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Cross-linguistic vowel variation in Saterland: Saterland Frisian, low German, and high German

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ABSTRACT

This study investigates the vowel space of trilingual speakers of Saterland Frisian, Low German, and High German. The three vowel systems show differences in the number of distinct categories but share the majority of vowel qualities. To examine whether the size of the vowel space correlates positively with the number of vowel categories and whether distinctive vowels are positioned in the vowel space so as to increase perceptual contrast (Liljencrants and Lindblom, 1972, Lindblom, 1986) speakers were instructed to read vowels of all three languages in a /hVt/ frame. Measurements of mid-vowel F1 and F2 of monophthongs neither revealed a positive correlation between the size of the vowel space and the inventory size nor cross-linguistic differences of dispersion, except for a higher dispersion of High German vowels in the F2 dimension. Single vowel categories of Saterland Frisian and Low German were merged with respect to formant frequencies and duration. High German showed longer vowel duration and higher F2 of the front vowels than Saterland Frisian and Low German and a lower F1 than Low German. These results suggest that the trilingual speakers use the same phonetic categories for Saterland Frisian and Low German but not for High German.



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