

Re-emergence of sonorant geminates in Zurich and Grison German

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In contrast to Standard German, many Swiss German dialects have preserved most of the geminates they have inherited from Middle High German. As to sonorant geminates, the picture within Swiss German is quite heterogeneous. While the western dialects (e.g. Bernese) have preserved the sonorant geminates after short vowels (e.g. Bernese *Tanne* 'fir' ['tannə]), north-eastern dialects have reduced them (Zurich German ['tɔnə]). As opposed to the singleton-geminate opposition in stops and fricatives (also referred to as fortis-tenis contrast; see Fleischer & Schmid 2006 for Zurich, Kraehenmann 2001 for stops in Thurgovian German), a shortening (or lengthening) of *m(m)*, *n(n)*, *l(l)* does not change the meaning of a word in Grison and Zurich German because of the (phonological) length of the preceding vowel (e.g. *wählen* 'to vote'; 'to choose' ['væ:lə] vs. *Welle* 'wave' ['væ:l(ɪ)ə]). In terms of reduction of sonorant geminates, Zurich German (ZH) and Grison German (GR) have gone one step further than other Swiss German dialects and have reduced *mm*, *ll* in words ending in *-er* (e.g. *Keller* 'basement', ZH ['xælər], GR ['kʰɛlər]) to *m*, *l*. Reduced forms for these dialects are documented in the Swiss German Dialect Atlas (SDS; Baumgartner et al. 1962-2003) as well as in dialect descriptions (Meinherz 1920 for GR, Weber & Dieth 1948 for ZH). More recently, geminates *mm*, *nn*, *ll* have been documented for ZH in words ending in *-er* or *-el* (Fleischer & Schmid 2006). Informal observations in GR indicate that in this dialect geminates are emerging not only in *-er*, *-el* words, but also in intervocalic position when preceded by a short stressed vowel (cf. *Tanne* above), that is, the positions where they previously had been shortened. This disagreement between older dialect descriptions and informal observations suggests the realization of Middle High German *mm*, *nn*, *ll* (corresponding to <mm>, <nn>, <ll> in High German) is currently changing.

The aim of this paper is to shed light on the current distribution of sonorant geminates and singletons in these two dialects. We recorded ten isolated words with an intervocalic sonorant (3 *-er* words: *Hammer*, *Keller*, *Teller*; 6 *-e* words: *Brunnen*, *Kelle*, *Pfanne*, *Sonne*, *Spinne*, *Welle*; 1 with intervocalic singleton: *Melone*) based on a picture naming task. All words but *Melone* contained two syllables and a short (long in *Melone*) stressed vowel preceding the sonorant. The speakers were 16 young female speakers for each of the two dialects (age range: 18-24 years) and grew up in their region of origin, either the region around Zurich or around Chur (Chur Rhine Valley). The recordings of the 320 words were segmented automatically using WebMAUS (Kisler et al. 2012) and the relevant segment boundaries - onset and offset of the lateral or nasal, respectively - were corrected manually. Three tokens had to be discarded because another word than the target word had been produced.

Figure 1 shows the duration of intervocalic liquids and nasals according to word type. In ZH, the intervocalic consonant in *-CCe* words (e.g. *Kelle*, *Spinne*) displays short durations (1.1 as long as /n/ in *Melone*), in *-CCer* words (e.g. *Hammer*, *Teller*), long durations (2.4 as long as /n/ in *Melone*). In Grison German, as in ZH, *-CCer* words also display long durations (2.5 as long as /n/), but in *-CCe* words, the intervocalic consonant has an intermediate duration between short and long (1.9 as long as /n/). An RM-ANOVA with consonant duration as the dependent variable, dialect as between- and word type as within-subjects factor showed a significant interaction ($F[2,60] = 36.2$, $p < 0.001$). Tukey-tests confirmed that in GR there is a significant difference in consonant duration between the three word types.

The considerable variation in the Grison *-CCe* words (sd GR: 35 ms, sd ZH: 23 ms) indicates that there might be differences between speakers or between words. Figure 2 indicates that in GR, the lengthening of the intervocalic nasal/liquid affects different words to a different degree. Mixed Models showed a significant interaction between dialect and word ($\chi^2[11] = 87.4$, $p < 0.001$). Tukey-Tests showed a significant difference between word pairs only for GR speakers; notably that the intervocalic consonant in *Brunnen* and *Spinne* was significant shorter than in *Pfanne* and *Welle*. Thus, this pattern also differs from the (non significant) differences in ZH, where consonant type (liquid vs. nasal) seems to be the crucial factor.

The results suggest that some of the Middle High German geminates that originally were reduced to singletons have now re-emerged. The two dialects, however, have opted for two different solutions: In GR there are emerging geminates in words ending in *-er* as well as in those ending in *-e*. In ZH, the new geminates are limited to *-er* words (and probably also to *-el* words, see Fleischer & Schmid 2006). From our data, it is not clear whether in GR a third, intermediate length between short and long is being established, or whether the intermediate durations found represent an intermediate stage in a gradual sound change in which intervocalic sonorants in *-e* words will once have as equal as long durations as those in *-er* words. Also, the problem of lexical diffusion has to remain an issue for future investigations.

The lengthening of intervocalic sonorants could be a reflect of spelling pronunciation, as suggested in Fleischer & Schmid 2006 (see also Christen et al. 2010), or it could be due to contact with other Swiss German dialects which mostly have conserved the long sonorants inherited from Middle High German (e.g. the Walser dialect in the Grisons, and the dialects spoken western of Zurich). One argument in favour of the contact hypothesis is that the SDS (note that the SDS data was collected mainly in the 40ies and 50ies) reports on a long nasal duration for *Hammer* and *Sommer* in some areas within the canton of Zurich, among others in the cities of Zurich and Winterthur, which might also have been the areas with most contact with other Swiss German dialects. According to the SDS data, the regions of Zurich and Grison represented an exception in reducing the geminates even in *-er* words, and they were surrounded by areas that did reduce sonorant geminates in *-CCe*, but not in *-CCer* words (Baumgartner et al. 1962-2003, II 186-198), making contact with non-reducing speakers more likely for *-CCer* than for *-CCe* words.

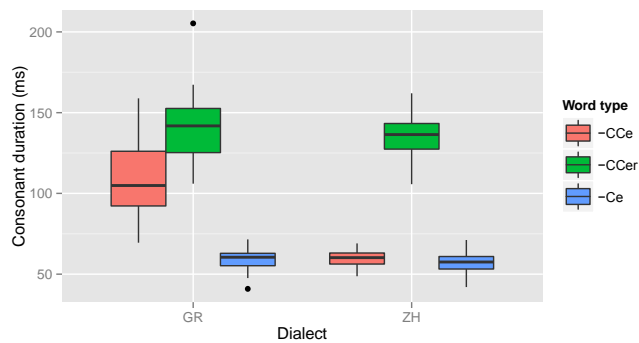


Figure 1: Consonant duration in *-CCe* (n=6), *-CCer* (n=3) and *-Ce* words (n=1). Mean value per word type and speaker.

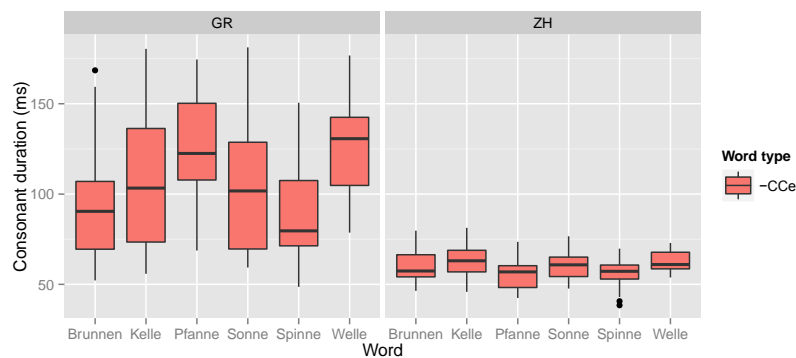


Figure 2: Consonant duration in *-CCe* words according to dialect. One value per word and speaker.

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