

FLOATING LOW TONE AND CONSONANT VOICING IN AKEBU

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Abstract: The paper deals with floating low tone and consonant voicing in Akebu, historically induced by the nasal velar η . The phenomena manifest in combination as nominal and agreement markers in a number of noun classes, as well as in independent pronouns. I argue against the analysis of paired voiced consonants as positional variants of their voiceless counterparts after the floating low tone found in the previous literature. This study proposes that floating low tone is considered only as a special case of the low tone and does not differ from the low tone on overt markers in any respect. Accordingly, paired voiced consonants are viewed as independent phonemes, while keeping in mind that they have acquired their phonemic status recently.

Key words: Kwa, Akebu, tone spreading, floating tone, consonant voicing

1. Introduction

Akebu (Kebu; ISO 639-3 keu) is a Kwa language of the Kebu-Animere group spoken in the prefecture of Akebu in Togo (West Africa) by ca. 70 000 people (Gblem-Poidi & Kantchoa 2012; Eberhard et al. 2019). The present study is based on the data collected during two field trips in 2012 and 2019 to the village of Djon in the prefecture of Akebu.

The paper deals with one of the most prominent features of Akebu morphonology: the interaction of floating low tone with consonant voicing. This topic was briefly discussed in (Makeeva 2013; 2016); it also became the subject of special consideration in (Sossoukpe 2017). The same tonal and consonant changes are described via morpho-phonological rules in (Makeeva 2013; 2016) and the floating low tone,

which affects consonant voicing in (Sossoukpe 2017). Both studies consider the tonal phenomenon in question in isolation from the system of tonal rules; they also do not fully take into account the distribution of voiced consonants. This study presents a new analysis of the floating low tone and its interaction with consonant alternation.

Voiced consonants in the context of the Akebu consonant system are described in §2. §3 provides basic information about the tonal system of the language and describes the low tone spreading rule. In §4, I describe the conditions for the appearance of the floating low tone, on the one hand, and consonant voicing, on the other. §5 presents the conclusion.

2. Voiced consonants

2.1. Consonant system of Akebu

The consonant system of Akebu based on my field data is presented in Table 1.

Table 1

Consonant system of Akebu

	labial	dento-alveolar	retroflex	palatal	velar	labiovelar	glottal
plosive	p b	t d	ʈ ɖ	c ɟ	k g	kp gb	h
nasal	m	n		ɲ	ŋ		
fricative	f v	s z					
approximant		l		y		w	

Some voiceless consonant phonemes have voiced allophones:

1. /p/ is voiced in intervocalic position manifesting as a voiced bilabial fricative [β]: *pāānùḃ* [pāānùḃə] ‘little brother’, but *àpāānùḃ* [àβāānùḃə] ‘little brothers’;

2. /t/ is voiced in intervocalic position and after bilabial stops occurring as [r]: /əṛīkə/ [əṛīkə] ‘nature’, /pṛɔ́yà/ [pṛɔ́yà] ‘cat’; in word-initial position [r] is in free variation with [t]: /túú/ [túú] ~ [rúú] ‘to sow’.

Paired voiced stops and fricatives have a highly restricted distribution. They only appear in the root-initial position of the following units:

- nouns belonging to the ɾ, κ, κP, ɗ, P noun classes;
- verbal forms and the numeral ‘one’ agreeing with the ɾ class subject or head of the noun phrase respectively;
- independent pronouns.¹

The only context where voiced stops and fricatives occur in word-internal intervocalic position is nouns of the P class. In other cases root-initial position and word-initial position coincide. In independent pronouns voiced consonants can optionally appear after the velar nasal.

2.2. Distribution of paired voiced consonants

Before proceeding to a more detailed description of the contexts for the appearance of paired voiced consonants in Akebu, I briefly present the system of noun classes and noun class agreement. Table 2 represents the system of noun class marking in Akebu. There are seven noun classes in Akebu, which are distinguished based on agreement paradigms and are labeled by the initial consonants of the independent pronouns. In nominal forms classes are marked by both prefixal and suffixal markers. The κ and κP classes include several subclasses that only differ in prefixal noun class markers. Agreement markers, which are always prefixal, appear in verbal and numeral forms. Verbs agree in noun class with the subject noun phrase, and numerals agree with the head noun they modify. The numeral ‘one’ and numerals from ‘two’

¹The distribution of the retroflex voiced *d̪* is less restricted and includes a number of additional contexts which will be described below in §2.2.

to ‘nine’ agree differently, but since numerals starting from ‘two’ are out of the scope of this study, their agreement markers are not given in Table 2. See Makeeva & Shluinsky (2018; 2020) for details, but note that in this paper a different analysis is proposed.

Table 2

Noun class marking in Akebu

class	prefix	suffix	verbal markers	markers for numeral ‘one’	independent pronouns
D	∅-	-yð	∅-	∅-	ɲɲù / ɲù
P	ṽ- ²	-pð	pɪ-	∅-	ɲpɪ̄ ~ ɲbɪ̄ / bɪ̄
ɿ	ð- (voicing)	-tð	ð- (voicing)	ð- (voicing)	ɲtɪ̄ ~ ɲdɪ̄ / dɪ̄
W	∅-	-wð	wɪ-	∅-	ɲwū / wū
Y	ṽ-	-yð	yɪ-	∅-	ɲyɪ̄ / yɪ̄
K	ð- (voicing)	-kð	kɪ-	kɪ-	ɲkɪ̄ ~ ɲgɪ̄ / gɪ̄
	ṽ-				
	kɪ				
KP	wɪ-	-kpð	wɪ-	wɪ-	ɲkpɪ̄ ~ ɲgbɪ̄ / gbɪ̄
	ð- (voicing)				

The plural is formed by class conversion with the following numeral correlations attested: D – P, ɿ – Y, W – Y, KP – Y, ɿ – Y, K – Y, K – KP, Y – Y.

First, paired voiced consonants appear in the word-initial position of nouns belonging to the following three classes: ɿ, K and KP. In plural forms of these nouns, the paired voiced consonants alternate with their voiceless counterparts (1)–(2).

- (1) a. *ɲɪ-tð* b. *è-cɪ-yð*
 ɿ.day-ɿ Y-day-Y
 ‘day’ ‘days’

² V stands for an underspecified vowel subject to a vowel harmony.

- (2) a. *gà-kà* b. *wì-kà-kpà*
 K.meat-K KP-meat-KP
 ‘meat’ ‘meats’

Paired voiced consonants are also attested in a number of nouns belonging to the singular *ɒ* class. In contrast with the previous case the plural forms lack consonant alternation, so that the *ɓ* class provides the only context where paired voiced consonants occur in intervocalic position. Most of these nouns are loanwords.

- (3) a. *Ø-gòmɔ-yà* b. *à-gòmɔ-pà*
ɒ-trap-*ɒ* *ɓ*-trap-*ɓ*
 ‘trap’ ‘traps’
- (4) a. *Ø-jà̀h̀tá-yà* b. *à-jà̀h̀tá-pà*
ɒ-lion-*ɒ* *ɓ*-lion-*ɓ*
 ‘lion’ (< Ewe) ‘lions’

In the verbal system voicing of the stem-initial consonant functions as an agreement marker for the *ɕ* class (5). The same alternation is attested in the numeral *cēŋcēŋ* ‘one’ when agreeing with the nouns of the *ɕ* class (6).³

- (5) *ŋnā-pí* *dū-tà* *sā* *vù̀h̀*
 1SG.PFV-ask *ɕ*.stone-*ɕ* this *ɕ*.throw
 ‘I want this stone to be thrown’. (*fù̀h̀* ‘to throw’)
- (6) *náŋ-tà* *ŋēŋcēŋ*
ɕ.loincloth-*ɕ* *ɕ*.one
 ‘one loincloth’ (*cēŋcēŋ* ‘one’)

In the pronominal system, paired voiced consonants are attested in the forms of the independent series. First, voiced consonants may appear

³ The *κ* and *κɓ* classes have segmental agreement markers in verbal and numeral word-forms *kì-* and *wì-* respectively.

as a result of voicing after the velar nasal: $\eta\bar{t}\bar{i} \sim \eta\bar{d}\bar{i}$, $\eta\bar{k}\bar{i} \sim \eta\bar{g}\bar{i}$, $\eta\bar{k}p\bar{i} \sim \eta\bar{g}b\bar{i}$. Second, independent pronouns of each of the classes have optional variants that lack the initial velar nasal, but retain voicing of the initial consonant (cf. Table 2).

The retroflex voiced d seems to have a less restricted distribution than other paired voiced consonants. First, it appears in the allomorph $-d\bar{\Delta}$ of the suffixal class marker $-t\bar{\Delta}$. This allomorph is attested after the velar nasal, η : $b\bar{i}\eta-t\bar{\Delta}$ [$b\bar{i}\eta d\bar{\Delta}$] ‘drum’, but $\bar{\Delta}p\bar{\Delta}\eta-p\bar{\Delta}$ [$\bar{\Delta}\beta\bar{\Delta}m\bar{\Delta}$]. It also appears as a result of haplology and consonant alternation in nouns ending in V_1tV_2 where V_2 is a high vowel and V_1 is a vowel identical to V_2 or a mid vowel that differs from V_2 only by height: $V_1tV_2-t\bar{\Delta} \rightarrow V_1d\bar{\Delta}$, see (7a) and (8a) compared with (7b) and (8b).

- | | | | | |
|--------|---|--|----|--|
| (7) a. | $gb\bar{e}d\bar{\Delta}$ | (← $gb\bar{e}t\bar{i}-t\bar{\Delta}$) | b. | $\bar{e}-kp\bar{e}t\bar{i}-y\bar{\Delta}$ |
| | $\bar{\Delta}$.cassava. $\bar{\Delta}$ | | | Y-cassava-Y |
| | ‘cassava’ | | | ‘cassavas’ |
| | | | | |
| (8) a. | $v\bar{\Delta}d\bar{\Delta}$ | (← $v\bar{\Delta}t\bar{u}-t\bar{\Delta}$) | b. | $\bar{\Delta}-f\bar{\Delta}t\bar{u}-y\bar{\Delta}$ |
| | $\bar{\Delta}$.life. $\bar{\Delta}$ | | | Y-life-Y |
| | ‘life’ | | | ‘lives’ |

In addition, d seems to be the only paired voiced consonant that occurs in root-internal position, though only in loanwords: $k\bar{\Delta}\bar{\Delta}d\bar{u}-y\bar{\Delta}$ ‘banana’ (< Ewe), $f\bar{i}d\bar{\Delta}\bar{\Delta}-y\bar{\Delta}$ ‘Friday’ (< Ewe).

3. Low tone spreading rule

3.1. Tonal system of Akebu

Akebu has three level tones: Low (L, $\bar{\Delta}$), Mid (M, $\bar{\Delta}$), High (H, $\acute{\Delta}$). The tone bearing unit (TBU) in Akebu is a syllable. There are the following types of syllables in Akebu: V, η , CV, C_1C_2V . An adequate description of the Akebu phonological system is impossible without using the concept of foot — a phonological unit which consists of one

or more syllables and has an increased degree of internal coherence⁴. In addition to monosyllabic feet, there are also disyllabic (VV, $\eta\eta$, CVV, CV₁V₂, C₁C₂VV, CV η , C₁C₂V η , C₁VC₂V) and trisyllabic (CV₁V₂V₃, C₁VC₂V η) feet in Akebu. Syllabic nasal η can bear a tone different from the tones of adjacent syllables.

Contour tones are produced by sequences of level tones realised on a single TBU. They appear as a result of contextual changes of lexical tones via application of tonal rules. Contour tones attested on a single TBU, their notation and correlates realised on two TBUs are presented below:

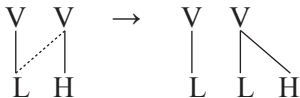
HL	\hat{a}	$\acute{a}\grave{a}$
HM	\acute{a}	$\acute{a}\bar{a}$
ML	\grave{a}	$\bar{a}\grave{a}$
LH	\check{a}	$\grave{a}\acute{a}$

There is a number of tonal rules in Akebu, applied across morpheme boundaries and mostly rightwards. This study is focused on one of these rules: the spreading of the L tone to the right.

3.2. Low tone spreading

It is convenient to represent the L spreading rule (9) in terms of autosegmental phonology (Leben 1973; Goldsmith 1976) with hyphens denoting morpheme boundaries and dashed lines denoting new association lines derived by the rule.

(9) L-H → L-LH



⁴ An increased degree of foot integration is provided by restrictions on the compatibility of vowels, consonants and tones within it. About integration features of the Akebu phonological foot see (Makeeva 2016).

- (10) a. Ø-*náá-wà* b. *à-náá-yà* → *à-nǎá-yâ*
 w-fire-w ʏ-fire-ʏ
 ‘fire’ ‘fires’

Rule (9) takes into account the laryngeal features of the consonants intervening between L and H tones: voiceless obstruents and fricatives, as non-depressors, block the spreading of the L tone rightwards (11b)⁵. It is worth mentioning that voiceless phonemes that are realised as voiced in intervocalic position (/t/ [r], /p/ [β]) do not block the spreading rule, see (12b) and (13b):

- (11) a. Ø-*cíí-wà* b. *è-cíí-yà*
 w-board-w ʏ-board-ʏ
 ‘board’ ‘boards’
- (12) a. Ø-*píí-yà* b. *è-píí-pà* → *è-[β]ǎí-pâ*
 n-child-n p-child-p
 ‘child’ ‘children’
- (13) a. *téé* b. *à-téé-kà* → *à-[r]ǎé-kâ*
 climb κ-climbing-κ
 ‘to climb’ ‘climbing’

The question remains whether this rule is automatic or not.⁶ Below are the contexts in which this rule applies in my data.

- (a) L tone of the prefixal noun class marker spreads onto the first syllable of the noun root (10b), (12b), (13b).

⁵ This non-depressor effect of voiceless consonants is parallel to the depressor consonant effect, in which voiced consonants block H spreading (Poser 1981: 483; Yip 2000: 34). The latter case is more widespread than the one attested in Akebu. Nevertheless, similar processes have been described for other languages, such as Nupe (< Nupoid < Benue-Congo) (George 1970).

⁶ The available data did not allow me to understand whether this rule applies in every phonologically similar context. This issue requires further research.

(b) L tone of the prefixal agreement noun class marker spreads onto the first syllable of the verb root (14)–(15).

(14) \emptyset -jàntá-yə s̄ā \emptyset -náání.
 D-lion-D this D-be.big_{FCT}
 ‘This lion is big.’

(15) \emptyset -kèṅtɛ-wə s̄ā wì-náání → wì-nǎání
 W-basket-W this W-be.big_{FCT}
 ‘This basket is big.’

(c) L tone of the prefixal agreement noun class marker spreads onto the first syllable of the habitual marker (16)–(18).

(16) \emptyset -yā \emptyset -lǎǎ-tí wì-tù-kpə
 D-PROG D-HAB-pound KP-maize-KP
 ‘She is pounding maize.’

(17) \emptyset -cíf-wə wì-yā wì-láá-tə → wì-lǎá-tə
 W-tree-W W-PROG W-HAB-fall
 ‘The tree is falling.’

(18) ə-tí-kə kì-yā kì-lóó-fùṅ → kì-lóó-fùṅ
 K-wind-K K-PROG K-HAB-blow
 ‘The wind is blowing.’

4. Floating low tone and consonant voicing

4.1. Initial rise and consonant voicing

In addition to voiced initial consonants, nouns of the τ , κ and kp classes exhibit special tonal behavior. The tone of the first syllable is L, M or rising LH; H tone never occurs on the first syllable in these nouns. Nouns with initial voiced sonorants and LH tone on the first syllable do not undergo any changes in their plural forms (19a–b). Meanwhile, the nouns with initial paired voiced consonants and LH tone on the first syllable undergo a tonal change LH → H as well as consonant alternation in their plural (20)–(22).

- | | | | |
|---------|--|----|--|
| (19) a. | <i>ŋǎ́-ṭâ</i>
ṭ.cloud-ṭ
'cloud' | b. | <i>à-ŋǎ́-yâ</i>
Y-cloud-Y
'clouds' |
| (20) a. | <i>zǎ́-ṭâ</i>
ṭ.chair-ṭ
'chair' | b. | <i>à-sǎ́-yâ</i>
Y-chair-Y
'chairs' |
| (21) a. | <i>gǔ́ú-kâ</i>
K.spoon-K
'spoon' | b. | <i>wì-kúú-kpâ</i>
KP-spoon-KP
'spoons' |
| (22) a. | <i>gú-kpâ</i>
KP.room-KP
'room' | b. | <i>ò-kú-yâ</i>
Y-room-Y
'rooms' |

The tonal behavior of these nouns suggests that the prefixal noun class marker of the Ṭ, K and KP classes is not null as noun class prefixes of the Ɔ and W classes. It is represented by a combination of voicing of the initial consonant and a floating low tone spreading rightwards across voiced depressor consonants as predicted by rule (9), see examples from (19a') to (22a').

- | | | | | | | | |
|----------|----------------|---|---------------|----------|----------------|---|---------------|
| (19) a'. | <i>̀ŋǎ́-ṭâ</i> | → | <i>ŋǎ́-ṭâ</i> | (20) a'. | <i>̀zǎ́-tâ</i> | → | <i>zǎ́-ṭâ</i> |
| | ṭ.cloud-ṭ | | | | ṭ.chair-ṭ | | |
| | 'cloud' | | | | 'chair' | | |
| (21) a'. | <i>̀gúú-kâ</i> | → | <i>gúú-kâ</i> | (22) a'. | <i>̀gú-kpâ</i> | → | <i>gǔ-kpâ</i> |
| | K.spoon-K | | | | KP.room-KP | | |
| | 'spoon' | | | | 'room' | | |

In plural forms of the nouns with initial paired voiced consonants spreading of the non-floating L tone of the prefix is blocked by non-depressors, compare (19b') vs. (20b').

- | | | | | | | | |
|----------|-----------------|---|-----------------|----------|-----------------|---|------------------|
| (19) b'. | <i>à-ŋǎ́-yâ</i> | → | <i>à-ŋǎ́-yâ</i> | (20) b'. | <i>à-sǎ́-yâ</i> | → | <i>*à-sǎ́-yâ</i> |
| | Y-cloud-Y | | | | Y-chair-Y | | |
| | 'clouds' | | | | 'chairs' | | |

The ungrammaticality of examples such as (20b') speaks in favor of adopting a rule-based approach with ordered rules, where consonant voicing strongly precedes the L spreading rule.

Initial rise LH also appears in verbal forms when agreeing with the nouns of the τ class (23)–(26); if the initial consonant of the verb is voiceless, it undergoes voicing (24)–(25). Thus, voicing of initial consonant and floating L tone should be postulated as an agreement marker of the τ class in verbal and numeral forms as well.

(23) $\text{̀v}ó\text{-t}\hat{a}$ $s\bar{a}$ $\text{̀n}á\text{á}\text{ní}$
 τ .calabash- τ this τ .be.big_{FCT}

→ $\text{v}ó\text{-t}\hat{a}$ $s\bar{a}$ $\text{̀n}á\text{á}\text{ní}$
 ‘This calabash is big.’

(24) $\text{̀}n\bar{n}\text{-p}\acute{e}$ $\text{̀g}ú\text{p}\acute{í}\text{-t}\hat{a}$ $\text{̀j}\acute{e}$ $\emptyset\text{-n}\grave{i}\text{m}\bar{u}\text{-y}\hat{a}$ lá $\emptyset\text{-k}\acute{u}\acute{h}\text{-w}\hat{a}$
 1SG.PFV-ask τ .orphan- τ τ .concede D-old.man-D POSS W-way-W

→ $\text{̀}n\bar{n}\text{-p}\acute{e}$ $\text{̀g}ú\text{p}\acute{í}\text{-t}\hat{a}$ $\text{̀j}\acute{e}$ $\emptyset\text{-n}\grave{i}\text{m}\bar{u}\text{-y}\hat{a}$ lá $\emptyset\text{-k}\acute{u}\acute{h}\text{-w}\hat{a}$
 ‘I want this orphan to make way for the old man.’ (cĕ ‘to concede’)

(25) $\grave{a}\text{-s}\bar{a}\bar{a}\text{-k}\grave{a}$ $m\acute{í}$ $\text{̀n}á\acute{n}\text{-t}\hat{a}$ $\text{̀j}\acute{í}$
 K-yesterday-K 1SG.POSS τ .loincloth- τ τ .be.dirty_{FCT}

→ $\grave{a}\text{-s}\bar{a}\bar{a}\text{-k}\grave{a}$ $m\acute{í}$ $\text{̀n}á\acute{n}\text{-t}\hat{a}$ $\text{̀j}\acute{í}$
 ‘Yesterday my loincloth was dirty.’ (cĕ ‘to be dirty’)

(26) $\text{̀g}ú\text{p}\acute{í}\text{-t}\hat{a}$ $\text{̀y}\bar{a}$ $\text{̀l}\acute{e}\acute{e}\text{-w}\hat{e}$
 τ .orphan- τ τ .PROG τ .HAB-cry

→ $\text{̀g}ú\text{p}\acute{í}\text{-t}\hat{a}$ $\text{̀y}\bar{a}$ $\text{̀l}\acute{e}\acute{e}\text{-w}\hat{e}$
 ‘The orphan is crying.’

4.2. Floating low tone and downstep

The analysis proposed for the nouns of the τ , κ , κP classes in §4.1 considers the initial rise as a result of the spreading of the floating L tone onto the first syllable of the root. It is supported by the fact that the H tone of the nominal root does not undergo the spreading of the floating L tone after H, but is downstepped (27b), (28)–(29), cf. also the similar example (27c) with the noun of the D class with a null prefix.

- (27) a. **là** [̀]záá-t̩ → là záá-t̩
 2SG.POSS ɿ.chair-ɿ
 ‘your chair’
- b. **mí** [̀]záá-t̩ → mí 'záá-t̩
 1SG.POSS ɿ.chair-ɿ
 ‘my chair’
- c. **mí** Ø-léé
 1SG.POSS ɒ-mother
 ‘my mother’
- (28) [̀]nā-fí [̀]léé-t̩ → nā-fí 'léé-t̩
 1SG.PFV-take ɿ.whistle-ɿ
 ‘I took a whistle.’
- (29) [̀]nē-fíí [̀]gú-kp̩ → né-fíí 'gú-kp̩
 1SG.PFV-enter KP.ROOM-KP
 ‘I entered the room.’

4.3. Initial rise and paired voiced consonants in the ɒ and ɾ classes

Most of the nouns belonging to the ɒ class have voiceless or non-paired voiced consonants in root-initial position. Meanwhile, as mentioned in §2.2, this class also contains a number of nouns with initial paired voiced consonants. In contrast with nouns of the ɿ, ɕ, ɕɾ classes, nouns of the ɒ class have different tonal behavior depending on the type of voiced root-initial consonant. Apart from L and M tones on the first syllable of the root, nouns with root-initial voiced sonorants in the ɒ class can bear H tone (30a), cf. also (19a), whereas nouns with root-initial paired voiced consonants can only bear LH contour (31a) and (32a). In plural forms of the nouns with root-initial voiced sonorants L tone of the prefixal noun class marker spreads onto the first syllable of the noun root (30b). In plural forms of the nouns with root-initial paired voiced consonants no consonant alternation or tonal change is observed (31b) and (32b).

- (30) a. \emptyset -*léé-yà* b. *è-léé-pà* → *è-léé-pà*
 D-mother-D P-mother-P
 ‘mother’ ‘mothers’
- (31) a. \emptyset -*bǝǝlò-yà* b. *à-bǝǝlò-pà*
 D-ball-D P-ball-P
 ‘ball’ ‘balls’
- (32) a. \emptyset -*glǎási-yà* b. *à-glǎási-pà*
 D-glass-D P-glass-P
 ‘glass’ ‘glasses’

In addition, as can be seen from Table 2, agreement prefixes of the D class are null and do not include any consonant or tonal alternations. These facts force to consider the initial pitch rise in the nouns of the D class to be rather lexical than contextual and to analyse the initial L tone as a part of the root. Two options can be proposed in this case. The first one is to postulate the floating L tone in the underlying representation of the root. It will then spread rightwards onto the first syllable of the root: \emptyset -*̀bǝǝlò-yà*, \emptyset -*̀glǎási-yà*. The second option is to allow underlying lexical countours on one TBU: *bǝǝlò-yà*, *glǎási-yà*.

4.4. Voicing low tone?

As shown in §4.1, voicing of the paired voiceless consonants and the floating L tone both serve as nominal prefixal markers of the τ , κ , κP noun classes, as well as agreement markers for the τ class in verbal and numeral forms. This fact, as well as distributional restrictions attested for paired voiced consonants in Akebu, led Sossoukpe (2017) to assume allophonic status of paired voiced consonants and voicing effect of the floating L tone. Although rare cases of tones affecting consonants are indeed attested in the literature (Yip 2002: 34; Hansson 2004; Poser 1981), I argue against this interpretation in the case of Akebu.

Historically, the marker of the τ , κ , κP classes can be reconstructed as **ŋ̣-*. This hypothesis is supported by optional short forms of independent pronouns with the velar nasal omitted. As was mentioned

in §2.2, in the non-locutor forms of independent pronouns (Table 2) paired voiceless consonants undergo optional voicing after the velar nasal. This voicing is retained in a set of short forms without the velar nasal.

Independent pronouns for locutors presented in Table 3 also have optional variants without an initial velar nasal. These forms have underlying voiced sonorants and thus do not exhibit overt voicing, moreover, it is the root-initial consonant that affects the velar nasal in these forms and not vice versa. At the same time, the locutor forms of independent pronouns exhibit the L spreading rule (9) which is observed not only in full forms but also in short forms which lack the velar nasal.

The two processes attested in independent pronouns – consonant voicing and L spreading – seem very similar to those attested in the nouns of the τ , κ , κP classes, with the only difference being that the omission of the velar nasal in the forms of independent pronouns is still optional.⁷

Table 3

Independent pronouns

person & number	Independent pronoun
1SG	$\eta m\acute{e} \rightarrow \eta m\check{e}$ [$\acute{m}m\check{e}$] / $m\acute{e} \rightarrow m\check{e}$
2SG	$\eta l\grave{a}$ [$\grave{l}l\grave{a}$] / $l\grave{a} \rightarrow l\check{a}$
1PL	$\eta l\acute{a} \rightarrow \eta l\check{a}$ [$\acute{l}l\check{a}$] / $l\acute{a} \rightarrow l\check{a}$
2PL	$\eta n\acute{e} \rightarrow \eta n\check{e}$ [$\acute{n}n\check{e}$] / $n\acute{e} \rightarrow n\check{e}$

Thus, I argue that paired voiced consonants have recently acquired phonemic status as a result of loss of the initial velar nasal in the markers of the τ , κ , κP classes. The floating L tone behaves exactly like the L tone on overt prefixal markers. This fact does not allow to postulate a special voicing effect of the floating tone.

⁷ It is noteworthy that the 1SG subject agreement marker in verbal forms also tends to drop, leaving its H tone without a segmental base and inducing initial falls (cf. (24), (28)).

5. Conclusion

The floating L tone in Akebu may be regarded as an L tone that has lost its segmental base reconstructed as * η in word-initial position. This L tone exhibits the same behavior as initial L tone on overt prefixal markers, as it undergoes spreading onto the following H tone syllable forming an LH contour. The contexts where the loss of the velar nasal is observed are the ones where this velar nasal had affected or still affects the voicing of voiceless consonants. This voicing effect retained after the loss of the velar nasal synchronically seems to be induced by the floating L tone. Nevertheless, since the floating L tone does not differ from the non-floating L tone in the same context in any other respect, it seems inconvenient to endow the floating L tone with properties that the non-floating L tone does not exhibit. In this study I assume L tone spreading and consonant voicing to be two different processes which happened to be combined in nominal and agreement markers of the τ , κ , κP classes and independent pronouns. Nevertheless, these two processes are closely related to each other since L tone spreading rule applies only across voiced depressor consonants and thus should strictly follow the voicing rule. In addition, the combination of initial rise and consonant voicing seems to be the reason for the restriction of high tones after voiced consonants in the nouns of \mathfrak{D} and \mathfrak{P} classes.

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Abbreviations

K, KP, D, P, T, W, Y – noun class markers	M – middle tone
1, 2, 3 – 1 st , 2 nd , 3 rd person	PFV – perfective series
H – high tone	PL – plural
FCT – factative	POSS – possessive marker, possessive pronoun
HAB – habitual series	PROG – progressive auxiliary
L – low tone	SG – singular

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