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**A multidimensional acoustic analysis of vowels in two Polish dialects**

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In this paper, we attempt to examine the acoustic (oral) vowel spaces of two main Polish dialects: the Polish spoken in Cracow and that spoken in the wider region of Warsaw. A semi-spontaneous corpus consisting of four speakers (two male, two female) of each dialect was recorded with approximately 2000 vowel occurrences for each speaker. The segmentation was performed manually and was subsequently corrected with an intensity-based algorithm. The tokens were submitted to acoustic analyses, and two multidimensional representations were then prepared, one based on formants (accompanied with bandwidths and amplitudes) and the other on critical bands. Both representations included measurements for duration, F0, spectral center of gravity, skewness, and kurtosis. These values served as input for discriminant and principal component analysis which allowed us: (a) to compare the relative weight of each cue, (b) to isolate those parameters that allow a differentiation of the members of a vowel system (in a language such as Polish, F1 and F2 are traditionally the sole cues regarded as relevant), and (c) to detect any (dis)similarities between the two dialects in the three aforementioned aspects.