

### Mr. Wallace and the Organs of Speech

IN his article in NATURE, vol. xxiv. p. 244, Mr. Alfred Wallace has given one of the keys to the formation of speech-language. He says, "When we name the *mouth* or *lips* we use labials; for *tooth* and *tongue*, dentals; for the *nose*, and things relating to it, *nasal* sounds; and this peculiarity is remarkably constant in most languages, civilised and savage." Of this he gives examples from Australasia.

Perhaps it may be said there is not much novelty in Mr. Wallace's observations, as many of us have said the same. I have gone over some of his ground in my small "Comparative Philology" in 1852, but I did not hit the point. Indeed what Mr. Wallace gives us is very little, but when it comes to be applied it acquires the highest importance. We have all known that *nose* is often a nasal, but Mr. Wallace distinctly puts it that *mouth* is a labial, *tooth* a dental, and *nose* a nasal. This however gives us by these words and their connections, as stated by Mr. Wallace, a very poor vocabulary, and leaves most of the phenomena of speech-language unaccounted for, and it gives no explanation apparently of the derivation of speech-language from sign- or gesture-language, and the connection of character with both.

Setting Mr. Wallace's illustrations aside—for though they are true, and taken from his own domain, they are not the most apt—we will search farther afield. Chinese will be convenient. In Chinese, for a reason that need not be explained, *mouth* is not now a labial, but in the series connected with it there are many labials. The series is best illustrated by the characters. The old characters are round; the new characters, as in other classes, are now square, conventionally representing the round. Now *mouth* is a round or circle, ○ (or □). *Ring* is a round or circle ○ (or □). The character for *mouth* is in fact a *ring*, or round, or circle. On looking for other corresponding characters we have *eye* with ○ differentiated. Here we get a labial *mu*. *Face* is another round character, and that is *men*. *Ear*, *head*, *blood*, *pot* (*ming*), *sun*, *moon*, *woman*, *mother* (*mu*), *white* (a labial), *field* or *garden*, *four* are all differentiated forms of each other and of *mouth*, as we know they ought to be. In cuneiform these characters are round, square, or triangular.

Of many of these psychological relations of words a list or dictionary will be found in the table of equivalents in my "Prehistoric and Protohistoric Comparative Philology." I observed and collected the facts, but did not know the full meaning of them for a long period; and in a paper as yet unpublished by the Biblical Archaeological Society I carried the subject still further, particularly as regards cuneiform and Chinese. Indeed, when Mr. Wallace published his article, I had the facts just cited ready for reference in my hand. The reason I did not grasp the solution was this: I have known for years that words forming what I now call ring characters were related to *eye*, and that *eye* is almost a constant in these investigations, equivalent to a molar in various departments of biological research. Indeed it was by the use of *eye* as a constant that I was able to make those numerous and rapid philological analyses which have excited so much distrust among those unacquainted with the process I used.

I found that if I could classify *eye* in a language under examination, it gave me *sun* and many other words, and it led me to much valuable work, but I was often thrown out for reasons I did not then know. Empirically I found *eye* was a constant, and I knew it was a round, because in many languages east and west *sun* is the day eye or day's eye; *moon* is the night eye, and *eye* the head eye. In the North American languages and in the Malay, for instance, there was the evidence of a common law of psychological philology, which led me to greater results. My knowledge became modified to the extent that *sun* was not day eye, but day round. Until Mr. Wallace's article appeared, I still regarded *eye* as the pivot on which the "round" words and characters turned, although I knew that *mouth* was the prototype of *moon*, *mother*, *woman*, *egg*, &c., and of objects and ideas having a periodicity or a month. Having a false pivot, I was never able to bring the facts into a right connection, although coming very near. The Chinese modifications of the ancient character show that *mouth* and *ring* constitute the primary character, and thereby indicate the primary word.

The researches of Col. Garrick Mallery, U.S.A., and my own, in the paper unpublished, show the connection of sign language and characters, and I have determined a relation between sign language, character, and words, as in the sign or character || for son, offspring, &c. The characters in many cases appear as ancient as the signs, and may have preceded speech language. How words were connected with ideas and their representatives by signs was the problem. The new explanations of Mr. Wallace in your paper, or the old observations of others, in giving explanations from natural cries and sounds, &c., are not always exact, and do not account for the fact that the sounds are in relation with the sign language. Thus the words for *eye* and 2 are the same, and the words for *ear* and 3, and so forth.

In the brief remarks now made I endeavour to steer clear of many things which would require a long explanation, and to bring my observations to bear on Mr. Wallace's article. On speech language being constituted, the application of a labial to *mouth* gave a large series, and so of the dentals, &c. As the numerals are in relation to each object of the universe in primitive symbology, so they were supplied. Indeed nouns, adjectives, pronouns, verbs, numerals, particles, were supplied from a common fount. There are languages constituted of a few differentiated words, which can be traced throughout.

In connection with Mr. Wallace's remarks is to be taken what he says afterwards of the action of the lips. In the sign languages and the characters the lower organs supply a large number of ideas regarded as phallic. Such are ||, †, O, &c. These ideas are not capable of direct connection with sounds; they came however into connection by the acknowledged correspondence of the parts in symbology and mythology. Thus the labial sounds became the representatives of actions or ideas illustrated by the corresponding lower organs, as in *go* and *come*.

Taking Mr. Wallace's terms and applying them, we therefore get the connection established between the sign languages and the speech languages, and we can see the psychological grounds on which they continued in working together, and why the speech languages have not everywhere *always* exterminated their ancestors. For this, and for the whole state of affairs, Mr. Wallace furnishes me with an explanation.

His naked statement is the best, that for *mouth* a labial was used. In the sign languages, and we find this in the prehistoric languages and their equivalents, several signs are used for one idea, and several ideas for one sign. When a labial was applied for the *mouth*, it was indifferent what labial. If one used a *b*, another would use *m*. This is one cause of the variety we find in the prehistoric primary languages, for there never was what philologists are fond of, one primitive language.

Many will object to Mr. Wallace, that *mouth* is not always represented by a labial, and in the common course hold that the negative evidence overcomes the affirmative. In many instances *mouth* is a dental, because the idea includes the *teeth*, which are dental. Again *tongue* is not always a dental, but a sibilant, so far as it is connected with *snake*. It is the whole knowledge of the facts which will better enable us to complete our progress and to overcome difficulties. For myself I have derived particular advantage from Mr. Wallace, in being enabled to understand my own work.

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