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Breathy and whispery voicing in White Hmong

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Two phonatory strategies are acknowledged to involve a superposition of periodic vocal cord vibration with excessive airflow generating turbulent noise. Breathy voice has the vocal folds vibrating along their entire length, but incomplete closure allows a constant airflow. Whispery voice has the vocal folds vibrating modally along an anterior segment, while the arytenoids maintain a posterior hole which allows a constant airflow. In linguistic phonetics, these are standardly regarded as variant strategies of a single “breathy voice” specification, and have never been noted to coexist in one language in an important way. They do in White Hmong. One of the seven “tones” of White Hmong is breathy. Syllables bearing this tone display breathy voicing (of the first type) on the vowel. White Hmong also has a stop [d^h], which sounds like whispery voicing during the release phase. In this study, the breathy tone is shown to have a higher H1 amplitude relative to H2 (compared to modal voice), while the whispery voiced stop is even more extreme in this measure. Whispery voiced stops are also shown to display less harmonicity than the breathy tone, which in turn has less harmonicity than modal voicing in a similar syllable.