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## An Optimality Theory analysis of Hungarian echo words

Echo-word formation in Hungarian has many patterns. This presentation attempts to identify the morphophonological properties and the different types of echo words through analysis of a smaller corpus, a manually filtered version of Szikszainé's (1993) child language and dialect corpus supplemented with the results of a web search. The analysis provides an explanation for the multiple forms and the observed variation by comparing echo word formation to diminutive derivation (Rebrus & Szigetvári 2015) and morphological schemas (Bybee 2001, Sóskuthy 2012).

The analysis identifies three main patterns: consonant variation (*csiga-biga* 'snail-DIM', *cica-mica* 'cat-DIM'), vowel variation (*fidres-fodros* 'frilly-DIM', *girbe-gurba* 'crooked-DIM'), and consonant and vowel variation (*izeg-mozog* 'move-DIM', *zene-bona* 'music-DIM'). Labiality plays an important role in all these patterns: 94 per cent of the onsets in the second root contain at least one labial segment (for the sake of the analysis, rounded vowels, labial consonants and labiodental consonants are treated as labials).

The formal analysis of echo-words is done in Optimality Theory which is compatible with the concept of output-oriented schemas, as this theory is capable of capturing relationships between surface forms as well as input-output correspondences. The three patterns will be modeled in OT as having their own constraint rankings, as co-phonologies in the language (Inkelas & Zoll 2003). The most important constraint (DIFF) requires that the output must not contain two identical elements (extending the Obligatory Contour Principle to morphophonological elements (Yip 1998)), which means that the two roots in an echo word have to be different. After the DIFF constraint rules out totally reduplicated candidates (*\*csiga-csiga*), four IDENT constraints define the difference between the first and second root. The IDENT constraints are taken from McCarthy & Prince's (1995) Correspondence Theory, stating that correspondent segments are identical in a certain feature. In the case of V-variation, the ranking IDENT-IO(C) >> IDENT-IO(V) will choose the optimal form *girbe-gurba* instead of *\*girbe-mirbe*. The remaining two IDENT constraints require the identity of the value of the [labial] feature: in echo words containing C-variation, the ranking IDENT-IO[-lab] >> IDENT-IO[+lab] chooses *cica-mica* as the correct output instead of *\*cica-kica*. The exact place of the labial segment is given by ALIGN constraints (McCarthy & Prince 1993, Buckley 2009). The ALIGN constraint determines the place of the labial segment in the onset of the root, and the \*ALIGN constraint ensures that the labial segment is the farthest away from the left edge of the word.

According to the first hypothesis, the three patterns will create three different constraint rankings. The second hypothesis states that the ranking of the CV-variation will be the result of merging the rankings of C- and V-variation.

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