

phische Analyse und Synthese. Denn wir haben hiermit durch rein akustisch-physikalische Ueberlegungen einen festen Punkt gewonnen, der, wie gesagt, für die allgemeine Sprachwissenschaft wie im besonderen für die sprachgeographische Forschung von grosser Wichtigkeit ist, da wir von hier aus phonologische Lautsysteme : 1. ihrer geographischen Herkunft nach unterscheiden, 2. in Mischlandschaften jedem tonalen System seinen ihm ausschliesslich zukommenden Anteil zuweisen können.

55. SIR RICHARD PAGET (London) : *Speech as a Form of Human Behaviour*.

I was honoured to receive an invitation from the Organising Committee of this Congress to present a Paper on the Nature of Speech. I have chosen as my title : „Speech as a Form of Human Behaviour” — for if we are to understand what speech really is, we must surely understand also how and why it is made.

To study merely the *sounds* of speech without also studying the gestures of the mouth and throat to which those sounds are due, is like studying the *noise* of thunderstorms without examining the electrical forces which cause the fundamental phenomena of lightning.

Only when human speech begins to be studied, not as a system of significant sounds, but as a *system of significant gestures which produce characteristic sounds*, will human speech take its legitimate place among the sciences.

I plead, therefore, with this Congress — as I did (though without success) at Amsterdam in 1932 — to devote attention to the lightning of human speech, instead of concentrating wholly on its thunder !

We should then be able to understand the importance of CHARLES DERWIN'S observation that man's mouth and tongue *tend* to imitate the movements of his hands. For it is through this relationship that natural sign language (such as that which the deaf naturals use) produces speech.

The great LIEBNITZ pointed out the importance of studying the gesture language of the deaf ; the English anthropologist, Sir E. B. TYLOR, 60 years ago, also emphasized the connection between speech and gesture language. But, actually, very little work has been, or is being, done on the subject.

It is a remarkable fact that the uneducated deaf (even to-day) have, by nature, no conception of a word — or of making any hand gesture equivalent to a „word”.

The uneducated deaf naturally use a generalised pantomime which describes the actions or incidents, etc., which they wish

to communicate ; and this pantomime is so natural that all deaf mutes can understand one another. But this pantomime is not composed of standardised signs meaning objects, actions, qualities, etc. — like the „parts of speech” into which grammarians divide the words of every language.

The born-deaf — though they may be intelligent, and skilful with their hands — do not, by nature, analyse their impressions into separate categories. They receive impressions as a whole, and they describe them in bodily pantomime *as a whole*.

Hearing children (on the other hand) at once acquire the habit of analysing their impressions into separate categories, and of expressing each separate element of this analysis by separate gestures of articulation — i. e., by words.

The deaf child does not naturally acquire this power, and therefore appears to be „mentally arrested”.

My own belief is that the best method of introducing the idea of *words* to deaf children would be by first teaching them a *verbal form of sign language*, and then to teach them the written or articulatory forms of each verbal sign in their native language.

In the pre-verbal stage of human development, man's generalised bodily pantomime must, no doubt, have been accompanied by corresponding mouth gestures ; and these gestures must have produced speech-like sounds.

But as these bodily signs were not standardised — so that the same sign did not always mean the same thing — it follows that the corresponding mouth gestures, and the sounds they produced, also did not *mean* the same thing each time they were made. In other words, the „speech” of those early days was a vocal gabble accompanying a generalised pantomime.

As man acquired the power of symbolising separate ideas, his vocal gabble would begin to include actual *words* which always meant the same thing (or the same group of ideas) and which therefore could be understood by listening to their sounds.

But so long as man remained in the un-analytic — the non-verbal stage (like the born deaf still are to this day) — it must surely have been difficult (if not impossible) for him to make *new* syntheses.

May it not be that man's new power of Analysis and Symbolism produced what we call „Civilisation”? If so, civilised man must be distinguished from the higher animals *not* as being a tool-using animal, (for many animals use rudimentary tools) but as being an *analysing and symbol-using animal* !

And the most practically important of these symbols are the mouth gestures which produce *words*.

If this hypothesis is valid, the power of human speech, and

of thinking in terms of separate symbols, may be inventions of the last 20.000 or 30.000 years.

There are so many otherwise inexplicable phenomena, in speech, which yield their secrets when we look upon words as significant gestures.

The sound-shifts of GRIMM and BOPP may be seen to be, (nearly always), simply the *audible* effects of minute differences of mannerism in making a particular significant mouth gesture. If so, we should be careful not to attach too much importance to these differences. Differences of individual behaviour in making significant gestures are probably inevitable — since no two individuals really behave in exactly the same way.

We must not aim at identity of articulation and phonation in the speech of different individuals speaking the same language. We must only aim at sufficient similarity to enable the gesture to be recognised without ambiguity.

The phoneme, then, becomes only a significant mouth gesture made with a variety of different mannerism. Verbal inflexions can then be explained as the natural consequence of a verbal type of sign language.

Let me give you an example : If the sign for *Come* is made with the hand as a whole, it is natural that the sign should be modified, in practice, so that the hand gesture with one finger extended means *One man come*, while the same gesture with two fingers extended means *Two men come*, and with all fingers extended means *Many men come*. Here at once we have the origin of the singular dual and plural forms in our *spoken* verbs.

Similarly, if *I*, *You*, *He*, are signed by pointing in three different directions, and the idea of possession is signed by the closed hand, it is easy and natural to combine the signs, and indicate *My*, *Your*, and *His* by „pointing” with the closed hand.

Again, in the case of all „words” whose meanings can be expressed by some fairly obvious hand gesture — the gesture theory would lead us to expect to find similar root words in many unconnected language groups.

Shame, for example, is very generally signed by covering the face. The Germanic word *Scham* (English, *Shame*) is a case in point. The *sh* is a thin-surface gesture — as in *Sheet*, *Shawl*, *Shale*, *Shell*, *Shield*, *Shore* — or as in the terminal gestures of *Beach*, *Fish*, *Ash*, *Mash*, *Pinch*, *Squash*, *Blush* and *Flush*. Cf. also *Scum*, in which *sk* is a variant of *sh*. The terminal *m* of *Shame* is a closing or covering gesture of the lips.

With *Shame*, compare Tibetan *Zem* meaning *Shame*.

„ Japanese *Shūmei* meaning *Infamy*.

The archaic Chinese *Tiem*, *Disgrace* is almost exactly the same gesture. So is Welsh *Siomm*, *Fraud*, *deceit*, *sham*.

I believe that a systematic investigation of such words as *Shame*, and other easily symbolised ideas, in *all* the language groups of the world would give a new and more fundamental classification of the races of men — a classification based on instinctive behaviour.

Again, if the original form of a word expressing an action — such as *Dig*, *Sow*, or *Row* (in a boat) — is known, it may be possible to reconstruct the original action it describes.

Thus, the English word *Dig* is obviously not a digging, but a hoeing action.

To summarise : It is suggested that human speech should be studied as being probably the most important branch of human behaviour. The various language groups should be compared — both as to their root words, their methods of symbolism, and their grammatical construction. In each case, the verbal forms should be considered from the point of view of the gestures which produce them.

It should be understood that human speech, as it at present exists, is still a very primitive and imperfect code of unconscious symbolic mouth gestures, and that the sounds of speech are only acoustic results by which the gestures are actually learnt and recognised. And finally it should be realised that the systematising of human speech, and the elimination of its irregularities and ambiguities, will be, in the future, of great advantage of human welfare and understanding.

DISCUSSION :

Prof. W. DOROSZEWSKI (Warsaw) :

Le procès historique que le prof. CHATTERJI appelle „fronting of articulation”, a jadis fait l'objet d'une étude de BAUDOIN DE COURTENAY qui fit paraître à Hambourg en 1893 un travail portant le titre de *Vermenschlichung der Sprache* (Sammlung gemeinverständlicher Wissenschaftlicher Vorträge, Neue Folge, Achte Serie, Heft 173).

Pour BAUDOIN DE COURTENAY la *Vermenschlichung der Sprache* consistait justement en un remplacement historique des articulations postérieures par des articulations antérieures, fait qui se laisserait observer dans toutes les langues indo-européennes. Il est intéressant de constater que le prof CHATTERJI, tout à fait indépendamment de BAUDOIN DE COURTENAY, est arrivé à une conclusion pareille.

Prof. MARCEL COHEN (Paris) :

Il est important de constater que l'étude des clics prend à

partir de maintenant un rôle nouveau dans l'histoire du langage ; après le livre de R. STOPA, et les diverses communications de cette séance, on ne pourra plus échapper à l'idée qu'au point de vue phonétique il a dû y avoir des étapes successives profondément différentes dans l'évolution du langage. Toutefois il ne faut pas se hâter de conclure au caractère primitif d'un seul type (les clics) à l'exclusion des autres ; les sons vocaliques apparaissent dès le langage animal. D'autre part, il faut tenir compte de la combinaison du geste et de la parole.

Sir RICHARD PAGET (London) :

With reference to the question „which were the earliest speech sounds” I would point out that primitive man had *two* languages — the language of the emotions (which was expressed by various emotional cries, like those of higher animals) and the language of gesture (which expressed his „ideas”).

A mouth gesture — made in sympathy with a bodily gesture — only produced a voice speech sound *when* it was combined with an emotional cry.

If the breath was drawn in or out, during the production of mouth gestures, *unvoiced* speech sounds were produced.

Clicks are not more primitive than any other form of mouth gesture.

Prof. J. VAN GINNEKEN (Nimeguen) :

Comme j'ai proposé de réduire toutes les consonnes de l'humanité à des clics de succion, plusieurs d'entre vous semblent avoir ressenti la séduction de voir dans ces clics la transition simple entre les bruits des animaux et ceux des hommes, ou même un „missing link” entre la langue (?) des singes et la langue humaine. Pour éviter tout malentendu, j'y tiens donc à vous informer que selon moi l'origine du langage humain est une question bien plus compliquée que cela. Par la même reconstruction méthodique qui m'a conduit peu à peu à réduire enfin toutes les consonnes lexicales à des clics de succion, je crois avoir trouvé 1° que les clics de succion n'ont reçu leur signification lexicale que comme des succédanés oraux des hiéroglyphes visuels, qui les ont précédés comme signes arbitraires dans l'histoire de l'humanité ; 2° que ces hiéroglyphes visuels ne sont eux-mêmes que des gestes figés, comme nous les trouvons dans le „Picture-Writing” des aborigènes de l'Amérique Septentrionale, et que 3° ces gestes lexicaux répondent originalement comme signes naturels aux conceptions manuelles de l'humanité primitive comme l'a trouvé M. CUSHING dans l'*American Anthropologist*, vol. 5.

THURSDAY, 21 JULY. AFTERNOON

SECOND SESSION OF ANTHROPOLOGY

Chairman : Prof. DIEDRICH WESTERMANN.

56. Prof. DIEDRICH WESTERMANN (Berlin) : *Die Schreibung der afrikanischen Sprachen.*

I

Die Schreibung der afrikanischen Sprachen ist nicht eine wissenschaftliche Aufgabe, sondern in erster Linie eine praktische. So handelt es sich also in meinem Vortrag nicht um phonetische Probleme im eigentlichen Sinn, wohl aber um solche, in denen phonetisches Wissen und Können mitzuarbeiten berufen ist. Denn ohne genaue Kenntnis der Laute und ihrer Funktion in einer Sprache oder Sprachengruppe kann eine brauchbare Rechtschreibung einer Sprache nicht zustandekommen. Genau genommen muss man auch in afrikanischen Sprachen immer zwei Rechtschreibungen im Auge haben, eine wissenschaftliche und eine praktische, denn es ist klar, dass in einer Schreibung, die ausschliesslich für wissenschaftliche Zwecke bestimmt ist, Unterscheidungen notwendig sein können, die in einer praktischen Orthographie entbehrlich sind. Mit Nachdruck muss aber betont werden, dass eine praktische Schreibung vernünftigerweise nur entstehen kann aufgrund einer vorangegangenen wissenschaftlichen Untersuchung der Laute und des Lautsystems einer Sprache. Erst aufgrund einer rein phonetischen Feststellung der Laute und ihrer Stellung und Aufgabe im Ganzen der Sprache können die für eine praktische Schreibung anwendbaren Regeln gefunden werden. Hier ist die Mitwirkung des Phonetikers unentbehrlich, und hier darf er als wirklicher Sachkenner seine Hilfe nicht versagen. Die Herstellung einer brauchbaren Schreibung für bisher ungeschriebene Sprachen ist eine Kulturaufgabe ersten Ranges, und der Vertreter der Wissenschaft sollte an ihr nicht deshalb naserümpfend vorübergehen, weil hier die Ergebnisse seiner Forschungen praktischen Zielen dienstbar gemacht werden. Auch die Phonetik darf doch trotz ihrer rein wissenschaftlich bestimmten Arbeitsmethoden nichts anderes sein wollen als ein Dienst am Leben ; es ist zwar ein bescheidener Dienst, darüber wollen wir uns klar sein, aber doch ein Dienst.

Es soll nicht geleugnet werden, dass afrikanische Sprachen schon geschrieben worden sind, ehe die phonetische Wissenschaft sich mit ihnen beschäftigte, und dass dabei teilweise ganz gute Resultate erzielt worden sind. Das erklärt sich daraus,