POLISH PALATALIZATIONS AS ELEMENT ADDITION

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The current paper will argue for an alternative approach to Polish segmental alternations. Polish palatalizations will be treated as an addition of the pieces of autosegmentalrepresentations to the stem-final segments. The contexts for palatalizations will be defined morphologically: the autosegments that undergo addition will be argued to be the result of the translations of the pieces of morpho-syntactic vocabulary into phonological vocabulary. This approach makes particular predictions as to the exponenceof the case-number-gender nodes in Polish nouns and adjectives: since the morphemes that 'induce'palatalizations are rewritten as phonological features, the nodes hosting the said morphemes should be realized by the default exponents. I will show that this prediction is indeed borne out.

The main part of the paper will address the question as to how the relevant pieces ofautosegmental representations are integrated into the stem-final segments to yield the attested outputs of palatalizations. The theory of segmental architecture that will be assumed is Element Theory (Harris 1994, Backley 2011).

(1) presents the Element Theory analysis of the underlying system of Polish consonants.

/p/-{U.ʔ.h} /b/-{U.ʔ.h.L} /f/-{U.h} /v/-{U.h.L}/m/-{U.ʔ.L}

/pʲ/-{U.I.ʔ.h} /bʲ/-{U.I.ʔ.h.L} /fʲ/-{U.I.h} /vʲ/-{U.I.h.L} /mʲ/-{U.I.ʔ.L}

/t/-{A.ʔ.h} /d/-{A.ʔ.h.L} /s/-{A.h} /z/-{A.h.L} /n/-{A.ʔ.L}

/t͡s/-{A.I.ʔ.h} /d͡z/-{A.I.ʔ.h.L} /ʃ/-{A.I.h} /ʒ/-{A.I.h.L}

/t͡ʃ/-{A.I.ʔ.h} /d͡ʒ/-{A.I.ʔ.h.L} /ɕ/-{A.I.h} /ʑ/ - {A.I.h.L} /ɲ/-{A.I.ʔ.L}

/t͡ɕ/-{A.I.ʔ.h} /d͡ʑ/-{A.I.ʔ.h.L} /x/-{(_).h}

/k/-{(_).ʔ.h} /g/-{(_).ʔ.h.L}

/r/-{A} /l/-{U.I} /w/-{U} /j/-{I}

Following Nasukawa and Backley (2008) I will assume that affricates are plosives with complex specification for the place of articulation. Since Polish has three series of coronal affricates it utilizes three logically possible combinations of elements A and I to represent the affricates. However, Polish uses only three series of coronal fricatives. The dental fricatives /s/ and /z/ will be argued to possess only one resonance element, since only such segments undergo Anterior Palatalization. The laminalpalato-alveolar fricatives /ɕ/ and /ʑ/ must beheaded by element I, as only such segments in Polish may be followed by the close front vowel /i/. Since phonology utilizes asymmetrical relations between elements only if the symmetrical relations have been used, the post-alveolar apical fricatives /ʃ/ and /ʒ/ will be represented as a symmetrical combination of I and A. Consequently, the representation {A.I.h.(L)} will not be utilized by the system at all. I will show that there are two principles which influence the integration of relevant elements into the stem final representations. The first of them is the Mutation Enforcement Principle (MEP) presented in (2a and b):

(2a) If an element E-head is added to an expression containing E-operator, the result is E-head.

$$E + \underline{E} = \underline{E}$$

(2b) If an element E-operator is added to an expression containing E-head, the result is E-operator.

$$\underline{E} + E = E$$

As the added E(lements) are translated morpho-syntactic features,MEP may be viewed as aparticular instantiation of the constraint Realize Morpheme (van Oostendorp 2005, Trommer2008).

The example of the working of MEP is the Spirant Palatalization which turns post-alveolar/ʃ/-{A.I.h} and /ʒ/-{A.I.h.L}into /ɕ/-{A.I.h} and /ʑ/ - {A.I.h.L} by the addition of the I which realizes the Nominative and Vocative of the masculine-personal gender.

The second relevant constraint is the Structure Preservation principle known from the Lexical Phonology and Morphology (Borowsky 1990). The adopted version of the Structure Preservation (SP) is found in (3):

(3) Morpho-phonological element addition may not create phonological expressions and configurations which are not underlying in a given system.

Structure Preservation (SP) is understood here as an inviolable constraint working on the outputs of element addition. If the expression arrived at through addition violates SP, the grammar induces non-ordered repair operations that derive grammatical outputs.

SP is attested in the application of the 2nd Velar Palatalization, where the mappings /k/→/t͡s/ and /g/→/d͡z/ are arrived at by the addition of A.I to velars. The addition of the same combination of elements to the velar fricative /x/ results in the representation {A.I.h}, which is unattested underlyingly and has to be repaired by demoting A to the status of an operator.

The two palatalizations that must be discussed in detail are the 1st Velar Palatalization and Affricate Palatalization. The former turns /k/ into /t͡ʃ/, /g/ into /ʒ/ and /x/ into /ʃ/. The latter changes the dental affricates /t͡s/ and /d͡z/ into /t͡ʃ/ and /ʒ/, respectively. The question that I will address is why the voiceless /k/ and /t͡s/ are mapped onto the voiceless /t͡ʃ/, but the voiced /g/ and /d͡z/ are turned into the continuant /ʒ/ instead of the expected /d͡ʒ/.

I will show that the post-alveolar /d͡ʒ/ is found underlyingly in the native vocabulary onlyin two stems: <dżdż-> /d͡ʒd͡ʒ/ as in *dżdż-ow-nic-a* ‘earthworm, nom, sg, fem.’, *dżdż-u* ‘rain, gen, sg.’ *etc.* and <drożdż-> /drɔʒd͡ʒ/ *drożdż-e* ‘yeast, nom, pl.’. Consequently, when /g/’s and /d͡z/’s in other contexts are turned into /d͡ʒ/’s the Structure Preservation filter detects the configurations as absent underlyingly and induces repairs which either de-link the ʔ-element or assimilate the preceding spirant to /d͡ʒ/ by a general rule of Spirant Assimilation.

References:

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