Some Acoustic Properties of Tones in Mao Naga

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Abstract

Mao (ISO 639-3, Ethnologue) is one of the Angami-Pochuri languages, a leaf among the agnostic Fallen Leaves model of the Trans-Himalayan languages (van Driem, 2011), spoken by Mao Naga tribe in Manipur. It is one of the North East Indian Languages where few linguistic works has been done to date. According to the 1997 census of India, the population of Mao Naga is about 81,000. The Mao Nagas dwell at the northern part of Senapati district of Manipur bordering Nagaland state. The Mao were once known as the Western Shiipfomei. They got their name from the word ‘Momei’, the name that the Maram (a neighbouring tribe) referred to them (Nepuni, 2010:10). Giridhar (1994) and Adaphro (2014) reported four tones in Mao; they both claim that all these four tones are registered/level (no contour at all). Similarly, Quake (2015) also describes as Mao having a complex tonal system with four contrastive tones: high, low, mid and rising. Furthermore, she claims that Mao has a rising toneme, and the falling tone is not a toneme. But, most of these studies were done by auditory analysis. This paper presents the acoustic properties of these four tones in Mao for both mono and disyllabic words from four native speakers. The minimal sets were recorded in three settings: Isolation, Carrier phrase and Natural speech (This includes narrations, and dyadic and triadic conversations). In comparison with Poula, a related language under Angami-puchuri, the acoustic structure of tones (mid and mid high) is similar (Veikho & Khyriem, 2015). The acoustic properties of tones in Mao show variations for all the three types in which the data were collected. The results indicate that the mid and the low tones are merging to as one tone. If the prosody of this language can also be accounted, the tone structure of Mao can be better understood. Closer observations with more data for the mid and mid-high tone are required. In addition, a perception test is necessary to know if these four tones are clearly distinct by the native speakers, particularly the two middle tones.
Figure 1. Average F0 of speaker FEM for natural and conversation data

Figure 2. Average F0 of speaker FEM for carrier phrase data

Figure 3. Average F0 of speaker FEM for carrier phrase data
Figure 4. Tone structure of Poula or Poumai Naga language (Veikho & Khyriem, 2015)

Key Words: Mao Naga, Tones, Fundamental Frequency, Trans-Himalayan

References

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