Language and Thought

Author(s): Mr. Sweet

Source: *The Journal of the Anthropological Institute of Great Britain and Ireland*, Vol. 6 (1877), pp. 457-482

Published by: [Royal Anthropological Institute of Great Britain and Ireland](#)

Stable URL: <http://www.jstor.org/stable/2841098>

Accessed: 15/06/2014 06:19

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Royal Anthropological Institute of Great Britain and Ireland is collaborating with JSTOR to digitize, preserve and extend access to *The Journal of the Anthropological Institute of Great Britain and Ireland*.

<http://www.jstor.org>

places for testing the range of vision by their means. To meet this difficulty, the Anthropometric Committee thought it advisable to recommend a dot of one-twentieth of an inch in diameter only, which, being but one-fourth as wide as the other, would subtend the same angle at one-fourth the distance, and so be far more applicable under the circumstances in which numerous persons who might feel inclined to assist in this inquiry are placed.

Col. LANE FOX said, in reply, that the matter referred to by Dr. Lawson respecting the size of the test dots was a purely practical one; the small dots had been used by him at first, but he abandoned them for the reasons stated: 90 or 95—say 100—feet was the utmost distance that could be required for the use of the larger dots, and this could generally be obtained out of doors. It did not appear to him desirable that the test should be taken indoors, as the distance depended upon the light, and the return would resolve itself into one shewing the amount of light admitted into people's houses. He felt convinced that the greatest difficulty to be overcome in obtaining useful returns consisted in securing uniformity of test, without very strict attention to which the results would be misleading.

Mr. Sweet then read the following paper:

LANGUAGE *and* THOUGHT.

THIS paper is mainly based on one read by me before the Philological Society of London in the summer of 1876, under the title of "Words, Logic, and Grammar." It was suggested to me by a distinguished member of the Anthropological Institute, Mr. E. B. Tylor, that the questions raised by me might prove interesting to anthropologists as well as philologists, and I gladly acceded to the request of that body to read a paper on these subjects, with especial reference to anthropology. I have, accordingly, endeavoured to divest my original paper of all unnecessary technicalities, and by fuller treatment of what might otherwise be obscure to those who are not conversant with the details of philology, to make my exposition as clear as possible.

I regret very much that my original paper was written in complete ignorance of the works of Steinthal. Just before sending my copy to press, I accidentally came on his "Logik, Grammatik, and Psychologie," and was glad to find my views of the relations of grammar to logic fully confirmed. I have with great difficulty secured a copy of this work within the last few days, and regret extremely that my prejudices against German linguistic mysticism (which, in many cases, I must claim to be well founded), prevented me from studying it before.

VOL. VI.

K K

I can only hope that my observations, imperfect as they are, may be found to be not entirely devoid of originality, and that they may, perhaps, be the means of inducing some of the members of the Anthropological Institute to investigate for themselves questions which belong almost as much to anthropology as to linguistic science.

Introduction.—One of the most striking features of the history of linguistic science as compared with zoology, botany, and the other so-called natural sciences, is its one-sidedly historical character. Philologists have hitherto chiefly confined their attention to the most ancient dead languages, valuing modern languages only in so far as they retain remnants of older linguistic formations—much as if zoology were to identify itself with palæontology, and refuse to trouble itself with the investigation of living species, except when it promised to throw light on the structure of extinct ones.

Philologists forget, however, that the history of language is not one of decay only, but also of reconstruction and regeneration. These processes are of equal, often more importance than those by which the older languages were formed, and, besides, often throw light on them. They have further the great advantage of being perfectly accessible to the observer. Thus the growth of a language like English can be observed in a series of literary documents extending from the ninth century to the present day, affording examples of almost every linguistic formation.

But before history must come a knowledge of what now exists. We must learn to observe things as they are without regard to their origin, just as a zoologist must learn to describe accurately a horse, or any other animal. Nor would the mere statement that the modern horse is a descendant of a three-toed marsh quadruped be accepted as an exhaustive description. Still less would the zoologist be allowed to ignore the existing varieties of the *Equidæ* as being “inorganic” modifications of the original type. Such, however, is the course pursued by most antiquarian philologists. When a modern language discards the cumbrous and ambiguous inflexions it has received from an earlier period, and substitutes regular and precise inflections and agglutinations of its own, these formations are contemptuously dismissed as “inorganic” by the philologist, who forgets that change, decay and reconstruction are the very life of language—language is “inorganic” only when it stands still in its development.

The first requisite is a knowledge of phonetics, or the form of language. We must learn to regard language solely as consisting of groups of sounds, independently of the written

symbols, which are always associated with all kinds of disturbing associations, chiefly historical. We must then consider language in its relation to thought, which necessitates some study of the relation of language to logic and psychology. Such investigations, if carried out consistently, will greatly modify our views, not only of English, but of language generally, and will bring us face to face with many of the ultimate problems of language, which have hitherto been rather shirked by philologists. Such problems are those which I propose to discuss in the present paper. I begin with the important question of sentence-, word- and syllable-division, beginning again with the purely formal, or phonetic criteria.

Sentence- and word-division.—The first and most obvious is the organic necessity of taking breath—we are unable to utter more than a certain number of sounds in succession without renewing the stock of air in our lungs, which unavoidably necessitates a pause. Speech in its simplest form consists mainly of short questions and answers expressed in simply constructed phrases—in this case there is not merely a pause, but an absolute cessation of voice.

Within these “breath-groups,” or phonetic sentences, there is no pause whatever. This is important to observe, as many people, misled by our ordinary word-division, imagine that they make a pause at the end of every word. But a very little observation will be enough to convince them that the words of a sentence run into one another exactly in the same way as the syllables of a word do. This coalescence is most readily observable in the stopped consonants, which, when sounded alone, or at the end of a sentence, end in a marked explosion of breath, which is sometimes called the “organic recoil.” Now if we compare such a sentence as “he took off his hat” and “he took his hat off,” we see that this organic recoil is quite wanting in the second sentence, the *t* in “hat off” being pronounced exactly as in the single word “hatter.”

The second criterion is force or stress—the most important element in the synthesis of speech-sounds. If we take a simple sentence, such as the imperative “come to-morrow,” and regard it provisionally as one undivided sound-group, all that we can hear is that certain syllables are uttered with more force than others: indicating force by italics, we have, therefore, “cometo-morrow.” We find, in short, that every sentence can be analyzed into smaller groups characterized by one predominant stress-syllable, round which the others group themselves. In our sentence there are two such stress-groups; and if we consider the meaning of the sentence, we see that the number of stress groups agrees exactly with that of the words it contains

K K 2

—a word is, phonetically speaking, a stress-group. It must now be observed that the stress, although it tells us how many words there are in a sentence, does not tell us where the words begin. Thus in the above sentence there is nothing in the *sound* to enable us to assign the second syllable to the first or the second stress-group—there is, phonetically speaking, no more reason for the division “come tomorrow” than for “cometo morrow,” although the *sense* shows clearly that the first is the only possible one. Word-division is really a very complex problem, involving many considerations, phonetic, logical and grammatical. We get so accustomed to our received word-division that we regard it as something self-evident. But when we have to deal with unwritten languages, we find it by no means so easy. Thus in Mr. Jenner’s paper on the Cornish Language (“Trans. of the Phil. Soc., 1873–4”) it is stated that at the beginning of the last century Cornish was “a most irregular jargon, the chief peculiarity of which was a striking uncertainty of the speakers as to where one word left off and another began.” I must confess to having encountered the same difficulty in my study of our own language.

It is evident that word-division implies *comparison*. As long as we confine ourselves to the examination of isolated sentences, we shall not advance one step further. But when we compare a variety of sentences in which the same sound-groups are repeated in different combinations, we are able first to distinguish between meaning and unmeaning sound-groups, and finally to eliminate a certain number of groups having an independent meaning and incapable of further division. The test of independent meaning is *isolation*, or the power of forming an independent sentence. We may, therefore, define a word as an ultimate, or indecomposable sentence. Thus the verb “come” pronounced with a falling tone is equivalent to the fuller sentence, “I order you to come;” the adverb “up” pronounced with a rising tone may signify “shall we go up?” or may have some analogous meaning determined by the context. The same applies also to nouns, pronouns and adjectives. Sound-groups, which, although phonetically capable of isolation, are meaningless when so isolated, are not words.

But between these two extremes there is an intermediate class of sound-groups, which, although not capable of being isolated and forming sentences by themselves, are yet not utterly devoid of meaning, and can, therefore, be to a certain extent isolated in thought, if not in form. Thus, if we compare the three groups “man” “aman,” and “theman,” we see that the two prefixes have an unmistakable, though somewhat vague meaning of their own, which enables us to identify them at

once in all other cases in which they are prefixed to nouns, and yet these two syllables would convey no meaning if pronounced alone. If, on the other hand, we attempt to analyse such a group as "deviate," we find that not only are its elements incapable of logical isolation, but that they fail to suggest any idea whatever. The last syllable is, of course, identical with the preterite of the verb "eat," but the association is felt to be purely fortuitous. But if we compare "deny," "depose," and "deprive," we feel at once the meaning of deprivation and negation in the *de*, just as we feel the generalising and specialising meaning of the prefixes in "aman," and "theman," although the syllables "ny," "pose," and "prive," have no meaning whatever by themselves. We are, therefore, obliged to regard "deny" &c., as ultimate, indecomposable words, in spite of the significance of the prefix, while in the case of "theman" and "aman" it is, to some extent, an open question whether we have here one word or two words. It seems best to distinguish two classes of words, *full-words* and *half-words*, "man" being a full-word, "the" a half-word—that is, a word incapable of forming a sentence by itself, or of suggesting an independent meaning.

The next question is, how far do these logical distinctions correspond to the phonetic ones already laid down? The answer is simple enough. Full-words correspond to stress-groups, half-words to stressless syllables. If we wish to know how many full-words there are in a sentence, we only have to count the number of full stresses. Each full stress indicates a full-word, although it does not show where the word begins and ends.

It is evident, therefore, that the formal criteria of word-division may vary according to the laws of stress in each language. In Icelandic, for instance, where every word which has a stress at all (that is, every full-word), takes it on the first syllable, the stress not only indicates the full-words, but it also shows where they begin. In French, again, the stress is so slightly marked and so vague as to be no guide whatever even in distinguishing between full- and half-words. In "arc-en-ciel," for instance, there often is a strong stress on the "en," the most unimportant member of the combination.

It must be remarked that the test of being able to form a sentence by itself does not strictly apply to all words. The finite verb is an important exception. The third person, "goes," for instance, cannot form a sentence by itself; by the sentence-test, therefore, "goes" is not a word; while "hegoes" is. And yet it would be absurd to deny the title of word to "goes" in such a sentence as "themangoes." We feel "goes" to be a

full-word, 1, because it has the full stress; 2, because of the analogy of the imperative “go,” which can stand alone; and 3, because of “hegoes,” which is felt to be a compound precisely analogous to “theman,” &c.

There is, finally, an important phonetic element of word-division to be noticed. This is the fact that certain sounds and sound-combinations only occur in certain positions. Thus the sound *ng*, and the combinations *tl*, *x*, &c., never occur at the beginning of a sentence, and others, again, never occur finally. It is, therefore, clear that these sounds cannot begin or end any full-word.

Derivative syllables and inflections.—We must now consider the important question of the relation of half-words to derivative syllables and inflections. It need scarcely be remarked that no absolutely definite line can be drawn between them, and that the distinctions made in practice are often purely conventional.

We must first consider an important distinction between full- and half-words, which clearly brings out the semi-inflexional character of the latter, viz., that full-words are position-free, half-words not. Compare the varying position of “go” in such sentences as “goaway,” “I’llgo,” “I’llgoaway,” with the unvarying præ-position of “the” in “theman.” The same fixity of position characterises derivatives and inflexions also, but in a higher degree. Thus, although the position of “the” *before* its noun is fixed, the connection is loose enough to allow an adjective to come between, as in “thegoodman.” Such “incorporations” are quite exceptional with derivative syllables, and still more so with inflexions. It is interesting to distinguish between “agoodman” and such collocations as “manyaman,” where the adjective is simply prefixed to the noun and its prefix instead of being incorporated. In “ahundredmen,” also, there is no incorporation, “ahundred” being a prefixed substantive used as an attribute-word.

Derivations may be either initial or final, inflexions are only final. This last is, of course, an arbitrary limitation, which although convenient enough in treating of the old Aryan languages, in which the most general relations were generally expressed by suffixed syllables, does not apply to other languages, which indicate the same relations by means of prefixes. Even in the Aryan languages such formations as the augment and reduplication can only be conventionally separated from the postfixed inflexions. It is, however, undeniable that, in the Aryan languages at least, the end of words is more exposed to phonetic decay than the beginning, and consequently that that intimate fusing together of root and modifying syllable, which

is felt to be something more advanced than mere derivation, and which we call inflexion, has a right to be considered rather as a "final" than as an "initial" phenomenon.

There are several important distinctions between half-words and derivatives. Half-words can be used everywhere where their meaning allows of it, thus "the" can be prefixed to all nouns. Such a derivative as "be," on the other hand, can only be prefixed to certain words without any apparent reason—we have "become," but not "bego." Further, the root often has no independent existence; from "behave" (pronounced "be-haiv"), for instance, we cannot deduce a verb "have" (haiv). Or else the connexion between the meaning of the simple root and that of the derivative is not evident, as in "come," and "become." There are, of course, various degrees of obscuration of meaning; the prefix "be," for instance, is practically almost meaningless in the present English, while "mis" in "mistake," "misfortune," &c., has a perfectly clear meaning. But as a general rule the connexion between derivative syllable and root is logically very intimate, more so even than in inflexions. Sometimes the derivative syllable even takes the full-stress from the root, as in the German *ant-wort*, which never happens with half-words and inflexions.

Inflexions differ from derivative syllables, and agree with half-words in being of general, unrestricted application, and in always preserving a more or less definite general signification. Their main characteristic is phonetic variation and obscuration; derivative syllables are invariable in form, inflexions not. Compare the plural forms "hats," "dogs," "men," "feet," so definite in meaning, and so divergent in form, with a group of "be" derivatives, with their constancy of form and want of meaning. Inflexions often express the same idea in totally different ways, either from phonetic change, as in the Latin acc. plurals *ovēs*, *equōs*, and the Greek acc. singulars *híppon*, *ópa*, or from confusing the meanings of forms of independent origin, as in the Latin datives *populō* and *patri*.

If we assume, as we seem to be justified in doing by historical evidence, that derivative syllables and inflexions have developed out of half-words, we may roughly describe a derivative syllable as a half-word which has lost its logical, an inflexional as one which has lost its phonetic independence.

Syllable-division.—We may now turn to the important question of syllabification. The definition of a syllable is easy enough: it is a group of sounds containing a vowel, or, in some cases, a vowel-like consonant. To determine the number of syllables in a word, we have simply to count the number of

vowels. The difficulty is to tell where the syllable begins. Here I am compelled to differ both from Mr. Bell and Mr. Ellis. Mr. Bell considers that the division into syllables is determined by the nature of the sounds which constitute the syllable, whereas I hold that syllabification has nothing to do with the sounds themselves, but depends entirely on the force with which we pronounce them. (It must be understood that I speak of the natural syllabification of spoken language, not of the artificial syllabification of the spelling-books.) Let us consider the syllabification of a natural, simple sentence, such as "takeup-the-teacup." Here we at once feel that the first *k* belongs to the preceding syllable, that the syllabification is clearly "take-up" (taik-up), while the second *k* belongs to the following syllable, the division being "tea-cup" (= tee-kup), the consonant being the same in both cases. The difference is simply one of stress, the first *k* being pronounced with weak, the second with strong force. (We may for the present disregard the fact that the stress is in both cases secondary.) The influence of the syllable-stress in determining the meaning of words is so important that if we reverse that of "takeup" by beginning the secondary stress not on the vowel, but on the preceding *k*, the word becomes quite unintelligible, or rather, sounds like an Irish pronunciation of "teacup." Other examples of varying syllabification are "notatall,"* and "atallman," "atack," = "attack" and "atack," = "at Ack" (name of place). We see, in short, that a syllable is a vowel-group beginning with a certain degree of force, which decreases up to the end of the syllable, till a new stress marks the beginning of another syllable. This decrease of force is observable in monosyllables also: in "cat," for instance, the *k* is much stronger than the *t*—we do not pronounce "kat" or even "*kat*," but only "*kat*." Indeed, it may be stated as a general law that perfect uniformity of force is something exceptional: force is followed by weakness of stress, and uniform weakness, again, cannot be sustained, but requires force to relieve it. These principles are clearly shown in the accentuation of polysyllabic words. If we carefully measure the degrees of force with which the different syllables of a word like "impenetrability" are pronounced, we shall find that every syllable has a different degree of force. Simple sentences, which are phonetically identical with polysyllabic words (or even in some cases with monosyllable ones), follow the same laws. They always have one predominant stress which dominates over the simple word-stress. The great distinction between words and sentences is that in the former the predominant stress is fixed

* Generally, however, pronounced "notatall," just as "at/home" becomes "atome."

and invariable, while in the latter it varies according to the principle of emphasis, which gives the strongest stress to the most important word.

Word-division in writing.—We may now turn to the practical question of word-division in writing. If we are to be guided consistently by logic, we must either write all half-words, derivative syllables and inflexions as separate words, or else incorporate them into the full-words. The difficulty is that, although word-division is mainly logical, the purely formal side of the question must also be considered. Thus, although it would be as easy to write the plural of "fish" in two words "fish is," as it would be if the "is" were the verb substantive, it would be impossible with the plural of "foot," unless indeed we were boldly to write "ft ee," although even this spelling would ignore the fact that the *ee* is as much part of the word itself as a sign of the plural. Cases in which unpronounceable letter-combinations would have to be written separately have also to be considered. The isolating system is thus found to be impracticable, if carried out consistently, and nothing remains but that of joining the half-words on to the full-words. This method, while offering considerable difficulties of detail, is practicable, although it has not been carried out consistently in any language I know. Our present word-division is a compromise between the two extremes of isolation and agglutination. As a general rule we agglutinate inflexions and derivatives, and isolate half-words, whose connexion with the whole-word to which they belong is less intimate than in the case of inflexions and derivatives. Inflexions are only acknowledged when sanctioned by Latin Grammar. Such purely modern inflexions as the negative "Icant" from "Ican," where the *nt* = "not," although conventionally only a half-word, not a true inflexion, could not be written as an isolated word, are shirked by that convenient compromise the apostrophe (?): by writing "can't," we keep up the fiction of the divisibility of a monosyllable into two separate words.

All these considerations show the hopeless confusion into which orthography falls when it attempts to overstep its legitimate function—that of giving a faithful graphic representation of the sounds of the spoken language. The attempt to indicate simultaneously the formal and the logical side of language by the same alphabet—an alphabet, it may be remarked, which is barely capable of fulfilling its purely phonetic duties alone—is about as successful as most compromises, that is, instead of doing one thing properly, it does two things badly. If, for instance, it is convenient to denote a substantive by a capital letter in German, why should we not do so in English, and why

should not the same principle be extended to the other parts of speech? Adjectives, for instance, might be written with a turned capital, verbs with an italic, adverbs with a turned italic. Again, in Latin it would be very convenient to have a series of marks to indicate the different cases, independently of their form, and would much facilitate the understanding of Latin. Others, again, think that the spelling of every word ought to give a brief epitome of its etymology and history. If carried out consistently, all this would postulate an entirely independent set of signs, which, for special purposes, would be written between the lines of ordinary phonetic writing, forming a sort of short-hand logical, grammatical or historical commentary, as the case might be. In the same way I should consider word-division simply as a logical commentary on the phonetic text; in short, I would abolish the ordinary word-division altogether.

But the abandonment of conventional word-division by no means postulates a return to the old system of writing each sentence without a break. On the contrary, it is clear that the great assistance afforded to the reader by presenting the letters in groups of moderate length was the one great reason for abandoning the original system of non-division. As we have seen, the most important element in the synthesis of speech-sounds is stress. I propose, therefore, to follow the analogy of musical notation, and divide our sentences into bars, making the beginning of each group of letters coincide with a full-stress. The accent-mark otherwise required to mark the full-stress would be available for the secondary stress, and the same mark, when placed before a letter-group or "stress-group," as we may call it, would indicate the emphatic sentence-stress. Thus with a single mark we should be able to indicate no less than four degrees of stress. We should, however, also require a mark to indicate absence of stress at the beginning of a sentence. If we added a sign for breath-taking, and two accents to indicate the rising and falling tones, we should be able to dispense entirely with the present unsatisfactory system of punctuation, &c., and to express clearly and precisely what they indicate only imperfectly and vaguely.*

Logic and language.—The great difficulty of all investigations which involve a study of the meanings of language is the want of a satisfactory classification of what is expressed in language. We have not even a classification of the words themselves, except Roget's "Thesaurus of English Words and Phrases," which, although a wonderfully acute and full work, is now somewhat antiquated, written as it was before the rise of modern psychology, under all the disadvantages of being a first attempt.

* Examples of this stress-division will be given hereafter.

I have been engaged for some years in trying to devise a more consistent and satisfactory scheme of classification; but as it is still unsettled in many of its details, I will not enter into any details now, but content myself with a few general remarks.

In the first place it must be borne in mind that the ultimate ideas of language are by no means identical with that of psychology, still less with those of metaphysics. Language is not in any way concerned with such psychological problems as the origin of our ideas of space and matter; for at the time when language was evolved, these conceptions were already stereotyped in the form of simple ideas, incapable of any but a deliberate scientific analysis. Even such universally known facts as the primary data of astronomy have had little or no influence on language, and even the scientific astronomer no more hesitates to talk of the "rising of the sun" than did the astrologers of ancient Chaldæa. Language, in short, is based not on things as we know or think them to be, but as they *seem* to us.

But although the categories of language do not require so deep an analysis as those of psychology, they are on the other hand far more complicated. Each word we use suggests a large number of ideas at once, varying always according to the context, and it is a matter of extreme difficulty to select the really characteristic and essential idea or ideas, which can alone be made the basis of classification. It is the great defect of Roget's system that he often classes his words by some extraneous idea which they suggest. Thus "food" is considered as something purely mechanical, as a mode of "insertion," and hence is included under "directive motion," whereas it clearly comes under "volitional functions of living beings" with, of course, a cross-reference to "insertion" and its other mechanical associations. "Theft" again is naïvely classed as a mode of "transfer of property," whereas it belongs first to "ethics" or "morality," and only subordinately to "property," ethics being a far wider category than property, although both ideas are equally indispensable to the meaning of the word. It is much as if we were to class frogs and horses together as "quadrupeds," and then make a special class "mammalia" to distinguish horses. For many words special compound categories are required. It is, for instance, quite misleading to class "sharp," "edge" and "knife" together under "superficial form," as Roget does; the essential difference between "knife" and the other two is that while they denote (or can denote) natural objects, "knife" always implies human agency: we require therefore a special category "inanimate things + volition," or something of the sort. Similarly "meadow," as opposed to "heath," etc., requires a special complex category.

It is further very important to begin with a limited selection of words in popular use. Roget's Thesaurus is full of such words as "zoohygiantics," "cicuration," &c., which only tend to confuse the mind, and increase the difficulty of arrangement. In my own lists I have cut out at least three-fourths of the words given in ordinary dictionaries.

Indeed, there can be no question that a vocabulary of, say, 3,000 representative words would be amply sufficient to begin with. If these words were properly classified, the rest of the words of the language would offer no difficulty: their arrangement would be merely a matter of detail.

Such a vocabulary would also form a most valuable foundation for the practical study of language. The study of 3,000 of the commonest words in any modern language by means of idiomatic sentences taken from actual life (not made up artificially, as is done in most elementary books), the whole being arranged according to the meanings, would enable any one to express himself on most of the ordinary topics of life with far greater accuracy than is now attainable, even after years of floundering about in the pages of unwieldy and unpractical dictionaries and grammars.

For anthropologists and students of psychology such a vocabulary would be of the highest utility. For the investigator of savage life a much smaller one would suffice to give a full and comprehensive picture of the moral, social, and intellectual state of those who speak the language.

I will now discuss the parts of speech, confining myself for the present to the consideration of noun, adjective, and verb. I may remark at once that the real difficulty of determining the meaning of the parts of speech lies in the fact, which logicians and grammarians obstinately ignore, that they often have no meaning at all. Indeed the whole of language is an incessant struggle and compromise between meaning and pure form, through all the stages of vagueness, ambiguity and utter meaninglessness.

If we confine our attention to material objects and to the simplest nouns, adjectives, and verbs, we see at once that the original function of these classes of words was to denote things and their attributes; adjectives denoting their permanent attributes or qualities; verbs their changing attributes or phenomena. It must be borne in mind that primitive man did not distinguish between phenomena and volitions, but included everything under the head of actions, not only the involuntary actions of human beings, such as breathing, but also the movements of inanimate things, the rising and setting of the sun, the wind, the flowing of water, and even such purely inanimate phenomena as fire, elec-

tricity, &c., in short, all the changing attributes of things were conceived as voluntary actions. Hence the origin of verbs from the simple root with a personal pronoun following. Further, in speaking of things it would be natural to call attention in the first place to their changing rather than to their permanent attributes, which would generally be taken for granted. Primitive man would not trouble himself with such propositions as "man is mortal," "gold is heavy," which are a source of such unflinching delight to the formal logician; but if he found it necessary to employ permanent attribute-words, would naturally throw them into what is called the attributive form, placing them in immediate proximity with the noun, whose inflexions they would afterwards assume. And so the verb gradually came to assume the purely formal function of predication. The use of verbs denoting action necessitated the formation of verbs to denote "rest," "continuance in a state," and when, in course of time, it became necessary in certain cases to predicate permanent as well as changing attributes, these words were naturally employed for the purpose, and such a sentence as "the sun continues bright" was simply "the bright sun" in another form. By degrees these verbs became so worn away in meaning, gradually coming to signify simple existence, that at last they lost all vestiges of meaning whatever, and came simply to be marks of predication. Such is the history of the verb "to be," which in popular language has entirely lost even the sense of "existence." Again, in a still more advanced stage, it was found necessary to speak not only of things, but of their attributes. Thus, such a sentence as "whiteness is an attribute of snow" has identically the same meaning as "snow is white," and "white snow," and the change of "white" into "whiteness" is a purely formal device to enable us to place an attribute-word as the subject of a proposition. We see now that the only satisfactory definition of a part of speech must be a purely formal one: "snow," for instance, is not a noun because it stands for a thing, but because it can stand as the subject of a proposition, because it can form its plural by adding *s*, because it has a definite prefix, &c., and "whiteness" is a noun for precisely the same reasons. By using the technical terms "noun," &c., in a purely formal sense, and distinguishing words according to their meaning as thing-words, attribute-words, &c., we shall be able to escape the hopeless confusion into which grammarians fall, who appeal alternately to the meaning and the form of the parts of speech in grammatical discussions. "Snow" then is both a thing-word and a noun, "white" is a quality-word and an adjective, "whiteness" a quality-word and a noun. I may notice here that great indignation was roused some time ago by a pedantic

school-inspector, who plucked some unhappy children for calling "cannon" in "cannon-ball" a noun instead of an adjective. The fact is that he had observed that "cannon" in "cannon-ball" was not a thing-word, but an attribute-word, and imagining that thing-word and noun were convertible terms, hastened to make the children feel the weight of his brilliant discovery. He would probably be as much surprised as the children themselves to hear that not only when it comes before "wall" is "stone" a quality-word, but also when it follows a transitive verb, in fact that the accusative case is what he would call an "adverb," as I hope to show hereafter.

We may now turn our attention to logic, and first of all to that introductory portion which treats of names. Although formal logic is mainly based on language, it has developed some views of its own which have had considerable influence on the grammatical analysis of language. I propose first to examine the theory of denotation and connotation. General names, such as "man," "horse," are said to denote an object and connote or imply various attributes. Proper names, such as John, London, are said only to denote an object, and not to connote any attributes. Here logicians have strangely overlooked the fact that such a word as John connotes at least two attributes, "human" and "male," "male human being." I maintain also that the name John, to those who know him, connotes an immense number of other attributes, physical, moral, and mental. That the name is practically applied at random to a variety of men is a mere accident, an imperfection of language. The word "sun," which, like John, is practically a proper name, also connotes to those who know what the sun is, a number of attributes: to people who had never seen or heard of the sun, it would connote nothing at all, less even than John, which even to those who do not know John personally, always connotes "male human being." An instructive instance of the dependence of logic on the accidents of language is afforded by the distinction it makes between such words as "white" and "whiteness." "Whiteness" is correctly described as an "abstract" name, as signifying an attribute without reference to the things that possess the attribute. "White," however, is held to be connotative: it denotes particular objects and connotes the attribute "whiteness." How a word can be said to denote an object which is entirely unknown until the name of that object is joined to it, was always a matter of bewildering astonishment to me, when I first began to study logic, and probably has been to many others as well. The truth is, of course, that "white" is as much an abstract name as "whiteness" is, the two being absolutely identical in meaning. I consider, further, that all attribute-words are denotative and

connotative, they denote an attribute and connote attributes of that attribute. Thus the word "colour" is the name of an attribute, but it also connotes all the various kinds of colour, red, blue, &c.; "bright" connotes various degrees of brightness, and so on. These secondary attributes again admit of connotation, and so on almost *ad infinitum*. The terms denotation and connotation thus appear to be applicable to every possible word, and therefore to be practically meaningless and useless. We are now able to understand what an adverb is—it is simply the attribute of an attribute, and bears exactly the same relation to an attribute, as a permanent attribute (adjective) does to a thing-word. Grammarians, misled by a false logic, describe adverbs as denoting the *manner* of an action, or make use of some similar expression, forgetting that manner is as much an attribute as anything else. Hence it follows that when an adjective is joined to a noun which is either entirely or only partially an attribute-word (action-word, for instance), the adjective is in meaning identical with an adverb; "he is a good runner," for instance, is identical in meaning with "he runs well."

We may now turn to the consideration of the proposition in logic. A regular logical proposition, such as, for instance, "all men are bipeds," is clearly nothing but a stereotyped form of the linguistic sentence. In language the subject being originally a permanent thing is stated first; when once stated its permanence is taken for granted and retained by the mind until the predicate, originally an impermanent attribute or phenomenon, is stated. That there is, however, no absolute necessity for this order is shown not only by the frequency with which it is violated in most inflexional languages, but also by the fact that the finite verb was originally formed by the agglutination of a subject-pronoun coming *after* the predication root. And now comes the very important consideration that not only is the order of subject and predicate to a great extent conventional, but that the very idea of the distinction between subject and predicate is purely linguistic, and has no foundation in the mind itself. In the first place, there is no necessity for a subject at all: in such a sentence as "it rains" there is no subject whatever, the *it* and the terminal *s* being merely formal signs of predication. "It rains: I will therefore take my umbrella," is a perfectly legitimate train of reasoning, but it would puzzle the cleverest logician to reduce it to any of his figures. Again, the mental proposition is not formed by thinking first of the subject, then of the copula, and then of the predicate: it is formed by thinking of the two *simultaneously*. When we formulate in our minds the proposition "all men are bipeds," we have two ideas, "all men"

and “an equal number of bipeds,” or, more tersely, “as many men, as many bipeds,” and we think of the two ideas simultaneously, not one after the other, as we are forced to express them in speech. The simultaneity of conception is what is expressed by the copula in logic, and by the various forms of sentences in language. If these views are correct, the conversion of propositions, the figures, and with them the whole fabric of formal logic fall to the ground. It by no means follows that logic is entirely destitute of value, but we shall not arrive at the real substratum of truth until we have eliminated that part of the science which is really nothing more than an imperfect analysis of language.

Structure of English.—I now propose to say something about the structure of English, and the proper method of treating its grammar. I may state at once that I consider the conventional treatment of English to be both unscientific and unpractical, starting as it does with the assumption that English is an inflexional language like Latin or Greek. The time is still not very far distant when the grammar of all languages—however diverse their structure—was servilely modelled on that of Latin. It was assumed, for instance, that as Latin had five cases, English must necessarily have just as many and no more. In those days *man* was declined thus :—

nom.	man.		acc.	man.
gen.	man's.		voc.	oh man !
dat.	to a man.		abl.	by a man.

After a time, however, when the historical and comparative study of language had opened people's eyes a little, they began to see that on this principle the number of cases in English might be indefinitely extended—in short that there might be as many cases as there were prepositions. The cases were, accordingly, cut down to three, nominative, genitive, and accusative. As I shall show hereafter, it is very doubtful whether the so-called accusative of the pronouns has any right to be considered a case at all, and when we consider that the genitive inflexion can generally be replaced by the preposition *of*, we see to what narrow limits the English cases, or rather case, are confined. The verbal inflexions are hardly less limited. The only personal inflexion is the *s* of *he goes*, which is practically a superfluous archaism. The only other inflexions are those which form the preterite and the two participles. These, together with the plural of nouns, are the only essential inflexions of English. No wonder, then, that the historical philologist looks with contempt on English as a language “destitute of grammar.” Certainly it

is so, if judged from a purely antiquarian point of view. That this point of view is inadequate to the requirements of English grammar is tacitly admitted by the grammarians, who, while refusing to allow that "of a man" is a case, do not scruple to put "I did love," &c., on a level with the inflexional preterite. And yet most of them ignore the equally important formations of the emphatic and negative forms or moods, simply because such forms are not recognised in Latin grammar.

All this confusion and inconsistency arises from the fact being ignored that the history of language is not merely one of negative decay, but also of positive reconstruction. Every language has the right to be regarded as an actual, existing organism, not merely as the representative of earlier stages. The fact that English was an inflexional language two thousand years ago does not prove that it is so now. The only rational principle is to look at the language as it is now, and ask ourselves, How does this language express the relations of its words to one another? If we examine English on this principle, we shall have no hesitation in characterising it roughly as an isolating language which is passing into the agglutinative stage, with a few traditional inflexions. Hence the value of English as a preparation for the study of language generally, when studied rationally: it enables us to watch many linguistic phenomena in the very process of formation, which in other languages can only be observed in a stereotyped condition. Another advantage of English for comparative purposes is the many-sidedness of its structure. In this respect it differs essentially from languages whose structure is primitive, not, like that of English, the result of casting off an effete inflexional system. In most agglutinative languages there is no distinction of meaning made by position, all grammatical relations being expressed by modifying syllables which have a fixed order, from which they never depart. English can, therefore, only be compared with such languages in as far as it is itself agglutinative, while in that part of its grammar which depends on position it can only be compared with "isolating" languages, such as Chinese. Again, although English agglutination is mostly of a rudimentary type, it is in other cases extremely advanced. Who, for instance, in comparing the positive future "he'llgou" with the negative "hewon'tgou," would be able to detect the root "will," which comes out clearly in the emphatic future, "hewillgo?" In such forms there is as much obscuration of the formative elements as in the traditional inflexions. These observations show how difficult it is to draw the lines which separate the different stages of linguistic development—languages pass from the isolating to the agglutinative and inflexional stages by insensible degrees, and

even during the fullest development of inflexion begin to lay the foundation of future agglutination.

One striking result of the English power of expressing grammatical relations by position is the freedom with which one part of speech may be converted into another. Thus "sunday" is a noun, "then" an adverb, but in "sunday evening," "— the then stateofa fairs"* they are both attribute-words. In the same way any part of speech may be made into a noun simply by prefixing an article or adjective.

Even groups of words may be treated in this way. Thus in the sentence "— the bookyou sentmewas no use," "use" is simply equivalent to the adjective "useless." When we talk of "— theem ployerslaia bilityfor injury bill," the whole of the group except "bill" is nothing but a huge composite adjective. These groups may also be inflected like simple words, as in "— the mani saw yesterdayatthe theatre's father" where on all received principles of grammar theatre's ought to be parsed as the genitive of "theatre."

English, in common with the Romance languages, is often described as an "analytical" language, as opposed to a "synthetic" language, such as Latin. This term is meant to imply that the agglutinations of modern languages are deliberate substitutions for the older inflexions—the inflexions are supposed to be "analysed" into their simple elements. It is easy to see that this view is quite erroneous. If the characteristic agglutinations of modern English, for instance, were nothing but substitutes for inflexions, there would be exactly as many agglutinations as there originally were inflexions; but, as we see, we have in English combinations to which there is nothing corresponding in the older inflexional languages, while, on the other hand, many inflexional distinctions are entirely lost.

Cases.—I propose now to examine some portions of English grammar more in detail, beginning with the cases of nouns and pronouns.

It is a curious fact, hitherto overlooked by grammarians and logicians, that the definition of the noun applies strictly only to the nominative case. The oblique cases are really attribute-words, and inflexion is practically nothing but a device for turning a noun into an adjective or adverb. This is perfectly clear as regards the genitive, and, indeed, there is historical evidence to show that the genitive in the Aryan languages was originally identical with an adjective-ending, "man's life" and "human life" being expressed in the same way. It is also clear that "noctem" in "flet noctem" is a pure adverb of time. It is not so easy to see that the accusative in such sentences as

* The (—) indicates weak stress.

"he beats the boy" is also a sort of adverb, because the connexion between verb and object is so intimate as almost to form one simple idea, as in the case of noun-composition. But it is clear that if "boy" in the compound noun "boy-beating" is an attribute-word, it can very well be so also when "beating" is thrown into the verbal form without any change of meaning.

Our difficulty in determining the meaning of the accusative has, as far as I know, never been pointed out hitherto, viz., that in many cases it has no meaning at all, but merely serves to connect a verb with a noun in various arbitrary ways. With such verbs as "beat," "carry," &c., the accusative unmistakably denotes the object of the action expressed by the verb, but with such verbs as "see," "hear," it is clearly a mere metaphor to talk of an "object." A man cannot be beaten without feeling it, but he can be seen without knowing anything about it, and in many cases there is no action or volition at all involved in seeing. And in such a sentence as "he fears the man," the relations are exactly reversed, the grammatical nominative being really the object affected, while the grammatical accusative represents the cause, but as he is conceived as a *passive* cause, the fiction of object can still be maintained. The meaninglessness of the accusative is further shown by the inconsistencies of its actual use in language. Thus Latin has "*rideo aliquem*," English "laugh at," while "*deride*" has the accusative as in Latin. Compare also English "see" with "look at" and the divergent use of the dative and accusative in Greek and Latin. It is, indeed, often doubtful *à priori* whether any language in a given case will employ the accusative or not—we can only tell by observing the actual form. Now in English, in the noun at least, the only "form" of the accusative is its position after the verb. As far as the form goes, then, "king" in "he became king," "he is king," may be in the accusative. And, as a matter of fact, English people who have not been taught grammar, that is to say Latin grammar, in their first attempts to express themselves in such a language as German, *do* put "king" in the accusative. They are naturally confirmed in this idea when they find that if they substitute for the noun a personal pronoun, which is supposed to have distinct forms for nominative and accusative, the accusative is used, and it is only the influence of ignorant grammarians that prevents such phrases as "it is me" from being adopted into the written language, and acknowledged in the grammars. In Danish "*det er mig*" is the *only* form known, and "*det er jeg*" would be as wrong as "*c'est je*" would be in French. Indeed, were it not for Latin grammar, we can easily imagine the grammarians proving that "king" in "he became king" could not possibly

L L 2

be anything but the accusative, the action of the verb "become" passing on to the object "king." That there is really nothing extravagant in this view is shown by the Old English "*hé wearð to cyninge (gehálgod)*" and the German "*er ward zum könig (ernannt)*."

Further we have also a positional dative, as in "he gave the man a book." May not then the supposed accusative in "he flattered the man," "it pleased the man," be really a dative, as it certainly would be historically? * This view might again be supported by an examination of the corresponding pronoun forms, for "him" is historically a dative, not an accusative, and so with the others also. †

But the truth is that, whatever the history may be, the so-called accusative of the personal pronouns is functionally not a case at all, but a special form which may be indifferently nom., acc., or dat., as the case may be. The real difference between "I" and "me" is that "I" is an inseparable prefix used to form finite verbs, while "me" is an independent or absolute pronoun, which can be used without a verb to follow. These distinctions are carried out in vulgar English as strictly as in French, where the distinction between the conjoint "*je*," as in "*je vois*," and the absolute "*moi*," as in "*c'est moi*," = "it is me," is rigidly enforced. The difference between French and English is that French has also a true conjoint accusative "me," which, as in Basque, is incorporated into the verb. ‡ In vulgar English we hear not only "it is me," but also with the relative, as in "him that's here," where the polite language only tolerates "he." In the polite language we find such monstrosities as "it will give my friend and I great pleasure"—the natural result of the artificial reaction against "it is me."

And now a few words about the terminology. It will be observed that I have throughout avoided the names "possessive" and "objective." The distinctions implied are historical, and therefore the historical names should be retained. If the names of grammatical forms were to be changed whenever their meanings changed, we should have different names for every period and every language. It is much simpler to regard these terms as being what they really are, purely conventional names of forms whose meanings are often vague and sometimes nothing at all. Historically English nouns can only be said to have one case, the genitive. The unmodified base represents

* Old English, "*hé ólecte ðám menn*" and "*hit lícode ðám menn*," where "*ðám men*" = "homini."

† In Old English *hé* (he) has accusative *hine*, dative *him*, and *ða* (they) has acc. *ða*, dat. *ðám*.

‡ As in "*il me voit*."

historically both nominative and accusative (possibly also dative in some cases), we may therefore call it the "common" case. Pronouns have three cases, nominative, genitive, as in "it is his," and dative. The question whether "his" in "his book" is a genitive, or a possessive adjective, is really an idle one, for the genitive is in all cases functionally identical with an adjective. If we disregard history, and take position as the criterion of case, we are able to distinguish doubtfully a subject and object case, the former corresponding to the old nominative, the latter sometimes to the acc., sometimes to the dat.

Pronouns.—Pronouns bear the closest analogy to proper names. They are nouns which, in themselves, only connote "human being," and in some cases sex also. When we hear that "he is coming," all we learn is that a male human being is coming, and we learn just as much from the proposition "James is coming." The main distinction is that pronouns are of general, proper names of special application, for, if the system of giving proper names were carried out perfectly, every one would have a name to himself, which would be shared by no one else. Pronouns are, therefore, even less significant than proper names: "he" may refer in turn to each individual man there is, if the grammatical structure of the sentence allows it.

All pronouns are relative—they always refer to some noun. "He" is quite as relative in signification as "who" is, and the two are really identical in meaning, the distinction being purely formal, viz., that a sentence beginning with "who" is always accompanied by another sentence containing some statement about the person to whom the pronoun refers, and until we have this sentence, we feel that the first sentence is formally incomplete. "He" is, therefore, relative in meaning, "who" in meaning and form also. "He is here" does not really convey any more information than "the man who is here," but it can stand alone, whereas the other cannot.

Adjectives.—Adjectives may be either special or general attribute-words. Special adjectives are "bright," "blue," &c., while such adjectives as "this," "that," which connote nothing but the attribute of existing in space, are general. Still more general are such adjectives as the definite article "the," which connotes nothing but the attribute of forming a member of a class, or something similar. Many of these general adjectives are at the same time pronouns when they stand alone, thus "some" alone is equivalent to "some human beings," while in "some men" it is simply an adjective, or, as it is sometimes absurdly called, an "adjective pronoun." Similarly in vulgar English "them" by itself is a pronoun, but before a noun, as in "them things," it is a general (demonstrative) adjective.

The two articles are often so devoid of meaning as to amount practically to nothing more than prefixes for forming nouns, although this is not carried so far as in French and German, where the definite article may be said to have hardly any meaning at all, being not only prefixed, as in English, to the names of things which only occur singly, such as "the sun," "the earth," but also to proper names and the names of abstractions.

Verbs.—The really characteristic feature of the English finite verb is its inability to stand alone without a pronominal prefix. Thus "go," "run," "fly," by themselves may be either nouns or verbs; if, for instance, the indefinite article is prefixed to any of them, it becomes a noun—"ago," "arun," "afly," are all nouns. But "igo," "werun," "theyfly," are verbs. With the help of other prefixes a great variety of verbal forms may be made without the slightest change of the primitive form. Thus "we'llgo" is future, "we'dgo" is conditional, "wedidgo" is a form of the preterite, &c. If for the pronoun a noun is substituted, the verb is recognised solely by its position after the noun in its common case, thus in "— the men run," there is nothing but the fact of "run" following the uninflected plural "themen" to show that it is a verb. Even when there is a noun preceding, the pronominal prefix is often used in common talk, especially among the uneducated; thus we often hear, instead of—"— my brother's coming hometo morrow," "— my brotherhe's coming," . . . The tendency to employ a pronominal prefix is also strikingly illustrated by the impersonal verbs, such as "it rains," "it happens," &c., where the "it" is quite unmeaning.

These facts illustrate the peculiar complexity of English grammar, and the difficulty of attaining a just and adequate view of its characteristic features. In such a sentence as "— the men come," "come" is a verb mainly through its position, in "they come" because of the pronominal prefix, and in "hecomes" both because of the prefix and of the inflexional s.

It is important to observe that English has no infinitive, except from an historical point of view. "Come" by itself is, as we have seen, not necessarily a verb at all, still less an infinitive "mood," and it is certainly most in accordance with the instinct of those who speak English naturally to consider "come" simply as a base or common form of the verb, just as "man" is felt to be a common case.

The term "mood" is, of course, quite a misnomer as applied to the infinitive in any language, for the infinitive is nothing but a sort of nominal form of the verb. On the other hand, there are in English several forms of the verb which, on all sound analogy, ought to be included among the moods. These are the

emphatic “*idogo*,” the negative “*idontgo*,” the interrogative “*doigo*,” the negative-interrogative “*dontigo*,” the first of which is quite peculiar to English.

The inflected subjunctive is almost extinct in English. In form it is only in a few cases to be distinguished from the indicative, and its original meaning is so completely lost that English people have great difficulty in learning the proper use of the subjunctive in such languages as German and French, where it is still a living element of the language. We still employ it chiefly in a few stereotyped optative phrases, such as “God save the Queen,” and mechanically after certain conjunctions. In the language of the vulgar it seems hardly to be used at all, and such constructions as “if I *was* you” . . . seem to be gradually spreading even among the educated.

Prepositions.—The combination of a preposition and its noun (or pronoun) is identical in meaning with an oblique case of a noun, that is to say, it is a compound attribute. The preposition itself is modified attributively by the noun, and the two together constitute an attribute of some other word. Thus in “he stood by,” “by” is an attribute-word modifying “stood,” in “he stood by the gate,” “by” is modified by “the gate,” which is virtually an adverb of “by,” and the two together form a compound attribute of “stood.” In this example the prepositional compound is equivalent to an adverb, but it may also qualify a substantive, as in “the church in the town,” which is equivalent to “the town church,” or, in German, “*die städtische Kirche*.”

Sentence-words.—There are a variety of words which have the peculiarity of always forming a sentence by themselves; they might also be called isolated words. These words are: 1. The imperative mood of verbs, “come!” for instance, being equivalent to “I command, or ask you to come;” 2. The “adverbs” *yes* and *no*, which are equivalent to affirmative and negative propositions; and 3. The interjections, many of which, as, for instance, *alas!* from the adjective *lassus*, are quite erroneously described as inarticulate imitative sounds, and which have as much right to be considered parts of speech as the imperatives of verbs.

Concluding remarks.—It is of great importance to obtain a clear idea of the province of grammar as opposed to that of the dictionary—a subject on which considerable confusion of ideas prevails. The popular notion is that the business of a grammar is to explain *forms*, of a dictionary to explain *meanings*. But it is clear that the study of forms involves also a study of their meanings as well, and, indeed, the whole of syntax is nothing else but an investigation of the meanings of grammatical forms.

The real distinction is that grammar deals with the general facts of language, lexicology with the special facts. Thus the fact that "tree" becomes "trees" when we speak of more than one tree, is a general one, for it applies, with certain restrictions, to nearly all other nouns as well; but the fact that the combination of sound that constitutes the sound-group "tree" has the meaning we attach to it and no other, is an isolated one, and there is nothing in the sounds themselves or the way in which they are combined to necessitate one meaning more than another, while even if we were ignorant of the meaning of the word "tree," we should be able to recognise in "trees" the meaning of "plurality," if we met with it in an unambiguous sentence. If we had a rationally constructed Universal Language, in which every letter in a word would be significant and combined according to definite laws, so that the connexion between form and meaning would be at once evident, there would be no dictionary at all—everything would be grammar, and the dictionary would be simply an alphabetical index to the grammar.

The simple question, then, that we have to ask ourselves in determining the scope of the grammar of any language is, how does this language indicate general meanings? The answer to this question is the grammar. If the language chiefly employs what are conventionally termed "inflexions," its grammar will be mainly an "inflexional" one; if position, its grammar will be like that of Chinese, and, to a great extent, of English also, "positional." To assert that Chinese has "no grammar," or "no grammar *properly speaking*," as it is sometimes cautiously put, is simply an eccentric way of stating that it has no *inflexional* grammar.

An essential part of English grammar is *intonation*. An immense number of general ideas, both emotional and purely logical, are expressed in English by the rise and fall of the tones of the voice. The distinction between affirmation and interrogation, subject and predicate, doubt and certainty, &c., are all expressed either partly or entirely by intonation.

The following are, then, the essential elements of English grammar:—

1. Phonology, or an account of the formation of the sounds of the language, their combinations, &c.
2. Phonetic Synthesis, comprising Quantity, Force or Stress, and Intonation. (Voice-timbre, Expression, &c., belong rather to Elocution, which is a special branch of Grammar.)
3. Word Position.

4. Parts of Speech, Inflexion, Agglutination, &c. (including all that is commonly understood as "Grammar.")

The relation of form to meaning may, of course, be considered in various ways. The form may first be considered purely as form, as when we analyse the various degrees of quantity, the exact intervals of intonation, &c., and we may then either consider the various meanings attached to each form, or, starting from the meaning alone, determine what forms are used to express it. In a full grammar all these arrangements must be represented, partially at least. The facts must also be so stated that due prominence is given to the really important elements. Archaisms and fossilised forms must be duly subordinated to the living means of expression.

The different *strata* of the formative elements must also be distinguished. Thus, while the combinations of noun and preposition would be treated at full under the same category as inflexion—"of man" and "man's," for instance, coming together—the traditional inflexions would also be grouped together separately, apart from the later agglutinations. Even merely *nascent* forms and tendencies would also be grouped together separately. It is, for instance, important to observe the tendency to indicate the singular of nouns by prefixes, leaving the plural unmodified; "man," for instance, means "man in general," or, in short, "men," while "the man," or "a man," has a definitely singular meaning. It is of course true that we can also say "the men" in the plural, but it is at least conceivable that in a more advanced stage of English the use of the articles may be confined entirely to the singular, and in that case it is highly probable that the plural inflexions would be entirely lost, so that the distinction between singular and plural would be denoted entirely by prefixes. Compare the French singulars "un chat," "le chat," with the plural "des chat(s)," "les chats."

If English grammar were treated in this way, it would give the student just notions not only of the structure of his own language, but also of language generally, and a solid foundation would be laid for historical and comparative philology. The ordinary grammars, which ignore many of the most characteristic features entirely, and subordinate others to purely exceptional ones, not only give the student an entirely erroneous idea of the structure of English, but also train him to habits of erroneous and superficial observation, the evil results of which are seen every day both in scientific philology and in the practical acquisition of foreign languages.

DISCUSSION.

Mr. TYLOR said that Mr. Sweet's views deserved the most careful consideration, affecting as they do several important points of anthropology. Mr. Sweet's definition of a word as made not by break of sound but by a stress or accent, is in agreement with the views of W. von Humboldt, and fits with Cicero's remarks on word-accent. It has been noticed before that English and other modern languages are capable of agglutinating or incorporating formations like the North American languages. Thus Dr. Latham instances such phrases *catch'em*, *je l'aime*, as being in fact incorporated or holophrastic words. To adopt this part of Mr. Sweet's views would be, in fact, classing English as an agglutinating language. In the speaker's opinion, the common classification of languages, as isolating, agglutinating, and inflecting, requires thorough re-examination and reform, a step to which Mr. Sweet's acute remarks will naturally contribute.

With regard to the plan of a classified vocabulary of ideas, Mr. Tylor considered that it would be of much service to the Society, as guiding travellers in their selection of savage vocabularies, so as to obtain better representations than at present of the stock of words.

The President and others joined in the discussion.

The Director then read the following papers, in the absence of the author, Mr. W. J. Knowles :—

On the CLASSIFICATION of ARROW HEADS.

ACCORDING to the leading authorities there are four or five types of arrow heads. Sir John Lubbock adopts the five varieties of Sir William Wilde, viz., *triangular*, *indented*, *stemmed*, *barbed*, and *leaf-shaped*. Mr. Evans, with whom is Colonel A. Lane Fox, arranges those of Great Britain under four leading types, *leaf-shaped*, *lozenge-shaped*, *tanged*, or *stemmed*, and *triangular*. Both these arrangements, I think, do either too much or too little. Arrow heads, in my mind, could as well be brought under three classes, the tanged, indented, and the so-called leaf-shaped. We could include in the stemmed all those having a central tang or stem, whether with or without barbs. Under the name "indented," I believe we could include the few that are triangular, looking on them as not having got the length of being notched, and all others having no indentation would come under the term "leaf-shaped."

If we arrange those arrow heads having a central tang into two classes, stemmed and barbed, the classes are very far from being equivalent, as those wanting barbs are very scarce com-