

Introducing Professor Petar Guberina

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Abstract :

本論文は、グベリナ教授の教えを忠実に伝えることを目的に、その教えの伝承に係わる経緯と本質的な内容について述べる。*Ferdinand de Saussure* はグベリナ教授の先生であり、言語の研究において音声的な分析と構造的な分析を統合した全体構造的なアイデアを作り、言語の世界に輝かしい豊かな道を開いた。その考えは、プラハの言語学校の学者、その後、グベリナ教授へと継承され、グベリナ教授により欧州、米国での言語の研究に特別な考え方を啓蒙し世界的に発展させた。

たとえば同じ音声でも数え切れない程の意味合いをもたらすことがある。それは我々の脳の中で、その音声をもつ最適周波数の特徴が脳に刺激を与え、脳が選択してその音を聞き取りしている。さらに、その音声の前後の流れやトーンなどすべての状況を含めた音響全体に拠りそれに基づき聞き取りをしている。そのような考え方が全体構造的の本質である。

グベリナ教授は、言語の全体構造的な考えを提唱され、その応用として、外国語の言語教育に係わる講座、視聴覚教育をザブレブ、パリで精力的に実践されていた。

絶えず話したり、聞いたりする対話では、全体の流れで、身振りや手振りなど眼で見ている映像が「ことば」と繋がって意味合いも深くなる。グベリナ教授が提唱した“Sound comes from movement”は正にそれを表したものであると云える。また、筆者の先生である偉大なるグベリナ教授の経歴や活動実績についても簡略に紹介する。

The following excerpts, under the signature of Professor Guberina, range from 1958 to 1971 and testify to the continuity of thought that has not ceased to animate our research groups and our practitioners.

They will help to shed light on the notion of “global structure”⁽¹⁾.

It is in tribute to the creative activity of Professor Guberina that we place them in this paper.

1. On the notion of Structure

We use the term structural-global to define the particular idea we have about structure.

The masterful idea of *Ferdinand de Saussure* that everything is in one language and that the language represents a system, has opened a very rich way to the different discoveries in the field of linguistics. The phonological school of Prague and all the phonological and structural schools in Europe and America start from De Saussure’s central ideas and try to describe, in different forms, the system of particular languages, and to deduce from them, in some cases, pedagogical methods.

The basic idea of the phonological school, and therefore of Troubetskoi, is based on a system that takes into account both semiological and physio-acoustic aspects. This last point is extremely important, although it was only glimpsed by Troubetskoi’s insight. Because basically, from the theoretical point of view, the limited number of phonemes compared to innumerable phonetic realizations of the same sound, proves that our brain hears the sounds on the basis of certain *optimal traits* that stimulate it the best, in the frame of the entire linguistic system which must first and foremost be meaningful. Phonology, as a linguistic system and as a structural system, contains in its sources the proof that we hear in terms of meaning, this auditory integration response not on the whole of the sound spectrum that gives us the physical analysis of a sound, but on the basis of certain optimal

1 Guberina.P., Sur la notion de <Structuro-Global>,Revue de Phonétique Appliquée, n.21,1972,9-13.

preferential acoustic characteristics, and that change with the change of the linguistic system.

The many phonological and structural schools which have been created in the last thirty years both in Europe and in America, although opening up new paths to linguistics and pedagogy, have not often taken into account the fact that the structure linguistics must respond by its function to the function of the language as such. The semiological aspect has been very often abandoned, whereas in pedagogy the overall set of the situation and the dialogue has been exploited and developed neither theoretically nor pedagogically.

It is precisely by the structural-global word, or better by the addition of the global word to the word *structure*, that we want to emphasize our idea about the structure and the application of this idea in the whole audio-visual course of Saint-Cloud, and more particularly in phonetics.

For us, language is an acoustic-visual ensemble. We can't separate the situation and the parts that compose it from their linguistic expression. That is why it is the spoken language which is at the base of our method, with the intonation as essential means which frames the structures. The dialogue will be the permanent link between the context and the expression, while the image will be the vehicle of this link between the contextual situation and its expression. [...]

We see that the structure, or, as we call it, the *structural-global* trait, consists in the fact that it is above all the *context*, the situation that creates the structure. It will therefore be the convex situation, with all its consequences, that will guide our theory and pedagogical application in the structural conception of language.

2. On the notion of Global⁽²⁾

Following three reasons was given.

1)

I had attached the word <global> to the word <structure> to make it clear that in the AVSG method any structure must be related to a situation. You know that the word <structure> in the American structuralist schools of the time had lost all connection with situations and that structure meant substitution and transformation exercises without regard to the situation.

2)

The second reason I joined <global> with the word <structure> was that I needed to understand the meaning globally and not translate. You know that translations go hand in hand with a lot of so-called structural exercises, and that beforehand you learn the forms from the students and translate them to them.

3)

The third reason I introduced the word <global> was that the student had to learn the pronunciation and the meaning of the syntax and the gestures in a big ensemble. [...]

3. Three definitions of structure

1)

What is essential is not to understand the word <structure> as a formal linguistic organization (for example, the sentence outside the situation) but in the sense of the structural functioning of our brain and its optimal responses. As all our bodies, including the brain, are rhythm-based and our body vibrates and is sensitive to vibration-frequencies, a stimulus structure organized on rhythm and intonation

2 Guberina.P., La méthode audio-visuelle structure-globale et ses implications dans l'enseignement de la phonétique, *Studia Romanica et Anglica Zagrabiensia*. n.11, 1961.

responds very well to the optimal possibilities of our brain.

2)

Another important point is to understand that our brain works on the basis of eliminating certain parts of the stimuli and that, in the learning of a foreign language, the brain will eliminate the elements that could disturb the system of the mother tongue. It is therefore necessary to present such a program where the situation, the rhythm, the intonation, the form of the dialogue will make a whole that will allow the best perception (optimal reception) of the brain because these structural factors respond to the learning of the mother tongue and has all facilitation during learning and responses to acoustic stimuli (music and sounds). Memory - so important in the learning of foreign languages - will be most effective in such an organization of stimuli, (transmission of linguistic material), because it will also work best if the structure to be learned is based on the rhythm, intonation, situation-context.

3)

A third important point in the understanding of the word <structure> in AVSG is that the brain grows richer and more functioning. So if it works optimally with the stimuli based on rhythm and intonation and that thanks to the image, the visual perception also takes place in rhythmic form (the appearance of the image a few seconds before the sound), the brain possibilities of those who learn a foreign language with such a method will be enriched and it will be possible gradually to send acoustic stimuli without image and it will be possible to combine them in different forms. [...]

4. Language linked between man and nature

The brain, in relation to the organs of sound, functions in structure. Language, the social function of language, represents structure in all

its aspects. Language is the link between man and nature. [...] ⁽³⁾

Nature also works in structure, our sense organs, our brain, our perceptions and our movements are based on the structural laws.

The language has the structural form because the brain, operating on the structural principles, can perceive the language only in structural form by means of the eye (realities, gestures) and the ear. The eye perceives reality by means of a few elements that are organized into overall units by the brain. [...]

5. Infrasound

Thus the infrasound does not have the function of being heard, since the infrasound is inaudible; a limited band, if the brain captures it as a limited band, would not be enough for the brain to understand all the language ⁽⁴⁾. What happens to the brain is no longer the frequencies that we see on the electrical or acoustic characteristics of the auditory field, but it is a set structured by the transients, the acoustic characteristics of the air or bone, the airways, infrasound, if it is at stake. The intermittent mixing of the frequencies, thanks to the particular slopes of the transmitter and to other elements contained in the <SUVAG>, takes on a whole value in the brain, different from that which was at the starting point (in the speaker emission).

The sounds of language are never deprived of their structure; this structure, escaping destruction, compresses and condenses during physical filtering. This explains why a deaf person, while not able for example the pure tone of 1000Hz, can hear the frequencies generated by the sounds of the language well beyond 1000Hz.

...If, despite everything, the brain is able to integrate them [the stimuli] it is because it has become capable of carrying out itself the

3 Extraits d' une correspondance de M. Guberina a M. Renard, des 23 avril et 16 mai 1971.

4 Guberina.P., La méthode audio-visuelle structure-globale, *Revue de Phonétique Appliquée*, 1, 1965, pp. 38, 39, 40.

work of limitation and elimination which at first had to be done by technical means. He arrived there thanks to his ability to create structures and thanks to the conditioned reflex. It is thus realized a system of feedback between the ear and the brain. [...]

6. Verbo-tonal System

We are aware that the basic premises of the Verbo-tonal System have been difficult to quantify because this system is based (1) neither on pure-sound stimuli that can be determined scientifically (2) nor on the physical components of speech sounds as quantified by conventional analyzers⁽⁵⁾.

The methods used in the Verbo-tonal system, however, have achieved certain objective results. The first thing to consider is that the components of the emitted sounds can be viewed from a structural point of view, that is, in terms other than those provided by linear and discrete analyzes. [...]

The optimal structure of the parameters of speech sounds is, of course, the basis of a correct perception, but the elaboration of these parameters and their structuring can be done during their transmission. Hence, as far as reception is concerned, the control of the transmitted signal is a very important step in the research of the Verbo-tonal System⁽⁶⁾.

5 Guberina.P., Extracts from the hearing prosthesis, Fourth Congress of the International Society of Audiology, Padua, 1958.

6 Guberina.P., Case studies in the Use of Restricted Bands of Frequencies in Auditory Rehabilitation of Deaf, Zagreb, Institute of Phonetics, 1972, 28-29.

7. The Verbo-tonal System placing at the center of the structural view

The Verbo-tonal System⁽⁷⁾, which bases its research mainly on the study of perception, thus placing itself at the center of the structural view, emphasizes: 1) that time is a structural factor, 2) that limited frequency bands are sufficient for under specific conditions the language is understandable, 3) that the combination of frequencies and intensity in the discontinuous form both in view of intensity and frequencies promotes understanding of language, 4) that the whole body functions as a receiver and as a transmitter, 5) that the tension is the result of the combined action of agonist muscles and 6) that the pause represents an activity. [...]

8. Professor P. Guberina⁽⁸⁾

Professor Petar Guberina was born on May 22 1913 in Sibenik where he finished classics-program grammar school, died January 22 2005 in Zagreb.

He was graduated from Faculty of Humanities and Social Sciences, University of Zagreb: French and Latin (1935).

He got his doctor's degree at the University of Sorbonne, Paris, France (1939).

His Ph.D. title he won by defense of his dissertation "Valeur logique et valeur stylistique des propositions complexes" what was the base for his later researches in the field of speech communication.

7 Guberina,P., Méthodologie du Système Verbo-tonal dans GOVOR, *Revue de Phonétique Appliquée*, n.1, 1967, p.7 (Tranduction of Serbo-Croatian).

8 <http://www.suvag.hr/en/guberina/>



Prof. P.Guberina

Full professor at the Faculty of Humanities and Social Sciences, University of Zagreb (1951-1965). At the Zagreb University he came as the professor of the French language and as the head of Department of Romance Studies (1951-1965). He founded Institute of Phonetics (1954) and Department of Phonetics (1965) the head of which he was until his retirement in 1983.

The author of the Verbo-tonal system (VTS) – an original scientific theory in the field of speech communication and electroacoustic apparatuses SUVAG constructed according to the Verbo-tonal ideas (1954-1955). His research in the domain of the “linguistics of speech” entered the revolutionary turn in the teaching of the foreign languages (structural global audiovisual method – SGAV) but also in the approach to the pathology of hearing and speech (Verbo-tonal method – VTM) and ranked him as the leading world scientist in the field of humanistic and biomedical sciences.

The Verbo-tonal methodology has been disseminated to all the continents.

The great number of institutions all around the world applies Verbo-tonal principles, procedures and electroacoustic equipment in the rehabilitation and education of subjects, especially hearing and speech impaired children and in the therapy of speech disorders.

The founder of the SUVAG Centre established by the Government of the Republic of Croatia(1961). Under his leadership as the long-lasting head and scientific and professional advisor, the Zagreb SUVAG has become central world institution for development and application of the Verbo-tonal System (status confirmed at the General Assembly of the international Verbo-tonal Association in Paris in 1982). So the Centre's activities are implementing national and international research projects and Verbo-tonal education of experts of different vocation from Croatia and abroad.

Focusing prof. P. Guberina's research on the basics of spoken language and speech, he led his research in various directions covering a complex area of speech-language activities: from those dealing with contemplative-affective structures up to the perception and realization of speech, and from stylistic characteristics of a powerful artistic expression up to pathology of listening and speech. His research in the domain of the linguistics of speech, from which emerged the original theory he named the Verbo-tonal system and published to the world scientific audience in the early fifties of the last century, entered the revolutionary turn in the teaching of the foreign languages and changed the image of the deafness and awareness about deaf-mute persons.

9. Summary⁽⁹⁾

Dr Guberina uses rhythmical body movements not only for the teaching of French speech sounds, intonations and rhythm, but also for the reeducation of hearing and speech. In this research, he discusses the way to use phonetic rhythms within the whole frame of the VTS. The importance of the affective component on the perception of speech is also underlined. The human body is particularly sensitive to low frequencies and these frequencies constitute the basis of speech rhythm and intonation. The VTS is used to make spoken structures based on body movements and nursery rhythms. Nursery rhyme rhythms are called “musical stimulations” while rhythms made out of nursery rhymes are referred to as “phonetic rhythms”. The last section of this research describes concrete examples.

The author feels, by a spiral where there is a possibility of a continuous search for improvement.

To express the same thing in different words. We find in Japanese language the following way of saying : “There is always something above” or, word for a word : “Above there is above”. In order to transcend and enrich our way of dealing with our students, children, patients, continuously we have to reflect upon our work and search for optimal ways of dealing with different challenges.

I would like to say that my admiration for the VTS flows also from the fact that we, Jesuits, have in our monogram the letters AMDG, “Ad majorem Dei Gloriam”, “For the greater glory of God”, or, if you want, “For the optimal glory of God”. The similarity between these words and the concept of global has always struck me.

9 Guberina P., *The Verbotonal Method*, Editor Claude Roberge, Artresor Naklada, Zagreb, 2013, 51-52.

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