**Extended Abstract** 

# Compensatory lengthening in Azarbaijani turkish withen harmonic serialism

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#### Introduction

The compensatory lengthening process has always been challenging for phonological theories. The cause of this challenge is the two-part nature of this process, in which one element is deleted in the first part and another is lengthened in the second part. This feature has made it difficult to provide a unified analysis of the two parts of this process. Generative phonology cannot explain this process due to its linearity and lack of intermediate level representation. Autosegmental phonology due to its nonlinearity can explain this phenomenon, but it has problems in explaining some cases. The Standard Optimality Theory only considers input and output, and there are no intermediate levels in it. In this theory, all possible candidates are evaluated at once. These characteristics also make the Standard optimality theory lack the necessary mechanism to analyze the Compensatory lengthening process.

Harmonic Serialism, which is one of the approaches of Optimality theory, has a derivative nature and, in addition to input and output, it also believes in intermediate levels of representation. The gradualness of the evaluator part of this approach solves the standard optimality theory defects and makes it possible for the two parts of this process to be evaluated in several stages and finally, the optimal candidate could be obtained.

This research examines the process of compensatory lengthening in the Ardabili dialect of Azerbaijani Turkish language within harmonic serialism.

#### **Materials & Methods**

The study is descriptive-analytical and the linguistic data used was collected through a set interview with 30 speakers (15 women and 15 men) living in Ardabil city between the ages of 35

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and 65 who were randomly selected. In addition, the writers are also speakers of this dialect. In this interview, which is a structured interview, 50 sentences are designed with one-word blanks, and these blanks are complemented by words with rolling consonants /j and /w at the beginning and end of the syllable. An element of elimination, a second element of attraction, to be drawn into the second part of the process, to be drawn out first, or to be eliminated from the rolls of the jerks, and afterward the attraction or absence of the examining; Due to the two-part nature of compensatory stretching, in the first part one element is removed and in the second part another element is stretched, first the removal or non-removal of the rolling consonants and then the stretching or non-stretching of the vowel are examined; For this reason, the interview questions are consisted of several parts: in the first and second part, , the non-deletion and deletion of the roll consonant /j/ from the final position of the first syllable, and in the third and fourth part, not removing and removing this consonant from the initial position. The second syllable is examined.

In the fifth and sixth sections, the non-removal and removal of the roll consonant /w/ from the final position of the first syllable and in the seventh and eighth sections, the non-removal and removal of this consonant from the initial position of the second syllable are analyzed. All conversations were recorded using audio recording software on a mobile phone. In order to analyze the statistical data of this research, the one-variable chi-square test has been used. The Chi-2 test examines the variable based on the observed frequency and the expected frequency. The null hypothesis in this research states that there is no significant difference between the observed frequency and the expected frequency in stretching or not lengthening the preceding vowel. And hypothesis 1 indicates the significance of the difference between these two frequencies. The Chi-2 test was performed for each of the consonants j/j and w/j using spss software and presented in table form. In the final step, the obtained data was analyzed in the framework of Harmonic Serialism in the form of the interaction of constraints and the drawing of the optimality tableau. This research aims to describe and explain the conditions of the compensatory lengthening process in the Azerbaijani Turkish language of the Ardabili dialect and identify and introduce the limitations related to this process, as well as present the ranking of limitations related to this process. Finally, evaluate the adequacy and effectiveness of the coordinated sequence approach in explaining the compensatory lengthening process.

#### **Results & Discussion**

In the Ardabili dialect of Azerbaijani Turkish language, in colloquial speech, the glide consonants /j, w/ are deleted both at the onset and the coda of the syllable after the preceding round vowels / $\emptyset$ , y/ with the difference that deleting from the onset position does not lead to the lengthening of the preceding vowel, but deleting from the coda position of the syllable leads to the lengthening of the preceding vowel. The explanation and justification of this matter goes back to the concept of Mora. It can be justified that the coda position of the syllable in Azerbaijani Turkish is a moraic position, and for this reason, when the /j, w/ is deleted from this position, its mora remains free and connects to the previous vowel. However, the onset position of the syllable in this language is not a moraic position, and for this reason, removal from this position does not lead to compensatory lengthening. Therefore, the conditions for the realization of the formulated as the following:

1. The glide consonant /j, w/ is deleted from the coda position after the previous rounded vowels /Ø, y/.

2. The preceding totosyllabic vowel is lengthened to compensate for the deleted consonant. The glide consonants /j/ and /w/ are deleted if they are placed at the onset position of the syllable, after rounded vowels, and otherwise they are not removed. Also, the examination of the corresponding outputs of each of the internals shows that the lengthening of the previous vowel did not happen. The reason for this is that the onset position of the syllable in Azerbaijani Turkish language is not a moraic position, and removing the consonant from this position does not change the weight of the syllable.

By deleting the glide consonants /j/ and /w/ from the onset position, the nuclear of the two syllables are joined together, and vowel hiatus takes place, which is not allowed in Azerbaijani Turkish, but considering that the presence of glide consonants at the onset and codes after round vowels is considered a high ranking constraint, to satisfy it, Azerbaijani Turkish is forced to accept the conjugation of vowels, but at the next stage, by merging two vowels. And the formation of a diphthong solves it.

### Conclusion

This research tried to explain the process of compensatory lengthening in the Azerbaijani Turkish language. Summarizing the findings from the data showed that the glide consonants /j/ and /w/ at the onset and coda position, are deleted by the glideCOND constraint, which is considered as a high ranking constraint in this language. On the other hand, due to the fact that the coda position in this language is a moraic position, deleting it from this position causes the mora to remain free. At this stage, the \*SHARE restriction, which penalizes the free vowel, causes the free vowel to be connected to the vowel before it and causes it to length

This research was able to identify and define the constraints related to the process of Compensatory Lengthening in the Ardabili dialect of the Azerbaijani Turkish language. In the following, the optimality tableau was drawn for some examples and the ranking of the constraints, which was one of the goals of this research, was obtained, as the following:

WBP, FLOT >> MAX[µ], \*glideCOND>> MAX, \*µ/C >> DEP-L[µ], \*SHARE

This research also showed that the harmonic serialism with the help of its mechanisms can explain the Compensatory Lengthening process well. In other words, this research proves the sufficiency and efficiency of this approach in explaining the Compensatory Lengthening process.

**Keywords**: Graduelness, Harmonic Serialism, Compensatory Lengthening, Fully Faithful Candidate, Constraint, Mora.

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