INTERACTION BETWEEN PAUSES AND SECONDARY WORD STRESSES IN THE RHYTHMIC SYSTEM OF AN ARCHAIC BULGARIAN DIALECT

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ABSTRACT

The present paper deals with the interaction between both word and phrase accents and syntactic boundaries in an dialect with very strong enclitic connective tendency. Secondary word stresses and connective phrase stresses in the dialect of Nevrocop are concedered as a rhythmic stresses, results of this interaction. An attemp has made stressing and pausing to be concedered in terms of the theory of metrical grid.

1 INTRODUCTION

In the Selkirk's theory of metrical grid silent syllables have important syntactic function, they delimit words, phrases and other syntactic units in the speech[3] Silent syllables are supposed to coincide with pauses and other delimitative contrasts in the speech.Syntactic units are considered to be able to change the rhythmic units.Final sentence lenghtening ,according to Lehiste, is due to the superimposition of the syntactic structure upon the rhythmic structure of the phrase [2] Our observations on the dialect speech suggest that both word and phrase boundaries often are not well differentiated prosodically because of existence of very strong enclitic connective tendency in the speech.Pauses have more rhythmic function than syntactic one.Secondary word stresses delimit often rhythmic units then words. As though rhythmic units influence the syntactic units.

The dialect has the following word accent rule. In the basic word forms the accent could not stand on the fourth or further syllables from the end of the word when the final syllable is opened or on the third or further syllables from the end when the final syllable is closed.The basic accent does not shift backwards when some morphemes or clitics subjoin the word but a second or even third stress occur according to a trouchee metrical scheme:

e.g. / 'kutʃe/ 'a dog' + /ta/ > /'kutʃ eta/ 'dogs' + /ta/ > / 'kutʃetata/ 'the dogs' + /ni/ > / 'kutʃetata,ni/ 'our dogs' + /sa/ > /kutʃetata,ni sa/ 'our dogs are'.

Enclitic joining is often stronger than words boundaries.Even some prepositions and shortened adverbs can subjoin words.In basic word forms accent has both phonological and delimitative function.In derivatives and rhythmic units primary stress has only phonological function while secondary stress has a delimitative one.

One experiment has been carryed out to reveal the role of both primary and secondary stresses in rhythmic organisation of phrase[1].Experimental data suggest that the dialect has stress-timed rhythm.In terms of the theory of metrical grid [2] the primary stresses coincide with the beats of basic metrical level. Secondary stresses function on an intermediate level which can be supposed to exist between the semi-beats and the basic beats level

1Experiment1

In order to reveal the prominence relation between the primary and the secondary stresses we analysed acoustically 25 group of words,each consisting of one basic word and two derivatives,pronounced by two native speakers . Analysis shows that in all cases the words have most prominent primary stress.The primary stressed vowels are longer (87%), on a higher pitch and intensity level (78% and 71% respectively), and have a rising pitch (81%). Secondary stressed vowels are longer than the non-stressed ones (84%) they have rising pitch (72%),and mark second, less prominent, i and f_0 peak (54% and 69% respectively).

Subjoining of morphemes to the words changes its phonological function while secondary stress has a delimitative one.

One experiment has been carryed out to reveal the role of both primary and secondary stresses in rhythmic organisation of phrase[1].Experimental data suggest that the dialect has stress-timed rhythm.In terms of the theory of metrical grid [2] the primary stresses coincide with the beats of basic metrical level. Secondary stresses function on an intermediate level which can be supposed to exist between the semi-beats and the basic beats level

prominence patterns in such way:

e.g. /'kutʃe/ + /ta/ > /'kutʃeta/ + /ta/ > /'kutʃetata/

The figures refer to the prominence level of the syllables in relation to its f_0 ,i and duration values.The prominence contrast between stressed and non-stressed syllables increases subjoining new syllables to the words. In this way increases the rhythmic prominence of the syllables sequences in generated units. Secondary stressing can be considered as a results of the function of enclitic mechanism which integrates rhythmically words in a phrase. This mechanism is often stronger than the word bounding.

The question of rhythmic organisation of syntactic units larger than sentence is very interesting sinse the reality of sentence in spontaneous dialect speech is under discussion. Interesting questions arise.Does integrative mechanism similar to the secondary word stressing functions on a higher speech level? Do the phrase stresses and delimitative contrasts influence the word stresses?We carried out the following experiment to throw any light on these questions.

2.EXPERIMENT2

2.1.We analysed acoustically one dialect text, a story told by one old illiterate, to reveal the prominence relation between primary and secondary word stresses in connective speech.

The analysis shows that there are some secondary stressed words which do not fall into the considered pattern. With these words the secondary stresses are more prominent than the primary ones.
e.g. / 'stănŭvaʃ /, / ŭtʃiliʃteto/.

The primary stresses are like shifting backwards . Very often the post-stress vowels are elided :
e.g. / 'kutʃtata/ , / 'stănvaʃ /.
In these cases lowering of f_0 and pitch fall is observed on the primary stressed vowel and lenghtening of the secondary stressed vowel.The primary stresses are like deleted by the secondary ones.
We traced the phonetic context of these words.They occur mostly in the middle of the phrases and are regularly followed by pauses.It is interesting that these words have a pitch pattern different from the one tipical for mid sentence clause breaks.The pitch falls after peak on the secondary stressed syllable.We have to answer to the question which type of pauses change the prominence of the secondary stresses and why.To reveal the function of the pauses in the considered text we carried out the following test.
2.2.A groupe of 50 native speakers (17-19 years old pupils) were asked after having listened to the text to note the perceived pauses and their lenght on the transcription forms ,listening to it a second time. This time the text was listened to in pieces for making easier the marking of the pauses.. Each piece was recorded together with its proceeding one .We transcribed the text without using capital letters and punctation marks.After having noted the pauses listeners were asked to put down the punctation marks.In Bulgarian orphography commas indicate phrase boundaries in sentences. Some of the results we shall discuss.
-The text consisting of 52 predicatives was devided into 5 to 25 sentences.. Only 3 full stops are noted by 45 listeners.
-The number of noted pauses is quite great.It vary from 31 to108.38 listeners note short pauses which does not exist in reality. The position and the number of these pauses vary .Most of these pauses coincide with commas or full stops.
-The noted punctuation marks are less than the noted pauses. Most of the punctuation marks do not coincide with pauses.
The comparison of the test data with the data of the acoustic analysis shows the following.
-21 of 57 objective pauses,are proceded by pitch tipical for mid sentence clause breaks.,17of them are proceded by secondary stressed words with most prominent second stress.28 of objective pauses do not coincide with punctuation marks .These pauses will sign as Pr.

-15 of the objective pauses and almost all non-existing in reality pauses are proceded by steep i and f_0 fall,tipical for phrase final.They usually follow the f and i peaks of the phrase accent .The final position is tipical for it.These pauses will sign as Ps.
The syntactic analysis of the text shows that the phrases are connected usually without conjunction or with the compound conjunction /i/ and.The string of compound connected phrases follow the time sequences of the predicative actions.The syntactic relation between such connected phrases often are complex but they are not manifestated lexically.This is may be the reason the listeners to run into difficulties deviding the text into sentences.The other reason is may be that the phrase boundaries are not well diferentiated prosodically.38 of 52 phrases are not limited by objective pauses.Pr pauses interupt the phrases. They occur periodically, in most cases after the verbs or some adverbs indicating the time sequence of phrase actions.These pauses have more rhythmic function then syntactic one.The periodical alternation phonation:pauses (objective and only subjective) integrate rhythmically the phrases in the text.When Pr pause follow secondary stressed word it increases the prominence of the second stress depressing usually the prominence· of the primary one by causing the elision of post-stressed vowel .In terms of the theory of metrical grid Pr pause can be considered as a group of syllent syllables. It make secondary stress more prominent than some primary ones subjoining secondary stressed word .The rhythmic role of this second stress is change.It probably function not only on a basic beat level with or instead of primary word stress but on a higher metrical level.The final syllable of non-secondary stressed words,proceding Pr pauses,is a srart of an upward glide of pitch.In these cases Pr pause can be consedered as point of expected pitch change. The words can be supposed to get a silent secondary stress.The secondary stresses proceded Pr pauses have a connective function.They probably function on a intermediate metrical level which can be supposed to exist between the main word stresses and the main phrase stresses levels.

1]Karlova,R.,Vodenicharov,P.,Nic olova,V.,Hristoska I.,(1990),"Psiholingvistichno izsledvane na rechevia ritam na edin balgarski govor",Ezik i literatura,1,12-16.
[2]Lehiste,I.(1973),"Rhythmic units and syntactic units ˙in production and perception",IASA,54,5.
[3]Selkirk ,E.(1984),"Phonology and Suntax:The relation between sound and structure",MIT Press.