

OCP Effects in Turkish Partial Reduplication: Locality and Feature Specificity

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This paper investigates the *partial (emphatic) reduplication* in Turkish, used with modifiers (adverbs and adjectives), which gives the modifier the meaning of ‘fullness’ (Demircan 1987).

Base	Gloss	Reduplication	Gloss	Base	Gloss	Reduplication	Gloss
<i>dingin</i>	‘serene’	<i>dip-dingin</i>	‘very bald’	<i>ma:vi</i>	‘blue’	<i>mas-ma:vi</i>	‘fully blue’
<i>beyaz</i>	‘white’	<i>bem-beyaz</i>	‘very white’	<i>temiz</i>	‘clean’	<i>ter-temiz</i>	‘completely clean’

The reduplicant, realized as a prefix, has the form $(C_1)VC_2$. C_2 of the reduplicant prefix ends in one of the four *linking consonants* (LC): *-p*, *-m*, *-s*, *-r* (Lewis 1967). Previous studies on the topic approach the issue from different angles with different OCP constraints (Hatiboğlu 1973, Demircan 1987, Dobrovolsky 1987, Taneri 1990, Wedel 1999, Kelepir 2000, Yu 1999, Sofu 2005, Sofu & Altan 2008). Many relied solely on intuitions, examined a small number of items, used a forced-choice task and not a rating task. This study undertakes a comprehensive data collection and analysis of the positional and feature specificity of the OCP effects.

Method: 162 real words were selected from these studies to cover a broad range of previously commonly tested items. To enable within participant comparisons, each participant was tested on both a rating task and a forced-choice task (4-AFC). Only the rating task is reported here because it was rarely used in previous studies. Participants were asked to rate a naturalness scale of 1-7 of each of the 4 reduplicated forms per item as well as to pick one option out of the 4 reduplicated forms. Each item was tested by ≈ 40 participants.

Discussion: Previous studies converge on the view that the dissimilation in reduplication stems from some kind of OCP, yet questions regarding the nature of the OCP or the extent of its effect have not been explained thoroughly and remain largely at the observational level. Most of the studies reduce the OCP effect to anti-faithfulness constraints between segments, explained at the level of natural classes, e.g. Demircan (1987), Yu (1999), Kelepir (2000). Moreover, the OCP between the reduplicant and the base is assumed to extend to C_2 of the base, and no further (Demircan 1987, Kelepir 2000, Sofu 2005). However, minimal pairs showing that the effect extends to C_3 can be found. For instance, *beyaz* ‘white’ and *bayat* ‘stale’ have identical consonants except for C_3 ([z] vs. [t]), but the LC [s] is only dispreferred with *beyaz* (Rating: 3.6/7), while it is the most preferred LC with *bayat* (Rating: 5.95/7).

Results: Focusing on consonant-initial words, the trial-level rating data were analysed using mixed-effect regression modelling (*lme4* in R (R Core Team 2017)). Following Graff & Jaeger (2009), to examine the **positional and feature specificity** of the OCP effects, each phonological feature was specified as an independent predictor for each consonant (IndFeat). Other predictors were included such as total identity of consonants ($LC = C_{1-4}$) (Iden), sum of the matched features (SumFeat), and ease of articulatory (between LC and C_1). *Random* effects of items, their LC, and participants were included. The best model based on AIC/BIC was found to be **Iden + IndFeat** which includes both OCP predictors of total identity as well as individual features **across all consonants** (not only C_1 and C_2). In addition, the OCP effect decreases from left to right (Zymet 2014) and the OCP effect is **stronger for codas** than onsets.

Conclusion: This paper presents a comprehensive analysis of Turkish Partial Reduplication. We highlight that the OCP constraints are more graded than they have been previously proposed. Our findings support previous work on the formulations of OCP constraints that treat individual features as free parameters in the similarity computation. The surprising finding with regard to locality is that not only the OCP effect extends all the way from C_1 to C_4 , but it is a function of both the proximity from LC and the position in syllable structures.