



THOT THEORY OF TONE

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Eastern Dan. Analytical report on the tonal system

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On the basis of the Version 8b of the Questionnaire

1. General information about the language

1.1. Language name

Dɔ̀ in Eastern Dan, also *yàobâ* (widely used, but is regarded as a xenonym). In Côte d'Ivoire, Dan people and language are most often referred to as *Yacouba*, in Liberia, as *Gio*.

The ISO-639 code is *dnj*, and the Glottolog code is *east2794*.

1.2. Genetic affiliation, geographic area, number of speakers

According to Glottolog: Eastern Dan < Nuclear Dan < Dan < Dan-Tura < Guro-Dan < Mano-Dan < Southeastern Mande < Eastern Mande < Mande

Alternative classification (Vydrin): Eastern Dan < Dan < Dan-Guro < Southern Mande < Southeastern Mande < Mande < Niger-Congo.

Eastern Dan is spoken by some 800,000 people in the Tonkpi region of the Montagne district in Côte d'Ivoire. The total number of Dan speakers is close to 2 millions (evaluation of 2018) in Côte d'Ivoire and Liberia.

1.3. Information on dialects

The total number of Dan dialects is close to 40; of these, 18 constitute the Eastern Dan area. All Eastern Dan dialects are characterized by 5 tonal levels (while all the dialects outside Eastern Dan have 4 levels). In the current study, the system of the Gwɛtaa dialect is analyzed.

2. Segmental phonology

2.1. Phonemic inventory

2.1.1. Vowels

2.1.1.1. Vowel inventory

	Oral			Nasal			
	Backness						
	Front	Back			Front	Back	
Unrounded		Rounded	Unrounded			Rounded	
Close	i	ɯ	u	ŋ	ĩ	ũ	ũ̃
Close-mid	(ɪ)	(ʏ)	(ʊ)				
Mid	e	ɤ	o				
Open-mid	ɛ	ʌ	ɔ		ẽ	ã	õ
Open	æ	a	ɒ:		æ̃	ã̃	õ̃

Table 1. Vowels

Eastern Dan vowels form two series, oral and nasal, subject to vocalic harmony; the domain of harmony is a prosodic foot (vowels belonging to different series cannot co-occur within a foot).

η does not belong to either series, it combines with vowels of both series. η is a vowel of a limited distribution: it cannot appear in a syllable of the CV type, it can occur only in an onsetless syllable, either in a light foot (only in the 1SG non-subject pronoun η) or in the final position in a heavy foot.

2.1.1.2. Status of long vowels

Long vowels are analyzed as biphonemic sequences (rather than monophonemic units), for the following reasons.

1) If the monosyllabic interpretation of the structures in question is accepted, long and extra-long vocalic phonemes should be postulated. Besides, combinations of different vowels should be considered as diphthongs and triphthongs imparted with phonemic status: $\widehat{o\acute{a}}$, $\widehat{i\acute{r}}$, $\widehat{i\acute{e}e}$, $\widehat{i\acute{\eta}}$ etc. If so, the total inventory of vocalic phonemes of Eastern Dan would exceed one hundred, with some of these “phonemes” occurring in only two or three words or even just a single one. Such a vocalic inventory seems weird and unnatural. (This argument is fairly convincing, although not completely irrefutable. The language may simply have an unusual vocalic inventory: if it is among the world champions in terms of the number of level tones it possesses, why shouldn't it be exceptional in the number of vocalic phonemes too?)

2) Eastern Dan adjectives have several models deriving plural and/or intensive forms. Among other means of derivation (tonal modification, reduplication, etc.), there is transfixation: $w\check{\acute{z}}\check{\acute{z}}w\check{\acute{z}}\check{\acute{z}}$ ‘apathetic, slack’ → $w\check{\acute{z}}k\check{\acute{z}}w\check{\acute{z}}k\check{\acute{z}}$ ‘very apathetic, very slack’. It turns out that a consonant morpheme can be inserted inside a long vowel. This is a very strong argument in favor of the biphonemic interpretation of the latter, and even a definitive argument.

In the same way, combinations of heterogeneous vowels within a foot are not analyzed as diphthongs or triphthongs, but as sequences of vocalic phonemes.

2.1.1.4. Status of [i], [u] in the V_1 position in heavy feet

In the feet of the structure $CiV(V)$ and $CuV(V)$ where V_2 (and eventually V_3) is different from V_1 , the first vowel is realized in a reduced form. Phonemically, the sequences $-iV$ and $-uV$ may be theoretically interpreted in three ways:

- as CV_1V_2 where V_1 is /u/ or /i/, and V_2 is different from V_1
- as C_1C_2V , where C_2 is /w/ or /j/, and C_1 is different from C_2
- as C^mV , / C^m / is a modified consonant.

In (Bearth & Zemp 1967: 16), the third solution (C^mV) was opted for. However, there is a strong argument in favour of the first option (CV_1V_2): in the feet of this type, tonal combinations are found which are otherwise unavailable on single vowels, e.g. $b\check{u}\check{a}b\check{u}\check{a}d\check{r}$ ‘indiscreetly’, $b\check{r}\check{a}$ ‘trap for monkeys’, $s\check{r}\check{a}s\check{r}\check{a}b\check{a}$ ‘immediately’, $s\check{u}\check{e}s\check{r}$ ‘nine’. Therefore, the interpretation of [i] and [u] in this context as vowels should be preferred.

2.1.1.4. Interaction between vowels and tones

Mid vowels /e/, /ɤ/, /o/ have two main allophones each: mid [e, ɤ, o] which are default ones, and close-mid [ɪ, ʏ, ʊ] conditioned by the extra-high tone. More precisely, these conditions are as follows:

- [ɪ, ʏ, ʊ] always appear under extra-high tone, e.g.: $d\check{r}\check{r}$ [dɪʔ] ‘red caterpillar’, $t\check{o}$ [tʊ] ‘ear’, $k\check{e}s\check{o}$ [kʰsʊ] ‘cash box’;
- [ɪ, ʏ, ʊ] appear under non-xH (most often, xL) tone in the foot-final or prosodic word-final position, if the preceding tone is extra-high: $d\check{r}\check{r}$ [dɪʔ] ‘sharp’, $b\check{e}\check{e}$ [bʊ] ‘alive’, $d\check{u}\check{r}$ [dʊʔ] ‘above’, $s\check{r}\check{r}\eta s\check{r}\check{r}\eta$ [sɤʔsɤʔ] ‘clean, pure’;
- [ɪ, ʏ, ʊ] appear optionally under mid tone if followed by an xH tone within the limits of the same foot: $w\check{e}\check{e}$ [wɛi ~ wɪ] ‘urine’, $s\check{e}\check{e}$ [sɛi ~ sɪ] ‘citrus fruit’, $g\check{l}\check{o}\check{o}$ [glɔʊ ~ glʊ] ‘green mamba’.

In some other Eastern Dan dialects (at least, in Tee and in dialects of the Man area), ι , ψ and υ appear even when they are not under xH tone, e.g.: $kp\check{v}$ ‘mongoose’, $w\check{v}$ ‘voice’, $t\check{p}\check{p}$ ‘basket’. It is highly probable that in these dialects, mid-close vowels are separate phonemes. Unfortunately, no systematic description of these dialects is available.

Nasal mid vowels \tilde{e} and \tilde{o} also tend to narrow down to mid-close under the xH tone, although optionally: $d\check{e}\check{d}\check{e}$ [nɯ̃i ~ nɛ̃ɛ̃] ‘cold’, $g\check{w}\check{e}\check{e}$ [gwɯ̃j ~ gwɛ̃j] ‘vulva’, $d\check{z}\check{d}\check{z}$ [nɯ̃nɯ̃ ~ nɔ̃nɔ̃] ‘milk’, $d\check{z}\check{b}\check{\lambda}$ [nɯ̃bɫ ~ nɔ̃bɫ] ‘lover, girlfriend’. $\check{\lambda}$ optionally narrows down to [ɰ̃] in feet with final $-\eta$: $g\check{w}\check{\lambda}\check{\eta}$ [gwɫ̃j ~ gwɰ̃j] ‘proverb’, probably $b\check{\lambda}\check{\eta}$ [bɫ̃j ~ bɰ̃j] ‘locust tree (*Parkia biglobosa*)’.

2.1.2. Consonants

Manner	Place					
	Labial	Alveolar	Palatal	Velar	Velar labialized	Labiovelar
Stops	p / b	t / d		k / g	kw̄ / gw̄	kp̄ / gb̄
Fricatives	f / v	s / z				
Implosives / Sonants	ɓ	ɗ	y		w	
Lateral approximant		l				
Lateral fricatives		(ɬ) / (ɮ)				
Trill		(r)				

Table 2. Consonants

When followed by a nasal vowel, any consonant is nasalized. This nasalization is very distinctly articulated on sonants and implosives. The nasal allophones of /b/, /d/, /y/, /w/ are respectively [m, n, ŋ ~ ỹ, w̃]. /kp̄/ and /gb̄/ are realized in the nasal context as [k̄m̄, ḡn̄]. The nasal allophones also appear in non-nasal feet if preceded by *ŋ* (belonging to another foot).

Realization of the foot-internal /l/ is conditioned by the nature of the foot-initial consonant. After an initial /t/ or /d/, /l/ is pronounced as a trill [r] (or [r̃] in a nasal foot): *dlòɔ* [dròò] ‘jealousy’, *dlāã* [drāã] ‘teach’, *tlòo* [tròò] ‘play’, *tlòò* [tròò] ‘profit’. Inner /l/ merges with the preceding consonants *s*, *z* into [ɬ, ɮ] accordingly: *slāã* [ɬāã] ‘madness’, *slāã* [ɬāã] ‘burnt leftover of food’, *zlòo* [ɮòò] ‘bushbock’, *Zlāã* [ɮāã] ‘God’.¹ After labial, velar and labiovelar consonants *l* is pronounced as [l]: *blã* [blã] ‘rotten’, *blēē* [mlēē] ‘snake’, *glòɔ* [glòɔ] ‘banana’, *klāã* [klāã] ‘spark’, etc. There are however some marginal phenomena in onomatopoea and borrowed vocabulary indicative of the beginning of phonolization of *r*.

Geminated consonants are rare, they are found only in expressive adverbs and intensive forms of adjectives in word-internal position, e.g. *gbākklāãgbākklāã* ‘very (long)’, *kṛkkṛdṛ* (be stuck) ‘strongly’, *kūkkūdhṛ* ‘cram-full, brimful’, *kpṛkkpṛdṛ* ‘to the brim, brimful’, *páppádṛ* intensive form of the adverb *pápádṛ* ‘snow-white’, *tèttè* ‘very numerous’ (an intensive form of *gbé* ‘numerous’).

2.2. Prosodic units

2.2.1. Syllable and mora

The TBU in Eastern Dan is a syllable.

There are three main types of syllables: V, CV and CIV. The CVC type is marginal, it appears only in words with geminated consonants.

The role of syllable in the prosodic structure of Dan is low, with comparison with the foot.

2.2.2. Foot

Prosodic foot is highly relevant in Eastern Dan.

Feet may have the following structures: V, VV, CV, CVV, CVVV, CIV, CIVV, CIVVV. The monosyllabic feet (V, CV, CIV) will be referred to as "light feet", disyllabic (VV, CVV, CIVV) as "heavy feet", and trisyllabic (CVVV, CIVVV) as "superheavy feet". Exceptionally, "extraheavy feet" (CVVVV, CVVVŋ) do appear, mainly in onomatopoeia, interjections and intensive forms of verbs.

The vowel *ŋ* can appear in any type of feet, with the exception of CV; it can occupy only the foot-final position (i.e., the following structures with *ŋ* are licenced: *ŋ*, CVŋ, CVVŋ, CIVŋ, CIVVŋ, CVVŋŋ).

The inner cohesion of syllables in heavy and superheavy feet is assured by:

– Nasal harmony. Nasal and oral vowels cannot combine in a foot. The feature of nasality is associated with all the phonemes of a foot, including the consonants, but excluding *ŋ* which is not concerned by the nasal harmony.

¹ ɬ and ɮ can be alternatively interpreted as separate phonemes of Eastern Dan. If so, *ɬ*, *ɮ*, *s*, *z* will be among foot-initial consonants incompatible with the foot-internal *-l-*.

– Constraints on vocalic combinations. Combinations of identical vowels are strongly preferred in heavy and extraheavy feet. If V_1 and V_2 in a heavy foot are not identical, the inventory of their combinations are strongly restricted: in the V_1 position, mainly i and u are found, and V_2 is most often represented by back unrounded vowels u , r , λ . In the extraheavy feet, combinations of three identical vowels are untypical; the predominant model of vocalic combination the following: V_1 is a high vowel i or u , V_2 and V_3 are identical and are opposed to V_1 by the backness degree and/or roundedness. Ex.: *gbíaa* ‘rafia torch’, *bíúú* ‘beard’, *dhiúú* ‘cool down’. Combinability of the foot-final vowels η with the preceding vowels is subject to special constraints.

– "Consonantal homoresonance": realization of the foot-internal /l/ is conditioned by the nature of the foot-initial consonant, see 2.1.2.

– Constraints on tonal combinations, see 4.2.

2.2.3. Word

Most often, a phonological word coincides with a foot.

There are some word types containing more than one foot (normally, two):

– reduplicated adjectival forms, often intensive, characterized by stable tonal melodies (Vydrine 2007), e.g. *γάηγλή* ‘loose’, pl. intens. *γάηγλήγλή*; *gbáíjgbáíj* ‘long, thick and heavy’, pl. intens. *gbáíjgbáíj*;

– a small group of “-*dú*-verbs” characterized by a fixed tonal pattern H-xL M, e.g. *γάάδú* ‘sit down’ < *yá* ‘be sitting’, *dóóδú* ‘stop’ < *dó* ‘stand up’, etc.

3. Tonal inventory

3.1. Character of tonal system

The system is predominantly level-toned.

3.1.1. For (predominantly) level-tone system: number of levels

Eastern Dan has 5 level tones: xH, H, M, L, xL.

3.1.2. Tonal contours hosted by one TBU

There is one lexical contour, HxL, hosted by one syllable.²

Phonetic contours on single (light) vowels can also result from docking grammatical floating xL tone on preceding syllables: xHxL, HxL, MxL, LxL.

3.2. Inventory of tonemes.

Eastern Dan has 5 level tonemes and one contour toneme: xH, H, M, L, xL, HxL. Some minimal pairs are represented in Table 3.

Segment	<i>dē</i>	<i>gɔ</i>	<i>gba</i>	<i>gbā</i>	<i>kaa</i>
xH	<i>dē</i> ‘leaves’	<i>sɔ</i> ‘trap’		<i>gbā</i> ‘leg’	<i>kāā</i> ‘scabies’
H	<i>dē</i> ‘the other’	<i>sɔ</i> ‘spread’	<i>gbá</i> ‘ambush’		<i>káá</i> ‘2PL’ (negative present)
M		<i>sɔ</i> ‘cloth’	<i>gbā</i> ‘give’	<i>gbā</i> ‘shoulder’	<i>kāā</i> ‘2PL’ (prospective series)
L	<i>dē</i> ‘how many?’		<i>gbà</i> ‘roof’	<i>gbā</i> ‘ceiling’	<i>kàà</i> ‘scratch’ (conjoint form)
xL	<i>dē</i> ‘call’	<i>sɔ</i> ‘penetrate’	<i>gbà</i> ‘black duiker’	<i>gbā</i> ‘drive in’	<i>kàà</i> ‘reed’
HxL			<i>gbá</i> ‘shed’	<i>gbā</i> ‘uproar’	

Table 5. Examples for tonal contrasts

The xL toneme has two allotones: level xL and falling from H, M, or L to xL (the departure point usually, but not necessarily, correlates with the preceding tone). These allotones are in free variation, the falling variant being more frequent one.

In a sequens of two or more xL tonemes, when they are represented by falling allotones, two realizations are possible: falling recurring (each xL toneme begins at the same level; or, at least, at a

² Two other contours, extrahigh-extralow (xHxL, *á*) and mid-extralow (MxL, *â*) are extremely rare on one syllable, and are not confirmed by the majority of my informants. They will not be taken into account in this analysis.

level higher than the arrival point of the preceding xL) or falling cascading (each xL begins at the level where the preceding xL ends).

Other tonemes display no significant variability in their realizations.

The tonemic status of all the six tones is confirmed by the following criteria:

– The Persistence criterion. There are very few tonal processes in Eastern Dan, see §6.

– The Floating criterion is valid for the toneme xL, see §3.3.

– The Tonal Morpheme criterion is valid for the toneme xL, to a limited degree also for xH, H, M, L, see §7.

– The Shared TBU Criterion is valid for all the level tonemes, with the exception of H.

There is no argument in favor of the zero status of any tone.

The most complicated case is the status of the HxL contour tone. As mentioned above, this contour can appear as the lexical tone of monosyllabic words, e.g. *gbê* ‘dog’, *ké* ‘farm’, *yâ* ‘bad’, but it can also result from docking the floating xL tone on the preceding H-tone syllable, e.g. *tô* ‘draw\INF’, in the same way as the other falling contours: *pā* ‘fill\INF’, *pē* ‘crack\INF’, *kpô* ‘turn sour\INF’.

I consider the HxL contour as an exponent of one toneme in all the cases on the basis of the Persistence criterion.

The HxL toneme is extensible (i.e., it complies with the Extensibility Criterion for contour tonemes): it can be hosted by a heavy foot (e.g. *dāj* ‘confidence’) or a superheavy foot (e.g. *dúλλ* ‘benediction’).

There is a following strong argument in favor of the tonemic interpretation of the HxL contour: in Eastern Dan, a prosodic foot can host a maximum of two tonemes (see §4.2.1). There are two words containing superheavy feet where feet host the contours LHxL (*gbàùù* ‘kitchen’ < Manding *gbàbugù*) and MHxL (*b̄d̄áá* ‘milliard, billion’ < French *milliard*). If we assume that the contour HxL in these words is bitonemic (/H/ + /xL/), that would violate the abovementioned positional constraint.

3.3. Floating tones

Only xL tone can float in Eastern Dan. The floating xL appears as the exponent of two morphemes:

– infinitive marker which is suffixed to a verbal stem;

– 3 singular personal pronoun of the non-subject series has two allomorphs: *à* and floating xL. In the phrase-initial position, only *à* is possible. Elsewhere, both allomorphs are in free variation, the floating xL being more current in the fast speech.

The floating xL is, by default, docked onto the preceding syllable thus creating a falling contour. If the preceding tone is also xL, the floating xL tone is eliminated. In the phrase-internal position, the tonal drop is often weakly articulated (in most cases, it lowers only to the departure level of the subsequent tone) or even not articulated at all. With some speakers, the elimination of the xL falling tone in the non-final position in a phrase is the most current strategy.

The xL floating tone is a toneme.

3.4. Downdrift and downstep

The downdrift is optional in Eastern Dan, it is attested in the speech of some people. Even when it is present, it is of a minor amplitude and carries no functional load.

3.5. Upstep.

There is no upstep in Eastern Dan.

3.6. Other suprasegmental features of tonemes, apart from pitch. Registers

Eastern Dan tonemes contain no other suprasegmental features, apart from pitch. Eastern Dan has no registers.

4. Tonotactics: tonal span, tonal phrase

4.1. Tonal span limits

4.1.1. Tonal span size

The minimal size of the tonal span is ½ syllable, and the maximal size is 4 syllables.

4.1.2. Change of tonal span boundaries

In the Gwæetaa dialect, tonal span limits cannot be changed.

Situation may be different in some other Eastern Dan dialects. E.g., in Gble dialect some suffixes seem to be toneless, and they are included into the tone spans of the preceding stems (i.e., a preceding

toneme spreads over the suffix), see (Vydrin 2021a: 9). In the Gwɛetaa dialect, the corresponding suffixes are associated with the xL toneme.

4.1.3. Tonal spans and other units

Most often, the boundaries of a tonal span coincide with the limits of a **prosodic foot**. If all the syllables of a heavy or extraheavy foot carry identical tones, e.g. [gèè] ‘mask’, [trōō] ‘play’, [dīāā] ‘earthworm’, they are interpreted as constituting one tonal span: /gèè/, /tlōo/, /dīaa/. The following arguments can be adduced in favor of this interpretation:

- Grammatical replacive tones (see §7) are always spread over the entire foot, e.g. *dīāā* ‘to mash’ (a fruit) → *dīāā* ‘mash\NEUT’. If the foot *dīāā* were subdivided into two or three xH tonal spans, one could expect that the grammatical tone would extend to only one of them.

- As mentioned in §3.2, when two (or more) xL tonal spans are adjacent, and the xL tonemes are represented by their falling allotones, two types of their realization are possible: falling recurring or falling cascading. And in a heavy or extraheavy foot, the falling recurring realization of xL never occurs; the only realization that is possible is falling cascading. This fact can be interpreted in a way that in this case, we have one xL toneme, rather than two or three.

A foot can carry a maximum of two tonemes. If a foot is monosyllabic, it can host two tonemes only when a floating xL tone is docked onto it, see §3.3. If an extraheavy foot hosts two tonal spans, their boundary coincides with the limit between V₁ and V₂, e.g. *dūāā* [M dū][xL āā] ‘younger maternal uncle’. The inventory of the tonemic combinations is subject to constraints, see §4.2.

4.2. Combinations of tonemes. Tonal melodies

4.2.1. Tonal melodies on feet

As mentioned in §4.1.4, a **foot** can host up to two tonemes, and the inventory of tonemic combinations is subject to strong constraints. These constraints can be mainly boiled down to two rules:

- A foot-final extra-low toneme can follow any other toneme: *flēē* ‘kernel’, *dāā* ‘winnowing basket’, *dlāā* ‘teach’, *gṛṛ* ‘iroko tree’.

- A foot-initial mid can be followed by any higher toneme, i.e. by H or xH: *dēē* ‘question’, *kpūj* ‘stump’.

These 6 contours are the main tonal melodies on the feet.

There are also four marginal tonal melodies which appear mostly on loan words (in these cases, the unusual pattern can be explained by the tones or accents in the source languages), but sometimes on original Dan words too.

[M][HxL]: *klōā* ‘cross’ (< French *croix*).

[L][HxL]: *kākāō* ‘cocoa’ (< French *cacao*).

LxH: *wēīdē* ‘a round dance’.

ML: *sūā* ‘lie, untruth’ (the tone of this word is unstable; even some speakers of the Dan Gwɛetaa dialect may pronounce it with different tones: *sūā* or *sūā*), *zūā* ‘guilt, responsibility’ (a rare word, appears in one idiomatic expression).

In two cases (both are loanwords), contours LHxL and MHxL appear on superheavy feet:

[L][HxL]: *gbàūū* ‘kitchen’ (< Manding *gbàbúgū*).

[M][HxL]: *bīdīāā* ‘milliard, billion’ (< French *milliard*).

In these cases, we have bitonemic combinations: *gbàūū* [L gbà][HxL ūū] and *dīāā* [M dī][HxL āā].

Four marginal tonal melodies have been attested in formes resulting from fusion with grammatical elements (most often, postpositions).

xHL: *sīāa* ‘on the earth’ (< *sē bā*, the locative case of *sē*).

HM: *blāā* ‘to the field’ (the locative case of *blāādē* ‘field’), *plṛṛ* ‘to the village’ (the locative case of *pṛdē* ‘village’), *pēē* ‘in this village’ (contraction of *pṛ yā gū*).

HL: *blāā* ‘field’ (in some locative contexts).

xHH: *dūṛ* ‘above’, *yāā* ‘in the pocket’ (the inessive case of *yāā*), *gbhūū* ‘in the stomach, inside’ (the inessive case of *gbhūdē* ‘inside, stomach’).

LM: *gwīṛdṛ* ‘on the head’ (the locative case of *gwīṛdē* ‘vertex’; there is also a more conventional variant *gwīṛdṛ*).

4.2.2. Tonal melodies on words

Words consisting of two feet (or more) and characterized by specific tonal melodies are not very numerous. The following melodies can be mentioned:

- HxL-xL for adjectives, e.g. *gúŋgùŋ* ‘stocky, short and thick’, *gbágbá* ‘low’ (of inanimate objects);
- xH-xL for adjectives, e.g. *káŋkáŋ* ‘bumpy’, *kpáákpáá* ‘numb’;
- HxL-HxL, for plural intensive forms of adjectives, e.g.: *yáŋyáŋ* ‘loose.PL.INT’, *gbíŋgbíŋ* ‘heavy.INT.PL’.
- HxL-M, for a dozen of verbs of change of spatial position, e.g. *gbááá* ‘stop’, *yááá* ‘sit down’ < *yá* ‘be sitting’, *dóóó* ‘stop’ < *dó* ‘stand up’;
- M-HxL, L-HxL, xL-HxL, for nouns, mainly loans from Manding and French, e.g.: *dúúú* ‘village chief’ (< Manding *lúúú*), *sòbèè* ‘seriousness’ (< Manding *sòbè*), *tūbū* ‘sand flea nest’ (< Manding *tūmū* ‘worm’), *kāŋŋ* ‘canton’ (< French *canton*), *klēyŋ* ‘pencil’ (< French *crayon*).

4.3. Toneless syllables

4.3.1. Toneless syllables

There are no toneless syllables in the Gwætaa dialect of Eastern Dan at the surface level.

4.3.2. Toneless morphemes

There are no toneless morphemes.

4.4. Tonal phrases

There are no tonal phrases in Eastern Dan.

5. Stress and tone; culminativity; prominence; obligatoriness

5.1. Culminativity

Eastern Dan is not culminative: a word can hosts more than one toneme.

5.2. Stress

Eastern Dan has no stress.

5.3. Positional prominence

There is no positional prominence in Eastern Dan.

5.4. Obligatoriness of tone

Eastern Dan is characterized by obligatoriness of tone.

6. Tonal rules. Segmental rules which have incidence on tones

6.1. Tonal rules

Contextual rules are very marginal in East Dan, they concern only limited sets of words.

6.1.1. Mid tone dissimilation

Mid tone, if preceded by another mid, is replaced by high tone (an instance of the OCP).

This rule has a very limited scope. It concerns three deictic adverbs: *yā* ‘here’ (near the speaker) and *bū* ‘there’ (outside the visibility of both interlocutors) change their tone obligatorily, and this modification is optional for *bā* ‘there’ (near the interlocutor, or on some distance from both participants of the conversation).

This rule has no impact on TDI (one toneme is replaced by another one).

6.1.2. Low plateauing

A LxL melody on a heavy foot is levelled to L if followed by another L.

E.g., *sòò* ‘horse’ → *sòò wɔ̀ɔ̀* [sòò wɔ̀ɔ̀] ‘under the horse’.

This rule is not automatic, it concerns only some words. It erases a toneme and, therefore, affects the TDI.

6.1.3. xL regressive assimilation

If a heavy foot hosting a L toneme is followed by xL, the xL tone assimilates its final syllable.

This rule concerns only one word, *kèè* ‘occiput’, e.g.: *kèè tã* ‘at the occiput’.

Spread of a tonal span over the limit of a phosodic foot is highly untypical of Eastern Dan. Taking into account the isolated character of this case, it would be more appropriate to consider the xL tone on

the final syllable of the noun as a separate toneme (rather than an extension of the xL tonal span of the postposition *tä*).

6.2. Rules concerning segmental units

There are no processes concerning segmental units that would affect TDI of the Eastern Dan.

7. Grammatical tones

7.1. List of grammatical tonal morphemes

7.1.1. Infinitive marker

The infinitive is formed by an additive tonal morpheme represented by an xL floating tone (1). About the realizations of the floating xL, see §3.3.

- (1) *Yř dō kã" dē yř zĩãg.*
3SG.EXI go\NEUT do\INF that 3SG.EXI road.AD
'He is probably on his way.'

7.1.2. 3SG non-subject pronoun

The 3SG non-subject pronoun has two allomorphs, *ä* and a floating xL, see §3.3.

7.1.3. The neutral aspect tonal morpheme

In the neutral aspect construction, the lexical tone of the final foot of the verb³ is erased and replaced by the grammatical xL tone. For the details on the neutral aspect construction see (Vydrin 2020).

7.1.4. The tonal modification on the verb in the conjoint construction

In the conjoint construction, the tone of the verb is lowered, according to a rather complex formula (depending on the lexical tone and the foot structure), or left unchanged. For the details see §8.2.

7.1.5. Nominalization tonal morpheme

If a verb is nominalized together with its indirect object or adjunct, the lexical tone of the verb is replaced by an xL grammatical tone (2).

- (2) *bãa yĩ bũĩ ká kōo*
rice.mush water drink\NMLZ with gourd
'spoon of gourd for the rice mush' (*bũĩ* ← *bũ*)

7.1.6. Construct state tonal morpheme

In the genitive construction, the lexical tone of the head noun is substituted by a grammatical xL tone (3).

- (3) *gřř dũũ*
iroko tree\IZF
'iroko tree' (*dũũ* ← *dũ*)

The rules for tonal head marking in Eastern Dan are difficult to formulate, and susceptibility to head marking is often a lexicalized property of a given noun. However, it is possible to observe some tendencies:

- if a construction describes the relation "part of a whole", it is usually unmarked. If, however, the second component is in some sense equal to the first (i.e. both refer to the same entity), it is tone-marked, e.g.: *gwē dhũũ* 'trunk of ceiba tree' vs. *gwē dhũũ* 'ceiba tree', *bĩr sōn* 'elephant tusk' vs. *bĩr wũũ* (← *wũũ*) 'elephant carcass';
- generic nouns are more prone to display head marking, e.g. *tããn wōn* (← *wōn*) <truth matter> 'truth, true matter', *sũà bhēn* (← *bhēn*) <untruth human> 'liar' vs. *blũn sēŋ* 'porcupine quill', *kó kpán* 'foundations of a house' (no tonal modification);
- apparently, the type of construction used can also depend on rhythmical factors.
See more in §8.2.

³ The great majority of verbs consist of only one foot.

7.1.7. Tonal rising on relativized nouns

Three monosyllabic nouns, the most generic and the most frequent ones, replace their lexical mid tone with the grammatical high tone when relativized: $b\bar{e} \rightarrow b\acute{e}$ ‘human being’, $p\bar{a} \rightarrow p\acute{a}$ ‘thing’, $y\bar{i} \rightarrow y\acute{i}$ ‘day’. The H-toned forms also appear before the definite article $b\bar{a}$ and the demonstrative $y\bar{a}$. This is explained by the fact that the constructions with $b\bar{a}$ and $y\bar{a}$ are relativized by origin, and the relativization marker \acute{r} can be restituted in slow speech (3).

- (4) $B\acute{e}$ (\acute{r}) $b\bar{a}$ $y\bar{a}$ $z\bar{o}$, $y\bar{r}$ $k\bar{a}$ $gb\bar{e}\bar{e}$.
 human\REL REL ART 3SG.PRF stutter 3SG.EXI do\NEUT very
 ‘This person stutters strongly’.

7.1.8. Adjectival paradigms of number and intensity

In Eastern Dan, adjective in the formation of intensive forms of adjectives, tonal modifications appear as supplementary, and sometimes as the only means of the derivation. See in more detail §7.2.

7.1.9. Pronominal inflection

Some series of pronouns and pronominal predicative markers are distinguished only by tones, see in more detail §7.2. In particular, the following tonal morphemes can be marked out:

- M tone is a marker of the autonomous pronominal series;
- M tone is a marker of the restrictive pronominal series;
- M tone is a marker of the prospective series or pronominal markers;
- H tone is a marker of the selective pronominal series;
- H tone is a marker of the conjoint series or pronominal markers;
- H tone is a marker of the negative imperfective series or pronominal markers;
- H tone is a marker of the negative perfective series or pronominal markers;
- H tone is a marker of the negative subjunctive series of pronominal markers;
- H tone is a marker of the negative consecutive series or pronominal markers;
- xL tone is a marker of the imperative series or pronominal markers;
- xH tone is a marker of the logophoric subjunctive pronominal markers.

7.1.10. Case oppositions in declinable nouns

In Eastern Dan, there is a subclass of nouns, “declinable nouns” (66 lexemes, in comparison: there are 2207 non-declinable nouns in the dictionary), which have morphological cases, see in detail (Vydrin 2011).⁴ Some of the case forms are distinguished only by tone, e.g. ‘foot, leg’: Superessive case $g\bar{e}e \sim, g\bar{e}aen$, Comitative case $g\bar{e}en \sim g\bar{e}aen$; ‘hand’: Adessive case $k\bar{o}$, Comitative case $k\bar{o}$; ‘eye’: Superessive case $y\bar{a}\bar{a}$, Comitative case $y\bar{a}\bar{a}$, etc.

The declension is irregular, most of declinable nouns have only two case forms which are distinguished by suffixes.

7.2. Tonal paradigms

7.2.1. Adjectival paradigms of number and intensity

As mentioned in §2.2.3, Eastern Dan adjectives have quasi-inflectional paradigms of number and intensity. The following morphological means are used: reduplication, suffixation, transfixation, suppletivism, tonal modification. Several inflectional types can be established, but in general, the paradigms are highly irregular and incomplete. Here are forms representing one of the types.

Basic form	Sg. intensive	Pl. intensive	Sg. super-intensive
$d\bar{r}rd\bar{r}$ ‘round’		$d\bar{r}rd\bar{r}$	
$n\bar{e}en\bar{e}$ ‘tasty’		$d\bar{e}ed\bar{e}$	$d\bar{e}k\bar{e}d\bar{e}k\bar{e}$
$sl\bar{a}sl\bar{a}$ ‘sweet’	$sl\bar{a}k\bar{a}sl\bar{a}k\bar{a}$	$sl\bar{a}sl\bar{a}$	
$gl\bar{o}gl\bar{o}$ ‘blunt’	$gl\bar{o}gl\bar{o}su$		$gl\bar{o}k\bar{o}gl\bar{o}k\bar{o}$
$f\bar{o}f\bar{o}$ ‘useless’	$f\bar{o}k\bar{o}f\bar{o}k\bar{o}$	$f\bar{o}f\bar{o}$	

Table 6. A fragment of the quasi-inflectional adjectival paradigm

⁴ In this paper, the nouns in question are referred to as “locative nouns”. However, in more recent publications, I prefer to call them “declinable nouns”, this term being more precise.

7.2.2. Personal pronouns and “predicative markers” (STAMP-words)

Eastern Dan has several series of personal pronouns. For each person-number, forms of all the series can be regarded as word-forms belonging to one lexeme, thus representing a paradigm. These paradigms are represented in Table 7. As can be seen, tonal modifications are among the formal means distinguishing the word forms.

Person	Singular					Plural				
	1	1+2	2	3	Refl.	1+3	1+2+3	2	3	Refl.
Non-subject	<i>ḡ</i>	<i>kō</i>	<i>ī/ū</i>	<i>à~</i>	<i>ṛ</i>	<i>yī</i>	<i>kwā</i>	<i>kā</i>	<i>à-dḡ</i>	<i>wō</i>
Autonomous	<i>bḡ</i>	<i>kō</i>	<i>ḃī</i>	<i>yṛ</i>	–	<i>yī</i>	<i>kwā</i>	<i>kā</i>	<i>wō</i>	–
Possessive	<i>bḡ</i>	<i>kōò</i>	<i>ū bā</i>	<i>à bā</i>	<i>ṛ bā</i>	<i>yī, yāà</i>	<i>kwāà</i>	<i>kāà</i>	<i>à-dḡḡ</i>	<i>wōò</i>
Possessive respectful							<i>kwēé</i>	<i>kēé</i>		
Restrictive	<i>bḡ ḡ, bḡḡ</i>	<i>kōo</i>	<i>ḃī</i>	<i>yṛṛ</i>	–	<i>yī</i>	<i>kwāa</i>	<i>kāa</i>	<i>wōo</i>	–
Selective	<i>bḡ́</i>	<i>kó</i>	<i>ḃí</i>	<i>yṛ́</i>		<i>yí</i>	<i>kwá</i>	<i>ká</i>	<i>wó</i>	
Negative focalized	<i>bḡḡḡ</i>	<i>kōáa</i>	<i>ḃīáa</i>	<i>yṛáa</i>		<i>yīyáa</i>	<i>kwáa</i>	<i>káa</i>	<i>wóáa</i>	

Table 7. Personal pronouns

In Dan, STAMP-words (“predicative markers” of the Mandeist tradition) are syntactic heads of the clauses. The person and number of the subject is indexed on the predicative marker; besides, they express tense, aspect, mode and polarity. In the same way as personal pronouns, the predicative markers constitute inflectional paradigms, and word forms belonging to one lexeme are distinguished by tones (among other formal means), see Table 8.

Person	Singular					Plural				
	1	1+2	2	3	Logoph.	1+3	1+2+3	2	3	Logoph.
Existential	<i>ā</i>	<i>kō</i>	<i>ī/ū</i>	<i>yṛ~∅</i>	<i>ṛ</i>	<i>yī</i>	<i>kwā</i>	<i>kā</i>	<i>wò</i>	<i>wō</i>
Conjoint	<i>á</i>	<i>kó</i>	<i>í/ú</i>	<i>ṛ~yṛ~dṛ~∅</i>	<i>ṛ́</i>	<i>yí</i>	<i>kwá</i>	<i>ká</i>	<i>wó</i>	<i>wó</i>
Perfect	<i>bḡ́</i>	<i>kó</i>	<i>bhá</i>	<i>yà/yá</i>	<i>yá</i>	<i>yá</i>	<i>kwá</i>	<i>ká</i>	<i>wà/wá</i>	<i>wá</i>
Prospective	<i>bḡḡ</i>	<i>kōo</i>	<i>ḃī~yī</i>	<i>yṛṛ</i>	–	<i>yī</i>	<i>kwāa</i>	<i>kāa</i>	<i>wōo</i>	–
Imperative	–	<i>kò</i>	<i>∅~bhṛ́</i>	–	–	–	<i>kwà</i>	<i>kà</i>	–	–
Subjunctive	<i>á</i>	<i>kó</i>	<i>í/ú</i>	<i>yṛ~∅</i>	<i>ṛ́</i>	<i>yí</i>	<i>kwá</i>	<i>ká</i>	<i>wò</i>	<i>wó</i>
Presumptive	<i>bḡḡḡ</i>	<i>kōò</i>	<i>bāà</i>	<i>yāà</i>	–	<i>yāà</i>	<i>kwāà</i>	<i>kāà</i>	<i>wāà</i>	–
Negative imperfective	<i>bḡḡḡ</i>	<i>kóo</i>	<i>báa</i>	<i>yáa, áa</i>	–	<i>yáa</i>	<i>kwáa</i>	<i>káa</i>	<i>wáa</i>	–
Negative gnomic				<i>áḡ</i>						
Negative perfective	<i>ḃī</i>	<i>kóo</i>	<i>ḃī</i>	<i>yī</i>	–	<i>yī</i>	<i>kwī</i>	<i>kī</i>	<i>wī</i>	–
Negative subjunctive	<i>bḡ́</i>	<i>kó</i>	<i>ḃá</i>	<i>yá</i>	–	<i>yá</i>	<i>kwá</i>	<i>ká</i>	<i>wá</i>	–
Negative consecutive	<i>ḃí</i>	<i>kwí</i>	<i>ḃí</i>	<i>yí</i>	–	<i>yí</i>	<i>kwí</i>	<i>kí</i>	<i>wí</i>	–

Table 8. Predicative markers

Both for the personal pronouns and the predicative markers, the series with xL on the 3 person forms and M or H on the others can be regarded as the those with lexical tones: the non-subject and possessive pronominal series; the existential and perfect predicative markers. Tones of all other series are grammatical.

8. Tonal classes of words

8.1. Differentiation of parts of speech by tone

Adjectives have quasi-inflectional paradigms which are characterized, among other things, by specific tonal melodies, see §7.2.1.

Only nouns can have tonal melodies L-HxL and M-xL (more precisely, this melody is typical of French and Manding loans, see §4.2.2).

Only verbs can have the tonal melody HxL-M, see §2.2.3.

8.2. Tonal classes of words (not necessarily related to the part-of-speech attribution)

8.2.1. Classes of nouns with respect to the construct state

Eastern Dan nouns form two tonal classes of nouns: unmodifiable nouns keep their lexical tone in the genitive construction, and modifiable nouns change their lexical tone to xL in construct state (status constructus), e.g. *βύλλα βῆ* ‘bearded man’ (*βῆ* ← *βῆ* ‘human being, man’). As mentioned in 7.1.6, the use of the xL-toned forms is conditioned by several factors, which are not always clear enough.

Only a small minority of nouns belong to this group; in my dictionary (Vydrin 2021b), only 53 nouns out of 2207 can acquire xL in the position of head noun in a genitive construction. As a trend, one can mention that most of nouns with generic meanings are modifiable, e.g.: *βῆ* ‘human being’, *δίταη* ‘talk, words’, *κῶη* ‘food’, *πᾶ* ‘thing’, *τό* ‘name’, *ῶν* ‘matter, affair’, *ωῦ* ‘animal; meat’, *γᾶ* ‘work’, *γῆ* ‘day’, *γῆα* ‘illness’, *ζᾶ* ‘dispute’. We also find in this group nouns for human statuses and objects which are most frequently mentioned in the everyday speech: *βλάα* ‘field; camp on the farm’, *ἀῖ* ‘child’, *δῆ* ‘woman’, *γβῶ* ‘pot, cauldron’, *κῆ* ‘farm; farm work’, *κῶ* ‘house’, *πῆ* ‘village’, *σῶ* ‘cloth’, etc. However, these are just trends, it is impossible to formulate a semantic (or any other) criterion for delimitation of both formal classes, and it is easy to find pairs of words of the same semantic field belonging to different formal classes, see table 9.

Modifiable nouns	Unmodifiable nouns
<i>γβῶ</i> ‘excrement’	<i>ωῆῆ</i> ‘urine’
<i>γλῶ</i> ‘banana’	<i>βᾶα</i> ‘cassava’
<i>τάεῆ</i> ‘bowl’	<i>κπεῆ</i> ‘wooden bowl’
<i>νῆ</i> ‘noise’	<i>ωῆ</i> ‘sound, noise’

Table 9. Some semantic pairs of modifiable and unmodifiable nouns

8.2.2. Classes of verbs with respect to tones

TAMP meanings are expressed in Dan by STAMP markers (see §7.2.2) and by the means of the verbal morphology. The so-called conjoint construction is formed by the predicative markers of the conjoint series and through tonal modifications of the verbs. Unlike in the neutral aspect construction (see §7.1.3), the conjoint construction tonal modifications follow more than one pattern. 13 models of tonal modifications have been identified.

- I. xH → M, only one verb: *δίλλᾶ* → *δίλλᾶ* ‘mush (a fruit)’.
- II. xH → L, for the structures CVη, CVV with identical vowels, CVVV: *βᾶῆ* → *βᾶῆ* ‘swallow’, *πῆῆ* → *πῆῆ* ‘boil’, *γῆῆ* → *γῆῆ* ‘knead’, *δίῆῆ* → *δίῆῆ* ‘deprive (of food)’.
- III. xH → xL, for the structures CV, CIV, CVV with different vowels: *βᾶ* → *βᾶ* ‘wear out, deteriorate’, *βῆ* → *βῆ* ‘rotten’, *γᾶ* → *γᾶ* ‘overripen’.
- IV. H → M, for the structure CV: *δῶ* → *δῶ* ‘buy’, *τό* → *τό* ‘remain’.
- V. M → M, for the types CV and CVV with different vowels: *γᾶ* ‘die’, *ζᾶ* ‘kill’; *ζῆα* ‘pierce’.
- VI. M → L, for the types CIVV, CVV with identical vowels, CVη: *κῶο* → *κῶο* ‘thrash’, *τῆῆ* → *τῆῆ* ‘grow dark’, *δῶη* → *δῶη* ‘count’, *γῶν* → *γῶν* ‘give present’.
- VII. M → xL, for the types CV and CVV with different vowels: *ωῶ* → *ωῶ* ‘lie down’, *ζῆῆ* → *ζῆῆ* ‘pass’.
- VIII. L → L: *φῆου* ‘steam (rice)’, *ωῆη* ‘pour’, *ζῆ* ‘tremble’.
- IX. L → xL: *κῆῆ* → *κῆῆ* ‘belch’.
- X. xL → xL: *γᾶ* ‘look’, *δίῆ* ‘moan’.
- XI. H-xL → L: *γῆ* → *γῆ* ‘smear’.
- XII. M-xH → L: *ωῆου* → *ωῆου* ‘stand up’, *τῆῆ* ~ *τῆῆ* → *τῆῆ* ~ *τῆῆ* ‘shake’.
- XIII. M-xL → L, for the type CVV with identical vowels: *δῆᾶ* → *δῆᾶ* ‘учить’, *κπεᾶῆ* → *κπεᾶῆ* ‘grow thin’.

Most often, tonal modifications are predictable from the lexical tone and/or the segmental structure of a verb, but in some cases, the modifications are lexically conditioned. The latter concerns the classes I and II, V and VII.

9. Diachrony of tone

No reconstruction of the tonal system is available for Dan. For some ideas about South Mande tonal reconstruction, see (Idiatov 2018).

10. Tonal notation in the writing

The first orthography for Eastern Dan was introduced in 1974 by the Summer Institute of Linguistics. In this orthography, tones are designated by punctuation symbols preceding a word. H and xH tones were not distinguished; tones of non-initial syllables in a word were unmarked.

In 1982, the orthography was reformed. With respect to tones, the H and xH tones were differentiated, and the mark for L tone was changed.

In 2014, a new orthography was elaborated; it was adopted in 2018, see (Vydrin 2019). In this orthography, tones are marked with diacritics; each tonal mark corresponds to a toneme.

Tonal notations in the three orthographies are compared in Table 10.

IPA	1974	1982	2014
xH	'v	"v	ǿ
H	'v	'v	acute
M	v	v	̄
L	.v	=v	̇
xL	-v	-v	̈
H-xL	'v-	'v-	̂
xH-xL	—	—	̈́
M-xL	—	—	̄`

Table 10. Tonal notations in three Eastern Dan orthographies

11. Calculation of the Tonal Density Index

Initial fragment of the text *Bhēn ȳr̀ t̄ò ȳīr̄r̀ bh̄à gbl̄ū bh̄à* ‘’ from the following book:

Kēbhōn Bābā Sēbāsīēn (Tiémoko Baba Sebastien). *Wón dh̄r̄. Kwēzl̄aan s̄áadhēbē* (There are things. A book of popular tales, in the Eastern Dan language). Ed. Gué Nestor, Vydrin Valentin, Zeh Emmanuel. Abidjan – Man: Pābhēnbhābhēn — EDILIS, 2019, 48 p.

The text is given in a transcription close to IPA: tones are designated by accents on each vowel, and vocalic nasality by the tilde. Floating xL tone is represented by an apostrophe after a word. The glosses used for this text are those of the Eastern Dan Corpus (Vydrin 2018); each phrase is provided with an English translation.

Dágl̄l̄ḡḡ-d̄l̄ *dō* *d̄l̄* *gū,*
 [H d̄l̄][M |gl̄ḡ][H .ḡ][H -|d̄l̄] [M dō] [L d̄l̄] [M gū]
 youth-DIM certain FOC be.PST\JNT
ȳr̄ *d̄ḡb̄l̄* *z̄à-d̄ḡ.*
 <[H ȳr̄]> [xH d̄ḡ][xL -|b̄l̄] <[xL z̄à]><[M -|d̄ḡ]>
 CONS.3SG.JNT mistress-human dispute\IZF-stand\JNT
 A young man had got engaged to a girl.

Ȳr̄ *ȳḡ* *k̄l̄* *d̄ēkp̄àēȳi* *b̄r̄rw̄*
 <[HxL ȳr̄]> [xL ȳḡ] [M k̄l̄] [xL d̄ē][L |kp̄à.ē]<[xL |ȳi]> [xH b̄r̄.r̄][xH |w̄ē]
 CONS\3SG.NSBJ bride.price do day-break-day\IZF many
k̄á, *ȳl̄* *dō* *k̄á,*
 [H k̄á] [M ȳl̄] [M dō] [H k̄á]
 with day certain with
ȳr̄ *p̄r̄* *r̄* *t̄áēñ-d̄l̄* *dō*
 <[HxL ȳr̄]> <[M p̄r̄]> <[M r̄]> [xH t̄á.ē][xL .ñ][M -|d̄l̄] [M dō]
 CONS.3SG.JNT\3SG.NSBJ say\JNT REFL.SG namesake-father certain

dē *ȳ* *dó* *ř̄* *dō'* *ř̄* *bā* *d̄b̄l̄*
 [xL dē] <[xL ȳ]> [H dó] <[M ř̄]> [M dō][xL -] <[M ř̄]> [M bā] [xH d̄][xL -|b̄l̄]
 before 3SG.SBJV go REFL.SG put\INF REFL.SG POSS mistress-human
bā' *dē* *gú,* *kř̄* *wó*
 [M bā][xL -] [xL dē] [H gú] [M kř̄] <[HxL wó]>
 ART\3SG before in SMLT 3PL.LOG.JNT\3SG.NSBJ

dā *dū* *túaa-bō.*
 [M dā] [xL dū] [L túaa]<[M -|bō]>
 father PL greeting-remove\JNT

He paid the bridewealth for many days, and one day he told one of his friends to accompany him to his fiancée to greet her parents.

Yř̄ *wó* *wlùù* *wó* *dō.*
 [H yř̄] <[H wó]> <[L wlù.u]> <[H wó]> <[M dō]>
 CONS 3PL.JNT rise\JNT 3PL.JNT go\JNT

They set off, they left.

Dó *wó* *wō,* *wó* *lòò* *bū* *bā*
 [H dó] <[HxL wó]> <[M wō]> <[H wó]> <[L lò.o]> [M bū] [M bā]
 go 3PL.JNT\3SG.NSBJ do\JNT 3PL.JNT arrive\JNT there there
kř̄ *d̄b̄l̄* *bā'* *dā* *yà* *s̄s̄* *zā,*
 [M kř̄] [xH d̄][xL -|b̄l̄] [M bā][xL -] [M dā] [L yà] [xH s̄.s̄] [M zā]
 SMLT mistress-human ART\3SG.NSBJ father 3SG.PRF cane-rat kill
ȳ *ř̄* *s̄s̄* *yà* *kā,* *à*
 [xH ȳ] <[H ř̄]> [xH s̄.s̄] <[xL yà]> <[xL kā]> [xL à]
 oil REL.3SG.JNT cane.rat 3SG.EXI>3SG.NSBJ do\NEUT 3SG.NSBJ
s̄b̄ā *yáá* *dř̄.*
 [xH sí][xH |b̄ā] <[H yá.a]> [H dř̄]
 resemblance 1PL.EXCL.NEG.IPFV be

When they arrived, it turned out that the father of the fiancée had killed a cane rat, and the cane rat was a very fat one, like no other.

Ā *gblúú* *wó* *bō,* *à* *wō*
 [xL ā] [xH gblúú] <[HxL wó]> <[M bō]> [xL à] <[M wō]>
 3SG.NSBJ stomach 3PL.JNT\3SG.NSBJ remove\JNT 3SG.NSBJ lie\JNT
ř̄ *dā* *yà'* *wō* *pēŋ*
 <[HxL ř̄]> [xH dā] <[xL yà]>[xL -] [M wō] [M pē.ŋ]
 REL\3SG.NSBJ grandmother 3SG.PRF\3SG.NSBJ do fire
tà *bā,* *à* *ȳ* *zū-sīā* *wé*
 [xL tà] [M bā] [xL à] [xH ȳ][xL -] [M zū][M -|sī.ā] [xH wé]
 on ART 3SG.NSBJ oil\3SG.NSBJ reach-DUR all.of.a.sudden
v̄ēŋv̄ēŋv̄ēŋdř̄, *d̄b̄l̄* *bā* *blāāb̄l̄*
 [xL v̄.ē.ŋ][cL |v̄.ē.ŋ][xL |v̄.ē.ŋ][M -|dř̄] [xH d̄][xL -|b̄l̄] [xL bā] [xL blā][xL .ā][xL -|b̄l̄]
 fizzling-ADV mistress-human POSS lover-human
ř̄ *dū* *bā* *pý,* *zūā*
 <[H ř̄]> <[M dū]> [M bā] [H pý] [M zū][xH .ā]
 REL\3SG.JNT come\JNT there also heart
dō *kō* *ř̄* *gō,* *à*
 [M dō] <[xL kō]> <[HxL ř̄]> [xL gō] [xL à]
 construction hand.CMM REL\3SG.JNT\3SG.NSBJ by 3SG.NSBJ

<i>s'ǎǎ</i>	<i>yáá</i>	<i>dǎ</i>
[xH sí][xH ǎǎ]	<[H yá.a]>	[H dǎ]
resemblance	3SG.NEG.IPFV	be

When the cane rat was disemboweled, and when the mother-in-law put the fat on the fire, the fat was falling on the fire veng, veng, veng, and the fiancé was desperate for it.

Glosses

- ADJ – adjective; adjectivizer suffix (-*sü*)
- ADV – adverbial suffix (-*wō* ~ -*bhō*)
- ART – definite article *bhā*
- AUT – autonomous pronominal series
- CMM – common case
- CNTR – contrastive pronominal series
- COM – comitative case
- CONS – consecutive conjunction (*yá*)
- COP – copula
- DIM – diminutive suffix
- DU – dual
- DUR – durative verbal suffix -*sā*
- EMPT — empathy marker (*ǎo*)
- EXI – existential series of PPM
- EXCL – 1 pers. exclusive plural pronoun/PPM
- FOC – a) focalization particle (*dhǎ* ~ *dhū*); b) grammatical high tone on certain focalized nouns
- GER – gerundive suffix -*sü*
- GN — gnomic series of predicative markers
- ICL — inclusory pronoun
- IMP – imperative series of PPM
- INCL. – inclusive pronoun
- IN – inessive case
- INF – infinitive marker (extralow tone suffixed to the verb stem)
- INSTR – instrumental/comitative/transformational postposition (*ká*)
- INT – intensive
- IPFV – imperfective
- IZF – status-constructus (izaphet) marker (an extralow tone on the head noun)
- JNT – conjoint series of PPM; tonal modification on the verbal stem in the conjoint construction
- LOC – locative case
- LOG – logophoric pronoun
- MSD – suffix of masdar (verbal noun, -*dhē*)
- NEG – negative
- NEUT – neutral aspect marker (extralow tone on the verbal stem)
- NMLZ — nominalization marker (extra-low tone)
- NSBJ – non-subject pronominal series
- PST – past
- PFV – perfective
- PL – plural
- POSS – possessive marker (*bhǎ*, *gǎ*); possessive pronoun
- PP – postposition with a broad meaning (*gǎ*)
- PRES – presumptive series of PPM
- PRF – perfect series of PPM
- PROH – prohibitive series of PPM
- PROS – prospective series of PPM
- PST — past

Q – general question particle (ěě, or a copy of the final vowel)
RECP – reciprocal pronoun
REFL – reflexive pronoun
REL – relativization marker (ʳ)
REM – remote
RETR – retrospective operator
SBJV – subjunctive series of PPM
SG – singular
SLA – selective marker (-süü)
SMLT – a multifunctional conjunction (k̄r̄)
SPN – supin marker (yän)
SUP – superessive case or postposition (bhä)
TOP – topicalization particle (zä)

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