

Contrast enhancement as motivation for closed syllable laxing and open syllable tensing

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Supplementary materials

These supplementary files contain a file, `typology.txt`, which can be used in evaluating the predictions of the dispersion-theoretic analysis in §6. The file must be run with OT-Help 2.0.

In the file, `i1` and `u1` stand for tense [i] and tense [u], and `i2` and `u2` for lax [i] and lax [u]. `[i1 i2 a u2 u1] × [C1,C2,#]` represents the set of 15 possible syllables. This set is the input to the phonotactic grammar.

Each candidate (across-the-board (ATB) contrast, OST-only, etc.) corresponds to a subset of the set of possible syllables. The candidates are described in Table IX, and are evaluated by the five constraints below.

- (a) **MAXCONTRAST**: assigns a violation for each syllable in the set of possible syllables that is missing in the corresponding candidate.

For instance, across-the-board tensing violates this constraint six times, because it only contains nine different syllables (`[i1 a u1] × [C1,C2,#]`).

- (b) ***C1-C2/Tense__**: assigns a violation for each pair VC1–VC2, where V is tense (i.e. either `[i1]` or `[u1]`).

For instance, across-the-board contrast violates this constraint twice, because it contains the two following pairs: `u1C1–u1C2` and `i1C1–i1C2`.

- (c) ***ADJACENTF1**: assigns a violation for each pair V1C–V2C or V1–V2, where V1 and V2 are one of the following pairs: `[i1]–[i2]`, `[i2]–[a]`, `[u1]–[u2]`, `[u2]–[a]`.

For instance, across-the-board contrast violates this constraint twelve times, because it allows all four pairs in the three available segmental contexts (`__C1`, `__C2`, `__#`).

- (d) *ADJACENTF2: assigns a violation for each pair V1C–V2C or V1–V2, where V1 and V2 are one of the following pairs: [i1]–[i2], [i2]–[a], [u1]–[u2], [u2]–[a], [i2]–[u2].

For instance, across-the-board contrast violates this constraint 15 times, because it allows all five pairs in the three available segmental contexts (___C1, ___C2, ___#).

- (e) *CROSSF1F2: assigns a violation for each pair V1C–V2C or V1–V2, where V1 and V2 are one of the following pairs: [i1]–[i2], [i2]–[a], [u1]–[u2], [u2]–[a], [i2]–[u2], [i2]–[u1], [u2]–[i1].

For instance, across-the-board contrast violates this constraint 21 times, because it allows all seven pairs in the three available segmental contexts (___C1, ___C2, ___#).