PHONEMIC THEORY AND FIRST LANGUAGE LEARNING

G. FRANCESCATO

From one of the most distinguished members of this Congress, Professor Roman Jakobson, we will listen here to a paper on the general theory of phonemics. From the same scholar, many years ago, came the suggestion that (after an initial period of pre-linguistic exercise) the acquisition of speech, that is of mother speech, by the child, should follow a rather definite pattern, based on the grouping of phonemes according to their most efficient opposition.[1] Whatever the reality of the schemes proposed by him in order to determine the successive formation of such oppositions, I think that today nobody will doubt of the reality of the process itself. In other words, objections have been raised from various sides against the order Jakobson has enunciated, and against the reasons he gives to support it, indeed against the very convenience of setting up such a pattern at the present stage of our knowledge about first speech acquisition. But no one seems to have objected to the fundamental and fruitful principle, that first language can and must be learned through a process of learning of phonemic entities.

The early linguistic activity of small children should accordingly be divided into two periods, very definitely separated, that is: 1) a period of pre-linguistic exercise (as we stated above), whose aim is in particular to acquire a certain ability to govern the articulatory organs; 2) a period of properly linguistic exercise, in which we can really say that the child is learning to speak. This second period begins within a rather various range of age. It can be stated that it begins at the moment when the child first learns to distinguish among different phonemes. But, what else is distinguishing among phonemes, if not distinguishing among sounds correlated with a certain meaning? If we free ourselves from the usual prejudices about the "word", we may probably admit that the first utterance of a child in which a certain sound is correlated with a certain meaning, can be called a "word". Of course, the meaning conveyed by such a word is expected to be a very vague one indeed[2]; on the other

[1] "Kindersprache, Aphasie und allgemeine Lautgesetze", in *Uppsala Universitet Aarskrift* (1941), pp. 1–83; cfr. R. Jakobson, "Les lois phoniques du langage enfantin et leur place dans la phonologie générale" (1939), Appendice à N. Troubetzkoy, *Principes de phonologie* (Paris, 1949), pp. 367–379.

[2] Among the many statements about this fact, see Latif, "The physiological basis of linguistic development and the onthogeny of meaning", in *Psychological Review* (1934), where he writes: "An infant awareness of some meaning does not imply any very precise appreciation. And, as a rule, the earlier meanings for an infant are exceedingly vague."

hand, one should probably expect the sound to be almost as vague and indistinct as the meaning it conveys.[3] In spite of such initial difficulties, we all know that the speech of a child, once started, will increase at a rate that any objective observer may properly term "marvelous". Moreover, the acquisition will certainly not be limited to enlarging the number of meanings to be conveyed, but will comprehend a steady and extremely accurate adjusting of the phonetic quality of the sounds produced and utilized, an increasing definition of the patterns of oppositions among those sounds, a continuous refining of the relations between produced utterances and conveyed meanings, and so on. The final result is what all of us know very well and use to call "mastery of the mother tongue".

It seems to me that both linguists and psychologists, while accepting the principles of the process we have now described very briefly in its main lines, have probably overlooked some aspects of the problem, which would deserve a closer consideration. It is anyway a matter of fact that almost not a hint about these aspects can be found in the extensive literature of first language learning I had to consult for a work on this subject.[4]

Some of the questions, which can be raised in this respect, are of thoroughly psychological content. We may ask, for instance, what are the phonemes in relation to the psyche? Is there any psychological object, which can be conveniently called "phoneme"? Is there any psychological difference (that is, any difference to be detected psychologically) between the phonemes for the child and the phonemes for the grown-up[5]? One possible solution of such problems, as suggested in my work, is that, from a psychological standpoint, the phonemes are to be interpreted as "Gestalten". If this may prove of convenience for the psychologists, it is probable that it will raise a set of similar questions for the linguists. What is, indeed, a "Gestalt" from a linguistic point of view? If a phoneme is a "Gestalt", is it possible somehow to identify (or else to distinguish) the unities which children utilize – more or less consciously – to learn their mother tongue, with the unities that linguists set up as a result of their analyses? In other words, is there anything as "the psychological reality of phonemes"[6]?

At this point, one may like to enlarge the range of questioning to such fundamentals as: does the phoneme belong to the "langue" or to the "parole"? Is "langue" a pure scientific abstraction, or does it correspond to some kind of psychic reality? etc. But, leaving aside such type of theoretical speculations, we have always to cope with the essential problem in our hands, that is: what justifies, in terms of the phonemic theory, the first apprehension of language?

[3] It is a well known fact that, at first, children try rather to imitate general intonation than sounds.

[4] *Psicologia e linguistica di fronte al linguaggio infantile*, submitted in 1960 (as a typewritten thesis) to the University of Padua.

[5] Of course, we do not mean here the phonemes as they are consciously set by the linguist.

[6] We use here the words of the late E. Sapir, see his contribution in the *Journal de psychologie*, XXX (1933), pp. 247–265 (reprinted in English by Mandelbaum, *Selected writings of E. Sapir*). This does not imply, of course, that we accept in full the ideas of the author.

Whatever answer we may wish to give to many of the questions we have raised and left aside, we cannot deny that children learn to speak, and we have to admit that learning to speak implies some form of learning of phonemes. As we have seen, learning of phonemes cannot be made in any other way, than by the learning of sounds. But again these sounds need not to be separated from the meaning they convey: for, they are phonemes in so far as their differences convey differences of meaning.

There is at this point one more interesting question, upon which I would like to call the special attention of this audience. From all what we have said, it appears obvious that phonemes, in order to be learnt, must have some psychological content. They are indeed the result of a psycho-phonetic process of learning, and this fact may have an impact upon the process of learning itself. This is an aspect of the problem I imagine no one has thought of till today. Jakobson stated, in the same paper, that the process of learning phonemes follows a more or less fixed order, and he has tried to deduce this order from the inherent phonetic features of the phonemes. Others, as we have seen, have objected to this point of view, but they have not put in doubt the fact that there has to be a determined order. They have only challenged the pattern set by Jakobson, or the actual possibility of setting a pattern within the limits of our present knowledge. Nobody has thought that, if sounds are to convey meanings, there will be a certain pattern not only of sounds, but also of meanings. That is, there will be a closed relation between the order of sounds and the order of meanings utilized. In other words: if we imagine a child who is learning to speak (of course, during the time of the linguistic exercise) and notice that his system of phonemes at a given moment is limited to three phonemes, say *a*, *p*, *k*, we will expect that his linguistic utterances are limited only to those which can be made with a combination of these three phonemes. But, on the other hand, in order to convey a meaning, the child has to try to imitate those utterances of the adults that he has identified as meaningful. In this case, it seems that he will have no choice, but to try to imitate as closely as possible those utterances which resembles (to his ear at least) a combination of the phonemes *a*, *p*, *k*, From a theoretical standpoint, this sort of situation seems to have only two possible solutions : either the pattern of the possible utterances determines the order in which the utterances are imitated, and therefore the order in which meanings are learnt, or the pressure of the reality, imposing the apprehension and use of meanings in a certain order, determines the order of the utterances to be learnt to convey these meanings. Of course, we may be inclined to expect that the usual needs for life present themselves to the children more or less in the same order everywhere (making due allowance for different ethnical and social environments). On the other hand, the words to meet these usual needs will obviously differ from language to language. If things are like that, we will be obliged to draw the conclusion that the order of appearance of the phonemes in the speech of children learning to speak will differ from language to language, and that it will be determined by the phonemic pattern of the language

itself. This goes against the hypothesis of Jakobson, according to which this order is determined by the phonetic features of the theoretical phonemes, and therefore supposed to be the same in all languages.

On the other hand, it is a well known fact that everywhere in the world children-speech indulges in certain patterns of phonemes which are very much the same, indifferent to the particular system of the language. All of us know about the so called "nursery-words" which are usually connected with largely similar meanings in different languages, and built upon a very narrow range of simple patternings.[7] To this phenomenon may be related the other fact, that the chronologically successive phonemic systems of children speech show very much the same simplifications and reductions in different languages, and that certain sounds seem everywhere to be doomed to a late appearance.[8] Eventually, both facts have co-operated to suggest a linguistic theory, known with the name of theory of "elementar Verwandtschaft", that is affinity determined by features typical of an elementary stage of language. All of these facts seem rather to support the hypothesis of a common pattern in the learning of phonemes, which will eventually be the same for all languages in the world.

At the end of this very short account, aiming at pointing to problems rather than to solutions, I would like to be permitted to underscore once more the many questions which still face us, in spite of longstanding efforts and intensive research, in the field of first language learning, and I would like to ask for a more intimate co-operation of psychologists and linguists, in this certainly fascinating section of psycho-linguistics.

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[7] Such are the most usual patterns of the type CV(CV), etc., as in *papa*, etc.

[8] Are they more difficult sounds? And why? Is there, for instance, any particular reason for the sound *r* to be, as a rule, the last to appear in the speech of Italian children?