

# Theoretical implications of non-optimising phonologically conditioned suppletion: the case of the stative and ambulative suffixes in Mapudungun

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This paper will analyse a case of phonologically conditioned allomorphy (PCA) in Mapudungun, a language with separative exponence. Examples (1) and (2) show this pattern of PCA. The stative and ambulative suffixes appear as [-le] and [-jaw], respectively, after a stem ending in a vowel, while long forms [-kile] and [-kijaw] are realised after a consonant.

- (1) apo-**le**- become.full-STA- ‘to be full’ vs. kiθaw-**kile**- work-STA- ‘to be working’  
(2) t̥ɕeka-**jaw**- walk-AMB- ‘to walk around’ vs. lef-**kijaw**- run-AMB- ‘to run around’

I present results from a corpus-based analysis showing that the pattern is essentially exceptionless. The only conditioning factor for the alternation is whether the final segment of the base is a vowel or a consonant. No general phonological processes can derive the two surface realisations if a single underlying form is assumed, so the alternation must involve a pattern of suppletion. Despite the similarities between the short and long forms of these allomorphs, the selection is independent of phonological processes, a situation that may lead to apparent cases of misapplication. Based on Paster’s (2015) predictions for phonologically conditioned suppletive allomorphy, among other factors, I show that this pattern is input-oriented and not output-optimising. For example, a post-lexical process of glide vocalisation in Mapudungun can alter the surface realisations of /w/ to be realised as [o], as in 3. Despite this surface realisation, w-vocalisation occurs too late in the derivation to affect the selection of the short form after consonants.

- (3) /epew-kile-/ → [epeokile-] Cfr. \*[epeole-] (Salas, 2006, p. 202)  
story-STA-  
‘to be telling a story’

Similarly, there is no clear case of emergence of unmarked constraints that could resolve disjunctive inputs to the phonology. The alternation occurs across all stems regardless of the number of syllables or the suboptimal patterns they generate, such as back-to-back stresses. For example, since multi-suffix verbs in Mapudungun have two stresses (Molineaux, 2023), and given that [-(ki)lé] and [-(ki)jáv] can attract stress on their final syllable, the presence of [ki] would be an optimal resolution for avoiding two adjacent prominences after vowel-final monosyllabic roots carrying fixed stress: \*[pì-kilé-n] ‘I am saying’. What we actually observe is that the short form is consistently and ‘perversely’ selected in these cases despite generating stress clash (i.e. /pí-lé-n/ → [pilén]), showing once more that the allomorphy is not optimising. Consequently, I consider it an input subcategorisation pattern (Bermúdez-Otero, 2012).

- (4) a. ‘go’ /amu-/    [ ] \_\_\_\_ [ ]Verb ... [ ]Verb    d. STA /-le/    [ ] [ ] [ ] ... [+voc] + [ ]Verb \_\_\_\_ [ ]Verb ... [ ]Verb  
b. ‘run’ /lef-/    [ ] \_\_\_\_ [ ]Verb ... [ ]Verb    e. STA /-kile/    [ ] [ ] [ ] [ ] ... [-voc] + [ ]Verb \_\_\_\_ [ ]Verb ... [ ]Verb  
c. IND.1SG /-n/    [ ] [ ] [ ] ... [ ]Verb \_\_\_\_ [ ]Verb

The morphology derives these constructions by considering the phonological subcategorisation frames of the lexical entries. As shown in (4), bound roots (a) [amu-] ‘to go’ and (b) [lef-] ‘to run’ subcategorise for finite verb inflection (represented here with ellipsis ‘...’), while a finite verb inflection affix, such as (c) the Indicative 1<sup>st</sup> person Singular [-n], requires a verbal base to form a word. Likewise, the stative morpheme has two listed allomorphs (4d, 4e). Their phonological subcategorisation frames indicate the correct phonological context for affixation, which can be represented with a system of features, for

example by using  $[\pm\text{vocalic}]^+$  (where ‘+’ means a morpheme-final segment), or any other suitable phonological representation.

As shown in (5), since (4a) [amu-] ends in a [+voc] segment, [-le] is selected. In the complementary environment, where (4b) [lef-] ends in a [-voc] segment, [-kile] is inserted. This stative construction is then incorporated into the word-level derivation after the finite inflection affix [-n] is added. This construction can then proceed to the syntax. The same analysis is assumed for the ambulative affix.

- (5) a. /amu-**le**-n/    [amu] <sub>Verb</sub> [le] <sub>Verb</sub> n <sub>Verb</sub> → X<sup>o</sup>    go-STA-IND.1SG    ‘I am going’  
 b. /lef-**kile**-n/    [lef] <sub>Verb</sub> [kile] <sub>Verb</sub> n <sub>Verb</sub> → X<sup>o</sup>    run-STA-IND.1SG    ‘I am running’

This work is part of a broader programme for describing and accounting for apparent phonological generalisations in Mapudungun (see Berríos, 2026). Assuming a strictly modular conceptualisation of grammar within stratal phonology, these types of arbitrary patterns appear to defy modularity because a) they are phonologically triggered but morphologically selected based on lexical information, and b) they invite both mono-representational phonological analysis, for example by positing a floating segment analysis (Scheer, 2016) and optimisation through the emergence of the unmarked. Positing arbitrary PCSA patterns may seem to reduce morphophonological interactions to vocabulary insertion without phonology, leading to apparent cases of missed generalisations (Embick, 2010). I contend that one way to provide a clear explanation for the emergence of these types of patterns in the synchrony of Mapudungun is by identifying a diachronic trajectory, an approach known as “amphichronic” (Bermúdez-Otero, 2015; Kiparsky, 2008). More broadly this has theoretical implications for the role of lexical storage in a modular architecture of grammar, as it has been identified as the resting place for historical sound changes in models such as the Life Cycle of Phonological Processes (Bermúdez-Otero, 2015).

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