PERCEPTION OF THE VARIATION OF THE CODA (S) IN THE SPEECH COMMUNITY OF RIO DE JANEIRO
ACCESSING THE SOCIAL MEANING OF THE BACK–FRICATIVE VARIANT

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This paper presents the results of a perception test that tried to access the social meaning of the variants of the variable coda (s) by speakers from two distinct social groups in the speech community of Rio de Janeiro (Melo, 2017). The tested variants were [ʃ/ʒ] and [h/ɦ]. In this variety of Brazilian Portuguese, variants of coda include alveolar, post-alveolar, back fricatives (velar and glottal) and the absence of coda, as in me[z]mo, me[ʒ]mo, me[ɦ]mo, meØmo. Previous studies with production data (Callou, Leite, Moraes, 1996; Scherre, Macedo, 2000; Melo, 2012) have shown that post-alveolar variants are the most frequent among all variants and, specially, according to Callou and Brandão (2009), its prevalence, in the speech community, is the result of the implementation of a change. In Melo (2012, 2017), with data from middle class and low-class speakers, living in slums, measured by level of schooling and socioeconomic conditions, it was observed an ongoing change towards the velar/glottal variant among socially excluded low class speakers. In both samples, the velar/glottal variant tends to be used when the coda is followed by a voiced consonant, in word final position, in non-monosyllabic words, in unstressed syllables, with no morphological status, in informal styles and it is subject to lexical conditioning. The overall rate of back fricatives is higher among socially excluded low class speakers without

regular schooling (30%) than middle class speakers (5%) and socially included low class speakers (6%).

This study adopts the view of linguistic variation as in the exemplar-based models (Bybee, 2001, 2010; Pierrehumbert, 2003; Drager; Kitley, 2016), according to which indexed linguistic variation is represented in the lexicon. Since the phonetic detail is stored as part of the wordform, the representation is updated through the speaker's experience with language in many different social, discursive and interactional contexts. In Melo (2012, 2017), it was assumed that the different rates of back fricatives for specific words indicates which variant is dominant in relation to the others in speaker's word representations (Connine; Ranbom; Patterson, 2008). It was shown that, among socially excluded low class speakers, back fricative prevails in some words, such as *mesmo* same, *desde* since, *vários* many (pl.) and *nós* we, whilst, among middle class speakers and socially included low class speakers, these words were mostly produced with the post-alveolar variant. Then, since the organization of words that contain coda (s) is different, at least for some words, among the three groups, it is important to investigate in what extent they share the same patterns of evaluation of these two variants. Different studies, based on production data, provided evidence that the back-fricative variant (velar / glottal) is stigmatized in several varieties of Brazilian Portuguese (Auler, 1992; Carvalho, 2000; Gryner, Macedo, 2000).

Perception of variants was assessed using a matched-guise method. The perception test contained 24 sentences constructed according to the number of words with the relevant coda in the sentence: 12 sentences with only one word (*Sempre depois do vento, vem a chuva*/When the wind stops blowing, there comes the rain), and 12 sentences with two words with the relevant coda (*Depois de muito tempo, o juiz disse a sentença*/After a long while, the judge gave the sentence). The sentences were controlled by size, coda's following context, and distance between words in the "two words with coda (s)" condition. All sentences were recorded by the same woman, from the same speech community of the participants, aged between 25-30 years old, and with university level of education, in two versions: one with the post-alveolar and the other with the velar/glottal. Stimuli were split in two lists of 12 sentences, one containing sentences with only one word with coda (s) and the other with two words. The number of words with coda (s) was an across-subject design, since participants heard stimuli from one of either lists. In each list, half of the sentences contained the post-alveolar variant and the other half, the velar/glottal variant, which means that no participant heard the same word with two different variants. Each participant heard 12 sentences for the relevant coda and 06 fillers.

The task consisted of the indication of the professional who said the stimuli among three options of occupation: physician (professional with a university degree required), nurse (professional/skilled worker, but with no university degree required) or cleaner (unskilled). These professionals were selected for testing the correlation between variant and social meaning because of their different social values aligned in a scale of different degrees of prestige in Brazilian society, according to the type of specialization and level of education required to practice them. The participants were instructed to listen each sentence carefully and then select one of the three professionals shown on the screen they thought that have said it. The familiarization with the task consisted in the presentation of a text on the screen, read by the researcher, in which it was told that the participant was at a public hospital, waiting for an appointment. While he/she was waiting, the participant heard a sentence, and had to decide whether this sentence was produced by a physician, by a nurse or by a cleaner (unskilled). The test was applied individually in the institutions were the participants were contacted using the software TP (Test/Training of Perception), version 3.1. The stimuli were presented randomly and the answers were registered on/in an Excel sheet for further analysis.

The test was applied to 36 individuals, distributed in three sets according to level of schooling, which also indicates different degrees of social insertion: a) UFRJ group, constituted by university students (from the Federal University of Rio de Janeiro), mainly with a middle and low-middle class profile; b) Fiocruz group, constituted by high school slum-living adolescents that participate in an extra-class activity offered by an important public research institution; c) EJLA group, constituted by socially excluded slum-living adolescents with no access to formal education, living in a reformatory.

The responses were analyzed in two ways: attributing a value to each profession in a scale from 1 to 3, in which 1 – doctor, 2 – nurse, 3 – cleaner per participant' social group, and through the distribution of the answers according all the independent variables. In this case, the dependent variable was the chose professional, and the independent variables were the variant (post-alveolar x velar/glottal), the number of words in the sentence with the relevant coda (1 x 2) and participant' social group (UFRJ x Fiocruz x EJLA).

The results for the participants' choice according the evaluation scale from 1 to 3 (the sum of the points obtained in each answer according to the chose professional) showed that the difference among the three groups and the two variants are statistically significant (chi-square test – p-value=0.0009345). The glottal va-

riant presented score (315) well above the post-alveolar (209), which means more association of this variant to cleaner. It was observed a gradual increase of the scores for the glottal variant from the socially excluded participants to the university participants, respectively, EJLA – 75, Fiocruz – 113, UFRJ – 127, whilst the scores for the post-alveolar don't differ deeply among the groups, respectively, between the lowest and the higher values.. These results indicate that for EJLA participants there is no difference of evaluation between the two variants, and that the social evaluation of the glottal differs gradually among the three groups.

The distribution of the responses per variant per participant's group complements the results obtained by considering the degree of penalization of the variant according to the chose professional. Distribution of responses of EJLA participants showed that there is no correlation between any of the two variant to a profession (p-value=0.4454), whilst there is a polarization between the two opposite professionals – physician and cleaner, among Fiocruz and UFRJ participants, respectively, Fiocruz: 11%, 68% (p-value=6.956e-05) and UFRJ: 4%, 81% (p-value= 2.294e-13) for the glotal fricative. For these two groups, the distribution of responses for the post-alveolar variant showed no bias related to the degree of prestige of the professional (Fiocruz: physician: 29%, nurse: 39%, cleaner: 32%; UFRJ: physician: 39%, nurse: 43%, cleaner: 18%). These results indicate that the post-alveolar is not associated to a value of prestige, and that it is probably perceived as a feature that characterizes the variety spoken in Rio de Janeiro.

Taken together, the results obtained from the different analysis of the perception of the two variants of coda (s) revealed that the three observed social groups don't share the same patterns of social evaluation, that there is a bias to the stigmatization of the glottal variant but no bias to evaluate the post-alveolar as a prestige form. In addition, the behavior of each group in the perception of the glottal variant seems to mirror the results obtained in Melo (2012, 2017) for production data. It was observed that socially excluded low class speakers differ from middle class speakers and socially included low class speakers in terms of the detailed representation of words with coda (s). For some words, the glottal variant is the dominant exemplar among EJLA speakers, whilst the post-alveolar is the dominant variant for the other two groups of speakers. The ongoing change affects high frequent words only for the EJLA group. This group is the one that doesn't show a negative evaluation for the velar/glottal variant.

The perception of coda (s) study also revealed that the sociolinguistic dynamics of speakers of a given speech community is complex, since there are not only different evaluations of the coda variants among the different groups of

participants, but also that these differences are gradual. The results, moreover, pointed out that evaluation patterns are closely related to the degree of access of the individuals of the different groups to the institutions that contributes to the maintenance and implementation of the prestige patterns.

We also argue that the concept of dynamic adaptive system (Beckner et al., 2009) is more appropriate to accommodate the results obtained by this study. In approaching language as an adaptive and dynamic system, it is assumed that language does not evolve in a uniform and orderly manner, depending on the specificities of individuals' interactions. (Mufwene, 2008: 62; 2017:207-208). However, it is clear that linguistic experience is embedded in the social structure, since individual experience is also social and historical.

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