## 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 Lan-guage-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 leim "an aim" : ə Ineim "a name",
Isia ðəm Iist "see them eat" : Isii ðə Imiirt "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 riksmal, 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, 7I sqq., v, I4I 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'nñnə or bø'nṇnə which correspond to the written bondene "the farmers" and bonnene "the beans" the tongue does not leave the $n$ position between the vowel $\rho$ and the vowel $\partial$ and still the words are trisyllabic and count as such in poetry. In a poem by Bjornson (Bjornstjerne Bjornson Samlede digte, II, I50 sq.) the last line of every verse is composed of dactyles followed by trochees in the following manner:

$$
\div x \times|\leftarrow x||\div x|<x
$$

e.g. den er vor/gamle\|den er vor/gamle.

In many of the verses this line is a sort of refrain:
bonderne/kommer/|bonderne/kommer,
which is recited:
bønnุnə/kåmmər//bønn̊nə/kåmmər,
with exactly the same rhythm as in the line quoted above. In another of his verses (ib. p. 45), composed of trochees:

$$
\begin{aligned}
& \text { her } \stackrel{\therefore}{\text { erlgrunnen }} \stackrel{\therefore}{\times}
\end{aligned}
$$

## tempel/hvórlvet <br> $\stackrel{\dot{x}}{\text { trodser/hälved }} \stackrel{\times}{x}$

there is no vowel between the first and the last n in grunnen and funnen as the verse is recited by a man speaking the riksmal of the East. The words are nevertheless dissyllabic.

A phonetician would perhaps object that the feeling of having dissyllabic or trisyllabic words in grunnn and bønnnə is an illusion, and that there is in reality only a long nasal to be heard in these words as I pronounce them. But the objection is not valid. We have distinctions between long and short nasals in Norwegian quite different from these cases. There is a distinction between long and short n combined with the distinction between short and long vowels as in hūn "a slab (of timber)" and hŭnn "she" (written hun). But the nasals in question are part of quite another series of distinctions. Let us consider the following examples:
funn " a find",
funne perf. pt. pl. of the preceding word,
funne "they found", now obsolete pl. of the preterite of the verb finne " to find",
funnene "the finds", pl. of the noun with the definite article.
In the first two cases there is no vowel between the first and the last of the n's, but still the words are different. And in the last three words there is no vowel between the first and the last n . The difference between the words is found in the $n$. The first word is pronounced with an ordinary geminated $n$ between an accented vowel and an unaccented one, the second is pronounced fuño with the first part of the geminate long. The last word is a trisyllabic funñnə.

It might perhaps be objected that the difference in these words is due to the different tone which is found in some of them. funn has the tone called simple and funnen the tone called double or compound. But the first and the second funne have the same tone and still they are distinctly different. In fact there are cases where words with geminates and triplicates have exactly the same tone. Take the following articulations: $\mathrm{b}+\mathrm{u}+\mathrm{n}+\boldsymbol{\partial}$. These articulations may represent three different words with three different meanings in spite of the fact that they all have the double tone.
bu'nnə (written bunne) is a verb meaning "to have its origin in, to be founded on".
bu'ñn is the pl. of the perf. pt. of the verb "to bind" and is written bundne.
bu'nnno is the pl. with the definite article of the word bunn "bottom".
In the monosyllabic neuter nouns ending in a long $n$ (written $-n n$ or $-n d$ ) the difference between an ordinary geminated $n$ and a triplicate serves to distinguish the singular of the noun with the affixed definite article from the plural with the same article, both
forms having the simple tone, e.g. binno (written bindet) "the bandage": binñnə (written bindene); bànnə (bändet) "the ribbon": bännnə (bändene) ; dønnə (donnet) "the boom": dønṇnə (donnene); funnə (funnet) "the find": funnnə (funnene); punnə (pundet)" the pound": punñəə (pundene); sinnə (sinnet) "the mind": sinnnə (sinnene) ; sunnə (sundet) "the sound": sunnnə (sundene), etc.

In the Gaelic spoken in Barra in the Hebrides which has just been described by a young Norwegian linguist, Mr Borgstrom (in N.T.S., VIII, 7 I sqq.), the division of syllables is free and potentially significant when nasals and liquids stand after a short vowel before another vowel. There is a difference between such words as $\int æ-r a k$ a verb meaning "to fade" (searg) and $\int æ$-ak "a glass of whisky". Mr Borgstrom has found no example in which the syllabic division by itself serves to distinguish two words. In the words quoted above there is also a difference in the r's. But that a difference really does exist is distinctly felt by the speakers. One of Mr Borgstrom's sources declared that the two words fäNak "a crow" (feannag) and faLak "hunting" (sealg) are very different in structure. In the first word, he said, there is a "space" between the two syllables. He could pronounce fäN-ak. But in the second fa-Lak the $L$ and the $k$ are so "close together" that a separation between them as in fæ̈N-ak is impossible. The word is "nearly monosyllabic, but not quite monosyllabic", he said.

It may be seen from these examples that in some cases and in some languages syllable divisions may be significant.

## 7. Dr J. Vachek (Prague): One aspect of the phoneme theory.

Since the First International Congress of Phonetic Sciences in Amsterdam in 1932 some of the fundamental notions of phonology, especially those established by the Prague group of scholars, have been submitted to criticism, and phonologists have, as a rule, profited by it. During these years, especially, scholars of the English-speaking countries have contributed to the general phonological discussion. I mean especially the work done in England by Prof. J. R. Firth, and by Prof. W. F. Twaddell in the United States of America Both scholars may be said to follow, in some way, the traditions established in their respective countries by Prof.' D. Jones and Prof. Edward Sapir. I use the cautious phrase "in some way": what I mean is that there is a considerable resemblance between the efforts of Prof. Firth and Prof. Twaddell on the one hand and those of the two esteemed pioneers of phonology on the other hand in so far that the former two scholars arrive, just as Prof. Jones and Prof. Sapir did before them, by their own methods, at results which at first sight appear very different from those arrived at by the Prague scholars, but which, in the long run, appear to have much more in common with them than might be expected.
As limits of time do not permit of a discussion of both these aspects of the phoneme theory, I must confine myself to one of them only. It is due to technical reasons only that I failed to choose the theory

