

Breaking the ice: apparent-time change in Frisian vowel breaking

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Frisian vowel breaking is an opaque synchronic process whereby the ingliding diphthongs [iə, yə, uə, eə, oə] alternate with the ‘broken’ vowels [ɪ, j, ø, wo, jɛ, wa] (Tiersma 1978ff). Cross-linguistically, synchronically opaque alternations tend to regularize diachronically (e.g. Sneller 2018), as has been explicitly predicted for Frisian vowel breaking (Arndt-Lappe & Ernestus 2020). Synchronically, such ongoing sound change presents as variation, and indeed, variation in Frisian vowel breaking has been observed anecdotally (e.g. Stefan 2022). However, phonetic measurements, including of change over time, are lacking; the most recent ones still date from 1985 (de Graaf).

We, hence, use the recently-completed Boarnsterhim corpus (Kingma et al submitted) to conduct a novel phonetic investigation of Frisian vowel breaking. The corpus contains 112 speakers from the Boarnsterhim municipality born between 1897 and 2001 recorded in 1980 and/or 2010. Both spontaneous and read speech are available. We present two analyses of this rich phonetic dataset. The first analysis used GAMs (Wood 2017) to model apparent-time changes in ingliding and breaking vowels’ F1–F2 trajectories, taking account of potentially-nonlinear formant dynamics (Voeten, Heeringa, & Van de Velde 2022). We discuss evidence of [ɪ] and [wa] merging with [i:, u:], and evidence suggesting a reconfiguration of breaking along the front–back dimension.

The second analysis, using read speech only, used mixed-effects logistic regression to determine if words have changed their participation in the breaking allomorphy. We discuss both general factors (specifically: vowel class, part of speech, morphological derivation, ambisyllabicity of the following consonant; these three predictors show significant effects, in addition to other predictors that were not significant) as well as individual differences among words (based on the by-word random effects; cf. Voeten 2021). We discuss which words appear to be changing particularly strongly, with particular attention to morphophonological predictors of that change (cf. Bergsma et al in progress).

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