QUESTIONS AND METHODS
PRETONIC MIDVOWELS IN THE SPEECH OF NORTHEASTERN MIGRANTS IN DIALECTAL CONTACT

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This article has two objectives: (i) to present the methods employed in an analysis of the variable pretonic midvowel height in the speech of 32 migrants from the Northeastern states of Alagoas and Paraíba living in the Southeastern state of São Paulo/Brazil, in a dialect contact situation; and (ii) to call attention to two limitations of variationist studies, namely, the great amount of time spent in identifying, extracting, and coding data, and the subordination of research questions to a restricted set of methods. Sociolinguistic studies of the variable pretonic midvowel height have generally treated it categorically, considering the factors "high" (vowels [i, u]), "mid-high" (vowels [e, o]), and "mid-low" (vowels [ɛ, ɔ]), analyzed in different binary models in Varbrul. From an initial expectation that migrants' speech is better characterized as a continuum, exhibiting patterns which are possibly intermediary between that of the native and the host community, and that their speech could present more individual variation than in the speech of native/prototypical speakers, we analyzed their vowels in mixed effects linear regression models with vowel height (measured in F1) as response variable, speaker as a random predictor, and other linguistic and social predictors as fixed effects – namely, preceding and following phonological context, height of following syllable vowel, stressed vowel, distance from stressed vowel,

structure of pretonic syllable, sex/gender, age group, level of education, age of arrival, length of residence, and motivation for migration). An additional sample of 7 native São Paulo speakers was also analyzed as a reference group.

The sociolinguistic interviews were first transcribed and time-aligned in ELAN (HELLWIG; GEERTS, 2018). The orthographic transcript was transformed into a phonological transcription through the use of *silac* (OUSHIRO, 2018), an R code available as an online app which outputs a transcript containing word syllabification and stress marking. The transcripts were then imported into Praat (BOERSMA; WEENINK, 2018), in which the Easy-Align plug-in (GOLDMAN, 2011) automatically segmented the wave, facilitating the identification of midvowels starting and ending points. After that, the Praat script Vowel Analyzer (RIEBOLD, 2013) extracted, into a semi-coded spreadsheet, F1 and F2 measurements at three points of around 14,000 vowels, which included all five Brazilian Portuguese pretonic vowels and their respective following syllable vowels. Finally, linguistic and social predictors were automatically coded and pretonic midvowels were Lobanov-normalized (LOBANOV, 1971) through an R script using the package vowels (KENDALL; THOMAS, 2015).

Analyses of six social predictors show that only migrants' age of arrival in the new community correlate significantly with pretonic midvowel height: the earlier the arrival, the greater the approximation to the host community's pattern, both for vowel /e/ and /o/. Differently from expected, predictors such as length of residence, motivation for migration, and sex/gender didn't show significant correlations, which suggests the need for more systematic analyses of a number of sociolinguistic variables in order to propose a typology of variables in dialect contact situation.

The methods herein developed and applied allowed for a more refined acoustic analysis of a great amount of migrants' speech data and for the observation of the effect of individual and social constraints in dialect contact and acquisition. They are all applicable to the study of other variables. These methods are not yet regularly employed in Brazilian sociolinguistic studies and have not had much publishing space, which may be symptomatic of a dependence on a single statistical method which, in turn, restricts the scope of research questions in the field. We argue for the need of developing and publishing methods (as well as results) and for the continued reflection upon research questions and methods: new questions require new methods, and new methods may lead to new insights.

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