

## Reconstructing Proto-Northern-Jê coronal obstruents: Evidence for a pull-chain in Suyá

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We propose a new reconstruction of the coronal obstruents in Northern Jê (NJ), a branch of the Jê language family spoken in the Brazilian Amazon. Our analysis centers on a pull-chain shift in the Suyá subgroup (Kajkwakhrattxi and Khísêtjê), whereby Proto-Northern Jê (PNJ) \*t split conditionally—becoming [t̪] before [i] and [t̪ʰ] before all other vowels (Step 1, Figure 1). While the shift from \*t > t̪ exemplifies classic palatalization before high front vowels, the change from \*t > t̪ʰ has not been previously explained. This shift created a gap in the consonant inventory, which was later filled by the reassignment of PNJ \*t̪ to \*t (Step 2, Figure 1).

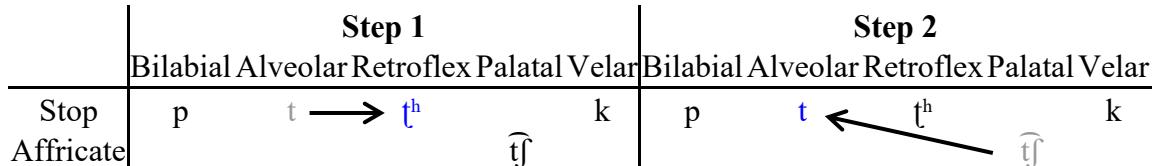


Figure 1. Proposed pull-chain: t > t̪, followed by t̪̪ > t.

The pull-chain account explains the anomalous patterning of coronal obstruents in Suyá relative to the other NJ languages, as in Table 1. In Pattern 2, for instance, the Suyá languages exhibit a retroflex [t̪ʰ], while other languages show an alveolar or dental [t]. In Patterns 3 and 4, where Kajkwakhrattxi and occasionally Khísêtjê retain [t], other languages show a variety of segments—fricatives, affricates, palatals, and velars—reflecting later innovations.

	Pattern 1: 'tapir'	Pattern 2: 'fish'	Pattern 3: 'mouth'	Pattern 4: 'deer'
Kayapô	[ku'krut]	[t̪ep]	[haj'kwa]	[piã'dʒw]
Panâra	[ik'kjw̪i:ti]	[t̪e:pi]	[sa'kwa]	[nã'sw]
Apinayé	[kukrit]	[t̪ep ~ t̪b]	[akwa]	[piatʃi]
Apâniekrá	[kokrit]	[t̪ep]	[arkwa]	—
Kajkwakhrattxi	[ku'kL̪i:ri]	[t̪εŋε]	[taj'kwa]	[piŋati'si]
Khísêtjê	[kʰukʰrit]	[t̪ʰeŋε]	[aj'kwa]	[piŋã'ti]
PNJ	*kukrit	*tep	*t̪arkwa	*piŋatʃi

Table 1. Patterns of coronal consonant reflexes across Northern Jê languages.

Three major works have proposed reconstructions of PNJ that touch on the asymmetry of coronal obstruents: Davis (1966), Nikulin (2016, 2020), and Huff & Lapierre (2021). Davis (1966) reconstructs \*t for Pattern 2, noting its occasional realization as [t̪ʰ] in Kajkwakhrattxi. Nikulin and Huff & Lapierre identify a regular correspondence between Kajkwakhrattxi [t̪ʰ] and [t] elsewhere in Northern Jê, proposing a shift from PNJ \*t to [t̪ʰ]. However, they do not discuss the conditioning environment for this change. Here, we propose that the change from \*t to [t̪ʰ] was triggered by following back rounded vowels, which are known to have an F3 lowering effect resembling that of retroflexes (Atta et al. 2022; Mielke 2015).

Support for this analysis comes from attestation of this pattern in several Yue dialects spoken in southwestern China, as well as Gan dialects in areas near the mouth of the Yangtze River. In these cases, the affricates /t̪s, t̪/ are documented to become alveolar stops, while stops like /t/ and /t̪/ weaken to Ø and /h/, forming a parallel chain shift: ts, ts̪ → t, t̪ → Ø, h (Zeng 2013, Qiu 1991).

The proposed pull-chain account of PNJ coronal obstruents offers several advantages. First, it accounts for Kajkwakhrattxi [t̪ʰ], which contrasts with [t] in all other Northern Jê languages. Second, it allows for reconstructing PNJ \*t̪ for cases where Kajkwakhrattxi shows [t], without requiring an appeal to *strengthening*—a typologically marked sound change.