

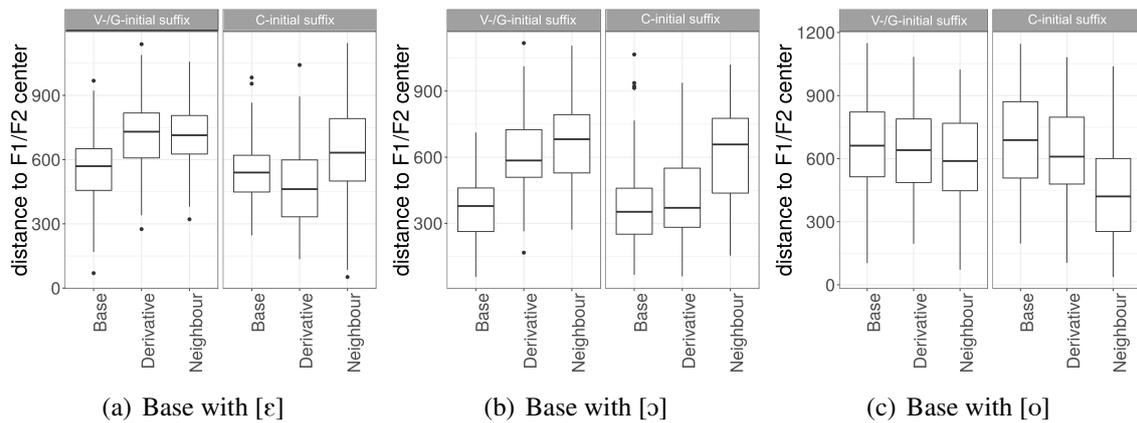
Phonologically-conditioned paradigm uniformity: suffix's phonological shape can condition base-derivative uniformity • Benjamin Storme (Université de Lausanne)

1. Introduction. The phonology of derivatives can be *phonotactically regular* (i.e. it obeys the language's phonotactics) or *paradigmatically uniform* (i.e. the derivative bears resemblance to its base beyond what is predicted by the language's phonotactics). This paper documents a pattern of phonologically-conditioned paradigm uniformity (PU) in Standard French (SF), where the realization of a mid vowel as tense or lax in the final syllable of a derivative's stem (e.g. *ê* in *fêt-ard* 'partier') is phonotactically regular or paradigmatically uniform depending on *the suffix's phonological shape*. This pattern is discussed in light of interactive models of language production (e.g. Goldrick, Folk & Rapp 2010).

2. Method. Ten SF speakers (age: 21-30; six female speakers) were recorded uttering 42 triplets consisting of a Derivative (e.g. *fêt-ard* 'partier'), its Base (e.g. *fête* 'party') and a word which is morphologically simple and phonologically similar to the derivative, i.e. the Neighbour (e.g. *feta* 'feta cheese'). This word provides the phonotactic baseline for the derivative. The derivatives contained (i) vowel- and glide-initial suffixes and (ii) obstruent- and liquid-initial suffixes. The suffixes included both inflectional and derivational suffixes. The words were embedded in a carrier sentence and presented to the participants in pseudo-randomized order. The distance to the F1/F2 space's center was used as a measure of vowel quality: lax mid vowels [ɛ, ɔ] are more central than tense mid vowels [e, o] (Gendrot & Adda-Decker 2005, Nguyen & Fagyal 2008).

3. Results. The figures below show how mid vowels are realized as a function of the word type (Base, Derivative, Neighbour), the suffix's phonological shape (vowel-/glide-initial vs. other) and the identity of the mid vowel in the base as established by dictionaries ([ɛ, ɔ, o]; Lexique 3.80). The results show that, with vowel- and glide-initial suffixes, the derivative patterns with the neighbour (see the left panels in Fig. (a-c)), but with liquid- and obstruent-initial suffixes, it patterns with the base (see the right panels in Fig. (a-c)). Four linear mixed-effects models were fit to the data: a fully phonotactic model (Derivative=Neighbour), a model with full PU (Derivative=Base), a morphologically-conditioned PU model (Derivative=Neighbour with derivational suffixes; Derivative=Base with inflectional suffixes), and a phonologically-conditioned PU model (Derivative=Neighbour with vowel- and glide-initial suffixes; Derivative=Base otherwise). The fourth model was found to provide the best fit (lowest AIC and BIC).

4. Discussion. The split between vowel- and glide-initial vs. liquid- and obstruent-initial suffixes is interpreted in the context of interactive models of speech production (e.g. Goldrick, Folk & Rapp 2010). These models predict that the articulatory/acoustic realization of a word is influenced by its phonological neighbours (among other factors). The following mechanism is hypothesized to motivate the Standard French phonologically-conditioned PU pattern. (i) The stem right-edge (e.g. [t] in *fêt-ard/-ra*) and the base right-edge (e.g. [t] in *fête*) are more similar before liquid- and obstruent-initial than before vowel- and glide-initial suffixes, due to the presence of salient release transitions in vowels and glides vs. their absence word-finally and in liquids and obstruents. (ii) As a result, the base is a closer phonological neighbour to derivatives built with liquid- and obstruent-initial suffixes than to derivatives built with vowel- and glide-initial suffixes. (iii) Because closer phonological neighbours have a greater influence on the realization of a target word, the base influences the phonological shape of derivatives more strongly when they are built with liquid- and obstruent-initial suffixes, resulting in PU along mid-vowel quality with liquid- and obstruent-initial suffixes but not with vowel- and glide-initial suffixes. Other patterns of phonologically-conditioned cyclicity involving the suffix's phonological shape (e.g. the Dutch pattern described by van Oostendorp 2004) are discussed in light of this hypothesis.



References

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