Is there a tendency to merge /e/ and /ɛ/ in Standard Austrian German? Data from read and spontaneous speech

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Introduction

The influence of dialectal processes on Standard Austrian German (SAG) is obvious. E.g., the distance between tense and lax vowels is small to non-existent (Wiesinger, 2009; Harrington et al., 2012; Brandstätter and Moosmüller, 2015; Brandstätter et al., 2015); a distinct characteristic of Standard Austrian German, which points to the intermediate position of SAG between Standard German German (distinction between high tense and lax vowels) and the Bavarian dialects (no high lax vowels).

A similar, yet more complicated influence is the merger of /e/ and /ɛ/ in the Middle Bavarian dialects. The merger has its origin in the development of Old High German (OHG) ë, which, around 1200, merged with /e/ resulting from umlaut in the Bavarian dialects. In the Middle Bavarian dialects, to which Vienna belongs, only long ë merged with Umlaut /e/. Thus, [rɛːŋ] *Regen* „rain" started to rhyme with [leːŋ] *legen* „to lay", whereas [lɛkŋ] *lecken* „to lick" retained its quality (Kranzmayer, 1956). In these dialects, however, further inconsistences in the development of OHG ë emerged, in that in some specific instances either [ɛ] was maintained (e.g. in trisyllabics, which should have developed to [e]), or developed to [e] (e.g. derivations, which should have retained [ɛ]). Kranzmayer (1956) dubbed these developments E-confusion. Rowley (1990), however, succeeded in formulating a rule for the development of OHG ë.

In the 20th century, OHG ë was subjected to further developments; Vienna was affected most by these developments. According to Kranzmayer (1953), all e-vowels merged to [ɛː] or [ɛ] around 1920, the so-called *Viennese e-confusion*. Around 1960, Seidelmann (1971) observed a reversed tendency. Contrary to Kranzmayer, he observed a high variation in the realisation of the e-vowels, with a tendency to prefer the tense variant [e]. However, [e] and [ɛ] could be equally used. This tendency is still present in today's Viennese dialect (Moosmüller and Scheutz 2013).

Brandstätter and Moosmüller (2017) proved a statistically significant difference between /e/ and /ɛ/ in the task of reading logatomes. However, as concerns F2 and F3, the difference between [e] and [ɛ] was larger in the older age-group. A qualitative analysis revealed that occasionally, /e/ was merged with [ɛ] or reversely, /ɛ/ was merged with /e/. For this reason, we were interested whether /e/ and /ɛ/ were merged to a higher degree in spontaneous speech. We also compared the results with results from a reading task.

Method

The recording comprises semi-structured interviews and several reading tasks of 17 male and female speakers of SAG from Vienna, split into two age-groups. Formants (F1, F2, F3) were extracted over time (LPC, 46 ms window-length, 95% overlap) and duration measurements were performed.

Results

Both in the reading task as well as in spontaneous speech, a significant difference occurred with respect to F1 and F2, both in spontaneous and in read speech. The difference was more pronounced in the older age group as compared to the younger speakers.

The qualitative analysis, however, proved a merger of extension, especially in spontaneous speech. A cluster analysis revealed that 17 % of all vowels were assigned to the opposite cluster, of these, 25 % of phonological /e/ were pronounced as [ɛ] and 8,6 % of phonological /ɛ/ were realized as [e].

References

Brandstätter, J., Moosmüller, S. (2015): Neutralisierung der hohen ungerundeten Vokale in der Wiener Standardsprache, in: Lenz, A., Glauninger, M. (eds.), *Standarddeutsch im 21. Jahrhundert* (Wiener Arbeiten zur Linguistik). Wien: Vandenhoeck & Ruprecht, 183–203.

Brandstätter, J., Kasess, C., Moosmüller, S. (2015): Quality and Quantity in high vowels in Standard Austrian German, in: Leeman, A., Kolly, M., Dellwo, V., Schmid, S. (eds.), *Trends in phonetics and phonology in German speaking Europe.* Frankfurt am Main: Lang, 79–92.

Brandstätter, J., Moosmüller, S. (2017): Die Distinktion von standardsprachlich /e/ und /ɛ/ im Lichte der mittelbairischen E-Verwirrung, in: Lenz, A., et al. (eds.), *Bayerisch-österreichische Varietäten zu Beginn des 21. Jahrhunderts – Dynamik, Struktur, Funktion* (Zeitschrift für Dialektologie und Linguistik). Stuttgart: Steiner, 167–180.

Harrington, Jonathan, Hoole, Philip, & Reubold, Ulrich. (2012). A physiological analysis of high front, tense-lax vowel pairs in Standard Austrian and Standard German. *Italian Journal of Linguistics*, 24, 158–183.

Kranzmayer, Eberhard. (1953). Lautwandlungen und Lautverschiebungen im gegenwärtigen Wienerischen. *Zeitschrift für Mundartforschung* 21, 197–239.

Kranzmayer, Eberhard. (1956). *Historische Lautgeographie des gesamtbairischen Dialektraumes*. Wien: Böhlau.

Moosmüller, Sylvia, Scheutz, Hannes. (2013). Chain shifts revisited: The case of Monophthongisation and E-confusion in the city dialects of Salzburg and Vienna. In: P. Auer, J.C. Reina & G. Kaufmann (eds.), *Language Variation – European Perspectives IV. Selected Papers from the Sixth International Conference on Language Variation in Europe (ICLaVE)*, Freiburg, 2011, 173–186.

Rowley, Anthony R. (1990). Das "Kollmersche Gesetz" - Die Entwirrung von ahd. und mhd. A und E in den Dialekten des Bayerischen Waldes. *Zeitschrift für Dialektologie und Linguistik* 57, 54–59.

Seidelmann, Erich. (1971). Lautwandel und Systemwandel in der Wiener Stadtmundart. Ein strukturgeschichtlicher Abriss. *Zeitschrift für Dialektologie und Linguistik* 38:145–166.

Wiesinger, Peter. (2009). Die Standardaussprache in Österreich. In E. M. Krech, E. Stock, U. Hirschfeld & L. C . Anders (eds.), *Deutsches Aussprachewörterbuch*. Berlin/New York: de Gruyter. 229–258.