

Phonetic change in the grammaticalization of Brazilian Portuguese *tipo*

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The lexeme *tipo* ‘type, sort (of),’ which has been undergoing grammaticalization in Brazilian Portuguese for several decades, can serve a variety of functions ranging from discourse particle to quotative marker, in addition to its canonical noun form [1–4]. Grammaticalizing forms across many languages have been noted to undergo various “erosion” processes [5–9] such as lenition and phonetic reduction, among others. **Our study asks whether such erosion processes are occurring within *tipo* as it grammaticalizes and, if so, how we may best quantify and characterize them using acoustic phonetic analysis.**

Our data is based on primary recordings of sociolinguistic interviews with 71 middle school children ages 11–16 living on Governador Island in Rio de Janeiro, Brazil, collected between 2015–2018. We investigate the phonetic changes occurring in *tipo* across its range of usages through the use of acoustic analysis and linear mixed effects regression modelling. Our results indicate that *tipo* undergoes several phonetic changes, not all of which fall under the category of erosion, which are significantly correlated with grammaticalized usage. To illustrate, the vowel /i/ is reduced in duration, whereas /o/ is increased (Figs. 1, 2). In addition, grammaticalized /o/ is retracted and lowered, and the consonant /t/, a phonetic affricate [tʃ] in *tipo*, is reduced in duration during its fricative phase. In summary, while phonetic changes do occur in grammaticalized *tipo*, they vary across its component phoneme segments, with some exhibiting expansion or non-reductional/orthogonal change alongside more overt erosion processes.

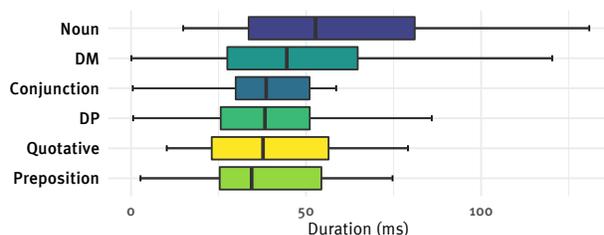


Figure 1: Duration of *tipo* /i/ by grammatical function

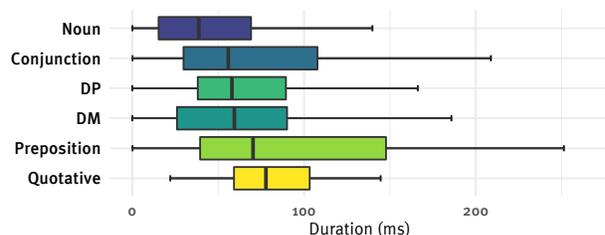


Figure 2: Duration of *tipo* /o/ by grammatical function

Our findings suggest that while phonetic change may indeed be a common characteristic of grammaticalization, not all changes can be characterized wholesale as erosion *per se*, and may not occur in a uniform fashion across different forms or across all segments of a given form. Furthermore, while phonetic changes/reductions have been most clearly noted during morphologization [8], they may also occur during earlier stages of grammaticalization, as in e.g. *tipo*. We suspect that closer phonetic investigation of grammaticalizing forms across languages could reveal patterns of the type our study has found, and thereby expanding our understanding of the grammaticalization process.

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