

Markedness-avoidance alone does not determine base choice: Evidence from Spanish

Canaan Breiss (UCLA)

Summary: This paper challenges a core tenet of the theory of Lexical Conservatism (Steriade 1998, Steriade & Stanton 2020), that speakers deviate from using the cyclically-contained Local Base only if there is a *phonologically-optimizing* morphologically-related Remote Base to relieve a potential markedness violation in a Derivative. I provide evidence that both phonologically-optimizing and phonologically non-optimizing Remote Bases influence Derivative formation in Spanish, and argue that this finding is only compatible with a model of Lexical Conservatism where all Bases exert analogical pressure on Derivatives, cross-cut by markedness.

Background on Lexical Conservatism: Recent research has centered on the factor(s) influencing speakers' choice of Base when forming novel words (via derivation or inflection). Classical theories of word-formation have assumed that a novel form (the Derivative, ex. *remédiable*), is always built on the cyclically-contained Local Base (ex., *remedy*). These assumptions have been challenged on the basis of corpus evidence by Steriade (1998) *et mult. seq.*, who demonstrates a dependency between the existence of a morphologically-related form that is *not* the Local Base, which I term the Remote Base (ex., *remédial*), and the willingness of the Derivative to undergo a markedness-reducing phonological alternation that is otherwise not observed (here, rightward stress shift to ameliorate a long lapse, preferring *remédiable* to **rémediable*). Recent experimental work (Steriade & Stanton 2020, 2021; Breiss 2020, 2021) has demonstrated speakers also exhibit this dependency when coining *novel* Derivatives, and that the effect is probabilistic rather than absolute. This has lent support to the hypothesis that the principle of Lexical Conservatism is an active part of speakers' synchronic grammars.

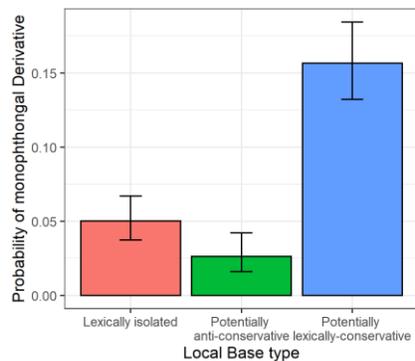
Contexts for Lexical Conservatism in Spanish: All dialects of Spanish exhibit an alternation between stressed [i^he] and [u^he] and unstressed [e] and [o]. How to predict which mid-vowels alternate under stress has been extensively studied (Harris, 1969; Hooper, 1976; Carlson and Gerfen, 2011), and is the result of a historical merger between low-mid *[ɛ, ɔ], which alternated exceptionlessly with stressed *[i^he, u^he], and high-mid vowels *[e, o], which did not alternate with stress (Penny, 2002). Thus in modern dialects, some mid-vowels [e, o] alternate with diphthongs under stress (*sentámos~siénto*, “we/I sit”), while others don't (*rentámos~rénto*, “we/I rent”). The fact that the alternation results in the elimination of unstressed diphthongs has been taken as evidence that unstressed diphthongs are phonotactically marked in Spanish. We can observe contexts for Lexical Conservatism in Spanish diphthongization by asking whether a stressed diphthong will alternate with an unstressed monophthong (violating faithfulness, but satisfying markedness), or not (violating markedness at the expense of faithfulness). In this light, we can classify the diphthong-having lexical items of Spanish according to what kind of morphological relatives (Remote Bases) they have. Words with a stressed diphthong and no other morphological relatives with differing stress, (ex., *siniestro* “sinister” or *ungüento* “ointment”) constitute a base case where the degree of monophthongization when stress is removed reflects the phonological grammar only. I call such Local Bases *lexically isolated*. Local Bases with a Remote Base with a corresponding unstressed vowel can be classified as either *potentially lexically-conservative* (*niebla~neblina* “fog, mist” or *mueble~móblar* “furniture, to furnish”), since the Remote Base is phonologically-optimizing, or *potentially anti-conservative* (*ambiente~ambiental* “environment, environmental” or *juérga~juerguista* “spree, reveler”), since the Remote Base is of no additional help in avoiding a marked unstressed diphthong.

Experiment: *Predictions and goals:* we are first interested in whether speakers are sensitive to the phonotactically-optimizing Remote Base in Spanish, exhibiting the classical markedness-reducing Lexical Conservatism effect. The second goal is to probe whether speakers treat *potentially anti-conservative* and *lexically isolated* Local Bases differently: the phonologically-

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optimizing view of Lexical Conservatism holds that since the speaker gains no benefit in markedness-avoidance for using a Remote Base for *potentially anti-conservative* Local Bases, the rate of monophthongization of newly-unstressed diphthongs in Derivatives formed to both *potentially anti-conservative* and *lexically isolated* Local Bases should be equal. Participants and procedure: 30 speakers of Mexican Spanish were asked to read aloud and indicate their familiarity with a series of Local Bases and Remote Bases, and then to produce a series of Derivatives to the three different types of Local Base by attaching the adjectivizing affix *-óso*, which bears stress obligatorily on its first syllable. Participant responses were coded for whether the Derivative contained an unstressed diphthong or monophthong. Participants also completed a phonotactic well-formedness test designed to assess the markedness of unstressed diphthongs (details omitted here), where they were asked to rate the phonotactic well-formedness of pairs of Spanish nonwords which differed minimally in whether they contained an unstressed diphthong (ex., $n[\widehat{i}e]rufa$ vs. $n[e]rufa$). Stimuli: 90 Local Bases were selected with the aid of a native speaker, 30 *lexically isolated*, 30 *potentially lexically-conservative*, and 30 *potentially anti-conservative*. 60 pairs of trisyllabic Spanish nonwords with penult stress were generated for the



phonotactic judgment task. Results: First we find that the rate of monophthongization in Derivatives of *lexically isolated* Local Bases was nonzero, indicating that participants are sensitive to, and occasionally repair, the markedness of an unstressed diphthong (left bar in figure). The phonotactic judgment task provided converging evidence, with participants rating the nonword with an unstressed monophthong more Spanish-like than its pair-member with an unstressed diphthong (Bayesian mixed-effects logistic regression, $\beta = 1.38$, 95% Credible Interval [1.34, 1.43]; not pictured). Second, we observe that participants were sensitive

to the presence of a phonologically-optimizing Remote Base: Derivatives of *potentially lexically-conservative* Local Bases had higher rates of monophthongization than those formed from *lexically isolated* Local Bases ($\beta = 1.09$ [0.20, 1.97]); right bar in figure). Finally, counter to the phonotactically-optimizing view of Lexical Conservatism, we find that Derivatives formed from *potentially anti-conservative* Local Bases exhibit even less monophthongization than those formed from *lexically isolated* ones ($\beta = -1.16$ [-2.65, -0.02]; center bar in figure).

Discussion: This study has advanced experimental evidence for a counter-example to the widely-held position that markedness-avoidance alone can drive participants to use non-Local – that is, non-cyclically-contained – bases for novel Derivatives. This data is not compatible with the theoretical framework for Lexical Conservatism put forward by Steriade (1998). I propose a model of Derivative-formation where all Bases exert an analogical pressure on the Derivative to be faithful to it, which is cross-cut by surface-oriented markedness avoidance from the phonological grammar. In this framework, the strictly-optimizing role of the Remote Base observed experimentally in English by Steriade & Stanton (2020) and Breiss (2020, 2021) and the analogical force of the Remote Base in spite of increased markedness observed in Spanish here emerge as two ends of a continuum of markedness-avoidance: when markedness is more powerful than analogical faithfulness, only cases of Remote Bases helping reduce markedness are observed (English), whereas when analogical faithfulness is more powerful than markedness, marked structures in the Derivative are tolerated, or even enhanced out of faithfulness to the Remote Base.