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Verba ex " onomatopoieiâ" oriuntur.
Natura revoluta, ad Naturam revertuntur.

LONDON:
WM. H. ALLEN \& CO., 13, WATERLOO PLACE, PALL MALL. 1874.

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## TO

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PRINCIPAL OF THE GOVERNMENT COLLEGE, LAHORE, REGISTRAR OF THE PUNJAB UNIVERSITY COLLEGE, AND FOUNDER AND PRESIDENT OF NUMEROUS LITERARY AND EDUCATIONAL INSTITUTIONS,

AS A TESTIMONY TO THE

AUTHOR, LINGUIST, REFORMER

AND

DISCOVERER OF LANGUAGES,

THIS WORK IS RESPECTFULLY INSCRIBED BY

THE AUTHORS.
omamy Googile

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## INTRODUCTION.

While in Rome-1840-occupied in establishing a "Humane Society" on the Flavum Tiberim, and lecturing on the art of bringing the asphyxied back to life, I ${ }^{a}$ had the honour to breakfast with Cardinal Mezzofanti, and an old friend, Count Martorelli, minister of Hohenzollern. The reader will easily imagine that I did not lose the opportunity of conversing on idioms and symbols, \&c., in company with such excellent scholars. His Eminence having made a characteristic mimical sign to his servant, I at once approached the subject. The quick perception of the Cardinal soon outran me, and he said, "Mimicry acts powerfully on man, and on the lower animals generally. They not only comprehend the expression of the acted thought, but they penetrate our modelling of the expression itself." I then rejoined as follows: "Does not your Eminence believe that Greek actors had really, at one time, conquered the art of mimicry, so as even to occasion hysterical fits in those assembled to witness their performances, and to induce the magistrates of the Republic to suppress pantomimes?" "I have no doubt that the history is true, and so is also the enactment of the magistrates of the Athenians."
"Then," I added, " mimicry, as a sub-faculty of our intelligence, seems to me one of the probable crude forms of language. Does not your Eminence think that monosyllables must be onomatops?" "Yes, I do; there is certainly a good deal in onomatops, and I will consider that interesting subject at the earliest opportunity." The Cardinal then, pointing to a chair where I was to sit, asked me what were the equivalents of poéle and chaise in Picard. Had I been foreign to Picardy a I should have wondered at this singular question; but we had before us an omelette aux fines herbes, and, though much puzzled, the link of the ideas passing in his Eminence's mind was soon discovered. "In Picard," I replied, "the vocables poéle and chaise are called pa-ielle and ca-ielle." ${ }^{\mathrm{b}}$ "Just what I wrote this morning !" exclaimed Mezzofanti; and a marked joy conveyed to me that the association of ideas was not to him a mystery. ${ }^{\text {c }}$

To speak of the birth-place of language is, seemingly, a mere assumption; but where the human genus was formed, or transformed, in times that baffle all calculation, there man began to exercise the won-

[^0]derful faculty he possesses in common with other animals. But man, amongst all other creatures, is certainly the only one who had the astonishing power of enlarging the gift of nature to an unlimited extent, from, so to speak, the cry of pain to the melopd $\neq i a$ of joy. Furthermore, man only can symbolize in a thousand manners and ways, the whole creation of which he is princeps. ${ }^{\text {a }}$

The process of learning to speak is far from a rapid one. We have seen many ploughmen and woodmen who could never imagine what a musical note was; who had never reflected one single minute on the resources of language; and had never uttered more than 200 different words in their lives. We asked some of them what God was, Jesus, England, France, \&c. Their answers were, "I can't say," "I don't know," "I have never seen them." This state has been most improperly called the state of blessed ignorance. In a part of the country about twenty miles from London, we have known men of forty, fifty, and sixty years old, looking stupid and unable to express a single idea. Speech-so near to the mind; the instrument for the expression of thought; the instrument so necessary for all the operations of man's intellect; the instrument which imparts to its possessor the power of thinking within himself and with his fellow-men; the greatest of intellectual feats-among these poor people

[^1]is more than barbarous, or negative. By the side of such degraded beings let us place a Mithridates, who could speak twenty-two tongues; or a Themistocles, who learned how to speak Persian fluently in one year. The memoria felicitas of that illustrious warrior was so wonderful that he used to say jocularly, "I wish some one could teach me how to forget; because I recollect things I would have forgotten, and I cannot forget things which I would not recollect." These wonders of past ages have been surpassed by Mezzofanti, late Librarian of the Vatican. This astonishing man, the son of a carpenter, when on the very eve of engaging in the same business as his father, was rescued from manual toil by a monk, who had discovered a great power within him. The monk interested himself in the welfare of the little Mezzofanti, and sent him to school. At the age of twenty-two the student had acquired a knowledge of Latin, Greek, Hebrew, French, German, Spanish, Portuguese, Dutch, Swedish, English, and Russian. Ultimately he acquired about forty languages, and could have travelled round the world without an interpreter, for he could express himself even in African and American idioms. It must be confessed, however, that as soon as Mezzofanti was led into a conversation the subject of which was alien to polyglottism, the good man ceased to be a cardinal point in the horizon of science.

Our friend Elihu Burritt was a blacksmith's apprentice when he picked up some leaves of a foreign grammar, and became, so to speak, suddenly a professor of

Coptic, Phœnician, Persian, Syriac, French, English, German, and Italian, with a good range of other accessory knowledge.

Stanislas Julien was another wonder. He was keeper of a little shop on the Place de l'Estrapade, close by the Panthéon at Paris. Once a snow-storm overtook Julien near the Collége de France, not far from the Estrapade, and he took shelter in the establishment. The storm increasing in intensity, Julien ventured to enter a room on a level with the ground floor, and finding a stove burning went forward to warm himself. Shortly after an old gentleman entered carrying several books under his arm ; the books he quietly placed on a kind of pulpit, and joined Julien at the fire. In a few moments he said, "Well, sir, I thought I should have to lecture to the four walls, but I see with pleasure that to-day I have one pupil in attendance." "I beg your pardon, sir," replied Stanislas Julien, " but I am not a student. Surprised by this storm I ventured to take refuge here, and to warm myself in this deserted room." "Do not trouble yourself, young man, I am happy to receive you in this my lecture-room, and, should you like it, I shall be glad to teach you Chinese and to furnish you with the necessary books. I see you have a quick eye; you might make rapid progress : it will cost you nothing." Julien accepted the generous offer, became very proficient, and, when the excellent lecturer not long after died, Julien was elected professor, with a salary of $£ 400$ a year, and a yet more distinguished reputa-
tion. Stanislas Julien, who recounted the above circumstance to us himself, could speak Chinese to the Chinese, a miracle that his venerable and learned professor could never perform.

These very remarkable men, with the utterly ignorant and uncultivated labourer by their side and in contradistinction to them, represent the whole range of the power of our race. It is as wonderful to observe Mezzofanti, Elihu Burritt, Stanislas Julien, and others like them, plunging at once into the abyss of language, as it is to witness the English labourer living during three generations without being able to acquire the elements of a single one.

The problem of the origin of speech is one of the most interesting that can engage the human mind. In it is involved the examination of that rudimental germ or autelechy whence sprang all the lofty conceptions of Homer, the divine guide of the sublime triad of tragic poets; of Plato and Aristotle, the fervent and immortal worshippers of eternal beauty; of Pindar, Virgil, Horace, Cicero, Archimedes and tutti quanti, the founders of our present intellectual great-ness-men who never caused a tear to be shed by their myriads of admirers during thousands of years, except those tears provoked by gratitude, love, and admiration. By contemplating the heroes in all branches of art and science, it is easy to see that all that man is and has beyond his animal nature is the gift of language. This it is which marks in an indelible way the line
of demarcation between man and beast-the rubicon which no other animal has ever crossed. Bereft of language, man would be still following his animal instincts, ignorant alike of past and future, incapable of progress, because incapable of communicating advancing thought. From considerations such as these the early Hindûs raised speech to the rank of deity, and prized the acquisition with feelings of reverential awe.

When the mind has been once awakened to the consciousness of the mysterious and potent agent now so obedient to its command, a feeling of surprise overtakes the thinker as he reflects on the little notice bestowed upon the subject, while so much time and pains are given to cognate branches of science. The intangibility of words no doubt accounts for much of this neglect; and the subtle nature of the bond linking sound and sense, eluding all but the closest scrutiny; so that it required the combined labours of a succession of such men as Leibnitz, ${ }^{\text {a }}$ Horne Tooke, ${ }^{\text {b }}$ Pritchard, ${ }^{\text {c }}$ Schlegel, ${ }^{\text {d }}$ Rask, ${ }^{\text {e }}$ Grimm, ${ }^{\text {f }}$ Adelung, ${ }^{8}$ Bopp, ${ }^{\text {b }}$ Burnouf, ${ }^{\text {i }}$ Humboldt, ${ }^{j}$ Bunsen, ${ }^{\text {k }}$

[^2]Max Müller, ${ }^{\text {a }}$ Eichoff, ${ }^{\text {b }}$ Pictet, ${ }^{\text {c }}$ J. E. Renan, ${ }^{\text {d }}$ L. Delâtre, ${ }^{\text {e }}$ E. Duponceau, ${ }^{\text {, }}$ P. Renouard, ${ }^{\text { }}$ N. F. Wiseman, ${ }^{\text {h }}$ \&c., \&c., to demonstrate the great fact that speech is a homogeneous whole.

Setting aside ancient unreasoning assumptions, three hypotheses have been propounded to account for man's possession of language. The first of these is what Professor Max Müller aptly styles the Bow-wow Theory, according to which man, originally mute, hearing the sound of the lamb, the wolf, the wind, the thunder, \&c., \&c., sought to imitate them with his vocal organs. ${ }^{\text {. The most able exponent of this theory was }}$ the late Baron Bunsen, who, in his great work on "Egypt's Place in Universal History," announces this as the final result of his studies. In despite, however, of so high an authority, this ingenious theory must fall to the ground, as it has never been explained, firstly, why man should have been the only mute animal; secondly, how it was that he possessed vocal organs for an indefinite period without the power to use them; and, thirdly, how any process of imitation
a The Science of Language.
b Parallèle des Langues de l'Inde et de l'Europe.
c Les Aryas Primitifs. d Orig. des Lang. Sémitiques.

- Français et Sanscrit dans leurs rapports.
${ }^{5}$ Langues Indiennes et Chinoises.
${ }^{8}$ Science and Religion, 1856.
${ }^{\text {n }}$ On the Influence of Words, 1856.
${ }^{1}$ There is in French a sort of grun, or grum, cru-cru, very often resorted to. There is no articulation; the mouth is not open; but it means, Look at this, or that, or I notice you, \&c. It would not be fair to call it language; it is simply an onomatop.
could have given to man the faculty of speech, without which his imitative instinct could never have come into play.

The second hypothesis has been called the Pooh-pooh Theory, because, according to it, articulate speech arose from the interjections of pain, joy, surprise, wonder, and admiration, which start out from the very nature of animated beings. Now there is a fatal objection to such a limited basis for language, viz. that existing words cannot be brought back to interjectional forms. We never speak of oh ! or ah! but of pain, grief, vexation; we do not say ha! ha! but laugh, smile, pleasure, merriment. Horne Tooke justly observes, that "Language is built upon the downfall of interjections."

The third method of accounting for language is that of Professor Max Müller. In the opinion of this eminent scholar, man, by his very nature, and as one of his proper qualities, is possessed of a few hundred vocal sounds, each of which has an inherent sense, which man has no more the power of acquiring or of altering than he has the power of adding to his own stature, or of endowing himself with eye-sight, hearing, taste, feeling, or smell. With respect to this theory, it need only be remarked, that it leaves the question unanswered. It brings the inquirer up to the original bases, and teaches him to believe that all existing languages took their origin from a small number of cognate or possibly identical bases, and then the theory leaves him with the assurance that these bases are inexplicable.

But the explication of these bases is, unfortunately, the very problem a solution of which philosophy demands. To treat them as inexplicable is, in effect, to assert that, although the mental and moral faculties are reducible to system, and are acknowledged to have been developed by natural processes, yet that language, one of the agents by which these faculties operate, is beyond the ken of the human mind. There is, furthermore, this fatal objection to Professor Max Müller's very orthodox theory, the indisputable fact that people born deaf never speak, although the organs of speech may be quite unimpaired. Now if bases were man's natural inheritance, he would express his wants by their means without tuition, in the same way that he looks with his eyes, eats with his mouth, and reaches with his hands. One born deaf is, however, quite oblivious of the use of language, and resorts to gesture as the appropriate means of communicating with others. Neither does it dispose of this matter to say that the faculty is dormant from inability to appreciate uttered sound; because people afflicted in the way spoken of do make noises (pure onomatops) for the purpose of arresting attention, expressing anger, \&c. The noises they utter, are, however, not Aryan bases with inherent sense, such as when uttered can be at once understood by other Aryans. We never hear anything like $v i d$, or $p a s$, or $k r i$, or $d d$, or any other base, issue from their lips. Yet this is what we should hear if bases were natural to man, even if we allow that all grammatical inflexion is matter of con-
vention. On the contrary, the sounds these poor creatures utter are all of a purely animal character, a gurgling, snarling, shapeless kind, such as it is impossible to write, and painfully sad to hear. One such natural fact as this is more conclusive than many arguments, and it proves incontestibly that what we call bases are in reality as much acquired as are the methods of inflecting them, and that all that we can fairly consider to be the natural gift of man is the power of making noises with certain organs which we call vocal.

Furthermore, if bases were intuitive, all nations would speak one language; for each individual would be born with the common stock of words, and would at once apply them in their unalterable senses, in the same way that all races of mankind use their hands, feet, and eyes, in precisely identical manners. So, also, it would be right to argue that each nation would be able to speak the languages of every other nation without special tuition; for though certain clusters of individuals may have habituated themselves to the use of a limited number of the common natural stock of bases, yet they could not fail to understand perfectly any of the others that might be uttered by strangers to their society.
The real objection to the imitation and interjection theories lies against their too narrow foundations. Man is an imitative animal, it is true, but not purely imitative; he possesses also an impulse to spontaneity. This latter impulse is taken as the one basis of lan-
guage by the advocates of the Pooh-pooh theory. Onomatopoieism is all imitation ; and Interjectionalism is all exclamation ; neither of these theories, nor does that of Professor Müller, take cognizance of the nomerous sounds emissible by man that express, by neither imitation nor interjection, the many and ever varying animal sensations.

It has often been said that an infant expresses all its wants by crying. This is true only of the first few weeks of infancy, when all that the child is conscious of is the desire for food, and the sensations of personal pain. No sooner does the animal nature develop sufficiently to let the little creature know of other things and beings beyond itself, than the power of expression at once enlarges, and every mother hears and understands the many modulations of tone,-_the murmuring, cackling, hissing, puffing, and such-like indescribable sounds by means of which the little infant expresses its wants, its approbation, and its disapproval. A more instructive lesson on the origin of language can scarcely be imagined than that afforded by the significant noises of a child of about a year old, before it is capable of uttering a single articulate word. ${ }^{\text {a }}$ One half-hour's observation will astonish a
a Though well known, we must recall to memory the little history of Psammeticus. That prince, wishing to detect the origin of language, and its comparative antiquity, confided two poor children to the keeping of a herdsman. They were shut up in a small house by themselves, and completely isolated, in order that they should forget everything. At the end of the period of isolation the
discerning mind with the almost incredible volubility and expressive character of the natural onomatops which such a child will pour forth." These utterances, alike in all times and in all places, form the natural and true basis of articulate speech. The germs of all past, present, and future generations are contained one in the other, as if packed up in a succession of boxes. ${ }^{\text {b }}$ This was Cuvier's idea of the developments of form, and the same remark seems to apply to mental evolutions. Certain it is that the only sounds natural to man are those which each child utters in its first
herdsman reported that, when he visited the poor creatures they repeatedly said. "Bécos! Bécos!" the Phrygian word for bread (Gr. $\beta_{\epsilon ́ \kappa) .}$
a "Os tenerum pueri balbum que poëta figuras." "The poet fashions the tender and lisping accents of the boy." The Romans recognize the services of poetry. The ancient Greeks used, rightly, to make children at first learn by rote the moral sentences of the poets, so as to accustom their ears to sweetness and propriety, and to compel them to pronounce with exactness. Horace argues that poetry renders great service to ethics, enabling men to bear uncomplainingly the infirmities of old age and ill health, and teaching them admirably how to sustain poverty itself under the scorn and insult of contumelious opulence.
${ }^{\text {b }}$ Godfrey Wilhelm, Baron de Leibnitz, two centuries ago, propounded the theory of the cosmologic system of monads ( $\mu$ óvas), which was, and is, the most rational hypothesis, but also the most subtle, which was ever suggested, to explain the formation of the world. The difficulty of understanding the schema, or principle, essential to the existence of every monad or unity-perfect, has been much more against Leibnitz than against the truth of his cosmologic doctrine, the honour of the discovery of which was claimed by Newton.
efforts to convey its meaning; and these are always uttered for purely animal purposes.

That profound philosopher, the late Baron Bunsen, supplies the demonstration to this simple reasoning, in his work on Christianity and Mankind. He there says," "In surveying all the languages of which we have records, we find the constant phenomenon, that the physical sense is the substratum of the metaphysical." And again, he states that the evidence of language points " to the fact that all intellectual, moral, and spiritual notions are found to be only the secondary signification of the respective words, their primary sense being physical, sensual." ${ }^{\text {b }}$ The plainest proof that the abstract arose from the concrete.

This fact being established, our ground is circumscribed and cleared for the final investigation. All language is reducible to the concrete ö $\nu 0 \mu a$, otherwise called rgots or bases, simple monosyllabic sounds. In the words of Professor Müller, "They are phonetic types produced by a power inherent in human nature," ${ }^{c}$ and articulate speech is fabricated from these stems by man, "guided only by innate laws, or by an instinctive impulse." ${ }^{\text {d }}$ No one will contest this who has studied the efforts of a young infant to express

[^3]its meaning by sound. Indeed, this scholar admits the whole question for which we contend, and definitively confutes his own final speculations when he says, "In fact, interjections, together with gestures and movements of the muscles of the mouth and the eye, would be quite sufficient for all purposes which language answers with the majority of mankind;"a and again, "We cannot deny the possibility that $a$ language might have been formed on the principle of imitation." ${ }^{\text {b }}$ These admissions, coupled with the assertion that "nothing in nature exists by accident," $"$ beget surprise in the reader that so acute a reasoner as Professor Müller did not perceive the only rational conclusion deducible from them. Still more marvellous does this become when we find the same author relating the experience of Moffat, the African traveller, ${ }^{\text {d }}$ who states that the inhabitants of isolated villages in the desert tracts of Africa are frequently compelled to travel to great distances from their homes; "on such occasions, fathers and mothers, and all who can bear a burden, often set out for weeks at a time, and leave their children to the care of two or three infirm old people. The infant progeny, some of whom are beginning to lisp, while others can just master a whole sentence, and those still further advanced, romping and playing together, the children of nature, through their live-long day, become habituated to a

[^4]language of their own. The more voluble condescend to the less precocious; and thus, from this infant Babel, proceeds a dialect of a host of mongrel words and phrases, joined together without rule, and, in the course of one generation the entire character of the language is changed."

Such facts lay bare the whole process of, and the reason for the existing diversity among tongues; for the African villager of to-day is the reflex of what civilized man was some 5000 years ago. The first tendency of language was unquestionably to unbounded variety; and of this we have yet remaining evidence in the superabundance of synonyms found in ancient dialects. If we take so modern a form of speech as the Sanskrit, we find that the more primitive is the idea, the more words are there to represent it. The proof of this axiom is found in some statistics of the Sanskrit language published in the "Notes and Queries," June 20, 1870. The writer [F. P.] had arranged the Sanskrit bases under English vocables as a kind of reversed dictionary, including in the arrangement every fairly established radical in the language. The conclusions are given in the following words:-
"There are between 1700 and 1800 original Sanskrit roots. The exact number will be about 1780 . These have been registered under 645 English vocables; but as many of the roots have been repeated under synonyms, and from difference of conjugation, \&c., it results that the arrangement includes 5658 apparent roots, giving an average of 3.2 meanings to each radical. Now these 5658 apparent roots are most
unequally divided over their 645 English representatives. 180 words have only one root each; on the other hand, one word ( $g o$ ) has 439 roots to itself. There are five vocables with more than 100 roots each :-


It will be seen that a large part of this total can be deducted from the 1780 original roots, as the ideas expressed differ too much to allow of much repetition. Thus we have the curious result that the major portion of the radicals express but five simple ideas. But deducting 1144 from the gross apparent number 5658, we have 4514 roots remaining. Selecting vocables which have between 50 and 100 radicals registered under them, we have-
(6) kill . . . . . . 75
(7) bind . . . . . . 54
(8) cut . . . . . . 56
(9) divide . . . . . . 50
(10) abuse . . . . . . 62
(l1) throw . . . . . . 75
(12) tremble . . . . . 57
(13) collect . . . . . . 61
(14) cover . . . . . . 56
(15) surround . . . . . 61

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The primitive nature of these words will be noticed, and also that the two lists of only fifteen words comprise 1851 of the roots, or just one-third of the whole number.

There are seventeen words which have between 30 and 50
radicals registered under each, which I give in two divisions, as a new class of idea appears :-

Rougher Idea.
(16) break . . . . 39
(17) burn . . . . 31
(18) despise . . . . 49
(19) join . . . . . 37
(20) firm (be) . . . . 36
(21) give . . . . . 47
(22) take . . . . . 38 277

## Gentler Idea.

(23) love . . . . 32
(24) play . . . . . 36
(25) please . . . . 31
(26) praise . . . . 35
(27) worship . . . . 31
(28) serve . . . . 37
(29) desire . . . . 41
(30) wish . . . . 32
(31) increase . . . . 40
(32) eat . . . . . 49


Descending lower, I find 39 vocables with between 20 and 30 radicals a-piece, comprising as a total 922 more of the gross number. It would make this communication too long to set these out at length ; but they contain the yet more developed ideas of 'adorn,' 'dwell,' 'flow,' 'know,' ' obtain,' 'preserve,' ' purify,' \&c.

Beyond these there are 70 vocables with between 10 and 20 roots under each, which absorb 937 radicals among them, and introduce to us the yet more refined notions of 'colour,' 'cook,' 'finish,' ' fry,' 'learn,' 'prosper,' 'proud,' \&c.

Now, collecting the foregoing totals, we have-


Therefore, out of the whole number of words (645) under which the 5658 roots are registered, 141 words (or 21 per cent.) appropriate 4251 (or 75 per cent.), leaving only 1407 to be divided among the remaining 504 vocables, or an average of 2.79 roots a-piece. It is further seen that the simpler the idea, the larger is the number of roots found to express it; the whole illustrating in an unforeseen way the primitive character of the Sanskrit language.

The laws by which language has been developed from primitive articulations are few and simple; as, indeed, are all the operations of nature when we reach their real source.

Sir C. Lyell thus expresses himself on this ques-tion:-

It becomes a curious subject of inquiry, what are the laws which govern not only the invention, but also the selection of some of these words or idioms; giving them currency in preference to others? Although when we observe the manner in which new words and phrases are thrown out, as if at random or in sport, while others get into vogue, we may think the process of change to be the result of mere chance,-there are nevertheless fixed laws in action, by which, in the general struggle for existence, some terms and dialects gain the victory over others.

Words change their forms by Combination and Compression, and their meanings by Metaphoric usage.

By Combination we mean the joining of two sounds, so as to produce a compound with a sense differing from that of either of the components taken separately, as, up-rise, up-right. By Compression we mean the blending of two or more sounds into one syllabic instant, which may or may not be accompanied with a change of sense; as, to prise (i.e. up-rise) a board. Piplu for apiplu, and pidhâna for apidhana, are instances in Sanskrit. Under Metaphor we would include every change in the use of a vocable; for the assumption of a dynamic character by a static word, or its adverbial employment, are clearly metonymical processes. When we say, "Hand me a chair," the action requires the hand; but the employment of the word in this sense is as much metaphoric as it is when we speak of a handy tool.

The laws of the development of language are set forth in the following table:-

1. Combination.
a. Compounding.
b. Reduplicating.
c. Inflecting.
2. Compression.
a. Phonetic.
b. Metastatic.
3. Metaphor.
/ The process of Combination operates in several
ways. Sound is added to sound with a view to intensify the meaning. This process belongs to a very early form of language, although it is a law of change in full operation at the present day. As soon as sounds were become consolidated into words, ${ }^{\text {a }}$ they could be added to each other for the purpose of more precise definition; and a sound that successfully defined one thing would readily be applied to define other things. Hence it results that these "definers" would be among the first vocables to sink into mere conventionalities; and this satisfactorily accounts for the fact that what are termed "demonstrative bases" (i.e. pronouns, \&c.) are among the most petrified fossils of language.

A further stage in the development of language would be marked by the addition of word to word with the object of qualifying or extending the meaning. These true compounds could be formed at a time anterior to the separation of verbal, nominal, and demonstrative stems. Human speech must have passed through such stages before it reached even the biliteral form of Arabic bases; because, as we think the present inquiry will demonstrate that no more than one

[^5]letter can be safely allowed as the base of any word, it must follow that a base containing even two letters is the product of combination. The word "letter" here, and elsewhere in this book, means the uttered sound, and not the written character representing the sound.

Upon arriving at the stage just spoken of language became grammatical (see p. 29), that is, the knowledge of the origin of vocal symbols was entirely lost, and a conventional meaning existed for a number of sounds sufficient to express the simple wants of a primitive people. Fresh sounds doubtless would obtain currency, but from that time forward language would mainly develop by the combination of existing vocables, and by their application to new uses. It has been long ago known that the complex of modern speech arose from a very limited number of bases, about two or three hundred stems proving a sufficient foundation on which to erect the Chinese and Semitic dictionaries respectively; and Professor Max Müller conjectures that some similar number will be found to be sufficient in the case of Aryan words. This conclusion has been arrived at by a comparison of words with actual bases; but, if we were to consider mere possibilities, then only eight or ten bases, by mutual combinations, would produce an infinitely greater number of words than is contained in the richest of languages. The actual number of words, then, in every language being much smaller than the possible combinations of the smallest number of bases ever
likely to be seriously proposed for them, we have no difficulty in believing that when man's vocal utterances settled into conventionalities, the subsequent development could be effected by a mere word-building process. This view is further strengthened by considering the natural disinclination to indulge in useless toil. It is easier to combine two vocables together as attributive and nominal, than it is to cast about for a new and appropriate vocal symbol. A people possessing equivalents for big and man would be more disposed to place one before the other, than to invent the new term giant. So, doubtless, our remote ancestors, starting from the sound $i=$ move, accompanied its pronunciation with a rattling of the tongue to indicate rapidity, and so produced the form $r i=$ go quickly. It has been long ago remarked that the letter $r$ gives a sense of rapidity to a vast number of Aryan words; and the quivering of the tongue upon the palate is certainly the simplest and most natural way of expressing rapidity by sound. ${ }^{*}$ The word $r i$, then, would be an intensive, and, as familiarity breeds contempt, by usage it would gradually lose its intensive power, and at last be used as synonymous with $i$, 'go;' as we find, in Sanskrit, to have been actually the case. The sound pă, produced by a puff of breath

[^6]through the lips, would aptly convey an idea like forth, forward, \&c., and, as a matter of fact, the letters $p, v$, $f$ (which mutually interchange) enter into a large number of words having such a meaning. Now, by simply prefixing this sound $p a ̆$ to $r \boldsymbol{r} i$ we orally describe the idea forward-go or move-on. It seems certain that such was the origin of the Sanskrit base pri, to go forth, expand; and of the Sanskrit preposition pra, the Greek $\pi \rho o ̀$, the Latin per, the Teutonic for, forth, fore, \&c., \&c.

These stages of formation had been traversed before the records of language we possess came into being; even the Egyptian inscriptions, the most solid bases of antiquity, are written with words in the main of settled formation, but which, as will be shown anon, throw much light on the process just described. Egyptian bases are biliteral in form, but so constantly lose one of the letters in combining with each other, that special inquiry may reduce them all to a few uniliteral primitives. Here it will be sufficient to remark that the words of the Hieroglyphic language were modified by many adjuncts or servile letters, the origin and meaning of some of which have been traced. The letters $d, r$, and $m$, are of this class. . By their insertion bases are modified materially in their meanings as well as forms. Thus, by way of example, $h \bar{a} n$, to incline, becomes $\mathrm{D} \bar{u} h \bar{a} n$ and roh $\bar{a} n$, 'to stand.' Of these two serviles, the $r$ is derived from an independent base $a \mathrm{R} \tilde{i}$ or $e \mathrm{R}$, 'to do;' and the $d$ is from $\mathrm{D} \overline{\boldsymbol{u}}$, 'to give,' a base found also in the word $\overline{\mathrm{u}} \mathrm{t}$, ' the hand,' that
which gives; the $t$ in this last word being also servile. The servile letter $m$ is from $m \bar{u}$, 'to give,' and is similarly used. Thus the forms mūhān and rohān mean, literally, "to give an incline," and Duhän is a true causal meaning "to make incline." Now when we find that it is possible to trace the servile letters of a language up to substantive vocables, we have actual demonstration of the reasoning before advanced.

Beside the addition of word to word so as to change the meaning, a love of Exaggeration is so natural to the human breast, that it will occasion no surprize to find its operation constituting a law in the building up of words, The meaning of a word can be exaggerated in two ways, (1) by the addition of other words which repeat the idea in another form, giving rise to such locutions as hurly-burly, chitter-chatter, and to such still more demonstrative words as the Hindî tan-badan = the body, in which both tan and badan have separately the sense of "body," and their combination only produces a bigger word. We say to children in France, "Allez faire do-do" (dormire, Latin).

This principle underlies the formation of the reduplicate preterite in Sanskrit and Greek, and such words as did (=do-do) in English. Nations with more primitive mental organism than our own avail themselves largely of this method of intensifying. Thus in India at the present day achchhâ achchh $\hat{a}$ means "very good," dûr dûr, "very far," and so
on. ${ }^{\text {. In the same way in ancient Sanskrit grî, to swallow, }}$ was first fortified with a sibilant (by the same process that converts run into rush), and assumed the form gra-s; an asper still further intensified it, and it became ghas. This last form when doubled, as in the preterite, by common Indian euphonic laws, becomes ja-ghas, or, when rapidly pronounced, jaksh. Hence this verb makes jaghâsa, "he swallowed," and jakshuh, "they swallowed." The habit of exaggeration caused the idea of reduplication to be lost in the case of this among other verbs. It became more common to say eat-eat, or eat-up, than to say eat only. In consequence of this the form jaksh was ultimately treated as a primitive word, and we find it separately conjugated, as jakshiti, "he is eating," jakshishyati, "he shall eat;" and in the preterite it is reduplicated for the second time, and becomes jajaksha, "he did eat."

This process of intensifying words, and when they become familiar re-intensifying them-which we are able to trace in the Sanskrit, because so many stages of the literature of that language have been preserved,has been a powerful engine in the operation of those changes which make the discovery of primitive bases so difficult in our day. But through all its diversified forms the onomatop is to be found, living on through

[^7]all changes like the vital principle animating the organic creature, and from the $\operatorname{gri}$ of the Rig-Veda to the modern English gree-dy, the sound gă, suggestive at once of the throat by which alone it can be produced, is for ever present to attest the impulse which first stamped this oै $\nu$ oua with sense.

The second method of exaggeration is easier, and no doubt more primitive, consisting of the simple expedient of repeating the word itself. As instances, we may cite the words gorge, the throat, Fr. gorge, It. gorgo, Germ. gurgel; and to gugale or gurale, Fr. alouglou, Swiss gungeln, Modern Greek KגovKגov. Both these words are formed by a repetition of the base found in Sanskrit under the form gri or gal, to eat, the parent of gala, the throat, Lat. gula, Fr. gueule, and all the thousands of derivatives which arose in boundless profusion from this highly suggestive sound. So fully recognised is this method of repetition in Sanskrit that every base in the language admits of reduplication in a frequentative or intensive sense. The rule being general, it would be useless to cite special examples; and the words gorge and gurgle are mentioned merely to show that, like the Bourgeois Gentilhomme, we are continually performing a feat without knowing it. ${ }^{\text {a }}$ Similarly, the Hindûs say dug-

[^8]dugânâ," to beat a drum," khilkhilânâ, " to burst out laughing," lakhlakhânâ, " to gasp, pant," \&c., \&c.; and the Arabs say, taftafat, "weakness," sinsin, " thirst," dardar, " eating," \&c. \&c.

We will now, however, seek the assistance of those marvellous old hieroglyphs of Egypt, and trace this phenomenon to a conscious process. The well-known Egyptologist, M. G. Maspero, says," "Repetition is the simplest manner of increasing the sense of a root; and, therefore, in Egyptian, as well as in most languages, radical repetition is sometimes intended to mark an increase of the action. $Q^{\circ} \mathrm{N}$, to beat, develops itself into $Q^{\circ} \mathrm{N}^{\circ} \mathrm{N}$, to give somebody a sound thrashing. But this is rarely the case: repetition ordinarily is a modification of the word without any modification of the idea. $\mathrm{s}^{{ }^{\circ} \mathrm{Ns}}{ }^{\circ} \mathrm{N}$, to breathe, $\mathrm{B}^{\mathrm{e}} \mathrm{NB}{ }^{{ }^{\circ} \mathrm{N}}$, to spring, have no more value than $s^{9} \mathrm{~N}, \mathrm{~B}^{\circ} \mathrm{N}$ : they are both of them mere variations of the words, corresponding to no particular shade of variety in the fundamental thought. The sole difference between them is that $S^{0} \mathrm{~N}$ is a monosyllable, while $\mathrm{s}^{\circ} \mathrm{N} \mathrm{s}^{\circ} \mathrm{N}$ is a dissyllable." This is another way of stating, and of proving, our proposition that words are repeated so as to intensify their meaning, and that a certain amount of usage evaporates the exaggeration originally intended. The laws of Compression then operate, and pave the way for fresh inflation. The Egyptian words just cited may be compared with the following from Sanskrit:

[^9]gam $=$ go, jangam $=$ go repeatedly; $p \hat{\imath}=$ drink, pepî ${ }^{2}=$ drink excessively-and so on, every Sanskrit base being subject to a similar exaggeration.

A third method of combining word-sounds is that intended to express the relations which words bear to each other. This is the principle underlying all grammatical inflexion and syntactical arrangement, and is one of the most obscure processes in the science of language. Fortunately it is not necessary to enter into much detail, as the result of the study of comparative philology has produced a pretty general impression among scholars, that unquestionably all grammatical formatives originated in independent vocables.

Prof. Max Müller is very clear on this point : "We know that grammatical terminations, as they are now called, were originally independent words, and had their own purpose and meaning." ${ }^{\text {b }}$ Again: "We are accustomed to the idea of grammatical terminations modifying the meaning of words. But words can be modified by words only; and though in the present state of our science it would be too much to say that all grammatical terminations have been traced back to original independent words, so many of them have, even in cases where only a single letter was left, that we may well lay it down as a rule that all formal elements of language were originally substantial." e

[^10]Such are the views of a scholar at the head of the modern school of philology, so that as we also arrive at the same opinion by independent processes, it must be admitted that the theory has a claim to be received as established fact. Let us now quote M. Maspero on the working of this law as illustrated in the development of the Egyptian language. That learned scholar thus writes:" "Egyptian roots are not, properly speaking, nouns, adjectives, or verbs :b they express the idea independent of grammatical category, and may, according to their relative position, play the same part that nouns, adjectives, and verbs, play in our modern languages. Thus $\sqrt{\hat{A} \mathrm{~A}}$ may signify great, greatness, to be great; $\mathrm{s}^{\circ} \mathrm{M}$, to hear (to obey), obedience, obedient, and are therefore not definite nouns, adjectives, or verbs, but only possibilities of nouns, adjectives, or verbs. Their grammatical category resides not in their material form, but in the mind of him who speaks or hears. Hence it comes that the Egyptians possess nothing which we may say corresponds exactly to our declinations or conjugations. By dint of personal pronouns affixed as signs of the subject to the roots of appellative value,

[^11]they contrived to build small phrases $\mathrm{m}^{\circ} \mathrm{R}-\mathrm{A}, \mathrm{m}^{\bullet} \mathrm{R}-\mathrm{K}$, by which they devolved the possession of the idea expressed by the root upon one of the three persons, but without creating any definite grammatical category. $\mathbf{m}^{e}{ }^{\mathrm{R}}-\mathrm{A}, \mathbf{M}^{{ }^{e} \mathrm{R}-\mathrm{K}, \text { signify, after a general fashion, love- }}$ o'mine, love-o'thine; but we were not right to interpret them, when taken isolatedly, by I love, thou lovest, more than by my love, thy love: it is only their position in a sentence which determines the special value we are obliged to give them for the nonce, and enables us to see whether they are to be rendered by one of our substantives or by one of our verbs. $\mathrm{M}^{\mathrm{e}} \mathrm{R}_{\mathrm{R}} \mathrm{A} \quad \mathbf{\Delta T} \mathbf{T}^{\mathrm{e}} \mathbf{W - A}$ is translated, ' I love my father; and we say that $\mathrm{m}^{\mathrm{e} R-\mathrm{A}}$ is the first person of a verb, the regimen of which is $\Delta T^{e} W-A$. But $M^{e} R-\mathbb{A}$ and $\Delta \mathrm{T}^{\mathrm{e}} \mathrm{W}-\mathrm{A}$ are two locutions constructed on exactly the same pattern, and which, when isolated, express the attribution to the first person of the general ideas love, father ; being united in the same proposition, they become the two terms of an equation, $M^{e} \boldsymbol{R}-\mathbf{A}=\Delta \mathbf{T}^{\circ} W-\Delta$, love-o'mine $=$ father-o'mine, where the relative position of the factors induces us to bestow upon $m^{e}{ }^{\mathrm{e}}-\mathrm{A}$ the quality verb, $I$ love, while in another
 would be obliged to give it the substantive value of my love. $\mathrm{m}^{\mathrm{e}} \mathrm{R}-\mathrm{A}$ being alike a substantive or a verb, may, in its verbal impersonations, denote the past as well as the present, and the future as well as the past. The Egyptians contented themselves with indicating the fact of the action being done, and with naming the
doing person ; they left to the hearer's or reader's mind the care of ascertaining, according to the tenor of the phrase, the moment of duration in which the action is, has been, or will be present."
M. Maspero also describes a further development, by which the Egyptians gave a more definite character to their words. Four roots, $a, p, t, n$, when vocalized with the vowel $\hat{u}$, were used to give a verbal signification to bases, but when vocalized with the letter $\overline{\boldsymbol{a}}$ produced forms with a power similar to that of the definite article. These prefixes were used by no means indiscriminately, though we need not here be minute in our description of their grammatical functions. It is enough, by way of illustration, to say that $T \bar{a} z^{\circ} \mathrm{D}-\mathrm{A}$ or $\mathrm{Ta}-\mathrm{A} \mathrm{z}^{0} \mathrm{D}$ represented "my word," while $\mathrm{Tûz}^{0} \mathrm{D}-\mathrm{A}$ or tû-A $\mathrm{Z}^{0} \mathrm{D}$ meant "I speak;" so also NāAR-A=" my deeds," and ûN AR-A="I do." The personal pronoun $A=$ "I, me, my," can, as we have just seen, change its place in Egyptian. It can, indeed, be used along with the auxiliary in three ways : by being added (1) to the auxiliary itself, $A \hat{u}-A M^{e} R$, the being-of me love = I love ; (2) to the verb, $\Delta \hat{\mathrm{u}} \mathrm{m}^{\mathrm{e}} \mathrm{R}-\mathrm{A}$, the being love-of-me $=I$ love; (3) both to the auxiliary and to the verb, $\Delta \hat{u}-\mathrm{A} \mathrm{m}^{e} \mathrm{R}-\mathrm{a}$; the being-of-me love-of$m e=I$ love.

We shall only touch upon one more point of Egyptian grammar, and that is the evolution of a participial form. The auxiliary ûn, to exist, (curiously like the Sanskrit an, to breathe, the base of an-imus, \&c.) was used, without the vocalizing helpmate $\hat{\boldsymbol{u}}$, also
to express existenoe. In this form it followed verbal stems and gave to them the sense of participles. Thus ÛN-n amen meant "the being which is Ammon," or "Ammon's being;" and $\hat{\mathrm{U}} \mathrm{N}-n-\mathrm{A}=$ "the being which is me," or "my being." The use of the auxiliary expressed an insistence on the idea which enabled it to perform the office of a past tense. An idea of "possession" underlies all verbal inflection"I walk" means that the walking is mine, "I shall eat" that the eating will be mine, and so on. In the same way an insistence on actual possession would fairly convey the idea of the past tense, that is, the possession which is possession. Therefore the form ÛN- $n$-A.meant not only my being but also I was (or "the being actually being mine"), in the same way $\mathrm{m}^{\mathrm{e}} \mathrm{R}-\mathrm{A}$, loving of $m e$, or I love, becomes much stronger in the form $\mathrm{m}^{\mathrm{e}} \mathrm{R}-n-\mathrm{A}$, the loving being (actually) mine, or I loved. The future tense was formed in a similar rational manner, by the addition of the base r, to $d o$; thus, $\mathrm{A} \hat{\mathrm{V}}-\mathrm{A}-\mathrm{R} \mathrm{M}^{\mathrm{e}} \mathrm{R}=I$ am to do the loving, or I shall love.
Theory is quite superfluous after such lucid facts. We need no longer speculate on the possible origin of grammatical formatives when the whole process is made manifest by the structure of the venerable language preserved on the monuments of Egypt.

It will, we think, be interesting to show that the very processes found in Egyptian, and which may have seemed somewhat mysterious to the reader, are to be seen in operation at the present day in Turanian languages. The construction of these languages allows
their formations to be more easily separated and examined than is the case with the more highly organized Aryan forms of speech. Not to weary with details we will content ourselves with an instance from Turkish. This language possesses no verb equivalent to the English to have, to express which relationship the Turks employ an impersonal verb var="existing," precisely as is the case in Egyptian. This base var is joined with the genitive and a form of the verb dur$m a k=$ "to stand, to be, to remain." Thus we get binim-var-dar " of me there is the being" $=I$ have; binim-var-edi, " of me there was the being" $=I$ had, and so on, in striking analogy to the method of the hieroglyphs. This impersonal verb var is to be deduced from the regular infinitive ol-mak, 'to be,' by the common change of $l$ into $r$, the proof of this alliance being found in the fact that, in the future and imperative, the regular verb is used: thus, binim-ol-ur, "of me it will be," =I shall have; binim-ol-is-un, " of me let it be."s The change of ol into var is not so great as at first sight may appear. Another verb from Turkish will show how the change came about,-the infinitive "to beat" though written or-mak is pronounced vour-mak. The fact, however, with which we are mainly concerned, and which is perfectly clear, is that the idea of possession is expressed in both Turkish and Egyptian by the insertion, as a verbal

[^12]inflexion, of a base of which the primary sense is "being." The French say phraseologically $C$ 'est à moi to convey the same idea.

The Chinese language is not chosen for illustration, because, as is well known, it contains nothing that at all approaches our ideas of an inflection. It is an interesting example of the theory of Survivals found in language, one perfect word being modified by the juxtaposition of another perfect word, just as we say was the case originally in all other languages.

In the preceding remarks we have confined ourselves to a few examples illustrating the formation of verbal inflexions, because they are among the most obscure of all the changes that words have undergone. The personal terminations in most languages can readily be referred to the personal pronouns. In Semitic grammars rules are actually given for the modification of personal pronouns so as to fit them to become the terminations of verbs. In Turanian languages, also, apocopated forms of these pronouns are regular verbal affixes; and in the Aryan languages the same thing can be recognized, though with greater difficulty. When we see how an idea of personality is imparted to Semitic and Turanian bases, there can be no longer a doubt that the termination $\cdot m$. for the first person of all Sanskrit tenses, and the tenses of so many other Aryan languages, is identical with the $\cdot m \cdot$ found in all those languages as the pronominal $m e, m y$, mine, Greek é- $\mu$ ós, Latin meum, Span. and Ital. mi-o, French moi, Persian man, Hindî main, Sanskrit mâm, \&c.

So again, the termination $\cdot t$. of the second person singular is the base upon which thee, thou, Latin $t e$, French te, Persian tú, Hindì tain, Sanskrit twam, \&c., have been erected. The personal terminations blend so completely with the stems in Aryan languages that it is impossible to separate them more distinctly than in the indefinite way above given. The dot before and after the $t$ and $m$ may be taken to stand for some unknown vocalizing element, which may have preceded or followed the consonant.

What we have just advanced about conjugation is equally applicable to declension; but on this point we will content ourselves with citing Professor M. Müller. He says, "Originally declension could not have been anything but the composition of a noun with some other word expressive of number and case."a

As it is not our object to trace grammatical forms to their origin, but only to adduce such facts as will support the general laws we enounce, the foregoing details are amply sufficient for the purpose. We hope our illustrations, and the authority of Professor Max Müller, will have satisfactorily proved the fact that the relations which words bear to each other are expressed by the addition of word to word, and are not the result of any mysterious or incomprehensible process.

The foregoing will be enough to show the existence of combining principles in the formation of language; and but few words are necessary to establish the com-

[^13]pressibility of compounded sounds. This latter law of growth is, indeed, so patent that it has never, to the writers' knowledge, been doubted. It is, nevertheless, a process of much interest to the student of language, as it affords historical evidence of undoubted truth, whence certain laws of permutation may be deduced, by which hypothetical forms of words can be constructed carrying the inquirer back, logically and scientifically, to primitive onomatopic bases. Horne Tooke spoke of what is here called a law of compression as arising from a desire to abbreviate the labour of utterance; we shall, however, be able to show that it is not due solely to this cause. "There are not only signs of sounds," says Horne Tooke, " but signs of those signs one under the other in a continual progression."

It will, perhaps, be sufficient if we mark two fairly distinct laws of compression: 1. Phonetic corruption; 2. Metastasis.

Words are in a perpetually unstable condition from the operation of phonetic corruption. All the vast machinery of social intercourse, of schools, and of literature, is impotent to stop the powers of nature ${ }^{2}$; the Word passes on from mouth to mouth for ever subject to the varying aspects of the speakers' mental constitutions. The speakers are quite unconscious of the changes which they themselves are operating. They hear the word and think that they repeat it ac-

[^14]curately, but yet unconsciously modify it. In early times no effort was spent on exactitude, and no institutions preserved traditions of what once was; accordingly words then changed more rapidly than is the case in these days. The long word folium, found in the Latin trifolium, dwindles down to $\boldsymbol{f}$ in the French trè̀fe; the Sanskrit madhya, Latin medium, Greek $\mu$ écos, French milieu, English middle, sinks to $m i$ in the French à mi-corps, half-length. We have elsewhere adduced reason for believing that the letter $f$ in the word lift is all that remains of the words above, over, up, and that the word lift meant originally lay-up, the $p$ undergoing a change similar to that which educes the French cuivre out of copper. It must not be supposed that we imagine for a moment that the French word cuivre arises from abortive attempts to pronounce the English word copper ; on the contrary, it is our firm conviction that there is much less of this kind of derivation in the world than is generally supposed. It seems almost certain that no language whatever was ever derived from any. other language by a relationship akin to that of mother and daughter. The spoken languages of to-day had their original at the parent fount of universal speech quite independent of classical mediation. The dialects of the dominant tribes in the peninsulas of Greece and Italy acquired a fletitious importance from the martial conquests of their speakers, and from the literature clothed in their dress; but it must not be forgotten that other ethnically cognate tribes inhabited both Greece and Italy along
with those who finally gained the political superiority. These independent colonies never derived their languages from what we call Greek and Latin; although, after their absorption, their languages were necessarily modified by the genius of their masters. The different dialects of modern Italian and modern Greek carry the indelible marks of the independence of these primitive colonies, and are thus of equal value to the philologist with their more renowned rivals. If the dialects of Italian are not derived from Latin still less can the speech of the Goths, Vandals, Franks, Gauls, Lusitanians, \&c., be derived from that language. The commonly prevalent teaching on this matter is, therefore, unsustainable.

As a remarkable instance of phonetic corruption let us take the English copula and. In German this word is written und; in Dutch the $d$ is dropped and it becomes en; in Latin the $n$ is lost, and it is pronounced et; in French, though still written $e t$, it is sounded like ay; in Italian the last consonant is rejected, and it is written $e$ while preserving the French sound; and, finally, in Spanish the sound is further modified to the vowel sound of $y$. Thus we see that the word and by phonetic corruption alone becomes $y$. But what is this word and? and whence does it derive its sense of copulation? To answer these questions we must trace it through its Indian forms. In Bengalî we find the same idea expressed by $o$, and in Hindî by $a u$ and aur. In these words no trace is found of the medial $n$, and the
vowel has the $u$ sound as in the German ind. But the Hindî form au or our also means "other," and through this sense points to its derivation from the old Sansknit word antara, which means "different, separate." The word our is a phonetic corruption of antara, just as the English or comes from other. Thus we see that the word and is an abbreviated form of the Sanskrit antara, Gothic anther, Anglo-Saxon oper, and that its original intention was to mark a difference between two objects. And it is really a sense of difference that we recognize in the word and. "This and that" means, etymologically, "this other that," ie., "this thing with that other thing." The word other, as will be perceived, preserves both the form and sense of the parent better than its rival and.

It is almost superfluous to prove that or and other were originally the same, still we may as well cite a case: thus, in Higden's Polichronicon we read, "for pis nyzt I schal assay wheper I schal overcome ope be overcome." We also read, "I douzte wheper I schulde be wrote ever no;" which shows that either is another form of the same word; as are also the compounds whether and neither.

Mr. Wedgwood with much ingenuity argues that and is a possible form of even, and was intended to place two objects on a level, and so mark their connectedness; but the foregoing and following remarks will, we think, show that such a view is untenable. The word antares is also found in Sanskrit deprived of its nasal, in the word tara, and this latter word
has exactly the same meaning and use as the former. But itara reveals its origin, because in this shape we are able to resolve it into the two parts, $i$ and tara, the first being the proximate definite explained at the end of the Præfamen, and the second being the Sanskrit noun expressing "passage, crossing," derived from a verbal base, tri, "to cross over." The same noun, tara, also forms the termination of the comparative degree of adjectives in Aryan languages; as the Persian bih-tar, English bet-ter, Sanskrit punyatara, English pur-er; but it dwindles, by phonetic corruption, to the letter $r$ only in such words as the Latin melio-r, and the English mo-re. As the sign of comparison it means " beyond," and this is also the sense which the same base, trí, bears in the Latin prefix trans-, and the French très. Hence we see that $i$-tara means "beyond this," a very rational expression for the ideas still conveyed by other, and, \&c.
The primitive meaning of $\operatorname{tr} \hat{\imath}$ is, however, "cross over ;"-it is a compound formed of $\cdot t$, the remote definite=" there " $+\underset{r}{ }=$ " go," and is, therefore, equivalent to " go there," i.e., "motion to that place." This analysis satisfactorily accounts for its use in another sense, as in the word antar-aila, Sanskrit; inter-vallum, Latin ; inter-val, English, for where this crosses to that there must be inter-vening space. A similar line of reasoning shows the origin of such Sanskrit words as anya, other; antra, intestine ; antar, within; anta, the end ; antima, last, \&c., \&c.; and the Latin inter-us, inter-ior, alt-er, ulter-ior, ult-ra,
and the thousands of derivatives that will readily suggest themselves to the reader.

The changes of which we have been speaking are caused by the attrition of use, and arise, in some respects, from a disinclination to take more trouble than is necessary to make oneself understood. It is a law of abbreviation very manifestly marked in the language of the Egyptian Hieroglyphs. The Egyytians, it seems, had an affection for monosyllables, so that the process of intensifying by reduplication, though gratifying a natural love of exaggeration, was irksome in the utterance. "To overcome that difficulty,"-we again quote M. Maspero,-"the Egyptians had no resource left but to drop one of the three last radicals, the first being always respected. Thus, $Q^{{ }^{\circ}{ }_{B} Q^{\circ} \mathrm{B}}$ becomes $Q^{\mathrm{e}} \mathrm{Q}$, by dropping the second radical; $Q^{\circ} \mathrm{BB}$ and $\mathrm{QB}^{{ }^{\mathrm{e}} \mathrm{B}}$, by dropping the third; $Q^{{ }^{e} B Q}$ or $Q^{\circ} Q$, by dropping the fourth; so that each biliteral monosyllable, being raised to the square, turns out to be the common stock for three triliteral monosyllables, all of them signifying the same thing."

Phonetic corruptions such as those above described have played an important part in the development of language. By their means, primitive bases, in originating derivatives, have lost their first form ; the altered form, in possibly an altered sense, has given birth to new derivatives yet further departing from the parent type; and these last, becoming tertiary bases, have produced other derivatives, able in their turn to carry on the process of development in ever-widening circles.

One thing these changes impress upon our minds in an especial way, and that is the unwisdom of the clamour made by some philologist about the essential distinction between termination and base. It is abundantly evident that in no language have the ultimate bases been as yet discovered, and this fact has caused even the best scholars to draw an arbitrary line at a certain period in the development of language, and to assert that the bases then existing were part of man's nature, and among his ingenerate attributes. Such an idea is pure mythology. Our researches lead to the conviction that the primitive bases exist now only as single letters; whenever two letters, certainly whenever two consonants, are joined together, there we have the remains of two or more bases. The number of these bases must be very small,-they are all contained in the alphabet of the universe,-and will in each case be found to be the natural expression of a material fact, that is, a true onomatop.

The desire for abbreviating the labour of speaking would of itself suffice to make an originally homogeneous language break up into rapidly diverging sections. The impulses of man's nature being ever the same, we can readily understand that long before historic time began, the whole form of language had been repeatedly changed, broken down, and renewed, leaving behind no traces of its former states. But the same being operating with the same means, and propelled by the same desires, would, however, con-
tinually remodel the same natural forces to a like result, and thus how repeatedly soever the elements were combined and dissolved, they would be for ever present, awaiting only the labour of the scientific analyst to resolve the compounded mass, and to separate it into primary atoms. $\Delta \iota \pi \lambda o \hat{\nu} \nu$ ỏ $\rho \hat{\omega} \sigma \iota \nu$ oi $\mu a \theta$ óvtes үра́ $\mu \mu а т а$.

The complete fluidity of language was brought to an end by civilization. The utterly savage state would allow of any amount of diversity, so long as the needs of the passing moment were subserved; but the first approach to civilization implies community of interest, with some amount of fixedness in occupation, in abode, in ideas, and therefore fixedness in vocal symbols.

Metastasis is another form of phonetic corruption. By this process the letters composing a word are not rubbed off or blended into new sounds; they remain in the word, and are changed only in position. After metastasis has taken place, however, a word is still liable to ordinary phonetic corruption, so that in the course of time its identity is completely destroyed. This law of change is the most obstructive to the student of language; for as long as the letters remain in their natural order they can be tracked through an indefinitely long series of permutations, but if any part of the series is traversed by metastasis, the clue to the labyrinth is gone, and is only recovered by a lucky hazard. Instances of genuine metastasis
are happily somewhat rare, but are sufficiently numerous to prove their undoubted existence. Such are the following: -

Lat. specto becoming in Gr. oKél-тоцal.
Eng. pot " "Germ. topf.
Eng. витt ", "Eng. тив.
Eng. витt ${ }^{\text {a }}$ " "Lat. тивия, тив $a$.
Eng. BeLly " "Germ. Leib.
Lat. roLium " "Eng. Lear.
A milder form of metastasis is frequently present, giving rise to duplicate forms in the same language, such as blabber developed from babbler, board from broad, bird from the older bridde, and bocla from bloca the Provençal for a knob. In Sanskrit words ending in $r i$ regularly change that termination to $i r$ in the past participle; thus kri, to scatter, becomes Kîrna ; grî, to eat, becomes gîrna, and so on.

These metastases arise in some part from carelessness, and in some part from physical peculiarities. We have known boys continually to say "regually" for "regularly," and be apparently quite unconscious of the difference. We have here nothing to do with the cause, we only chronicle the fact; and the single example of spec- becoming $\sigma \kappa \dot{\epsilon} \pi$ - is sufficient to prove it.

Words change their meanings as well as their shapes, and a change in meaning frequently occasions some

[^15]changes in form which in the original sense could never have taken place. The science of language concerns itself as much with the meanings of sounds as with the sounds themselves, hence it follows that what operates such changes of a meaning is a law in the development of language. We think that all such changes of meaning arise from Metaphor, that disposition which man invariably manifests to describe that for which vocables are wanting by such words as he has at command,-speaking of the analogic unknown in the likeness of the known.

Dr. Daniel W.ilson, in his work on Præ-Historic Man, brings before our minds a remarkable historical instance of the development of language by the application of existing vocables to new objects. "In the slow migration of the human family," he says, "from the great central hives, language imperceptibly adapted itself to the novel requirements of man. But, with the discovery of America, a new era began in the history of migration. In its novel scenes language was at fault. It seemed as if language had its work to do anew, as when first framed amid the life of Eden. The same has been the experience of every new band of invading colonists on its first arrival in the new world. That its English settlers, after occupying the continent for three centuries, instead of inventing rootwords wherewith to designate plants and animals, as new to them as the nameless living creatures were to Adam in Paradise, apply in an irregular and unscientific manner the names of British and European flora and fauna. Thus the name of the English partridge
is applied to one American tetranoid (Tetras umbirellus); the pheasant to another (Tetra cupido); and that of the familiar British warbler, the robin, to the Turdus migratorius, a totally different American thrush." So also E. A. Eyre, says, "When an Australian sees an object unknown to him, he does not invent a name for it, but immediately gives it a name drawn from its resemblance to some known object."

This natural propensity to apply an existing vocable to a new idea can be illustrated by the Sanskrit base previously cited (p.26). Gri, to swallow with the throat, easily began to express the idea of eating in general; and as eating implies seizing with the mouth, as an animal does its prey, so this mouth-seizing would gradually come to include seizing of any kind. And this is undoubtedly the origin of the form grabh, "to seize," found in the Rig-Veda, ${ }^{\text {a }}$ and which still lives in the vulgar English grab, to grip, or grasp; but which was softened into grih, "to take," and still further modified to hri, "to convey," in the later forms of Sanskrit. This word has even reversed its meaning, as is seen by the Gaelic gabh, "to take;" the Gothic giban, the English give (Wedgwood). The vocable for seizing, after being applied to the idea of conveyance in general, gradually began to express every species of hauling and drawing, from the ploughed marks or furrows on the land to the lines

[^16]on a tablet or canvas, and so originated the Greek form roádo, the Latin graphicus, English, graphic; Greek roapis, a drawing-pencil or pen; roaфiov, a writing style; whence the French greffe, stylet, and greffe, an office where writings are engrossed and deposited ; also, in agriculture, the insertion of a small twig, like a stylet, in another tree is called grafting. Now the word bio-graphy would never suggest the idea of eating to modern ears; but the above shows how simple is the process which has produced so artificial a word.

When grabh or graph assumes an initial sibilant, a very common change, it becomes scribere, in which the crib is clearly the Greek $\gamma \rho a \phi$. From scribere proceed, of course, scriba and scri-nium, and such metaphorical terms as de-scribe; also the English scribble and write; for $w$ in this last word represents a guttural letter, just as worm is identical with the Hindî kirm, and the Sanskrit krimi.

As the evolution of $\gamma \rho \alpha^{\prime} \phi \omega$ from $g r i$ may, by some, be thought purely speculative, we will adduce one or two instances equally remarkable and more patent to the sceptic. When we re-cover our heads the term employed seems exactly to suit the action; but when we recover lost property it is not so apparent that our intention is to bring the article again under the shelter of our protection; and when we recover from sickness the last thread of connexion snaps. Here we have a common word, without the smallest change of form, assuming three very different meanings, caused solely
by the operation of this law of Metaphor. But the word re-cover in any sense is now far removed from its basic signification. We get it from the French recouvrir, i.e. re-couvrir, to cover again, the analogous Italian form being coprire, from the Latin cooperire, i.e. con-operire. And what is operire? It is an excellent instance to prove that French is not derived from Latin, but had an independent growth; because the French word is nearer to the older Sanskrit form than is the Latin, and it is inconceivable that a word having once been corrupted should, by further corruption, approach nearer to its original form. The Sanskrit form is sam $+v r i$, meaning literally, "to surround with"; nor need we stop there, for vri itself, which by some would be called a primitive base, can be resolved into $v i+r i$, literally " to go about," a very natural and descriptive onomatop for the idea conveyed by "surround." But it may be asked how does the writer [F. P.] know that operire is at all connected with vri? The answer is that he has detected several other Latin words in which the same change manifests itself. For instance, op-tare, to choose,-in Sanskrit $\boldsymbol{v} \boldsymbol{r} \boldsymbol{i}$ has also the sense of choosing ;-op-erari means " to operate, work, engage oneself in," and the Sanskrit base vrit has precisely the same meaning; op-es, op-imo, op-ulens, \&c., convey an idea of "riches," \&c., and the Sanskrit vridh does the same; op-acus means "shadowy" and the Sanskrit vrish, to rain, whence varsha, "a cloud," shows the origin of the term; op-timus, $=$ "best, most to be chosen," is the equi-
valent of the Sanskrit vrind-araka, "excellent," from vri, " to choose." Some words show the alliance still more plainly, such as orbs, orbit, in which the presence of $v \underset{i}{ }$, to go round, is manifest. In the same way we might ally the Latin or-care, ${ }^{\text {a }}$ to shout, with the Sanskrit vrih or vrimh, having a similar meaning; or-dia, " first, principal," with varh or valh, " good, pre-eminent," of (?) vrish "to be grand, powerful;" and or-are, " to speak," seems to have been as active a word in Sanskrit as it is in Latin, for a whole series of bases exist presenting modified forms of $v r i$, all having the sense of "speaking:" thus, vrimh, varh, valh, vridh, vrit, vat, vad, [?vaj], vichh, vach. The imaginary base vaj is introduced merely to show the phonetic link connecting vach with vad, the latter being unquestionably derived, through vat, from the form vrit. All these Sanskrit bases mean "speak," and again we find the sound veri modified to or-o in Latin. A very little trouble would bring together many more instances, but enough has been done to show that $0-, o p-$, or-, orb-, in certain Latin words actually represent the $v \underset{r}{ } i$ of Sanskrit. It is contrary to all the teaching of modern scholarship to suppose that sam-vri having once degenerated into co-operire could ever have gone back, by further corruption, to the form cou-vrir; ergo the French word is independent of the Latin word. Furthermore, such words as coupe, cupidité, Cupidon, \&c., show that the French

[^17]would have found no difficulty in uttering the Latin cooperire had they tried to do so. There can, therefore, be no doubt that the exact meaning of re-cover is "to again surround with," and that it has acquired other meanings by metaphoric usage.

The word box is a most familiar instance of the many different ideas which metaphor will make a word represent.

In the foregoing instances (p. 47) we, incidentally, met one of the most pertinent objections to the theory of onomatops, which we advocate and maintain. Mr. Henry Sweet, in the course of a review in the "Academy," asays, "The most primitive and indispensable words of language are just those which could not possibly have originated from imitation; the first object of language must have been to make known material wants such as hunger and thirst, not to call attention to the song of the nightingale, or discuss the ornithology of the cuckoo." We have seen above the simple guttural exclamation gă, giving birth to vocables expressive of the first wants of man (gri, to eat), and slowly enlarging in import with the growing exigencies of society, until ending in such words as bio-graphy and graft-ing. This is the process to which Mr. Sweet alludes, but does not rightly appreciate, when he says that, "as language increases in copiousness and precision, the imitation and gesture words drop out, and are replaced by legitimate nonimitation words." The real truth being that the a Vol. iii. p. 219.
natural and animal utterances of man become consolidated into conventional symbols by advancing civilization, and afterwards assume new meanings by metaphoric usage.

Enough has now been said to define accurately our views on the development of onomatops; and of Onomatops themselves it may here be said that they are not sounds imitative of other animals, or of the powers of nature; they are not interjections, the exponents of transient passion; they are not innate bases with unalterable senses, created with man as an attribute of his being; but they are the simple sounds which man utters in common with the brute, but which the mental organization of man has wrought to the perfection of Homeric and Shakesperian verse.

We may say, in the words of J. S. Mill, when discussing universal law, that we "have been enabled to see more clearly, in the progress of the investigation, the basis of all these logical operations is the law of causation. The validity of all the inductive methods depends on the assumption that every event, or the beginning of every phenomenon, must have some cause, some antecedent, on the existence of which it is invariably, and unconditionally consequent."

[^18]
## PR AEFAMEN.

From the Philosophy of Inductive Sciences, Language is called an instrument of thought; ${ }^{*}$ but it is also the atmosphere for living thought. On the one side a medium essential to the activity of our speculative powers, invisible and imperceptible in its operations; and, on the other side, an element modifying by its quantity and changes the growth and complexion of the faculties which it feeds.

Onomatops are the primitive and original forms of the human language-the 'Evte ${ }^{\prime}$ '́ $\epsilon$ є $\alpha$ of Aristotle ( De Animâ), or perfection coming from superior causes, preexistent, and capable of receiving life and becoming finished vocables-the $\lambda$ óros-what Geology is to the knowledge and science of our globe; or Astronomy to the study of the physical laws of the heavenly bodies; -or the representation of universe after its contemplation. Words exist from the very nature of man, springing from the faculties which enable him to obey the impulses of his being, urging him to express by sounds the wants and fears of his life, and the tempests of internal passion. All vocables become cognizable

> 2 Words are the notes of thought, and nothing more; Words are like sea shells on the shore, They show Where the mind ends, and not how far it has been.
through onomatops, because they are symbols of creation-figmenta verborum-the medium by which children learn all that they know, for the simple reason that that fleur de rhetorique is the vox nature, the corner-stone, from all antiquity, to the majestic edifice of language, and the very source of light from which flow the elements of strength and grace of the $\lambda$ óros.

The word Onomatop, or more correctly Onomatopoieiia, is derived from the base of the oblique cases of ö̀oua and the verb $\pi$ oté $\omega$. It would have been more appropriate to have evoked a new term from $\tau \cup \dot{\pi} \tau \omega$, since an Onomatopoieiia is a vocable coined, stamped to the effigy of the subject represented, of the nation where it is represented, and of the age in which it has been represented. The inconvenient length of the old term, on the one hand, and the desire to avoid the affectation of coining an altogether new word, on the other hand, have induced us to cut off boldly the latter portion of the word Onomatopoieia, and to reduce it to the more wieldy proportions of Onomatop. The reader of this book will find that this is by no means the first time that a word has dwindled down to a single letter. This time the process is effected consciously, and for a practical purpose.

Onomatops have escaped the convulsions which have agitated the globe, and the revolutions which have again and again remodelled society, because they are fundamental and eternal principles. The ơvo $\boldsymbol{\alpha} a$ once struck by the electric genius of man circulates among
mankind for ever, carrying with it at all times the impress it has received; for, however much alloyed by foreign admixture, and disfigured by accumulated accretions, the pure and primitive elemental atom remains in every articulate word, awaiting the scientific analysis of the master of language.

The task of submitting the whole body of human speech to careful analysis, for the purpose of discovering the protean atoms from which it germinated, is beyond human power; but it is possible so to operate upon definite sections as to arrive at the real basement, and by occasional excursions into the general domain of speech to assure ourselves that our discoveries are universal facts. This we have in great part done, and have formed the onomatops we have discovered into a dictionary; but before publishing the matter so collected, we thought it advisable to make known our method of treatment, in order that, in the work itself, we might have the advantage of the criticisms of such scholars as might favour us with their notice.
The special object of writing this first Dictionary of Onomatops is to show, that we must look to nature only for the bonds uniting all languages together; and in adverting to the numerous affinities or analogies connecting languages, it is hoped that the proof of their true origin will be demonstrated. To do this we must go back to a period anterior to our civilization, although we do not pretend that civilization alone had the power to regulate the euphony of onomatops. Eupho-
had for nia, suprema lex est,-the consequent corollary is that flum $x$. $n$. letters or signs must submit and yield to the music of the word.

The only language we meet with in the long retrospect of the past by which the riddle of human speech can be solved, is the Sanskrit, the elaborately organized structure of which presents most highly finished forms, abounding with numberless inflexions and idioms of remarkable euphonic power ; and, furthermore, a language susceptible of perfect analysis, exhibiting an incontestible and uncontested superiority over other idioms. This admirable language spread over India by virtue of its strongly marked vital force, and the children it has left, in such vernaculars as Bengalî, Mabratî, and Hindî, adapt themselves conspicuously to European languages, and elucidate them wonderfully by revealing the laws by which, in historic times, the monuments of Sanskrit phonology have crumbled to the dust.

As we have shown in the Introduction, man had much to do before he could arrive at the harmony of Homer's verse. Proceeding from simple unconnected utterances, passing on to a concatenation of monosyllables in the fashion of the ancient Chinese, developing an uncertain terminology, such as is seen in the hieroglyphs of Egypt, and finally reaching the fully inflexional phases of Semitic and Aryan languages, such is an outline of the history of this remarkable acquisition; the whole affording a strong confirmation of Dr. Darwin's theory of continuous evolution.

The principles we announce, when fully developed, will lay the foundation for a new school of Philology, and do for Language and Philosophy what Dr. Darwin has done for the science of Physiology.

In this Præfamen we propose to give only some illustrations of our method of analysis, by which we shall seek to show a bond of union among large numbers of words hitherto supposed to have had independent origins. Some of these words we treat more fully and trace up to their onomatopic original; but a preliminary sketch such as the present would have extended beyond reasonable proportions had we done so in every case. We take a sentence and show that every word is but one of a series of words, all clearly pointing to some common original. The method of recovering that original we illustrate in some cases, which it will be seen is not guess-work, but is effected by a careful examination of both modern and ancient forms and by building upon a broad basis. It is not improbable that many of our alliances may prove faulty and may have to be rejected, but so long as our principles are not overthrown the value of our work remains untouched. These principles may be stated in a few sentences, as follows :-That every abstract in language is evolved from a more primitive concrete;-that every concrete was, originally, expressive in all its parts; that each part (or pronounced letter) was a distinct expression of a separate material fact, or a phonetic modification of such an expression;-that each expression had a distinotly recognizable relationship with
the fact described; and that it originated in the natural vocal utterances arising from the fact itself.

But before placing the illustrations we have to adduce before our readers it is essential that we should very clearly explain what we mean when we speak of onomatops, and how we operate to discover them. To do these things more perfectly we shall discuss what we have to say in separate sections.

## SECTION I.

ONOMATOPS ACCORDING TO FORMER WRITERS.
In the Introduction we have principally concerned ourselves with the laws which produce the most striking changes in language, and have only incidentally expressed our views on what onomatops really are. It is, however, evident that, to carry our readers with us through the wide field into which our method of treatment leads us, it is necessary to make very clear what we consider an onomatop to be, and how we deduce words from the elemental germ. To do this effectually we shall first of all place on record the opinions that have been advanced on this subject by previous writers, as far as they are known to us; and then enter more fully into the results of our own reflections.

Starting from Herodotus and Epicurus, we are astonished to find how accurately the old Greeks reasoned on such subjects. This is the more remarkable when we remember that the Greeks came to their conclusions without the aid of anything approaching to scientific examination, but solely by aid of philosophical speculations, and an intuitive sense of the fitness of things.

The Chaldean oracle of Zoroaster leads with a word on our subject:-

 -(Cozy, Anc. Frag., pag. 271). "There are names given by the Deity, and they are eternal ; others are variable which are made by mortals."
 produced by animals are elementary."

Aristides, lib. i. p. 3, Ælii Adriensis (Oxonii, 1722):-

 $\sigma v \nu a \rho \mu o ́ \tau \tau \epsilon \iota \nu$.


 фa入i乡civ. "Barbar is a word formed by an onomatop, signifying murmur, from that sound, as denoting a man who speaks with difficulty and hardness." 'Ev $\beta$ ápeı $\epsilon i \nu a \iota, "$ to be burdensome."

Epicurus ap. Dig. Laert., x. $32:-\Pi_{\epsilon \rho i ̀ ~}^{\tau} \boldsymbol{\omega} \nu \dot{a} \delta \dot{\eta} \lambda \omega \nu$


 $\lambda_{0} \quad \sigma \mu \mu \hat{v}$. "Concerning things not manifest, signs must be taken from those which do appear ; for all ideas (or thoughts) have arisen from the senses, according to circumstances or opportunities,-analogy, similarity, synthesis, and symbols also contributing something."

a "Barbarus hic ego sum quia non intelligor ulli."-Ovid in Pontus, Trist. v. 10, 37. "I am a barbarian here, because I am understood by no one."
 $\pi \rho a \gamma \mu a ́ \tau \omega \nu$. "Language is the produce of man's instinct sharpened by the spur of necessity; or, nouns or names are by nature, the first men having burst forth certain sounds about things."

The remarks of Proclus not inaptly follow here. He says :-


 (p.9). "For Epicurus said that these men did not put forth names scientifically, but named naturally, as those who cough, sneeze, bellow, bark, and groan." (See Laurenz Lersch, "Die Sprachphilosophie der Alten," p. 41 ; Bonn, 1839.)

This last writer is very precise in his enumeration of the processes by which words are formed. From his Cratylus we gather the following ideas:-
" Words are made (1) by imitation, $\kappa \alpha \tau a ̀ ~ \mu / \mu \eta \sigma \iota \nu$, as to kiss, $\sigma \iota_{\zeta} \epsilon \iota \nu$; (2) by reference to something, or by analogy ; (3) by catachresis, as when one says that sound is sweet; (4) pseudonymously, or with a disregard of etymology, as when we talk of a silver box, or of a brass looking-glass; (5) by reference to history, as ò $\beta_{o} \lambda_{o ́ s, ~ o b o l, ~ f r o m ~}^{\beta} \beta^{\prime} \lambda o s$, ingot ; (6) by an extension of meaning, è $\pi \iota \delta \iota a \theta_{\eta} \tau a \kappa \circ ́ \pi a$, as $\zeta \omega \gamma \rho a ́ \phi o s, ~ a ~ p a i n t e r ~ o f ~ a n i m a l s, ~$ to a painter of animals in any other subject ; (7) by hyperbole, as when we talk of a man having no heart; (8) euphemistically, as when we call the Furies " gentle ones;" (9) analogically, as when we speak of the head of a mountain; (10) by resemblance, as when we say that a man's frame of mind was crude ; (11) by a slight modification of an existing word; (12) elliptically, as $\tau \rho a ́ \pi \epsilon \xi a$; (13) by discovery, as when we call wine, "Bacchus;" (14) by naming the producer from the product, as "Vulcan" for fire; (15) by excess, $\kappa a \tau a ̀ ~ \dot{u} \pi \epsilon \rho \circ \chi \grave{\eta} \nu$, a physician, a surgeon $\chi \epsilon \rho \rho o v \rho \gamma o ̀ s, ~ \& c$. \&c., figures of speech.

The following passages, culled from the writers indicated, will also satisfactorily attest that from the most ancient times to our own, a long succession of thoughtful men has felt that onomatopoieia formed the real basis of language.

Lucretius de N.D., ${ }^{\mathbf{a}}$ lib. v., vv. 1027-1388:-
At varios linguæ sonitus Natura subegit
Mittere, et utilitas expressit nomina rerum :
Non alia longe ratione atque ipsa videtur
Protrahere ad gestum pueros infantia linguæ;
Quom facit, ut digito, quæ sint præsentia, monstret :
Sentit enim vim quisque suam quod possit abuti.
Proinde putare aliquem tum nomina distribuisse Rebus, et inde homines didicisse vocabula prima,
Desipere est: nam quur hic posset cuncta notare
Vocibus, et varios sonitus emittere linguæ,
Tempore eodem aliei facere id non quisse putentur?
Proterea, si non aliei quoque vocibus usei
Inter se fuerant, unde insita notities est?
Utilitas etiam, unde data est huic prima potestas,
Quid vellet facere, ut sciret, animoque videret?
Cogere item plureis unus, victosque domare
Non poterat, rerum ut perdiscere nomina vellent:
Nec ratione docere ulla, suadereque surdeis,
Quid sit opus facto ; faciles neque enim paterentur,
Nec ratione ulla sibi ferrent amplius aureis.
Vocis inauditos sonitus obtundere frustra.
Postremo, quid in hac mirabile tantopere est re,
Si genus humanum, cui vox, et lingua vigeret,
Pro vario sensu varias res voce notaret;
Quom pecudes mutæ, quom denique secla ferarum,
Dissimileis soleant voces variasque ciere,

[^19]Quom metus, aut dolor est; et quom jam gaudia gliscunt?
Quippe etenim licet in rebus cognoscere apertis.
Irritata canum quom primum magna Molossûm
Mollia ricta fremunt, duros nudantia denteis,
Longe alio sonitu rabies districta minatur, Et quom jam latrant, et vocibus omnia complent. At catulos blande quom lingua lambere tentant, Aut ubi eos lactant pedibus morsuque petentes, Suspensis teneros imitantur dentibus haustus, Longe alio pacto gannitu vocis adulant, Et quom desertei baubantur in ædibus, aut quom
Plorantes fugiunt, submisso corpore, plagas.
Denique non hinnitus item differre videtur, Inter equas ubi equus florenti ætate juvencus
Pinnigeri sævit calcaribus ictus Amoris;
Et fremitum patulis sub naribus edit ad arma?
Et quom sic alias concussis artubus hinnit.
Postremo, genus alituum variæque volucres, Accipitres atque ossifragæ mergeique marinis Fluctibus in salso victum vitamque petentes, Longe alias alio jaciunt in tempore voces, Et quom de victu certant prædaque repugnant.
Et partim mutant cum tempestatibus una
Raucisonos cantus cornicum secla vetusta
Corvorumque greges; ubi aquam dicuntur et imbreis
Poscere, et interdum ventos aurasque vocare.
Ergo, si variei sensus animalia cogunt,
Muta tamen quom sint, varias emittere voces;
Quanto mortaleis magis æquum est tum potuisse
Dissimileis alia atque alia res voce notare?
At liquidas avium voces imitarier ore
Ante fuit multo, quam lmvia carmina cantu
Concelebrare homines possent, aureisque juvare.
Sic unum quidquid paullatim protrahit ætas
In medium, ratioque in luminis eruit oras.

Varro, Lingua Latina, 1064, 20. 30 :-" Vocabula piscium, pleraq. translata et terrestribus ex quâ parte similibus rebus ut anguillas linguata sudis."

Quinctil. Instit. Orat. viii.:-"'Ovoмaтoтotta, id est fictio nominis, Græcis inter maximas habita virtutes, nobis vix permittitur; et sunt plurima ita posita ab iis, qui sermonem primi fecerunt, aptantes affectibus vocem."

Quinctil. Orat. viii. :-" Nomina aptare, non aliâ libertate quam quâ illi primi homines rebus appellationes dederunt."
 ò $\boldsymbol{\nu} \boldsymbol{\mu}{ }^{\prime}$ т $\omega \nu$. "The nature of names is a deep and mysterious subject."

St. Augustin, A.D. 430 :-" In the case of things lifeless, and to carry with it an impression, a certain analogy was allowed to come into play, as that of the softness or hardness of things. The very words levis and asper have a lightness and asperity in their sound ; voluptas, pleasure, is a soft, as crux, cross, is a harsh .word: mel, honey, is as sweet to the ear as honey is to the taste; acre, sour, is bitter to both; lana, wool, and vepres, a bramble, are as rough to the ear as the things they mean are to the touch. The Stoics considered a concord between sound and sense to be the very cradle of language."

 an imitation of the voice, in reference to the quality of the sound which is the subject thereof."


 teacher of these (onoma) is nature, which makes us (to be) imitative and productive of nouns (or names) by which things are set forth."

Alex. Aphrodisiensis (Oxon. 1481, fol.) :-Tà ỏ̀ó $\mu a \tau a$ каı̀
 ¢ं $\eta \mu a \tau a$ фv́бєє. "Nouns and verbs are sounds; therefore nouns
and sounds are by nature." (See Dr. Laurenz Lersch, "Die Sprachphilosophie der Alten," i., p. 89 ; Bonn, 1838.)

Antonius, Epig. lxxvi. (edit. Lemaire) :-
Gallorum Cantus, et orantes gutture corvos,
Et vocum quidquid bellus et ales habet,
Omnia cum similes ita voce ut ficta negentur
Non potes humanæ vocis habere sonum.
Petrus Nigidius (the elder), Commentariis: -" Nomina verbaque non positu fortuito, sed quadam-vi ac ratione naturæ facta esse P. Nigidius in Grammaticis Commentariis docet; rem sane in philosophiæ dissertationibus celebrem. Quæri enim
 eam rem multa argumenta dicit, cur videri possent verba esse naturalia magis quam arbitraria."
IsaacTossius, De Poemat. Cantu (see "De Arte Grammaticæ,") p. 66 ; Oxford, 1676 ; and London, 1688 :-" Nunc vero ita comparatum est ut animalium quæ vulgo bruta creduntur, melior longe quam nostra, hâc in parte videatur conditio, utpote quæ promptius et forsan felicius sensus, et cogitationes suas sine interprete significant, quam illi que quando mortales, præsertim si peregrino utatur sermone."

The Indian commentator on Yaska's Nirukta, a Sanskrit work on Etymology dating 400 years b.c., remarking on the fact that among many qualities one only is chosen as the name of the object, says: "You may well ask why this is so. But, my friends, go and ask the world. Quarrel with the world, for it is not I who made this law. For although all nouns are derived from verbs, yet the choice of one action (which is to be predicated in preference to others) is beyond any control. . . . . Words are fixed in the world we cannot say how (svabhâvatah, by nature)." (Quoted by Professor Max Müller, Anc. Sansk. Lit., p. 167.)

In the Mahâbhâshya (b.c. 200) we are told that "A word is that through which, when uttered, there is cognition (of objects of sense); or, in the world, a noise (dhwani) ${ }^{\text {a }}$ with a recognized sense is called a word."

Among French authors the following are selected:-
Charles Nodier, Des Onomatopées, ed. 1828, Préface, p. 11:"L'onomatopée est le type des langues prononcées, et l'hiéroglyphe le type des langues écrites."

Ibid., p. 15 : - "Indépendamment des mots formés par imitation, il ya dans les langues un très grand nombre de mots qui, sans avoir la même origine, n'en sont pas moins composés très naturellement et doivent être rapportés à l'onomatopée, ou fiction de nom."

Biondelli, Etudes linguistiques:-" Lorsque nous considérons (il ragguardevole numero) le nombre remarquable d'onomatopées épars çà et là dans les langues, et surtout les onomatopées qui conservent encore les marques de leur formation première, nous ne saurions douter de la tendance naturelle chez l'homme à représenter les objets sous leurs formes les plus distinctes."

Pictet, Les Aryas Primitifs, Introduction, p. 12:-"En thèse générale, lorsque deux mots de même son se trouvent présenter le même sens dans deux idiomes différents, il en résulte, tout d'abord, une propension à croire, soit à une transmission, soit à une commune origine, à l'exception de ce qu'on appelle les onomatopées qui naissent d'une imitation directe."

Ibid., vol. ii., p. 347 :-" $I$ l est certain que d'anciennes onomatopées se conservent souvent à travers les siècles, et que retrouvées dans les diverses branches d'une même famille de langues, elles concourent à en démontrer l'unité primitive."
M. Littré, Hist. de la Langue Française (Paris, 1869), vol. i.
a This word dhwani is connected with the A.S. dyn, confused noise.
pp. 26, 27 :-" Sans doute l'Etymologie ne mène pas encore et, on en peut dire, ne mènera jamais à toucher les origines et les sons primordiaux d'où les langues sont sorties par un développement régulier. Mais, pourtant, elle a fait bien de chemin dans cette voie ascendante vers le passé de notre histoire, et elle en fera certainement bien davantage à mesure que le cercle de ses comparaisons s'étendra, et que, dans chacune des grandes familles d'idiomes, elle aura réussi à distinguer, avec une précision suffisante, les éléments radicaux. Les espaces intermédiaires lui sont ouverts, et le fait est, que la faculté qui transforme est de même nature que la faculté qui créa; les transformations étant dans tous les cas, une création pour une part."
E. Renan, Origine du Langage (Paris, 1858), pp. 136, 137: -"La langue des premiers hommes ne fut donc, en quelque sorte, que l'écho de la nature dans la conscience humaine. . . Dans les langues ṣémitiques et dans l'Hébreu, en particulier, la formation par onomatopée est très-sensible pour un grand nombre de racines, et pour celles surtout qui portent un caractère marqué d'antiquité et de monosyllabisme."

Idem, ch. vi. p. 136 :-" L'onomatopée, ou l'imitation, parait avoir été le procédé d'après lequel l'humanité primitive forma les appellations. La voix humaine étant à la fois signe et son, il était naturel que l'on prit le son de la voix pour signe des sons de la nature. D'ailleurs, comme le choix de l'appellation n'est point arbitraire, et que jamais l'homme ne se décide à assembler des sons au hasard pour en faire les signes de la pensée, on peut affirmer que de tous les mots actuellement usités, il n'en est pas un seul qui n'ait eu sa raison suffisante, et ne se rattache à travers mille transformations à une élection primitive.
"Or, le motif déterminant pour le choix des mots a dû être, dans la plupart des cas, le désir d'imiter l'objet qu'on voulait exprimer. L'instinct de certains animaux suffit pour les porter
à ce genre d'imitation, qui, faute de principe rationel, reste chez eux infécond."

German scholars ${ }^{\mathrm{a}}$ have written largely on onomatops; the following passages show the tendency of their thoughts.
Heyse, C. W. L., System der Sprach-Wissenschaft, \&c. (Berlin, 1856) p. 90.-(Translation.) "If we consider on the one hand the different kinds of natural sounds, and, on the other, the stock of words which belong to intelligent speech, we shall find many close points of contact and transition between the two."

Herder (der Ursprung der Sprache) was a strenuous defender of onomatopoieia, but in later life he abandoned his belief.

Steinthal, der Ursprung der Sprache (Berlin, 1858).—"It is inconceivable that anyone should be hardy enough to deny that onomatopoieia was the primæval tendency of language which has furnished us with all elements of words."

Ibid.-"The word belongs not only to the speaker but also to the hearer. Comprehension and speech are only different effects of the power of language."

Bopp, Comparative Grammar (Trans. into English by E. B. Eastwick). -"Of every thing in nature, of every animal, of every plant, speech can seize one property to express the whole of it."

Pott, Etymologische Forschungen (Lemgo, 1833.)-" There is unquestionably a certain meaning, appropriateness, and symbolic power in sound."

Bunsen, Outlines.-"Language has all the distinctive peculiarities of vegetable nature."
${ }^{\text {a }}$ F. Wallner Ueber den Ursprung der Sprache, Münster, 1838 ; Woigtman, Die Bau-wau Theorie, Dresden, 1865 ; Diez, translated into English by Cayley, 1863, and his Etymologisches by T. R. Donkin, 1865 ; L. Wienborg, Das Geheimniss des Worts, Hamburg, 1852.

Idem.-" The imitative nature of Language consists in an artistic imitation, not of things, but of the rational expression which an object produces by its qualities."

Bunsen, Egypt's Place in Universal History, vol. iv. p. 485 :"Primitive language spoken with rising and falling cadences; elucidated by gesture; accompanied by pure picture writing; every syllable a word, every word a full substantive one, representable by a picture."

Professor Max Müller,a as is well known, is decidedly opposed to the theory of onomatopoieia, but still he makes admissions which tell in its favour. Thus he allows that "onomatopoeias are material for lan-guage-stepping-stones to it." This is all that the most advanced onomatopist desires to establish. Professor Max Müller also admits that "There is a vast stock of onomatopoeias in every language; some words originally expressive of sounds only, might be transferred to other things which have some analogy with sound."

Every thing that so excellent a scholar writes is valuable, we therefore cite, from his "Science of Language," two or three more ideas.
"Every thing in language, but the roots, is intelligible, and can be accounted for,"-p. 260. "They [the roots] are phonetic types produced by a power inherent in human nature."-p. 370. Language is built up by the mind of man, "guided only by innate laws, or by an instinctive power,"-p. 296. But at
a The Languages of the Seat of War in the East, second edition, London, 1855. Lectures on the Science of Language, First Series, 1861 ; Second Series, 1864, London.
p. 346 he says, "We cannot deny the possibility that $a$ language might have been formed on the principle of imitation :" which is afterwards (p. 351) amusingly modified by the remark that "though $a$ language might have been made out of the roaring, fizzing, hissing, gobbling, twittering, cracking, banging, slamming, and rattling sounds of nature, the tongues with which we are acquainted, point to a different origin."

A few passages from English writers will end these selections.

Horne Tooke, Diversions of Purley, vol. i. p. 62:-" The dominion of speech is erected upon the downfall of interjections. Without the artful contrivances of language, mankind would have nothing but interjections with which to communicate, orally, any of their feelings."

Campbell, Rhetoric:-"Onomatopeeia is not a word invented on the basis of sound-imitation, but the transformation of a sound-name into a vocable."

Rev.R. Garnett, Essays on the Nature and Analysis of the Verb, pp. 289 to 342 :-" We believe'with Mr. Max Müller, that all language is reducible to roots, which are either the bases of abstract nouns, or are pronouns denoting relations of place, which latter we believe to have arisen from interjectional or onomatopic elements."

Trench, The Study of Words, 4th ed., p. $15:-\mathrm{He}$ [man] did not thus begin the world with names, but with the power of naming; for man is not a mere speaking machine; God did not teach him words, as one of us teaches a parrot, from without; but gave him a capacity, and then evoked the capacity which he gave."

John Stuart Mill, System of Logic ratiocinative and inductive, vol. i., chap. ii., p. 23 :-"A name, says Hobbes (Computation of Logic, chap. ii.) is a word taken at pleasure to serve
for a mark which may raise in our mind a thought like to some thought we had before, and which being pronounced to others, may be to them a sign of what thought the speaker had (or had not). This simple definition of a name as a word (or set of words) serving the double purpose of a mark to recall to ourselves the likeness of a former thought, and a sign to make it known to others appears unexceptionable. But seeing names ordered in speech are signs of our conceptions, it is manifest they are not signs of the things themselves; for that the sound of this word stone should be the sign of a stone cannot be understood in any sense but this, that he that hears it collects that he who pronounces it thinks of a stone."

Ibid., chap. v., on the Natural History of the Variations in the Meaning of Terms, p. 237 :-"The history of a word, by showing the causes which determine its use, is a better guide to its employment than any definition; for definitions can only show its meaning at the particular time, or at most, the series of its successive meanings, but its history may show the law by which the succession was produced."

Rev. Frederick William Farrar, Origin of Language, chap. viii. p. 88 :-" The theories of the Interjectional and Onomatopoetic origin of language are not in reality different, and both of them might, without impropriety, be classed under the better name Onomatopœia; for, in point of fact, the impulsive instinct to reproduce a sound is precisely analogous to that which gives vent to a sensation by an interjection."

Ibid., chap. iv., p. 39 :-"If language was a human invention, and was due to a gradual development, there must have been a time in man's history when he was possessed of nothing but the merest rudiments of articulate speech, in which, therefore, he must have occupied a lower grade than almost any existing tribe."

Wedgwood, Dictionary of English Etymology, Introduction, p. iii.:-After saying that a rational inquirer will not be satis-
fied until he meets with a principle adequate to give rise to the use of language, he goes on, "Now one such principle at least is universally admitted under the name of Onomatopoeia, when a word is made to imitate or represent a sound characteristic of the object it is intended to designate, as Bang, Crack, Purr, Whizz, Hum. In uncivilized languages the consciousness of the imitative character of certain words is sometimes demonstrated by their composition with verbs like say, or $d o$, to signify making a noise like that represented by the word in question."

The reader who has attentively considered the foregoing opinions (which could be much increased in number) cannot fail to have remarked their diversities and similitudes. The greatest diversity of opinion seems to prevail on what an onomatop is; while singular unanimity is manifest in the declaration that language had an onomatopic origin. Professor Max Müller is the important exception to this general unanimity, and even he confesses that a language might have been so formed. It is clear that these writers viewed the question more from a poetic and philosophic point of view than from a scientific and analytical one. Some of these scholars appear to think that words are the natural correlatives of form, that the sound is moulded on the form and being presented to the ear, as rays of light are presented to the eye, necessarily and inevitably occasion a perception of the object intended; others seem to believe that sound is, as it were, plastic, and is itself moulded by the will of the speaker into the verisimilitude of the object spoken of; others, again, deduce words from interjectional noises, and others from the imitative faculty of man
which led him to recognize objects by the sounds emanating from them. It is not too harsh a judgment to pronounce on the majority of these unscholastic opinions if we set them aside as mere poetry and dreaming. Of course we do not mean that all the eminent men from whom we have quoted are unpractical dreamers, but that they, having discovered that the beginnings of language must have been onomatopic, instead of patiently analyzing facts so as to find what onomatops really are, allowed themselves to speculate, to argue, and theorize, as to what was or was not a probable starting point for language. It forms, however, no part of our present purpose to descant upon the views we have quoted. The object of this section is to place before our readers an historical summary of what has hitherto been said of onomatops. In the next section our own views will be fully set forth. ${ }^{\text {a }}$

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## SECTION II.

## WHAT ONOMATOPS REALLY ARE.

In the preceding section we have stated as succinctly as possible the views of preceding writers on the nature of onomatops, but have spent no time in discussing them. It seems to us that, with the exception of some of the more recent, their interest is mainly historical, enabling us to see that the general sentiment of philologists for thousands of years has tended towards the onomatopic origin of speech. The reason why this idea has never been consolidated into the basis of a real science of language is that it presents so tempting a subject for the poetic faculty of our species to dream over. No sooner does the mind realize the notion of an imitative origin for words than an impulse almost irresistible leads the speculator to ponder on the still and gentle, the sweet and soft, the hurrying and boisterous, the grand, terrifying, yea, horrifying sounds that alternately please and startle the ear of man. The lion's roar and the bulbul's song, the crash of bursting rocks, the howl of the eddying tempest, and the gentle ripple of the murmuring stream, are felt to be the monitors of man, imparting to him, with nature's untiring pertinacity, the mysterious art of inspiring sentiment and arousing
thought by aid of sound alone. The poetic instincts within us are awakened by such reflections, and the imagination at once busies itself in framing theories and in explaining away facts. The judgment is fascinated by the pleasing vision.

There can be no doubt that many words owe their being to the imitation of natural sounds, and many more bear the semblance of such a genealogy; but still, as sceptics have repeatedly pointed out, though languages are enriched by such imitative vocables, they do not constitute the essential basis. They are tributaries, not the parent stream. After the excision of all words that can fairly be considered imitative, there always remains a small but important residuum that obstinately resists any reasonable effort to demonstrate its evolution from either the heavens or the earth.

Now this general concurrence of opinion as to the onomatopic origin of words, and the inability, at the same time, to explain the process of evolution, must be primarily occasioned, or at all events largely affected, by the want of a clear and rational definition of what an onomatop really is. It is for this reason that we think it of essential importance to explain in this section what we mean when we speak of onomatops; so that we may not be confounded with poets and dreamers, who are charmed by a name to which they attach no proper sense.

And, first, we must remark that those who seek to deduce all our words from the sounds of animals and
the elements, do not seem to perceive that, by so doing, they reduce man below the level of the brute. We have nothing to object to that on sentimental grounds; but we do object to it on the score of logical inconsistency. For in all historical time man has been in advance of the brute, and the qualities that have kept him in advance must have been those that brought him to the front; and first among these qualities is language itself. But were this not so, it is surely unreasonable to argue that the animal which has always shown the largest amount of intellectual capacity, should, in the beginning, have possessed the very least; insomuch as to have been unable to express its passions by sounds until it had acquired the art from other creatures. It must not be forgotten that the purely imitative theory carried to its logical conclusion brings mankind to a time of absolute dumbness,-when the dog could bark and the monkey could chatter, but the man could utter never a word. This view of the argument is something like a reductio ad absurdum. Furthermore, if we suppose our species to have acquired the power of speech by nothing but imitation, we are at once deprived of all spontaneity. Without going so far as M. Renan, and asserting that "spontaneity is everything," we yet think it very certain that human beings are, at least, as capable of originating as the inferior animals; and if a dog could bark untaught of man, so man may be safely accorded the power of speaking untaught of the dog. Again, there seems
something unaccountably contradictory in maintaining that the progenitors of our race were so hopelessly imbecile that they could not cry out if they were hurt, and yet were intelligent enough to perceive the advantages that would accrue from an interchange of ideas, and to set themselves to overcome their great natural defect. Did anyone ever hear of an idiot arguing within himself that idiotcy is folly, and resolving to desist from foolish pranks and become a savant? The two ideas seem utterly irreconcileable. There is yet another and unanswerable argument why human beings have as great a claim to spontaneity in their use of sound as other creatures, and that is the possession of the means of articulation. What process of imitation could have given to man his mouth, teeth, palate, tongue, and vocal cords? Can we suppose a creature possessed of appropriate organs without the capacity for their use? This argument requires no elaboration. As it is simply absurd to suppose that imitation could have conferred on human beings the faculty of speech, so is it altogether beyond credence that the organs of speech should exist without the capacity for their employment. ${ }^{\text {a }}$

Pure imitation, then, fails to account for language; |

[^21]and the recognition of this fact has led to the suggestion that all words grew out of emotional sounds, the sudden and uncontrollable ejaculations which express the transitory passions. It will be seen that this theory goes to the other extreme; for, as the first supposition reduces man to an incapable dummy, painfully imitating sound after sound of the more advanced brute, so this theory, casting aside imitation, rests entirely on man's spontaneity. In the first case the human animal originates nothing; in the second, blind impulse originates everything. However convenient such a theory might be, the words we now-a-days use persistently refuse to be reduced to interjections. Furthermore, under such an hypothesis our reason assures us that we should find one word only to express one idea all over the world, more especially those primitive ideas that must have been among the very first such a process called forth. Some form of "oh!" should be the word for "woe" all over the world, and it could never be subject to phonetic corruption from its extreme simplicity, and its constant reference back to nature. This we know is not the fact. Every man of every race cries out "oh!" when he is hurt,-M. Du Chaillu tells us that when the gorilla received his death-blow he exclaimed, in the most terrific and human-like voice, "ah!"-but man uses some widely different sound when he speaks of the injury he has received. So far from finding but one word to express one emotion the very reverse is in reality the case. Even the simplest and most barbarous language is
found to offer a choice of vocables for any idea the speaker may desire to express. ${ }^{\text {a }}$ The alternative words, too, are as diverse in construction as can well be imagined. Take, for example, the English sorrow and grief, both of which are as hopelessly removed from any conceivable interjection as they are from each other; and comparing these with the Sanskrit rodana and âlâpana, we have at once four vocables radically distinct to represent one of the prime emotions. ${ }^{\text {b }}$

History is, furthermore, altogether against the interjectional theory. Many instances occur of words passing into unmeaning exclamations; but we meet with very few undoubted interjections assuming the powers of ordinary vocables. Thus, alas! is derived from lax-us, lass-itude, the being loose, or re-laxed; so the Greek $\boldsymbol{\alpha} \boldsymbol{\gamma}$ е, "quick!" "good!" "come on!" sprang from a base that is also found in the Latin ago, agedum (for agendum), agesis, meaning " to set in motion," to agi-tate (Fr. agir). It is not improbable that these broken-down words may have deceived inquirers

[^22]once penetrated with the notion that interjections formed a rational base for language. The sounds which human beings uttered from the promptings of impulse only are very few, and what is more to the point they are altogether wanting in descriptive power. The necessity for finding both a descriptive and a plastic basis for language led the authors of this book to the conviction that speech could only find its origin among the sounds which are completely under the control of man. A potter could never shape pots to his wish out of clay that started spontaneously into regular forms; neither could a speaker modulate into descriptive vocables sounds that started forth impulsively only upon the awakening of the passions. Such reflections seem to dispose finally of the interjectional theory, and to throw the inquirer of necessity upon some other source. That other source, as we have indicated in the "Introduction," is found in the illimitable number of sounds, other than exclamatory, which all creatures possessed of appropriate organs can emit or not at pleasure. These sounds, it will be remarked, are not necessarily imitative ; for they are peculiarly subjective, and can be occasioned by a thought as well as by a fact. Not that we suppose for a moment that thought primarily suggested words; on the contrary, we maintain that words occasioned thought. The facts of life were the first monitors. Man in his animal state bit, grasped, swallowed, snarled, licked, fought, ran, and felt the emotions of fear and love; and actions and impulses such as these being continu-
ally repeated and experienced by particular organs and in particulars ways, were gradually felt to be symbolized by the sounds and gestures with which they were constantly accompanied.

The important part which gesticulation played in early language must never be lost sight of. "Loquacissimæ manus, linguosi digiti, silentium clamosum." * All uncultivated languages supplement their defective vocabulary by gestures which are frequently as expressive as words themselves. The language of the Kafirs of South Africa, for example, to the ear consists of a succession of clicks. Two, three, and many clicks are uttered, to which sense is given by expressive gestures ; insomuch that it is jokingly said Kafirs cannot talk at night without a fire. The same, to a lesser extent, is true of more advanced idioms. Everyone will recollect the following scene : When a high priest in Greece was celebrating, with pomp and solemnity, the services of the gods at Athens, a messenger entered the temple, and going straight to the altar, threw himself on his knees, and with extended arms exclaimed, " 0 Lord, thy son lost his life yesterday on the battle-field!".... The priest immediately took his tiara from his head, and deposited it upon the altar as a sign of mourning . . . . "but," continued the messenger, "he died while fighting the enemy!" Then the father and priest instantly replaced his tiara on his head, and unconcernedly continued his sacrifice

[^23]to the gods. There is a marvellous depth of poetry in such gestures, they symbolize by a motion the most subtle impulses,-grief, humility, joy, content, glory, and all of them together."

We have, however, not yet given our definition of an onomatop, or rather the sense in which we employ the word throughout this treatise; and one reason for not doing so is that it is no easy task to formulate what is nevertheless clear to the conception. What is foregone will, however, enable the reader to see the view we entertain of language itself, and will act as a gloss on the following, which we think the most apt words to describe an onomatop:-A sound consciously uttered for a purpose. Perhaps we could do without the word " consciously," for everything done with intent must be performed consciously ; but we think it better to insert the word so that it may be unmistakeably apparent that we consider the will of the utterer an essential factor. When a pig screams it gives vent to interjections; when it murmurs over the trough it utters onomatops. So also the yell of

[^24]the lion is an interjection, but the roar is a genuine onomatop, uttered consciously for the purpose of terrifying the prey.

Few people are aware of the fact that the lion's roar is systematic. In proof that it is so, we give the following narrative from the experience of S. Gérard, the lion-killer. This undaunted hunter was once, early in the morning, at the foot of the Atlas, selecting a recess under a projection of a rock whence he could easily observe the plain, and be himself protected in the rear. When established and ready for work, with his two guns, his pipe, his biscuit and flask, he had his ingenious triangle displayed and planted in front on the sand of the desert. He then sat down, drew a telescope from his knapsack, and waited the arrival of an antagonist. Soon a clattering noise was heard, like horses' feet, as though a squad of Arabs were riding on the rocks hanging over his head, which inspired the single-handed man with serious reflections. Then there was a perfect silence: no Arab could be seen. At a quarter of a mile off, a monstrous bison-like animal was moving. It was a lion of gigantic stature, such as Gérard had never seen before. The animal now advanced in a right line toward the rock, sometimes crawling and beating the sand with fearful blows, his tail serving as a flail; sometimes erect,-his mane about four feet wide in front. When arrived within forty yards of Gérard, the lion excavated a hole in the sand, six feet in circumference and eighteen inches deep; then putting
his mouth in the hole, he began to roar in so terrific a manner that all animated creation within hearing ought to have been transfixed and unable to move. The most remarkable fact was that the lion turned round and round the hole when roaring, so as to deceive the hearer, who thus could not determine from whence the sound proceeded. The strategy of the noise being performed, the lion passed to mimiory no less terrible. He made a new move in advance toward Gérard, intending to frighten him with his glaring, fiery eyes. Sometimes crawling, sometimes erect, sometimes beating the sand, sometimes gnashing the teeth in a savage manner. The space was now considerably lessened, and the tragedy was nearing the final bound. In one jump the monster could reach his foe. Gérard raised his gun, and pointed at the shoulder, where a ball would destroy the animal at once. But the lion was stopped by the puzzling triangle. Three small iron rods an inch in diameter, six feet high, each forming a reversed pyramid. Gerard was so struck with the magnificent form of the creature, and with the ingenuity of his tactics, that he was inwardly regretting the necessity of killing the noble brute. Their four eyes were gazing at one another with a seeming interrogation. The thunder was calm, the animal was puzzled to the utmost at the aspect of that other animal which had not been cowed by the demonstrations made against him. The lion was astonished, feeling himself in presence of a mystery. He stopped in his advance, turned back, tail
down, and went quietly off never to show himself again.

Why, then, do not all creatures talk, since they can and do utter the sounds from which language is elaborated ? The reply may take the form of a questionHow do we know that they do not talk in a way sufficient for their needs? When a hen finds a sprinkle of corn, she clucks with a peculiar sound that brings her chickens rapidly from every direction in the farmyard; but should a cat appear instead of corn, she lifts up her head and utters a sudden noise that puts all her brood on guard. This is certainly effective language. It will, however, be rejoined that as the hen clucks now, so there is every reason to believe she always did and always will cluck; the sound is impulsively and instinctively uttered, and so on. Human beings, on the other hand, do not now utter the same sounds they used to utter only a few hundred years ago, and we know that, in a few generations, the words we now use will cease to be understood. To this argument we reply, first, that the fact that language changes need not alter the nature of its origin; and, secondly, that the reason for these changes in the use of sounds is to be found in the mental constitution of man. Granted that animals are purely instinctive,-man, we know, certainly is not. Man possesses a power of will to do, or not to do, and he is not slow to use his power, being ever pursued by an insatiable love of change. The spirit of Dissatisfaction with every state in which he may exist,
is a very characteristic difference between man and brute. "Man never is, but always to be blest." How low soever in the scale of civilization the human being may be, we still find him bent on increasing his gratifications. Even the most stationary nations are always busy in devising new delights, from a constant sense of dissatisfaction with those they already enjoy. The civilized man is for ever striving to augment his wealth; the semi-civilized seeks to gratify in new ways his lusts; the uncivilized strives to increase his food. The whole human family is divided among these three classes, and in each the mainspring of action is Dissatisfaction. As Mr. J. S. Mill wisely pointed out, all the improvements in the world result from the labour of "discontented" men. This dissatisfied yearning for something not yet attained proceeds from cerebral peculiarity. It is man's idoorvvxparia. Every other creature is satisfied with the food it eats and the natural functions it ordinarily performs, and manifests no wish to change its aocustomed course; hence they do to-day what they did yesterday, for no other reason than because they did it the day before ; and this is instinct. How man became possessed of his faculty for discontent, that is, how man became man, forms no part of this treatise to explain. Darwin, Wallace, and Huxley have proved conclusively that existing animal natures are the results of progressive developments. This is a fact; and it is a fact that accounts perfectly for man's possession of articulate speech. The gratification of
the gregarious instinct which the human animal shares with the monkey, afforded opportunities for the interchange of cries ${ }^{2}$; and associated labour in procuring food, \&c., combined with the constant desire for increased gratification, would gradually stamp upon those cries more and more precision of meaning, as the purposes to which they were applied became more and more precise. Hence we see the reason for the extreme plasticity of onomatopic bases. One simple onomatop may underlie scores of words that grew out of the primal idea, as will be abundantly illustrated in the next section when discussing the word "Law." Simple onomatops are susceptible of indefinite development, insomuch as to become the grand and expressive vocables of the most polished languages. Human speech is, indeed, a mass of onomatops. Language does not consist of onomatops and something else, but of nothing else than developed onomatops. Every sound was at one time significative, save only those produced by phonetic corruption. Onomatops are, therefore, roots-the bases of words; but differ from what are ordinarily understood by roots in that they are the ovomaza struck by nature or natural processes, whereas roots are the discoveries of the etymologist.

The word root has been hitherto misunderstood and misapplied. What is termed a root is frequently spoken of as a block, devoid of special signification;

[^25]that it bears the same relation to a word that a block of marble does to a statue. It is said to be a mass of crude material which acquires sense and dynamic power only upon the performance of certain grammatical operations. As long as these operations are unperformed, the root remains inert and lifeless. A root, however, cannot be an inutile lignum, a truncus, but the very reverse; it is a plastic force existing in every animal being. It is altogether a misnomer to speak of roots at all. We shall see this more clearly by reflecting on the manner in which we came by our knowledge of roots. The Semitic languages first familiarized us with the term, because in those languages nearly all the words they contain are palpably deduced from sets of articulations, each of which comprises three letters. These three fundamental letters, by the operation of certain definite changes in the vowels by which they are vocalized, and by the addition of particular auxiliary letters, produce large numbers of words, each of which words bears a definite relationship to the three primitive letters on which it is based. The identical changes that produce any particular word from one triliteral cluster, would produce an exactly similar word from any other cluster, ${ }^{2}$ -the form of the two words would be alike, and they would differ only in the idea conveyed, whieh depends, of course, upon the meaning of the root operated upon. But these triliteral roots are never devoid of sense;

[^26]on the contrary, they are as perfectly apprehendible as the most developed vocable educed from them;-they are, indeed, used as the third person singular of the past tense, and so have a constant place in spoken language. The word root is only a poetic description of the basis of a set of words, which grow from it as naturally, and apparently as irresistibly, as do the stem and branches from the root of a herb. The study of Sanskrit grammar, however, revealed another kind of root which appeared to have no definite relationship to the words educed from it, and which was never employed in language without some grammatical adjunct, the addition of which not only modified the sense ascribed to the root, but also gave the vitality necessary to make it into a real word. What, then, are these roots, and how did we come by them? The answer is, that they are mere grammatical abstractions, and that we get them from ancient Indian grammarians, who subjected their old idiom to an exhaustive process of analysis, and by patiently stripping off fragment after fragment from the word in common use, ultimately arrived at a monosyllabic residuum to less than which the word could not be reduced without destroying its individuality. This final residuum was called by the Indians a dhâtu, which literally means an "ore" or "mineral,"-the crude material from which the finished vocable was wrought. It will, therefore, be evident that there is nothing sacred and inviolable in Sanskrit roots, nothing connected with them that need be spoken of with awe, or wrought into any poetry;
they are nothing more nor less than the smallest fragments to which Indian grammarians, according to the lights they possessed, were able to reduce the words of their language. This consideration will, we think, modify somewhat the superstitious reverence with which Sanskrit roots are generally regarded. "It is a Sanskrit root" is, apparently, held by many to be a conclusive argument-the ultima Thule-the last appeal. Any doubt upon the finality of a root is regarded as a kind of profanation, or a mania, akin to disbelief in the rotundity of the earth or the motion of the celestial bodies. Mr. Wedgwood makes the following very sensible observations on roots, which we quote entire, as they cannot be repeated too often until the present practice of philologists is abandoned :-
" Etymology is still at the stage where an arbitrary theory is accepted as the basis of scientific explanation. It is supposed that all language is developed from roots or skeletons of articulate sound, endowed with distinct and often very abstract meaning, but incapable of being actually used in speech until properly clothed in grammatical forms. And this theory of roots takes the place of the elementary powers which form the basis of other sciences. The etymologist, who succeeds in tracing a word to a Sanskrit root, is as well satisfied with the account he has rendered of his problem, as the astronomer who traces an irregularity in the orbit of a comet to the attraction of a planet, within whose influence it has been brought in its last revolution. Now in what condition is it possible that roots could have existed, before they were actually used in speech? If it be suggested that they were implanted by nature in the mind of man, as some people have supposed that the bones of mammoths were created, at the same stroke with the other materials of the strata in which they are buried
-we oan only say that it is directly opposed to anything we observe in infants of the present day. But if it be said that no one supposes that the roots, as such, ever had independent existence; that they are merely fictions of the grammarians to indicate the core of a group of related words having similar significations, . . . . . or if they are regarded as the remains of some former condition of language, then they cease to afford a solid resting-place, and the origin of the roots themselves becomes as fit an object of inquiry, as of the words in actual use at the present day. Nor will the curiosity of a rational inquirer be satisfied until he meets with a principle adequate to give rise to the use of language in a being with a mental constitution, such as he is conscious of in himself, or observes in the course of development in the infants growing up around him."-(Introduction, pp. ii. iii.)

We ourselves are anxious to be counted among the most devoted admirers of the wonderful scholarship enshrined in the noble language of the Brahmans, but we have not brought ourselves to the conviction that those ancient scholars were possessed of all linguistic knowledge, insomuch that their deductions are beyond all doubt the last words on the subject. On the contrary, we are rash enough to think that their conclusions are still open to the criticisms of scholars; but at the same time we are prepared to receive their dicta with much reverence, from the conviction that the grammatical system of the Hindûs represents the accumulated wisdom of generations of patient and pains-taking workers, who laboured with unprecedented and, as yet, unrivalled zeal to elucidate the facts of their marvellous idiom. With thoughts and feelings such as these, and with a knowledge of the way in
which Sanskrit roots were educed, we do not hesitate to deal with these roots as we should deal with any other abstractions of former writers.

As we have before said, it is a misnomer to speak of roots at all. The attentive reader of this book will find the clearest evidence that what are ordinarily considered roots are in reality developed forms of yet earlier roots. Let us take as an illustration the root krit, meaning " cut." The bases kut, kutt, kash, and karn are certainly developed from krit by mere phonetic corruption. The form kut, with the guttural softened to a palatal gives birth to chut, chatt, chunt, chund, and chun. When the cerebral $t$ passes into $r$, as is frequently the case, from kut we also get kshur, and from this last khur, and chhur, chho, chhut, and with a reappearance of the dental, as in $k r i t$, ,-chhid, chhidr, and chhed. The roots kshad, khad, khand, khud, khund, khan, are parallel forms closely related to krit. These many roots, all of which have the same meaning, "cut," must have been developed the one from the other. Again, the base klis," to be distressed," exists also in the forms khid, kut, kunt, kutt, kund, kath, kuit. The word for "give" is found under the following forms: dâ, dây, day, dấs, dâs, $d a d, d a d h, d h a$; and the word "grind" is expressed by the bases mrid, mrad, mut, munt, math, mud, mund. Such instances might be indefinitely multiplied, and they prove conclusively that by far the greater number of the Aryan roots we possess are developments from yet earlier roots. It is, however,
absurd to speak of the root of a root, and we, therefore, eschew the term altogether. We call them bases; and when our investigation reaches beyond them to yet earlier forms, we find no inconsistency in speaking of the base of a base.
In the Introduction (pp. 23, 27, 39), we have shown how primitive descriptive sounds became consolidated into words. In this section we have endeavoured to make clear the sense in which we employ the term onomatop, because in that consists the essential difference between our views and those of former writers. The sense in which we employ that term permits us to answer the most difficult problem in the Science of Language, viz. the natural construction of bases or roots. The root is the ultima Thule, or ratio, of all preceding writers, even of Mr. Wedgwood; for he only seeks to explain roots by referring them to some natural action which he believes to be graphically depicted by the sound that expresses it. Professor Max Müller does not attempt an explanation,—" Every thing in language, except the roots, is intelligible," he says." The disciples of that excellent scholar have not yet advanced beyond their master, as witnesses the following from the Saturday Review of May 31, $1873^{\text {b }}$ :" Let us take any Aryan root, say the root vid. When we have traced all the various cognate forms up to the root, there we stick ; we can get no further. We see that vid means to see, and therefore to know, but

[^27]we cannot say why it should mean to see. If Mr. Wedgwood can tell us, we shall sincerely thank him. If he can show us how vid came to have the meaning of seeing whether by onomatopoeia or by any other process, we shall not have to give up one tittle of what we have already made out by the Comparative method; we shall only have learned something else into the bargain." Our definition of an onomatop will, we think, materially aid in the elucidation of such questions, by permitting bases to be dismembered and resolved into elemental fragments, as will be illustrated further on in this Præfamen.

The filling up of lexicons is a mere question of time and endeavour; the process once begun the result became inevitable. Sounds expressive of the simplest actions, a $\cdot g \cdot$, gullet, swallow, $\cdot l \cdot$, lick, tongue, $\cdot p \cdot$ lip, suck, \&o., gradually lost their spontaneous character by constant repetition, and so became the symbols of ideas. At first they were mere noises, produced by a particular organ, naturally calling attention to that organ and its functions ; and as long as they remained so they would be in what we might call the " spontaneous" stage of language, in which any noise could be used by any being to serve any purpose desired. Gradually one complexion of sound, from its more expressive character, would gain the predominance over others, and it would then cease to be spontaneous ; it would have become a recognized name, a word, the symbol of an idea. These symbols of ideas
acquired intensity by doubling, as $g \cdot g \cdot$, gar-gle, Fr. gor-ge, \&c., and, losing their intensiveness by familiarity, were revivified by fresh duplication, or modified and distinguished from each other by the addition of other sounds as the humanizing process proceeded. These added sounds need not all of them have previously existed as separate onomatops with special meanings of their own ; analogy would rather lead to the conclusion that many of them must have been added by way of stress or accent, or as descriptive of particular states or actions. As Mr. Wedgwood has pointed out, sounds such as posh, blob, gob, \&c., are highly descriptive; they need no interpreter; it is impossible to differ as to the ideas their utterance awakens. The cerebral sibilant is a sound of this character, and it seems to have been added to many Aryan words as a kind of intensifier. Instances are found in the words rush, crash, crush, dash, splash, smash, with which may be contrasted run, creak, crack, dab, smack. The latter are clearly not so forcible as the former. The following Aryan bases all mean "strike," "injure," and in each case the cerebral sibilant seems added solely for the purpose of exaggerating the sound, because simpler forms exist for most of them :-ish, ush, kash, kishk, khash, ghush, chash, jash, jush, jûsh, jhash, jhûsh, dhûsh, dhrish, pash, pish, prọish, bash, brûsh, yûsh, rish, rush, lûsh, vash, vrish, nûsh, mush, śash, šish, hishk.

A sharp dental, also, would give an idea of finality and decision to any onomatop,-an idea covered by
such words as down, done with, there, there's an end. The following bases are offered in illustration:-at or $\hat{\imath} t$, to bind up; krit, to wrap up; krit, to cut up; kit (from ki), to know; chit, to wake up ; chrit, to blaze up; dyut, jyut, jut, yut, to sparkle ; nrit, to lead forth, dance ( $n \cdot \hat{i}$, to lead); pat, to fall down; yat, to knock about ; and $y a t$, to strive after ( $y \hat{a}$, to go for). This sharp dental $t$ by the air of decision it imparts to bases, is a rather apt exponent of the ideas intended by there, that, and is what may be called "the remote definite." Considering it to have this sense the results are not a little curious when we seek to analyse old bases. For example the Sanskrit sad is the same as the English sit, set, which may be resolved into $s \cdot t$, the $s$ " $=$ "exist" (Sans. as, English $i s$, Lat. $s$-um), and the $t=$ "there." Sit is then the equivalent of "exist there," which is by no means an unreasonable explanation. The base sth 0 , "stand," (Lat. sto, stare) admits of a similar rendering; but here the dental $t$ or $t h$ has more the force of "down," so that stha may mean "exist down," "be placed." The word "down" itself will be seen to be based upon a dental, which in Sanskrit takes the asper under the form adhas, and the preposition adhi = super, upon, which may also come from the notion of placing down one thing upon another.

The letter $s$, besides its sense of "being," is also commonly used to define that which is near, whether the nearness be of likeness or of vicinity. In this sense we find it in the Sanskrit sah, "he," "this ;" sa and saha, " along with," in the preposition sam,
"with," and as the sign of the nominative case in Sanskrit and Latin. The Hindi ablative se, "with, through, by means of," is another instance. The letter $s$ most clearly marks the difference between this and that in English; this meaning "the defined which is near," and that, "the defined which is remote." For this reason we call $s$ "the proximate definite." Abundant illustrations are readily found for its sense of nearness of likeness in such words as same, similar, such, thu-s, as, so, the Sanskrit sama, " like," the Hindî sâ, "like," "similar;" and, in composition, in such words as aisâ, " this-like," waisá, " that-like," \&c., \&c. The letter $s$ in the form sam was frequently used in Sanskrit grammar as a verbal prefix to indicate proximity, as samgam =" to go with," samjna $=$ " to be conversant with;" but this prefix was felt to be an addition to the base, insomuch that the verbal augment was inserted between it and the base; thus in the preterite we say sam-a-gachchhat, "he went with," sam- $a$-janinta, " he was conversant with," and not $a$-sangachchhat, $a$-sanjainita. The more recent Sanskrit books, as for example the Mahâbhârata, do, however, frequently place the augment in a position that shows a disposition on the part of these prepositions to become welded on to the verbal stems. The very preposition of which we are now speaking is treated thus in Mahâbh. i. 5515, where we meet the word anwasancharat, "he traversed" (anu-a-sam-char-at), instead of the regular form anusam-a-charat. Here the preposition sam has lost its independence,
and is become welded on to the base char, which thus becomes sanchar, and then takes the augment as a simple verb (asancharat). This process accounts fully for the presence of the letter $s$ as an initial in many Aryan bases. Sam, as Professor Th. Benfey points out, is the accusative singular of $s a$, and is frequently employed without the inflexional mark in such words as saphala, "fruitful," "with fruit." Just on this model we find the base sabhaj, meaning " to serve," and also the base bhaj, "to serve," the former being clearly a developed form of the latter; and it is, therefore, not unfair to suppose that sanj, "to be attached," really grew out of sam-ga, "to go with," or that such a base as say, "to go," is deduced from $s a+i$, "to accompany." That the prefix $s a$ or $s a m$ can dwindle down to $s$ only, we have positive proof, in the case of sarj, "to acquire," which is clearly arj, "to acquire," with the addition of an $s$ prefix, as both Westergaard ${ }^{4}$ and Benfey ${ }^{\text {b }}$ properly state.

This long argument on the prefix $s$ will, we hope, strengthen our conjectures as to the origin of some Aryan bases. To apply this notion to the analysis of a base we will select strî, to " stretch," every letter of which appears to be significative. To stretch is to extend from here to there connectedly; and the sound stri exactly represents that complex idea. Thus, as we have just been arguing, $s=$ "with," " likeness," " connection," " alliance," so removing the $s$ from the base we are examining, tri remains. Now tri$i$ is also

[^28]a base, meaning "to cross over," "to go there," the $t$ being the remote definite. When the $t$ is removed $r \hat{\imath}$ is left, also a Sanskrit base meaning " go," " move;" and as the trill of the $r$ most frequently imparts nothing else than a sense of rapidity to bases, that also may be removed and we find the vowel $i$ finally remaining, which is the well known Aryan base, the $i$-re of Latin ; Greek, $i$-éval; " to go," "to move." Synthetically we have, $-i=\mathrm{go} ; r i=$ go quickly, and after losing its intensive character, simply " go ;" trî = " go there," " cross over;" strî = " go there connectedly," "to stretch." Each of the four letters composing stri is thus, not improbably, a separate onomatop; and if this is thus shown to be the case in one instance, the probability that it is generally true is much strengthened. That the letter $s$ is only accessory to Sanskrit bases, admits of ready proof from the following set of double bases:-sri and ri both mean " go ;" svri and $v r i=$ "go ;" srip and ri or rep = "move;" svart and vrit ="turn;" sphal and phal $=$ "expand;" sphul and phul $=$ "expand"; skhad and khad=" be firm;" spaś and paś="injure;" and sagh, "strike," formed of sa + han, han standing for an original ghan, as shown by the 3rd pers. plu. pres. ghnanti, "they strike," and by the redupl. pret. jaghâna, "he struck."

These illustrations are sufficient for our present purpose, which is to make it clear that bases as they now exist are in reality composite factors, and so establish the conclusion that we must look beyond
them for the onomatopic bases of language. Onomatops are thus reduced to the simplest proportions, to the elemental articulations upon which modern words are based. These elementary sounds will be found to be related to, and to be expressive of, the natural functions of animal nature, and to be destitute of all that is miraculous on the one hand, or poetic on the other.

## SECTION III.

## COLLECTIVE ANALYSIS.

IT will be evident to the reader that we are not guided entirely by the ordinary rules of comparative philology. Some words of explanation are, therefore, necessary so that it should not be thought that we recognize no restraints whatever. The present school of philologists lays great stress on the difference between base and termination, and we quite agree with them in maintaining this intrinsic difference. We agree also with other philologists in separating prefixes from the base; so that, being agreed on these fundamentals, it is evident that we work by method, and are not mere dreamers. Where we differ from philologists is in the treatment of the residual base. After the separation of prefix and termination, the remaining portion of a word is generally considered irresolvable into simpler elements. So much is this the case that every philologist seeks to carry a word up to its most antique form before eliminating the radical, and when he has done this he thinks that he has the word in its purest form and can do no more. Here we differ; for it is our opinion that the bases
themselves show marks of alliance and divergence sufficient to allow the inquirer to detect bonds of union among classes of bases, leading to the conviction that many of the oldest bases we possess are themselves compounds, formed by the aggregating or welding on of more ancient formatives. This fact, for we think ourselves entitled to speak of it as a fact, has been noticed by Professor Max Müller. In discussing some roots in his work on the Science of Language, that seholar points to the undoubted connection between tud, tup, tuph, tuj, tur, tûr, turv, tuh, tuç, and between $y u, y u j, y u d h, \& c$. In these instances we find a general idea of "striking" expressed by the letter $t$. with varying adjuncts, which have the effect of defining to some extent the particular kind of striking each base is intended to express. In the other case the letter $y$, with a primary sense of junction, is combined with other letters which discriminate between many ways of associating things together. Now we maintain that it is very unscientific to hold that each of the words $y u, y u j, y u d h$, had an independent origin, and that the presence of the same initial is due to accident or chance; on the contrary, we think it more conformable to reason to believe that the initial is one and the same primitive base modified by certain adjuncts, which in course of time and by certain repetition in a particular sense, have ultimately lost all trace of independence, and so are become indissolubly welded on to the parent stock. This indeed seems to be the opinion of Professor Max Müller with regard to these
particular bases, and he considers that a large number of other Aryan roots came to their present forms by a similar process. That eminent scholar does not, however, say how far he would be prepared to allow the operation of this law ; and it is. very apparent that the philologists who think they follow his teaching will not allow it any operation whatever. The oldest form preserved in literature is treated as the oldest possible form of a base, and any attempt to apply inductive reasoning to the elimination of the earliest forms of words is looked upon as idle dreaming.

A little reflection will convince the reader that for the purpose of reaching the ultimate base of a word the more modern forms are in some respects as useful as the more ancient. If sense naturally attaches itself to particular sounds, it is evident that as soon as those sounds were entirely eliminated the word would become senseless; hence it follows that the most modern words, which we know by experience to possess sense, must contain within themselves the primitive bases upon which they are built. It is the task of the philologist to point out that central and vital spot around which successive strata of modificatory sounds have clustered, and too frequently almost obliterated.

A necessary preliminary to this inquiry is an examination of the phonetic changes which words have undergone independently of accretions of sense-modifying adjuncts. We have before (p. 37) alluded to this in the Introduction, as one of the laws of change
to which words are subject, and we recur to it here in order to show to how great an extent it transforms the appearance of words. The instances we shall shortly cite will be such as are undoubtedly known to have been evolved from each other ; and it will, we believe, be admitted that the words among which we seek to establish a relationship are in no case so diverse in appearance.

Let us take the common word am, which is only another way of pronouncing the French-word suis. The two words are identical in both base and inflexion, Land one is merely a phonetic corruption of the other. The French suis and Italian sono ${ }^{2}$ represent the Latin sum, in which the letter $m$ of the Anglo-Saxon eom makes its appearance. The Latin sumb is the equivalent of the Greek ci $\boldsymbol{c}^{i}$, the Lithuanian esmi, and the Sanskrit asmi, the last being a compound of as, "the existing," $m i$ " (of) me," i.e., I exist. Here we have unanswerable evidence that $a m$ and suis are only phonetic varieties of the same word.

Further instances of identical words strangely differing in appearance are found in the French guépe, the representative of the English wasp; the Sanskrit yakrit, Greek, $\mathfrak{\eta} \pi a \rho$, Latin, jecur (liver); Sanskrit yájya, Greek äyıos (holy); Sanskrit udra, Greek ẻvvסpıs (other) ; Sanskrit yatas, Greek ö $\theta \in \nu$ (whence). From

[^29]an analogous cause words passing from one people to another are, at times, completely changed into other words of somewhat similar sound; thus the apple known in France as belle et bonne, "beautiful and good," appears in English as belly-bound; and, as is well known, the ship Bellerophon is called by our English tars the Bully-ruffian. In a similar way Sundy-acre, a parish in Derbyshire, is meant for Saint Diacre, " the holy deacon;" and the hill in Oxfordshire called Shotover was named from the Château vert, or " green castle." Sparrow-grass is as near as some people can approach the pronunciation of asparagus, and Beef-eater has completely supplanted the old buffetier, " side-board attendant." Filibusters is from the French Flibustiers, a corruption of the English freebooters. The signs of public-houses afford familiar instances of phonetic corruption, changing "God encompasses us" into the "Goat and Compasses," and the "Bacchanals" of Chelsea into a "Bag o' Nails."

The Greek language furnishes us with a set of almost systematic changes ; such as a Prothesis, which prefixes a letter or a syllable to the beginning of a word, as $\tau \epsilon-\tau a ́ \gamma \omega \nu$ for $\tau a \gamma \omega \nu \nu$ from $\tau \alpha \dot{\beta} \xi \omega$;-an Aphæresis, which, on the contrary, takes away a letter or syllable from the beginning of a vocable, as ö $\rho \tau \eta{ }_{\eta}$ (Ionic) for éopr̀̀ ;-a Syncope, which takes away a letter or syllable from the middle of a word, as ${ }^{\boldsymbol{q}} \gamma \in \nu \tau 0$ for

or syllable in the middle of a vocable, as $\bar{\epsilon} \lambda \lambda a \beta \epsilon$ for è $\lambda a \beta \epsilon$;-an Apocope, which cuts off a letter or syllable from the end of a word, as $\delta \omega$ for $\delta \omega \mu a$;-or a Paragoge, which occurs when an addition is made to the last syllable of a word, as $\boldsymbol{\eta} \sigma \theta a$ for $\boldsymbol{\eta} \mathrm{s}$, ë́v́ $\pi \tau \epsilon \sigma \kappa \epsilon$ for є̈тú $\tau \tau$.

The singular disfigurement noticeable in these words is produced mainly by phonetic corruption; and when we see such striking divergences developing in historic times we are prepared to believe that analogous changes took place at a yet earlier period.

Indian grammarians have not overlooked these modulations in the sounds of words, and have embodied some of their conclusions in the following rule:-
Ryor $\dot{\text { p̣Los }}$ tadvaj JYor bvor api-
śsor mnoś chânte savisargavisargayoh ॥
Savindukâvindukayoh syâd abhedenakalpanam |
"The letters r and $\mathrm{L}, \mathrm{D}$ and $\mathrm{L}, \mathrm{J}$ and $\mathbf{r}, \mathrm{b}$ and V , ś and $s$; $M$ and $N$; a final visarga [ $h$ ] or its omission; and a final nasal mark or its omission, are always optional, there being no difference between them." *

Here it will be remarked that some of the permutations which we point out, and which, we suspect, will meet with much scepticism among European scholars, are looked upon as well known and established facts that admit of no controversy. It is upon the mutual

[^30]convertibility of $\mathrm{r}, \mathrm{L}$, and $\mathrm{p},{ }^{\mathrm{a}}$ and the optional insertion or rejection of a nasal, that we base our belief in the unity of the words flower and expand (in Sect. IV.), and the more we examine that matter the more are we convinced of the truth of the alliance.

The foregoing examples of phonetic change, which, we think, will not be disputed, afford sufficient evidence that the corruptions to which words are liable are practically limitless. With such instances before one's face, it seems mere idle quibbling to object to a derivation because $s$ has unaccountably become $k$, or $p$ has been replaced by $m$, or because vowels have been interchanged or elided. Mr. Wedgwood says very truly that the only rule for palæographic permutation is that any letter may interchange with any other letter; and it is almost labour thrown away to attempt a systematic classification of anything so capricious. It is notorious that no two districts in any country pronounce the words of their common language alike; it is even questionable whether any two people can be found who can give to any word exactly the same phonetic power. Nature has endowed us with boundless diversity in this as in all other things, and we must expect that this diversity in the

\footnotetext{
a Scholars will find European examples ready to hand in-

| $\Delta a ́ k p \nu$ | - | - | - | Lacryma. |
| :---: | :---: | :---: | :---: | :---: |
|  | - | - | - | urysses. |
| odor | - | - | , | oleo. |
| cicada |  |  |  | cicala, It |
| ægidius |  |  |  | gicles, \&c |

appreciation of sound and in the capacity to imitate it, will also show itself in the symbols intended to present sounds to the eye. In Somersetshire the sound given to the word this is, to a Londoner's ear, exactly like thik. We know that the two words are identical in construction, and are supposed to be identical in sound by their respective utterers." The same change is to be remarked in India, where the word for " language" is both written and pronounced bhâshâ and bhâkhâ indifferently. So identical are the sounds $k h$ and $s h$ thought to be in India, that the writers of many manuscripts employ one or other of these letters throughout, to do duty for both sounds in any words in which they may occur. The Sanskrit śwan, a dog, which reappears in the Greek word $\kappa \boldsymbol{v} \omega \nu$, $\kappa v \nu o ́ s$, then in Lat. canis, catulus, French, chien, Ital. can, O.H.G. hunon, Saxon, German and Swedish, hund, Esthon. hunt, Scotch and English, hound,-shows us that, as an initial also, a guttural, palatal, or asper, may supplant a sibilant. If we, now, only imagine a word having an initial, medial, and final sibilant converted, on the principle of these examples, in each case into a letter of another class, such a word, though a mere phonetic corruption, would be unrecognizable, and would be treated by all philologists as an independent creation.

Instances of $s$ becoming $k$ acknowledged by scholars, are found in the following:-

[^31]| Sanskrit. | Greek. | English. |
| :---: | :---: | :---: |
| śwaśura | - éxvós | father-in-law. |
| ṡwaśrû | - ékvjà | . . mother-in-law. |
| paraśu | - $\pi \in \bar{\lambda} \epsilon \kappa<\nu$ S | . . an axe. |
| sankha | . . кóv入ך | - a shell. |
| âsú | - . ${ }^{\text {ckús }}$ | - . swift. |
| aśman | - . ${ }^{\text {a }} \kappa \ldots \mu \omega$ | - . stone. ${ }^{\text {a }}$ |
| śringa | - . кépas | - cornu, Lat., horn. |

Another remarkable instance of phonetic corruption is the interchange of L with N , two letters which appear to have nothing in common. The following will, nevertheless, show that they have been used as equivalents of each other :-
Lat. Lympha . . . Gr. Ní $\mu \phi \dot{\eta}^{\text {. }}$
Gr. Aıт $\quad$ о ( $\nu i \tau \rho o \nu$ ) . Lat. vitrum.
Lat. L-utra . . . Span. vutria.
Lat. Lamella . . . Prov. Namela.
Lat. Lib-ella . . . Fr. Niv-eau.
Ital. veleno . . . Lat. venenum.
Span. ca-Lange . . . Lat. canonicus.
Span. comulgar . . . Lat. commusicare.
Fr. orpheLin . . . Lat. orphanus.
Sans. lânghana . . . Hindî vânghnâ(trespass).
Sans. Lângala . . . Hindı Nângar (plough).
Doubtless a very useful work is accomplished when any scholar discovers the laws by which letters interchange when passing from one particular language

[^32]into another. Such discoveries clear away many mists of uncertainty, and, as in the case of Grimm's law for the convertibility of tenues into aspers, in Sanskrit, Latin, and German, give at times a secure base of operations from which to advance to future conquests. Indeed one such demonstration of regular action, like the law of universal gravitation, evolves harmony out of discord, and conducts almost of necessity to conclusions akin to those sought to be established in this work.

Here the question as to what is to be considered the real base of a word naturally suggests itself. If any letter may interchange with any other letter at the beginning, middle, and end of a word, what point d'appui remains on which to rest our confidence that any word is certainly the confrère of any other word? To this we would reply that, in our opinion, the result of former attempts to connect particular words together has proved that there is no certain means of recognizing congenital characteristics. It is notorious that very absurd mistakes have been made by allying words somewhat similar in form; so absurd indeed have been the results that philologists now-adays very properly pay no attention.whatever to accidental resemblances or differences, but rely entirely on historical evidence and the operation of such phonetic laws as have hitherto been discovered. But, as has just been shown, the $\phi \omega \nu \eta$ is so capricious a manifestation of the $\lambda$ óyos that the very cautious method now pursued by philologists prevents their tracking vocables
through more than a fractional part of their wanderings, and allows their deductions to culminate in only vague generalities about the possible development of language from a few hundreds of primitive bases. It is this state of the science which has led us to suggest the system of Collective Analysis, illustrated in this book, and which promises to unlock many of the sphinxlike riddles that have hitherto teazed inquirers. It is by the simultaneous examination of collections of words in one and the same language, which are more or less indefinitely related to each other in meaning, that we hope to arrive at some unchanging or recognizable central point which may be taken as the sensegiving element, and therefore the base of the whole congeries. It is true that at last we can give no more definite shape to the base we eliminate than a single letter; but this is so because we wish to keep ourselves clear of assertions which it is impossible to verify. The consentient opinion of all scholars is that modern words arose from monosyllabic bases; and it would therefore follow that all words are resolvable into some simple sound, the vocalizing element of which must ever remain a moot point, and which we represent by a dot both before and after a consonant to indicate uncertainty as to whether the vowel preceded or followed the letter. It must not, however, be supposed that we promise to reduce every word to such modest proportions. It forms no part of our programme to reduce the Greek language to the letter $i$, or the whole speech of mankind to seven
primitives, as has been seriously attempted in times past; neither do we suppose that this will be the last book ever written on the subject, and that it will for ever set at rest all doubts and scruples connected with etymology. Our ambition has more reasonable bounds; as we only seek to lead the way in a new method of investigation, which promises, by the combined labours of such scholars as think our method worthy of elaboration, to establish relationship among large classes of words hitherto thought to be distinct, and in this way to reduce materially the number of necessary bases, and finally to prove that each arose as the natural expression of a common want,-natural, as the imitative expression not of the sound of bird and beast, but of the very idea intended to be conveyed. The bases resulting from our exhaustive system of analysis are undoubtedly genuine onomatops, and, when discovered, commend themselves to our intelligence; as in the identification of the letter $l$ as the phonetic exponent of the tongue's action (p.141), in that of $g$ as the representative of the throat (Introd. p. 27), and in that of $p$ as the puffing symbol (see Sect. IV.).

What we mean by "collective analysis" can only be explained by an example ; and we therefore append the following examination of the word "Law." Here we may as well add the general remark that in seeking to probe language down to its ultimate bases, we would be understood as laying no great stress on the alliances which we endeavour to show to be subsisting
between particular words. What we mainly seek to establish is the recognition of new principles in the treatment of bases. If we succeed in proving the ultimate connexion and positive affiliation of numbers of words hitherto supposed to be distinct one from the other, it will matter little that particular alliances may afterwards be shown to be doubtful or erroneous.

It will be remarked that we do not deal with letters so much as with phonic or syllabic instants, pulsations of sound which do not change letter by. letter, but sound by sound. To give an example, vri becomes wri, whor, wel, \&c., by phonetic, not palæographic transmutation. The modulations of syllabic instants may be well illustrated by this sound, vri, which is a Sanskrit base, meaning "go round," " surround." It presents us with the following among other changes:-wrea-th (to go round the head), wri-the (to turn round about), wri-ng, and wre-nch (to twist anything round), wri-ggle (to twist round), wri-nkle (that which is so twisted), wel-ter (to roll about), wel-t (a small roll or crease), wel-kin (that which surrounds) the worl-d or e-or-th, both of which are forms of or-bs, Latin. To wra-p is to inclose anything, a wal-l is an enclosure; to ware is to make a ship turn away from its course, to make it go $a-w r y$; and to be war-y is to circumvent, to make any one subservient to your wil-l (see p. 49), to get them into your wiles or toils. A wheel is so called from its circular and revolving character, and a whor-l is a circular arrange-
ment of any kind; to wiel-d a sword is to make to go round, to whir-l it about, so as to overwhel-m the foe or co-ver him with confusion. A whel-k is a curly shell-fish; a wire is a flexible object that will turn to-ward-s any point; and a wil-d or weir-d creature is one that wanders round about according to its own will. The fact that these words have reached us through different Aryan channels in no wise affects their utility for the present purpose, as they all come from one primitive base, which appears in Sanskrit as vri. Here, then, we have the idea of circular motion expressed by vri, wri, wry, wre, wrea, weir, wir, war, ver, or, wel, wal, wil, wiel, whel, whil, whor, worl, and wheel, all of which are clearly but different forms of each other. The greater part of such transmutations were wrought by people innocent of alphabets, who repeated the sounds they heard uttered in the best way they were able, without any regard to the appearance their words would present upon paper.

It is also proper to remark that in our opinion too much stress is at times laid upon the differences between what are called vowels. It should be remembered that vowels have, in reality, no substantive existence in language,-the Semitic languages entirely ignore them. Vowels are merely vocalizations of the consonants, and they differ from each other solely according to the place in the mouth at which the emission of sound is permitted, and the more or less degree of relaxation of the throat. They pass into.
each other in the following order :-i, e, $a, 0, u ;{ }^{\text {a }}-i$ being the sharpest and most guttural, the rest opening out one after the other as the musoles of the throat are relaxed, and the vibration approaches nearer and nearer to the front of the mouth. Hence it follows that $k i$ differs from $k a$ solely from the fact that in pronouncing the $k$ in the latter case the throat is somewhat more relaxed; and so of any other vocalization. With these preparatory explanations, we proceed to discuss the word "Law."

> "LAW."

A word is used in the title of this book which has sorely puzzled etymologists, and given rise to much curious speculation. The word "law" is, as it were, "Nobody's child"; no parent has, as yet, been found for it; its raison détre is still undemonstrated. It is, therefore, an excellent subject on which to operate by our method of collective analysis, for the purpose of arriving at some definite result.

As soon as we bring together the congeners of law we see that they agree in only one particular, which is, in containing the letter $l$, and this of itself is prima facie evidence that the sense of the word attaches, in an especial degree, to that part of the word. It is true that, at times, the sense-giving element in a word entirely disappears; but though this takes place in a few words in each language, it is incredible that many

[^33]different languages could all have dropped the essential sound, and could all have united in preserving some merely adventitious adjunct. The letter $l$ may, therefore, be fairly held to represent the base of the word law (lah, laga, Anglo-Saxon ; lag, Old Norse ; lex, Latin ; $\lambda \epsilon ́ \gamma \omega$, Greek; laie, Norman French; loi, French; legge, Italian; lége, Wallach.; lēge, Russian; lage, Swedish; ley, Spanish; lauwe, Dutch).

Now the $x$ of the Latin lex we know stands for a simple guttural, which comes to light in the genitive legis, exactly presenting the shape of the Anglo-Saxon laga, and Icelandic lag. In Old English the sound of $g$ or $\underset{\sim}{z}$ was frequently softened into $y$; hence the word laga passed by phonetio change into ley, and its use in this form directs us to the sense attaching to the word. Thus while ley meant simply law, a ley-gager, was a gage deposited or laid down to abide an issue ; it was a gager in law. While the word ley-gager, from its nature, preserved a technical sense, the same form in ley-land (lea, ley, Norm. Fr.), or fallow land, -land lying dormant, - never lost a general, and therefore original import. The base, then, of laga, a law, is to be found also in ligan, A.S., to lay or place; which is further illustrated by the Old English word leke, lawful, closely allied to league,-the Fr. ligue, Ital. legua, Lat. ligare, to bind.

Norman French is a language which had a considerable effect in moulding the forms which words in English ultimately assumed, and the remarkable changes which the word we are discussing undergoes in Nor-
man French will help the reader to understand how such forms as the Latin ligo, lego, and lex, passed into each other. The word law in Norm. Fr. is written lai, layde, -laie, leye, lee, ly ; and in the plural lez and lous. Here we have the vowels $a, e, y, o$, used indifferently, which are certainly more violent changes than the conversion of $i$ into $e$ (ligo into lego). The adjective lawful undergoes the following transformations in Norm. Fr.:-loiastes, luist, lyst, leust, laust, licette, liat, leux, leus, leu, loyse, lyse, list, lise, leise; under another form loisible, lisible, leisible, leissie, or loial, laiel, lealment. Each of the vowels is used indifferently in these words, and it will be perceived that the only fixed point in all these words is the letter $l$. When we find a word undergoing such transmutations in one language, without any change of meaning, we shall be less surprised at the changes to which bases are subject when they assume new and technical significations.

The connection between law and ligan, to lay, was pointed out by Horne Tooke a hundred years ago, yet his explanation is not generally accepted, and the Latin licere, to permit, to allow, has been thought, by some, a more probable source of the word. It will be shown in the sequel that licere itself, and all such words, originate in the idea of laying, leaving; and therefore the ultimate base of law through either channel would be the same. Still there can be no doubt that ligare, to bind, is a nearer relative to lex, legis,
than licere, to allow; and we, therefore, agree with Mr. Wedgwood in thinking that by law is meant "what is laid down." In corroboration that author says, "so Lat. statutum, statute, from statuere, to lay down; Ger. gesetz, law, from setzen, to set; Gr. $\theta \epsilon \sigma \mu o s$, law, from $\tau \iota \theta \eta \mu \iota$, to lay;" and we may add the Sanskrit dharma, law, from dhri, to place or lay.

The kinship between law and bondage is further illustrated by the Norm. Fr. ly, law, and lyance or ligesse, allegiance, the duty of the liche, lige, or liege, the subject, one under the law of a particular ruler, that is, one bound to conform to what is laid down for his guidance; a meaning which receives further elucidation from the term liege-man, a feudal tenant who owes absolute fidelity, one bound to unquestioning servitude, in fact, a bond-man. The word lige or liguie is the Norm. Fr. for a bond; liers = prisoners, lyer = to bind, liaz or lyaz=bundles, and loiens=bonds, presenting forms closely analogous to those which represent the fetters of the law.' In the same language those who bound themselves for a term, or who were hired, were called loians or loueez, and the aot of hiring lowance, lowange or lovage (Fr. louer, to let a house), while that which was paid for the service was known as lower, luer, lowir, loos, or alegance, that is, an al-low-ance, obviously allied to louer, al-

[^34]louer, Fr., to assign; alogar, Prov.; allogare, Ital., to settle; locare allocare, Lat., to place, i.e., lay down (locare argentum, Lat., to lend money on a rental).

To Lay a thing down is really to place it in contact with something else, as is proved to demonstration by the Sanskrit form of the same word. Lag, in Sanskrit, means both to lie and to ally; and in its derivative Lagnâ, in Hindî, it comprises every kind of application both mental and physical. The Latin word ligare, to attach, to bind, gives the nearest rendering of the word law, lex, the lig-ament, the agreement or League binding well-ordered societies of men, without which there can be no alsiance, no lock-ing together of numerous interests into a compact block or log. The $\mathrm{L} a w$ is a Link which, like the Lainers or lanyards of a ship, $\mathrm{L} a c e s$, Lashes, or Latches together the elements of a common polity, in the same way that a Leam or Leash binds dogs, a sinch-pin binds the axle of a cart, and a langot or Latchet binds the two sides of a shoe. ${ }^{\text {a }}$

The above instances show some of the changes which the base $\cdot l$ undergoes while retaining its older sense of attachment. It will, we think, be acknowledged that the passage of ligan into law is trifling in comparison. The original identity of the words above given is shown more clearly in their older forms: thus,

[^35]to latch is in A. S. leccan, gelæeccan, to lock is beluccan, Loc is a shut-in place, the Icel. loka; and a leash finds its representatives in the Norm. Fr. Lease, a leash, Laces, snares, and the Old Fr. Lacs, the Prov. Lac, latz, laz; the Spanish Lazo; Fr. cacet, a string for stays; Bavarian geLäss, the Lat. Laqueus (snare); and the modern Dutch Laschen or Lassen, the Danish Laske, the Bavarian geLassen, to join things together,-show how commonly the guttural passes into a sibilant (see p. 108).

There are, however, very many other words in which the same base $\cdot l \cdot$ enters to impart a ligamentous sense; such as Leetch-lines on board ship, Lime. (another form of leam, the coupling of dogs), Loam, the adhesive kind of earth, and lime (leim, G.; lijm, Du.; lim, Icel.; limus, Lat.; lym, Nor. F.; beliman, A.S.; leimen, G.), a sticky substance, the ag-glutinative property of which is its distinctive feature. So also the Sanskrit words Laguda, a club; Laddu, an ag-glo-merated sweetmeat; Lákshâ (lacca, Lat.; lacca, Ital.; laca, Sp. and Port.; lack, Dan.; lak, Dutch; lack, Swedish; laka, Pol. and Russ.), "gum-lac;" Leshtu, Loshtu, Loshtra, Loshṭa, "a clod of earth."

From lime we naturally pass to slime, the $s$ of which is adventitious, and changes to a guttural in cLeam (claman, A.S.), "to glue or fasten," and so passes into cLew (clywe, A. S.; knauL, G.), the Teutonic form of gLue, glu, Fr., "birdlime ;" gLus, gLutinum, colLer, Lat.; gLud, Welsh; $\gamma$ Aooós, Gr.;
"nasty, clammy;" the Scotch guair, glar, glaur, "slime, saliver;" and the French glaire, "slimy soil," or "the white of an egg." The obsolete word glaimous is a bond of union with clammy, sticky, adhesive, and a word which at once puts us into communication with cLam, "to glue or daub;"A.S. clam, a bandage, clasp; kLamm, G., viscous; kLam or kLamp, Du., sticky. The last Dutch word shows the form the base assumed on taking a new sense; for $k$ camme or kLampe is also the Dutch for a hook, $c \mathrm{Ramp}$, or cLamp, used for the purpose of holding things together,-the German kLamme, knampf, Fr. cRampe.

The following batch of words from Hindî will show how adhesiveness is expressed in that language:Lagân, holding fast; $\mathrm{L} a m d o r$, leash for catching game, Lokná, to catch; Lachchhâ, a bundle, ball; Lat, tangled hair; Luj-Luja, clammy, viscous; LachLachâná, to be clammy; Las, tenacity, viscosity; Lasaknâ, to become viscid; Lasnâ, to embrace, adhere; Lasorâ, name of a glutinous fruit; Lâsá, anything clammy; Lâhjâ, viscosity, Lâkh or Lâh, gum-lac ; Lág $\hat{u}$, adhering to, desirous of; Lânk, birdlime ; Lablabâ, clammy, glutinous; Lipatnâ, to cling, adhere: Laptî or Lapsî, glutinous food. In all these words (and many more might be added) the constant phenomenon is the presence of the letter $l$.

The form camp above mentioned has congeners in crump-led, to be pressed together, to have the cramp
(crampe, Fr.), to be crushed, made close, stuffed, cram-med (A.S. cramman); and when meaning simply "bent together" the nasal is dropped, as in the form crub-ach, Gaelic, a crip-ple, one crab-bed, or crooked. That crab (a craw-ling creep-er) has the sense of adhesion is shown by the tool of that name used for clamping boards together, and also as applied to the animal, crabba, A.S.; carabus, Lat.; krabbe, Dan.; krab or krank, Breton; krebs, G.; krabbi, Icel.; cancro, granchio, Ital.; karkata, Sans.; каPкivos, Gr. ; cancer, Lat., in which $l$ (or $r$ ) is entirely suppressed; but as it appears in the Italian word, we have an instance to prove that modern European languages are not derived from the classical tongues, but had an independent growth.

Closely allied to the crab is the crayfish or crawfish, the krebiz of O. H.G.; kRevisse or kRevitse, Du.; écrevisse, Fr.; escarbot, a beetle (crap-aud, a crawling toad) escarabot, Langue d'Oc ; $\sigma \kappa a P a ́ \beta \epsilon \iota v=$ бкалáßos, Gr.; scara-bæus, Lat.; the creature with claws, or cleyes (Sax. and G. klave), by which it can clutch, clip, cLasp, or cleave to anything. The A. S. cleowan, to close, is clearly allied to such other forms as cleofan, A.S.; kLeben, Germ.; kLeeven, kLijven, $\mathrm{Du} . ; k \mathrm{~L} a b e$, Dan., all of which mean "to cleave," "to adhere;" and the Somersetshire clytty, sticky, is near akin to cleat, a piece of wood on which ropes are fastened, approaching the word cLaut, which Chaucer uses as synonymous with cLaw. It is, furthermore, the claw with which we cling to anything, enabling
us to climb or clamber, i. e. to scramb-le up, Fr. grimp-er, griffe, akin to grip, to grasp; Gr. $\gamma$ Pıniढ़ $\boldsymbol{\gamma}$ Pítos, Fr. agraffe, grippé; cleik or clek, Scotch, to seize; kLupe, Swiss, claws; kLenga, Swedish, to climb.

Very similar to the form cleye, a claw, that by which we adhere, is the word clay (Gr. äpyulios, Lat. argisla) the adhesive kind of earth, Fr. argise, Ital. argisla, luto, Span. arcilla, Russ. and Pol. $g_{\mathrm{L} i u a, ~ A . S . ~ c L a g, ~ D u . ~ k L e y, ~ D a n . ~ k L a g ~ o r ~ k L e g, ~}^{\text {ent }}$ clammy, $k$ Lag, mud. The adventitious character of the initial of clay is well shown by the German Letten, lehm, the Italian $\mathbf{~ u t o , ~ t h e ~ R u s s i a n ~ w e t i o ̆ , ~ t h e ~ W a l l a - ~}$ chian Letiu, the Danish and Saxon leer, and the Swedish Lera, all of which are deprived of the guttural. In Sanskrit clay is termed çiLîndhrî, basically identical with çicî-pada, çLî-pada, çLî-padin, cLub-footed; analogous to çLesha, union; çLeshman or çLeshmaka, mucus; and çiLat, a rock ${ }^{2}$ or $b$ Lock of matter. The final $g$ of the A.S. clag is softened in the word cling, and yet further changed in clench or cLinch, though it is again hardened upon dropping the non-basic initial, as in link (cf. the Hindî words Lag, Lagbhag, and Lon, meaning " near to," "close to"). The link (Langa, Sans.) which unites two objects is nearly related to cLink-er, matter linked or clenohed together; klinken, Du., fasten or clench a nail ; kLanken, Bav., to knot together ; kıynge, Dan.,

[^36]a knot or cluster. The word cluster is itself expressive of aggregation or joining together of many units, cluyster, A.S.; kLister, kluster, Du. ; klissen, Du., to close, to be close, cly $\dot{s} a n$, A. S.; schLiessen, Germ.; akin to cloister, what is enclosed, kloster, Germ.; cLoitre, cloture, Fr. ; кムєí $\omega$, кムï $\rho o \nu$, Gr. ; claustrum, cLaudo, Lat.

What is close is cRush-ed or crowd-ed together, and crowd (cruð, A. S.), which was at one time written $c u \mathrm{R} d$ or $c \mathrm{R} u d$, and lost its dental in $c \mathrm{Rew}$, is traceable in such words as curdle, to cruddle, $c \cdot$ ower, ${ }^{\mathrm{a}}$ crouch, as is shown by the Dutch $k$ ruyd-en or kruyen, to hustle together; similar to the Polish gruda or grud-ka, a lump or clod; Fr. crottes; Eng. crottles, cRuttles, or crums. Closely akin to crowd is the word cloud (clote, Du., ax^ìs, Gr., caLigo, Lat.) which has long been known as a companion form to clot or cLod, which may be strikingly illustrated by the expression clouted or clotted cream. To the word clod (clud, A.S.) must be allied clog, the changes of the final letter being illustrated by the Dan. klods, the Swed. klots, the Du. kLot and the Germ. kloss. Clog, by loss of its adventitious initial, becomes Log , expressive of an aggregated mass, a block. Log is found in the Hindî Laggî, a staff or club, to which the following words are allied : Lakut or cakar, a club or cudgel ; cakrâ, a lump of wood; Lothrâ, a lump of flesh; Labedâ, a club; and coprî, a lump of anything moist.

[^37]The word clod takes a nasal in the Dutch form. klonte, and Danish klunt, so bringing about a not uncommon result, that is, the change of the letter following the nasal into a labial. Hence arises kLompe, Du. ; kLumpen, G. ; kLumbu, Icel. ; kLump, Dan. ; clump, Eng. The last word is, as Mr. Wedgwood says, "related to club as stump is to stub, bump to bob, hump to hob." A cLub is clearly a log or Lump, an aggregation of matter, as the Swedish $k$ Labb, a $\log$; caava, Lat., a bundle of sticks; the Russian $k \mathrm{~L} u b$ ', a ball; the Polish kugb, a ball; the Welsh clob, a boss or knob; the Dutch kLuppel, a cudgel, the German kloben, koLbe; the Latin gLeba, a clod; and the English $c \mathrm{~L} u b$-footed, abundantly attest.

The elision of a labial following a nasal is, also, a common occurrence, as was shown above by the change of clamp into clammy, clam, and cram; and so in the form of the base we are now discussing we find that the word clump or cloud passed not unnaturally into clown, to express one who is agglomerated in intellect, and who is also called a clod or clot-pole, a lumpish, stupid boor, a log-gerhead (Lat. colonus, stupid) ;-just as we find in German the word klotz, meaning a log, and klotzig, for that which is boorish or rustic. When the word clown loses its initial, it produces the form loon (Lawand, Pers., foolish) or Lout, applied to any lub-ber (Ligu, Sans., a fool), in which last the labial reappears, bringing us back to lump, anastomosing with clump, clamp, and all that have preceded.

While mentioning clump, we must not forget clumsy, which Mr. Wedgwood prefers to derive from comelyd, cumbled, clommed, clomsid, "stiffened with cold," without perceiving that all such vocables arise from the onomatop expressive of closing together, or aggregating, whether it be by application, agglutination, or by meteoric or other causes. The very word $\cos d$ (ceaLd, A.S.; gevidus, Lat.; kuhL, Germ.; chicl, Eng.; ceLe, cy ᄃ, A. S.), that which con-geals or gelatinates, is a pertinent instance of the use of the base $\cdot \%$ in a ligamentous sense.

From cloud, by mere change in pronunciation, we educe glout, glowt, and so glum, gloomy (glomung, A.S.), words expressive of a cloudy or frowning countenance, the looking grim,-to glombe (Chaucer) ; glupna, Norse; glomme, Dan.; gloeren, gluyeren, Dut.

Among the forms above given as near of kin to clog, we mentioned the word block; but this is by no means the only vocable in which a labial occurs as initial to our base. The continental equivalents of this word lead us into regions as yet untrod; the Swed. bLack, Dut. bucken, Ital. b•uzzelli, Germ. block or kloss, Fr. bloc or blot; Prov. bloca or bocla, the boss of a shield, that which is bLunt; Dut. paukk, which in Somersetshire is also pronounced plock; leading to the Danish puet, Eng. plot, and ultimately to blot; which last is, in German, expressed by the three words, bLosse, kLeck, and fLeck, the last of which conducts us to a falke or knot of snow, and a flock
of wool (flocc, A. S.; flocke, Germ.; floc, flocon, Fr.; plecta, Lat:), a flock of sheep, and a fueece or bunch of wool (fLyse, A. S.; vciess, woule, Germ.; viies or wos, Dut.; uLd, Dan.; uıl, Swed.; Laine, Fr.; Lana, Ital.; La, Sp.; Làa, for Lagna, Port.; Lava, Doric), and at last we arrive at $f \mathrm{~L} a x$ ( $f \mathrm{~L} e a x, \mathrm{~A} . \mathrm{S} . ; ~ v \mathrm{~L} a s$, vLasch, Dut.; wLakno, Bohem.; Linum, Lat.; $\sin$, Fr.), which the Russian words wias, wowos', hair, enable us to recognize as a form of the word wool. The demonstration of this alliance is furnished by the following paragraph, simply copied from the first edition of Mr. Wedgwood's "Dictionary of English Etymology":-
" Wool. Goth. wulla, ON. ull, Fris. wille, Fin. willa, Russ. wolna, W. golan, Gael. olana, wool. Lith. wilna, Let. willa, wilna, Illyr. vuna, Lat. villus, a lock; vellus, a fleece; Gr. oudos, woolly ; Esthon. wil, wool; willane, wildne, woollen, woolly."

These words are given by that gentleman without comment of any kind; but they at once suggest how the $\boldsymbol{v}$ passed into $v$, and then into $f$, and finally coalescing with the letter $l$, transformed wool into $f$-eece (? the old Aryan genitive, wool-is, vl-is) and gave a name to that which has a flossy appearance, i. e. flax. The Norman French lins, laisnes, or leignes, wool ; lanuz, woollen ; linge, lenge, or leignes, linen, are additional evidence.

The kind of block with which we stop a hole is called a $p \mathrm{~L} u g$, a word which retains the $k$ in the Finnish form $p u \mathrm{~L} k k a$, and the Esthonian $p u \mathrm{~L} k$, as indeed is the case in the Pl. Du. pu $u k k$, which means
both a block and a plug; while the words plugge, Pl. Du.; pLug, Du.; pLigg, Swed.; offer forms which balance the initial surd by a final sonant. The French en-cloyer, to stop with a plug, to clog, or cloy, gives a parallel form, in which the final melts into a vowel, the not uncommon end of a guttural. That the letter $l$ in plug is radical may be shown by the word peg, which, however closely it approaches to plug in both form and sense, is nevertheless derived from a quite different base, as will be shown in the Dictionary.

The word block, besides changing its initial to the spiritus asper in flock, fleece, \&c., at times loses it altogether, so that we meet with the alternative forms flocke and locke in German; vlocke and locke in Dutch; lockr in Icelandic; locca in Anglo-Saxon, and lock (of hair) in English. The word lock is applied to an aggregation of hair just as $\log$ is to an aggregation of woody matter, and rock or block is to a mass of stone. In every case the idea is that of associated units forming a common $b u \mathrm{~L} k$.

Having thus followed the base $\cdot l \cdot$ through so many changes arising out of its sense of attachment, agglutination, and aggregation, we will return to the forms link, clench, cling, and follow the base through a different channel among a series of words which adhere in meaning more closely to the idea of simple alliance, the bringing, laying, or placing together. For the word cling so naturally suggests the form linger, that it would require more reasoning to prove they were not akin than to establish their relationship.

Linger suggests Loiter, Lounge, Lurch, Lurk ( $u \boldsymbol{k}-n \hat{a}$, Hindî) and Langour, ${ }^{\text {a }}$ to remain attached to a particular place or state (Lirka or Lurka, Norse, Lauern, Germ., to lie hid), to be slow (slaw, Sax., slov, Du., Lent, Fr.) as a slug or a sluggard (i.e. slow-ard), to Lag behind, be loth, and, with a nasal accent, to be long. There does not, at first sight, seem much connexion between the ideas expressed by long and loitering, yet in their Hindî forms (vi-Lamb, procrastination, de-Lay, and Lamba, long, tall) the identity of the two is rather strongly marked. Such is also the tendency of the Walloon Lon=slow, the Limousin Loung, Loun=tedious; the Italian Lungi, French Loin=far, Old French esconger, éloigner, to put at a distance; and the Old Norse Langr, Goth. Laggs. Very near of kin to langour is the French Languir, to Languish; to linger in confinement; and Long (Scotch lang) passes readily into Lank, (to be long or Lean,) by the mere sharpening of the final. He who lingers behind becomes Late, he may even be the last to move, or he may not move at all, but continue or Last in the hypothetical condition an indefinite time. Lagna, "attached," the past participle of the Sanskrit base lag, also means "left," "remaining." To express continuance our Saxon ancestors would have employed the word Lestan, but the Germans would now say lleiben (af Lifnan, Goth.; brifwa, Swed.), which seems

[^38]to be as near to Leben (Goth., Liban, Nor. Fr., $\mathbf{x} i b$, uibe, Eng. to live) as give is to the Gothic giban, Sanskrit grabh, "to take." To live is, in fact, to remain, to continue, to last, and the letter $l$ has in this word the same sense of abstract attachment to existence as it has of concrete attachment in the words line and sigament.

A lane is an opening along a line (Hoyxòs, a lance) and so is a glen (glyn, Nor. Fr.), showing how small is the effect of these fickle initials upon the sense. A dawn is very similar to a lane, it is a Level, and is one form of land, just as clown is a form of clod, or tun of tub. A level or lawn is a place laid out flat, as is proved by the way in which we always speak of producing one; for we build a house, but lay out a lawn. The same may be said of lake (lac, Fr., lacus, Lat., 入áккоs Gr.,) which is a smooth sheet of water. But this word may be more nearly allied to the Saxon loc, an inclosed space (Scotch loch), though, as we have formerly shown that lock and close both originate from the idea of binding or attaching inherent in all forms of $\cdot l \cdot$, to ally, this circumstance will have no effect on the propriety of the insertion of lake in the present series. Perhaps a Lath exhibits the singular metamorphoses of this base in an equally striking manner ; for a lath is a piece of wood that has been displayed, spiayed, or Laid open. A lattice (lattiz, Nor. Fr.) is a window formed of laths.

The idea of laying as associated with the letter $l$ is clearly seen when we speak of loading a cart, or the
bill of Lading (A. S. hlàd, Hindî Ladânâ, to load, Lâd or Ladâ-o, a load); but we forget this radical meaning when we use the noun and speak of a Load, or a last of corn ; so also when we speak of our Ladging, that is, our Lair, where we lay, last, or abide. When we Lodge anything under certain circumstance it is called a pledge (plegg, Nor. Fr.), the thing is $p$ Laced or laid down to abide a certain contingency ; and when we pledge or plight our words, we bind or attach ourselves to something in a way analogous to that in which a sailor splices the two ends of a rope, or an artilleryman Lashes a gun to the lifting gear.

The letter $l$ in the word $p$ Laint (plaindre, Fr.) points to a similar origin. It is a complaint, or pLea in legal phraseology, an al-Leg-ation, that which is lodged. In Norman French a plea was called pleintie, plaint, pleit, plet, plait, plaid, and lai or laie, leading directly to the forms alaier, lier, lyer, to allege, the last identical with lyer, to bind ; and the word aliaunce or alience was used indifferently to express either alliances or allegations.

This word causes us to notice the radical difference between the French plaindre and pleurer. The latter is the equivalent of the Latin plorare, to weep, the English flow, Fr. fleuve, a river, Sans. plu, \&c. This last sentence is enough to show that we use discrimination in the alliance of vocables.

In all these numerous instances we find a ligamentous sense attaching to the words in which the letter $l$, or its
correlative $r$, is a constant accompaniment, and it would require the faith of a Buddhist to suppose that all occurred by chance. An exact study of the physical phenomena of the universe is establishing with accumulating force the conviction that chance has no place in the realm of matter; and we may rest assured that the same is true of the phenomena of language. A scientific study of language will tend more and more towards a demonstration that language is the out-come of definite laws, which await only the patient and comprehensive analysis of existent facts to reveal themselves to the diligent student. But our present duty is to argue not to perorate, and we, therefore, proceed to cite other examples, such as $\mu \mathrm{L} a i t$, to intertwine or lay together, to $b_{\text {raid }}$ (deadening the sound of the consonants), to buend or associate together, to foLd, to pLeat, to $p \mathrm{~L} y$ or cause to lie in a particular direction, with a pair of pliers (plier, Fr.). The word ply has a secondary sense, for we speak of those who ply an occupation (Ger. pflegen, Swed. plaga, Dan. pleger). This must mean, apply themselves to it, expressed in German by the word obliegen, which can be at times divided so as to show that the latter part of the word really means to tie; thus, es liegt mir ob, "I am obliged to it," "it is my duty."

That which hangs or lies about is properly said to be loose, to hang in loops (Sans. lab or lamb, to hang down, dangle; Lat. labi, delabi) to be Lithe, supple, or Limp; and lither is an old word for ц $a z y$, idцe (jedes, Du.; loose, Ger. lassig, Gal. lesg,

Fr. lasse, languissant), one who is di-La-tory, a Lozel, woll-ard, who Lolls about, who Leans (laners, Nor. Fr., idle, sluggish) on others for support, in short, a sLoven (slaw, A. S., slove, Dan.), sLattern, a sLut, one whose garments are sLack (з̆L $a t h a$, Sans., loose, Lata, a creeping plant) or slouchy, who is addicted to sLumber or sLeep (slumerian, A. S.; slummer, Dan.; sommeil, Fr.; sonno, Ital.; sueno, Span.; sona, Hindî ; swap, Sans.) ; i.e., to lay down and rest. So in Hindî, the connexion between these various ideas is manifest in such words as Litâna, to lay, cause to lie; Latthar, slack ; Lithärna, to draggle ; Latakna, to dangle ; Latârna, to be fatigued. Loose (leosan, A.S.; losen, Germ.; loser, Du.; losa, Swed.; $\lambda \hat{v} \omega$, Gr.; läche, Fr.; laus, Goth.; las, Dan.), lax, laxity, Lat. laxus, laxare, to unloose, to re-lax, to re-lieve; Ital. lasciare, Fr. re-lacher, laisser, Prov. laissar, educed from a base that gave birth to lex, league, lien, \&c., afford an instance of diametrically opposite meanings being expressed by the same base.

In connexion with the word sloven must be mentioned slobber and sLur (sLet, Du.; schlostern, Germ.; slog, Sax.; slyk, Du.; sLush or sludge) to smear or daub over anything, and the Dutch word sLobbern, to bag, hang loose, or $f \mathrm{~L} a g$; the last word leading on to such words as faii, to sink down, to faцl (fallere, lapsus, Lat., be faLse; oфá̀入 $\omega$, $\sigma \phi a ̈ \lambda \mu a, ~ G r . ; ~ f a l l i r e, ~ I t a l . ; ~ f a i l l i r, ~ F r.) ; ~ a n d ~ f o o L, ~$ one known for his failings. For fear the last etymology should be thought far-fetched, we hasten to
add that in Sanskrit a precisely analogous change has certainly taken place: thus the base mri, to die, to sink down, a parallel form to mlai, to be weary or fail, has passed into mlechh, to be obfuscated, mûrchha, fainting, a swoon, and mûrkha, a fool. Before leaving fail we notice ail-ment, a failing or ill-ness; the word ill being akin to the Gothic ubils, Germ. übel, Eng. evil, fal-libility, which is, therefore, no worse than a failing or falling short of a prescribed standard. The vocable evil brings us into communication with the primitive base in an unlooked-for way; for evi工 is merely the Teutonic form of viLe, the congeners of which are defise, fouL, fisth, ${ }^{\text {a }}$ guiLe, guiLt. The direct parent of vile is the Latin vilis, the Fr. vil, Ital. vigliacco, that which is base or Low, closely akin to vaLlis, Lat., vazlé, Fr. vaцley, vase, Eng., the depressed or low-lying ground between two mountains. Vile is not allied to villain. The latter word has a curious meaning when traced to its origin; for the ancient villein, villanus, was the servant of the villa, which last is undoubtedly a form of villus or vellus, the skin of a sheep, akin to pellis, the skin of any beast, velamen, a covering in general, and vallum, an enclosure, a wall,--the $v$ passing into $b$ in the word buil-ding,-all of which meet in a point in the Sanskrit base vri, to surround, co-ver. Thus a villain is, etymologically, "the servant of a covering."

[^39]We return to the vocables meaning "lay," "ally." To sling anything (Sans. śsath, be relaxed) is to cause it to hang loose (Dut. slingern, to dangle; Germ. schlingeln, to loiter); to sLay is to lay low, to cast down (Swed. staga, a sword, a slayer); and the sLain arè to a battle what the sLag is to a furnace, the dross, that which is Left behind (ef. Sans. lagna, laid, left), by which last word the senses of continuance and attachment become manifest. The verb to Leave (linquer, Nor. Fr., re-linquere, Lat.) fits into the series containing linger, late, and last, previously mentioned; but we did not then instance the word Let (lait, Nor. Fr., laissar, Prov.), to al-sow, permit, Leave remaining, with a secondary sense of hindering. Mr. Wedgwood so clearly shows the connexion between let and loose that we cannot do better than quote his short argument,-
> "The idea of slackening lies at the root of both applications of the term. When we speak of letting one go, letting him do something, we conceive him as previously restrained by a band, the loosening or slackening of which will permit the execution of the act in question. Thus Lat. laxare, to slacken, was used in later times in the sense of its modern derivatives, It. lasciare, Fr. laisser, to let. Laxas desiccare, let it dry, modicum laxa stare, let it stand a little while.-Muratori. Diss. 24, p. 365. So from Bav. lass, loose, slack, slow, G. lassen, to permit, to let. The analogue of Bav. lass is ON. latr, lazy, torpid, slow, the original meaning of which (as observed under Late) was doubtless slack, whence E. let, to slacken (some restraining agency), to permit."

There are hundreds of other words containing the base $\cdot l \cdot$ which we must pass over with only a hasty
allusion, such as L ull (luller, Du., lullen, Ger., loisir, Fr., loire, Old Fr., and lolo for the nursery), sure (leurre, Fr.), to allay apprehension; a brait or brace; to $p \mathrm{Laister}$, to Lute, different modes of applying substances ; and such possible forms as Lug, Luggage, to $p \mathrm{~L} u c k, p u \mathrm{~L} l$, to Lead, the Load-stone, \&c., \&c.; for the idea of application or attachment soon assumes the meaning of seizing or arresting, as is shown by the legal phrase of "attaching a prisoner," the Ital. attaccare, to fasten. There are other words of like origin, such as Lot, a share, portion, one appropriation which the recipient takes to himself, what indeed be-longs or appertains to him. Lot (hlot, A. S., lott, Swed., lot, Fr.) also means an aggregation or collection. The word sift (hlifian, A. S., lüften, Pl. Du., löfte, Dan., lever, en-lever, Fr.) .means "to lay hold of," "appropriate," to glean; and that which is readily lift-able is light (laghu, Sans., levis, Lat., léger, Fr., licht, Du., leicht, Ger.) or slight, slender. A seech is a creature that lays hold and attaches itself with vigour, reminding one of a leash or thong. Mr. Wedgwood thinks "it is more likely that the radical idea is the application of medicinal herbs," which gave a name first to the physician, or healer, and then to the blood-sucking mollusc. He associates with it the words houseleek,

[^40]leeks, \&c., "whence in all probability the lock or lick, Ger. luege, which forms the termination of many of our names for plants ; hemlock, charlock, garlick, Swiss wegleuge, wild endive; kornleuge, galeopsis ladanum.". All this is very possible, and as the physician or leech was named from the poultices or applications he administered, his name and its derivatives are good examples of the sense of laying or applying imparted by the base which we consider to underlie all such words.

Now it will not be uninteresting if we show that in the Semitic languages also the letter $l$ is pursued by its ligamentous sense. To do this it will be enough to cite a few instances from Arabic, because the Semitic languages are radically so similar, that what is true of one is roughly true of all. The words we shall choose are such as, according to the laws of Arabic grammar, are radically distinct from each other; we are, however, aware that all Arabic triliteral roots have been traced to biliteral stems. This fact does not detract from their value for our purpese; because, in the mouth of an Arab, they are as much apart as block and plug and clump are to an ordinary Englishman. The following will, no doubt, suffice:-
 lying flat; saL $f$, levelling; laykat, clay; $\mathbf{L} a z a b$, ad-

[^41]hering, also clay; 'aLfatat, mixing; Lamm, assembling; Lamı $\hat{u} m$, a crowd; $\mathbf{L} a w t .$, bedaubing, luteing; Layf, fibres, filaments; L afq, sewing two things together; Lafm, binding, fastening; $\mathbf{~} a h q$, adhering; $\mathbf{~} a q \underline{t}$, gathering together; Laqs, mixing; Laqs, inclining towards, laying; Laqy, meeting; $\mathbf{~} a k k$, mixture; $\mathbf{~} a k \dot{a}$ or Latab, adhering; Lats, collecting; Lath, laying on
 ing together; $a t!y$, cleaving to the ground; La'a ${ }^{a} b$ viscosity; $\mathrm{L}^{\circ} z$, lying with; Laghts, a mixture; Laff, joining; $\mathbf{~} a z a j$, viscous, being glued together; $\mathbf{~} a z a z$, fastening, joining; lizaq and Lisaq, adjoining, close; Lazak, coalescence; $\mathbf{~} a z m$, sticking close to anything; Lasb or $\mathbf{~} a s a b$, adhering; Lasf $f$, joining together; $\mathbf{~} a$ sûgh, cleaving to the bones; Laṣíq, conjunction ; watt., fastening; and $\mathrm{L} a z y$, attached.

Nearly all the foregoing words are simple bases giving rise to a whole vocabulary of derivatives expressive of every species of adhering and placing together; and when we further remark that, while differing from each other in every other respect, they all agree in containing the letter $l$, it is impossible not to believe that the meaning common to all is imparted by some ultimate base represented by that letter.

The resemblance between the Arabic words Lafitc, foolish, and vafif a crowd (akin to layf, filaments, and lifafat, any kind of bandages) shows that the Semites also recognized the likeness between a clown and a clod; and littitikh, a fool (cf. laty, cleaving to the ground) tends in the same direction. The word laghûb,
foolish, from laghb, to become weary, tired, exactly tallies with our derivation of fool from fail, and the Sans. múrkha, a blockhead, from mlai, to fade (p.133).

Returning to the Aryan family, the writers would remark that a careful examination of the Sanskrit language has convinced them that the number of bases might be materially reduced. The majority are of a secondary, tertiary, or yet more developed form, very few having any pretence to a primitive character. The real ultimate bases of that language will form the subject of a separate treatise; here it will be enough to state that the germs of all the vocables that have illustrated this exposition of the congeners of the word law, are to be found among the Sanskrit bases, and that the process of development is not altogether hidden from sight. Thus starting from the simple sound $i \mathrm{~L}$, to lie down, we get $e \mathrm{~L}$, to place, and the secondary bases $L \hat{i}$ and $L a g$, to place, to adhere. From $l \hat{\imath}$ arises the series $\mathrm{L} y \hat{\imath}, \mathrm{~L} w \hat{\imath}, v \mathrm{~L} \hat{\imath}, b \mathrm{~L} \hat{\imath}, \mathrm{~L} p \hat{\imath}, \mathrm{~L} u d, \mathrm{~L} a s$, all of which mean " to join together," " to embrace." The change of lwô̂ into $v l \hat{\imath}, b l \hat{\imath}$, and $l p \hat{\imath}$, may be purely phonetic; but lud and las originate from the addition of a sibilant, meaning "to seek," " to wist," "souhaiter," Fr. Las in its sense of "clinging" gave rise to Losht, to collect; and blî naturally developes into pLain, prain, pain, pen, all meaning "to embrace." These last forms show that we must expect to meet vocables of ligamentous sense which have lost the dis-
tinguishing liquid. The form las, by accession of a strengthening initial, becomes sLish, ${ }^{\text {a }}$ to clench, to embrace, and also siciL or siL, scon, śron, to collect; $\bar{s} \mathrm{~L} k$, to compose verses. By $\bar{s}$ becoming $k$, sil passes into kíL, to attach ; kuL, kshaL, and khaL, to aggregate, or bring together. The base kil, to attach, to lay with, introduces the forms $k \mathrm{Lam}$ and giai, to lay down, fade; and $k L i \hat{i} v$ or $k L i ̂ b$, to fail, or be weak. More directly from ślish come the bases śsath, śrath, and śar, to fade, fail, be weak; and from lpî, or one of its sisters mentioned above, we may not improbably deduce $p u \mathrm{~L}$ and $p u_{\mathrm{L}}$, to aggregate; and $p \hat{\mathrm{~L}}$, to be agglomerated in intellect. At times the letter $p$ is supplanted by the letter $m$, which enables us to understand the origin of $m i \mathrm{~L}$, to unite, embrace; and its congeners $m \mathrm{~L} a i, m u \mathrm{rch} h$, to lay about, to fade (phonetically corrupted into muh, be faint); and mLaid, mRaid, $m_{\text {med, }} m_{\mathrm{L}} a i t, m_{\mathrm{R}} a i t$, met, different forms meaning "to be foolish." Even the bases $n i \mathrm{i}$ and $s t h \hat{\mathrm{u}}$, to be thick, gross, contain the letter $l$ with a sense of aggregation; but it would be venturesome to include these in the series. Omitting these two, we have here fortysix Sanskrit bases which may not unfairly be referred to the primitive sound $i l$, the venerable parent of so many thousands of vocables preserved to us in this perhaps its simplest form.

But beyond the large family of vocables containing

[^42]the base $\cdot l \cdot$ in a sense of physical attachment, we find it applied, as indeed we might expect, to every kind of mental or sentimental attachment. Thus we are said to like that upon which we fix our minds-us ne us par dil Lag-âyá, "he set his heart upon her," is the Urdû idiom for "he loved her," or was attached to her. The word love itself (leof, A. S.) is a modification of Lief (lefe, leve, Chaucer, "loving;" lief, Du., dear, pleasing), seen also in Leaman or Leman for Lefman, one to whom we are attached sentimentally or carnally. Still more evident is this in Sanskrit, in which language from the base lag, attach, directly arises langa, union, a lover; langiman, union; langaka, a lover; and lagnaka, a surety, one bound for another. In Hindî also the chain is complete; thus, lagnâ, to adjoin; lagânâ, to apply, place; lâg, lâgût, or lagg $\hat{a}$, attachment; and lag $\hat{u}-\hat{a}$, a paramour.

Mr. Wedgwood very reasonably connects the vocables love, lust, like, luck, \&c., with such words as lick, $\gamma \lambda \omega \sigma \sigma \alpha$; and the application of the tongue may really be the idea underlying all the preceding derivatives. If so the origin of the connexion between sound and sense is patent, as the action of the tongue necessarily produces the sound which is represented by the lingual $l$. This liquid is clearly the onomatop on which thousands of words suggestive of the tongue and its operations are built; and the great probability that licking suggested the ideas of clamminess, adhesiveness, smearing, and other methods of applying, and so passed on to allying, binding, and aggregating, is not
by any means so improbable as many of the changes of sense which words are known to have undoubtedly undergone.

The Sanskrit bases lih, to lick; lag or lak, to taste; likh, to write; and ling, to paint, reveal some part of the process. In the form lag, to taste, we have perfect coalescence with lag, to adhere ; and the French le-s-cher or lécher, to lick, may be juxtaposed to leash and lash; while the Gothic laigon, bi-laig6n, to lick, shows a bond of union with laga, the law ; as does also the Saxon liccian, and the Gaelic ligh. That the letter $l$ is the natural exponent of licking may be readily shown by the Aryan forms found in the Cerman lecken, Fr. lécher, Ital. leccare, Persian lîsîdan, Armenian lezal, lick, luzw, the tongue, Russian lokat', Lithuanian lakti, Latin lingere, Gr. $\lambda_{\text {eí }} \boldsymbol{\chi} \omega, \lambda_{\iota}{ }^{2} \nu_{o ́ s,}$ $\lambda \epsilon \subset \eta^{\eta} \nu$, and the Sans. lih, Eng. lick. Arabic, a Semitic language, abounds in similar instances, such as $\mathrm{L} a s s, \mathrm{~L} a s b, \mathrm{~L} a s d, \mathrm{~L} a s n, \mathrm{~L} a t_{i}^{c}, \mathrm{~L} a^{e} z, \mathrm{~L} a^{i} q$, all meaning "licking," and, indeed, nearly all the Arabic words formerly given as expressing "adhesion," have also this sense of "licking." The same language, furthermore, contains such words as Lasm, tasting ; $z a \mathrm{~L} q$, Lughat, $\mathrm{L} a h j a$, or $\mathrm{L} i s d n$, the tongue; and $\mathrm{L} a^{a} a ̂ b$, spittle, from the base $l a^{a} a b$, to play, sport, be addicted to, showing the connexion between de-light and re-lish. The complete onomatopic origin of the sense ascribed to the letter $l$ is demonstrated by the Finnish word

[^43]Lakkia, to lick, and by the following words of CochinChinese, taken from the Dictionary of that language by the missionary Josepho Maria Morrone. These words are the more remarkable as they present the letter $l$ in all the senses which we have already ascribed to it, and in those which will be given further on. Lai and luoi=the tongue; lanh=tongue and voice; la, to call ; lap, to be loquacious. Loi=to shine. Lao, to hang loose; la, fatigue, lassitude ; and lay and lat have the opposite meaning of "bond" or "ligament," while lap means "to tie," and loi is the name of little strings; finally, loi, la, and luot are the words used to express "law," in singular conformity with what we are endeavouring to show is the universal practice. These words show that Aryans, Semites, and . Turanians universally recognize the letter $l$ as the fitting exponent of lingual action. ${ }^{\text {a }}$

The Latin lingua certainly gave rise to lingere, delingere, diligo, and loquor, to speak, lingula, a chatter-box, loquax, loquacious; and from the base of
 also $\lambda \hat{v} \omega$, lux, luxuria, luxury, and $\lambda \alpha^{\prime} \omega$, to desire, analogous to $\lambda \hat{\eta} \mu a, \lambda \hat{\eta} \mu \mu a$, the O. H. G. liuban, Lat. lubet, Goth. liubs (dear), Sans. lubh, Eng. love, that which is worthy of praise, Laus, Lat., $\mathrm{L} o b$, O. H. G., what makes us "lick our chaps," or lust after, lustus,

[^44]Goth.; laska, Bohem.; las, Sans. From the licking of the tongue, also, naturally arises lubricare, and $\gamma \lambda i \sigma^{\prime}-$ xpos, a smooth surface; $\lambda \epsilon$ eia, an instrument to polish stones ; whence Gr. к $\rho$ v́ $\sigma a \lambda \lambda o s$, Lat. glacies (lubrica), Fr. glisser, to glide or slide over ; also lino, to spread, liniment, what is spread, oleum, oil (huile, Fr.), oliva, è $\lambda \in$ eia, from its slimy, or saliva-like appearance. A single smear was called linea, a streak, or line, the Hindî lekhâ or lakî, Sans. likh, to write, from lih, to smear ; whence col-limate, direct line, and col-limataneus, common boundaries, or limits.

The application of the tongue to objects would be the most natural source of the idea of smearing, which is clearly shown in Sanskrit; for in that language the base lih, to lick, reappears in lip, to smear, and from this latter proceed ling, to paint (obviously akin to lag, to apply), and likh, to write. It is worthy of remark that the letter $h$ at the end of lih is not radical," but the remains of a guttural affix, which is seen in the $g$ of ling, and the kh of likh. Linga is a derivative, meaning "a mark," or sigu of any kind ; and hence applied to the phallus as the mark par excellence; and from likh we get lekha, a line, or writing; while lih is repeated to produce leliha, a serpent, from its resemblance to a smear or streak, and lald," spittle." The $p$ of $l i p$, to smear, is also significative; for it reminds us of the labia, Lat.; lèvres, Fr.; lips, Eng.;

[^45]which assisted in the primitive lepana, Sans., smearing ; whence arose lepaka, Sans., a bricklayer or plasterer, and lepa, Sans., a spot or stain. That lip combines two onomatops $\cdot l \cdot$ and ' $p$ ', which respectively signify "tongue" and "lips," may be inferred from the simpler base lî or rî, to be viscous, or moist, in which the tongue only is concerned, and therefore the $p$ is wanting. The base lap, to speak, gives another instance in which the action of tongue and lips are expressed by one vocable. Lap gives, as a derivative, lapana, the "mouth;" and also appears under the forms rap and riph, to speak, showing how constantly $l$ tends towards $r$. Lap, furthermore, is the parent of lubh, to covet, to lick the chaps (Lat. lubet); and labh, to enjoy, get, obtain. The intimate relationship of these bases is shown by the Sanskrit derivatives lampata, covetous, a libertine, limpata, a lecher, and lipsâ, a wish. In the sense of "wishing" we find the onomatop $\cdot l \cdot$ assuming such forms as lal, lash, lubh, luh, and also rabh, the last base affording the best assurance that labh, though generally used to express " obtain," proceeded from a base signifying " desire to obtain," to hanker after, the appropriate gesture indicative of coveting being the licking of the tongue round the mouth. In direct descent from lih, to lick, and lik=h, to write, we get laksh, to make marks of any kind, to distinguish one thing from another, a base which, by phonetic corruption, passed into lachh and lánchh, both of which retain the same meaning. The form $m_{\mathrm{B}}$ aksh or $m_{\mathrm{p}} i k s h$, to anoint, brings us back to
the original sense of the word ; $m$ being a prefix, and $r$, as usual, representing $l$. By transference of the qualities of the object to the subject, a very common manifestation of the Law of Metaphor, laksh, to mark, passed into laksh, to see, perceive, just as the English word mark (S. mraksh, above) is used in both senses in the phrases "mark those goods" and "mark what I say." With the help of a prefix, laksh becomes vleksh or, by corruption, veksh, and may ultimately have dwindled into $\hat{\imath} k s h$, all of which mean "see," "perceive." However this may be, laksh, to see, is certainly allied to lok or loch, to perceive, which only differs by rejecting the sibilant ;-and to linkh, to perceive, ${ }^{\text {a }}$ which actually brings us back to the form likh, to write, or make marks, whence the series started.

Now when the tongue is applied to an object, not only is there engendered an idea of smearing, but a particular kind of smearing is always apparent. The tongue invariably leaves behind it a slimy or shiny mark, which soon evaporates, it is true, but while it continues glazes or glosses the surface completely; and the similarity between gloss and $\gamma \lambda \boldsymbol{j} \sigma \sigma a$ is not a little remarkable. But we have no occasion to compare ancient and modern languages together, for we have positive identity in the Sanskrit bases lok and loch, which mean, not only "see," "remark," but also "shine." The idea of " shining" is, of course, deduced directly from the mark of licking, and not

[^46]through "seeing," so that the bases are parallel and not derivative. The bases likh and laksh, to mark, underlie those expressive of "shining," as might be inferred from the base las, to shine, which is clearly a corruption of such a form as laksh. The guttural is preserved in the word langh, to shine, which is also spelled rangh; and is modified to a palatal in lanj or laj, to shine, which last, through the base ranj, "to paint," or "smear," again places us en rapport with the primal idea from whence all these words arose. The identity of lanj, shine, and ranj, paint, is strikingly illustrated by the words rub, Gael., rubba, Old Norse, ruobbet, Lappish, rhwbio, Welsh, all of which mean to smear, stroke, or, as we say, to rub, which last appears in Latin as lub-rico, to render polished or shiny. The identity of origin of the English rub (Pers. rufftan) and the Lat. lubrico, to po-lish, lub-et, to re-lish, to lick the tongue, and lucere, luxi, light, shine, cannot be doubted.

Returning again to our Sanskrit bases we find that laksh, lok, exist under the form lut, which changes its initial in rut, and regains the palatal form of its final in ruch, to shine. Ruch is an important base; but before tracing its derivatives, it is as well to give its immediate congeners. These are runs', rej or bhrej, ráj or $b h r a j$, which reassume the final sibilant in the forms bhrás or bhrás, and regain the $l$ in bhlaś or bhlas, but modify it in bhrins, and lose it entirely in $b h a s$, bhas, and bha. Every one of these bases means "shine," and some elucidation is certainly needed to
show how $b h d$ could be eliminated from $\cdot l$. The order in which the bases are given is designed to illustrate, in some way, the changes; none of which, taken singly, appear very violent. The greatest difficulty is to explain the prefix $b h$, which, for want of a better reason, may be supposed to be the remnants of the preposition $a b h i$, "on," "over" (Arabic $f \hat{\imath}$ ), a very common prefix in Sanskrit, though at the early stage of language at which these bases were formed, the bh might with equal propriety be deduced from $v i$, "about," or even pra, " forth," "per." If this conjecture be correct $a b h i+r a j$ would give $b h r a j$, and $a b h i+l a ́ s$ would give bhlâs or bhrâs, \&c. Whether this be so or not, it is clear that no great emphasis can be laid on the unchanging character of the initials of bases. (Cf. pidhâna for apidhâna, p. 20, \&c., \&c.)

Let us now turn to Semitic languages, and see whether similar words were evolved from this onomatop in that family. In Arabic we have seen that the vocable for "tongue" is lisan, and this is obviously based on the simpler form lass, "licking." When the medial vowel is changed it becomes laws, "tasting;" the $w$ melting into $\hat{u}$ produces lûs, "meat," "food," that which is tasted. The addition of a final $m$ makes lasam or lisâm, meaning "tasting;" the medial s passing into "ain leaves la'm ="saliva;" and when the final $m$ is replaced by a $d$ we get lasd, " sucking," "licking." The connection of all these words with the action of the tongue is too obvious to require comment. Many more Arabic words could easily be
adduced, but the following will suffice for our present purpose, which is to show that the licking of the tongue gave a name to the tongue itself, and to its actions, and metaphorically to other kinds of smearing, marking, and applying. The words we shall adduce are: $l a^{e} z$ or late, licking; láab or $l u^{e} a b$, viscosity, sliminess; $l a^{e} w$, lecherous, lusting; $l u^{\bullet} a ̂ q$ or lamz, licking the lips; lamq, writing, smearing out writing, obliterating; lawt, bedaubing. Here we have precisely the same phenomenon that was presented in Sanskrit, that words expressing "licking" develop in two channels, one conveying an idea of "lusting after," the other of "smearing," or "writing." Still more strikingly is this parallel shown in lafz, "a word," etymologically identical with the Sanskrit lap, "to speak," which we have before shown produced the derivative lapana, " the mouth;" and we may here add lapita, " the voice," and vilápa, " lamentation."

In Arabic, as in Sanskrit, the letter $l$ at times passes into $r$, and so from lasm, " tasting," "licking," we get rasm, "writing," "drawing," and rashm, expressive of any kind of " marking" (S. laksh, mraksh). So also lat., " licking," reappears as rat!, to express "rheum" or anything similar; and such forms as láab, " sliminess," seem closely akin to razab, "sucking," and ruzab, "spittle." These changes prepare us for forms very similar to laf-z, "a word," such as lafiafat, a repeated base to express rapid action of the mouth, "eating voraciously" (Johnson's Dict.) ; and lafaf, imperfect action of the mouth, "stammering;"
and these suggest the parallel form raff, which means "sucking, saliva, and shining," whence comes the derivative rafif, "shining," "glittering." Rafif, raff, and lafaf bring to mind laff, lafm, \&c., formerly given (p. 138), with a sense of "allying, joining," lending probability to the suggestion that the application of the tongue suggested vocables indicative of other methods of applying one thing to another. In these instances from the Arabic we have, again, something like direct evidence that the action of the tongue gave birth to words expressive of sliminess, gloss, sheen, shine, brilliance, splendour, glare. The simplest process of natural development, would thus lead on from laws, " licking," to lawa-ih, " light and splendour."

Returning to the Aryan family of languages, we will trace the onomatop $\cdot l$. through a similar course in Persian, and then passing into Greek, will show its existence in many of the commonest words of the vernaculars of Europe.

There are two verbs in Persian for licking, lishtan and lisidan, both being near akin to the Sans. likh. Deprived of grammatical termination, we get at the nominal base lis, "licking," which passes into ler, " slaver," and into liz, to express anything soft and slippery. From litz we pass to lush and loshan, the name of slimy mud at the bottom of ponds, slush, and lajam, a general name for "slime." The sound of $j$ in this last word approaches that of $s h$ in lush, or is like the French $j$ in jamais. That the vocable for "licking" passed on to express that which was
"luscious" we may infer from the word lot, "a de-li-cious morsel ;" but its slimy, shiny sense seems to have found expression through the $r$ form of the base (cf. Raughan, oil, butter). Thus it is indubitable that in rakhshîdan, "to shine," rakhsha, "shining," and rakhsh, "lightning," we meet the Sanskrit word laksh," to mark, make manifest, see," in a slightly disguised form. Other Persian words which help us here are rusht, "bright," "light,". rosh, " light," " splendour," and roz or roj, "the day." The connection between rusht, rosh, and roz, is very apparent.

Here also we have reasonable proof that the vocable for licking, lapping, came from the noise made by the tongue, and that, by the action of the Law of Metaphor, it ultimately came to express what had been licked, and so appeared slimy, shiny, or bright. It requires no stretch of imagination to see in the Persian word rosh, "bright," the Sanskrit base ruch, of precisely similar import, to which we have already called marked attention at the end of our examination of the Sanskrit series. As this base is one of the furthest removed from the more primitive $\cdot l$, lih, likh, laksh, we may safely conclude that it was posterior to those forms in date ; and as a necessary corollary, it is the form most likely to be met with in derivatives. In this expectation we are not disappointed, as the following from Sanskrit will prove:rochaka, "what brightens," " pleases;" rochana, " splendid ;" rochishnu, " gaily attired ;" and rochis,
" flame;" and, subjectively, loch, "to see," and lochaka or lochana," the eye." Professor Th. Benfey, in his Sanskrit Dictionary, says, " loch $=$ ruch, the initial $r$ is changed to $l$, as in the kindred languages," and then makes reference to ruch, under which vocable we find ourselves in communication with the Greek;
 words naturally suggest the ideas $\lambda \lambda^{i} \chi \omega$, Latin lingere, and the other words to express licking already given on p . 142. That shining is intimately associated with smearing in Greek may be inferred from the words $\lambda_{i}^{\pi}$ os, " grease," $\lambda a ́ \mu \pi \omega$, " to shine," and $\lambda a ́ \mu \psi \iota s$, "splendour;" words which reappear in the Latin lux, lumen, luceo, lychnis. In this sense the base $\cdot l \cdot$ is found all over Europe as the idea of brilliance, or "light," is represented by $\mathbf{~} u m i e ̀ r e, ~$ Lampe, Luire, in French, by lucerna in Italian, by lamparas in Spanish, by alampados in Portuguese, by lampor in Swedish, by lamper in Danish, by ampen in Dutch, by lampadii in Russian, by lampy in Polish, by Leuchten, wicht, in German, by wiuchan, wuchjan, in Old High German, by liuhath in Gothic, by wios in
 by llug in Welsh, and by light in English. The English light is found in the Anglo-Saxon words leoht, lioht, leóma (flame), ge-lihtan, and lócian, the last word meaning "to see," and being the Sanskrit base loch ( $=$ ruch, Benfey), in, almost, purity. When to the Anglo-Saxon leóma we add the Gothic lauhmuni and liuhtjan, we think we have satisfactorily de-
monstrated the European domestication of this base.

It must not be thought that the base $\cdot l \cdot$, "lick," "shine," is found in European languages only in the case of a solitary word, that may have been passed from one to the other until all acquired the use of it. On the contrary, each language will be found to possess numerous words into which this base enters as an inalienable and integral element. To establish this point, we will cite some words to prove how firmly the base is imbedded in English ; and if we succeed in that object the reader will, no doubt, credit the assertion that the same could be done in other languages, without the wearisome detail necessary to establish the fact in each case.

Lamp (lampe, Fr., lampas, Lat.) is a kind of light or Lantern (lanterne, Fr., lanterna, Lat.), which sends forth a f L ame (flamme, Fr., flamma, Lat.) or $f$ Lash; as does also a $f$ Lambeau (Fr.), which burns with a fuare, or, as it was also written, blare (blaren, Du.), that is, a blaze (blase, A.S.) or bright (beorht, A.S.) light. Closely allied to flare is glare, to dazzle ; to glaze, to put a gloss on anything, and glass (glees, A.S.), that which is trans-Lu-cent, through which a glance can penetrate, or a gleam of light. Gleam is certainly the congener of glitter (glitenan, A. S.), glisten (glisteren, Du.), glimpse and glimmer, the Pl. Du. glimmen, glimmern, to shine ; Swed. glimma, to glitter ; Norse glima, to shine brightly, to dazzle; Old Norse lioma, splendour ; A. S. leoman, to shine ;

Old English leem, liom, a gleam. Chaucer uses lowe for a flame of light, which suggests such words as lightning, anciently called Levin; and the words Link, a torch, and lin-stock, i. e. a stick for holding the match for a gun.

In this way we see that the derivatives of $\cdot l$, " lick," "smear," "shine," anastomose with those given under "Gloriam" (p. 168). One series helps to explain the other, for it is impossible to conjecture why $\delta \quad r i$ and $s$ slish should have ever come by their sense of " shining," unless we discover the ultimate onomatop on which they are erected.
We leave it to the patient scholar to say whether our long argument does not afford reasonable ground for believing that $\cdot l$, as the exponent of lingual action, is really the parent of the diverse ideas which we have indicated.

At p. 147 we have connected another series with the same base by introducing the word raj, the immediate parent of rájaka, "splendid," found under what we have said of "Regnare" at p. 165. We lay no great emphasis on this alliance, and would be understood as leaving it an open question whether or not two separate bases have here passed into one identical shape. If so raj, as connected with raksh, "to preserve," and with laksh or ruch, "to be bright," will have two independent origins. It is, however, noticeable that raksh, " to preserve," through its derivative rakshika, "a watchman," \&c., seems to convey an idea of "looking after" (laksh), and if so
light and right are etymologically identical, and a rule or regulation (regula, Lat.) brings us directly to regalis as another form of the word legalis. The ease with which these words arrange themselves lends much probability to the suggestion. However this may be, we think we have proved to demonstration that many vocables expressing "shining" took their origin from the glossy appearance of a "licked" surface; and that the smearing of the tongue gave names to other kinds of smearing, marking, writing, applying, laying on, and so developed, with the growing wants of man, into the exponents of placing together, attaching, fastening, and binding. The best proof of the truth of these affiliations is found in their extreme simplicity, and the eminently inartificial way in which one grows, as it were, out of another. In the course of our argument we are never reduced to the necessity of talking about Nature's harmonics, or the mysterious correlation of sound and form, and such-like wonderful things. The whole affair is very simple. An inevitable sound accompanied, and therefore expressed, a natural action, which we can as well recognize at the present day as could the first human being who uttered it. This simple sound was applied to other cognate ideas, as ideas multiplied with the gradual dawn of civilization ; and these new ideas were distinguished from each other by gestures and equally expressive modifying intonations ; until at last, the sounds became substantive vocables, the onomatopic origin of which was completely lost, and
they had to be passed mechanically from father to son in the manner with which we are all familiar.

This long examination of the word law and its associates is an illustration of what we call Collective Analysis, which it will be seen differs totally from the process of former etymologists, who take a single word with its meaning, and then seek its origin by help of other words of similar import from other languages; whereas by our method of analysis large numbers of words in the same language of similar, but not necessarily of identical import, are collected together, and the feature common to all is eliminated. This common bond of union is taken to be the base, and if an identical phonic symbol with like import is found in any considerable number of words in other languages, we then feel sure that we have discovered a natural onomatop, more especially when some common action, as the licking of the tongue, the puffing of the lips, \&c., is found to correspond in both sound and sense with the derivatives that have led up to it.

## SECTION IV.

## GENERAL ILLUSTRATIONS.

In this section we shall apply our method to a variety of words, in order that its general applicability may be apparent; and to make this still more evident, we shall take two whole sentences and examine each word they contain.

An idea prevails over the globe we inhabit, among civilized and uncivilized nations, -an idea not to be contested,-that of a Supreme Ruler of the natural phenomena of all eternity, and of which man is, or seems to be, the only interpreter. In a telling verse, written 2000 years ago, by the prince of Roman lyrics, touching the wonderful dramas that pass in heavenly regions, we shall detect as many grand onomatops as words. Colo tonantem credidimus Jovem regnare (Ode v. l. 3, Carm.).

Cœlum, this vast source of onomatopic vocables (called coelus by Ennius) was, by the Greeks, made кoî̀-ov, concave and round, con-cavus, curvus, cav$u s=c u v e$, Fr., cir-cul-us. From these descriptive vocables a large family has been produced, as, for instance, ceil, ciel, cielo, cir-col-o, cin-gul-a, ceinture, cer-cle, coil, san-gle, cin-golo, en-ceinte, urbs cinc-ta, кор-ஹ̀ท, cor-ona, crown, chaîne, gir-dle, gir-th, char-kh, Pers., a wheel, chakra, Sans.

The onomatop on which these words are built is found in every class of language，as is shown by Dr．P． Bœetticher．On the Latin word curvus，Gr．$\sigma$－код－ ios，Slavonic kol－o，a wheel，that scholar remarks that：－
＂The root means to become crooken，and is identical with the Hebrew＇$q-l$ ，where＇$a$ in is as well a prefix，as sigma in $\sigma$－ко入ıós．Hence we have ：－


He adds that the English word crimson＝Sans． krimi－ja，what is born of a worm．

Among the principal derivatives from this onoma－ top is circum，L．（possibly an accusative of circus as its adverbial use might seem to indicate：＂Hosti－ libus circum litoribus＂－Tacitus）；from circum arise numerous derivatives，as circumference，circum－ locution，circonférence，Fr．，\＆c．\＆c．，circuitus and the circuit of a judge，circem，Lat．，to encompass， deceive；circulator，L．，a mountebank，one who wanders round about；cir－ratus，L．，what is curled， cur－rus，a ringlet；cir－cul－us，L．，кí－коя，a＂top＂ which revolves，cir－cus，L．，cir－－chio，It．，коь入ıакòs，the abdomen，col－ique，Fr．；кó入－ov，Gr．，a flexure，Xop－

[^47]S $\eta$, the gut, Lat. chor-da, whence Eng. cor-d. Other examples of the onomatop readily suggest themselves in the Lat. cur-rus, char-iot or car, cur-sio, running, cur-sorius, pertaining to a race, cur-sitore, to run about, cur-sus, a running on foot (Ital. cor-so, Fr. cour-s, cour-se), cur-vus, Fr. cour-be, Eng. cur-l, a coil of rope, Gr. кóp $\eta$ the circular pupil of the eye, коì $\lambda$, the keel, because curl-ed. When expressive of circumference it assumes the form $s$-cor-tum, Lat. cuir, Fr., the skin or rind; Lat. cor-tex, Fr. e-cor-ce, es-cor-te, Ital. s-cor-za, Span. cor-tesa, cor-chos, Dan. and Swed. cor-k, Du. cor-ke, kor-k, Swed. kor-k, Russ. kor-kovoe, Eng. cor-k.

Upon this vocable Mr. Wedgwood remarks (Dictionary of English Etymology, vol. i. p. 378) : -
"The root cor is widely spread in the Slavonic and Fin. class of languages in the sense of rind, skin, shell, uniting the Lat. corium, skin, with cortex, bark. Fin. kuori, bark, shell, crust, cream; Lap. karr, bark, shell; karra, hard, rough; Esthon. koor, rind, shell, bark, cream ; korik, crust. Hung. kereg, rind, crust, bark ; keregdugó (dugó=stopper), a stopper of bark, a cork; kereg-fa, a cork tree, kérges, barky, hard. Bohem. ki̛ra, ki̊rka, bark, crust; Pol. kora, bark of a tree; korek, koreczek, cork, korek-z-kory (a stopper of bark), cork; - drewniany, a stopper of wood, - szklanny, of glass."

Tonantem.-This most descriptive onomatop arises from the simple articulation $u$ ( $u k t i$, Sans., "speech"), meaning " to sound." vlulo, Lat., hurler, Fr., howl, Eng., úlf, Norse, wolf, Eng., lupus, Lat., loupe, Fr., the howling animal. The base is found in its simplest form $u$ in Sanskrit ; and as an instance of its use

Durgadâsa, an old Indian grammarian, gives the phrase, Av ate gauh, "the cow moos" ( $u$ becomes av in this case by Sanskrit euphonic laws). The onomatop is produced by the mere expulsion of air through the nearly closed lips, so commonly and so naturally done, when, sitting in the shelter of our homes, we hear the wind howl around, and seek to describe its gusts. Strengthened in various ways by peculiarities of utterance and by the addition of particles, this sound animates the following series of Sanskrit bases:-kv, $k \hat{\mathrm{U}}, k h \mathrm{v}, g \mathrm{v}, g h \mathrm{v}, \underline{\mathrm{v}}, t \mathrm{U}$, , $d i \mathrm{w}$ (pron. di-u), ru, śvl (c.f. śrv, to hear a sound), $s w r i$, $s w a n, d h w a n, d h \cdot a n, t \cdot a n, s t \cdot a n,{ }^{2}$ all of which mean " sound," "make a noise." The growing wants of man, and his love of exaggeration, caused the primitive
a The dot in the last three bases indicates the elision of the $u$; dhwan passing into dhan by phonetic corruption, the $d h$ sharpening into $t$, and finally assuming the 8 prefixed to the last.

The letter $T$ is by no means so unchangeable as its sharp, clear dental sound would lead us to expect.
$T$ changes to-

| D, thus | pater | becomes | padre | (Ital.). |
| :---: | :---: | :---: | :---: | :---: |
| TT, " | totus | " | tutto. | ( ", ). |
| z, " | acutus |  | aguezzo | ( "). |
| sc, " | angustia |  | angoscia | (, ) . |
| ss, " | " |  | $\left\{\begin{array}{l} \text { angoissa } \\ \text { angoisse } \end{array}\right.$ | (Prov.). <br> (French). |
| X, " | " | " 2 | $\left\{\begin{array}{l}\text { quexar } \\ \text { queixar }\end{array}\right.$ | (Span.). <br> (Port.). |
| TZ, " | terra |  | tzearë | $\left\{\begin{array}{c} \text { (Walla- } \\ \text { chian) } \end{array}\right.$ |
| s, " | $\left\{\begin{array}{l}\text { titionem, } \\ \text { justicia, }\end{array}\right.$ | $\} n\{$ | $\left\{\begin{array}{c} \text { tison, sai } \\ \text { tesse, ois } \end{array}\right.$ | $\} \text { (French). }$ |
| c, | negotium | " | négoce, | ( $\quad$ ) |

bases to become rapidly obsolete, and in their places the more developed and intensified forms are those which are most frequently employed in modern speech. Nevertheless, the former activity of the first five of the above bases is attested by such words as yoav, Gr., gaunôn, Goth. ; and, possibly, also by the Sanskrit go; Gothic gavi, gauja; Old High German $k o ̂$; A.-S. cû; English cow, the low-ing moo-ing creature ; an alliance much strengthened by the other name of the cow, i.e. ox (oxa A.-S., oxe Dan.) in which the $u$ comes first, and is strongly aspirated in the word fox (vixen, fem.), a kind of ulf or wolf, a howling animal, one with a vox or voice. The connection between voveo, to vow, Gr. ßó $\omega$, to cry out, vulpes and vowel, has never before been pointed out; but their certain affinity shows, in a remarkable manner, how the words that make up language are linked together. The later forms of the bases above given (swan, dhwan, dhan, tan, stan, ${ }^{\text {a }}$ ) are those which move in historic times, giving rise to the Sanskrit stanana, groaning ; stanita, stanayitnu, thunder ; Icelandic, stynja; New High German, stöhnen; Anglo-Saxon, gestun; French, étonner; English, stun; Italian, stordire ; Latin, at-ton-itus; French, é-tour-dir ; Latin, ob-tun-dere aures ; French, ? é-tou-ffer. The same idea is found in the Greek

[^48] Latin, tono, tonare, tonitrus, tonitruum ; the French, tonnerre ; Old High German, donar ; New High German, donner; Anglo-Saxon, thunor; the terrible thunder of to-day-the thunder-bolt. In milder accents we encounter tone, the French and Danish ton, Latin tonus, Spanish tono, tonidro, Italian tuono, English tin-kle, tin-gle; and by parallel derivation from the form $s w a n$, the Gr. $\sigma v$-pitct, the Latin sonitus, sonare, susurrus, murmuring ; susurramen, muttering; Italian suono; French son; English sound. In direct descent from dhwan come the Sanskrit dhwani, the Hindî dhuni, a noise, the A.-S. dynan, dyne, Eng. din or uproar, meeting again the German donner, the Eng. thunder. But of all the forms which the onomatop $u$ assumed, perhaps the most prolific in derivatives is $r u$, the parent of the German rûnên, to speak low ; runa, mystery ; roar, rout, rave, raucus, rumour, row, brook (murmuring stream), rook, a kind of $c$-row, raven (A.-S. hrafn ; Ger. rabe ; O. H. G. hraben; Sans. kârava; Gr. корळ́vך; Lat. corvus; Fr. corbeau). From $r u$ were likewise evolved the Sanskrit rud, rodana, weeping rue-fully; rodas, the heavens (the abode of roaring storms) ; besides the base ran (A.-S. ryn), and after the addition of the preposition abhi (abhiran), it gradually sank into the form bhran or vran, whence arose the Greek $\beta \rho o v \tau \eta े$, BpárXos; French bruit, brouiller; English brawl; French é-branler, that which shakes the canopy of heaven-Latin ful-men.

Credidimus is a very old verb, which we find pure in Sanskrit, under the form śrat, s'rad-dhâ, perfectly corresponding to the Latin cred-o, cred-e me, croy-ez moi. We have made out of it creed, a symbol, French croyance, croire, cred-ibilité, créd-it (a sale on promise to be paid, an obligation), créd-itor, créd-ule, créd-ulite. In many languages credidimus implies faith (res habere fid-em, Ovid; croire la chose) Gr. Feíd- $\omega$, Lat. vid-eo, Sans. vid, Fr. voir, Eng. view. To believe is to have con-fd-ence, to have confidence is to see with one's own eyes the reality of a thing actually existing or manifested. Out of light, out of faith and confidence : mihi cred-e, $\epsilon \mu \circ i$ l'ai $v u$; dis-je $v u$; de mes propres yeux $v u$, ce que l'on appelle $v u$."

Jovem is another most interesting onomatop, which means Supreme Ruler, the light and splendour, luminous and resplendent : $\operatorname{Deva}=\delta \epsilon \iota$ fós $=\delta \epsilon$ Fós $=\theta \epsilon$ ós, adj. $\theta$ єíos=Sans. daiva, divya=divine; $\delta \iota o$, div-inus, $d i v-u s, \delta a i-\mu \omega \nu$, de-mon, dia-ble, dev-il, all arising from the base $d i v$, to shine, to twi-nkle. In Lettonian deus=daeva, diewas, desos; Celtic dia, Gael. duw, God, the heavens, the light, $\delta \hat{\eta}$ - $\lambda o s$, day-light, (Eng. day $=$ Goth. dags) ; Ital. di-o, Span. di-os, Fr. di-eu, Jove, the electric spark,--the modification of the initial of the base being shown in the Sanskrit forms dyu, dyut, syut, Jut ( $j \hat{i} v-a$, Sans. life ; zî-stan, Per. to live), $J u$-piter, $J o v$-is=the Father of $j o y$, of the day, jour, Fr. (Sans. dyo, dyota, lustre, jyotish, light; adya
(i.e. $i$-dyu, this light), to-day, ho-di-e (i.e. hoc die,) Lat.; og-gi, Ital. ; ho-y, Span.; au-jour-d'hui, Fr.),-the Father of $j u$-bility, re- $j o i$-cing ( $j e-c u s, j o-c u s, j o-c o r$, $u$-vo, ju-bar, Lat.).

In the "Saturday Review," vol. xxxiv. p. 830 (Dec. 1872), a writer remarks:-
"As to Janus we have the forms Januspater, Dianus, Diana, and with these $\Delta \iota^{\prime}{ }^{\prime}, \Delta i F a$, leading to the Latin divinus; and again with the Greek Zeus, we have the Vedic Dyaus, from $d y u$, to shine, and by the side of these we have $d y$ passing into $j$, Jupiter, Janus, Juno, or $d j$, as in the Djovis of Oscan inscriptions, and the old Italian deity Vedjovis, Vejovis."

The bases jyut, jut, cited above, show that Indian grammarians were familiar with this change of $d$ into $j$.

Div, to shine, is clearly a metaphoric word; it is an idea betraying a large amount of discrimination in the speaker, and a state of society when such things as the shining objects of the sky could be contemplated, talked about, and required a name. In naming them the speaking animal would seek a characteristic mark, and would find it in their $d i$ verse nature, in their $d u$-plication, their fickleness, tricksiness, or, as we still say, their $d u$-plicity. Such must have been the origin of the parent of $t w i$-nkle, -the being twi-ce, twi-sting, twi-ning, dou-bling, or changing. Hence it follows that the word two (Latin $d u o$, Sanskrit $d w i, \& c .$, ) was the fore-runner of $d i v$, " to twi-nkle;" and, therefore, to reach the onomatop we must trace the numeral. And this is not very difficult, for it is obviously based upon the pronominal demonstrative base $t$, " there," \&c., which may be
called "the remote definite." As $i$ betokens that which is "here" (see p. 183), so $t$. designates what is "there," or away from the speaker. The one describes the speaker, the other the spoken to, or, as we still say, the second person, the duplicate of the 1 . As we show on p. 184, the word $I$ is the universal exponent of unity, and thou is, perhaps, equally widespread as the sign of $d u$-ality. Certain it is that in a vast assemblage of words, two numerous to cite, and which will readily suggest themselves to the reader, forms importing duality and demonstration are, basically, obviously allied to the second personal pronoun. The result we deduce is that such words as that, there, thou, and two have a common origin; and that the doubling or uncertain light of the stars caused the term to be applied to them. It is marvellous that such utterly dissimilar ideas as those of deity and duplicity, should spring from the same base.

Regnare.-Genere regio natus, says Cicero in his Republic-the action of reign-ing, of having power. Regnare is to be rex, roi, $\mu$ óvos-apX $\grave{\eta}, p$-rinc-eps, ruler, taking the name from the Sanskrit rij, to stand firm, the Greek ó $\rho \in ́ \gamma \omega$, ò $\rho \epsilon ́ \gamma \nu v \mu \iota$; Lat. reg-ere, rec-tus; Gothic rak-jan, raihts; A.-S. rec-can; Eng. righ-t. In a secondary sense we have in Sanskrit rich, to honour, whence arch or arj, to honour, to shine, the Lat. arg-entum; further development produces râj, to illuminate, to govern, the parent of the Sanskrit râjan, a king; rájaka, splendid; râjya, government;
and râjanya, a soldier;-descendants of which are found in the Hindî raj, a king; rana, a prince; raj$p u ̂ t$, a warrior; and rajjpûtí, courage. The last form in Sanskrit seems to have been raksh, to govern, protect, the Latin rex, prolific source of the Sanskrit rakshana, protecting; rakshika, a watchman; raksh$i n$, a policeman; and even euphemistically, rakshas, a demon ;-in Hindî, rakh-nâ, to keep or guard; rakhwâa , a shepherd; rakhaiy $\hat{a}$, a keeper; râchh-as, a demon; and rak- $\langle\hat{s} \hat{\text {, }}$, devilish. Even the Persian lash-kar, an army (for protection), and lash-an, a prop or support, arise from the same base, by the common change of $r$ to $l$. ${ }^{\text {a }}$

Onomatops are very diversified in character; some are proper, natural, primitive; others figurative, metaphoric, analogic, abstract. Some reflect the brightness of the diamond, others are priceless pearls, all being of more or less value;-and, like gems, they differ in their associations, and are produced in different latitudes, under different circumstances. But Man is the Vulcan that finds, cuts, polishes, and harmonizes them; and, for that very reason, a vast number of the gems preserve for ever the stamp and mark of his workmanship. When circulating in society each of these coins of language

[^49]bears on its face the stamp of its own value; and the different parts of the world-kingdoms, capitals, towns, villages, hamlets-vary only in the manipulation of these natural and eternal symbols.

Ovid, Met. I. v. $84:-$
"Prona que cùm spectent animalia cætera terram, Os homini sublime dedit, coelumque tueri Jussit, et erectos ad sidera tollere vultus."
We will give a last quotation, a truly royal inversion of Cicero's: "quis est tam vecors, qui, cùm suspexerit in cœlum, non sentiat Deum esse?"

David in the Psalms is made to say: Coeli enarrant gloriam Dei-a perfect fountain of descriptive vocables.

Coeli, as was said before, represents the great orb, túpos, the majestic canopy of heaven, that endless circle that binds up our globe, for ever and ever effulgent with myriads of fires, most glorious and of all colours.

E-nar-rant, a beautiful and prolific expression, akin to the Sanskrit jan, Gr. $\gamma \hat{\eta}=\gamma i(\gamma) \nu o \mu a, \gamma v-\nu \dot{\eta}$, $\gamma o v \dot{\eta}, \gamma \hat{\omega}=\gamma \dot{\alpha} \omega$ Lat. gi-gno, ge-no, ge-ro, ge-rato, ge-mius, ge-rmius, ge-stio, ge-sco, na-sco, na-scor, natus, na-rrare, gn-arigare, gn-aritas, $\gamma i-\nu \omega \rho i \xi \epsilon$, $\gamma \iota-$ $\nu \omega \sigma \kappa \kappa \omega, \gamma \nu \omega$ - $\sigma o \mu a l=k n o w$-ledge, judgment, thought. The bond of alliance being found in the expression "I conceive"-I give birth to-I think-shown also in the change of the Sanskrit jan, to con-ceive, into jna, to per-ceive, recognize, to $k n$-ow, $\gamma \iota \gamma \nu \omega \sigma \kappa \omega, \gamma \nu \omega \sigma \sigma \iota$, ${ }^{a} \gamma \nu o l a, ~ \nu o v ̂ s, ~ \& c ., ~ L a t . ~ n o s c o, ~ c o-g n o s c o, ~ g n-a r u s, ~$
n-arro ; Pers. dân-istan ( $j$ becoming d, see p. 163); Gothic kun-nan, kun-ths; O.H.G. kna-jan; A.S. cná-wan ; Eng. to kn-ow, cun-ning, to con over.

Gloriam-that which is glorious, celebrated, illustrious. Found in the Sanskrit śrî, light, splendour, beauty, fortune, prosperity,-the Latin Cer-es; it also means to heat, burn, make to glow,-Lat. per-cerpere, per-ci-pio, cre-mare, car-bo; Gr. крíßavos, крá-
 $\kappa \lambda i$-os $=$ gloria, к $\boldsymbol{\epsilon} \epsilon$-оs к $\boldsymbol{\lambda} \epsilon$-о $\mu a \iota, ~ \kappa \lambda \epsilon ́-\iota \omega, ~ c e l-e b r o . ~ I n ~$ Sanskrit $\bar{s} r i ̂$ assumed the form 'ri-sh or śli-sh, to burn, to glis-ten, the congeners of which are gli-tter, gla-ze, gla-ss, glo-se (glesan, A.S.), glo-ss (gleissen, glanz, Germ., gloser, Fr.; glossare, Lat.), to glo-w (glóa, Old Norse; glowan, A.S.; glühen, Germ.), glo-ria, glo-riola, $\gamma \lambda a-\phi v \rho o ̀ s ; ~ g l o-r a, ~ N o r s e, ~ t o ~ s h i n e, ~$ to stare. Besides these we find gla-re, to over-dazzle, (cla-rus, Lat.), gle-am, a beam of light, gla-nce, gle-nt, gli-mpse, the ray of light from the eye; gli-m, a light or candle, and gli-mmer, to glow, or shine. Extremes do, indeed, meet here in glim-mer and glo-ry.

Dei, as we before observed, the Sanskrit Deva, effulgens; the Divine electric spark, the $\Delta \alpha i \mu \omega \nu$, $\delta \iota \dot{\sigma} \sigma \iota a, \pi \alpha ́ \nu \delta \iota \alpha-\delta \epsilon i \pi \sigma \wedge \iota a$, Jovialia, festivals in honour of Jupiter.

Marvellous are, indeed, the changes which most onomatops have undergone. Let us examine the word flower, and see where it will lead us.

## "Flower."

It is scarcely necessary to remind the reader of this disquisition, of the laws discovered by Grimm, Burnouf, \&c., regulating the permutations of certain letters. To these well established laws, by which a tenuis changes to its corresponding media or spiritus asper, must be added others, familiar enough to Sanskrit scholars, by which the liquids interchange and frequently, also, pass into $d$ or $t$. Besides the foregoing, some of the changes here exhibited are produced by the addition of separate words, which are become absorbed into the body of the leading word by the efflux of time. This is the case with the Hindî word pîth, derived from the Sanskrit prishtha, which itself is formed of pri+sthá, " to stand forth." The Urdû pahup, represents the Sanskrit pushpa, i. e. push $+p \hat{a}$, to increase by drinking, a flower. Push, again, is not improbably formed of $p r i+s, s$ being a Sanskrit desiderative adjunct (the verb ish, to wish), which, by Indian laws of euphony, became prish, pûsh, push;-and so on of other instances.

Flower, $\phi u ́ \lambda \lambda-o \nu$ for $\phi u ́ \lambda-\iota o \nu$ (fol-ium, mono-phyl), flora, flos, fleur, floraison, changing to blume in German (the Eng. bloom or blossom; Du. bloem; Swed. blomme ; A.S. bloma; Gothic bloma, blostma; Gr. $\beta \rho v v^{-\omega}$, to grow; $\beta \rho{ }^{\prime}{ }^{\prime}{ }^{\text {a }}{ }^{2}$ a herb), exists in Hindî under the form phûl, and this. last is from the Sanskrit

[^50]base phull. Now the problem before us is, How came phull to express what we call a flower? To answer this question we must examine some of its congeners. In Sanskrit, besides phull, blossom, we meet with phala, a $f r$-uit, and $p h a l-y a$, a $f$-ower, showing an alliance between these two phenomena, which leads us directly to the base $p u l$, to enlarge; other forms of this base being push, pûsh, whence come the common Sanskrit words pushti, increase (pushta, Pers., a heap), posha, prosperity, and pushpa a flower. The word still lives in the Hindî posh-nâa, pos-n $\hat{a}$, pokh-n $\hat{a},{ }^{\mathrm{a}}$, to breed, rear, foster.

Returning to our base phal, we find that it receives a strengthening $s$ in the forms sphal, sphar, sphul, sphur, all of which are common bases in Sanskrit in the sense of "increase," "expand." $L$ and $r$ are, as we remarked above, interchangeable in Aryan languages, and frequently pass into the cerebral or dull sound of $d$ or $t$; this causes our bases to re-appear under the forms sphat and sphand, to break forth, sphur-chh,svur-chh, sphut, sphund, ${ }^{\text {b }}$ to expand. These bases originate a host of words, such as ö-фe入-os, ó$\phi \in ́ \lambda-\lambda \omega$, Gr. ; split, Eng. ; spal-tan, Old H. G.; ex-panse, ex-pansion, spar-go, di-sper-gere (difflat ventus folia, Plaut.), Span. spar-cir, Ital. spar-pagliar, Fr. éparpiller les feuilles; ré-pand-re, Fr.; aus-span-nen, Ger.; spend money ; dé-pen-ser, Fr.; the span of an arch,

[^51]" G. spanne, It. spanna, Fr. espan, empan, the length of the outstretched thumb and finger."-Wedgwood.

The base sphand, to expand, is also found in the Latin frons, frond-eo, frond-escere, frond-osus, frondifer, frond-icamus; and in its form phull gives meaning to fru-x, fru-ctus, fru-ctificare, fru-ctuosus, fru-ctifer, and even in fru-cteta, bushes, and fru-ticare, to become bu-shy.

The word bushy suggests a new series, based upon a phonetic corruption similar to that which produced the Sanskrit push out of pul. Bush, formerly spelled busk, is found in the Icelandic buskr, a tuft of hair, a bush, a thicket; and in the French bouche, a tuft or bunch, whence bouchon de paille, a wisp of straw, a bouchet, a bush or bramble. Similar forms are found in the Fr. bosse, a bunch, hump; the Breton bouch, a tuft or wisp; the Frisian bosc, a lump or cluster, the Ger. bausch, a projection, bundle, bunch; and the Dutch bos, a bunch, knot, bussel, a bundle. Bushel and the bush of a wheel derive their names from their hollow, swollen out, expanded nature, as is seen from the Provençal form of the word "boistia, boissa, whence the diminutives O. Fr. boisteau, boisseau, Lat. (A.D. 1214) bustellus, a box for measuring, a bushel."-Wedgwood. The Du. busse, a box, Pl. Du. büsse, büske, Ger. büchse, lead to the A.S. box, the name of the tree and also of a receptacle, akin to the Gr. $\pi v \xi^{\prime}$ os, the box-tree, and $\pi u ́ \xi \iota s$, a box, Lat. buxus, " Ital. bosso, box-tree, bossola, a box, hollow place; Fr. buis, Bret. beuz, Bohem.
pusspan, box-tree, pusska, a box."-Wedgwood. Other receptacles are also derived from this base, as is shown further on.

Longitudinal extension is expressed by spin, ${ }^{\text {a }}$ to lęngthen out (spinnan, A. S., spinnen, Ger., spinder, Danish), whence arise spindle, spindel or spille, Ger., and a spill, or spindle-like twist for lighting the pipe, "N[orse], spila spile, a splinter, chip, peg; spila, Pl. D. spilen, to stretch out, to fix open."-Wedgwood. The verb spill, to spri-nkle, or spread out, seems to follow (Pl. Du. spillen, to shed, waste, spoil; Norse spilla, to gush, spill, waste), and so, metaphorically, to spill, to spoil, corrupt or foil. The last word brings us to the French $f l$, a thread, fll-ament, $f l$-ature ; Eng. $f l$-oss, the Latin pil, pila, Fr. poil, a hair, the pile of velvet,-a striking anastomosis affording a remarkable confirmation of the genuineness of these alliances. Anyhow the Danish spinder, to spin, leads us to spider, the spinner; and so we advance to spine, a lengthening out ; spina, Lat.

Returning to the form sphand, sphut, \&c., with a sense of "spreading" we have in Sanskrit sphut- $\hat{a}$, perspicuity; sphut-a, manifest; sphut-ana, opening; sphut-ârtha, intelligible, i.e. opened meaning ; sphut- $\hat{\imath}$ or sphur-a, a swelling; sphot-a, bursting; sphat-a, phat-a, phan-a, phut-a, the expanding hood of a snake ; sphir-a, sphâr-a, large, spreading; and phal$g u$, the spring time, when nature expands. Other

[^52]derivatives, deprived of the asper (allied to phal), are found in pal- $\hat{a n d} d u$, an onion, a bul-b, or $p l$-ump root; pal-ása, fol-iage, leaf; pall-ava, a sPRout or what is spread ;-(allied to sphand) pid-aka, a small pimp-le or swelling ; pind-a or pind-aka, a lump or ball.

In Hindî the words depart still further from their original. Thus we have phûl, a flower; phal, a fruit ; phûl-ná, to blossom; phûl-a, swelled; phûl-â-o, a swelling; phor- $-\boldsymbol{a}$, а в вoic or sore; phor-ná, to break, sPLiT; phît-nâ, to be broken; phut, phut-î, phût-an, disagreement, i.e. breaking apart; phail-ana, to spread; phail-âo, expansion; phall-gun, the spring or opening season; phun-gi, a sprout or bud (Lat. fun-gus, a sprouting growth); phal, a ploughshare (because an expanded blade, or because it breaks open the ground) ; phal-î or phar-î, a shield or broad object for defence; and phar, a $f r$-uit. The same idea of "expansion" is found in $p h \hat{a}-o r \hat{a}$, a sPade ; pha-phol- $\boldsymbol{a}$, a blister; phan-î, a wedge; phal-âng, a stride; phû$h \hat{a}$, a teat or pap; phant- $\hat{a}$, a bough or branch; and pal-lo, a sprig or shoot; and the idea of "opening out" is presented in phar $r-n a$, to rend; phat -nâ, to split; phât-ak, a gate or opening; phar-ana $a$, or phas-kâna, to split; phat-a, a crack; phat-ná, to be torn ; and even phut or phut-kar, what is opened out, separated, dispersed, and so an unmatched or "odd" object.

The English equivalent for the Hindî word phạt-nâ, i.e. to split, to splinter, helps us to see that the base sphand really represents a form sprit nasalized, as we
shall show more fully further on. But, in immediate connection with the present series, we may observe that the Sanskrit bases sphund, sphant, sphut, sphat, mean "break," i.e. split or spread out, and from these, by loss of initial and the operation of obvious phonetic changes, are evolved the bases bhind ( $s+$ phund), bhid and $d$ becoming $j$ (cf. dyut, jyut, p. 163) we get bhajj, bhanj, to divide, separate, or break. The last form bhanj is the well known analogue of the Latin frango, whence are derived all the words connected with frac-ture, frag-ment, \&c., \&c., \&c. It is important also to notice that the Latin frango contains the letter $r$, which has been lost in the Sanskrit bhanj, thus proving two things, first, that the Latin is older than the Sanskrit form of this word; and, second, that the word bhanj is certainly the congener of such words as bryt-an, A. S.; briot-a, Icel.; bris-er, Fr.; bryte, Dan.; and the Du. s.priet, a spear, bow-sprit, a split or splint-er of wood, the Sans. sphant or sphand.

In India, a long succession of grammarians preserved from antique times a knowledge of the older forms of words, and the earnest study of a vast literature counteracted, to some extent, the ordinary processes of phonetic corruption; lence it results that we have but little difficulty in recognizing our bases phal, sphand, \&c., in all the foregoing Indian words. In countries not so favoured, we must not expect to find this purity; nevertheless in Persian, at least, there is sufficient correspondence to enable
us to walk on the solid ground of fact. In Persian, pâl-âyîdan means " to increase;" pâl-ûdan, " to be large;" and pál-âdan, "to stretch." Here we are clearly dealing with the Sanskrit phall or pul, "to enlarge." : In Persian the letter $p$ is never aspirated, on the contrary it is often softened into $b ;{ }^{\mathrm{b}}$ hence we meet with bâl-âyânîdan, to extend, enlarge; bâl-ân, increasing; bâl-ish or pâl-ish, growth, increase; pâl-ânanda, augmenting; bâl-̂̂ or pâl-̂́, a wart or swelling; bâl-ûd, increase; bâl-în, a pillow, and bâl-ung, a cucumber, both being bul-ky objects. Other changes are illustrated by pîl, ${ }^{\mathrm{c}}$ a swelling; pîl-tan, bulky; piyâz, an onion or bulb; pinda, a drop, spot (cf. Sans. pinda, a ball); and pind-ish, a ball of cotton. The leter $l$ is, as usual, often replaced by $r$, giving rise to par-âsh or par-u $\hat{a} s$, expansion; $b \hat{a} r$ or $p a ̂ r-\hat{\imath}$, fruit, flowers; pâr-o, a shovel, paddle; par-war, nourishing; par-osh pimples or swellings ;and pâdal, a flower; pâna, a wedge; and pâshîda, a pumpkin, also, possibly, take their origin from the base pul, " to enlarge."

The bonds of alliance between Aryan and Semitic languages are too slight to allow the scholar to compare such languages with much confidence; still it is worthy of remark that in Arabic also the idea of "expansion" finds expression by a somewhat similar

[^53]sound. Thus, in that language, bâl means a "spade," and also "affluence;" and bawl signifies "bursting out."

When the extension is lateral, the base pul (or pri, which we shall shortly find is the same thing), is strengthened with a dental, and, in Sanskrit, it becomes pra-th, pri-th, pa-th. From these forms arise such words as pri-thu, in English broad (Germ. aus-breit-en); pri-thwî, the earth; pra-tha or prathiti, fame, celebrity; pra-thiman, greatness; prathima, chief, excellent; prithuka, flattened grain; pri-thuta, largeness; pri-thula, large; patra, a leaf (because fat); and pri-shtha the back or broad part of the body.a In Hindì we meet with $p i t h,{ }^{\text {b }}$ the back; pirtam, the world; path, a road or path; pathik, a traveller; pat, pattá, pattí, a leaf; patra, a broad dish ; pat broad; prathâ, immemorial custom ; pâtan, a roof. These Hindî words present us with some very corrupt forms; but still further corruption shows itself in the Persian pahan, width (pât, Hindî, prithu, Sans.); pahna, broad; and bâdya, any capacious vessel (pâtra, Hindî, prithula, Sans.). But it is in European languages that the most remarkable changes of this word are to be found ; for we recognize the
${ }^{2}$ Prishtha is the word which explains the use of the dental affix. It is formed of $p r i+s h t h t(=p r a+s t h d)$, i.e. "forth-stand," to be placed, put, or to be forth in all directions, hence broad.
${ }^{\text {b }}$ This word $p i t h$ is only a phonetic corruption of prishtha, the Sanskrit word above given. This affords unanswerable evidence that $p r i, p a l, \& c .$, can degenerate into such remnants as $p i$ and $p a$.
base pul+tha in the word plate (platte, Fr., piatto, Ital., platt, Germ.), that is a flat or spread out surface;-a BLaDe of grass is a broad object (A.S. blad, Fr. blé, Germ. breit), as is also a board (Germ. bret) ; a FLoor is a flat (Germ. platt) surface, and so are the FLuke of an anchor, a plank of wood (planke, Germ., planche, Fr.), the plan of a country, and pré, Fr., a meadow.

The spade (of which spoon seems a modification) is another instance of the expression of expanded surface by the base sphand, showing a near approach to the form pal in the Fr. word pelle, a shovel, Ital. pal-etta, a small spade ; the Fr. pal-ette, a painter's pal-let, the small tabula on which his pigments are mixed; with a secondary sense in the French word palette, "a battledore,"-plainly showing that the sound merely expresses extended surface.

The blade, the flat, or extended vegetable surface is expressed in Latin by fol-ium ${ }^{2}$ (tri-folium $=$ trè $\mathrm{FL} e$ Fr.), from which proceed fol-io, tin-foil, in-fol-io, folded (pleat-ed ; plé, Fr.) ; fol-iol, fol-iomor; hence arise fol-iage,fol-iated,fol-iaceous, fol-iation, fol-iature, foliér, Fr. (fluttering pieces of tin). Then we find folleatus, expanding like a fol-les; fol-licans, fol-liculus (the envelope of fruit-frumenti vagina, Cic.) folligena, and fol-lis. In French the Lat. folium becomes

[^54]feuille, feuillage, effeniller, to pick up leaves; and, in the sense of "flower," fleurette, fleuron (in printing), fleuron (in botany), fleuraison, fleur-de-liser, to mark with a hot iron, fleuriste, a florist; so also dé-flor-er, to take the flowers of virginity; de-for-ation, the act of doing so, to de-flower.

Now before we seek to eliminate the onomatop from which the word flower derives its sense of expansion, it will be necessary to follow the base pul through another channel of derivation. Expansion or enlargement takes place in consequence of distension from ful-ness. This word full, indeed, presents the base $p u l$ in one of its earliest meanings; for in this sense it assumes, in Sanskrit, simpler forms, enabling us, by their means, to reach to the ultimate base underlying the whole system. These forms are-pûr, pûrv, purv, parv, plu-sh, pru-sh, pra, prin, pri, and pri. All these bases mean fill ; and the last two are what Professor Max Müller calls "primitive roots." Their claim to that title will be examined in the sequel; but first we must show that in this sense also the base $p u l$ has been well used. In Sanskrit we get pûr-a, filling; pûr-uata, plenty; pâr-ana, fulfilling, and $p a r-i$, a cup (both from $p r i$ ); the verb $p a l,{ }^{,}$to nourish; pall-ana, cherishing; pâl-a, a guardian ; pûr-

[^55]ta, complete; pûr-na, able, strong. Hindî gives us pûr-â, fully; sam-pûrn, full; pûrâ- $\hat{\imath}$, fulness; pûl-â, pûlî, and pol-ak, bundles of straw; pâl-nâ, to nourish, \&c., \&c. The prolific vocables for-ma, Lat., for-me, Fr., for-mo, Ital., are also seen in the Hindî pûrầ̂, fulness; Lat. am-pul-la, a stout jar; Fr. am-poule, a bubble.

In, Persian we find $p u r-i ̂ d a n$, to fill; pur- $\hat{a}$, fulness; pur-wâr, fatted, or filled out; pâr, past, completed, \&c. In European languages this base frequently recurs in this sense; as, for example, ple-nus, ple-onasm, plé-nitude, re-ple-nish, am-pli-ation, am-pli-tude, af-flu-ence, po-pul-us, pl-ebs, pl-us, plu-rimus, $\pi i \mu-\pi \lambda \eta$ $\mu \iota$; Lat. im-ple-re, Fr. em-pli-r, sup-pli-er, Eng. sup$p l y$, re-ple-te, Fr. com-plé-ter, ple-in, accom-pli-r, to accom-pli-sh; Gr. $\pi \lambda \epsilon \in-\iota \nu, \pi \lambda o \hat{\imath}-\tau o s$, rich, $\pi \lambda \hat{\eta}-\theta o s, p l e-$ thora, $\pi \lambda \epsilon$-os, several, plu-rality; Lat. am-plus, ample; A. S. full, fyllan; Gothic, fulljan; Fr. remplir, s'emplir, ex-ple-tif; Ger. füll-en, voll, aus-full-end. The part of the body which is filled and expands is termed the bel-ly, clearly a derivative from fill; in German bauch, and, by metastasis, leib; in French panse or ventre, both of which are obviously allied to the Hindî pet!, ${ }^{\text {a }}$ pet $h$, or per $\hat{u}$ (pet $\hat{u}$, gluttonous); and the Sanskrit phanda or phanda, the belly, in which last we see ex-pand almost pure and simple. Addi-

[^56]tional examples are found in the Greek $\pi \lambda \alpha^{\prime}-\tau o s$, dilate, $\pi \lambda \alpha^{-}-\tau v s$, Lat. la-tus, ample, $\pi \lambda \alpha^{\prime} \tau \iota \nu$, Plato, the master of Aristotle, the man with the large chest, $\pi \lambda \alpha$ - $\tau \alpha \nu o s$, the pla-tanus, the pla-ne tree, whose branches spread out, $\pi \lambda \alpha^{\prime}-\tau \epsilon i a$, a large road; also in such words as pl-ump, bowl, bowel (boyau, Fr., boel, Old Fr.), bulb, a ball; and in bourse, purse, a ba-g. Again, $\beta \dot{v} \rho \sigma a$, bourse, Ital. borsa gonfilata, Fr. bourse gonflée, enflé, pleine, \&c.; bour-geons of flowers, bu-ds (akin to $p a-d s, p a$-dding), bourrée, a bun-dle of small sticks, bour-reler, bour-let, a kind of cushion filled with hair, a pad, bour-relier, the man who fills horses' collars with flocks. There are also diminutives, as bour-sicauld, a small purse and bour-son, a small pocket; besides the noun bour-soufflage, inflation.

Of this word bourse Mr. Wedgwood gives the following congeners:-"It. bolgia, bolza, Gris[ons], bulscha, buscha, a budget or leather wallet; Sp. bolsa, a bag, purse, exchange. Hence with the common change of an $l$ for an $r$ (as Sp. peluca, Fr. perruque), It. borsa, borsia, borza, Fr. bourse.
"From the It. form bolza seems derived bolzacchini, Sp. bolzequin, buskins, originally signifying bags of skin into which the feet were thrust, as Sp. bolsa, bag lined with furs or skins to keep the feet warm.-Neumann. The same change from $l$ to $r$, as in bolsa, borsa, gives It. borzacchini, Du. broseken (Fr. brodequin), E. buskin. In like manner it seems that the original meaning of boot was a leathern bag, as in Sp, bota, which signifies both a leathern bag to
carry wine, and also boot, a leathern covering for the leg and foot. Du. bote, boten-schoen pero, calceus rusticus e crudo corio.-Kil." (vol. i. p. 277.)

But the filling up of any object or person satisfies the recipient; and the idea of satisfaction is also expressed by the base we are examining. It meets us in the words play, ple-ase, ple-asure, pla-cere, Lat.; plaire, Fr.; be-frie-digen, freund, Ger.; fri-end, Eng.; and in the Sanskrit bases prin, prid, spri, prî, pîy, $p r i ̂, ~ p r i$, also in the developed bases sphant, sphand, sphut, and sphund, the last four meaning play, and the rest please. It is needless to cite many examples of this most prolific form of the base; they come ready to hand in the Sanskrit pri-ya, beloved (Persian $y a ̂ r, ~ a ~ f r i e n d, ~ p y a ̂ r, ~ a f f e c t i o n) ~ ; ~ p r i-y a k a, ~ a ~ b e e ; ~ p r i ̂-t i, ~$ gratification; pre-man, kindness; paur-ta, a pleasing work, \&c.; also in the Hindî pre-m or pem, love; and pemî, a lover, \&rc.

The foregoing has shown us that the verb $p r \hat{\imath}$,-the past participle of which is purna, giving rise to the secondary base pur or pul, and the tertiary bases sphut, sphand,, \&c.,-originates a vast assemblage of words with pleasure at one end, and the span of an arch at the other, all which words meet at a point in the word bel-ly, in which both the ideas of "expansion" and of "satisfaction" find expression. The extreme plasticity of primitive bases having thus been

[^57]somewhat lengthily demonstrated, we are in a position to carry the inquiry still further, and to endeavour to reach the cause of all, that is, to endeavour to ascertain how it is that the sound $p r i \hat{i}$ (which is the most primitive of all the forms the base assumed) in the first instance acquired its sense of "extension." To effect this we resolve it into two parts $p r+i$. The $p r$, or rather the $p$ only, ${ }^{\text {a }}$ is the original onomatop from which the prepositions pra, per, pro, $\pi \rho o ̀, f \hat{\imath}$ Arabic, for, forth, forward, \&c. \&c. ad infinitum, received their birth: it is the very natural expression of out-going-the forward puff of Breath. That the sound puff enters into articulate speech we have distinct evidence in the Persian verb puf-îdan, to blow, also in the Sanskrit $p h u ̂ t$, an imitative sound occurring frequently in the lighter works; and in the word phût-kâra, hissing, crying aloud, beside the common English phrase "to be puffed up" (Galla afufa, Hungarian fuv-ni, Scotch fuff;-Wedgwood). The letter $p$ as the exponent of ex-p-ulsion (expulsum, pulso, Lat., pousser, Fr., push, Eng.) is also the ultimate onomatop from which springs the Sanskrit $v \hat{j}$ and $v \hat{a}$, to Blow, v $\hat{a}-y u s$, wind, \&c.

The $p$ being thus accounted for, there remains but $i$, a simple onomatop expressive of motion, existing quite pure in the Sanskrit $i$, to go, in the Egyptian
a The letter $r$, as is well knọnn, imparts a sense of quickness to Aryan words, without otherwise altering their sense: cf. run, rush, rabid, rapid, \&c. \&c., and the Sans. $i$, to go, and ri, to go, \&c.
${ }^{\mathrm{b}}$ The Panchatantram, for instance.

Hieroglyph $e i=$ go; and in the Latin eo, \&cc. This base might be more correctly defined as "the proximate definite," and may be illustrated by the word he-re ${ }^{\text {b }}$ (here, A. S.; her, Du.; hier, Germ.; i-dhar, Hindî; iha, Sans.), implying motion towards the speaker, and when intensified it takes what, in Sanskrit grammar, is called the vriddhi substitute, and becomes ai (pronounced like the word eye), and when strongly aspirated becomes hi! hi! (Sans. hay, to make a noise) so constantly used when inciting to motion. As a definer of that which is proximate this base gives life to many vocables; as, for example, the Sanskrit i-ha, here; i-hatya, of this place; i-tas, hence ; i-tara, other (beyond this); i-dam, this; i-dânim, the present time; $i$-va, like, in this form; $i-t i$, thus, in this way; $i$-ttham or $i$-tth $\hat{a}$, thus; $\hat{i}$-driś, thislike; e-tad, this-here; and, by phonetic corruption, $a$-dya, to-day (for $i$-dyu=this light, see p. 164; in Hindî this word becomes, by still further corruption, $a-b)$; $a$-tas, hence (cf. $i$-tas, above); $a$-tha, now; $a-t r a$, here. In the modern Hindî we find $i-t$, here; $i$-dhar, hither; $i$-ttâ or $e$-t $\hat{a}$, this much; $i$-tn $\hat{a}$ or $e-t n a ̂$, this many; $y a-h a \underline{n}$, here; $y$ - $\hat{u} \underline{n}$, thus ( $y=i$ ); $i$-tek, this

[^58]much; ai-sd this-like; and, in the Braj dialect, $i$-tau, here. In Bengalî also: i-ni, this person; i-hâte, hereby; $e$ or $e i$, this; e-mot, thus; e-khâne, here; eihetuk, hence; ei-sthane, hither; ei-ovodhi, hitherto, \&c. These vocables find their equivalents in Europe in such words as he-re, hi-ther, he-nce; i-ci, Fr.; i-d, i-dem, ea-dem, i-bi, i-bidem, Lat., \&c., \&c., \&c.

But there is yet another idea arising out of this proximate definite, for the very acmè of approximation is Self, and subjectively this idea assumes the double form of Personality and Unity. I is the natural exponent of personality, and shows itself on the surface of widely scattered languages $a-n \hat{\imath}$, Hebrew (as a suffix $-\hat{\imath}) ; a-n a^{\prime}$, Arabic; $a-n a k,{ }^{\mathbf{a}}$ in the Egyptian Hieroglyphs; •nek, or $\cdot n e k k i$, in the Berber dialect; $\cdot \tilde{n} o c a$, in the Quichua language; $n g a$, Burmese; $\cdot g o$, in the Canton dialect; $y-u$ in Chinese; $I$, English; $i-k$, Dutch; $a-k u$, Malayan; i-ch, German; j-e, French; $i$-o, Italian ; $s$-1-hrih or $s$-Ey-ree, Georgian; e-go, Latin; $\epsilon-\gamma \omega$, Greek; $a$-ham, Sans.; m-ai-n, ${ }^{\text {b }}$ Hindî; man, Persian-the last coming round almost to the Semitic anî. In its sense of unity-the I-the one-it is of universal recurrence. It is the $e-k a$ of Sanskrit, the Hebrew $e$-khad, the $a$-ce of cards, the Pehlevî $a$-chad,

[^59]the Persian $y-a k$ or $e-k$, and the nominal affix $-\hat{\imath}$ (as mard- $\hat{\imath}$, one man), the Japanese $i-t s$ ', the Georgian $z-e e$; the German ei-n, Norse, ei-tt, the Dutch ee-n, the French $u-n$, the Italian $u$-no, the English $a-n$, ane, one. So natural is it to man to express unity by this articulation that no process of decay or length of time seems sufficient to destroy its traces. Thus in the Tamulic group of languages one is expressed by the Toduva won, the Malayâlam on-na, the Tuluva on-ji, the Gond $u n-d i$, the Malabar and Canarese on- $d u$, the Uraon-Kol $u n-t a$, the Tamil on-ru, the Telugu o-ka, the last anastomosing with the Ugric group of languages, represented by the Tsheremissian $i-k$, the Lappish $a$ - $k t$, the Esthonian $\ddot{u}$-ks, the Finnish $y$-ksi, the Hungarian e-gy, the Vogulian $\ddot{a}-k v a ̈$, the Mordvinian väi-ke, the Syrianian $\dot{o}$-tik, and the Ostiakian $i t, i, j a$. Around the Caucasus, also, may be met the Abchasian $a-k a$, the Georgian $e-r t h i$ or $z$-ee, the Mingrelian $a-r t i$, the Suanian $e$-shchu: the Mandshu $e-m u$ is clearly the same onomatop, and so, among Mongolic people, is the Aimak $n-i-k k a$, the Sokpa $n$-e-ge, and the Ölöt $n-i-k e$. Nor have we yet done with it; for the Taic group supplies us with additional examples in the Kassia $w$-ei, the Shan $n$-ei-n, the Khamti, Laos, and Siamese $n-u ̈-n g$, and the Ahom $l-i-n g$; the Lohitic group presents the Dhimal $e$-long, and the Mikir $i$-chi; the Gyami gives us $i-k u$, the Kong-Chinese, or spoken dialect, $y-u t$, and finally we obtain it quite pure in the Chinese ' $i$, "one."

In all these numerous examples it is seen that
various modifications of the sound $i$ are used to express "unity" all over the world, and that "unity" -the one-the I-is also the exponent of proximity -"here,"-and of motion towards the speaker"here," "come here," and likewise of motion in general-i, Sans., "to go." In this last form the sound became a true vocable, all knowledge of its onomatopic origin being gone; and, as a symbol of an idea, $i$ with its sense of " motion" could, and did, conjoin itself with other vocables, as, for instance, $r$, in ri, "go quickly"; and finally superadding $p$, "forth," became pri," to go forth," the base of all the words we have been examining.

The word flower has thus led us a long way; yet however strange may appear the ultimate origin of so highly organized a word, we have seen that the path we have trod, though long and devious, has always been one of solid fact. In no part of this disquisition has the imaginative faculty had any play; we move from fact to fact in a tedious but certain and scientific manner ; and the rational result at which we fiually arrive is at once the keystone, crown, and test of the entire argument, by which its truth can be instantly established. We see that the words flower, expand, fill, \&c., spring out of $p r i ̂$, which itself means go-forth, and all its manifold derivatives open their meanings at once to this master key, by which the going forth, opening out, filling, satisfying, pleasing, are seen to be but various forms of the one idea, which underlies and gives vitality to the whole.

## "Bee."

An onomatop is a natural euphony itself, the supreStermana ma lex of language-it is cause and effect-something like the primitive instinct of animals, it is a music that offers an unlimited diversity of harmonies.

Having expatiated on the remarkable onomatops of Cicero, we bring our reader to the humble bee of our gardens and proceed to discuss its onomatop.

Everyone knows what a bee is, but few know why it has been called by that name. The Sanskrit base on which it was built is $p \hat{\imath}$, which means $p$ - $u m p$, suck, drink, the Chinese f-ung, Fr. b-oire, pi-per. The Greeks made the vocable $\pi i-\omega, \pi i-\nu \omega$, the Latins $p i-n o$, pro-pi-no, to drink the health, and bi-bo, soto, in the Quechua language u-pi-ani. The insect is called in Italian ape, pe-cchia; in Spanish it is $a-b e-j a$; in Burmese $p y$ - $a h$; in Japanese $b a-t s i$; in Georgian $b$-shey; and in English bee; A. S. beo; Icel. by-fluga (the sucking-fly); Ger. bie-ne; Gael. be-ach.

The Latins made many vocables from it, such as a-pi-s, a-pe-s, a-pi-anus, a-pi-arium, a-pi-arius, $a-p i$ ostra, a-pi-ostrum, a-pi-cula, po-trix, po-tor, po-tus; whence the English potion, pottage, po-table, pot or $b u-t t$, beverage, and bee-r. In the interesting letter written by Dr. Livingstone to Mr. Bennett, Insama, a chief of southeastern Africa, is spoken of as calling his cup and beer, po-mbo!

The fertile germ whence the word bee had birth is
likewise progenitor of nature's chief, the Sanskrit pi-tri, Eng. fa-ther, $\pi a r \grave{\rho} \rho, p a-t e r, p e ̀$-re, who causes everything to grow for the pa-bulum vite, the nourishment of man, the head of the family, its protector and defender, and who has been called by the same onomatop all over the globe.

The Sanskrit $p \bar{a}$, which is only a developed form of $p \hat{i}$, makes $p i-v a m i$ in the present tense, and passes to the Greek as $\pi i-\omega, \pi i-\nu \omega$, reduplicate $\pi \epsilon-\pi \sigma-\kappa \alpha$, to drink ; the Latin po-tus, po-culum, changing to the English be-verage, in French boi-sson; and a poor boisson is called pi-quette, because of its acidity. The Italians made of it be-veraggio, be-vanda, po-zione, and vi-nello (of small strength), French petit vi-n (little wi-ne) or pi-quette, vin, vin-aigre, and wine, being only phonetic corruptions of $p \hat{\imath}, b \hat{\imath}$, or $v \hat{\imath}$. In this sense this onomatop gives vitality to such words as the Sanskrit $p \hat{\imath}-t i$ or $p i$-tu, drink ; pî-tha, or $p \hat{a}-$ thas, water; pay-as, milk; pa-naka, beverage; and pî-yûsha, the nectar of the gods: push-pa (Urdu $p a h u-\mathrm{P})$, a flower, is formed of $p u s h$, to increase,$+p a$, by drinking; and a tree is called $p a d d a-\mathrm{Pa}$, or footdrinker, because deriving its nourishment from the root. In Hindî we meet with pey, pay, milk ; pain, a reservoir of water; pau-h, a stand where water is kept; po-khar, a lake or pond; $p y-\hat{a} n a \hat{a}$ or $p y-\hat{a} w n a$, to make to drink; and $p y$ - $\alpha s$, thirst. In the last word the letter $s$ is the remains of the word ish, to wish; so that pyâs (pipâsâ, pipâsu, Sans.) is really $p \hat{i}+i s h$, to wish to drink, hence thirst. In Hindî we
have also the interesting word $p \hat{i}-n \hat{a}$, to drink, to suck, also applied to the smoking or rather sucking of a pipe. From pînâ come both $p \hat{\imath}-p \hat{a}$, a $b a$-rrel, and $p \hat{\imath}-$ $p i ̂$, a pipe or s-pou-t. In Persian we find the vocables pi-yâla, a drinking cup; pâ-h and pâ-zûm, food, $p a$ bulum; and the word $p \hat{u} d$, almost identical with the English food (pud-ding), Ger. fud-der, Eng. fod-der. That beautifully articulated and wonderfully constructed language, the Sanskrit, lays bare many of the processes by which onomatops change both form and meaning. Thus there are derivatives or secondary bases springing from $p \hat{\imath}$ in the sense of "swelling," "increasing." These bases are pyai, pyây, sphây, and they originate such words as sphâti and sphîti, swelling, increase; pî-vana and pî-vara, large, fat; $p i ̂-n t a ̂, ~ f a t n e s s ;-a n d, ~ a c c o r d i n g ~ t o ~ P r o f e s s o r ~ T h . ~$ Benfey, probably $p h e-n a$, froth, and phe-nala, foamy.

This $p \hat{a}$ of Sanskrit indicates nourishment $\pi a-\epsilon \iota \nu$, po-wer, and lives in $p a$-ste, $p a$-stry, $p a$-sture, $p a$ rentage, making in Greek $\pi \epsilon i-\theta o \mu a l$, subdue to obedience. In this sense we get the Sanskrit nouns pi-tri, the nourisher, the father (Japanese, fi-to a man), pa-ti, a lord or master,-Zend pai-tis, Gr. $\pi \sigma^{\prime}-\sigma \iota s, p o-o i r$, possess, $p o-u$-oir, and finally po-wer,—a master, husband; as well as po-tatio, po-tation, $\pi o-\lambda \lambda \grave{\eta}$, $\phi \iota \lambda \delta^{-} \pi 0-\tau \eta \mathrm{s}=$ potator, po-tion, poi-son, pui-ssant, possible, Lat. hos-pes, hos-pi-tium, Fr. hos•te hô•te, $h o \cdot t e l e r i e, ~ h o \cdot t e l l i e r, ~ E n g . ~ h o s \cdot t, ~ h o s \cdot t r y ~(i n ~ t h e ~$ last six the elision of $p i$ is marked by a dot).

In Persian pati, a master, a husband, becomes pad
and $b u d$, a master, and $p a b b, p u ̂ b, b a b, b a b a$, are used for "father," while $b a-n$ represents a "prince," and pa-nah, a protector; the Arabic $b a a^{*}$, nobility, and the Turkish básha, a lord or master, may have a similar origin. The Sanskrit pitri, father, becomes padar or pidar in Persian, which by phonetic corruption, changes to piyar, whence comes $p \hat{\imath} r$, an old man, a reverend senior, and pîrana, "elderly."

The base $p \hat{\imath}$, besides its subjective sense of " nourish," was also applied to the object,-the one nourished, and so assumed in Sanskrit the form $p u$-tra a nursling, a child, pu-er, a $b-o y$, derivatives of which are found in the Latin $p u$-ella, pu-ellaris, $p u$-ellariter, pu-ellarius, pu-ellascere, pu-ellatorius, pu-elliter, pu-ellula, pu-erascere, pu-eraster, pu-erculor, puerigenus, pu-erilis, pu-erilitas, pu-eritia, pu-ernius, pu-erperus, pu-eriliter, pu-erulur; and the Spartan $\pi о i \bar{\rho}$ for $\pi \alpha i s=\pi v \epsilon \rho a$, a girl.
The following Table exhibits the possible phonetic corruptions of the word father in 200 languages. It it designed to show the gradual series of modifications by which words, apparently quite different, may have been evolved from each other. It will be seen that Turanian and Semitic words find their natural places among undoubted derivatives of the Aryan father. ${ }^{\text {a }}$ The outx of the Canadian Indians is quite as much like father as the Bulgarian otskve, and the only

[^60]reason for considering it to have had an independent origin, is that, from want of a literature, we are unable to trace its history, but in the case of the Bulgarian word we can do so. It will be thought that we are mixing two distinct bases together by including the forms of tâta under those of pitri, and this may, in fact, be the case. We have included them because it is possible to suppose them parts of one series in a way indicated by their arrangement in the Table; and we must leave this arrangement to gain what weight it can. Enough has been said in different parts of this book to show that words undergo strange transformations by mere phonetic corruption. It is worthy of remark, also, that the Greek language possesses all three forms of our arrangement $\pi a \tau \eta \grave{\rho}, \tau \in ́ \tau \tau \alpha$, and $\dot{\alpha} \tau \tau \alpha$. The obscure Turanian languages, furthermore, still await the investigation of scholars like the brothers Grimm, to point out the laws of permutation at work in their midst. We all know the great results which followed when Humboldt shed the light of his genius on the Kawi language.

## PI-TRI=" the nourisher."

N.B.-The letter P, at times, becomes fatus-asper, then asper, and finally disappears.

| 1. Sanskrit | pi-tri. |
| :---: | :---: |
| 2. Zend | pai-tar. |
| 3. Persian | pa-dar. |
| 4. Algerian - | pé-dér. |
| 5. Hindì - | pi-tâ, bâp. |
| 6. Bengalî - | pi-tâ. |
| 7. Singhalese | pi-ta. |
| 8. Tamil | bi-ta, appa. |
| 9. Greek - | $\pi a-\tau \eta ̀ \rho$. |
| 10. Latin | pa-ter. |
| 11. Italian | pa-dre, pa-pa. |
| 12. Spanish - | pa-dre. |
| 13. Catalan | pâ-re. |
| 14. Portuguese | pâ-y, pâ-e. |
| 15. Sardinian | pâre. |
| 16. Gascony - | pâi-re. |
| 17. French | pè-re, pa-pa. |
| 18. Flemish | pe-ar. |
| 19. Old Rhetian - | рā-pa. |
| 20. Kyriaks (Syria) | pé-pé. |
| 21. Turkish | pé-pé, bâ-shâ, bâ-bâ. |
| 22. Tatar | ba-ba. |
| 23. Shilah (Africa) | bā-ba. |
| 24. Leodic (Styria) | pe-er. |
| 25. Lithuanian | pâ-ts. |

26. Slavonic (Hellenic) bâ-t.
27. Gujarâtî - - bâ-p.
28. Grisons - - - bâ-b.
29. Frioul - - pâ-ri.
30. Frisian - - pâ-p, heine.
31. Gaelic - - pa-erinthele.
32. Wallachian - - pa-renthie, tatul.
33. Javanese - - pâ-man, tama.
34. Tranquebar - - pi-tave.
35. Malabar - - pi-tawe.
36. Thibetan - - pâ, jha-phu.
37. Tonquin - - phu.
38. Siamese - - poo.
39. Japanese - - fi-to [a man].
40. Chinese - - - fu.
41. Frisian d'Hin. - fe-er.
42. Gothic - - fa-dar, â-tta.
43. Anglo-Saxon - fa-ðer, vâ-tter.
44. English - - fa-ther.
45. French Theod. - fa-der.
46. Runic - - - fa-dder.
47. Swedish - - fa-der.
48. Danish - - fa-der.
49. Icelandic - - fa-der.
50. Orkney Islands - fa-vor.
51. Scotch - - fa-der, na-thairn.
52. German - - va-ter, vâder.
53. Dutch - - va-der, va-yer.
54. Norwegian - - va-der.
55. Walcheren - - vâ-yer.

56. Pian (Illinois) - os-sah.
57. Manticoké - - os-sac, oschsch.
58. Massachusetts - osh.
59. Ottawa - - oss.
60. Micmacs - - ouch.
61. Lennap - - och.
62. Delaware - - ook.

From the Chinese $f u$, Tonquin $p h u$, and Siamese poo, we are led to the following series:-
92. Ahom - - po.
93. Khamti - - po.
94. Laos - - - po.
95. Mikir (Bengal) - po.
96. White Kharen - pa.
97. Kuki (Bengal) - pa.
98. Mrà (Bengal) - pâ.
99. Kami - - pâ-ei.
100. Khyeng or Shou pau.
101. Red Kharen - phay.
102. Manipuri - - ipâ.
103. Ho(Bengal Pres.) âpu.
104. Korva - - âpu.
105. Angami Naga - apû.
106. Arung Nâga - apeo.
107. Mithan Nâga - apâ.
108. Tablung Nága - opàh.
109. Murmi (Bengal) âpâ.
110. Bodo or Kachari aphâ.
111. Burmese - - â-pa, phâ-e.
112. Madagascar - - amp-roy.

| 113. Kumi (Bengal) - amp-o. |  |  |
| :---: | :---: | :---: |
| 114. Hottentot - <br> 115. Limbu (Bengal) |  |  |
|  |  |  |
| 116. Tungusic - - am-inmoen. |  |  |
| 117. Tulu - - am-me. |  |  |
|  | 18. Tatar | âm-a, a-tc |
| 119. Talain (Bengal)- mâ. |  |  |
| 120. Rabbinical Heb. |  |  |
| 121. Samaritan - ab. |  |  |
| 122. Hebrew - - ab. |  |  |
| 23. Pehlevi - - ab, âb-ida. |  |  |
| 124. Syriac - - ab |  |  |
| 125. Moresque |  |  |
| 126. Arabic - - ab-a, ab-u. |  |  |
| 127. Samoyed |  |  |
| 128. Chaldsean |  |  |
| 129. Amharic - - â-ba. |  |  |
| 130. Barbary - - â-ba. |  |  |
| 131. Abyssinian - ab-ba. |  |  |
| 132. Melindan (Zanz.) |  |  |
| 133. Ethiopic - - ab-i. |  |  |
| 134. Mech (Bengal) - appa. |  |  |
| 135. Tamil - - appa. |  |  |
| 136. Butia - - appâ. |  |  |
| 137. Kharria (Bengal) appâ. |  |  |
| 138. Mundari - - appu. |  |  |
| 139. Telugu - - abba. |  |  |
| 140. Kuri or Muasi - abba, bâ. |  |  |
|  | 41. Anka or Hrusso | abba, âu. |
|  | 42. Dophla (Bengal) | âbo. |


| 143. Dhimal (Bengal) âbâ. |  |  |
| :--- | :--- | :--- |
| 144. Garo | $-\quad$ âjâ. |  |
| 145. Lepcha | - | abô. |

146. Rajmahali Pahari abu.
147. Kandh(Beng.Pres.) abu, âbâ.
148. Pani-Kocch - - awa.
149. Kiranti - - bâ.
150. Santâl - - bâbâ, âpu.
151. Juanga - - bâbâ.
152. Abor (Bengal) - bâbâ.
153. Miri (Bengal) - bâbâ.
154. Oraon - - - baba.
155. Gond - - baba.
156. Ramgarh - - bûba.

Looking at such words as the Gothic fadar (No. 42.), which, by loss of the spiritus asper, becomes atta, we may understand how such forms as the following are possible varieties of the same word:
157. Gothic - - â-tta.
158. Germ. Swiss - ae-tti.
159. Huron (Canada) aih-taba.
160. Biscayan - - â-ta.
161. Persian - - a-tâ, i-tâ.
162. Cantabrian - a-tta.
163. Greèे - - - ${ }^{\boldsymbol{\alpha}}-\tau \tau \alpha$.
164. Epirote (Albany) a-tti.
165. Latin - - a-tta.
166. Welsh - - - a-thair, tad.
167. Irish - - na-thair, ai-te, oi-de.
168. Hungarian - - a-tyank.
169. Kalmuck - - a-tey.
170. Ossetian - - a-dà.
171. Siberian - - a-tai.
172. Egyptian Hierog. a-tw.
173. Frisian (Germ.) - hei-ta.
174. Do. (Holland) - hei-tā.
175. Do. (common) - hei-te.
176. Vaudois - - ha-rme.
177. Carib : - - ha-ba.
178. Tangut (Thibet) hā-pa.
179. Khasi (Bengal) - ky-pa.
180. Chutia - - tsi-pa.
181. Greenland (North) u-bia, uttata.

The Turanian forms appa and $a b b a$, which are clearly the representatives of $p a, p u, f u$, readily suggest how, through some such change as produced the Gond baba, might have arisen the Khari Nâga tabáa; the analogue of the Livonian tabes, the Cornish taz, Breton tad, Esthonian taat, and the whole of the series given below :-

$$
\begin{aligned}
& \text { 182. Khari Naga - ta-bâ. } \\
& \text { 183. Livonian - - ta-bes. } \\
& \text { 184. Werulic (Germ.) ta-bes. } \\
& \text { 185. Prussian - : the-wes. } \\
& \text { 186. Courlandish - te-we, te-ws. } \\
& \text { 187. Breton - - taa-d, ta-d. } \\
& \text { 188. German Jews - thâ-daer. } \\
& \text { 189. Cambro-Breton - ta-d. }
\end{aligned}
$$



The onomatopic base of all the foregoing different forms of $p \hat{\imath}$, is to be found in the noise produced by the in-sucking of the lips, naturally accompanied by a sound like that represented by the letter $p$, preceded by a vocalizing element. We, therefore, describe it as $\cdot p$, placing a dot in front.

## CONCLUSION.

Onomatops are the natural and inevitable expression of the conscious Soul, prompted by the secret impulses of life and motion. The onomatop places before the philosophical mind the first springs of human civilization and advancement, the first humanizing influence, -that which first marked the divergence of man and brute. "Man speaks, and no other animal has uttered a word."-Max Müller. Speech is the surprizing accomplishment that gives to man his pre-eminence, gives him the power to clothe his thoughts in form, 一 almost in substance, ${ }^{n}$-it is even more correct to say that it gives to man the very power of thought itself. Philosophers, at times, go widely astray in their deductions by gliding imperceptibly over primary considerations, and by plunging at the very first into the more recondite parts of a subject. This is the case with what is called Mental Philosophy. It has never yet been perceived that the mental phenomena with which we are familiar can have no existence without

[^61]Language. ${ }^{*}$ Can we even imagine a being thinking out one thought to a conclusion without the use of words, either pictured to the mind or uttered with the voice ? This is a matter of experience. Immediately we begin to think a stream of words passes through the mind and presents the idea in varying forms, until it assumes the shape we finally approve, and then we give it utterance in audible language. Mental operations, before the formation of articulate speech, must have been confined to mere sensation, such as the lower creation universally manifests. Locke considered man distinguished from the brute by the possession of general ideas; and that great thinker did not fail to see that Language plays an important part in the building up and development of our ideas ; but the real part that Language plays, and the extent to which it operates in the whole of our conceptions, he could never accurately determine. Horne Tooke was able to see that what Locke called general ideas were in reality but general terms. This astute writer remarks that it is an easy thing " upon Locke's own principles, and a physical consideration of the senses and mind, to prove the impossibility of the composition of ideas;" ${ }^{\circ}$ that is, that comprehensive ideas could not exist in the mind until a term or vocable existed, enabling the

[^62]mind to project it, so to speak, upon the retina of its apprehension. Onomatops are, indeed, the analogues in speech, of those projections imagined by great architects in the active moments of their genius. Our reasoning, indeed, leads to the conclusion that connected thought of any kind is impossible without words, with which alone it can be carried on. This being so, all mental philosophy resolves itself into the history of language,-the first onomatop was parent to the first thought, and the parent of all that has resulted from man's mental power. Horne Tooke thus clearly expresses himself: "The business of the mind, as far as regards language, appears to me to be very simple. It extends no further than to receive impressions, that is, to have sensations or feelings. What are called its operations, are really the operations of language."• As we have already said, in our opinion, any connected thought is impossible without language, and therefore Reason itself is the offspring of the Word. Man spoke before he reasoned. Emotional sound was first stamped with unvarying sense at a time when the man-animal was instigated by no other sentiments than those of animal desire and animal aversion. The gregarious impulse so conspicuous in man created the need for this unvarying sense, and the habit of living and acting in communities increased the number and definiteness of uttered sounds, as the necessity for communicating impressions enlarged. A long period

[^63]must have elapsed before sounds settled by usage into fixed signs of ideas, and the merely animal state must have been, during the interim, considerably departed from by the humanizing tendencies of the speaking creature. Nevertheless this rudimentary stage, in which a few sounds possessed the force of true vocables, was far too imperfect to allow of the expression, and therefore of the conception, of anything beyond sensuous impressions. It was phraseological collocation of vocables, first, probably, resulting from a necessity for discriminating similar but notidentical objects, that gave birth to what is now called the Reasoning faculty. The desire to discriminate would impel the creature to utter two vocables each expressive of some characteristic, the union of which two vocables, producing a third and compound word (as in the modern sea-horse, $d o g-f i s h$ ),-would be the germ of the art of Reasoning, that is, the combination of simple propositions. This theory is not inconsistent with itself; for no higher process than perception is involved in so compounding words. The speaking creature looks at an object in the water,-"it is dog," is the impression; but still looking on it is seen not to walk like the other beings generally so called, but moves like a fish. "It is fish," now the creature perceives ; and to communicate the impression he repeats the names of the two creatures whose ideas have been aroused at sight of the strange object." The development of this

[^64]process brought about the categorical arrangement of words in a sentence, and with that the power of reasoning, and all the mental operations of which we are now so proud. For further illustrations of this process the reader is referred to the Introduction, under the Laws of Combination, p. 21 et seq.

How much, then, of human interest centres in our present inquiry! We seek that which gave to man the power to construct telegraph, railway, and palace, the power to dig the mine, to navigate the deep, to scan the starry heavens, and to meditate on and to subdue the powers of nature to his use. It is the use of articulate sounds that made man master of the tempest and the sea, master of the lightning, and of the magnetic and invisible electric powers, master of the etherial regions, and of all comprised in the material world. All the achievements of man are based upon the communication of ideas, by means of which succeeding generations amplify and perfect the works of their predecessors; and all communication of ideas is impossible without the $\lambda$ ó $\gamma o s$, which both Greek and Hindû so justly reverenced.

But as all animate creation emits sound, how shall we discriminate the human sounds so pregnant with germinative power, from the sounds of the horse, the dog, the elephant, \&c.? This presents at once the highest problem in linguistic science, and in a few words we boldly state that there is no natural and intrinsic difference between the sounds of the brute and the words of the man,-the difference is one
merely of application. The human mind is what botanists would call a "sport" in animal creation, bringing with it the sense of dissatisfaction or discontent. The lower creation are content in their operations, and are free from a restless impulse to change; man alone is for ever discontented, and is for ever striving to improve or change his condition. At first a mere mental idiosyncrasy fostered by the material (or physical) advantages it procured, and developed by succeeding courses of descendants, each of which by employment of the faculty would exaggerate it by the common laws of nourishment and growth, - as the blacksmith's arm, the dancer's leg, and the philosopher's brain are exaggerated by the hypertrophy arising from constant use. Man was first differentiated from the brute by a peculiar, and, may be, accidental ${ }^{\text {a }}$ modification of cerebral matter, which under favourable circumstances succeeded in establishing itself as a permanent condition of being. It is from this peculiarity, which at first need have been but little above sensation, that man, emerging from his primal animal character, would feel the advantage of association, and association would of itself occasion the natural sounds he uttered in common with the brute, to be utilized as a means of arresting the attention, or calling to, or urging on associates, these actions being prompted by the acquired desire for change. It is generally

[^65]admitted, that all arts and sciences had their origin in the pressing wants of barbarous society ; and it is easy to see that language also is only an "accomplish-ment"-(it is never inherited, but always personally acquired)-which was gradually brought to the state in which we find it. It is not peculiar in its liability to change; for the whole realm of nature and of art continually progresses. The animals and plants of to-day are not the same as those of the geological epochs,-the men of to-day are not the men of only 2000 years ago,-not only are they changed in language, but in habits, dress, food, and general appearance. "The analogy," says Bunsen," " of the development which proceeds from inorganic to organic life, and in organic life from unconsciousness to consciousness and individuality, with the development of mind, as demonstrably exhibited in the progress of language, that is to say, in the history of the deposit of mind, is very striking." That great scholar then divides language into a primitive and inorganic or crystalline formation, every word having the power of totality in it, being neither noun, verb, nor attribute; a secondary or vegetable formation, in which words exhibit a power of change according to genera and species ; and he shows that "finally, the words of the spirit, denoting the relation of one thought and sentence to another, are developed, and give expression to the agency of the mind upon itself." Professor

[^66]Pott held it to be conceivable that the developed and artificial languages were preceded by a state of the greatest simplicity and entire absence of inflexions; and Professor Max Müller adds that "it is absolutely impossible that it should have been otherwise." " The simple uninflécted sounds are the primordial onomatops which man first interchanged with his fellow man, as a means of communicating his sensations. How long such a process was continued before the animal ejaculations were consolidated by habit into conventional vocal telegraphy it is impossible to say ; but thus much is clear that the first sound uttered for the purpose of communicating perception or desire, as differing from mere animal sensation, was the first Word-the basis of man's pre-eminence-the perennial spring of sublime thought-nay, the very life of thought itself-the mighty and soul-giving $\lambda$ ó $o$ os!

[^67]
## APPENDIX.

## The Languages of Dardistan, and their bearing on the present inquiry.

No account of language can now pretend to scientific completeness which fails to notice, and neglects to incorporate the results of the discoveries of Dr. Leitner into the dialects of Dardistan, Kashmir, Little Thibet, Ladak, Zanskar, \&c. That eminent linguist has laboured earnestly and enthusiastically,-enduring privations, undergoing fatigue, hunger, exposure,and has risked life itself by wandering among hordes of semi-savages in order that he might contribute sound and perfectly reliable material to philological science.

The scene of Dr. Leitner's labours is one of the greatest interest, for all history and tradition point consentiently to that district as the original home of the Aryan race, if not the very birth-place of the human kind. The result of Dr. Leitner's researches strikingly confirms the traditions of antiquity in this
respect;-it is scarcely too much to say that the facts which that excellent scholar has brought to light are of themselves sufficient to establish the Central Asian origin of the Sanskritic family of languages even had not a single tradition of the circumstance lived to our days. Dr. Leitner says, and he has excellent grounds for so saying, "it is my impression from an inquiry into Dardu verbal and other forms that these languages are the dialects from which the Sanskrit was perfected." The extreme importance and engrossing interest of Dr. Leitner's discoveries will be readily admitted if there be only prima facie grounds for such a conclusion ; but, as will be seen further on, the Dardu dialects possess an inherent interest apart from this consideration.

We have reserved what we have to say on this matter for a separate heading, because the discovery of the languages of Dardistan is altogether too recent an event to lead us to expect that incidental references to the dialects of that district would be readily apprehended by our readers. We take it that words cited from the Shinâ, Arnyiâ, Khajunâ, Kalâsha-Mânder, \&c., without further explanation, would convey but little meaning to the minds of even well-informed philologists. We therefore propose to say a few words here that will tend to show how admirably the languages Dr. Leitner has brought to light support and illustrate the conclusions to which we have already arrived.

But first let us fix these languages in space. The district occupied by the Dardu races is close to the
spot to which legend and history alike point as the very cradle of the human race,-a phrase which means, if we may venture to translate the language of mythology into the language of philosophy, that the spirit of enterprize and of unsatisfied desire which has spread civilization over so large a portion of the earth, had its rise among the people who, in extremely antique times, occupied the spot which is now known as Dardistan. This small triangle of land at the extreme north of Affghanistan, with Badakshan on the one side and Kashmîr on the other, from its inaccessible and remote position, was far out of reach of the general current of history, and its inhabitants may fairly be supposed to have there lived on unaffected by the progress of their congeners, and even unknown to all but the wild tribes of Tatary and Turkistan.

Having thus indicated the position of these Dards upon the map, we will now, before proceeding to fortify our former statements with the help of their languages, bring forward a few facts calculated to establish the true position of these dialects in the complex of human speech. There can be no doubt that the Dardu races are members of the Aryan family,-the vocabulary and grammar both proclaim it; and when we reflect on the isolated position of the Dardu tribes and their unsophisticated manner of living, which there is every reason to believe has been unaffected by the whirlwind of changes that has again and again swept over more accessible portions
of the earth, we shall then see that the languages of these primitive tribes furnish material of the first importance as regards the inquiry upon which we are now engaged. In support of these assertions we will compare some Dardu words with their equivalents in Sanskrit, Hindî, \&c., which will, we think, make manifest the interesting nature of Dr. Leitner's labours. We shall first give the ordinary numerals.


It is clear from an examination of this list that the Dardu languages can in no respect be considered as derived from the spoken languages of the north of India, as many of the forms are obviously more primitive than those now current in Hindustan. By the word "primitive" we do not mean simply more like the Sanskrit prototype, because we are fully persuaded that the Sanskrit itself is a derivative, or, more properly, a scholarly elaboration of some barbarous tongue, the living form of which may yet be discovered, if, indeed, the languages we are now treating of be not the very same. Our use of the word "primitive" implies that the Indian forms of words are phonetic corruptions of more complex forms which are found in Sanskrit and also in Dardu; and therefore the latter could not be derived from the Hindî, \&c., on the common sense principle that a word having become corrupt, cannot, by further corruption, approach nearer to the form whence it started. Hence it follows that the Ghilghiti átsh, the Astori asht, the Kalásha asht, and the Arnyiá osht, approaching closely to the Sanskrit ashtan, represent. a phase of language decidedly more antique than the Hindî and Gujaratî $a t h$, \&cc. Similar reasoning applies to the Ghilghiti tré, the Kalásha trè, and the Arnyiá tróy, which, by retaining the letter $r$ found in the Sanskrit tri, prove incontestably that they could not have been derived from the Hindî and Urdû tin, or the Bengali tin, or from any other dialect in which that letter had once been elided. Even the Gujaratî taran, although retaining the $r$,
is obviously no channel by which tri could become trè. In Arnyiá, as a remarkable fact, we meet with the letter $t$ only as the exponent of unity, which our previous inquiry (p. 184) led us to announce as the ultimate base of all the many diverse words found upon the earth with that meaning. We have now a distinctly Aryan language preserving, or presenting, a form the onomatopic simplicity of which rivals the Chinese.

But it may not unfairly be said that the digits form but a slender foundation on. which to establish the independent character of a whole cluster of languages. To show that all parts of the Dardu languages present features of a more primitive nature than do the vernaculars of Hindustan, we will cite other examples of nouns, adjectives, and verbs. And, first, we will compare the substantive verb as follows :-

$$
\text { As }=\text { " to exist." }
$$

| $\left.\begin{array}{l}\text { Bengalî. } \\ \text { Hindî. } \\ \text { âchchhi } \\ \text { âchchhis } \\ \text { âchchhe } \\ \text { âchchhi } \\ \text { âchchho } \\ \text { âchchhen }\end{array}\right\}$ Quite lost. |
| :--- | :--- |

asmi, amhi
asi
atthi
asma, amha
attha
santi

\[

\]

$$
\begin{gathered}
\text { Prákrit. } \\
\cdot \cdot \cdot \\
\text { • • • } \\
\text { atti, achchhi } \\
\text { • • • } \\
\text { achchhadho } \\
\text { achchhanti }
\end{gathered}
$$

corrupted to atti or achchhi，and now throughout a large part of Hindustan has ceased to be employed at all．
The verb＂to be，＂＂exist，＂tells a very similar tale．In Sanskrit the base is bhû，A．S． beon，Gaelic beo，＂alive，＂Irish bioth，＂life，＂Gr．Bıos，＂life，＂closely akin to the French The present tense of this vie，the Latin vita；$v$ and $b$ being frequently interchangeable．

 \begin{tabular}{lll}
thus conjugated in the Khajuná language：－ <br>
\& \multicolumn{3}{c}{ Bhu 三＂to be，＂．} <br>
\& Khajuná． \& Sanskrit．

$\quad$ Prákrit． 

thus conjugated in the Khajuná language：－ <br>
\& \multicolumn{3}{c}{ Bhu 三＂to be，＂．} <br>
\& Khajuná． \& Sanskrit．

$\quad$ Prákrit． 

thus conjugated in the Khajuná language：－ <br>
\& \multicolumn{3}{c}{ Bhu 三＂to be，＂．} <br>
\& Khajuná． \& Sanskrit．

$\quad$ Prákrit． 

thus conjugated in the Khajuná language：－ <br>
\& \multicolumn{3}{c}{ Bhu 三＂to be，＂．} <br>
\& Khajuná． \& Sanskrit．

$\quad$ Prákrit． 

thus conjugated in the Khajuná language：－ <br>
\& \multicolumn{3}{c}{ Bhu 三＂to be，＂．} <br>
\& Khajuná． \& Sanskrit．

$\quad$ Prákrit． 

thus conjugated in the Khajuná language：－ <br>
\& \multicolumn{3}{c}{ Bhu 三＂to be，＂．} <br>
\& Khajuná． \& Sanskrit．

$\quad$ Prákrit． 

thus conjugated in the Khajuná language：－ <br>
\& \multicolumn{3}{c}{ Bhu 三＂to be，＂．} <br>
\& Khajuná． \& Sanskrit．

$\quad$ Prákrit． 

thus conjugated in the Khajuná language：－ <br>
\& \multicolumn{3}{c}{ Bhu 三＂to be，＂．} <br>
\& Khajuná． \& Sanskrit．

$\quad$ Prákrit． 

thus conjugated in the Khajuná language：－ <br>
\& \multicolumn{3}{c}{ Bhu 三＂to be，＂．} <br>
\& Khajuná． \& Sanskrit．

$\quad$ Prákrit． 

thus conjugated in the Khajuná language：－ <br>
\& \multicolumn{3}{c}{ Bhu 三＂to be，＂．} <br>
\& Khajuná． \& Sanskrit．

$\quad$ Prákrit． 

thus conjugated in the Khajuná language：－ <br>
\& \multicolumn{3}{c}{ Bhu 三＂to be，＂．} <br>
\& Khajuná． \& Sanskrit．

$\quad$ Prákrit． 

thus conjugated in the Khajuná language：－ <br>
\& \multicolumn{3}{c}{ Bhu 三＂to be，＂．} <br>
\& Khajuná． \& Sanskrit．
\end{tabular}$\quad$ Prákrit．



Here again we find the full consonant remaining in a Dardu language when it has been softened to the letter $h$ in Prâkrit and the modern languages of India (cf. Mahrattì honen, " to be").

We will now give two tenses from two verbs in the Kalásha dialect which will satisfactorily establish the close accordance of the conjugational system of the Dardu languages with that of the Sanskrit. The verbs we select are tshishtik, " to stand," and juk, "to eat." The $i k$ or $u k$ in these words is the sign of the infinitive, leaving tshisht and $j$ as the respective bases: of these tshisht is clearly the same as the Sanskrit tishth, the base of what are called the "conjugational" tenses of the verb stha, "to stand"; and the $j$ is the Sanskrit $a d$, English eat, the $d$ passing into $d j$, and then into $j$, as Deva becomes Jovis (p. 163).

## Kalásha. Sanskrit.

| I stand | a tshishtim | tishṭhâmi |
| :--- | :--- | :--- |
| Thou standest | tu tshishti <br> se tshishteu | tishṭhasi <br> tishṭhati |
| He stands |  |  |
| We stand | abi tshishtik | tishṭhâmas |
| You stand | tuaste tshishta <br> They stand <br> eledrúsa tshishten | tishthatha <br> tishṭhanti |

[^68]Kalásha.
I eat
Thou eatest
He eats

We eat
You eat
They eat
a jum
tu jus
se jui.
abi juk
tuaste júa
eledrús jún

Sanskrit.
admi
atsi $[\mathrm{ad}+\mathrm{si}]$
atti $[\mathrm{ad}+\mathrm{ti}]$
admas
attha [ad + tha]
adanti

There is much phonetic corruption apparent in the above tenses, still the similarity of principle in the two languages is apparent. The past tenses are even more remarkable, because they preserve the initial augment of Sanskrit, which has completely passed away from modern India. The base $j$ now becomes sh by a phonetic change, such as $j a=c h a=s h a$.

|  | Kalásha. | Sanskrit. |
| :--- | :--- | :--- |
| I stood | a a-tshishtis | a-tishtham |
| Thou stood'st. $\quad$ tu a-tshishti | a-tishthas |  |
| He stood | se a-tshishteu | a-tishthat |
| We stood | abi a-tshishtimi | a-tishthâma |
| You stood | tuaste a-tshishtili | a-tishthata |
| They stood. | eledrús a-tshishtani | a-tishthan |
|  |  |  |
| I ate | a-shis [? a + ashis] | âdam [a+adam] |
| Thou atest | tu a-shi | âdas [a+adas] |
| He ate | se a-shu | âdat [a+adat] |

$$
\text { Kalásha. } \quad \text { Sanskrit. }
$$

| We ate | abi $a$-shimi | âdam [a+adam] |
| :--- | :--- | :--- |
| You ate | tuaste $a$-shili | âtta $[a+a d+$ ta $]$ |
| They ate | eledrus $a$-shin | Adan $[a+a d a n]$ |

It is most interesting to find this antique method of forming a past tense still surviving among an Aryan people of Central Asia.

Among nouns, \&c., presenting forms decidedly more antique than those now current in Hindustan we select the following examples. The Sanskrit is placed first, next the Dardu forms, and finally the Pâl̂, Hindî, and other Indian forms.

A "fish," is called in Sanskrit matsya, in Arnyiá and Kalásha matzi,-in Pâlî machchho, in Hindî, machhlî, mâhî, mîn.

A "hand," is in Sanskrit hasta, in Arnyiá hòst, 一 in Pâlî hattho, in Hindî hath, in Mahrattî hatt.

The "head" is in Sanskrit śiras, in Zend śirsha, 一 in Ghilghiti shish, Astori and Kalásha shish,-Hindî sir, Persian sar.
"Lightning," Sans. vidyut, Ghilghiti bitshus,Pâlî vijjuma, Prâkrit vijjû, vijoulû, Hindì bijlí, Mahr. bij.
A "fy," Sans. makshikâ, Ghilghiti matshi, Kalásha mangajı̀k,-Pâlî makkhikâ, Prâkrit machchhiä, Hindî makkhî.
A."bone," Sans. asthi, Ghilghiti āti, Kalásha ati,Pâlî and Prâkrit att hi, Hindî hadḍ̂.

The "eye," Sans. akshi, Ghilghiti atchi, Kalásha $\grave{e}^{t c h}$,-Pâlî achchhi or akkhi, Hindî ankh.

The "sun," Sans. surya, Ghilghiti súri, Kalásha suri,-Prâkrit sujjo or sưro, Hindî sûraj.

The "lip," Sans. oshtra, Kalásha úsht, Ghilghiti onti,-Bengalî oshṭ, Hindî onth.

A "crow," Sans. kâka, Khajuná káko,—Pâlî kadko, Hindî kag.

A "brother," Sans. bhrâtri, Arnyiá birār,-Pâlî bhatiko, Hindî, bhâ-î.

A "daughter," Sans. duhitri, Arnyiá djùrr, Ghilghiti dihh,-Persian dukhtar, Pâlî dhîtâ, Prâkrit $d h \imath ̂-a$, Hindî dhiyâ, dhî, dhîriyd.

A "bear," Sans. riksha, Ghilghiti itch, Kalásha ìtz,-Prâkrit richchho, Hindî rîchh.
"To-day," Sans. adya, Ghilghiti atshu, Astori ash, Kalásha óndja,-Pâlî ajja, Hindî and Mahrattî aj.
"Large," Sans. vriddha, Astori baddo,-Prâkrit vaddhako, Hindî barâ, barhá.
"Small," Sans. kshudra, Khajuná djött,-Pâlî chuddho, Hindî chhota.
"Middle," Sans. madhya, Ghilghiti majja, Arnyiá mújja, Kalásha mósthe (? Sans. madhya + stha, mid-sta-tioned),-Pâlî and Prâkrit majjho, Hindì manjhla or manjhola, Mahrattí máj.
"Behind," Sans. paśchadt, Kalásha píshto, Ghilghiti pittu, Astori pato,-Persian pasîn, Hindî pîchhá.

A careful examination of the above words (which could easily be multiplied) will show that in every
case the Dardu words are more primitive and complex in their character than are the representatives of the Indian vernaculars with which they are contrasted. The Pâlî and Prâkrit forms have hitherto been deemed the oldest forms derived from Sanskrit which we possess supplying a link between the language of the Vedas and the vernaculars now current in India. The labours of Dr. Leitner have now brought to our notice a whole family of spoken languages which approach much nearer to the Sanskrit than anything to be found in the Pâlî or the Prâkrits. It is transparently clear that, if the Dardu languages be not themselves the ancient language from whence the Sanskrit, in common with the north Indian languages, were elaborated, they at least constitute phonetically an intermediate link between the Sanskrit on the one hand and the Pâlî on the other. Upon the latter ground only these Dardu languages are of the greatest interest both to philologists and ethnologists.

A few words will now be given which possess, if possible, still greater interest than those already cited, because the Dardu words preserve forms closely akin to the old Sanskrit, which seem to be entirely lost to modern India. A few of such are the following:"Dog," Sans. swan, Kalásha sheon, Ghilghiti shú. The Bengalî equivalent of this is kukkur, Hindî kûkar or kuttâ, from a corrupt Sanskrit word kukkura of kurkura. When the word śwan is now used in India it is simply the old Sanskrit word artificially revived.
" Earth," Sans. kshiti, Arnyiá tshuti.
" Milk," Sans. kşhîra, Arnyiá tshirr, Kalásha tshìrr, Persian shîr.
"Small," Sans. sûkshma, Ghilghiti tshùno, Astori tshuno.
" Above," Sans. adhi, Ghilghiti adje. Adhi is still used as a preposition in India, but cannot be employed as a separate word. The Pâlì form, as a preposition, is ajjh-.

There is one word in the Dardu languages that suggests a whole history in itself. The word used to express the right hand side is, in the Ghilghiti language, dachini. This word is the same as the Sanskrit dakshina; the Pâlî and Prâkrit dakkhino, the Hindî dakhin or dâhiná. The remarkable fact is that in all the languages of India, the equivalents of dakshina mean not only the right hand side, but also the south; whereas, in the Ghilghiti language, this same word, while still expressing the right hand side, is used to distinguish the north. As we know that the right hand and south were considered identical, because the progenitors of the Hindû people entered India from the west, and advancing westward with the rising sun to the front, they had necessarily the southern country on the right hand side ; so we might infer that the Dards entered the land they now occupy from the east, having the north on the right hand side, the tradition of which still lives among them in this remarkable vocable. If further evidence should strengthen this assumption, it is not unreasonable to
conjecture that the Dards in reality are the representatives of the primitive people from whom those we now call the Sanskrit-speaking races originally separated before penetrating the Hindukush, and before the Vedas were composed, or civilization itself had dawned. It is, furthermore, marvellous that one of these Dardu tribes still calls itself by the name "Arnyiá," which differs only in its nasal twang from "Aryiá" or "Ârya," the well-known name by which the IndoGermanic peoples anciently distinguished themselves. If this ethnographical speculation prove correct, the Dardu languages would present us with a form of Aryan speech closely akin to, and possibly anterior in linguistic stratum than, the Sanskrit language itself; and which assumed its present shape unaffected by anything that took place in India. Whether there be any real ground for these speculations or not, we have undoubtedly made it evident that these interesting dialects are purely Aryan in character, and present forms more antique than those of the vernaculars of Hindustan, and therefore could not have been derived from the latter, but must have had an independent history.

Having thus established the relationship and primitive character of the Dardu languages, it will be evident that the circumstance that the Arnyiá $\hat{\imath}$ is the equivalent of the Chinese ' $i$, and the Sanskrit eka, acquires a special significance. It tells us that these rude people who have, as we have seen, conserved
many forms of an older stratum of language, have also. in daily use as the exponent of unity the very simple articulation which our previous examination of modern dialects had led us to pronounce as the natural onomatop to express it. It is no less remarkable that the same sound $i$ is also used among Dardu people to express "motion to a place";-thus the Kalásha people say aya $i$ for "come, mother" (ay $a=$ mother). . This is precisely what we concluded would be the case among a primitive people; and upon that onomatopio sound has been based the more developed form é, "come," in the Astori and Ghilghiti dialects, identical with the Latin $e-o$, and forming part of the series we have already given on p. 183, \&c. We may thus claim to have tracked to its source the onomatop expressive of motion. The Dardu languages help us, also, to the onomatop upon which the ideas forth, forward, \&c., were erected. This we have suggested (p. 182) is the mere puffing forward of the lips by the expulsion of air; but we adduced in evidence only such derivative forms as the Persian pufidan, "to blow," and the Sanskrit phut, an imitative noise. The Dardu languages, however, present us with the onomatop we are seeking in its simple purity; thus, "to blow" or "puff" is, in Ghilghiti phu tóki, in Astori phu teono, in Arnyiá phu-istai (?), in Khajuná phueti, and in Kalásha phu-she. The syllables tóki, \&c., are the Dardu words for the word "do" or " make;" so that the literal meaning is " make a $p h u$," precisely in accordance with our previous statements. In the

Astori and Khajuná dialects the word "fire" is also expressed by the same sound, no doubt from the puffing, noisy sounds emitted from burning timber.

The same sound $p h u$ or $p u$ is found in words expressive of "expansion" in the languages of Dardistan, just as is the case in India; so that the Hindî phûl, "a flower," is matched by the Ghilghiti phunérr, " a flower," and the Astori púsho, "a flower." As in Sanskrit we find that a fruit, or that which expands out of the flower, represented by the sound phala, so do we find in Ghilghiti the same idea expressed by phamúl, in Astori by phalamúl, and in Khajuná by phamùl. A particular kind of fruit, "an apple," is called in Ghilghiti phalá, and in Astori phaló. All these words are obviously connected with the Sanskrit phala and phalya, and to the other words previously given under the word "Flower," that have a general sense of swelling, extension, or spreading out. The Dardu words for a "leaf," a spread out surface, as shown in the Ghilghiti patu, the Astori pàttu, and the Kalásha prón, help us to further examples to add to those given on p. 176. To the Hindî forms there given we may add the words pâtî, palla, parn, pannâ, pân, all of which mean "leaf," and show how constantly a $f l$-at or in- $f a$-ted thing was expressed by some equivalent of $f l$ or $p \cdot l$.

Turning to another onomatop, the history of which we have sketched at p. 26 et seq., we find the Dardu languages express the throat and its operations by
a guttural noise, which we represent by $\cdot g \cdot$ as an ultimate base. The verb "eat" is in Ghilghiti khà, and in Astori kha, closely allied to the Hindî khâ-nâ and the Sanskrit base $k h a \hat{d} d$. In the Introduction our object was merely to sketch the process of wordformation as revealed by our method of investigation. We made no attempt to trace the words there adduced through other than obvious channels; so that it may be as well here to mention that our view of the guttural origin of words meaning "throat," \&c., is not deduced solely from the few examples there adduced. The following Sanskrit bases, all of which mean "eat," "bite," are sufficient to show that we could say a great deal more on this subject:-With the $g$ initial, grî, gûr, gal, gras, glas, ghas; with the $g$ hardened to $k$, and the final sibilant changed to a cerebral, krid, kud, kad, khed, khet ; the cerebral changing to a dental, khâd khad; and softening the initial, kshad; the initial still further softened to a palatal (as in the Eng. chew, Germ. käuen) gives us char, charv, chash, and the series cham, chham, jam, jim, jham, which are, obviously, only different intonations of one word. All these guttural exponents of the act of eating and swallowing suggest themselves as congeners of the Dardu form kha, and give rise to tribes of derivatives such as the Sanskrit khâdana, "food," khddin, " hiting," \&c., \&c., and also the base khand, "to bite," "to chew up," and afterwards, metaphorically, "to break," which then gave birth to the vocables khanda, "a piece," "portion" (literally Q 2
"a bite"), and khandana, "destroying," " breaking into bits." Possibly, also, the base khan, "to dig," or "incise," with its derivatives khani, "a mine," Hindî khâ-î, "a ditch," \&c., arises from the same guttural base, as the gnaw-ing of food would not be inaptly represented by the gnawing or scratching into the ground in the very early days of engineering operations. Thus we here, by quite an independent process, arrive at the same conclusion as that given on p. 48, where we show that $\gamma \rho \dot{a} \phi \omega$, "to draw" or "scratch," is a derivative of grî," to eat;" and the change of meaning is not so great as that which turns the French goût, Italian gusto, Latin gustus, into the English dis-gust.

In support of our analysis of the word "Law," the Dardu languages offer us several words of much interest. The Arnyia, for instance, offers Liyinni for "the tongue," like the Latin lingua (p. 143); and that which is smooth or po-lish-ed is called, in Kalásha, Lansht (Gr. גéa, p. 144). The " morning," when everything brightens and shines, is called, in Ghilghiti, loshtáki, and in Astori lóshte; and the light of a candle is called in Kalásha vutsh (see p. 152). The same transference of the qualities of the object to the subject, which we remarked upon at p. 146, seems to underlie the Arnyiá Lole, "see, look," and the Ghilghiti lishí, "spy." In the same way the alliance between that which is light or brilliant and that which is light or slight (see p. 136), is shown by
the Ghilghiti lofko and Arnyiá Lótz, both meaning "light," " not heavy;" while the lax character of the base $\cdot l \cdot(\mathrm{p} .132)$ is exemplified by the Ghilghiti word Láto, "low."

The licking and smearing action of the tongue, giving expression to the ideas of "painting," \&c. (see p. 144) is found in the Ghilghiti uryyar and Astori uкннé, "to write" (Sans. likh); and $l$ becoming $r$, as we have so frequently seen, accounts for the Ghilghiti ranyito and .Astori ranyíto, "colour," "paint" (Sans. ranj, langh).
A long chapter might be written upon this form of the base $\cdot l$, as the Dardu forms for a particular kind of colour, "red," are eminently suggestive. The name of this bright, light, and vivid colour is, in Ghilghiti loìlu, in Astori lolo, and in Kalásha latshéa,-suggesting at once the Persian lall, and the Sanskrit lohita or rohita, the last word having also the meanings " blood," "light-ning," and "in-flam. mation." This word rohita is of itself sufficient to show how words acquire new meanings with the growing necessities of mankind; and it, furthermore, enables us to see the bond of union between itself and such other Sanskrit words as rajas," the bright sky," rajat, " white," rajaka, "a washerman," one who brightens soiled garments ; Ranja, "a colour;" ranj, "to be attached," "de-light-ed," or " brightened" (p. 147); Ranjana, "delighting," "colouring;" Ranjaka, "what stimulates pleasure;" aati, "passion ;" вama, "a lover;" ramana, "delighting;" rasa,
"taste," "love," "lust," what is lus-cious or lustrous; Rasmi, "a ray of light" (Lat. Laqueus); Rukma, " clear," " bright," " gold;" noka, " light." Closely akin to these ideas, all of which are connected with that which is light, bright, vivid, and pleasing, are other words also arising from the idea of brightening or the making bright, lustrous, or glowing ; such as the Sanskrit Rosha, " anger," from rush, "to be angry" (cf. rûsh, "to decorate," "paint"); noshana, "quicksilver"; Ru or Rud, "to be angry"; Ruj, "to burn," "glow," "be in pain;" and roga, "disease." All these ideas are fairly deducible from the ruddy glow of anger, passion, or mental burning, and of that which is light or bright. If further evidence were needed it is supplied by the Sanskrit word lajja, "shame," "bashfulness," from the base laj, "to be ashamed," deduced from an older form laj, "to shine," or "fry," "stew," " burn." We need not pursue this matter any further. Any oriental scholar will perceive the whole vocabulary of derivatives that flow from these suggestive bases; and that the argument we have sketched affords excellent evidence of the primal unity of raksh, "to rule," and laksh, " to shine" (p. 154).

We will add a few more words from the interesting languages of Dardistan in illustration of other statements made in the text. The Ghilghiti má, Astori mú, Arnyiá $m a$, Kalásha mái, and Khajuná mî, show that these languages recognize $\cdot m \cdot$ as a fitting
exponent of personality, " me , my " (p. 35); and the Ghilghiti tú, tùs, the Astori tù, the Arnyiá tú, and the Kalásha tái, express that which is more remote from self by the consonant $\cdot t$, "thee, thou, that one" (see pp. 36, 165). Another letter may here be mentioned as suggesting a history of its own, although not treated in the text. In Ghilghiti anú means "this," ani means "here," and anu means"he (if near)." We find the letter $\cdot n$ ' with similar meanings in Astori and Khajuná ; and throughout the inflexion of Ghilghiti pronouns this letter $n$ imparts a sense of nearness to every form of the base, which strongly reminds the inquirer of the Sanskrit nah, "to bind," the Latin ne-xus, and all that is near, nigh, and next in our own language.

In support of our etymology of Jovem (p. 163), we find in Ghilghiti des, and Astori diès for "day," forms which more closely approach the Sanskrit divas than does the Hindî din. "Heaven" is, also, in Kalásha dí, like the Sanskrit $d i v, d y u$, and dyut. Finally the word $g a$, meaning "also," "beside," in Ghilghiti, is also added to words as the equivalent of the English "and," showing that such ideas as "beside," "beyond," underlie the copula "and" (see p. 39), and not the notion of "equality," " evenness," as suggested by Mr. Wedgwood.

Another feature of much interest, to which we can here only allude, is the presence of pure onomatops in the languages of Dardistan, such as the verb phu-tóki, " to make a phu," "to blow," and ho-tôki, "to make
a ho,"-" to call" (cf. the Sans. hwe, "to call"). These are really the kind of sounds from which first language, and then languages, have been developed. The sound ho as the exponent of "noise" naturally came to be the name of particular noise, so that, in Ghilghiti, this same sound ho is used for the noun "voice" as well as for the verb "call." Possibly tshukk tóki," to make tshukk," " to be silent," "hush," is of similar character. These pertinent facts are more conclusive as to the natural onomatopic origin of language, than any amount of abstract reasoning; and make the process by which words were formed patent to the sense.

In conclusion we sincerely hope that Dr. Leitner will continue his researches into the unknown districts of Central Asia. He has already placed within the reach of scholars eleven languages which were, before his recent publications, either entirely unknown, or known only by name. The material which Dr. Leitner has already collected from the district of Dardistan, and which will ever reflect honour on his name, is, as we trust we have shown, of the greatest interest and value to Comparative Philology, and to the history of the human race.

## INDEX TO ONOMATOPS.

[For references to the text in explanation of the examples her cited, see the Index Verborum.]

$$
\mathbf{G}=\text { " throat." }
$$

Gonomatop of throat, swallow, eat, bite, incise, seize, grasp, drag, draw, engrave:-gal, "eat," Sans.; gula, gustus, Lat.; gueule, Fr.; greedy, gorge, gnawing, disgust, Eng.

G is aspirated :-ghas, " eat," Sans.
G becomes K :-krid, kad, "eat," Sans.
G becomes K aspirated:-kha, "eat," Astori; kha, "eat," Ghilghiti ; khad, " eat," khand, " bite," Sans.

G becomes CH:-chen, Eng.; char, chash, cham, "eat," Sans.

G becomes J :-jam, jim, jham, " eat," Sans.
G in other senses:-grip, give, Eng.; grah," take," Sans.; rpaфן, Gr. ; scribere, Lat. ; écrire, Fr.; scribble, describe, Eng. G ultimately lost:-write, Eng. ; hri, " take," Sans.
I=" here."
a definer of that which is proximate-self-unity-motion towards the speaker-motion in general:-i, " one," Arnyiá; 'i,"" one," Chin.; I, Eng. ; i, " go," Sans.; iha, " here," Sans.; ibi, idem, Lat.; ici, Fr. When aspirated, hi! hi! Eng.; hay, " noise," Sans.

I becomes E:-e, "this," Beng. ; ei, " go," Eg. Hier. ; eka, " one," Sans.; eo, Lat.

I becomes $\mathrm{Y}:-y u$, " I," Chinese ; yak, " one," Pers. ; yîn " thus," yahân, " here," Hindî.

I changes to other vowels:-an, ace, Eng.; un, Fr.; wei, " one," Kassia.

R $+\mathrm{I}:-r i, "$ go," Sans.; river, Eng.
$\mathrm{V}+\mathrm{R}+\mathrm{I}:-v r i, "$ surround, choose," Sans. (vi, prep. "about," Sans.); vridh, "increase," Sans.; vrish, "rain," Sans.

VRI becomes VAR :-varsha, " cloud," Sans.
VRI becomes OR:-orbs, orbit, optare, ordia, Lat.

$$
\mathrm{L}=" \text { lick." }
$$

onomatop of tongue, and the tongue's operations, licking, smearing, shining, brightening, liking, attaching, binding:-lai, "tongue," Cochin-Chinese; lih, " lick," Sans.; lap," speak," Sans. ; lu'ab, "viscosity," Arab. ; likh, " write," Sans.; lip, Eng.; light, Eng.; relish, Eng.; leash, Eng.; link, Eng.; la, "law," Cochin-Chinese; lex, Lat.; loi, Fr., \&c.

L becomes R:-ruch, " shine," Sans.; ranj, " attach," Sans.; rub, Eng. (p. 147).

S + L :-slime, Eng.; sling, Eng.; slesha, "union," Sans.; salive, Fr ; saliva, Eng.
$\mathbf{S}+\mathbf{P}+\mathbf{L}:-$ splice, Eng.; splayed, Eng.
$\mathbf{G}+\mathbf{L}:-\gamma \lambda o \sigma \sigma \alpha, \mathbf{G r} ;$ gloss, glide, glue, grip, Eng.; argilla, gelidus, Lat.; glisser, gelé, Fr.
$\mathbf{K}+\mathbf{L}:-k i ̂ l$, " attach," Sans. ; cling, clen, clay, clamp, cramp, Eng.; coller, Lat.

P + L :-plain, prain, " embrace," Sans.; plaister, pleat, plug, plot, Eng.; plecta, Lat.

B $+\mathrm{L}:-b l o c$, Fr.; block, blot, braid, brace, Eng.

F+L:-flag, fleece, flossy, fold, fail, fool, foul, false, Eng.
V + L :-vale, vile, wool, Eng.; vallée, Fr.
M +L :-mlaid, mraid, " foolish," Sans.
H +L :-hlot, Anglo-Saxon.
Z $+\mathbf{L}$ :-zalq, " tongue," Arabic.
Vowels preceding L:-il, "lie," Sans.; el, "place," Sans.; 'als, " sticking," Arab. ; oleum, Lat.

$$
\mathbf{P}=\text { " puff." }
$$

Ponomatop of puffing, blowing-a forward puff of breath, motion forward, extending, filling, broadening :-phu, "blow," Dardu; puff, Eng.; phît, "puff," Sans.; pufídan, " blow," Pers.; pulsum, Lat.; push, Eng.; [foux, O. Fr.; pouls, Fr.]

P becomes B:-blon, breath, Eng.
P becomes $\mathbf{F}$ :-fore, forth, Eng.; fí, "for," Arab.; fuff, "puff," Scotch.

P becomes V:-va, vij, " blow," Sans.; vâyu, "air," Sans.; vent, Fr.; wind, Eng.
$\mathbf{P}+\mathrm{R}+\mathrm{I}:-p r i$, " fill out" (lit. "go forth"), Sans.; pra, "forward," Sans.; per, pro, Lat.; prd, " fill," Sans.; par, " completed," Pers. ; pair, " fill," Sans. ; pall, " nourish," Sans.

PRI becomes PL:-plus, Lat.; plump, Eng.; emplir, Fr.; pleasure, Eng.; platt, Germ. ; plank, pallet, Eng.

PRI loses its liquid:-pulsh, " enlarge," Sans.; púsho, "flower," Astori; pahnd, " broad," Pers.; pokhnd, "nourish," pemî, " lover," pet, " belly," pan, "leaf," Hindi ; pyâr, " affection," yâr, " friend," Pers.

S+PRI :-spri, " please," Sans. ; spread, spade, span, expand, Eng.

PRI is aspirated:-phalya, " flower," Sans.; phûl, " flower,"

Hindî; phala, " apple," Ghilghiti ; phar, " fruit," Hindî; phamul, " fruit," Khajuná; phânda, " belly," Sans.

S+PRI aspirated :-sphal, sphar, "increase," sphand, "expand," spund, " play," Sans.
PRI becomes BL:-bloom, blossom, bulb, blade, boil, ball, belly, Eng. Also BR :-broad, board, Eng.; and loses its liquid :bauch, Germ.

PRI becomes FL:-fill, flower, floor, tin-foil, friend, Eng.; ansfullend, Germ. ; folium, forma, Lat.

$$
\mathbf{P}=" \text { suck." }
$$

Ponomatop of in-sucking, drinking, nourishment, strengthening, power, lordship :-pî, pá, " suck," payas, " milk," Sans.; $\pi \iota \omega$, Gr.; pino, Lat. ; pînd, "drink," pyâs," thirst," Hindî. Pabulum, Lat.; pad, " food," Pers. ; pasture, pastry, Eng. Power, Eng.; puissant, Fr.; pati, "lord," pitri, " father, the nourisher," putra, "son, the nourished," Sans.; panah, " protector," pir, " old man," Pers.

S $+\mathbf{P}$;-spout, Eng.
S+P aspirated :-sphîti, sphâti, "increase," spháy, "вwelling," Sans.

P becomes B:-bibo, Lat.; boire, Fr.; bee, "the sucking creature," Eng.; ba-tsi, " bee," Japan.; bshey, " bee," Georg.; beer, Eng.

P becomes F :-fung, "drink," Chinese ; food, fodder, father, Eng.

P becomes V, \&c. :-vin, Fr. ; wine, water, Eng.

$$
\mathbf{T}=" \text { that." }
$$

Tonomatop of definition, that which is exterior to self, the second person, the other, there, beyond; as an intensifier, "down":the, he, thee, thou, that, there, two, twice, twisting, twinkling, Eng.

T becomes D :—dwi, "two," Sans. ; duo, Lat. ; duality, duplication, duplicity, diverse, Eng.; div,."twinkle," Sans.; dî, "heaven," Kalásha; day, Eng.; dyo, dyota, "lustre," Sans.; deity, Eng.

T becomes J:-jut, jyut, "shine," jiva, " life,"jyotish, " light," Sans.; joy, jubility, Eng.; jour, Fr.; jocus, Jovem, Lat.

T becomes Z :-zistan, " live," Pers.

4

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## INDEX VERBORUM.

[The language is added in each case, because the same combination of letters has frequently different significations in different languages.
Translations are given of all words of Oriental, and of a few other little known languages.
For 219 equivalents of the word "Father," see pp. 192-199.]

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Très, Fr., 41.
Tri, " three," Sans., 213.
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Troy, " three," Arnyia, 213.
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## U.

U, a base, 159 .
U, " sound," Sans., 159.
Übel, Germ., 134.
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Udra, " other," Sans., 104.
Üks, " one," Esthon., 185.
Ukti, " speech," Sans., 159.
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Up, above, over, Eng., 38, 136
note.
Upiani, "drink," Quichua, 187.
Upper, Eng., 136 note.
Ush, "injure," Sans., 95.
Usht, "lip," Kalásha, 221.

## V.

Vâ, " blow," Sans., 182.
Vach, " speak," Sans., 50.
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Vaḍdhako, "large," Prâkrit, 221.
Väike, " one," Mordvinian, 185.
Vale, Eng., 134.
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Vri, " choose," Sans., 50.
Vri, " go," Sans., 99.
Vri,"surround," "choose," Sans., 49, 134, 161 note.
Vran, "noise," Sans., 162.
Vridh, "increase," Sans., 49.
Vridh, "speak," Sans., 50.
Vrriddha, "large," Sans., 221.
Vṛih, vrimim, "shout," Sans., 50.
Vṛindâraka, "excellent," Sans., 50.

Vrish, " be grand," Sans., 50.
Vrish, " injure," Sans., 95.
Vrish, " rain," Sans., 49.
Vrit, " speak," Sans., 50.
Vrit, " turn," Sans., 49, 99.
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Waisâ, " that-like," Hindî, 97.
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Y, Span., 39.
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[^0]:    * Another Cardinal in London made a sharp remark about this celebrated Mezzofanti: "Perhaps his Eminence knew the fact by consulting a biography."
    ${ }^{\text {b }} P a$ - found in $p a-b u l u m$; and $k a$ - or $c a$ - in $\kappa \alpha-\theta \in ́ \delta \rho \alpha$; -ielle is the termination that marks the Picard patois.
    c Finally, the Cardinal told me that he was just come from Bologna, where he had met several Cochin-Chinese princes, who afforded him a good opportunity for working at his Cochin-Chinese Dictionary. I have never once heard of this work since

[^1]:    ${ }^{\text {a }}$ Plato was the first who introduced the vocable óvouadpróv and $\tau \circ \cup$ övоматоөє́тทข. uthe rify sel ream?

[^2]:    a Dissertation on the Origin of Nations. b Diversions of Purley. e Researches into the Physical History of Man.
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[^3]:    - Vol. iv. p. 133.
    b "Nomina verbaque non positu fortuito sed quadam vi, et ratione naturæ facta esse."-A. Gellius, Noct. Attic. l. x. cap. iv. Naturalia magis quam arbitraria.
    c Science of Language, Part I. p. $370 . \quad$ Ibid. p. 296.

[^4]:    ${ }^{\text {a }}$ Science of Language, Part I. p. 353.
    c Ibid. p. 18.
    ${ }^{\text {b }}$ Ibid. p. 346.
    ${ }^{\text {d }}$ Ibid. p. 53.

[^5]:    a More will be said anon about the origin of words. It is, however, convenient to state here that so keen a thinker as $A$. W. von Schlegel had no doubt on the subject. He says, "As regards invention, I find no difficulty in that either, since in order to comprehend the absolute origin of language, we have no choice between having recourse to a miracle, and conceding to mankind an instinctive power of inventing language."-Trans. Roy. Soc. Lit. U.K. vol. ii. p. 433.

[^6]:    ${ }^{2}$ Once, the great Talma, who was to the French stage what J. Kemble was to the English, said to one of us: "If you shut up your ears when we speak, keeping them open only to hear the buzz, you will remark that there is a continual vibratory sound through that litera canina (R), as Persius used to call it."

[^7]:    a The French, also, rarely content themselves with one oui, they prefer a series, oui, oui, oui ; and in this case, also, the sense of exaggeration is lost.

[^8]:    ${ }^{\text {a }}$ Numerous other such words readily suggest themselves, as the Greek $\gamma о \rho-\gamma \grave{s}, \gamma \alpha \rho-\gamma \alpha \rho i \zeta \omega, \gamma \alpha \rho-\gamma \alpha \rho เ \sigma \mu o ̀ s, \gamma \alpha \rho-\gamma \alpha \rho \epsilon \grave{\omega} \nu$, $\gamma \dot{\rho} \rho-\gamma \nu \sigma \mu o ̀ s$,「ap-raфía (a gurgling fountain in Bœotia); the Latin, gur-ges, gur-gustium, \&c.; the French gar-gote, gar-gotier, gar-gouille, gar-gousse; the English gar-gle, \&c.

[^9]:    a "The Academy," vol. iii. p. 377.

[^10]:    a Pépie has passed entirely into the French "avoir la pépie" = to feel the want of drinking.
    ${ }^{\text {b }}$ Science of Language, Part I. p. $202 . \quad$ e Ibid., p. 215.

[^11]:    s "The Academy," vol. iii. p. 378. This excellent journal always gives the last results of modern scholarship, and its articles are, therefore, of even greater authority on the subjects treated than are the works of the scholars who write them.
    b The same is also true of Chinese and Sanskrit roots. As the Egyptian language is Semitic, and the Chinese Turanian, we have thus the oldest forms of each family of language agreeing in the power to be ascribed to their primitive bases.

[^12]:    a The verb to have or hold is almost peculiar to Europe. Indian languages supply its place in precisely the same way as the Turkish does.

[^13]:    a Science of Language, Part I. p. 205.

[^14]:    - Since this book has been in the press, Dr. Fitzedward Hall has illustrated this truth with remarkable clearness, in his work on " Modern English."

[^15]:    a These words, pot, butt, proceed from the base $p \hat{a}$ or $p \hat{\imath}$, 'to suck,' as is shown by their Hindî forms $p \hat{i} p a$, a barrel or butt, and $p \hat{p} \hat{\imath}$, a tube or pipe. This is seen clearly in the expression "a pipe of wine."

[^16]:    a A collection of 1017 hymns, in Sanskrit, addressed to the powers of nature. This is the oldest book in any Aryan language.

[^17]:    ${ }^{\text {a }}$ Auctor. Philom.

[^18]:    ${ }^{1}$ Logic, ch. xxi., Evidence of the Law of Universal Causation.

[^19]:    a The old orthography of some of the words has been preserved.

[^20]:    a This Section (Sect. I.) is due to the researches of the Count de G.-Liancourt.-F.P.

[^21]:    a As it might be urged that parrots, magpies, \&c., have the organs necessary for articulate speech, and yet do not talk unless specially instructed, we here remark that the wild-wood screams of the parrot, \&c., form the natural language of those creatures. What the parrot is taught is the art of regulating his screams, and bringing them into conformity with a human standard. The bird, in fact, is not taught to speak, but to speak a new language.

[^22]:    ${ }^{\text {a }}$ We mean, of course, the native speaker and his own ideas; not that a barbarous language can express civilized refinements.
    ${ }^{\text {b }}$ Sorrow is the Gothic saurgan, the Norse sorg, connected with the words sough and to sigh, the Sans. soka, allied to swas, to breathe, to heave sighs. Grief, Fr. gréver, Ital. gravare, to oppress; from Lat. gravis, heavy, Sans. guru, with which also is connected the Gothic kauritha, kaurs, A.S. caru, Eng. care, Lat. cura, and that which exhibits tokens of care or is curious. Rodana from rud and ru, to mạke a row, to roar. Âlâpana, from lap, to speak, to sound, to use the lips.

[^23]:    2 Cassiodorus Varro, " De Linguâ Latinâ," iv. 51.

[^24]:    ${ }^{\text {a }}$ Marsh, in his "Lectures on the English Language," pp. 487, 488, gives the following surprising instances of gesture:-"The language of gesture is so well understood in Italy, that when King Ferdinand returned to Naples, after the revolutionary movement of 1822 , he made an address to the lazzaroni from the balcony of the palace, wholly by signs which, in the middle of the most tumultuous shouts, was perfectly understood by the public ; and it is traditionally affirmed that the famous conspiracy of the Sicilian Vespers was organized wholly by facial signs, not even the hand being employed."

[^25]:    ${ }^{\text {a }}$ See what is said about those born deaf in Introd. p. 10.

[^26]:    a This is true theoretically; in practice every root is not subject to every possible grammatical change.

[^27]:    ${ }^{4}$ Science of Language, I. p. $260 . \quad{ }^{\text {b }}$ S. R. vol. 35, p. 720.

[^28]:    a Radices Sanscritx.
    ${ }^{\mathrm{b}}$ Sansk. Diet. 8. v.

[^29]:    a L. Delâtre, La Langue Française dans ses Rapports avec le Sanscrit, Introduction, page 6.
    ${ }^{\text {b }}$ E-sum was the old form for sum, simus for sumus; subj. present was siem, sies, siet, \&c., for sim, sis, sit.

[^30]:    - Wilson's Sanskrit Dictionary, Preface, p. xlii.

[^31]:    a These provincialisms are very numerous in all languages.

[^32]:    a áк $\mu \stackrel{\omega}{\omega}$, used by Homer, is an anvil.

[^33]:    - Continental pronunciation.

[^34]:    a In modern French re-lier means 'to bind' (a book); and re-lieur is a binder.

[^35]:    ${ }^{\text {a }}$ Cf. the Persian langar, a rope for steadying a tent; and the Sanskrit Labhasa, a rope for tying horses, in French longe.

[^36]:    ${ }^{\text {a }}$ Rock $=\log$, by change of $r$ to $l$.

[^37]:    a The dot in this word marks the absence of the base.

[^38]:     of which mean "tail," or vertebral lengthening.

[^39]:    a Thus there is no connexion between these words and $f y$ ! fo! as suggested by Mr. Wedgwood.
    ${ }^{\mathrm{b}}$ By change of $v$ into $f$, then into $p$.

[^40]:    a The $f$ in lift is almost certainly the remains of up, upper, over, by the change of $p$ into $v$ and $f$. The meaning of $l i-f t$ is to attach upwards, to lay-up, to make aloft, to heave, to have, to appropriate. The last two words being based on the Sanskrit $d h r i$ or $d h d$ joined to the same word $u p$, over.

[^41]:    a Is not this termination allied to that in such words as wedlock, know-ledge?

[^42]:    ${ }^{2}$ In Sanskrit $s$ generally becomes $s h$ after any vowel but $a$; the change in the vowel sound would, therefore, produce the change in the final letter of slish.

[^43]:    a "Les langues finnoises contiennent beaucoup de mots ariens."Pictet, Les Aryas Primitifs, vol. ii. p. 346.

[^44]:    ${ }^{2}$ Though employing a different phonic symbol, the Chinese also recognize the connectedness of the ideas illustrated under the word law: thus, she, the tongue; she, to lick; shin, the lip; and she cho, to place, set down.

[^45]:    ${ }^{4}$ Prof. Th. Benfey is of opinion that $h$ is never radical in Sanskrit.

[^46]:    a Benfey's Sanskrit Dictionary, 1866.

[^47]:    a Bunsen＇s Christianity and Mankind，vol．iv．p． 356.

[^48]:    a These dentals need cause no astonishment, they are frequently prefixed to bases. A familiar example is found in t-urn, $t$-our and $t$-urris, all from the Sans. vri, " to go round," the parent of both wire and tower.

[^49]:    a It is noteworthy that in Arabic, also, traces of this onomatop are seen in rafi', one who raises or exalts ; ráff, a preserver; ráa, guarding, a prince ; rájiḥ, excelling : ra-ab, a chieftain; rabb, ruling, governing; ribabat, lordship, dominion. Also in the Armenian rab-bud, a chief. Rab-nag

[^50]:    2 Cf. the Fr. brouter l'herbe, Eng. browse.

[^51]:    ${ }^{\text {a }}$ See p. 108, about this change of $s h$ into $k h$.
    b The insertion or omission of a nasal being optional, see p. 106.

[^52]:    ${ }^{\text {a }}$ The short vowel conveying an idea of tenuity, as in thin, \&c.

[^53]:    a The Sanskrit pâl will be mentioned anon.
    ${ }^{b}$ The tenuis becomes, frequently, spiritus asper in Persian; thus the English grip (Sans. grabh) is, in Persian, girif-tan.
    c Cf. the series of bases containing pri on p. 178.

[^54]:    a We may notice here the small importance of vowels as a means of discriminating bases. Fol- is the same as pul and pal and pil: the vowel may even be elided altogether, as in $f l$-at and trè- $f$-e, above given.

[^55]:    ${ }^{\text {a }}$ This base is considered by most Sanskrit scholars to be the causal form of $p a$, to preserve, from $p i$, to drink, to nourish; but the peculiar insertion of $l$ in the causal of the verb $p a \hat{a}$, shows that the base arose by the conversion of $p r i$ into par, then into pal and pâl.

[^56]:    a By some such changes as the following:-pri becoming par, then pal, and fal and fad and fand, then vent(re); the $t$ softening to $s$, would make vens-, whence panse. More probably panse came directly from the Sans. phanda, the parent of the Hindî pet.

[^57]:    ${ }^{\text {a }}$ A probable series of phonetic changes being-pri, pîr or $p \hat{u} r$, pul, phall or pál, phall, phad, phand, sphand. See p. 106 for change of $l$ to $d$.

[^58]:    a The argument that follows shows that the distinction between demonstrative and predicative bases, contended for by Prof. Max Müller, has no existence in fact.
    ${ }^{\mathrm{b}}$ The $h$ in these words stands for an ancient sibilant, found in the Sans. sa, Lat. sibi, still surviving in the English she, though lost in $h e$, and dentalized in the (Sans. tad). The sibilant is a definer of the proximate, "the this;" the dental defines that which is more remote, " the that."

[^59]:    ' a The base of this word, and, therefore, of the other Semitic forms ani, ana', nek, \&c., is proved to be a vowel both by the Hebrew suffix $-\hat{\imath}$, and also by the personal termination of verbs in the Hieroglyphs. In the latter case it is articulated as $a$; thus $M^{e}{ }^{R}$, to love, $\mathrm{m}^{\mathrm{e}} \mathrm{R}-a, I$ love; so ${\Delta \mathrm{T}^{\mathrm{e}} \mathrm{W}-a, m y \text { father. }}^{2}$
    ${ }^{\text {b }}$ Sounded like the English (m)eye.

[^60]:    a M. Pictet, in "Les Aryas Primitifs," says (p. 348) that the bases $p a$ and $m a$ are "répandus au loin dans le monde entier."

[^61]:    - "Words are living powers, are the vesture, yea, even the body, which thoughts weave for themselves."-Trench, The Study of Words, 4th ed., p. 2.

[^62]:    a "We cannot reason without words."-Bunsen, Christianity and Mankind, vol. iv. p. 127. The same author, very inconsistently, in the preceding page speaks of language as "the product of reason."
    ${ }^{\text {b }}$ Diversions of Purley, vol. i. p. 38.

[^63]:    a Diversions of Purley, vol. i. p. 51.

[^64]:    ${ }^{\text {a }}$ See the remarks of Dr. Dan. Wilson, quoted p. 46.

[^65]:    "The word " accidental" is here employed in the sense in which it may be said of an unusual or monstrous vegetable growth.

[^66]:    a " Christianity and Mankind," vol. iv. p. 134.

[^67]:    a Science of Language, Part I., p. 260.

[^68]:    a This word brings to mind the Turkish anlar, "they." If it be the same word it offers a notable instance of mixed Grammar.

