The merger in process of [ɛ] and [ʃ] in Luxembourgish

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As for many areas of Middle German dialect regions (e.g. documented in Koblenz, Erp and Leipzig) a sound shift in process in Luxembourgish (Lux) leads to the loss of the voiceless palatal fricative, shifting into an alveolo-palatal variant: [ɕ] > [ɛ]. In parallel, the voiceless post-alveolar fricative, via delabialization, is shifting towards the same new variant: [ʃ] > [ɛ], thus reducing the Lux fricative system: *[ɛ] > [ɛ] < *[ʃ].

My analysis intended to clarify this shift in Lux on a large scale on a set of minimal pairs (e.g. frech ‘mean’ vs. Fräsch ‘frog’ [fɪæʃ]). The fricatives of 48 speakers (24 male, 24 female) from three different generations and two regions (South and Centre) were analysed. The combination of the analysis of the first spectral peak and the centre of gravity, both computed using the algorithms of the phonetic software PRAAT, proved most significant in order to distinguish the Lux fricatives.

The results are in line with those found in the Middle German dialects:

a) There is a clear difference in the fricative system of the three generations, with an opposition between a labialized post-alveolar fricative [ʃʷ] and an alveolo-palatal fricative [ɛ] for the elder generation, a less stronger opposition between an optionally labialized post-alveolar fricative [ʃʰʷ] and [ɛ] for the middle generation, and the virtual absence of opposition in the speech of the younger generation.

b) The inner-individual differences are systematic, i.e. every speaker shows a consistent fricative system. Inter-individual differences, on the other hand, are in some cases very strong.

c) There are no significant differences between the two regions and no gender differences.

Thus, the different stages of the merger can all be documented in today Lux, with the final stage of the shift being reached in the speech of speakers < +/- 45.