Characteristics of the West-Central-Bavarian vowel system - a comparison between adults and children

The West-Central-Bavarian (WCB) dialect, which is spoken in the south of Germany and in most parts of Austria, has often been a subject of research, due to its large vowel system with an astonishing number of diphthongs, that do not exist in the corresponding Standard language at all. Although there is a large amount of literature concerned with descriptions of the dialect, nearly all of it is based on impressionistic auditory descriptions (Zehetner, 1985; Merkle, 1976; Capell, 1979; Mansell, 1973a; Keller, 1961; Mansell, 1973a). While in the last decades systematic acoustic analyses on the Austrian side of the Bavarian dialect have been increasingly elaborated (Moosmüller et al.), the German side still remains largely unexplored.

However, there is much evidence that Standard German (SG) is superimposed on German dialects, causing sound change in the respective dialects (e.g. Müller et al. (2001) for East-Franconian, Bukmaier & Harrington (2014) for Augsburg German).

The goal of the current study was 1) to systematically measure some of the defining vowel characteristics of WCB for an acoustically based analysis of the Bavarian vowel system and 2) to investigate whether these characteristics are being preserved across generations or if there is a sound change in progress observable, in which young speakers show more standard characteristics than old on some attributes of vowels where Bavarian and the Standard are known to differ.

The new concept for testing 2) is to combine synchronic and diachronic approaches in order to detect sound change. That is, we make use of both real-time longitudinal analyses of WCB primary school children as well as an apparent-time analysis, in which the data from the children recorded at the first time point of the longitudinal analysis is compared to those from WCB adults from the same region.

The addressed questions were A) if the typical Bavarian distinction of the open vowels /a/ vs. /ɒ/ (e.g. in “Kabel” /kabe/ vs. “Gabel” /gɒbe/) is less pronounced in children than in adults, B) if there is a quality difference between long and short vowels for children but (traditionally) not for adults, and C) if the typical Bavarian quantity correlation between vowel and following consonant (a long vowel is always followed by a short consonant and vice versa) is weakened for younger speakers.

The current study involves acoustic data from 18 young (average age 6.5) and 13 older (average age 60.6) WCB speakers. As for the children, the recordings were obtained in two primary schools around Altötting, 90km from Munich. The adults were accordingly recruited from the same area. The experiment was designed as a picture-naming task with 58 different, mostly trochaic target words (as pictures) appearing 4 times. Target sounds were vowels and diphthongs that are characteristic of WCB in stressed position and diverse phonetic contexts. For this research 34 different items per speaker containing the monophthongs /a/, /ɒ/, /i/, /u/, /o/, /e/ and /ɛ/ were analyzed.

Results so far show differences in productions between children and adults for A) the distinction between the open vowels /a, ɒ/, which is less marked for children than for adults. That is children´s /ɒ/ is significantly closer to their /a/ category than it is the case for adults ($p < .01$).

Further, B) children make greater use of quality in order to differentiate short vs. long vowels ($p < .001$). While adults show no or little quality difference between long and short vowels, which then are large caused by duration, children´s quality differences are far greater than would be expected from duration alone. That is, children seem to have started to phonologise the quality difference in the same way that there are quality differences in SG.

The typical Bavarian quantity correlation C) is weakened for children insofar as they make less use of consonant length in distinguishing short-long vowel pairs ($p > 0.05$ for children, $p < 0.001$ for adults), which again is according to SG where consonants are not differentiated by duration. Concerning

vowel length younger and older speakers show a similar pattern, namely phonological long vowels are significantly longer than phonological short vowels ($p < .0001$ for both groups) and hence vowel duration separates short-long vowel pairs to a similar extent in both age groups.

Thus, results so far could acoustically verify that children (as well as adults) clearly produce Bavarian vowels as described in literature but children are subtly conditioned by the Standard. The data of the longitudinal analysis of the children will then allow us to detect if these first tendencies of shifting towards SG in their dialectal productions will be strengthened, which would be a supporting indication of a sound change in WCB.

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