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## An auditory account of rhotic allophony: evidence from Maltese

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The class of rhotics still presents a puzzle in linguistic theory (Ladefoged & Maddieson 1996). While stops as a phonological class have a clear and acoustic unifying property related to the closure of the vocal tract to unite them as a class, rhotics defy such a definition and contain not only the prototypical trills, but also more sonorant approximants and less sonorant fricatives. Some have argued that the class of rhotics is best understood as a case of family resemblance, which also requires to consider language change (Sebregts 2014). Chabot (2019) argued, however, that rhotics are better understood by their phonological behavior as sonorants and that the family-resemblance model may be resting too much on “the intuitions of the linguist founded on diachrony” (Section 2.2).

Given this background, we investigated the development of rhotics in Maltese, which, impressionistically, is moving away from using the alveolar trill towards using approximants, similar to English, the second national language on Malta. We therefore recorded younger ( $\leq 25$ y) and older ( $\geq 45$ ) speakers of Maltese using sentences that contain /r/ in the onset and offset position, both in simple and complex onsets. Not only did we observe that younger speakers prefer approximants over trills (60% vs. 31%) while older speakers prefer trills (52% vs. 36%) but we also observed strong effects of position, with trills being preferred in complex onsets ( $> 50\%$ ) but dispreferred in complex codas ( $< 25\%$ ). In this latter position, we also observed a continuum of productions from clear trills to approximants. In such complex codas (e.g., art, Engl. ‘floor’), the release of the trill is often very weak and contributes very little to the auditory impression of the segment, leaving the approximating gesture into the closed position as the only cue for the presence of an /r/. This provides a clear diachronic link between the trill and approximant version of /r/ and shows how the approximant is a natural attractor based on patterns in perception and production of the trill /r/.

**References.** Chabot, A. (2019). What’s wrong with being a rhotic? *Glossa. A Journal of General Linguistics* 4(1), Article 1. <https://doi.org/10.5334/gjgl.618> • Ladefoged, P. & I. Maddieson (1996). *Sounds of the world’s languages*. London: Blackwell. • Sebregts, K. (2014). *The sociophonetics and phonology of Dutch r*. LOT, Netherlands Graduate School of Linguistics.