

# Duration of word-initial fricatives in Zurich German: a sociophonetic marker of (multi-)ethnolectal speech

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Since the turn of the millennium, the phenomenon of so-called (multi-)ethnolects has been observed in the cities of German-speaking Switzerland. This way of speaking differs significantly from traditional Swiss German dialects such as Zurich German with regard to lexical choices, syntactic structures, and segmental features [5]. For the time being, however, a sociophonetic investigation of Swiss German (multi-)ethnolects is lacking – something which has been done quite extensively in other (Western) European cities, e.g. in the project on *Multicultural London English* [2].

There is anecdotal evidence that speakers of (multi-)ethnolectal Zurich German realize word-initial fricatives with a longer duration than monocultural dialect speakers do. This sociophonetic feature seems to be particularly salient, as it also appears in the so-called secondary ethnolect [1] (e.g., in the speech of the comedian Mike Müller: [jɔ: 'siçər fo:] “yes, of course” [4]). In traditional Zurich German, we would expect the lenis fricatives [z̥] and [ʒ̥] instead of the fortis fricatives [s] and [ʃ] [3]. There is, however, no empirical research on the presence of this phenomenon in any Swiss German dialect so far.

In order to investigate the sociophonetic value of this feature, we analyzed the speech of 49 pupils in two schools in the city of Zurich (mean age = 14.29, 29 females). One of these schools is located in a very multicultural neighborhood, whereas the other one lies in a less multicultural neighborhood. Read speech was recorded in a battery of carefully designed test sentences. Pupils read 20 carrier sentences in Zurich German which included target words with word-initial fricatives (e.g., *Ich gsee de Fuchs* ‘I see the fox’). There were five sentences for each of the four investigated fricatives /ɣ z̥ ʒ̥ ʃ̥/ yielding 980 data points in total. All fricatives appeared in postvocalic position and all but two (*Schnuuf* ‘breath (n.)’ and *Schruube* ‘screw (n.)’) occurred in intervocalic position.

Short audio samples extracted from a picture description task done by all recorded pupils were rated by 40 peers from another school in Zurich, who had to evaluate to what extent the speaker talked (multi-)ethnolectal Zurich German, by means of a 7-point Likert scale ranging from ‘not at all’ to ‘completely’. Mean ratings (calculated from the 40 raters) ranged from 1.45 up to 6.1 (mean = 3.77), covering almost the whole spectrum of the scale. According to these rating results, speakers did not fall into two distinct groups of (i.e. traditional vs. ethnolectal) Zurich German speakers, but they were located rather on a continuum as can be seen in Fig. 1 (only the IDs of half of the speakers are depicted in the figure due to lack of space).

Acoustic measurements revealed that fricative durations of pupils with a higher rating on this scale (i.e. speaking more ethnolectal Zurich German than traditional Zurich German) were significantly longer than the durations of those with lower ratings ( $r = .54, p < .001$ ). The positive correlation is depicted in Fig. 2. There was also a significant difference between the durations of the four observed fricatives ( $F(3, 144) = 12.08, p < .001$ ), with [ʃ̥] having the shortest mean duration (131 ms), followed by [z̥] (133 ms), [ɣ] (140 ms), and [ʒ̥] (148 ms). There were also strong positive correlations between the durations of the different types of fricatives ( $r = [.58 - .75], p < .001$ ). Thus, speakers who produced long fricatives in one place of articulation also did so in the other places.

These results suggest that fricative duration in word-initial position in Zurich German does indeed function as a sociophonetic marker. However, there is evidence that additional features are used to rate their speech as (multi-)ethnolectal, for instance the voicing of (traditionally unvoiced) lenis plosives [6].

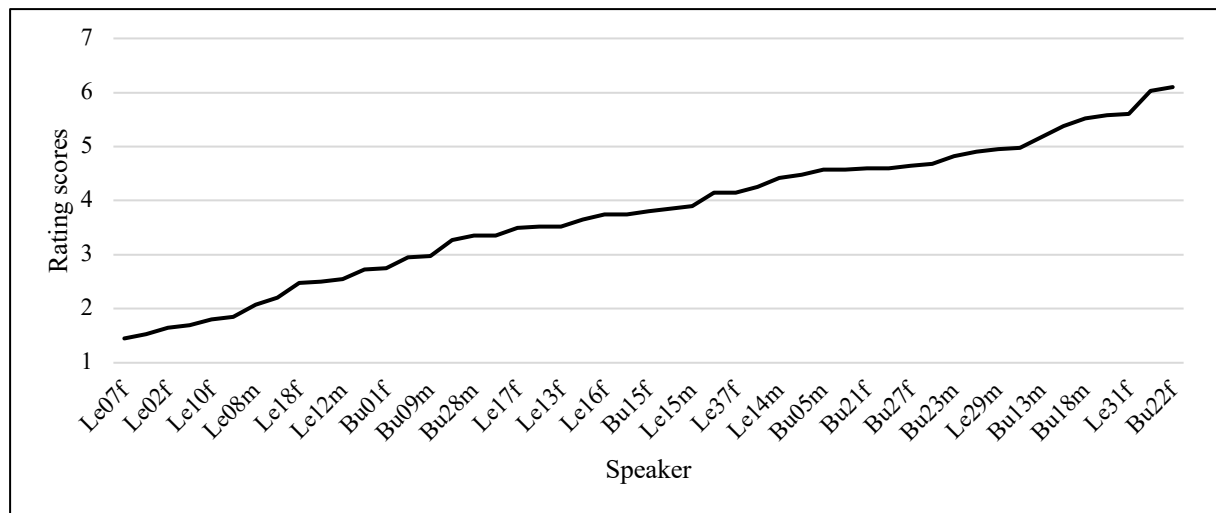


Figure 1: Rating scores for the 49 analyzed speakers

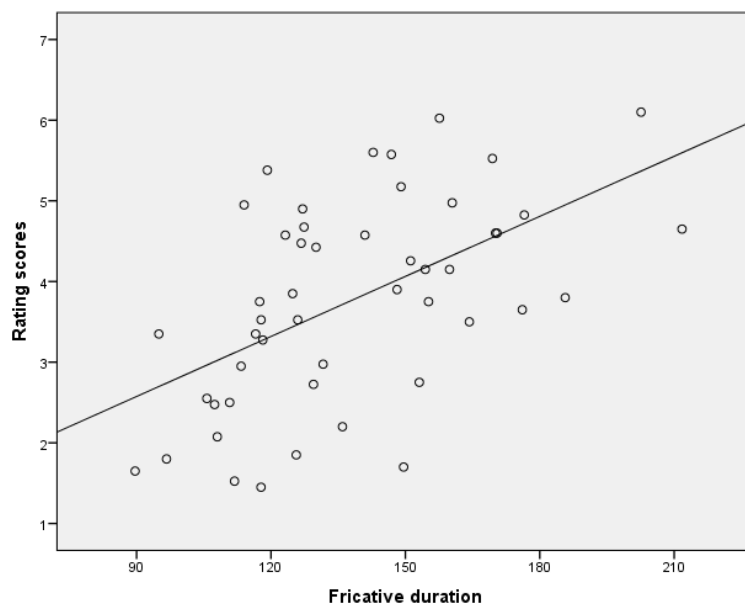


Figure 2: Rating scores a function of fricative duration

## References

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