A sociophonetic investigation of Roman rhotic degemination

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Introduction This paper aims at investigating rhotic degemination in the production of young Roman Italian speakers. We focused on rhotic degemination because it's considered a sociolinguistic marker of romanesco and it is overtly commented and associated with rudeness, low status speakers and informal communicative situations. Given the particular status of the R variable (Scobbie 2006) in conveying socio-indexical information, we analyse if, and how, young Roman speakers produce degemination of the rhotic phoneme.

Background According to Rohlfs (1966), degemination of the intervocalic rhotic is attested in Northern Italy, but it appears to spread toward southern areas (Tuscany, Marche, Umbria) and "in misura particolarmente forte a Roma e nel Lazio meridionale" (Rohlfs 1966: 313). The phenomenon is a strong sociolinguistic marker of Roman speaker (Stefinlongo 1999, D'Achille et al. 2012), since it correlates both to speech style and to social groups, and it reaches the status of a stereotype (Johnstone et al. 2006). According to D'Achille (1995) the stigmatized value seems to be confined to degemination in posttonic syllable (like *orrore*), whereas degemination in pre-tonic position (es. *arivare*) can be found in informal speech style.

Even if it's worth mentioning Bernhard's (1998) empirical survey, no explicit sociophonetic study has been devoted to the investigation of rhotic degemination: in particular, we do not know if the phenomenon is still maintained in the speech habit of young Roman speakers, or if it is subject to variation according to different speech style. To our knowledge, the only study devoted to the problem of degemination is Marotta (2005), which shows that in a dialogic production from the corpus CLIPS, degemination does not appear in the production of unstressed syllable. Her results show that, at least for the two analysed subjects, young Roman speakers do not produce rhotic degemination, therefore confirming its low status and its possible disappearing in the production of highly educated speakers.

Research questions Inspired by Marotta's (2005) results, the current study has the aims of starting an investigation of rhotic realization in Roman Italian. In particular, we aim at answering at two specific questions: 1) given that rhotic degemination seems overtly stigmatized, do young roman speakers still realize it? Do they show it also in more controlled sociolinguistic speech events, like sentence reading task? 2) Assuming the maintenance of rhotic degemination in the speech of young Roman speakers, how is this degemination realized? Namely, if we assume that the phenomenon is still maintained, do geminate rhotics show the same duration in ms. of the singleton ones? Furthermore, do other phonetic factors have a role in triggering degemination, as the anecdotal observations about the role of stress, with degemination being favoured in unstressed syllables? In this presentation we will show preliminary data from a small sample of speakers performing a sentence reading task.

Methodology We recorded 10 speakers from Rome, 5 males and 5 females: 7 out of 10 speakers in particular are from Eastern Rome, whereas the remaining 3 come from Southern Rome. We decided to focus our investigation of Eastern and Southern Rome, because they are considered the core of the true Roman working-class, but also the core of Roman alternative hipster artsy and musical scene, with many clubs and squatting spaces. Their age span from 23 to 30, and their education goes from high school diploma to PhD degree. We narrowed our investigation to this population to test if speakers from these areas, with these social characteristics, may use a low-status phenomenon in order to signal their affiliation to the working-class.

Speakers participated to a sentence-reading task. The list consisted of 70 sentences of equal length and controlled prosodic contour. Each sentence contained one token with a singleton and/or geminate /r/, in pre-tonic and/or post-tonic condition. Following Dmitrieva et al. (2018) some words were minimal pairs, to test if minimal pair neighbours of word can affect the acoustic realization of rhotic degemination. Each rhotic could be followed by any of the seven vowels. Sentence were constructed in order to resemble an informal, everyday communication: for this reason, we did not inserted our word in a standard frame, like *Say X again*, but we constructed realistic, informal sentences, with swear words and regional terms too (es. *Non si sgarra co l'amici*). Thus, even if a sentence-reading task will normally elicited a more controlled speech, the design of the sentences stimulated the emergence of a more "vernacular-like" variety. The corpus consisted of 741 tokens, annotated in PRAAT following the protocol for rhotics developed by Celata et al. (2016).

Studies devoted to the investigation of Italian geminated consonants have demonstrated that different acoustic cues are involved in conveying gemination. In particular the most robust cue seems to be the consonantal lengthening, associated with a shortening of the preceding vowel: vowels preceding geminates are thus considerably shorter than when preceding a singleton consonant. When turning to rhotic gemination, in addition to durational parameters, qualitative dimension plays a role too: as Payne (2005) notes, contrast between singleton and geminate rhotic is usually a contrast between a tap and a trill. For the aforementioned reasons, we decided to investigate rhotics both qualitatively and quantitatively: we rely on durational measurements (preceding vowel and consonant duration) to test if the consonant is realized as a geminate or a singleton. In addition to this, the visual inspection of the spectrogram is used for a qualitative investigation of rhotic realization, in order to analyse if rhotic degemination can be conveyed by a change, from trill to tap.

Results and discussion According to the bibliography, we analysed the durations of both rhotics and preceding vowels. For each variable we ran linear mixed models that included 4 fixed variables and their corresponding interactions: 1) speakers' sex; 2) gemination (tokens with lexical gemination, tokens with lexical singleton); 3) syllable structure (pre-tonic, post-tonic); 4) lexical competitor (the presence or not of a minimal pair neighbour, ex. bara vs barra). Results show that, for rhotic duration, Gemination and Lexical competitor were statistically significant, since geminated rhotics were longer than singleton rhotics, and words with a minimal pair neighbours were significantly longer than words without a corresponding one. Sex and Syllable were not significant: males and females show the same values for rhotic duration, and this is also true for pre-tonic and posttonic rhotics. However, Sex and Syllable were found to interact: the difference between males and females was significant only for pre-tonic syllables, with males showing longer durations (males 43 ms, females 38 ms). The interaction between Gemination and Lexical Competitor showed that tokens with a minimal pair neighbour maximized the contrast between

singleton and geminated rhotics, whereas tokens with no minimal pair neighbour tend to show a less sharp contrast between singleton and geminates. When looking at vowel duration, results show that only Syllable stress was statistically significant, with stressed syllable being longer than unstressed one (stressed = 113 ms, unstressed = 78 ms). Unexpectedly, no effect of Gemination was found. However, these results tested absolute duration: it will be interested to use relative measurements (e.g., singleton/geminate ratio).

Our results clearly show, at least for rhotic duration, the presence of gemination in the Roman Regional Italian; the unexpected results for vowel durations let, instead, hypothesize a different role of vowel duration in conveying gemination (see also Mairano and Di Iacovo 2018 for similar inconsistencies). Qualitative analysis of the distribution of rhotics across the two conditions show a more complex picture. Intervocalic geminate rhotics seem to allow a greater range of possibilities: they can indeed be realized mainly as a trill, but approximant, fricatives, taps, and combined realizations (trill or tap with a fricative appendix) are found too. When looking at each speaker production, results show that some speaker seem to be more systematic in realising their geminates with lenited variants. These results show that relying only on quantitative analysis for investigating rhotic degemination can lead to misleading conclusions. The observation of lenited variants in the speech of some speakers show that is not only duration, but the use of tap variants that can have indexical purposes, since it is characterized by "statistical differences in [the] form's distribution" (Foulkes, Scobbie and Watt 2010). Rhotic degemination seems therefore to be, at least for some speakers, still present: from a sociophonetic perspective this could be interpreted as the maintenance of a marked feature to show affiliation to a cultural-defined group, also given the fact that the recordings have been performed by a member of the same community. A further analysis of this phenomenon in casual speech in different communicative settings will help confirming the findings presented in this first sociophonetic analysis of rhotic degemination.

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