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APHASIA IN A COMPOSER

(On the relation of ~~verbal and musical~~)

One of the most ^{interesting} ~~significant~~ problems of cortical neurology is that the relation of ~~phone verbal and musical hearing~~ two kinds of acoustic processes - ~~the verbal and the musical ones.~~
~~Some authors believe there is a significant correspondence of both functions of the brain and that sensory aphasia is as close~~

~~Some authors believe both functions~~

Some authors believe both functions are ~~pretty~~ ^{very} close and sensory aphasia is associated with some disorders of musical ~~hearing~~ (Ustvedt, 1925). ~~Other~~ ^{Other} & some authors - observed a certain dis-association of both ~~functions~~ ^{kinds of acoustic processes; they believed} ~~that~~ sensory aphasia with severe disturbances of phon differentiation of phonemes ~~is not~~ ^{is not} associated with musical disturbances (Jellinek, 1956, Feuchtwanger, 1930, Jellinek, 1956 ~~and~~ and others).

They mentioned the fact that ~~in~~ ⁱⁿ the prosodic and organi- sation ~~and melody~~ of speech is preserved in ^{patients with} sensory aphasia, and that in ~~most~~ most cases of amusia there was no distur- bances of ~~speech~~ ^{speech} receptive or expressive speech. A series of cases observations ~~have~~ were made where amusia was observe a result of lesions of the right hemisphere and was not ~~accompanied~~ associated with any ~~distinct~~ aphasic disorders (Ajuriaquerra & Hecquen, 1960 a. oth.). That is

~~All these observations have a certain sig~~ why cases where ~~no~~ such dissociation can be observed in a most ~~clear~~ ^{clear} form ~~and~~ ^{and} of a ~~spe~~ have a special significance.

During ~~two~~ ^{three} years we had the opportunity to observe an outstanding ~~and world known~~ Russian composer - Professor Sh. ~~Shabatkin~~ ^{Shabatkin} who suffered with a severe acoustic (predom- inantly acoustic) aphasia but who during the whole pe- riod of ~~the~~ the disease ~~not~~ preserved his musical abi- lity, ~~and~~ ^{and} ~~with~~ ^{with} ~~composed~~ ^{composed} ~~outstanding~~ ^{outstanding} ~~being a staff~~ ^{being a staff} many outstanding ~~compositional~~ ^{compositional} musical compositions ~~which were many times played in~~ ^{which were many times played in} which were ~~performed~~ ^{performed} ~~and received~~ ^{and received} highest evaluation many times performed with a great success

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Professor Sh. was born ~~1892~~ 1903, in a Teacher's family. From his child

years.

U.S.

He started his ~~work~~ work ~~in~~ as a pupil om Musical School, ~~moving~~ ~~then~~ to Moscow. After ~~1928~~ ¹⁹²⁸ he ~~abolished~~ ~~the~~ ~~Moscow~~ ~~High~~ ~~Musical~~ ~~School~~ ~~(highest~~ ~~musical~~ ~~school)~~ ~~at~~ ~~the~~ ~~time~~ ~~he~~ ~~abolished~~ ~~the~~ ~~Moscow~~ ~~High~~ ~~Musical~~ ~~School~~ he already has composed several quartetto's, romances ^{and} ~~and~~ pieces for fortepiano; ~~the~~ during his school years he composed his First Symphony.

~~In~~ ~~During~~ ~~next~~ ~~years~~ ^{On his thirtieth} he was ~~is~~ elected professor of the Moscow Conservatorium and ~~cond~~ ~~be~~ leading a class ^{of Composition} ~~of Composers~~. A series of well known Russian Composers (T. Khrennikov, L. Suter, J. Morosov ^{and others}) were his pupils. From 1942 he was elected ~~Prof~~ as a Director of Moscow ~~Conservatorium~~ and has written composed a series of symphonies; his opera "

" ~~At~~ ~~after~~ ~~set~~ ~~Shakespeare~~ was performed in the Bolshoi Theatre. He was supposed to be one of the ~~to~~ most eminent Russian Composers and was decorated with highest artistic titles and rewards of the Soviet Union.



realized that he does
The first day after the vascular attack he ~~did~~ not understand any speech and was unable to ~~use~~ ~~verbal~~ ~~speak~~; after several ~~first~~ days he used to say only "yes" and "no" and ~~was~~ ~~able~~ to ~~give~~ a few very disorganized utterances. After a week he tried to propositionize, but his ~~phrases~~ ~~his~~ attempts resulted ~~in~~ ~~work~~ unsuccessful and he used to ^{utter} ~~give~~ only some common expressions as "how do you do", "Thank you", "good buy", "oh, gosh", "I really don't know" etc. He ~~evaluate~~ was conscious of his speech inability, but ~~did~~ ~~not~~ was unable to evaluate ~~every~~ ~~separate~~ ~~case~~ ~~of~~ his verbal mistakes.

^{His} The repetition of the speech perceived was unsuccessful; he mixed several sounds, was unable to ~~repe~~ ~~repeat~~ ~~correlative~~ ~~pho~~ ~~nes~~ without mistakes; many cases of ~~literal~~ ~~paraphras~~ ^{and verbal} were observed. He repeated the word "slabost" (weakness) as

During many years Prof. S. Sh. suffered with hypertonia. September 14, 1953 ~~he~~ ^{was} an acute disturbance of vascular brain circulation ~~to~~ ^{short} took place. There was a disturbance of cutaneous sensibility in the right hand, then a right sided hemiparesis and severe disturbances of speech with a right facial paresis. After several weeks these symptoms disappeared and he returned to his work October. After six years - October 10, 1959 there was a second disturbance of vascular dynamics ⁱⁿ of the left hemisphere; ~~the~~ Sh. lost his consciousness, there was a paresis of the right ~~hand~~ side and an expressed sensory aphasia. After 36 hours he recovered consciousness, but a paresis of the right hand and disturbances of speech remained. During 1962 and 1963 ~~there~~ several epileptic fits with were observed.

...sla... " - " shta... " - " sta... " ; trying to repeat " OK zepnost " (you will recover) - he repeated " krepnost... OK zepnost... krep-nust... OK zestro " etc.). There were many similar literal and verbal paraphrasias in his spontaneous speech, which improved during the first month. ~~Finally~~ Trying to ^{say} utter " ka-zandash " (pencil) he uttered " chazantash... chazantash... " and being unable to find the proper word ~~to~~ showed to his head and told " here... I have... here... ~~tot~~ total... total... no... shame!... ". All attempts towards ~~spontaneous~~ active formulations remained ~~unsuccessful~~ futile. Trying to tell something to his ~~first~~ wife he told: " Expressive... compressive... no... suppress... no... what for a treason have I to-day... ")

After two months Sh. was able to ~~up~~ utter several words or even phrases, but literal and verbal paraphrasias persisted.

Motor ~~defects~~ in speech ^{was ~~word~~ partially recovered} ~~became less expressed~~, but sensory defects in hearing and ~~in~~ perception and understanding of speech remained unchanged. Marked ~~at~~ defects in ~~under-~~ ~~stand~~ instability of the meaning of the words (" alienation of the ~~in~~ word meanings ") ^{persisted} ~~was seen~~, and only ^{some} understanding of ^{speech by} contextual ~~speech~~ was possible.

~~Systematic~~ Psychological ~~and~~ and Neuro-psychological ^{analysis} ~~investigation~~ ^{with day-by-day study of his speech, accompanied} with rehabilitative treatment ~~was~~ ^{was} begun ~~at~~ ^{on} the 6th month of the illness and was continued during three years 6 months after the vascular ~~attack~~. marked deterioration of ~~analysis of phonem~~ the phonematic organization of the speech sounds, alienation of the ~~word~~ meanings of words could be observed; ~~the patient~~ ~~to~~ the patient could ~~not~~ ^{was} able to understand the verbal instructions (" show your nose... ear... eye... etc.) only ~~for a very short time~~ ^{for a very short time}; ~~continuation of the experiment resulted in a total loss of understanding of the ~~word~~ meaning of the words.~~ ^{As a result he was able} ~~he continued~~ to understand phrases ~~phrases~~ phrases only by general context and was able to give ~~adequate~~ ^{adequate} ~~grammatical~~ ^{grammatical} sentences ~~in his active utterances.~~ ^{speech} He was able to name several objects, but ~~verbal and general~~ verbal and ~~general~~ paraphrasias remained

1) The first three utterances have identical root; but are the last has a different meaning

4) We do not reproduce textual Russian utterances; ~~but~~ ^{we} prefer to give the structure of these utterances in English matrix.

unchanged. The same paraphrasic disorders were observed in ~~automati~~ ~~good~~ automatized (serial) forms of speech (days of a week, months etc.)

It was clear that after 6 months a clear syndrome of a sensory (acoustic) aphasia with components of disorders of the kinesthetic organisation of articulation was observed. During the next period ~~defects in articulation~~ as well as defects in discrimination of phonemes and ~~literal~~ ~~literal~~ paraphrasias ~~dis~~ became less expressed and defects in articulation disappeared. (#) ~~in contrast~~ ~~defects in acoustic-mnestic~~ ~~defects in retaining series of~~

~~words (acoustic-mnestic defects) remained unchanged.~~ As a result of these defects active speech of Prof. Sh. was still defective: he ~~tried~~ tried to use extended sentences but was unable to finish phrases; there were plenty of literal and verbal paraphrasias, as well as grammatical defects. His speech remained poor and agrammatical, and ~~so~~ he was unable to express formulate his statements in adequate way. "Oratoria... it descended... he tried

~~The prosodic and melodic structure of his speech remained un-~~
~~changed; and as well as he could excellently fulfill rhythmical~~
~~tapping and his evaluation of musical ... was as~~

to say... it was a long time ago... That is a spiritual kind... Gradually it became... it was extended... and then... and now... gradually... ah... it ~~was~~ became very different... how may I say... I have to recall... Oh... nothing... I have thoughts... No... it's too difficult..." Here are some attempts to summarize

"the episode"

the contents of his Set Shakespeare's "..." he composed as an Opera: "That's in Petruccio's house... She is running... where... where... she want to escape... in the storm... and so on... She was brought there... no, that not that..." etc.

(#) He ~~error~~ became able to repeat separate sounds, but inability to discriminate correlative phonemes was still observed in cases when the amount of the series of sounds given for repetition increased. The similar difficulties in retention of ~~verbal~~ series of words were observed remained; perseverations and defects in serial order of words were observed when Prof. Sh. had to repeat a series of three words. Repetition of a sentence was impossible; ^{instructed to repeat} ~~given~~ a series of sentences "The moon is shining - The house is burning - The dog is barking" he ~~tried~~ told: "The moon... is shining... The house... no... I really don't understand..."

The Prof. Sh. was able to name one or even two objects; but when three objects were shown - his naming became paraphrastic and he gave contaminations. ~~He did not accept any~~ ^{At} Attempts to help him by giving the beginning of the word failed.

Understanding of speech remained disturbed during the whole period of disease. Prof. Sh. formulated these defects himself: "The words... Do I really hear them? But I am sure... not so clear... I cannot grasp them... Sometimes yes... but I can't grasp the meaning... I don't know to what it is..."
~~Verbal~~ Inability to understand the meaning of the words was extremely clear in cases when the word was presented without a simultaneous presentation of the visual object.

Reading - and partially writing were preserved, but Prof. Sh. was unable to write long series of words or sentences; when ~~tired~~ exhausted he was unable to grasp the meaning of the written paragraph.

In the further ~~etc~~ course of the disease ^{defects of} understanding of speech, ^{as well as} ~~and~~ retention of verbal series remained defective and defective grammatical structure of sentences remained defective, ~~whereas~~ and the whole ^{syndrome} ~~picture~~ remained a syndrome of acoustic aphasia ~~etc~~ which one of us described elsewhere (A.R. Luria, 1947, 1962).

During the whole three years of his disease - no marked personality changes were observed in Prof. Sh.

In spite of his marked disturbances of speech he continued his work as a composer. He worked hardily with his pupils - listening to their essays and correcting ~~them~~ their compositions. He spent a considerable time to his creative work. ~~Even~~ Being an aphasic, he ~~brought to~~ ended compositions he began before his disease and created a series of new compositions which were ~~it~~ considered to be ~~the~~ not lower than the opera he composed before his illness.

Here is a list of some of his compositions he fulfilled during the last three years:

- Op. 51. (1959-1960). Sonata for Violoncello and fortepiano; C-dur, in four parts. (played by M. Rostropovich, G.S.R.Z. S. Knushevitzky and others).
- Op. 52 (1960, 1962). Three choruses on Moldavian motives (played by the Moldavian Capella)
- Op. 53 (1960). The eighth String quartet. (played many times by the Borodin-quartet, Moscow, recorded)

- Op. 54. (1961). "My fatherland" - eight series of eight songs
(crowned by a prize of Ministry of Culture, USSR)
- Op. 55. (1961) "On the Land of Mordovia" (Three songs, ~~the~~ sung by
G. Vishnevskaja, soloist of the Bolshoi Theatre)
- Op. 56. (1962) The Fifth Symphony, c-dur, for orchestra, in four parts.
(played by the orchestra of USSR, recorded)
- Op. 57 (1963) "To my grand children" - Four choruses. (in print)
- Op. 58 (1963) The Ninth quartette in three parts (many times played,
recorded)
- Op. 59 (1963) "In the Forest", 7 seven choruses. (^{performed} sung by the children
chorus of Prof. Svecnikov, in print)
- Op. 60 (1963) Sonatina g-dur in three parts. (played by Ivanoff-
Kramskoi, in print)

Revised. Ballet "Memories of Old Days", after M. Glinka.

Op. 27. "Sun in the Steppe": Orchestra of an opera.

Op. 19. Concerto for the violoncello.

Op. 22. The Second suite for orchestra.

A part of these compositions, ~~were played~~ of 1961-1962 were played
in a special concert 9. x. 1962 in Moscow.

Here are some evaluations of the ~~ee~~ Prof. Shabalin's composition
of the last years:

D. Shostakovich: ~~The~~ "Shabalin's Fifth Symphony is a brilliant
creative work, filled with higher emotions, optimistic and
full of life. The symphony was composed during V. Shaba-
lin's illness. That is a creation of a great master."

T. Khrennikov: We can only envy the brilliant creative activity
of this ~~man~~, outstanding man, who, despite of his illness, created
the brilliant Fifth Symphony which is so full of young feelings and
wonderful melodies"

We presented a remarkable - perhaps a unique case of dissociation of two kinds of acoustic abilities - that of phonematic and musical ^{perception} hearing and memory.

An outstanding composer ^{who suffered a vascular} ~~with~~ injury of the left temporal lobe and ~~etc~~ massive acoustic aphasia - preserved his musical abilities and continued his creative work; being an aphasic - he composed a series of outstanding musical opera which were ~~played~~ played in many places and received a highest evaluation.

This case proves once more that ~~is~~ phonematic and musical hearing ~~a~~ perception and are included in different systems having ~~different~~ as a basis different cortical structures.

It will be the task of further studies to bring ^{neuro-} psychological as well as physiological analysis of such data.

We are very grateful to ~~our~~ ~~the~~ Dr. D. M. Shabalina - the widow of the late Prof. Shabalin, who conducted a series of observations and who gave us permission to publish this paper.