

5. Sir RICHARD PAGET (London): *The relation of the deaf mute sign language to the sign languages of North America and Queensland, Australia.*

In two previous Congresses—at Geneva and Amsterdam—I have offered evidence to show that audible human speech is the result of significant but *unconscious* mouth gestures, and that the *meaning* of our speech (in any language) is carried by the gestures which we make with our tongues, lips, and the other movable parts of our vocal cavities.

According to this view, the sounds of speech are only convenient *consequences* of the gestures by which they can be subconsciously recognized without the aid of sight.

If speech is really a branch of the human instinct to express ideas by bodily pantomime—in which the mouth unconsciously moves in sympathy with the hands—then it is evidently important that we should also study the *other* branches of behaviour in which this pantomimic instinct is used.

It is well known to anthropologists that there are several forms of silent gesture language, or sign language, by which men have been able to express ideas as we normally do by audible speech.

The best known of these are: (1) the sign language of uneducated deaf mutes, (2) the universal Red Indian sign language, (3) the less known, but equally interesting, Australian aboriginal sign language, as developed by the natives of North-West-Central Queensland. Mr IVAN T. SANDERSON has recently found a sign language in use in the Assembo Hill country—Manse district of the Cameroons—but this has not yet been recorded.

As to the deaf mute sign language, my chief authority has been the Rev. ALBERT SMITH, the Chaplain to the Royal Association in Aid of the Deaf and Dumb.

Mr SMITH confirms the fact (which I have known to be questioned by at least one reputable anthropologist) that this language is truly *universal* and instinctive. Thus, an uneducated deaf mute from China or Japan or Africa, finding himself in England, *can* “talk” (in his sign language) with English deaf mutes, so as to make himself understood without difficulty. He will use a natural pantomime which every deaf mute can understand. In his own country, and especially if he lives in a community where there are other deaf mutes, he will use many special, conventional signs, peculiar to that community, signs which other deaf mutes would not understand unless they had learnt them; *but* the basis of the deaf mute sign language is natural, instinctive and universal.

As to the Red Indian sign language, I have relied mainly on the little book of WILLIAM TOMKINS, *Universal Indian Sign Language*, published in 1929. The Red Indian sign language was in use before the European discovery of America; it continued to be the universal language of the various tribes of North America until English became their universal language.

As to the Australian aboriginal sign language, my sole authority has been WALTER E. ROTH, whose *Ethnological Studies among the North-West-Central Queensland Aborigines* was published in 1897.

With the help of the Rev. ALBERT SMITH, I have compared the signs given by ROTH—about 200 in all—and the signs for similar objects, actions and ideas, given by TOMKINS (Red Indian sign language), with the deaf mutes’ signs for the same ideas.

The results may be summarized as follows:

(1) The underlying principle of all three languages is the same, viz. natural pantomime.

(2) There are certain differences depending on racial psychology and outlook.

Thus, the Red Indian sign language is entirely signed with the hands, facial expression takes no part: but this does not prevent the sign language from expressing emotions, or such mental attitudes as humour, sarcasm, poetry, etc.

The deaf mute sign language is not so austere as the Red Indian, it is freely supplemented by facial expression.

As to the Australian sign language ROTH makes no mention of facial expression; it may be therefore that this language is (in this respect) more akin to the Red Indian, but this is not certain.

As to differences depending on differences of knowledge and outlook: the Red Indian considered the heart as the *seat* of knowledge as well as of emotion; on the other hand, the deaf mute considers the brain (forehead) as the seat of knowledge, memory, etc., and the heart as the seat of emotion.

The Australian apparently considered the head as the seat of knowledge. No heart sign is given by ROTH.

In the few minutes available I will give examples:

(1) of similar signs } in the three systems.
(2) of different signs }

As the Red Indian and Australian signs are derived only from illustrations and brief written descriptions, I cannot guarantee that my “pronunciation” (so to call it) would be considered satisfactory by a Red Indian or an Australian “Aborigine”; but we are, in this case, not concerned with niceties of pronunciation, but only with the fundamental roots, the nature of the pantomimic gestures by which the ideas are *naturally* expressed.

I. Similar Gestures. Three sheets of drawings were exhibited showing signs for the following:

Horned Cattle	Belt	Go
Bird	(Necklace)	Question
(Diving Bird)	Bag	Yes
Snake	Run	No
Frog	Sleep	
House	Swim	

in Australian, Red Indian and Deaf Mute.

II. Differing Signs. One sheet of drawings was exhibited showing signs for the following:

Brother	Anger	Forget
Doctor	Sick	Good

in Australian, Red Indian and Deaf Mute.

Conclusions

It will be seen that the three varieties of Sign Language—which come from widely separated parts of the world—are formed on practically identical principles.

Generally speaking, the sign appears to be due to the process of selecting the most *easily described characteristic* by which the idea (object, action, etc.) can be identified.

In Gesture Language (as also in speech), abstract ideas are signed by reference to concrete ideas which are felt to be related to them.

One other conclusion may, I suggest, be legitimately drawn, namely, that the exact form of the gesture is relatively unimportant (e.g. whether it is made with one or both hands, or with one finger or another, etc.).

If so, it follows that minor differences of *pronunciation* (due to mouth gesture in forming vowels and consonants) are also *relatively unimportant*, and that too much stress is at present laid (in Linguistic Science) on these *gesturally* insignificant details.

What is important for mankind is that they should learn to *understand* one another. Provided this is secured, small individual or racial mannerisms in the performance of the descriptive gestures should be acceptable as natural expressions of the fact that we are not all exactly alike.

Prof. DANIEL JONES suggested to me personally some years ago that the development of Gesture Language would be the *natural* way of securing a universal language for mankind, and that the real problem is to devise a suitable notation by which to *record* the Gesture Language. This suggestion deserves more attention than it has yet received. I hope that this brief description of Gesture Language—as developed by three very different human types—will serve to show that Gesture Language is well worth investigation by all those who are fundamentally interested in the nature of Human Speech.

MONDAY, 22 JULY. AFTERNOON

JOINT SESSION WITH THE INTERNATIONALE ARBEITSGEMEINSCHAFT FÜR PHONOLOGIE

Chairman: Prof. VENDRYES.

6. Prof. A. SOMMERFELT (Oslo): *Can syllable divisions have phonological importance?*

I shall not here enter into the vexed question of different syllable theories. I am not going to discuss the problem of the existence of the syllable or of how the syllable is constituted, whether it is based on the interchange of different degrees of sonority or opening, or on

a rhythm of muscular tension. Personally I am convinced that, of the theories which have been brought forth up to the present, the theory of muscular rhythm is the most satisfactory one from the linguistic point of view, and I believe also that syllable division is of great importance to the understanding of phonological evolution. But here I only propose to deal with the question of knowing whether syllable divisions can have phonological importance.

It is known that in the interior of the sentence word divisions may be significant. In some languages the autonomy of the word is greater than in others and different divisions in the sound chain can have phonological importance. I may, for instance, quote the article by Prof. DANIEL JONES, "The Word as a Phonetic Entity" (in *Le Maître Phonétique*, III, 36, pp. 60 sqq.), where he shows how this is the case in English. Excellent examples are

ən 'eɪm "an aim" : ə 'neɪm "a name",
'sɪː ðəm 'i:t "see them eat" : 'sɪː ðə 'mɪt "see the meat", etc.

Divisions in the interior of the word may be said rarely to be significant, but there are cases where they have such significance. I shall take some examples from Norwegian and from Scotch Gaelic which will, I hope, make the point clear.

In Eastern Norwegian, especially as it is known from the phonology of the riksmål, an unaccented *e*, *ə*, between nasals and liquids is under certain conditions absorbed by the nasals or the liquids, but the number of syllables is not reduced. The result is that when the vowel in question is placed between the same nasals we get some curious cases of geminates or even triplicates, as has been shown by Mrs CHRISTIANSEN in three articles in the Norwegian review of linguistics (*N.T.S.* II, 306 sqq., IV, 71 sqq., V, 141 sqq.). The tongue does not leave the position of the nasal or the liquid but all the same there is a syllable division. In the words *bø'nņnə* or *bø'nņnə* which correspond to the written *bøndene* "the farmers" and *bønnene* "the beans" the tongue does not leave the *n* position between the vowel *ø* and the vowel *ə* and still the words are trisyllabic and count as such in poetry. In a poem by BJØRNSON (BJØRNSTJERNE BJØRNSON, *Samlede digte*, II, 150 sq.) the last line of every verse is composed of dactyles followed by trochees in the following manner:

˘ x x | ˘ x | ˘ x x | ˘ x

e.g. *den er vor|gamle||den er vor|gamle.*

In many of the verses this line is a sort of refrain:

bønderne|kommer||bønderne|kommer,

which is recited:

bø'nņnə|kåmmər||bø'nņnə|kåmmər,

with exactly the same rhythm as in the line quoted above.

In another of his verses (*ib.* p. 45), composed of trochees:

˘ x | ˘ x
her er|grūnnen
˘ x | ˘ x
fūnnen|fūnnen