

## A Study of Total Reduplication in Ghayeni Dialect based on Parallel and Stratal Optimality Theory

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### Abstract

The process of Reduplication, due to its importance, has attracted very much attention from linguists in recent decades. The present research aims at describing and analyzing total reduplication processes including added medial and final total reduplication and echo reduplication (changing the initial consonant or vowel of reduplicant) in Ghayeni dialect based on Parallel Optimality Theory (POT), in particular Stratal Optimality Theory (SOT). To this end, the considered reduplicative data were gathered based on Shaghaghi reduplication model (2000, 2018). To analyze some data, we need to predict the correct output through some levels to consider the morphological derivation correctly. Since POT has a one-level (input and output) nature, it is unable to explain some reduplicative data. So, SOT, with no limit on the number and kinds of levels, is used to analyze the medial and final added total reduplication. In the present study, the final added total reduplication is considered in two stem levels in which ONSET is on the top of constraint ranking. Since the final consonant of the base undergoes germination, in the medial added total reduplication using enclitic /o/, two levels of stem and word are required. In the medial added total reduplication, the constraint ranking is only different in stem level (a) because the type of reduplicant (echo or non-echo) is determined in this level. But in the next levels, stem level (b) and word level, which undergoes germination and resyllabification, constraints have the same ranking. The results show that SOT presents a more obvious analysis of the mid-levels in the medial and final added total reduplication.

**Keywords:** Added total reduplication, Total reduplication, Ghayeni dialect, Parallel Optimality Theory, Stratal Optimality Theory

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## 1. Introduction

Reduplication is a syntactic process in which all or part of a base word is repeated (Lieber, 2009). In the Reduplication process, an element (or an affix) is added to the base word, which is called a Reduplicative component, and its form is affected by the base word (Kager, 1999). In this word formation process, all or part of the base word is repeated to the left, right, or sometimes in the middle of the base word, included total reduplication (total reduplication and total added reduplication) and partial reduplication (prefixation, suffixation and infixation). Types of repetition in Persian and its different variants have been considered especially in the framework of parallel optimality theory (OT). The question now is whether reduplicative words can be analyzed in another approach of OT, here the stratal OT, in one of the Persian linguistic variants, the Ghayeni dialect? Ghayeni dialect is spoken in Ghayen. Ghayen is one of the cities of South Khorasan which is limited to Gonabad and Torbat-e Heydariyeh from the north and Birjand from the south. Therefore, among the types of reduplication processes, the aim of the present study is to investigate and analyze the total reduplication process including total non-additive reduplication and total additive reduplication (middle and end) and complete echoic reduplication (by changing the vowel or initial consonant of the reduplicated component) based on the classification of reduplicative process types from the perspective of Shaghghi (2000, 2018) in Ghayeni dialect according to parallel OT (Prince & Smolensky, 1993/2004) and stratal OT (Kiparsky, 1998a, 2000).

## 2. Theoretical Framework

Stratal OT is one of the approaches to OT that is made by combining stratal approaches such as morphology and lexical phonology with OT. In the stratal optimality approach, there are different models, the similarity between them is in the variety of layers and there is no limit to the number and type of them. In the optimality approach, there are several layers that are arranged sequentially

from input to output. According to Kiparsky, there are three layers in the stratal OT. At the three levels of this approach, the stem first enters the stem level. Inside the stem level, in addition to the stem, a derivative affix or a compound word is added to it. The product of this level enters the word level. At the word level, a second derivative (if any) or inflectional affix is added to the output of the stem level. Finally, at the postlexical level, which is at the phrase level, the words are combined, and what happens at this level is only the study of phonological and morphological changes.

### 3. Methodology

The research method is a descriptive-field method to test the hypothesis. In this regard, both documentary and field methods have been used in collecting data. In the field method, the researchers recorded the speech of twenty native speakers, mostly illiterate or older than sixty years. Finally, a written corpus containing one hundred reduplicative words and an oral corpus consisting of three hundred sentences were collected. Then one of the authors, who is a native speaker of Ghayeni and has sufficient mastery of its words, extracted reduplicative words based on the dialect. After categorization based on Shaghghi's (2000, 2018) reduplicative process types, the reduplicative words were transliterated according to the International Phonetic Alphabet (IPA), Doulos SIL version. Next, by identifying the occurrence or non-occurrence of constraints corresponding to the context of reduplicative words and their ranking, the analysis appropriate to each of the changes was first examined in the framework of the parallel OT.

### 4. Results and Discussion

The process of repetition has long been one of the interesting topics for linguists as a result of advances in phonological and structural theories (McCarthy, 1979; Marantz, 1982; Kiparsky, 1986; McCarthy & Prince, 1986,

1993, 1995; Spencer, 1991; Haspelmath, 2002; Inkelas & Zoll, 2005). In this section, the types of total non-additive reduplication and total additive reduplication (middle and end) and complete echoic reduplication (by changing the vowel or initial consonant of the reduplicated component) are examined in the framework of parallel OT (Prince & Smolensky, 1993/2004). In cases where the parallel OT is not able to justify the differences between the input and output forms, the stratal OT (Kiparsky, 1998a, 2000) is used. parallel OT is used to justify total non-additive reduplication in Ghayeni dialect. The faithfulness constraint IDENT-BR (Kennedy, 2008) has the highest order, according to which the corresponding base and reduplicated parts must be exactly the same. The two faithfulness constraints of MAX-IO (McCarthy & Prince, 1995), which rejects output deletion, and MAX BR (McCarthy & Prince, 1995), which do not allow any deletion in the reduplicated component, rank higher than \*REPEAT (Kennard, 2004) which penalizes the proximity of identical syllables. To examine final total and medial added reduplication, it is necessary to describe the layers and the stages of their formation step by step, so parallel optimal theory (Prince & Smolensky, 1993/2004) is not able to describe this process appropriately, because it has a single-level input-output nature. To explain total reduplication of the final addition based on the stratal OT, two layers must be considered, both of which are at the stem level. At the stem level, word formation is of the derivation and composition type. While at the word level inflectional form (s) of the word is generated. Some types of total medial added reduplications are created by /o/ suffix. In this case, due to the occurrence of the final consonant of the base between the two vowels, that consonant geminates. In Persian, the geminated phoneme is not placed at the end of the syllable, but it can be after the vowel, the geminated phoneme is divided into two syllables (Kord-e Za'faranloo et al. 2016, p.228). To explain total echoic reduplication that changes the beginning of the reduplicated component, three levels must be considered, two stem levels and one word level. Three levels of analysis, two stem levels and one word level, are needed to explain the total echoic reduplication that changes the vowel in the reduplicated component. At the

level of stem A, the reduplicated component is echoed to the base, so that its vowel is different from the base vowel.

### 5. Conclusion

In response to the main question of the research, based on the ability of the stratal OT to justify the changes between input and output forms of reduplicated words in Ghayeni dialect, the results showed that to evaluate the total final and medial added reduplication, the layers and its formation steps needed to be described step by step. Therefore, parallel OT was not considered appropriate due to the monolayer nature of input-output. Thus, stratal OT was used to explain the complete repetition processes of medial (echoic and non-echoic) and final.

For the analysis total reduplication, the final added was assumed to have two layers at the stem level and it was shown that the order of the constraints was different in each layer. In the case of total reduplication, the medial added is geminated due to the linking morpheme /o/. Parallel OT could not justify this change in input and output, so stratal OT was the solution of this analysis and three levels (two stem levels and one word level) were considered. Regarding the explanation of the total medial added reduplication, both echoic and non-echoic, it was observed that the ranking the constraints is different only in the first layer, i.e. the level of stem A, and is the same in the other two layers. The reason for the difference in the first layer is that at this level the type of the reduplicated component is determined to be non-echoic or echoic, and if it is echoic, the onset changes or the vowel. At the other two levels, the addition of the /o/ morpheme, gemination and resyllabification are common in all three types of reduplications. That being said, parallel OT can only handle the analysis of total non-additive reduplication, but is not sufficient for the analysis of total medial and final added reduplication. This confirms the research hypothesis: stratal OT is sufficient to analyze these processes, although the principle of linguistic economics may not be observed.

