

Acoustic investigation of the vowel systems of Buginese and Toba Batak

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We report here on an investigation of Buginese and Toba Batak vowels, considering formant structure, duration, F0, and intensity in stressed and unstressed syllables. Three native speakers of Buginese (N, I, Y) and one of Batak were recorded producing disyllables with penultimate stress. The vowel spaces for /u/ and /o/ greatly overlap in both languages and Buginese schwa is nearly as high as /i, u/. For two Buginese speakers and the Batak speaker, F0 correlates with stress, while duration and intensity distinguish stress for the remaining Buginese speaker. For speakers N and I, vowels in stressed position are shorter in duration (final unstressed vowels are longer due to final lengthening) and more centralized than those in unstressed position. This provides support for Lindblom's undershoot hypothesis (arguing that the shorter a given vowel, the more centralized it is) and argues against the schwa hypothesis (contending that vowel centralize in unstressed position).