

## Phonemic initial glottal stops: The emergence and spread of an areal sound pattern in the Lesser Sundas

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This talk will deal with the emergence and spread of an areal sound pattern in six Austronesian languages (Ende, Kéo, Ngadha, Palu'e, Kedang, Sika) spoken on the islands of Flores, Palu'e and Lembata (eastern Indonesia). In these six languages, glottal stops are contrastive in word-initial position. Words which lack a phonemic initial glottal stop are produced with a predictable breathy onset or "breathy attack". The surrounding languages neutralize the distinction between initial glottal stop and its absence by systematically inserting glottal stops before vowel-initial words ("glottal attack"). While these six languages are all Central Malayo-Polynesian, they belong to two subgroups (Central Flores and Flores-Lembata), and not all members of these two subgroups show the sound pattern. Contrastive initial glottal stops (and the accompanying default breathy attack) must have arisen in some subset of daughter languages after these two subgroups had begun to differentiate, and then spread areally. Moreover, the actual etyma which have an initial glottal stop show a striking mirror image pattern: in two languages (Ende, Kéo) all Proto-Malayo-Polynesian (PMP) vowel-initial etyma are reflected with an initial glottal stop, while in the other four languages (Ngadha, Palu'e, Sika, Kedang), all PMP vowel-initial etyma are reflected with no glottal stop and a breathy onset.

I propose that the trigger for the emergence of this sound pattern was a series of phonetically motivated sound changes affecting Ende and Kéo (Central Flores) which turned Proto-Central Flores *\*kl-* clusters into [h-]. Ende and Kéo were once glottal attack languages, precluding the possibility of contrastive glottal stop in initial position. Once the *\*kl-* clusters developed into [h-], this initial period of breathiness was reanalyzed not as a new fricative consonant, but as the predictable breathy onset of a newly vowel-initial word. This had the effect of promoting the predictable glottal stops inserted before earlier vowel-initial words to full phonemes, although it had no effect on their phonetic realization.

*Table 1: PCF \*kl- > h- followed by reanalysis in Ende/Kéo. Ngadha adopted the same pattern, but for its own vowel-initial words*

	Stage 1: PCF	Stage 2: Pre-Ende/Kéo	Stage 3: Modern Ende/Kéo	Compare: Ngadha
Phonemic	<i>*/kliŋa/</i>	<i>*/hiŋa/</i>	/iŋa/ 'ear'	/xiŋa/ 'ear'
Phonetic	<i>*[k<sup>h</sup>iŋa]</i>	<i>*[hiŋa]</i>	[hiŋa]	[xiŋa]
Phonemic	<i>*/ana/</i>	<i>*/ana/</i>	/ʔana/ 'child'	/ana/ 'child'
Phonetic	<i>*[ʔana]</i>	<i>*[ʔana]</i>	[ʔana]	[hana]

This new sound pattern was relatively salient, because breathiness is rare in the area and the nearby languages were uniformly glottal attack languages. Speakers of Ngadha, Palu'e, Sika and Kedang were introduced to the Ende/Kéo sound pattern (most likely via contact with Ende, not Kéo, for social reasons) and adopted it themselves. They did not add breathiness to the same words that Ende and Kéo did; instead, they added it to their own vowel-initial words, switching from glottal attack to breathy attack languages and coming into line with the Ende and Kéo sound pattern. This explains how PMP vowel-initial words ended up with an initial glottal stop in Ende and Kéo, but with initial breathiness in Ngadha, Palu'e, Sika and Kedang.