Exceptionality and Faithfulness in Polish Stress: Comparing mono- and multistratal OT analyses

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A multistratal analysis of Polish stress placement better accounts for exceptionality, faithfulness, & their interactions with morphosyntax

Basic stress template

Primary stress on penult, non-primary stresses alternating from left (1).

(1) kónstantynopolitańczyka — (σ́σ)(σ́σ)(σ́σ)σ(σ́σ)
'person from Constantinople' (Rubach and Booij 1985)

Compound components each independently follow the template (2).

(2) démokratyczn-o + républikański — (σ́σ)σ(**σ̀́σ**)+(**σ̀́σ**)σ(σ́σ)
democratic-CPD + republican (Kraska-Szlenk 2003)

A single proclitic gets initial 2° stress but doesn't otherwise interfere (3).

(3) dó = Amerykanin-a — (**σ̀=σ**)σ(σ́σ)(σ́σ)
to = American-GEN.SG (Kraska-Szlenk 2003)

Enclitics and sequences of proclitics do not interfere with host stress.

Existing monostratal analysis

(Based on Kraska-Szlenk 2003, *The Phonology of Stress in Polish*, LINCOM)

Nested prosodic domains correspond to morphophonological units:
PWord: root + affixes *MWord*: complete word *PUnit*: clitic group

Core constraints for (binary, trochaic) foot placement in each domain:

HDFT-R(MWORD)	the rightmost foot in the MWord is head (1° stress)
≫ FOOT-R(MWORD)	have a foot at the right edge of the MWord
≫ FOOT-R(PWORD)	have a foot at the right edge of the PWord
≫ FOOT-L(PUNIT)	have a foot at the left edge of the PUnit
≫ IDENT(MWORD)	clitic-host MWord is O-O faithful to standalone MWord
≫ FOOT-R(PUNIT)	have a foot at the right edge of the PUnit
≫ FEET-L(PUNIT)	don't leave unfooted σs left of a foot in the PUnit

Extension to multiple strata

Step 1: extend domain parameterization from FOOT-R to FOOT-L and FEET-L.

Step 2: swap domains with morphological strata, O-O faithfulness with I-O.

Stratum 1: triggered by derivation, compound head, compound formation;
Stratum 2: triggered by inflection, compound non-head;
Stratum 3: triggered by cliticization.

At all strata (foot-template): FTBIN ≫ FOOT-R ≫ FOOT-L ≫ MAX(FT) ≫ FEET-L.

Step 3: add head-foot constraints, dominating foot-template constraints:

Stratum 1: erase existing head foot	*HDFT ≫ OBLHDFT, MAX(HDFT)
Strata 2/3: require a head foot	OBLHDFT ≫ *HDFT
Stratum 2: make rightmost foot head	HDFT-R ≫ MAX(HDFT)
Stratum 3: protect existing head foot	MAX(HDFT) ≫ HDFT-R

Treatments of exceptionality

Exceptions: antepenultimate 1° stress under monosyllabic inflection (4a), regular penultimate 1° stress under derivation (4b).

(4) a. gramátyk-a — σ(***σ́σ***)–σ
grammar-NOM.SG

b. grámatycz·n·ość — (σ̀***σ***)(***σ́***·σ)
grammaticality (Rubach and Booij 1985)

Mono: inflection and derivation both yield a PWord domain;
→ cannot predict the difference.

Multi: assume that exceptions have lexically-marked head feet;
→ protected under inflection by MAX(HDFT) ≫ FOOT-R at Stratum 2;
→ erased under derivation by *HDFT ≫ OBLHDFT, MAX(HDFT) at Stratum 1.

Conclusion: the multistratal analysis gives better treatment of exceptions.

Empirical coverage of faithfulness

Mono: faithfulness only holds between cliticized and non-cliticized forms;
→ all non-final feet in non-cliticized forms should be left-aligned.

Multi: faithfulness also between inflected and uninflected complex forms;
→ penult foot in 2σ-inflected complex forms should be right-aligned.

(5) od·parow·álnik-ami — (σ̀·σ)σ·(**σ̀́σ**)–(σ́σ)
vaporizer-INST.PL (consultants; novel)

(6) radi-o + lokátor-ami — (σ̀σ)+σ(**σ̀́σ**)–(σ́σ)
radio-CPD + locator-INST.PL (consultants; constructed)

(7) probabilistyk-ami — (σ̀σ)σ(**σ̀́σ**)–(σ́σ)
probability theory-INST.PL (consultants; novel)

Conclusion: the multistratal analysis gives better coverage of faithfulness.

Effects of morphosyntax

Exceptional stress in compounds: regularized in head (2nd) component (8); retained in non-head (1st) component (9).

(8) a. prézydent — (***σ́σ***)σ

b. pseúd-o + prezydent — (σ̀σ)+***σ***(***σ́***σ)
pseudo-CPD + president (consultants; constructed)

(9) a. mátematyk-a — (σ̀σ)(***σ́σ***)σ

b. mátematyk-o + geodéta — (σ̀σ)(**σ̀́σ**)σ+(σ̀σ)(σ́σ)
mathematician-CPD + surveyor (consultants; constructed)

Mono: both components are PWords → cannot predict the difference.

Multi: marked foot is erased in cpd head at S1; protected in non-head at S2.

Conclusion: only the multistratal analysis allows effects of morphosyntax.

KEY: *σ* exceptionally-stressed syllable; BOUNDARIES: · derivation, - inflection, + compound, = clitic

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Details: