

## Situating variation in the lexicon: Evidence from second language phonology

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Phonological variation is a particularly common feature of second language (L2) speech. Why should this be the case? Drawing on data from Brazilian Portuguese (BP) learners of English, we propose a view of L2 variation that differs from most approaches to variation in first language (L1) speech. Accounts of L1 variation typically situate it in the grammar, due to either multiple grammars (Bickerton, 1971), variable rules (Cedergren & Sankoff, 1974), partially ordered constraints (Reynolds, 1994) or overlapping constraints (Boersma, 1997). In our view, L2 variation is generally situated in the lexicon, characterized by competition between two underlying representations (URs) associated with a single lexical item. At the moment of lexical access, these dual URs vie for selection, leading to variation in surface output.

Our study focuses on learner difficulties with the stops /p k/ in medial and final coda position. Because BP allows only the limited set /s r l N/ in a coda (all subject to lenition), BP ESL learners resort to a process of i-epenthesis which resyllabifies /p k/ as onsets (e.g., *cha[pi]ter*, *magi[ki]*; Baptista & Silva Filho, 1997). Arguably, however, these so-called epenthetic vowels are in fact underlying, resulting from a perceptual illusion whereby learners hear a phantom vowel after illicit codas (Koerich, 2006). But if such is the case, why is coda /p k/ production variable (i.e., alternating between *magi[ki]* and *magi[k]*)? Why do learners not consistently realize these forms with the added underlying vowel?

Our findings suggest that the observed variation results from competition between dual accurate (i.e., target-like) and inaccurate URs for words such as *chapter/doctor* and *magic/bishop* in the L2 lexicon. The accurate UR arises as learners acquire the ability to syllabify /p k/ in coda position. Hence learners rewrite lexical entries, with /mæ.dʒi.ki/, for example, being revised as /mæ.dʒɪk/. Importantly, when learners rewrite a lexical entry, they do not overwrite the original UR; instead, this original (inaccurate) UR continues to be present alongside the revised (accurate) UR, both being available for selection at the moment of speaking.

To substantiate our claim, using standard sociolinguistic procedures, we analyzed the oral production of 36 BP learners of English in three tasks: real-word elicitation, non-word repetition and non-word reading aloud. The results of a GoldVarb X (Sankoff et al., 2005) analysis showed higher i-production in elicited real words than repeated non-words. Based on these results, we argue that participants draw on a real-word UR in the elicitation task, with the L2 lexicon instantiating competing URs with and without a vowel. In the repetition task, however, participants form a (generally accurate) representation for the non-word online, leading to the virtual absence of i-production in this task. We consider (and reject) an alternative account which attributes the low level of i-production in the repetition task to phonetic imitation.

In sum, the notion of dual URs for lexical items has a decidedly marginal status in the variationist literature (see, e.g., Anttila, 2002). We argue, however, that this approach is precisely what accounts for much variation in L2 output.

## References

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