

PHONOLOGY OF STUTTERING

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ABSTRACT

Here follows the discussion of the most interesting problems which are indicated by the results of phonological subtests of the Multilevel Linguistic Test proposed to 90 stutterers being treated at the Speech Pathology Center in Moscow. Stutter can be interpreted as a new distinctive feature inherent to stutterers' "dialect". Its existence is connected with the changes in the syntactic and the semantic levels. Stutter can be compared with the slip of tongue in the frame of time-space planning model of stuttering. Certain features of the disorder are similar to child language and aphasia.

0. In the last years the problem of definition of the stuttering phenomenon has been widely discussed in the literature (see, e.g. /1/). It seems however that the linguistic 'diagnosis' for stuttering (i.e. the study of the functions of levels of stutterers' language system) is more important.

As it was shown in /2/, /3/ and in some other reports, stutterers evidenced serious disturbances in the scene analysis/synthesis and its description, in the functional description of objects, in composing, storing and producing complex phrases, in completing long phrases and other semantic and syntactic difficulties. Bilingualism and language interference are to be considered as causing particular troubles in the patients.

1. As the above listed difficulties seem to affect the principal levels of language structure, the study of morphological and phonological means in stutterers turns out to be decisive in testing the hypothesis of the particular dialect (or few ones) that's created in the process of the development of the disorder.

The hypothesis implicates the following problems:

a) One can (preliminary) observe that, at least partially, the stuttered sounds are likely to be compared with the sounds of languages that are 'exotic' for the given speaker. From that point of view in stutterers' speech the new 'phonetical' features appear (such as 'aspiration', 'emphatisation', 'prolongation' and some others - cf. /4/).

The sounds, when stuttered, are 'marked' (and 'unmarked' in the fluent pronunciation - cf. the data of /5/). These features could be described (because of different degrees of laryngeal participation - cf. /4/; another approach in /6/) as Trubezkoy's "correlations of second degree" /7/.

b) At the same time the stutterers' active vocabulary is narrowed (among others my patients could not recall/use such words as NEW, HEAT, COMFORT, SUCCESSFULL, TO UNITE, TO COMPLETE, SALESMAN, TRUNC, etc.). The smaller size of active vocabulary can be one of the reasons that the patients fail to produce examples of the minimal pairs for certain distinctive features (Ž-Š, G-K and others) even if the investigation continues for a rather long period (till two days; the subtest often ends up with the patient's refuse to continue any kind of linguistic testig - the difficulty compared only with the subtest for making up the long phrase).

c) Phonetically different performance, on one hand, and the failure to produce examples for minimal pairs, on the other, get stuttering phonology close to the child phonology (cf. "cortical immaturity in stutterers" discussed in /8/). To some extent, stutterers are to be considered as being in the phase of language development that was described by Jakobson as "oubli des phonations" /9/: children confound the sound pairs (in stutterers' case the difference is not 'phonological') but can distinguish them in audition.

A case study can illustrate the thesis. Nastya, 4:5 (yrs:mos), Russian speaking young girl, began to stutter (according to her mother) at 2:2. Stutterings were mainly blocks and prolongations. At the same period, she began to learn by heart the passages from the poems that were read to her and recite them without stuttering. The intensive stuttering lasted for 5 months, then, suddenly, the amount of stuttering dramatically decreased. At about 3:10 she started telling herself rather long nonsense texts. At 4 her texts became meaningful, and interjections (SO TO SPEAK, LORD, etc) appeared.

The investigation started when she was 4:3. The phonetical subtests designed personally for her were the following:

Q. Instead of saying /DOM/ ('home') I say /TOM/ ('volume'). That's the language the fox speaks. How do you think he will say /BAR/ ('bar')?

A. ----

Q. (the first question repeated) How will he say /TAM/ ('there')?

A. /ZABOR/ ('fence').

Q. Instead of /DOM/ the fox says /TOM/, instead of /BAR/ he says /PAR/ ('steam'), instead of /TAM/ he says /DAM/ ('I'll give'). What will he say for /POL/ ('floor')?

A. 'I don't know ... yet' (exactly 'after' Jakobson!)

Q. How will the fox say /SAD/ ('garden')?

A. /SAD/ will be /SKAF/ (pronounced as /KAF/ as she had sigmatismus lateralis; it can be preliminarily supposed that the tongue position, just like in aphasics, is connected here with certain brain processes).

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Q. Instead of /SOL/ ('salt') the fox says /SOL/. How will he say /BOL/ ('pain')?

A. /BOL/ - it's when you fall and something is painful on the asphalt'.

Q. (the question repeated) -

A. /BOL/ - it's when it's /BOL'NO/ ('painful').

Q. (the question repeated) What will he say for /ROL/ ('role')?

A. /ROL'IK/... /KROL'IK/ ('roller' - 'rabbit') (the answer shows that the kid understood that she was supposed to change only the first sound of the word; she tried to do it later in her /NAMPA/ for /LAMPA/; the only idea she could not get was how the sounds were related; is her favour for semantic associations instead of phonetic changing a general tendency in stutterers?).

She confounded /R/ and /L/. At first she did not correct me when asked her about /LAK/ 'laquer' instead of /RAK/ 'crab'. But then she asked me what will I say for /KRASKI/ ('paints'). I answered /KLASKI/. She reacted: '/KRAS/ - ha-ha - it's like /KRAS/ (normally /KLAS/ 'grade') - where you study in the school!'

The case is interesting because she must be considered as the high-risk infant, though actually the number of her stutterings is rather small. Anyway, the comparison between stutterers and child language must be the problem for further investigation.

2. Though the question of the loci of stuttering had been put up long ago /10/, it still remains not quite clear (see, e.g. /11/).

As a working hypothesis one can assume that:

a) The stuttered word differs from the non stuttered one not only phonetically, but with its value on the other levels of language structure (especially in the semantic aspects). The supposition leads to the conclusion that the stutter *per se* is the value of the distinctive feature (or few ones) in the stutterers dialect. The study of the question is complicated by the fact that stutterers sort of speak the 'normal' language; that's one of the reasons for their

speech changing under different conditions (cf. /12/; cf., also, the orientation of the patients on various clichés and standards, such as the speech of TV announcer, etc.).

b) The stuttered word differs from the non stuttered one because of its different position in the speech sequence, that is, there are certain positions that tend to be stuttered more than the others (apart from the classical "first three words" /11/ my clients tend to stutter on every 4th, 8th and so forth, word of syntagm and on the conjunctions of complex phrases). Various relations in which the stuttered word takes part are arising the problem of time-space planning of stutterers speech (cf. /13/). The problem along with the slow, slurred speech of stutterers, the changes in the intonation patterns and often phonetical errors resemble very much the features, described by Alajouanine in the patients with the damages in the frontal lobes of brain /14/.

3. The problem of time-space planning may help to link the stutter in its various appearances with the slip of tongue (that, as the stutter, appears under certain conditions in the fluent speech as well as in aphasia). The two principal kinds of the slip - perseveration (/NE NEDO/ instead of /NE NADO/ - from the patient V119) and anticipation (/POSLE SLUŽBY V ARMIJU JA POPAL NA LECENIE V MOSKVU/ - instead of /... V ARMIU .../ - from the patient K12) may be interpreted in this model as the stutter, extended in time and space symmetrically around some "nucleus" (it is interesting, that, according to /8/, stutterers persevere less than the normal speakers - maybe, because some part of their perseverations converts into stutters). It seems that in the normal speech sequence there are certain places for pauses, corresponding to the "nucleus" (as it was stated in /15/, based on the different kind of testing, "the true relation is between natural pauses and stuttering"). In the cases of stuttering certain restrictions for the distances between pauses seem to appear. Not contradictory to the model seem to be the linguistic analysis of slips /16/ as well as the phenomena of word and syllable repetitions (where, "nucleus" being stable, the sphere of its influence is extended). The time restrictions data are also indicated by the results of syntactic subtests. Maybe, the interjections (LEMME SEE) appear exactly on the margins of these time intervals. That is supported by the fact that the "embolus" can be meaningless (/PI/ in the Cheremiss patient) or can consist of the words from foreign languages (i.e. Russian /TAK/ 'so' in the Armenian patient), thus carrying no but temporal function.

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