

## The Prosodic Structure of Pazeh

This paper presents novel data on the prosody and intonation of Pazeh, an Austronesian language of Taiwan declared extinct in 2010. The discovery of an additional speaker has allowed for continued documentation of the language. Here, I present an Autosegmental-Metrical analysis of Pazeh, with relevant discussion of the phonetics of word-level prosody.

**Pazeh.** Pazeh's high position in Austronesian phylogeny (perhaps even a first-order branch; [1]) means that Pazeh data is of increased importance in historical work in Austronesian. It was thought that the last speaker of Pazeh was Pan Jin-yu, informant for work by Robert Blust, Paul Li and Shigeru Tsuchida. Pan Jin-yu's death in 2010 was presumed to be the death of the language [2]. However, with the discovery of a remaining speaker Pan Meiyu, continued work on Pazeh is possible.

**Speaker.** Pan Meiyu's speech has some features that do not match previous descriptions of the language, for example a merger of the liquid phonemes with /d/ (except coda /r/), and a lack of coda fricatives. I have argued in previous work that these features are not specific to Pan Meiyu (as they match features of the speech of Pan Yongli, an unrelated speaker of the Kaxabu dialect who maintains separate dialect features), and that some features of her speech reflect conservative features in the language that can be incorporated into existing descriptions of Pazeh (for example, preglottalized voiced stops that are likely from contact within Formosan in the last few hundred years).

One area of the data where yet-undescribed features are likely to be conservative is the prosodic system. Previous descriptions mention only final stress, and penultimate lengthening [3,4].

**Prosodic phrases.** The prosodic phrase may include one or more content words (dependent on speech rate). Certain particles tend to precede IP boundaries (like locative particle *di* and topic marker *ka*), while others tend to follow IP boundaries (like the ligature *a* and the case marker *ki*). This does not always align with syntactic constituent boundaries, as in (1):

(1)	[ <sub>AP</sub> kuang [ <sub>PP</sub> di	[ <sub>DP</sub> dalum ]]]	Syntactic structure
	[ <sub>IP</sub> kuang           dí    ]	[ <sub>IP</sub> dalúm ]	Prosodic structure

**Prominence.** Stress always falls on the last syllable of the IP (as shown in (1) with an acute accent). Stressed syllables receive an aligned tone, and have a higher intensity maximum than unstressed syllables. IP's may have a non-final stress in addition to final stress. These fall on syllables containing long vowels, or the sequences /ai/ /au/, for example *aitana* [ái.ta.ná] 'give'. Notably, stress is not attracted to syllables with sonorant codas, or with the sequences /ia/ /ua/, for example *siatu* 'clothing' is [ɛja.tú], not \*[ɛjá.tú]. On this basis, I analyze these sequences as [ja] [wa]; non-final stress is thus assigned to all VV sequences. This is counter to the analysis in [4], in which glides are only found postvocally.<sup>1</sup>

Non-final stress has the same phonetic properties as final stress, with higher intensity and tonal alignment. There is no evidence of non-final stress being 'secondary', as its acoustic cues are of the same magnitude as those of IP-final stresses. Non-final stress may occur in any part of the IP, which can lead to stresses on adjacent syllables, ex. *kiaaren* [kjáa.rón] 'beautiful'. A third stress within the IP is not permitted: *aisiiai* 'resemble' only has stress on the final two syllables.

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<sup>1</sup> This is not a disagreement with Blust's analysis of Pan Jin-yu's synchrony in [4], only an explanation that his analysis does not fit with Pan Meiyu's synchrony.

**Boundary tones and tonal alignment.** Pazeh has one boundary tone, the %L that is assigned to the first syllable of the IP, unless that syllable bears stress. An \*HL tone is assigned to all stressed syllables. If \*HL is assigned to a syllable preceding an unstressed syllable within the IP, the L of \*HL is reassigned to that syllable. The L of final \*HL is deleted if the syllable has an obstruent coda. These processes can be seen in examples (2–4).

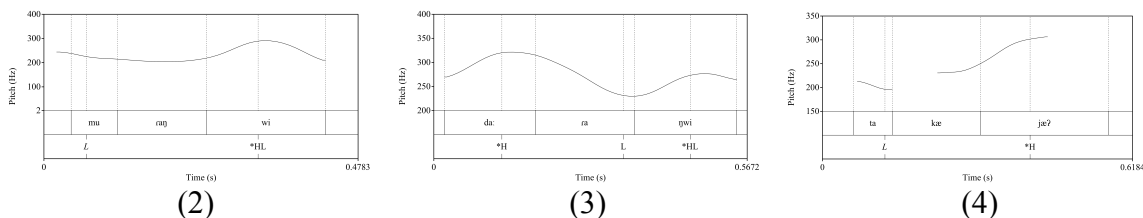
**Typology.** Some aspects of this prosodic system are uncommon cross-linguistically, including multiple (non-secondary) stresses within the IP, stress allowed on two adjacent syllables, and stress attracted to VV but not V+sonorant sequences.

These are uncommon in Formosan languages, but common in Philippine languages. For example, Balangao can have multiple stresses within the IP [5]. Stress-to-Weight systems are common enough in Philippine languages that they have been proposed as a feature of Proto-Philippines [6]. As Philippine languages represent one or more primary branches of Malayo-Polynesian, their similarity in prosodic structure to Pazeh may be indicative of this structure reflecting conservative features of Austronesian.

**Conclusion.** The discovery of a new speaker of Pazeh has allowed continued documentation of a language thought to be extinct. This speaker has provided data that shed new light on the prosodic system of the language. This system is unique within Formosan, but its similarity to prosodic systems in Philippine languages allows for new investigation into how these systems developed in Austronesian. Additionally, this data highlights the contributions of late-stage speakers to general efforts in language documentation.

- (2) %L \*HL → %L \*HL  
 [IP mu.ra.ŋwí ] → [IP mu.ra.ŋwí ]  
 UR: /mu-daŋui/ ‘AF-swim’
- (3) %L \*HL \*HL → \*H L \*HL  
 [IP ʔdaa.ra.ŋwí ] → [IP ʔdaa.ra.ŋwí ]  
 UR: /daa~daŋui/ ‘keep swimming’
- (4) %L \*HL → %L \*H  
 [IP ta.ka.já? ] → [IP ta.ka.já? ]  
 UR: /takaia?/ ‘frog’

#### Pitch tracks for (2–4):



**References.** [1] Sagart, Laurent. 2004. The higher phylogeny of Austronesian and the position of Tai-Kadai. *OL* 43(2):411–44. [2] Li, Paul Jen-kuei. 2010. 下一個消失的語言是？ [And the next extinct language is...?] <http://city.udn.com/62960/4247360>. Xishi: United Daily News 聯合報. [3] Ferrell, Raleigh. 1970. The Pazeh-Kahabu language. *Bulletin of the Department of Archaeology and Anthropology* 31–32:73–97. [4] Blust, Robert. 1999. Notes on Pazeh phonology and morphology. *OL* 38(2):321–365. [5] Shetler, Jo, and Anne Fetzer. 1964. The obscuring of word accent in Balangao. *OL* 3(1):101–9. [6] Zorc, R. David. 1979. On the development of contrastive word accent: Pangasinan, a case in point. *South-East Asian Linguistic Studies* 3:241–58.