

Acoustic properties and regional variation of Saterland Frisian vowels

Saterland Frisian is reported to have a complex vowel inventory with up to 21 monophthongs and 16 diphthongs (FORT 1980, 2001, KRAMER 1982). According to SIEBS (1889) and FORT (1980), Saterland Frisian exhibits three distinct regional varieties in the villages of Ramsloh, Scharrel, and Strücklingen, which may be closely linked to systematic dialectal differences in the expansion and exploitation of the vowel space. This study is the first systematic acoustic investigation of Saterland Frisian monophthongs and diphthongs, including their regional variation. Following previous studies (see BOHN 2004, CLOPPER ET AL 2005, ADANK ET AL 2007, MAYR & DAVIES 2011), each vowel category was embedded in a neutral /hVt/ frame for a read elicitation task. Acoustic measurements were taken throughout the vocalic portion and included vowel duration, the location in the F1 by F2 space at the temporal midpoint (for monophthongs), and the amount of vowel inherent spectral change (VISC, see NEAREY & ASSMANN 1986, ADANK ET AL 2004, FOX & JACEWICZ 2009, MORRISON & ASSMANN 2013). The results add to the documentation of an endangered minority language and to our understanding of the organization of contrastive vowel categories in languages with complex inventories.

References

- Adank, P.; Hout, R. v. & Smits, R. (2004). "An acoustic description of the vowels of northern and southern standard Dutch". *Journal of the Acoustical Society of America* 116, 1729-1738.
- Adank, P.; Hout, R. v. & Velde, H. v. d. (2007). "An acoustic description of the vowels of northern and southern standard Dutch II: Regional varieties". *Journal of the Acoustical Society of America* 121, 1130-1141.
- Bohn, O.-S. (2004). "How to organize a fairly large vowel inventory: The vowels of Fering (North Frisian)". *Journal of the International Phonetic Association* 34, 161-173.
- Clopper, C. G.; Pisoni, D. B. & de Jong, K. (2005). "Acoustic characteristics of the vowel systems of six regional varieties of American English". *Journal of the Acoustic Society of America* 118, 1661-76.
- Fort, M. C. (1980). *Saterfriesisches Wörterbuch mit einer grammatischen Übersicht*. Hamburg: Buske.
- Fort, M. C. (2001). "Das Saterfriesische". In: Horst Haider Munske (ed.), *Handbuch des Friesischen*. Tübingen: Niemeyer, 409-422.
- Fox, R. A. & Jacewicz, E. (2009). "Cross-dialectal variation in formant dynamics of American English vowels". *Journal of the Acoustical Society of America* 126, 2603-2618.
- Kramer, P. (1991). *Kute Seelter Sproakleere*. Rhaderfeh: Ostendorp.
- Mayr, R. & Davies, H. (2011). "A cross-dialectal acoustic study of the monophthongs and diphthongs of Welsh". *Journal of the International Phonetic Association* 41, 1-25.
- Morrison, G. S. & Assmann, P. F. (Eds.) (2013): *Vowel Inherent Spectral Change*. Berlin: Springer.
- Nearey, T. M. & Assmann, P. F. (1986). "Modeling the role of vowel inherent spectral change in vowel identification". *Journal of the Acoustical Society of America* 80, 1297-1308.
- Siebs, Th. (1889). *Zur Geschichte der englisch-friesischen Sprache*. Nachdr. Wiesbaden: Sändig, 1966.