humans, are obviously determined by the different character of the parts of the body operative in walking. The activity, the function of the organs is, so to speak, only an aspect of the organ itself, even if the scientist's scalpel and microscope do not always succeed in showing the material cause of every [8] phenomenon. It is exactly the same with language as with walking. Language is the audible symptom of the activity of a complex of material relations in the structure of the brain and speech organs, with nerves, bones, muscles, etc. <sup>2</sup> Of course the material basis of language and language differences has not yet been established. And, as far as I know a comparative investigation of the speech organs of linguistically diverse peoples has not yet even been begun. It is possible, maybe even probable, that such an investigation would lead to no satisfactory results. Such negative results could nevertheless hardly shake our conviction about the presence of material, bodily bases of speech. For whoever wanted anyway [9] to deny the existence of such material relations! It is just that at present they escape direct perception and perhaps never will be directly observable objects! The effect of minimal quantities and relations is not seldom an uncommonly important one. Just consider the phenomena of the spectrum, of color and fragrance in plants, or of the effect of the fertilizing spermatozooids etc. It is possible that language differences are the result of such minimal differences in the character of the brain and the speech organs. <sup>3</sup>

Be that as it may, since we do not have the material foundations of speech immediately before us, we can only take into account effects of those founda-

1 [Translator's note: Schleicher's style here, with a negative (*unabhängig*) embedded in the complement of a covert negative verb (*bezweifel'n* 'doubt, be unsure') results in a murky passage, one that ill accords with the following text: on the one hand he avers that an organ's activity is independent of the character of the organ, on the other his examples show the opposite. The issue that concerns him however is not the dependence or independence of function from structure in organisms but the fact, as his text subsequently bears out, that the functions themselves can be observed even when we are in no position to know the underlying physical structures.]

2 This thought is not new. Lorenz Dietschbach, *Vorschule der Völkerkunde*, Frankfurt am Main, 1864, page 40ff. had already enunciated it. Cf. also the following note [3].

3 Cf. [Thomas] Huxley [(1825-95)], *Zeugnisse für die Stellung des Menschen in der Natur*, *Abhandlung vom National-Vierteljahr* (1873, 1903) Braunschweig, 1863, n. 117. note. [English

tions [10] and to proceed with language more or less as the chemists do with the sun: they investigate its light, as they cannot directly take the source into their investigations.

To remain with the same analogy, what light is to the sun, so audible sound is to language. As, in the former case, light attests a material basis, so in the latter case does sound. The material conditions underlying language and the audible signal stand to each other in a cause-effect relationship, or as essence and appearance. The philosopher would say they are identical. We therefore consider ourselves justified in considering languages as something with material existence, even if we cannot grasp them with the hand or see them with the eye, but only perceive them through the ear.

The charge that I erroneously treat language structures as [11] really existent, when they are but the result of activities of the speech organs, I believe to have refuted with the above argument.

Before I attempt, however, to evaluate language so considered for human natural history, let me answer yet another objection against the alleged substantiality of language that may have occurred to this or that reader: I refer to the learning of foreign languages.

If language really rests on a particular quality of brain and speech organs, how can anyone learn one or more foreign languages? Adverting to an analogy used at the outset above, I could reply in brief here that one could learn to walk on all fours or on the hands without questioning that our natural gait is determined by the character of our body and is but [12] a mere manifestation of the same. But let us consider a bit closer the objection about foreign language learning. First of all one should ask if there is any perfect mastering of a second language. I doubt it, and I concede it only for the case where one exchanges a foreign language for the mother tongue in earliest youth. But in that case he becomes another person than he was: brain and speech organs develop differently than they otherwise would have. Don't tell me so-and-so speaks and writes German, English, and French, etc. with equal facility. I would deny the 'fact' directly. But, for the sake of argument, conceding such were possible, i.e. that one might be simultaneously a German, an Englishman, and a Frenchman, then I would for one suggest that all Indo-European languages belong to one and the same language family and can be more broadly considered as variants of one and the same language. First, though, show me the person who thinks and speaks equally well in German and Chinese, [13] or in Maori and Kirghiz, or in Arabic and Hottentot, or in any two fundamentally different languages. I do not believe that such a person can exist. It is so often

person can both walk on his hands and all fours. Up to a certain point our organs are, so to speak, flexible and able to develop abilities that are not really 'native' to them; but one function will always be the proper one of a given organ. Thus it is with the organs that have language as their function. Hence there is no argument to be found against the postulated material basis of [14] language in the brain and speech organs.

If we are correct in seeing language as something really and materially existent, then a far deeper significance attaches to the view that language, and (after Huxley's well-known investigations) language alone, is the defining, characteristic separating man from the nearest anthropoid apes (the gorilla, chimpanzee, orang, and gibbon). Language, that is the expression of thoughts through words, is man's sole exclusive trait. Animals possess sound signals, even highly developed ones for the direct expression of feelings and desires; and by means of these communication is possible among animals, as well as by other displays. [15] Indeed expressions of feelings by one animal can produce ideas in others. Therefore one is accustomed to speak of animal 'languages'. The ability, however, to directly express *thoughts* by means of sound is possessed by no animal, and only this is meant by the term 'language'. How strongly this is recognized in our consciousness and in our actions is shown by the remark, that doubtless an ape with the gift of speech, though an animal externally different from man, would be considered human if it possessed speech. It is well-known that deaf mutes possess language *in potentia* no less than actually speaking humans. That is, their brain and speech organs are essentially as developed as those of hearing persons. If this were not the case, they could never learn to speak or write. As opposed to these, truly speechless defectives, the microcephalous etc., are not to be reckoned as really human, since they lack [16] not only language, but also the means of producing it.

If language is the human trait par excellence, then the question arises why it should not serve as the prime criterion for a scientific classification of humanity; it seems we have found in language the basis of a *Systema Naturae* of the Genus Homo.

How inconstant are such matters as cranial shape and other racial traits! Language, on the other hand, is a totally constant trait. A German can match

4 Th. H. Huxley, *Zeugnisse für die Stellung des Menschen in der Natur*, ... [see note 3 (above) for full reference], p. 127.

5 [Translator's note: I render Schleicher's 'natürliches System' this way because I believe that he

a Negro in kinkiness of hair or prognathism, but will never speak an African language of his own doing. How insignificant the so-called racial differences are for man is shown by the fact that members of one and the same language family can present different racial traits. Thus the sessile Osman Turk is of Caucasian race, while other, [17] so-called Tatar Turkic tribes represent a Mongoloid type. The Hungarian and the Basque are indistinguishable physically from Indo-Europeans, while linguistically Basques, Magyars, and Indo-Europeans diverge greatly. Besides their instability, racial differences could be classified only with the greatest difficulty. On the other hand, languages can be arranged with relative ease in a *systema naturae*, especially in their morphobiological side, no less than other organisms. But this is not the place to go into greater detail on this matter. For us then the externally observable form of the cranial, facial, and bodily skeleton is markedly less important for the human than that no less material, though infinitely finer, bodily characteristic, of which the symptom is language. The *systema naturae* of languages in my view is at the same time that [18] of humanity. The whole higher activity of human life is inseparable from language, and it is for language above all that humanity merits attention.

Naturally however I will not in any way deny that brain formation and brain-determined cranial form might have implications for language. Nor would I dream of questioning the deep significance of exact investigation of human anatomical differences. I would only put in question the justifiability of these as the basis of a typology of now existing humanity. One can classify animals according to their morphological structure. For humans, however, outer appearances now seem to me to be a matter relatively insignificant and passé. To classify humanity we need, so it seems to me, finer, higher criteria, exclusively proper [19] to man. These we find in language.

But language is of significance not only for the elaboration of a scientific [i.e. taxonomic] systematization of humanity, but also for the evolutionary history of man. In previous work I reached the conclusion that language above all characterizes man as human and that accordingly the various stages of language are to be considered as the perceptible, characteristic traits of various grades of man. (I deliberately avoid the terms 'genus', 'species', 'variety' for reasons close at hand.) Now language has revealed itself to science as something that has evolved very gradually, as something that once did not even exist. The comparative anatomy of languages shows that the more highly organized languages evolved very gradually out of simpler language organisms, probably in the course of very long time spans. [20] Linguistics finds, at



cended by degrees from vocal displays and mimicry, such as possessed by animals. To document such here would lead too far afield. Besides, I believe that these results of linguistics are generally considered the least unlikely.

I believe I can spare myself the refutation of the view of language as the supposed invention of some individual or that it was handed down from some external source. Language, even in the short span of human history to the present day, can be seen in the grip of constant change, as the product of a gradual evolution according to definite "laws of life", which we are in a position to detail in their essential traits. With assumption of a material basis for language in the somatic [21] character of man, the only compatible theory for the origin of language is one assuming an evolutionary theory of language together with that of the brain and speech organs.

If language is what makes man then our ancestors were not what we could call 'man' from the beginning, but became human only when language appeared. Development of language however means the same for me as development of the brain and speech organs. Thus the accomplishments of linguistics lead quite decisively to the assumption of a gradual evolution of man from lower forms, a conclusion which, it is well-known, modern natural science has reached by a completely different route. For that reason alone language would be of significance for natural science, especially for the evolution of man. But observation and classification of languages also gives us the basis to conclude even more exact views of the prehistory of our race.

[22] The languages that to date have been dissected into their ultimate elements and those that have remained on the simplest stage of evolution show that the oldest form of language was everywhere the same. The oldest material of language was sounds designating objects and concepts. There was as yet no expression of relations, nor differentiation of word classes, nor declension, nor conjugation. All such developments obviously developed later. In this regard indeed some languages have never evolved to this level at all, and others have not reached this stage to an equal degree. To name just one example, Chinese to this day has no phonic differentiation of word classes. True verbs, in opposition to nouns, I have found in the languages known to me only in Indo-European languages.<sup>6</sup> Morphologically, but only morphologically, according to my studies, [23] all languages are in origin essentially the same. But these first beginnings must have differed in their phonetic shape, as

1) POUR LE LANGAGE DE L'HOMME  
80' ND LE LANGAGE DE L'HOMME

well as in the concepts and objects reflected in sound, not to speak of their evolutionary capacity. For it is impossible to derive all languages from one and the same original language. Rather, unprejudiced research reveals as many languages [Ursprachen]\* as there are distinct language families. In the course of time however languages die out, new ones never appear, since such could only appear during the time when man was becoming man. In the certainly very long period before historical records, untold numbers of languages, most probably, became extinct, while others spread far beyond their original territory and in the process differentiated into a multitude of forms. [24] We must accordingly presume an indefinitely large number of original languages [Ursprachen].

The later life of languages is known to us from direct observation. For eras beyond our observation we presume, with equal validity, the principles we can establish for observable periods, even for the first emergence of languages, which can only be envisioned as a gradual becoming [i. e., not as a human invention or divine gift or revelation: JPM]. In the later life of language among humans who live under essentially the same conditions, we see that languages have changed uniformly and spontaneously among all individuals speaking the same tongue. Therefore we are forced to conclude that one and the same language arose among beings that lived under the same conditions, i. e., who lived close together. The more diverse the environmental conditions were under which humans evolved into humans, [25] the greater was the difference in the configuration of their languages.

Despite the disruption, both in historical times and in the incomparably longer period of prehistory, of original conditions through the agency of migrations, wars, natural catastrophe, etc., one can still recognize that languages of whole areas, even conceding their great differences, nevertheless present a uniform character, in the matter of flora and fauna. This is particularly true of the aboriginal languages in the New World, as well as of all the languages of The South Sea Islands and of the languages of the Australian aborigines known to date. In these vast areas a remarkable uniformity of languages is apparent, without our being able to trace them all from a single proto-language [Grundsprache]. The most variegated assemblage appears in Eurasia, which for us counts linguistically as a single area, doubtless the consequence of the quite early awakening [26] of history here. But even here can be recognized the traces of a common type in whole groups of diverse language families.<sup>7</sup>

6 Cf. "Die Unterscheidung von Nomen und Verbum in der lautlichen Form", in *Abhandlungen der philologisch-historischen Classe der Königlich-Sächsischen Gesellschaft der Wissenschaften*

The rise of language forms on earth, i. e., the emergence of language-producing organs, appears to have depended on certain conditions. We have reason to believe that in essentially similar neighboring regions similar languages arose independently, and that in other regions different language types evolved. Such conclusions for a certain epoch of human evolution based on observation of languages, ought to be of some value to modern natural science, even if scholars are not inclined to acknowledge the great significance of language [27] and its material basis in human anatomy, as I claim they should.

At the conclusion of this sketch, let me just mention that the genesis and evolution of language falls in the period before 'history' in the proper and more narrow sense. What we call 'history' or 'historical life' fills only a tiny fraction of the time which man as such has lived through. Within history we see languages age according to set laws in sound and form. The languages that we now speak, as all languages of historically significant peoples, are senile language examples. All languages and therefore also the bodily speech organs of historically developed peoples, to the extent they are known to us in sufficient measure, are far advanced in retrograde metamorphosis: In the course of human existence language evolution and historical life are mutually exclusive.

[28] Thus it may be permitted to divide the life of the human race to date in three great periods of development. Naturally, the transition from one to the next is gradual and not everywhere contemporary. These periods are: 1) The period of evolution of the physical organism according to its essential feature, probably a period incomparably longer than the following and treated by us here as an interval only for the sake of brevity, 2) The period of the evolution of language, 3) The period of historical life, in the beginnings of which we still stand, and into which some peoples of the earth seem not yet to have entered.

As we can now perceive, certain peoples, such as the North American Indian tribes, are unfitted for historical life because of their endlessly complicated, languages, bristling with overabundant forms; they can only undergo retrogression, even extinction. Accordingly, it is most probable that not all [29] organisms that found themselves on the path to becoming human have attained to the evolution of language. One part of these creatures was left behind in evolution and never entered our second period, but succumbed to retrogression and as all such stunted beings, to gradual extinction. The rest of these stunted creatures remaining without language, and never achieving the human state, we see in the *anthropoid apes*. And with this reference to the

## ON THE ORIGIN OF LANGUAGE

WILHELM BLEEK

Translated from the German

by

THOMAS DAVIDSON

Über den

# Ursprung der Sprache

VON

**Wilhelm Heinrich Immanuel Bleek.**

ON THE

# ORIGIN OF LANGUAGE

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EDITORS' PREFACE.

"With every people, it is mainly its wealth of thought that assures its ascendancy."—JACOB GRIMM.  
"It is shown that human language retrogrades only in appearance and when viewed in detail; whereas, viewed in its entirety, it must ever appear progressing and augmenting its internal forces."—Id.

In view of the separation which still ordinarily prevails between philology and natural science, it will cause certain persons some misgiving if a student of nature writes a few words of introduction to an essay on the science of language. Still, I was not unwilling to accede to the request of the publisher that I should accompany the following essay ON THE ORIGIN OF LANGUAGE with such an introduction. On the one hand, I am induced to do so by the close personal relations in which I stand to my cousin and friend, the author, who for the last thirteen years has resided in South Africa; on the other hand, by the close connection in which the subject of the essay stands to zoology, my professional department.

Wilhelm Bleek has for nearly twenty years given his attention to a comparative study of the South African languages, and has, since 1851, published a series of treatises on that subject:

*De Nominum Generibus Linguarum Africa australis, Copi-  
acæ, Semiticarum atarumque seruilium.* BONNÆ, 1851.

*Ueber afrikanische Sprachverwandtschaft,*—in den Monats-  
berichten der Berliner Gesellschaft für Erdkunde.

(*On the Relationship of the South African Languages*—in  
the Monthly Report of the Berlin Geographical Society)  
1853.

*On the Languages of Western and Southern Africa*—in the *Transactions of the Philological Society*, 1855, No. 4.  
*The Languages of Mozambique.—Vocabularies, &c.* LONDON, 1856.

*The Library of H. E. Sir George Grey, K. C. B., Philology*, Vol. 1, Africa. Vol. 2, Australia and Polynesia. CAPE TOWN, 1858, 1859.

*Reynard, the Fox, in South Africa. Hottentot Fables and Tales*, from Original Manuscripts. LONDON, 1864.

*A Comparative Grammar of South African Languages. Part 1, Phonology.* CAPE TOWN AND LONDON, 1862.

As is well known, the tribes of South Africa, the Hottentots, the Bushmen, the Kaffirs, and others, branches of the woolly-haired long-headed (dolichocephalic) family, and usually looked upon as belonging to the negro stock, have remained, down to the present day, at the lowest stage of human development, and made the smallest advance beyond the ape. This is true not only in respect of their entire physical and moral characteristics, but also in respect of their language. And surely this very fact furnishes the author with a peculiar call and right to broach the highly important fundamental question "On the Origin of Language." It is only by a careful empirical examination, and a thoughtful comparison of just those original conditions of language, that the indispensable inductive basis for the solution of that problem can be obtained.

To attain this end, Wilhelm Bleek has spared neither labor nor sacrifice. In order as far as possible to make direct personal acquaintance with the languages and tribes of South Africa, he in 1854 accompanied the expedition for the exploration of the Benue (Jehadda), as scientific commissioner of the English Government. Sickness, however, compelled him to leave the expedition before it

ascended the Niger. Returning to England, he there met Sir George Grey, the then recently appointed governor of Cape Colony, and the first Bishop of Natal, the now celebrated Colenso. In the following year he accompanied the latter to Natal, and during the year and a half that he spent in this colony and in the country of the Zulus, he passed many months in the hive-shaped huts of the natives. (Petermann: *Geographische Mittheilungen* 1855, pp. 55, 145, 271, 361-363; 1856, pp. 362-373; 1857, pp. 99 and 266; 1856, p. 418.)

From this time, he labored in Cape Town, at first in connection with Sir George Grey, who, with that lively interest with which he is wont to further all scientific efforts, took advantage of the numerous resources at his command in order to bring together a collection of materials as rich as possible for an accurate ethnological and philological knowledge of the peoples and languages of South Africa which have remained in such low conditions of culture. This collection forms part of the library, extremely valuable also in other respects, (rich particularly in old mss.), which Sir George Grey, on his removal to New Zealand, in 1861, presented to Cape Colony.

In his situation as librarian, Bleek soon found in Cape Town other and manifold opportunities for becoming more closely acquainted with those lower races of men, who in every respect remind us of our animal ancestors, and who, to the unprejudiced comparative student of nature, seem to manifest a closer connection with the gorilla and chimpanzee of that region than with a Kant or a Goethe.

Whilst Bleek's comparative studies in language were thus positively favored by the immediate empirical examination of those lowest stages of human linguistic

development, he enjoyed, through his protracted absence from Europe, many negative advantages in addition. Being removed from the unhealthy daily wrangling of European schools of *scams*, and unbiassed by the influence of prevailing authorities, he was able to rise freely to the higher philosophical comparative stand-point which is indispensable for the general treatment of so fundamental a question. The reader will receive a vivid and manifold impression from the widely extended view which that stand-point affords for comparative anthropology, and which the author to some extent develops in his preface.

The fact that this treatise, which was written a considerable time ago, is now published for the first time may be regarded as a favorable circumstance in this respect, that it will now find a much more receptive public than it would have done at the time of its composition. Without any doubt it will derive advantage from the enormous progress which has been made in scientific acquirement generally, and particularly in the branch of anthropology, since the appearance of Charles Darwin's era-making book *On the Origin of Species*. The theory of organic development which, as early as the beginning of this century, was put forward by Lamarck and Götthe as the only possible explanation of all biological phenomena, and hence also of anthropological facts, has been placed on a basis of mechanical causality by Darwin's theory of selection. In zoology, which, in the first instance, is more affected by this progress than all the other sciences, Lamarck's and Darwin's theory of transmutation or development forms already a basis which is indispensable. In fact, it is now generally acknowledged as the basis of zoology; for it is the only one that completely explains all the general phenomena of zoology, while its opponents

have not been able to bring forward a really scientific explanation of a single one of these phenomena.

If, now, the doctrine of Lamarck, Götthe, and Darwin, that all animals are descended from one common type, or from a few such types, is really true, and it is beyond all doubt; and if, accordingly, this doctrine of transmutation is a great general law of induction, then we must set down as an inevitable consequence of it, as a deduction following necessarily from it, the conclusion that the human race also has arisen in a similar way, by the long and tedious path of organic development and transformation; that it likewise, through "natural selection in the struggle for existence," has gradually developed itself through different stages from low animal organisms, and immediately from a class of mammals resembling the apes. How this highly important conclusion has been established on a positive basis by all the general facts of zoology and anthropology, and especially by the history of the (embryological) development of man in particular, I have shown in detail in my *General Morphology of Organisms*, (Berlin, 1866, Vol. II, pp. cxli, 423, 432.)

This enormous progress in human knowledge, which lays the basis for a new and happy epoch in the history of the progressive development of the human spirit, owes its origin directly to the great progress made in the history of animal development, and the thoughtful appreciation which that subject has met with. But it is not merely zoology in its narrower sense, not merely comparative anatomy and physiology, that afford an immovable inductive basis for it. On the contrary, the results of geology, archæology, ethnology and geography, anthropology and linguistic inquiry, coming from all quarters unite in this one centre. They all verify and confirm that great, infinitely important law of development. The extror-  
di-

nary significance which has accrued from it to the comparative study of language has been demonstrated particularly in the treatises of August Schleicher. (*The Darwinian Theory and the Science of Language*. Weimar: 1863. *On the Significance of Language for the Natural History of Man*. Weimar: 1865.)

We may gladly welcome the following treatise by Wilhelm Bleek as a further and highly important contribution to the definite solution of this "question of questions." As I have already stated in my lectures *On the Origin and Genealogy of the Human Race* (Berlin, 1868), the knowledge of the descent of man from a class of lower animals will certainly hasten the progress of his spiritual development and freedom in an extraordinary degree. In this connection, the knowledge of the origin of language plays a conspicuous part. In view of this, Bleek's treatise may be warmly recommended not only to natural investigators, but also to all persons of education who take any interest in the great law of the progressive development of humanity.

ERNST HAECKEL.

Jena, 1st July, 1868.

#### AUTHOR'S PREFACE.

THE rise of humanity is so recent an act in the history of the development of inanimate life, and the preparatory stages which preceded the appearance of the human race are so well known to us, that it can hardly be regarded as anything extraordinary if we endeavor to form to ourselves some representation of the process which brought us to that which distinguishes us from the animal world and threw us into a higher path. Particularly at present, when the tendency of all the more recent investigations goes so much to strengthen the idea of progressive development in the production of the animal world, this attempt seems merely a legitimate offspring of the time. I must here, however, call attention to the fact that it was written years ago, almost entirely as here printed.\* Jacob Grimm had then published one of his finest essays, which was placed in a false light by its somewhat unsuitable title, *On the Origin of Language*. In connection with this, Steudhal in a work, which must be reckoned among the weakest productions of that able thinker, had treated the same question, without, however, in any way seizing its real solution. What the then youthful, though not untrained, student of language required was to make

\* It formed part of a work which competed in 1853 for the Volney prize. The publication has hitherto been prevented by the author's many years' absence from Europe.

himself clear regarding that which his masters did not explain to him.

I am not aware that any attempt has ever been made to answer the question in this manner—the only one, it seems to me, which is scientifically possible.

Many readers of this explanation, in order to gain a clearer idea of the matter, will perhaps, and with good reason, ask in what period of time the occurrences here described are to be placed. This question, nevertheless, does not in any way essentially affect the results of our inquiry: but yet I see no reason why what has hitherto been obtained in the way of general and all-embracing results from our examination of the career of linguistic development should not be summed up in a few words.

It would carry us too far were we to state the manner in which the minutest details are worked out. For this reason, I have the less right to demand that our estimate should be accepted without further question. Yet I think we make a very moderate calculation when we place the epoch at which man became man a hundred thousand years before our usual reckoning. This is an estimate which years ago seemed to force itself upon me by the mere consideration of the space of time necessary for the formation of those differences of development manifested in what are called the old-world languages. It may, however, well be that, instead of one hundred thousand years, several, yea, many hundred thousand years, belong to the history of humanity.

Still, the solution of this question does not lie in the region of philology, but in that of paleontology. And in this respect, it is a real pleasure to observe with what approximate certainty important results have been arrived at already, when only a few districts of country have been geologically examined with any thoroughness.

When I reflect how, something like twelve years ago, when one evening, in the course of conversation with one of the most prominent geologists of our time, I touched upon this subject, he referred the discussion of the question respecting the age of the human race, and the epoch as well as the scene of his first appearance, to much later stages of geological research, and regarded it as hardly at present a possible subject of investigation—when, I say, I make this reflection, the appearance of Sir Charles Lyell's work *On the Antiquity of Man* shows me with what gigantic strides European science has progressed. To us here in the Southern hemisphere, so far removed from the bustle of the European learned world, this seems all the clearer that frequently only the results, without the daily progress, of the researches of our northern friends are accessible to us. That, nevertheless, we exert ourselves to follow with lively interest, at least in its salient points, the course of these investigations, even this attempt may serve to show in some small degree to our friends at home.

I should like here to call attention to the fact that hitherto no sufficient inquiry seems to have been instituted into how far the lower animals are endowed with language. So far as I can make out at present, that which they possess analogous to language occupies almost the same position as printing from blocks does as compared with printing from moveable types. If, for example, we must really refuse to acknowledge that the Chinese are in possession of the art of printing (as we understand it in Europe), we cannot say that the lower animals possess language in the real sense of the term—least of all, artificial language. But as there is only a step from printing with blocks to printing with types, so in those means of expression which the animals use to communicate their feelings we find the elements out of which, under favor-



able circumstances (which rendered the division of speech into articulate elements possible), it was possible for human language to arise.

This view, that the insight which is possible for humanity had its origin in the unintelligence of the lower animals, is to me not at all a degrading one, but seems in the highest degree elevating and hope-inspiring. For the advance which we have already made, and the comparison of what we have attained with what we have left behind, cannot but inspire us with the deepest hopefulness in regard to the attainments which our race may yet possibly make. We must not indeed in any manner undervalue those large acquisitions which we have made through the possession of articulate speech, nor the penetrating character of the distinction which this establishes between us and the lower animals.

In discussing the question as to the position which man ought to occupy in a scientific classification of organic beings, it seems to me that one important point has been too frequently overlooked, viz: the fact that, although the differences in structure between the individual man and those species of animals that are most closely related to him are hardly so great as those that exist between these and the lower apes, yet the individual man is only an inseparable part of the entire human race, inasmuch as he cannot continue to exist as a man in anything like complete isolation. The race itself must be looked upon as an individual organism, in every respect enormously grander than any other organism with which we are acquainted. In this very fact, that the lower animals can not through articulate speech make the acquisitions of the individual or of the generation the common property of the race, lies the ground of the other fact that all progress of the race as such, and hence all actual united and therefore imper-

ishable and immortal life for the race is in their case impossible. The endowment of speech is the cement that binds together all the parts of the gigantic organism of humanity, and the expressions of this endowment bear a certain analogy to the circulation of the blood in the animal body. The individual man holds merely the same relation to the real unit of entire humanity as a single cell holds to the whole of a great organic being, whether it be a unit in the animal or in the vegetable world. But, as the single elements of an organic being are correctly appreciated physiologically only when viewed in connection with the whole of the particular organism to which it belongs; so, also, we arrive at a true understanding of what the individual man is, not so much by a comparison of his physical constitution with that of the animals that are most closely related to him, as by a correct comprehension of his relation to the great whole whereof he forms but an infinitesimal part. And as the nature of inorganic substances alters entirely when they become components of an organic being; so, also, and in a much higher degree, are the powers and capabilities of the animals affected, when (and to the extent that) the body of the individual man is penetrated by the spiritual power conditioned by his position in the whole of the great organism of humanity.

We give the name of spirit to the eternal and imperishable (element) in the relation of man to humanity, the element which penetrates the whole organism with its life-giving properties and renders it capable of a larger unity and a progressively higher development,—which penetrates each particular part, yea, each particular particle, to a greater or less extent. According to his participation in this vital element of the whole is determined the significance of the individual man—whether

in an animal sort of way he appropriates the attainments which have descended to him, or uses his efforts to carry these forward to higher developments. To realize in himself the internal and external harmony of his race in some way or another, and to further the proper relations of the different parts to each other in their connection as limbs and larger divisions of the entire organism, (for example, of the bonds of family, state and nation, held together by ties of kinship, community of laws, or similarity of language,) these are the highest aims of human existence visible to him—aims that must of themselves incite him to noble deeds and virtuous actions. In the accomplishment of these tasks lies the highest happiness that appears to be accorded to our race—a happiness accessible to every individual of it in his own particular way.

And it appears to me that the attainment of such happiness is very much facilitated when in this manner the highest tasks of man are shown to be those which are easiest in accordance with the natural view of his constitution. For, as soon as we have clearly seen that individual life and action are in reality only small fragments of the great everlasting life of humanity, and that it is only in and through participation in it that the individual man actually lives—and, we may hope, lives forever—the realization of the universal best appears no longer as a duty difficult to fulfil, but as a necessity of our nature, which we shall be the less able to resist the more we comprehend the true nature of things. And in truth it is the feeling of such a relation that is the life-spring of all good and noble efforts. Neither the fear of everlasting damnation, nor the hope of individual bliss, are really of sufficient strength, as true saving ideas, to raise men to a higher existence; and this apart from the fact that each of

these two fundamental doctrines of the vulgar dogmatism in reality makes a merely refined selfishness the lever of its ethics.

Whether, and in how far, a continuance of the identity of the individual beyond the grave is possible is a question with which our ethics at present have nothing to do; and it is a mere paltry ethical view which supposes that it must support itself upon such ideas, lying beyond our comprehension. Even granted (and I do not mean either to affirm or deny it) that such a continuance of life for the individual man were proved; in any case, the mode and manner of it are altogether uncertain, and for that reason alone, if for no other, it cannot form a sure and solid foundation (which is indispensable to ethics as to every other edifice) for our moral convictions.

It must, however, here be distinctly stated that this idea of what is called personal immortality is not specifically a Christian one, or one that owes its origin to the sacred writings of the Jews or Christians.

Ancestor-worship, a form of religion which must be reckoned among the most ancient, is entirely based upon this view. However, when the personification of natural phenomena, having its origin in the sexual form of language, filled the sky with gods, this idea of the personal prolonged existence of man after death was in some measure thrown into the back-ground; notwithstanding that in hero-worship, which is so frequently mixed up with this form of religion, the ancient ancestor-worship is still represented in greater or less degree.

That modern theology, however, has grown upon the ground and soil of a mythology which arose out of the original personification and consequent worship of celestial phenomena, is demonstrated in the most striking manner by the mere use of the word heaven as the abode

beyond, hers will be united in indissoluble union ! Those ruder peoples have merely endeavored to carry out this thought in the most sensuous manner.

The ancestor-worshipper's gods (if we may call the objects of his worship gods) appear to him most frequently in dreams, thus reveal their will to him, and even announce future events accurately, when the dream-spirits (which, therefore, are called in Zulu *a-Ma-tongo* 6, plural of *i-Tongo* 5, a dream-spirit,) are well disposed to the dreamer. If, on the contrary, they are angry with him, they flutter round and delude him with deceptive promises, whose non-fulfillment accordingly announces the wrath of the dream-spirits. In order to conciliate them, sacrifices must then be offered, or purifications instituted for that purpose.\*

This is the beginning of an ethical intuition, wherein each of our actions and thoughts is viewed in its relation to an invisible object grasped merely by the imagination. And at this period of the development of religious life, men begin to accustom themselves more or less to see, in fortunes and events, the work of the passions of spirits having volition like men, and yet not appearing in human

\* On the occasion of a visit to the court of *Mgyinde*, king of the Zulus, I one day saw among the crowd of courtiers who petitioned me for gifts several of the wives of one of the chief Zulu princes. The youngest of these petitioned me for one particular thing, a kind of ornament that is worn in the country of the Zulus. I offered her another present, and one which, I presume, was as valuable in her eyes. However, she persisted in her original request, stating as her reason for so doing that she had dreamt that I would give her the thing which she then asked for. Unfortunately I adhered inexorably to my refusal—and in fact I should soon have been stripped of all my property, if I had once begun to make presents to the Zulus in accordance with their dreams. The young lady went away mourning, and complaining that the dream-spirit had deceived her, and that she should now have to purify herself before him.

form. To render these favorably disposed, or when they are angry, to conciliate them, is of course the duty and desire of the faithful ancestor-worshipper.

This belief is strengthened not only by dream visions, but also by apparitions during the day of the spirits of the deceased, chiefly in the form of animals—for example, serpents, as they most frequently appear among the Zulus.

However, there is certainly here no personification of the animal, such as we find in the fable-world of our earliest literature. The imagination of the ancestor-worshipper does not for the most part go even so far as to endow the animals with human speech, but merely makes them perform, with animal dumbness, actions which are within the limits of the capacity of animals, but which, in the individual animals, into which the souls of deceased persons have passed, are regarded as proceeding from these souls. The serpent *iz lozi* 5 (or ancestor-ghost) among the Zulus, sinks into the most remote corner, in order to feed upon the pieces of flesh that are there hung up as offerings, or it enters into combat with other serpents, which represent *a-Ma-izlozi* 6, of such deceased persons as the spirit represented by the first serpent was hostile to during life.

The spirit-world of pure ancestor-worship is distinguished by this characteristic, that the beings endowed with human volition (which are either altogether invisible, or visible only as animals, or in some other non-human form) have always been actual human beings. Of a personification of the animal world (such as we find in our fables) or even of other things (as we find chiefly in our mythology) this primeval prosaic view as yet knows nothing.

Such a poetic flight of imagination takes place contemporaneously with and in consequence of a development

of the form of language—a development which, to judge from its results, must certainly be regarded as one of the most important. But, to make this plain, I must go a little farther into detail.

For the majority of us (we might without exaggeration say, for nine thousand nine hundred and ninety-nine in every ten thousand) who during our whole lives employ only sexual languages,\* the distinction of the gender of nouns according to sex seems a matter of course—in fact, almost a natural thing. Many persons (for example, to name only one of the most distinguished names, Grimm, in his German Grammar, that giant work of profound investigation) have tried to recognize in the kind of distinction which we make between the genders, a profound, delicately excited view of the nature of things.

It is only the practical sense of the English, who, as a matter of fact, have themselves altered and brought into almost complete accordance with reason, the original distinction of gender, that asks with astonishment why in the world, in German, for example, the bottle (*die Flasche*) is apparently a lady, and the table (*der Tisch*) a gentleman.

The history of the development of language, however, shows us that the distinction which is made in our languages between the genders of nouns does not rest upon any intentional division of the ideas expressed, but upon the fact that the nouns were originally capable of being replaced by their most essential components; which, however, do not now occur as separate words—that is to say, unless they were used in this manner as pronouns.

\*For almost all European languages, as well as all the rest of the Aryan ones (also the Semitic languages, and even the Egyptian), in fact almost all civilized languages belong to the sexual family of languages.

The nouns which in this way are replaced by their same pronouns then form a class, the extent and character of which depends at first on the more or less extensive use of the noun-factor which serves to replace the nouns.\*

Thus in the prefix-pronominal languages we find a large number of classes of nouns (in some as many as eighteen) or genders whereof not one has any relation to the distinction of sex. In these languages, the very words for man and woman are not in different classes, because they are not formed with different derivative syllables. The names of human beings, on the contrary, are in the singular, usually put in the same class, with a corresponding plural class.

This setting apart of beings endowed with speech as a particular grammatical class, appears to have led to the specific prominence lent to it, which must be regarded as the ground of ancestor-worship, and which even forms the basis of the religion of nearly all the peoples who speak prefix-pronominal languages.

On the other hand, in those suffix-pronominal languages which we designate as belonging to the sexual family, no common class for human beings was formed in this manner; but as the words for man and woman were formed with different derivative syllables, they were also replaced by different pronouns, and thus found their way into different classes or genders. That those classes of nouns, for example, in which the words for man, and at the same time, the majority of the words expressing male beings, occurred, should thereby have impressed upon them the character of the masculine gender, was entirely natural. When the use of a pronoun which, with words designating human beings, implied a difference of gender,

\* I must here refer my readers to the second part of my Comparative Grammar on the South-African languages, now in the press.

extended itself to inanimate objects, this produced at once a distinction among them, on the analogy of the distinction of sex, having application to persons.

But now, to view things as if they stood to each other in the relation of man and woman, and so were affected by the most intense and engrossing passions, was to endow them with humanity in the highest degree, and thus to lend them an interest of peculiar importance, such as they could not in and for themselves have been enabled in any other way to claim from persons ignorant of their internal connection, and the power which the knowledge of them imparts to man. That which appears to us as guided by a power of volition analogous to our own, and in which we suppose the existence of passions and appetites of a human character, must interest us from the very first, and thereby it comes immediately, in a mythical way, into a peculiar relation to us. Thousands of examples might be adduced to illustrate this, and to make us feel how much a personification of inanimate things, or the endowing of impersonal existences with human attributes, sharpens our powers of observation and spurs us on to a better comprehension of the actual relations of things.

Is it, then, a mere accident that nearly all the nations which have made any progress in scientific acquirement speak sexual languages? \* Certainly, the sexual class includes the languages of the Egyptians, Babylonians, Hebrews, Phœnicians, Arabs, ancient Hindoos, Medes,

\* How far in this respect, Japanese and Chinese science forms an exception, I do not venture to say; particularly as it is not yet certain whether the Chinese language must not be regarded as having belonged, at least originally, to the sexual class of languages. Many indications seem to show that, along with other formal elements, the grammatical genders of the nouns were lost.

Greeks and Romans, German, and all the peoples whose languages are akin to these.

On the other hand, among the mass of nations speaking prefix-pronominal languages, many of which form extensive political unions, there is not one that has added any noteworthy contribution to scientific knowledge; and not a single individual who could be called great as thinker, inventor, or poet has risen among them. This fact is, doubtless, the result of an organic defect, the ground of which lies in the lack of any power of seizing poetically the constitution of things. The grammatical form of their languages does not allow their imagination that higher flight which the form of the sexual languages irresistibly imparts to the movement of the thought of those that speak them.

This enables us to see why the mode of speech, and hence also the mode of thought, prevalent among peoples who speak prefix-pronominal languages is strikingly practical and prosaic. Of poetry, as well as of science, mythology, and philosophy, there is hardly even a trace among them.

The form of a sexual language, by exciting in us sympathies for that which is not united to us by a common humanity, leads in the first instance to the endowment of animals with human attributes, and in this way gives occasion for the invention of fables. Even at the lowest stage of national development, we find the language of the Hottentots possessing a fable literature, for the counterpart of which we should look in vain in the literatures of the prefix-pronominal languages.

Still, the endowment of animals with human attributes, and the personification of impersonal things, do not necessarily lead to the adoration of these objects. Only when objects are personified whose power, when they are

viewed as endowed with human life, evidently far exceeds the power of the individual man, does the feeling of great superiority make itself valid—a feeling which, in and by itself, inclines the mind to reverent consideration.

At the lowest stage of culture which we find among peoples of sexual speech, among the Hottentots, religious reverence of this kind for the heavenly bodies prevails to such a small extent, simply because the knowledge of the significance of their movements necessary for a worshipful apprehension is as yet so slightly developed. Still we find the beginning of a mythological apprehension of them even among that people. But it is plain from the mode and manner in which, in all the myths (even in the most significant of all, the one relating to the origin of death), the sun and moon cooperate with animals, that myth and fable are here still undistinguished.

Among the Hottentots, the phases of the moon seem principally to attract attention. The gradual increase and decrease of the appearance of this heavenly body seems to give it the semblance of a being that waxes and again wanes, and one which readily lends itself to personification. It is therefore not improbable that the worship of the moon was the earliest phase of star-worship. In regard to the Hottentots, Kolb, for the most part a trustworthy informant, tells us that they pay divine worship to the moon. The moon (*||khāp\**) is among them, as well as in the Old-Germanic languages, masculine, and the sun (*sovis*) feminine.

The Hottentot fables include myths relating to the sun even; and although its unchanging appearance is not so likely to give occasion for personification as the more

\* *||* Is the lateral click, *kh* a guttural consonant, and *~* indicates the nasal pronunciation.

inconstant moon, it has been, nevertheless, obliged to follow closely the personification of the latter.\*

A further step was taken in passing from the worship of the moon and the sun to a general star-worship. As soon as this point was arrived at, there followed, on the one hand, a development of mythological thought, whose last offshoot is our theology, and, on the other, arose astrology, and its older surviving sister, astronomy. But it was through the latter that the veil of mist, in which mythology and theology had wrapped our whole existence, was at last lifted.

In any case, this poetical view was a most important transition stage in the ascent towards true scientific knowledge. It does seem as if it had been necessary that the heavenly bodies should appear engaged in an eternal dance, and as actively influencing the life of the individual man; moreover, as if it had been necessary that the elements should be conceived as moved by spirits, and therefore the universe as guided by beings endowed with

\* The worship of the sun and the moon that prevails among many American tribes is capable of being explained in two ways. Either the civilization of these peoples is traceable to that of the sexual nations, and so was probably introduced among them from Asia, or else the languages of all, or at least some, of these American culture-nations belonged originally to the sexual family of languages. If the latter is the case, we may assume with certainty that traces of this original kinship will be discovered on sufficiently accurate examination. That the prefix-pronominal family sent off shoots across to America seems to me beyond question, although the language in which, as I believe, I have found traces of this family (the language of the Dacotahs), stands to it perhaps only in the same sort of relation as English stands to the Romance languages. But as the present condition of English affords evidence of the earlier existence of Norman-French in England, so certain distinct marks in the Dacotah language appear to show that it must have been for a long time under the influence of prefix-pronominal languages.

human volition, and therefore subject to human limitations, in order that our interest in the existence of things which appear as standing in such kinship to us, and hence in closer relation, might excite us to a more profound study of the world of phenomena, and that thus we might approach, in some small degree, a knowledge of the final ground of all existence, and, to a considerable extent, an understanding of the mutual relations of the objects that lie nearest to us.

As soon, then, as the imagination, incited by the form of language, had endowed either the heavenly bodies, or any other objects or abstractions that appear to the individual man as accompanied with gigantic power, with human attributes, the result could hardly fail to be that the worship, which had hitherto been paid to the spirits of the great departed, should be transferred to these new and grand personages who were likewise *not* visible to the eye in human shape. All the changes that were observed in them were naturally looked upon as tokens of their caprice, as marks of their favorable or unfavorable disposition.

Thus, the upward gaze of adoration turned gradually from the spirits of the dead to the supposed spirits of nature—and this all the more strongly as increased insight disclosed the significance of the forces of nature. To win the favor of these sublime personages, and to avert their wrath, now became, of necessity, the chief motive of religious life.

It is not possible, within the limits of a mere preface to pursue the forms of the so-called religious idea—or, to speak more correctly, the mythological conception of the nature of the deity—through all its manifold stages and ramifications. In this relation, we will simply remark that, in general, higher ethical ideas go along with a deeper

apprehension of the nature of the deity, and that, on the other hand, the manner of this apprehension depends essentially upon the character of the cognizer, and the degree in which he has arrived at a scientific cognition.

But the grand turning-point on which the mythological apprehension splits is marked by the rise of the idea of the necessity of atonement. For, at bottom, all so-called religious modes of thought based upon the idea that one or more invisible personages have to be conciliated are essentially of the same character. But there is no absolute, though relatively there is a very considerable, difference between the feeling of the Kaffir who pleads with his forefathers to forgive him his misdeeds, and the contrition of a penitent sinner who is involved in the notions of popular theology. In both, the mythological anthropomorphic conception of the nature of God, as a being who must be appeased or conciliated like a human being, is the main lever of the consciousness of dependence and of the religious attitude.

It is only when man has come to recognize it as an impossibility that a being similar to man should be the final ground of all existence, and to confess with reverent modesty his ignorance of the nature of the primal ground of things, that he learns to see what a trivial view he has, in any case, of the Being that appears to him worthy of the highest adoration, if he supposes that, with his limited knowledge, he can in any way grasp the nature of Deity and understand His plans and ideas. But this is just what is done by all theology, which, therefore, appears to us essentially a piece of presumption—a presumption, however, of which most theologians are unaware. In the same way, the astrologers had seldom even the slightest notion to what extent they cut the thread of scientific

inquiry when they supposed they had already discovered the relation in which the star-world stands to us.

We do not mean by this to allow that the efforts of all so-called theologians have been of no service to science. On the contrary, as the actual studies and observations of the astrologers frequently benefited astronomy, so many of the works of so-called theologians maintain their position as valuable and lasting contributions to science. In this relation, it is a satisfactory feeling to know that every honest and earnest endeavor after truth, however much one may be groping in the dark as regards method and fundamental view, will one day produce its fruit. In fact, it is theology itself, and chiefly the philosophy that has grown out of it (by dealing seriously with its problem, and carrying the theological principles to their consequences), that makes manifest its untenability and its unsatisfactory character. It can do this, however, only when it views with the sharpness of scientific method the image of the past, and does not reconcile itself with it in a merely poetical way.

If, on the one side, we thus endeavor to strip off theological presumption as a heathen element that has descended to us from the mythological stage, on the other, the true religious feeling, as arising from the fulness of self-consciousness, must gain in intensity in proportion to the spiritual development of humanity as such. It increases in strength chiefly through and along with that deeper insight into the essence of things which is furthered by greater scientific clearness. If, on the one hand, the coloring of theological pre-suppositions contributes only to the weakening of the religious sense, on the other, the humble confession of the insufficiency of all theological definitions is the fundamental premise of a pure religious disposition.

Before I close this preface, I wish to remark that, in this treatise, undertaken as it is from the philological stand-point, the certainly undeniable fact of the immediate connection of the faculty of language in man with the peculiar constitution of his brain has not been taken into consideration. It may be that, when the progress of physiology shall have placed this point in a clearer light, it will enable us to make further contributions to the history of the origin of language. I may state however, as a passing remark, that I see no reason why the development and refinement of the material of the brain, and the consequent faculty of speech and higher power of thought, should not be regarded as the results of continued energetic effort on the part of more original brain-forms. How much the constitution of the brain depends upon its greater or less activity is generally well known. This is what has given occasion to the higher cerebral activity which has led to the development of those distinctive characteristics of the human brain. How the development-processes of lower faculties and tendencies have produced a new force, by which, as a natural consequence, the brain has been affected in a quite peculiar way, is the question here attempted to be investigated.

W. H. I. BIERK.

*Cape Town, May 30, 1867*



ON THE

ORIGIN OF LANGUAGE

AS A FIRST CHAPTER IN A

HISTORY OF THE DEVELOPMENT  
OF HUMANITY.

## THE ORIGIN OF LANGUAGE.

We move upon a giddy height when we attempt to know the direction of the world's development. And yet the contemplation of the successive phases of the Universe which our eye has hitherto been able to seize leads naturally to further conclusions in reference to the whole course of development, whereof all that we have hitherto been able to learn forms but a very small part.

The direction of the world's development seems to have for its aim the production of a being more and more capable of volition, because continually advancing in power and self-consciousness. It is on purpose that I abstain from using the word *plan* in this connection. For I believe that a plan always implies a purpose, and a purpose is only a determinate product of will—that is to say, of a purely human function. As soon as it is clearly understood that an act of volition can belong only to a being whose knowledge is limited, and who, on all occasions, makes an arbitrary choice between two things with limited insight, it is no longer possible to speak of the plan or purpose of the world's evolution. Since it is manifestly beyond our powers of comprehension to understand the nature of the last ground of all existence, it is certainly a piece of presumption on our part to ascribe to it a sublimated human essence. Fichte was right in saying that God ought not to be thought in connection with

the world of sense, or, indeed, at all; and this for the simple reason that it is impossible so to think Him.

If, therefore, it appears impossible for us, from the nature of our understanding, to grasp anything beyond the laws according to which the elements involuntarily act upon each other, we can speak no longer of the purpose, but only of the result of the process of the world's evolution; we must seek to recognize in it, not a plan, but a course of development.

It is only when an efficient power begins self-consciously to distinguish itself from its objects, and determines its own direction according to choice, that systematic action and subordination to determinate ends begin.\*

Now that such a being, having its basis in self-consciousness, should be inclined to look, in other activities, which come under its notice, for a constitution similar to its own, is easily conceivable. But in the same

\* Of course I do not here mean to deny the possibility (personally I have a firm belief in the actuality), but merely the congruability of a higher working, analogous to our directive activity. But it is extremely necessary to guard oneself against the insinuation of the prevalent anthropomorphism, which conceives the deity in a fashion homologous with our own nature. One, indeed, is sorry to see a man like L. Agassiz, who observes so finely and seizes so acutely, again falling into this mistake, notwithstanding that in other connections he clearly sees the unsatisfactory character of this mode of adducing proof, which prevails notably in *The Bridgewater Treatises*, (*On Classification*, 1859, p. 11.) The fact that his spirited discussions will not fail to accomplish the beneficent purpose of putting a stop to the loose employment of a scientific terminology is due, not so much to the fundamental thought which they pre-suppose, as to the genial eye of their author, who, in spite of his dogmatic bias, could not help recognizing the truth in almost all individual cases. It is true that a greater degree of elasticity must be imparted to the intermediate sections of a system, in order to make it comprehend rightly, and without forcing, the results of actual observations, and to prevent it from degenerating into mere scheme-making.

manner as the progress of knowledge has caused us to give over regarding the elements, the heavenly bodies, the passions and appetites, as beings endowed with human power of volition, clear insight forbids us to represent the Universe as moved by a power analogous to the human. The ground of all existence cannot be measured in its infinity by finite magnitudes. And for the reason that it is less susceptible of representation than anything else, it is less suited than anything else for being a starting-point of investigation. It is the final goal of all knowledge, which, in proportion as it progresses, comes nearer the intuition of it. Whether this approximation will ever be able to ascend beyond a mere guess, we hold to be more than doubtful.

Although we must be on our guard against all *a priori* constructions, and against the insinuation of all false principles of explanation, still the only aim of our science must ever be to discover how it has happened that such a being, endowed with self-consciousness and power of volition has developed itself; by what process it arrived at those differences of culture which we find existing among different nations and individuals, and what is likely, from the peculiarity of its constitution, and from what we know to be the conditions of its evolution and that of the Universe generally, to be the end of it. Of these three problems the last belongs more properly to the sphere of speculation than to that of scientific knowledge. But in proportion as we arrive at certain results in the other two, the greater will be the amount of truth imparted to the conclusions based upon them in regard to our future.

The discovery of the mode in which man came into existence is the aim of what are called the natural sciences, whereas, the investigation of the process of human

development is the task of philology or history, these terms being used as identical and with a much more general signification than that in which they are usually employed. These two disciplines, philology and physics, are distinguished most clearly, as regards their different aims, by the mode of observation peculiar to each.\*

As the separation between the two disciplines takes place naturally, the investigations and results of the one need not therefore remain foreign to the other. They mutually complement each other, and it is only when the two are combined that they form science; neither by itself can be called a science; each is only a scientific discipline. Instead, therefore, of the misleading term, Natural Science, we prefer Natural Research, and range the latter alongside Philology or Historical Research. For although the activity of the investigator of nature is to be distinguished, in this way, from that of the philologist or student of history, still we do not see that we are justified in holding these two separate, especially if we take the concept of philology in a more general, and that of historical research in a more extended sense, so that the former shall not confine itself to a few peoples, and the

\* Max Muller, in his spirited *Lectures on the Science of Language* (London, 1861) seems to me inconsequent in assigning the study of language to the domain of the natural sciences. Students of language will always of necessity be philologists, and will derive no more profit from physics than one scientific discipline always derives from another. It is indeed true that at bottom science is one; but practically (*i. e.* as regards methods and means of investigation), as well as theoretically (*i. e.* as regards the object of investigation) there is a clear enough distinction between the two disciplines. The science of language stands in closer relation to physics than any other branch of philology does, inasmuch as by it the original skeleton of the entire history of human development is laid bare.

latter shall include not merely political development, but all human evolution generally.

To return, however, to the relation between natural research and philology (for we prefer this term to historical research); on one side our knowledge of the constitution of things depends entirely upon the extent to which we have arrived at clearness in regard to the nature of our own power, and the range of human knowledge. True knowledge is arrived at only when we know how we know, that is, when we have comprehended our own nature. This problem, which philology must endeavor to solve by an investigation of the course of human development, is therefore of the highest importance at the same time for natural research.

But in order to arrive at this insight into the constitution of human nature, it is not enough to take into consideration merely the course which its development has run, and the various conditions in which we observe it to have resulted. No, the history of human development is merely a part of the history of the development of the universe, and can be comprehended only in connection therewith. The essential nature of the course of human development can become clear to us only when we endeavor thus to discover the origin of our race, and to arrive at the characteristics which distinguish it and mark it out.

If then the two disciplines have the same object, if the highest problem of natural research is that of the formation of human nature, and the sole problem of philology is to pursue still farther its various development; it is clear that a one-sided devotion to either, inasmuch as at bottom they aim at the same mark, though in different ways, can lead only to error. Each has to learn, not only from the results, but also from the methods of the other.

But how far distant is still the time when this thought shall be realized in the harmonious fusion of the two disciplines! How long will it be before philology shall have risen to that height on which the disciplines of natural research at present stand and from which they justly claim the favor of the moment!

But it cannot do this—it cannot assert its right to a place among real scientific disciplines, until it is studied purely for its own sake, without any reference to aesthetic or educational aims, although the method in which it is usually conducted in Germany at present gives small promise of ever allowing even these to be reached.\* This method (in which, notwithstanding, a considerable progress has become apparent, inasmuch as an exact and methodical treatment is the necessary condition of all real scientific knowledge) has, on the other hand, led again to one-sidedness in this way, that in theory, and still more in practice, the most accurate possible restoration of the text of ancient authors has been set forth as the aim of philology. "Sufficiently has the past been investigated by us without any reference to the universally human in it," says Bunsen in his memorable preface to the German edition of *Hippolytus*.

Philology must not only become more and more conscious of its great aim—the discovery of the process of human development, of the position which we hold in it, and the manner in which our efforts can be made to contribute to its advancement; but with this view, it must

\* I beg leave to remark that, since this was written, the author's long residence in Africa has withdrawn him from immediate observation of the progress of philology in Germany during the last twelve years, so that it is possible that what was a correct statement in respect to this then, is now no longer applicable. *Remark by Dr. Haackel.*

enter upon a series of hitherto almost untrodden paths; it must renounce prejudices, which, though long since overcome in the other disciplines, still hold it back. How far would botany, for example, have progressed, if the study of it had been confined to the plants useful for the kitchen and the drug-store, or to those which please the sense of sight or smell? And in like manner how would it be with chemistry, if the properties of only those substances which are medicinally or commercially important had been deemed worthy of investigation?

Only when every peculiarly developed member of humanity is considered worthy of attention, and investigation turns with as much zeal to the conditions of those peoples which have stopt short at the lowest phases of development, as to those of the most cultured nations—which it can properly understand and comprehend only by a comparison with those less developed ones—only then may we speak of a universal philology in the true sense of the term, and place it on an equal footing alongside natural research. Only when in this way an inexhaustible fund of new ideas, materially affecting our view of the world, has been secured, has it a right to look for a fresh awakening of the nation's sympathy in its behalf—a sympathy, however, which will be accorded to it in far larger measure than it now is to natural research. For it speaks to man of man; and this after all is the most important subject of contemplation, the one which must most concern man.

Universal philology does not confine its efforts simply to pursuing the development and growth of each particular race, and to connecting together such results as may be obtained touching the progress of the method of human development universally. No, its task is one that goes much deeper. It must endeavor earnestly to obtain

a picture of the whole course of human development; must examine how the conditions of the individual nations, investigation of which is the task of special branches of philological study, arose out of a former undistinguished existence, of which no monuments or written records remain to us, and attained their present distinct and variform character. A solution of this problem is of course possible only when the conditions of different nations have been shown to have arisen out of *one* and the same original condition. A careful comparison must then show what each individual nation has preserved from the original source, and what it owes to later culture, attained whether by native power or through foreign influence. The sum of the former will then determine our view of that common initial condition, of which those traditional or so-called historical relations are, so to speak, only the points of the branches, or the extremities of the lines, which diverge from it as their common origin.

Thus we shall obtain pictures of a series of conditions which we could not discover from any historical tradition, and from which we must then contemplate the farther development, till we arrive at conditions which can be seized historically. The question here is to determine with all possible accuracy the degree, the species, and the peculiarity of the pre-historic conditions, and, as far as possible, to obtain a complete picture of them. Hitherto this has nowhere been attempted in a proper manner.\* It would be but a short step, for example, to determine the condition of the people that once spoke the mother tongue of the Indo-Germans, or even,—a thing which

\* This, of course, would have been differently stated, if it had been recently written.

would be much simpler—the character of this Indo-Germanic original idiom.\*

If we thus succeed in placing before our minds a series of pre-historic conditions, the further task remains of penetrating backward again from these, and if any family relationship manifests itself as existing among them, to investigate the prior condition that lies at the basis of it. Thus a comparative view of the original relations of the Indo-Germanic and Semitic languages, and of the other members of the sexual family, must enable us to know the epoch which preceded its division into different branches. Yes, from the original condition of the sexual family we shall be able, with the aid of the other families of pronominal languages, to arrive at the fundamental type of this extensive family of languages. In this way, however, we must endeavor to examine the connection of all differently developed human relations, and where this connection manifests itself, to obtain the clearest possible ideas of the initial conditions. In this pursuit of the ramifications of the human race, some light may certainly be obtained at once by a mere comparison of those members which are distinguished by their faithful preservation of what is ancient. But any deeper and more accurate investigation must take into consideration all the offshoots of each of the groups under comparison that fall within our knowledge. For instance, Sanskrit, so-called Old Persian and Zend, Greek, Latin, Gothic, Lithuanian and Old Slavic, are certainly not sufficient to enable us to arrive at an exact comprehension of the original relations of the structure of the Indo-European tongues. The original Germanic form of speech, derived

\* An attempt of this kind seems to have been made recently by A. Schlieher in his *Compendium of the Comparative Grammar of the Indo-Germanic Languages*. Weimar, Vol. I, 1861, II, 1862.

from the manifold variety of all the German dialects, must take the place of Gothic, and, in a similar manner, the other factors of what has hitherto passed as Indo-Germanic comparative grammar must be replaced, if the linguistic life of this race is to appear to us in its true light.

We have here intentionally spoken only of conditions which might be traced up to the same starting-point, not of peoples springing from one stem. For the relationship of different human conditions certainly does not stand in direct ratio to the blood-relationship of the peoples who represent them. How much easier is it, for example, to trace the conditions, of the Romance peoples outside of Italy to the condition of Rome, than to find drops of Roman blood in their veins! It is certainly not merely their tropical position that renders the Galla physically so similar to the negro, whilst his speech, which claims Semitic kinship, hardly manifests a proportionate influence of the *Bd-ru* element. Such a transition of conditions from one people to another is one of the most interesting spectacles in the history of human development; it is, besides, of extreme importance for that development. It has frequently contributed to advance its culture, inasmuch as in a certain way a fusion of different conditions takes place, or at least, in the contest between them, a reaction of the vanquished condition upon the stronger aggressive one. The influence, for example, of the Keltic upon the formation of the relations of the Romance peoples is still far from being sufficiently appreciated.

There is, therefore, certainly, a relation between the conditions of a people and the proportions of the different bloods that enter into their constitution. This relation is however by no means of such a nature as to confound

them, and hence science must hold the two as far asunder as possible. The investigation of the physical affinities of different nations belongs to natural research, whereas the investigation of the various human conditions is the province of universal philology.

The conditions of a people depend mainly upon their mode of thought; this is the most important and influential condition. All others can be comprehended only according to and in it. It is it that makes man man, and it is only in the formation of it that humanity develops itself. It is therefore the chief aim of philology to follow the unfolding of thought in humanity, and the moulding of it into different thought-forms. The development of the other conditions of humanity will naturally follow, and what cannot be traced back to the mode of thought does not really belong to the sphere of philology.

We know the condition of a thing by its manifestations. The manifestations of thought are various; but no one of them is of more importance than language. For it is through language and with language that man as a thinking being has developed himself. It is communication by means of speech that brings his thinking to greater clearness, by bringing the different modes of thought into mutual furthering communication with each other. By means of speech man is able to hold with more tenacity the impressions already obtained, and thus better to combine the old with those whose action is fresher, and generally each one with every other, and to work them up into intuitions. It is the spring of self-consciousness, inasmuch as it is what enables man to distinguish himself and his emotions from the external world, and so to become conscious of both. Thus it is only by means of it that true development of thought can take place; for as Wilhelm von Humboldt's last letter to

Göthe clearly states: "Our entire possession of ideas is just what we, placed outside of ourselves, can cause to pass over into others."

When we thus know what language accomplishes, how it is the basis of our existence as human beings, and when, in the mode indicated, we can follow it through the different phases of its development, and are even able to obtain an image of the stages of its formation which lie nearest to its origin—still we do not thereby obtain any information as to the manner of its rise. Yet I consider this question as certainly a very important one, and do not look upon it as useless to enquire how that arose which lifted us above the animal world, and threw us into a path, whose goal, fortunately for us, we cannot espy.

A solution of this problem, however, is not impossible, for the reason that language is merely a product of that life-giving power of volition which we must recognize as the principle penetrating the other organisms.

The voluntary movement which our consciousness compels us to assume as an axiom in ourselves is a power which is certainly inexplicable from what we know of chemistry and physics, but is not the less a matter of fact on that account. This sort of force which we must regard as the foundation and basis of human existence, we are also obliged to recognize as the agent in animal existences, wherein we see it in the different stages of development. Seeing that we are thus able to bring into connection the quivering of the most undeveloped of the infusoria, with the action of thinking individuals, which is the result of consciousness, there is nothing authorizing us to make a separation between the latter and the general movement of the animal and vegetable cellular matter or protoplasm; this seems rather to manifest itself as its

undeveloped appearance. It is indeed possible that the force which lies at the basis of voluntary movement would lose something of its inexplicability, if we were to follow its unfolding more accurately into detail, and, watching carefully every mode of its expression, to exhaust all the phases of its development from the lowest up to the most advanced. For what reason should we not examine more closely why in the plant it remains confined to the individual cell, whereas it grasps the whole of the animal organism, and in beings connected through language, effects more and more a harmonious interaction of individual volitions, and a combination into larger units, such as the family, people, church, state, and other unions variously formed for various purposes.

However, the task of philology is merely the consideration of the products of volition in this last stage. But, if we try to gain an acquaintance with the development of any epoch, we can do this only by obtaining a picture of the conditions from which it started, and hence pursuing their further development through the given space of time.

But as all investigation of the course of human evolution, save in cases where it is handed down historically, is impossible, unless, starting from the lowest known condition, we ascend as it were to the higher; and, as the path of development that lies between the different cognizable conditions can be made out only by combination from those given magnitudes; so, likewise, we cannot arrive at a knowledge of the rise of humanity, the ascent of human nature from animal existence, save by a comparison of the lowest conditions of humanity with those of the highest formations in the animal world. We must examine and see what there is in animal nature analogous to that which is characteristic of man; from which of the faculties



of the former, human life could arise, under favorable circumstances. For the fact that conditions similar to those of humanity can no longer develop themselves from animal speechlessness proves nothing, just as the fact that the progress of a language like that of the Hottentots to the stage of development reached by its no very distant Indo-Germanic relatives is now impossible, proves nothing.

We must greatly lament in our inquiries that an investigation of those stages that preceded humanity has hitherto not been undertaken with the view to learn in how far they contain germs for the development of human existence.<sup>†</sup> Were this done, we should learn to understand in quite a different way the significance of the act of humanization. We should also be able to obtain a much more reliable and accurate picture of the course of it, whereas, at present, we can attempt to depict it only in

\* Those classes of animals that stand next to man, are, if not externally, at least internally, in a different condition from that in which they were at the period when humanity arose. Being as yet hardly formed, they were then not only more susceptible of change, but there also lay in them a stronger impulse toward further progress and the attainment of a higher stage. This impulse had to be satisfied, as was done in the case of human beings; or, if it remained long without satisfaction, it would necessarily be extinguished, and therewith ceased the possibility of their freeing themselves from the condition in which they were. This condition became all the while more and more confined, and what at first was the uncertain advance of a forward impulse toward formation, and, at the same time, the first steps towards a further development of this power, forms now the petrified, stereotyped forms of a species of animals, which seems to have long ago been deprived of the possibility of internal change.

<sup>†</sup> Interesting illustrations of this subject are to be found in Dr. G. Jäger's Essay *On the Origin of Human Language in the Ausland* for 1867; Nos. 42, 44, 47.

vague outlines. The question here is, to show how, by the method of comparing various conditions, results of no mean order are arrived at in respect even to their development, although these conditions are as dissimilar as those of human and those of animal nature, the latter being of course taken in their highest, the former in their lowest stages of development.

It will be best for us to begin by settling the difference between the word in human speech and the character of animal sounds—a difference which will at once be made evident by closer definition. In the lower animals generally, sound is only the expression of feeling; not indeed that the animal means thereby to communicate its feeling; but simply that there is connected with feelings, a certain peculiar activity of the organism, and by that a sound is produced. In the animal, sound has not yet become the line of demarcation between its own self and the object. It can however become so, and will become so more and more, in proportion as there is a tendency in it, to become the image of the external world. With the waking of this tendency, humanity existed; to satisfy it completely is humanity's unattainable goal. All that is intermediate is simply different stages and forms of its development. But in order that this tendency should manifest itself, it was in the first instance necessary that, in the creature producing the sound, there should arise the consciousness, not only of the sound as distinguished from the feeling that accompanied it, but also of the necessary connection between the two. How it was possible for this to take place, we will next consider.

Let us suppose a creature endowed with a very strong capacity for forming sounds, but with a tendency to imitation such as we find among the species of animals that stand next to man, it is not conceivable that a union of

the two faculties should fail to take place in it. Imitation of sounds we find even among parrots; but their capacity for imitation is of quite a different character from that of the apes, which is limited to the imitation of creatures similar to themselves—a limitation which we regard as highly important.\* In the imitative creature there is an effort to assimilate itself as far as possible to creatures of the same form, an effort which, in the animal world accomplishes its aim in a merely external manner, whereas the internal accomplishment of it is possible only through language.

If, now, such a creature, whose nature it is to unite particular states of feeling with vocal utterance, imitates similar expressions of feeling coming from animals of its own class, the sound which it thus produces is one to which its organs are already accustomed. The particular feeling, however, which was wont to occasion it, has not produced it this time, but it owes its origin to the tendency to imitation. But, as it was formerly called forth by that feeling, it has become so much accustomed to be accompanied by it, that the feeling is superinduced, even when the sound is produced without its agency. When, then, through this imitation, there sprang up a consciousness of the sound, and its production was only followed by the presence of the feeling, whereas, formerly, the sound was merely an involuntary accompaniment of the feeling—then it was that the sound came into consciousness, distinguished from the feeling to which

\*This limitation of the tendency of the ape to imitation depends on the nature of the animal in so far as it is manifested by gesticulation, and the external behavior of a dissimilar creature is naturally insusceptible of imitation, or, at all events, does not naturally provoke to imitation. The parrot, on the contrary, following its eye and not its ear in imitation, can as readily reproduce the creaking of a door as the cry of another bird.

it naturally belonged, and yet as having a necessary connection with it. The involuntary utterance of a feeling thus became a sign of a feeling. The rise of the consciousness of the difference between the sound and the feeling, this positing of the sound as a separate entity, which is transformed by the volition laying hold of it, into its instrument—is the first step in the process whereby man became man.\*

To be sure the imitation of gestures may lead to results similar to those which imitation of sound here produces. But, on the one hand, the expression of feeling by gesticulation is too various and too changeable, to be readily seized and fixed with the same definiteness as sound. On the other hand, gesticulation affects the entire organism in such a way, that distinction between it and the feelings which call it forth would not take place so readily. Modulation of the voice is much easier for creatures endowed with the power of producing sound, as is shown by the perfection which song-birds display in distinguishing tones. For this reason a further development of sound-language is possible in quite another way than it could have been in the case of gesticulative language, if such had been developed instead of the other.<sup>†</sup>

But we do not mean to distinguish possibilities that are

\*Whether and to what extent such first attempts at language (i. e. the utterance of expressions of feeling not as such, but their voluntary application, in order to express the accompanying feeling, or the feeling presumed in their companions) are discoverable in the animal world, and why they have not developed these into a complete conventional language, deserves closer investigation.

†Could an unusually delicate, developed sense of touch be capable of giving rise to a language of touch, such as distinguished naturalists think they have discovered in ants and insects of that class?

not actual; let us suppose the word already existing with the first elements of articulation. How did the further development of language take place? And how did the self-consciousness develop itself in and through its further formation. Of course, self-consciousness must be confined to beings that have learnt to distinguish between their feelings and the objects which call them forth. But a clear distinction of this sort is possible only through the articulated word, placing itself between them, and thus its beginning coincides with that of self-consciousness, and thereby of humanity, of human existence. The further history of the word therefore includes the formation of the self-consciousness, and therefore the career of the development of human existence.

But the word, having arisen in all cases through imitation, and in intercourse with creatures of the same species, is from its nature as a mere simple sound, of two-fold origin. On the one hand, in certain movements of feeling, it might come from the direct action of the organs; on the other hand, the tendency to imitation in creatures having the power of producing sound, would of necessity be directed to those sounds which were most striking to the ear. But both, not only the interjection, but also the imitative sound are, in their nature, mere involuntary expressions of feeling; inasmuch as the play of the organs which produces the sound, just as in the former case it is excited by feeling, is in the latter excited by the equally unconscious tendency to imitation. Therefore, in the account given above of the manner in which the word arose, I have been able to throw the two together without any harm. For all that I have there said of the interjection may at once be asserted of the imitative sound. The latter is accompanied by the feeling of the phenomenon imitated, or of the representation aroused along with it

in the mind,\* and may therefore be well included under the term interjection.

The external form of the first words was of course entirely similar to that of the interjections from which they sprang,<sup>†</sup> and can therefore be arrived at only from a consideration of the interjections that remain in our languages, and of the so-called onomatopoeic words, or words that imitate sounds, together with a comparison between them and the sounds of the animal voice.

In this initial condition of language we cannot properly

[\*The German word here is *Genüß*, which has no English equivalent. It comes pretty near the Greek word *ἡδύς*, and means the seat of the passions, feelings, and emotions. 7r.]

† Although I cannot say that I am altogether satisfied with Humboldt's definition of articulate sound (Introduction to the work on the *Kawi Language*, p. lxxxix.), yet it does not seem to me to belong to the nature of articulate sound as such, that it should be a limited sound having a definite form (K. Heyse, *System der Sprachlehre*, 1852, p. 5, *et seq.*). I believe that, in its origin, and also in the first stages of the development of language, the word does not differ externally from the animal utterance of feeling. But the further progress of the development of language renders it necessary that the articulate sound should become more and more limited and shaped. But this view of mine is in harmony with the statement on page 7 of Heyse's above mentioned work: "It is articulated only to the degree in which the mental imprint is internally articulated, that is, logically divided and formed," although I should have expressed even this thought somewhat differently. I should rather make the two clauses exchange places. But this is due altogether to the view which I hold of the relation of thought and speech, and which is somewhat different from that of Heyse. According to him, language is an efflux of thought. It seems to me that this view does not give sufficient prominence to the fact that it is only through it that man comes to consciousness, and that to a great extent, particularly in the beginnings of human existence, the word gives birth to the thought.

speak of a system of sounds or of a division of words into their individual elements. Every word formed in itself a united vocal whole, which certainly had not the remotest resemblance to the simple elements to which our etymologists imagine they can reduce the vocabulary of languages. The different organs used in the production of sound were certainly put in action in a manner much more manifold, more energetic, and differing very considerably from our method of producing sound.\* Clicking

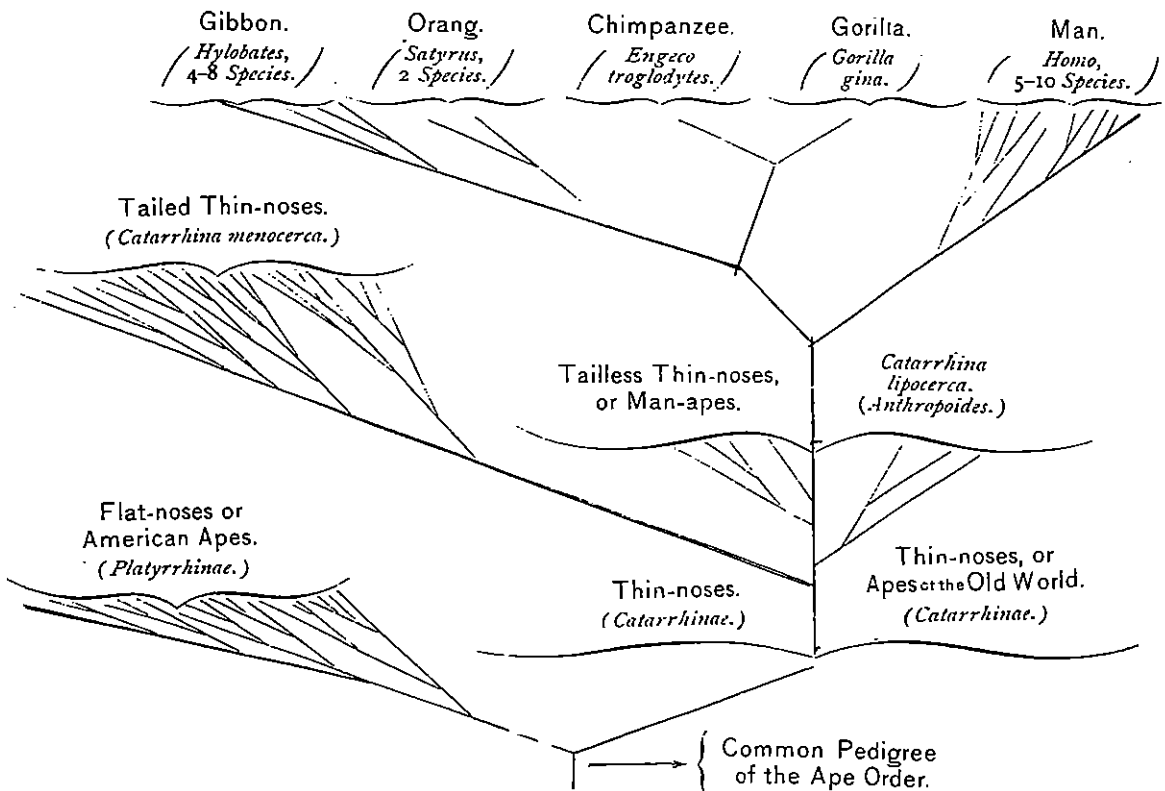
\* The comparative science of language places beyond doubt, as the direct result of observations made on the direction taken by the development of a system of sounds, the fact that in general that system of sounds is to be considered the most original which requires the greatest amount of mechanical exertion for their enunciation. The tendency in the vocal development of language is to make the pronunciation as easy as possible. In this relation, we need only refer to the manner in which English, the most advanced member of the Germanic family of languages, is pronounced, as compared with its nearest relatives. But nothing can be a greater mistake than, for example, the idea that an apparent simplicity of phonology, such as we find in the language of the Sandwich Islanders, is a proof of original condition. A comparison with the other Polynesian dialects proves, as an incontestable historically established fact, that the unusual poverty of consonants in Hawaiian is not original, and that the more the cognate dialects have preserved a rich consonantal system, the more the antiquated forms have been preserved in them. Among all the languages with which I am acquainted, that of the South African Bushmen (called by the Hottentots, *Saan*, by the Kaffirs, *Abakaa*, and in Setsubana, *Borra*) far exceeds the rest in respect to the strength of the mechanical exertion necessary for its pronunciation. A language like this, in which the majority of the words are pronounced with one of the clicks (the number of different clicks amounting at least to six), and several with very energetic gutturals, must be made an object of special attention if we would arrive at even an approximate idea of the original vocal elements from which human language sprang. In this language, not only the tongue, as in Hottentot, but also the lips click. It seems to me that our modern systems of sounds might with as good reason be regarded as mere

offshoots, extremely weakened and softened down according to definite laws, of such original phonologies, as the modern methods of writing, particularly the stenographic, are considered to be descendants of a hieroglyphic picture-writing transmogrified for practical purposes. But in how far a system of sounds like that of the Bushmen shows points of coincidence with sounds produced by the apes resembling man, is a question which seems to me well deserving of closer investigation. On this subject, the Jena professor of zoölogy, Dr. Haeckel, writes to me (15th September, 1865) the following: "The language of the apes has not hitherto received from zoölogists that attention which it deserves, and there do not exist any accurate descriptions of the sounds uttered by them. They are designated sometimes simply as *howls*, sometimes as *cries*, *clicks*, *roars*, &c. Remarkable clicking sounds, produced not only with the lips, but also, though seldom, with the tongue, I have myself frequently heard in zoölogical gardens, and from apes of very different species, but I have been unable to find anywhere an account of them. Evidently these sounds have not interested most observers. Perhaps it will be interesting to you to learn that three years ago there appeared a work by the great English zoölogist, Huxley, and soon after another and more extensive one by the German, Carl Vogt, in which the evidence of the descent of the human race from the apes, founded on embryological and palæontological investigations, was stated with such pointedness, that no scientific zoölogist any longer has any doubt on the subject. "Among all the hitherto discovered living species of men, the Australasian negroes in New Holland, and the Bushmen who are related to these in many ways, are the ones that stand nearest to the apes. Among the living known apes, the *Anthropoides* (the *Gorilla* and *Pygæe* in Central Africa, and the *Orang* and *Gibbon* in India) are the ones most closely related to man, although they are by no means his progenitors, but lateral branches from common progenitors. The genealogy of the Primate Order would be somewhat like this (see plate). The common family group of the ape order, which is sprung from lower mammals, first divided into two principal branches, the thin-noses (*Catarrhinæ*) and the fat-noses (*Platyrrhinæ*), the former having thirty-two, the latter thirty-six teeth. The former inhabited exclusively the old world, Asia and Africa, the latter the new world, America. The thin-noses, or *Catarrhinæ*, the apes of the old world, remained for the most part with tails (*Menocercæ*). One portion of them, however,

sounds, even perhaps the clapping of hands and other sounds not produced with the organs of the mouth, as they certainly served for the expression of feeling, must also have been transformed from interjections into articulate words of the original language.

But, if we should measure these words belonging to the earliest stage of humanity by the standard of our syllables, we should certainly find that their duration was not limited to that of one of our syllables. The nature of the intonation would always depend entirely upon the organs which were called into sounding activity by the feeling which occasioned it. The product of this activity would certainly only in rare cases be a simple element, according to our grammatical analysis. By the same simple feeling, the organs of sound might in succession be made to produce different utterances, and these, although not really composite, would frequently bear more analogy to our polysyllabic than to our monosyllabic words. The idea that all languages must be reduced to originally monosyllabic roots is a mistake—for this, if for no other reason, that they contain a large number of onomatopoeic words (e. g. *haci* in *haci/cita* the Gallic lost their tails, and developed themselves into forms resembling "men, or into man-apes (*Anthropoides* or *Tipoctoca*). Of these we find still living the Gibbon (*Hyllobates*) and the Orang (*Satyris*) "in Southern Asia, and the Chimpanzee (*Pygoco*) and Gorilla (*Gina*) "in Africa. From a now extinct branch of these Anthropoides was "developed (probably in Southern Asia) the human race, which "afterwards divided into 5-10 different species, the so-called races "of men." Compare Haeckel, *General Morphology of Organisms*, Vol. II, pp. cxli, and 423-438, Berlin, 1866; and Haeckel, *On the Origin and Genealogy of the Human Race*, Berlin, 1868.

A passage in Du Roi's last work (*Travels in Ashango Land*, English original edition, pp. 371, 372) seems to show that, at least with a certain approximation, the sounds produced by the Chimpanzee are not unlike the tones of human speech.



Genealogical Tree of the Ape Order.

See page 54.

word for sneeze \*) which cannot possibly be called monosyllabic, although they owe their origin to simple imitation. Repetition of the same sound I have found in the first stage of language in very many (perhaps in most) words; yet this did not affect their simple character. The expression of feeling by sound is seldom limited to a single utterance, but is called forth oftener than once by the continuance of the feeling—in most cases several times, nay, very many times. To the first words, however, as mere copies or offspring of expressions of feeling, we must ascribe a character entirely corresponding to these; and what can be shown as true with regard to the external form of the latter, we may boldly ascribe to the former.

The meaning also of the individual word of the original language necessarily depended on the feeling which was associated with the interjection from which it sprung. But as this interjection did not owe its origin to a single object or condition, but was the product of an entire state of feeling (*Gemüth*), so also single objects or feelings could not have been designated by the first words. They, the words of the original language, were to the consciousness mere expressions of states, arising from a complex of different feelings working together. The same state, or at least similar ones readily convertible with it in the consciousness, might, however, be occasioned in manifold ways by the most diverse objects. The difference in the producing causes, so long as the effect was the same, would not be felt in the first period of man's progress towards consciousness; but all further develop-

\*The clicks / (dental) and! (palatal) have represent the characters *l* and *d* of the Tutschek alphabet, to which, to judge of the description of it, they seem to correspond. *l* represents, however, represents the Tutschek *l'* by *l*, and its *d'* by *g'*.

ment necessarily urged him on to distinguish his individual feelings, and to obtain from them an intuition of the objects and conditions which produced them.

But as I was able with reason to affirm that, as the sound expressive of feeling gives us information of the life of feeling, so the word gives us information of the consciousness of feeling; in like manner, I must affirm that the relation between consciousness and language is very different from that which subsists between the interjection and the feeling. For the feeling expresses itself in sound only in exceptional cases; so that, of the whole of the sensuous life of any creature however largely endowed it may be with the power of producing sound, nothing beyond a very few fragments is manifested by its voice. Sound is a mere accidental accessory to feeling. Not only is there feeling without it, but it is comparatively seldom that feeling is made perceptible to the ear. Consciousness, on the other hand, awoke in man with the birth of the first words; its character was shaped entirely by their signification, and its extent is not greater than the sum of what is expressed by words. Speech and consciousness are not thinkable apart; the one could not possibly have arisen save along with the other, and through the rise of the other; thus the one is the exact image of the other. The further development of self-consciousness took place necessarily only along with and because of the development of language. What has really passed clearly into the consciousness must be produced through language and be visible in it. The language of a people is always a copy of the thoughts that have come into its consciousness.

How limited must have been the condition of the consciousness in the initial period of humanity! Consciousness of states of feeling was all that could then have

been awake in man; consciousness, too, only of such states as had been accompanied with sounds that in the way above described had become words. But since, as we have said, it was only the smallest portion of the sensuous life that expressed itself in sound, and since the whole of these sounds expressive of feeling could hardly have passed into words, we can hardly imagine how little of that which was felt passed into the consciousness, and how vague even that little must have been. There existed as yet but a mere prelude to cognition.

But in order to make any real progress in this direction, language and the consciousness united and bound up with it had to be further formed. The meaning of the individual words was rendered more limited by the production of new words, either from interjections or imitative sounds. But the consciousness passed into a new stage, from which a true progress in development was possible only when the material of language was able in itself by reciprocal action to produce new elements.

With this further unfolding of the formative process of language begins the second stage in the awakening of human cognition from an animal-like state of unconsciousness. But in order to arrive at this, we must try to make ourselves thoroughly acquainted with the character of speech in the first stage. In it, intercourse through speech consisted simply in this, that when one was visited by a particular state of feeling for which he knew a word, and wished to communicate, this feeling to another, he uttered that word. But, inasmuch as this word was entirely similar to the interjection from which it had sprung, this condition of vocal utterance was not distinguished from the speechless one that preceded it by anything save the consciousness, which in this case was instrumental in the production of the sound.

Again, however, it was possible that there should be states of feeling which reminded the one who wished to attempt to express them of two others, which already had got words to designate them. There was nothing more natural than that, in order to express them, he should put the two words together. This was the second stage, and in it the basis was first laid for the separation between the outward manifestations of the conscious and unconscious expression of feeling.

In the third and last stage of the first period, before this separation had fully taken effect, there had already in this way, by the union of known words, been formed expressions for a number of states of feeling which, being formerly accompanied by no sounds, had therefore in the previous stages not been expressible by words, and a consciousness of which had not yet been attained. This however took place in a manner peculiar and differing essentially from the previous one. As feelings were now expressed by several words, they appeared to the consciousness as made up of the states designated by these words, notwithstanding that they might be really much more simple than the elements of which they seemed to be composed.

But, if they were so (that is to say, more simple), and in proportion as they were so, the more readily would the feeling of the connection between the two combined words necessarily impress itself on the soul. In use, they would necessarily grow together more and more closely, whereas others were held more loosely apart. Next, to unite words combined in a conception as far as possible into a whole in sound was a very natural effort of the linguistic tendency. But sounds brought closely together could not continue without mutual influence. Changes of sound accommodated them to each other; and thus two

words that were formerly distinct readily passed over into a new one, which did not, either in form or concept, indicate what its elements had been. This process would necessarily be facilitated in cases where the sounds out of whose fusion the new word had arisen had already ceased to be used as simple words, and out of composition.

Thus the second period in the career of the development of language begins with the external separation between it and the unconscious expressions of animal sensuous life. It is not till this point that language can be regarded as a secure possession, inasmuch as the previous absence of distinction between the form of words and that of sounds expressive of feeling still made it seem possible that their internal distinction, which was seized and established by the will only, should vanish, and humanity sink back into the state of unconsciousness.

The distinction between sound and feeling could not arise in the consciousness until the sound came to be not so much the result of a feeling as of a combination which, so to speak, forcibly united it to the feeling which it was to express. The fact that it was not spontaneously produced by the organs when affected by a particular state of feeling, but was entirely independent of the action of affection in the organism—nay, perhaps even opposed to it—was naturally of the greatest importance in holding asunder the feeling and the expression of the feeling in the consciousness.

The distinction between feeling and expression of feeling, however, necessarily preceded the separation between the object and the feeling occasioned by the object. Intuition of objects developed itself only from intuition of the feelings called forth by them.

Confusion of concepts could be diminished only by their progressive imitation. A word that expressed a state of



feeling very generally and indefinitely was limited by the addition of another to a part of the meaning inherent in it. So long as the compound character of the word was still perceptible this particular feeling appeared in the consciousness only as a combined one. When the appearance of composition afterwards vanished from the word and it appeared to the ear as a simple sound, the concept designated by it was seized by the consciousness as a simple one. But while the concepts, which at first were so much confused, were thus sundered, the things which gave occasion to the feelings, *i. e.* objects and their conditions, came nearer to the consciousness; although in this period no real conscious intuition was reached, that indeed being something which can be arrived at only when a distinction is made between these.

However, before we can pass to the manner in which the consciousness was awakened by the duplicity of the provocatives of feeling, we must give more special attention to many phenomena which occur in the second period. We have not yet touched upon the case in which only one part of a compound word had ceased to be used as a simple word. When this took place, the new word would evidently, and of necessity, appear as a modification of the other element which was still protected in its isolated signification.

Thus, by the new process of derivation, it became possible to call different shades of an already existing concept into consciousness, and, on the analogy of the derivative words already formed, further divisions of fundamental concepts could be effected by means of such sounds as had ceased to have any value in and for themselves, receiving their value only from combination with others.

Thus, a word in the second period might have ten different origins. Either :

A. It corresponded, without any addition, to the intension from which it arose, *Simple*, 1.

Or,

B. It was composed of two such simple words, or two simple word factors, whereof

a. Both still occur as separate words; *Compound*, 2.

b. The first element still occurs as a separate word.

a. The second, however, only in compounds.

*Derived with Suffix*, 3.

β. The second does not occur elsewhere at all.

*Strengthened at the end*, 4.

c. The second element still occurs as a separate word.

γ. But the first only in compounds. *Derived with prefix*, 5.

*prefix*, 5.

d. The first does not occur elsewhere. *Strengthened at the beginning*, 6.

*Strengthened at the beginning*, 6.

2. Neither part is any more used by itself.

e. Yet both are still found in compounds. *Compound*, 7.

*Compound*, 7.

ξ. The first still occurs in compounds; the second not. *Inflected at the end*, 8.

*Inflected at the end*, 8.

η. The second still occurs in compounds; the first not. *Inflected at the beginning*, 9.

*Inflected at the beginning*, 9.

θ. Neither occurs elsewhere. *Fused*, 10.

*Fused*, 10.

The course which was taken in the development of words is best shown by the following table:

1st Stage	Simple word [Intension] (1)	Simple word [Intension]
2d Stage	Compound word (2)	
3d Stage	Derived with suffix (3)	Derived with prefix (5)
4th Stage	Strengthened at the end (4)	Strengthened at the beginning (6)
5th Stage	Inflected at the end (8)	Inflected at the beginning (9)
6th Stage	Fused (10)	



system, that is, in acquiring a few sounds, of which the mass of the different words seemed to be but combinations, by the formative process of the second period. The combination of the same sound with various others would alone give occasion to the recurrence of the same elemental word. The tendency to ease of pronunciation would however lead to the disappearance of those sounds which, from their rare occurrence, were unusual, or to fusion with others which were more usual. Vocal changes did something more. It would of course be only the later moments that could have any influence upon the formation of a vocal system in a language in which individual sounds did not come into any close contact.

But what appearance the earliest systems of sound presented we may well refrain from attempting to conjecture here. In any case, they were removed as far as possible from the pattern of Sanskrit or similar languages. The latter belongs to much later periods of language.

With the rise of the word, in so far as entirely distinct in sound and sense from the interjection, the question with regard to the origin of language is really settled, and the pursuit of the further development of the vocal form and conceptual import must be left to the history of language. In conclusion, I will now take a rapid and summary glance at my view of the mode in which the word arose.

The first phase of the existence of the word as such occurred when the sound expressive of a feeling was uttered, not as such, but was voluntarily employed for the purpose of calling up the accompanying feeling, or the corresponding one which was presumed to be felt by a companion.

In the second phase, the sound becomes fixed by usage as the conventional medium for the feeling which it indicates, and inasmuch as it is distinguished from the latter in the

feeling and in the consciousness, it departs farther and farther from being an index of it, and soon becomes, even in form, a mere indication of the interjection to which it originally owed its origin, and with which in the beginning it was identical.

In spite of this, although in form and signification differing from the interjection and the feeling expressed by it, the word, both in form and import, leaned too much to the sensual world and the expression of it, and owed its origin to it too directly to be able as yet to embrace a clear independent concept.

Each word still designated an idea, standing for itself and modified only by itself, and formed, as we should say, an independent sentence.

Now it could not but happen that the desire should be felt to express feelings which were not in any very decidedly close relation to one particular feeling expressed by a complex of sound, but seemed to lie at once equally near to two such complexes. In this case, the most obvious thing was to put one of these after the other. This marks the beginning of the third phase.

Of two words thus unitedly expressing an idea, the one would of course usually appear in the consciousness as more necessary than the other for the concept expressed by both. Thus, even at an early period, a kind of distinction asserted itself in the consciousness between the principal and the subordinate part, between the word to be determined and the word which served to determine another.

In the first stages of the course of linguistic development I have endeavored to show how it is only with the rise and progress of language that man arrives at consciousness, and that no cognition can come into his consciousness otherwise than in and through language.

It is evident that clearness of consciousness must increase in proportion as the external forms of speech facilitate logical thinking. But they can do this only in so far as that which is distinguished by them agrees with the distinctions which urge themselves upon our cognition as the most essential.

Our present thinking consists in a putting together of concepts whose images are awakened in us; and in like manner, our speaking is a combining of individual words. The concepts which we have, however, are mere abstractions; they are the result of the friction of the different feelings.

When I say, or what is really the same thing, think, (for I think to exactly the same extent as I can speak) *the horse in my stable is brown*, I put together mere abstractions in order to designate the concept to be expressed. I never saw brownness, or existence, or mine, or stable, but I have seen millions of brown things, thousands of individual horses, many stables, have often thought of things which belong to me, and am continually observing things that are, that exist; I am surrounded by beings and am one myself. (Dr. F. Leibert, in Schoolecraft's *Information respecting the History, Condition and Prospects of the Indian Tribes of the United States, Part II, p. 346.*)

But how do we pass from the mere consciousness of a state of feeling with which human existence began to these abstract concepts, and how did the word develop itself from being the mere sign of a feeling into being the basis of these concepts? The latter question, in our view, comes first, and from the solution of it naturally follows that of the other.

How the combination of concepts, which is effected by the composition and consequent fusion of words must lead more and more to abstractness and to a sundering of them from individual feeling as the result of manifold

combinations, we have remarked above. But this, of and by itself, did not lead to a division of the concepts into classes. In the primitive words, the parts of speech were entirely undistinguished. Even in cases where one of the original elements did not suffice, in the already advanced stages of linguistic development, to complete an expression, and several words had to be united into a sentence in order to manifest a thought, we cannot speak of a real distinction between the parts of speech.

The same word, without alteration, included a substantive or a verbal concept, and could be used after the manner of our adjectives, adverbs, &c. Thus, for example, the perception of which one is conscious in hearing a sound was designated by a word which arose from the imitation of the sound. This perception was not at all of an abstract or general character, but an altogether concrete and individual one. For instance, had a word been formed from imitation of the note of the cuckoo, its concept could not possibly have been limited to that of the bird, or to that of crying; or to any property of the animal or its utterance, etc. etc.; but the whole situation, in so far as it came into the consciousness, was indicated by the word. The frequent hearing of the same sound was of itself enough to bring the salient points of the situation into consciousness; but the signification of the word still comprehended the most heterogeneous elements whereof one was made more prominent in one connection, another in another. But while in this manner, perhaps in connection with a word indicating flying, the word cuckoo made the concept of bird prominent, and the whole designated the flying of the cuckoo, and while in another connection the same word gave prominence to a property or action of the cuckoo, this differed infinitely from the principle which prevails in modern English, that a word

without any change may often belong to different parts of speech. For, in English, the parts of speech, though not always differing in sound, are always accurately distinguished in concept; while in the other case there was, as yet, no consciousness of any difference, inasmuch as neither form nor position had called attention to anything of the kind.

For forms had not yet made their appearance, and determinate position—as for example, in Chinese—could prevail only in a language of very advanced internal formation: we can think, even although the gradually disappearing forms (as in English) which first called attention to the distinction, have not been replaced. For the parts of speech were certainly distinguished at an early period by a vague feeling, and this even might have contributed to establish a fixed order, which again would of necessity give rise to a somewhat clear consciousness of their difference.

Then there were combined with whole series of words certain particles or derivative syllables, which became the distinctive marks of their conceptual determination, indicating time, action, and particularly persons, or pointing to the relation of concepts to the speaker (articles) or the like.

The origin of such formative elements in language will be explained, if we keep in view the above described processes whereby words are formed (pp. 58--64) somewhat as follows: As a part of a word might disappear from use as a separate word, so the same thing was possible in the case of a part of a sentence—that is to say, it might cease, when uttered by itself, to designate a concept, and to have a meaning only in connection with others. Such words, or as they are technically called, particles, belonged both to the fusive and the isolative languages; they were even rather more frequent in the latter than in the former.

With the appearance of them, and, in the fusive languages, with that of the derivative syllables, a consciousness of the form of the concept would necessarily manifest itself, since in this way, words or syllables which expressed merely the form of the concept individually, or as combined into a proposition, stood in a kind of opposition to the other more significant ones. The sort of form that came into use depended of course at first upon chance; but the more language developed itself, the more would formative words, or forms of words facilitating the aims of the understanding, necessarily come into use.

Thus was it found possible to pave the way for a distinction in form, and hence also in concept, between the parts of speech. But, even where it exists, it will hardly ever be completely realized. In particular cases, the words will lack the distinctive particles; in others the particles belonging to one part of speech are capable of being applied to another; and thus, even in numerous cases where it is not impossible to make the distinction, the consciousness of difference is not made clearly prominent by any close distinction between the parts of speech.

We do not find them completely distinguished till we come to the pronominal languages; although even in them different stages of progress are observable. This distinction is very closely connected with pronominal formation, and with the use of the pronouns and the union and fusion with other parts of speech.

But a consideration of the nature of pronouns and of the great significance of their influence upon the whole of the development of language would carry us too far into a region of the history of language which, although doubtless extremely interesting in itself, would be out of place in a treatise whose aim is merely to consider the origin of language.

## APPENDIX

### TRANSLATOR'S NOTE.

Dr. Haeckel, to whom I wrote in regard to the publication of this translation, has sent me a very kind letter, from which I translate the following passage:

“JENA, March 31st, 1869.

“*Respected Sir:*

“Your kind letter which reached me yesterday, informing me that you had translated my cousin Bleek's essay ON THE ORIGIN OF LANGUAGE into English, gives me much pleasure. The essay has received much praise in Germany, and I hope it will have the same powerful effect in America also.”

THOMAS DAVIDSON.

ST. LOUIS, May, 1869.

## DR. BLEEK AND THE SIMIOUS THEORY OF LANGUAGE

by

WILLIAM DWIGHT WHITNEY\*

\* From W. D. Whitney, *Oriental and Linguistic Studies: The Veda, the Avesta, the Science of Language* (New York: Scribner, Armstrong & Co., 1873 [already published in Fall 1872]), pp. 292-97.

## DR. BLEEK AND THE SIMIOUS THEORY OF LANGUAGE.<sup>1</sup>

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THIS little work is written with much apparent profundity, but it seems to be one of a class, not quite unknown in German literature, in which a minimum of valuable truth is wrapped up in a maximum of sounding phraseology. Its author is well known amongst students of language as a man of great erudition and great industry, and his contributions to South African philology have been extensive and important. He has never kept himself within the strict limits of his special department; his mental enterprise and fondness for generalizing have exercised themselves in various and wide-reaching speculations and combinations; but here his success is far from being assured, and it is doubtful whether much of his work will stand criticism. In the discussion of a question like that of the origin of language, a great deal of clear thought, of sound logic tempered and guided by sober sense, and of cautious reserve, is required — qualities which, to say the least, are not the special characteristics of his mind. We do not feel tempted to yield our opinions either to his guidance or to that of his cousin and editor, Professor Hückel of Jena, who also has a good deal to

<sup>1</sup> *On the Origin of Language.* By W. H. J. Bleek, etc. Edited with a Preface by Dr. Ernst Hückel, etc. Translated by Thomas Davidson. New York. 1869. 8vo. Pp. 69.

say within the same covers. The latter gentleman, particularly, appears to be one of those headlong Darwinians who take the whole process of development by natural selection as already proved and unquestionable, and go on with the fullest and most provoking confidence to draw out its details. Thus, in a note (not of his own appending, but introduced by Dr. Bleek), he is kind enough to sketch the whole common genealogical tree of man and the monkeys and apes, showing us the gorilla, the chimpanzee, and their like, on a level at the ends of the top-most branches, and enabling us to read off the exact degree of our consanguinity with each individual group of the *quadrumana*, sharp-nosed or flat-nosed, tailed or tailless. Now we, for one, must confess that we have not a particle of prejudice against such kindred; we are demagogic enough to think a *parvulus* quite as good as a man with innumerable quarterings; and to hold, with Memphis-topheles, that "we are, after all—what we are," no matter how we came to be so, whether by a long and tedious climb upward from a miserable semi-simious state, or by a briefer slide downward from a condition of paradisaical purity and intuitive wisdom. In fact, we must allow the justness of the claim urged by our authors, that the former account of our position is the more flattering and gratifying of the two. Who would not belong to a race whose career is steadily upward, rather than to one which has once made an awful lapse, and may probably enough repeat it? Further, we have great faith in the substantial truth of the central Darwinian idea, and would no more regard the analogies and correspondences of form among different kinds and races as meaningless sports of nature, than the fossils in the rocks, which used to be interpreted as such—and are still by many, from whose knowledge and spirit those of the scientific and half-scientific denouncers of Darwin are not perhaps so far removed as they imagine. But we cannot think the

theory yet converted into a scientific fact; and those are perhaps the worst foes to its success who are over-hasty to take it and use it as a proved fact. Nor have we patience with men who, inspired by it, claim to be wise respecting man's grand and great-grand ancestors to a degree far beyond what is yet written in the book of science.

The eminent linguistic scholar Schleicher was also sorely infected with Darwinism, and sought to bring the science of language into relation with it in a couple of noted essays,<sup>1</sup> which are far the weakest and most valueless of all his productions, though here referred to with high approval by his colleague Häckel; and it is part of Dr. Bleek's aim, as well, to connect the development of speech with this particular mode of the development of our race—although we hardly see how he would bring it about, since his theories seem to require only that man should have been, at some indefinite epoch in the past, a creature without language. But his course of exposition is not of the clearest; and, either by his own fault or his translator's, his expression is also often awkward and confusing, especially on the first pages. The introduction to his specific theory occupies two thirds of the pamphlet (forty-six pages out of sixty-nine), and in the course of it he brings forward many views to which it is very difficult to yield assent. For example, he claims that the language of the mute animals bears to human speech nearly the same relation as the Chinese mode of printing from solid blocks bears to our own from movable types. Surely a most unfortunate and misleading comparison, and one which reduces indefinitely, we might fairly say infinitely, the real difference of the two modes of communication. Animal speech is vastly further removed from ours than even the rudest picture-writing from our perfected alphabets, written and printed. Dr. Bleek's opinion on this

<sup>1</sup> See the next essay (below, p. 298 *seq.*).



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point doubtless stands connected with his idea, dimly shadowed forth here and there, that articulate speech is distinguished from inarticulate by being broken up and mobilized — which seems to us wholly meaningless. Again, he claims that the personification of natural phenomena, and the development of a nature-religion, has “its origin in the sexual form of language” — that is to say, grows out of the classification which some languages (all those with which we are most familiar) make of objects as masculine or feminine; and he proceeds later to connect poetry and science with the same linguistic peculiarity. The extent to which he is under the domination of this opinion may be gathered from the fact that, on finding a worship of the sun and moon among certain American tribes, while the American tongues have no grammatical gender, he is ready at once to assume the derivation of a part of the culture or the speech of America from nations in the Old World who said *he* and *she*! Indeed, so arbitrary and unsound are his reasonings on matters of religious history, that when, in the sequel, he comes to make himself as offensive to “theologians” as he possibly can, they will feel justified in regarding his denunciation and contempt as of very small account.

When we arrive at last at the theory proper, we find it to be of a quite peculiar character. It is somewhat as follows: The earliest quasi-human beings uttered by mere instinct certain sounds to express certain feelings. They heard their fellows utter the same sounds. Beings, like monkeys, of an imitative disposition, they could not help mocking these sounds. But, upon thus reproducing them, they were reminded of the feelings which had prompted their own original utterances. This gave them, side by side, a view of the feeling and its natural expression, an apprehension of a sign and something signified, and so brought before their consciousness the separateness and the connection of the two; it set the feeling outside

of them as an object of contemplation, and gave them knowledge of that item of themselves. This was the first step in the process whereby man became man.

This theory is unnecessarily complicated. So far as there are involuntary utterances expressive of feeling (and their range is very limited), they did not need to be repeated by imitation before they could be associated with an idea of the feeling that led to them. Why could not that association follow upon their being heard simply from others' mouths, or even from one's own? Would not the most rudimentary man *in posse*, if he heard his fellow laugh or cry, understand what it meant without having first himself to *haw-haw* or *boo-hoo*? Do not even the animals thus? When a gun goes off, all the shy birds near by take to flight without waiting to say “bang!” to themselves. The imitative factor is an intrusion, and may be left out of the account altogether. If the first man had not had a power of analytic apprehension, and a mastery over consciousness, very different from those of other beings, neither hearing nor imitation would have led him to anything. This power is man's characteristic, and where he received it, at whatever time and in whatever way, he became man. We object entirely to having his conversion into man treated as the result, rather than the cause, of his cultural development as man. When the process of language-making began, man was man *in esse* as well as *in posse*, ready to have his powers drawn out and educated — just as is every human being nowadays at the commencement of its existence. And the specific moving power to the working-out of speech was not the monkeyish tendency to imitation, but the human tendency to sociality, the desire of communication with one's fellows, — an element which Dr. Bleek appears not to have taken at all into consideration.

He is, further, consistently in the wrong in his view

of the relation of language to thought. He holds the extreme opinion as to the absolute necessity of a word to an idea, asserting that "no cognition can come into man's consciousness otherwise than in and through language," and more to the same purpose. Here is no place to enter upon the often repeated discussion of this fundamental point; but we may say that we do not see what sound and telling argument can possibly be urged upon Dr. Bleek's side. Like many another before him, he mistakes one kind and degree of indispensability for another. Because, on the grand scale, language is the necessary auxiliary of thought, indispensable to the development of the power of thinking, to the distinctness and variety and complexity of cognitions, to the full mastery of consciousness, therefore he would fain make thought absolutely impossible without speech, identifying the faculty with its instrument. He might just as reasonably assert that the human hand cannot act without a tool. With such a doctrine to start from, he cannot stop short of Müller's worst paradoxes, that an infant (*m-fans*, 'not speaking') is not a human being; and that deaf-mutes do not become possessed of reason until they learn to twist their fingers into imitations of spoken words.

Of course, we cannot believe that a man who goes so far astray upon points of so capital consequence is capable of casting valuable light upon the origin of language; and we are forced to regard the present essay as a failure. So far as we can discover, it does not add an item of valuable information or valuable thought to the discussion of the subject; and neither its substance, nor its style, nor its spirit furnishes reason for its translation into English.