Tones Worldwide

A typological questionnaire

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### Introduction

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### General Information on the language

**Language name**: Bambara

**Genetic affiliation**: Manding < Central Mande < Western Mande < Mande < Niger-Congo

**Area**: West Africa, Mali WE

**Language international code**: ISO 639-3: [bam]

### 1.1 TYPE: Tonal language type

**TYPE INDEX**

Iμ(2-P)+Dd Ds Up Ft AccNo IntYes {fus0; prdg0; word 1.29, 1.75} AF.WA

#### Coding

If the subject language has a traditional way of coding and classifying tonal distinctions, please, indicate correspondence of traditional way of writing to uniformed transcription[[1]](#footnote-1).

Bambara (2 level tonal units: L, H):

jɛ̀ ‘to gather’ jɛ1

jɛ́ ‘to whiten’ jɛ2

Traditional terms: Low, High.

***Comment 1****:* In the Bambara orthography of Mali, tones are never marked. In academic publications, tones are usually marked with diacritics (acute and grave accents, sometimes also circumflex and hachek for tonal combinations on single vowels), each author in his own way.

#### 1.1.1 Type of tonal system

In this section, please, indicate the predominant type of the tonal system.

* I ☐ Mainly level tonal units
* II ☐ Mainly contour tonal units
* III ☐ Other

[***Comment 2****:*](#_Comment_2.)Contour tones (rising, falling, rising-falling) are attested at the surface level, but they are interpreted as realizations of different level tones on one syllable.

#### 1.1.2 Tone bearing unit

What is the tone bearing unit in the subject language?

* μ ☐ [Mora](#_11_Types_of)
* σ ☐ [Syllable](#_9_Types_of)
* π ☐ [Foot](#_10_Types_of) (Pes)

***Comment 3****:* In Bambara, TBU of two levels are relevant: for the surface tones, the TBU is a mora, and for the underlying tones (tonemes), the TBU is a "tonal domain" which most often equals a phonological word (more rarely, a foot).

## Characteristic of language

Non tonal characteristics of the language are put in the Index in {braces}.

##### 2.1. Level of fusion

* ☐ 0 Absent
* ☐ 1 Low
* ☐ 2 Medium
* ☐ 3 High

*Comment 4:* There is no segmental fusion of morphemes in Bambara.

##### 2.2. Existence of segmental paradigmatic classes

* ☐ 0 Absent
* ☐ 1 Low
* ☐ 2 Medium
* ☐ 3 High

***Comment 5****:* Paradigmatic inflectional classes are absent.

##### 2.3.Average number of syllables in a word

☐ in text: feet 1.29; syllables 1.75

* ☐ in dictionary: feet 2.15; syllables 3.11.

***Comment 6****:* [Counting word length for Bambara (Ctr+click)](#_Counting_word_length)

## 3 Specific features of type I (level tones)

3.1. Number of tonal levels

* ☐ 2

**Comment 7**.

##### 3.2. Number of modulated tones

* ☐

**Comment 8**. [Surface modulated tones.](#_Comment_8.)

##### 3.2.1. Structure of modulated tones

[**Comment 9**.](#_Comment_9.)

## 4 Specific features of type II (contour tones)

##### 4.1. Number of tonemes (tonal units)

* ☐

[**Comment 10**.](#_Comment_10.)

## 5 Tone unit structure

Please, list all functional tonal units of the subject language

L (v1), H (v2)

[**Comment 11**.](#_Comment_11.)

##### 5.1. Tone unit structure

List suprasegment features are relevant for tone units representation (present in one)

* P ☐ modulation of pitch
* F ☐ phonation
* L ☐ length
* I ☐ interruption
* O ☐ other

##### 5.1.1. Types of phonations

Name phonations characteristic for the subject language

* λ ☐ Laryngealisation (Creaky voice)
* φ ☐ Pharyngealisation (Breathy voice)
* α ☐ Other

##### 5.1.1. Autonomity of phonations

Are phonations autonomous or an integral part of the tonal unit?

[**Comment 12**.](#_Comment_12.)

##### 5.2. Tonal sandhi

See Comment.

[**Comment 13**.](#_Comment_13.)*Contextual modifications of tones in Bambara*

### 6 Additional features of tonal system

* Dd ☐ Downdrift
* Ds ☐ Downstep
* Up ☐ Upstep
* Ft ☐ Floating tone

Please, put the corresponding letters with the sign +Xx into the section “Type” after brackets, e.g. Iσ5(3–1)+Dd

**[Comment 14](#_Comment_14.)**[.](#_Comment_14.)

### 7.2. Tonal behavior specific for certain classes of words

* ☐ Yes:
* ☐ No

"Predicative markers" (auxiliary words encoding TAM and polarity meanings in verbal phrases).

In verbs, prefixes represent tonal domains separate from the stem.

##### 7.2.1. Tonal paradigmatic classes

Are tonal paradigmatic classes characteristic for the subject language?

* ☐ Yes:
* ☐ No

[**Comment 16**.](#_Comment_16.)

## 7 Functions of tone

### 7.1 Functions of tone

Please consider, what are possible functions of tonal units in the subject language:

* L ☐ lexical
* D ☐ derivational
* X ☐ Inflexional
* O ☐ Other

Please, put the corresponding capital letters (it can be more than one) in square brackets into the section “Type”, e.g. Iσ5(3--1)+Dd [LX]

[**Comment 15**.](#_Comment_15.)

### 8 Other suprasegementals

##### 8.1. Word accent

##### 8.1.1. Does word accent exists in the subject language?

* ☐ Yes
* ☐ No

##### 8.1.2. If word accent exists, is there any correlation between accent and tone?

* ☐ Yes
* ☐ No

[**Comment 17**.](#_Comment_17.)

##### 8.2. Phrase intonation

##### 8.2.1. Does word accent exist in the subject language?

* ☐ Yes
* ☐ No

Please, put the corresponding information after the information on accent into the section “Type”, e.g. Iσ5(3--1)+Dd [LX] AccNo IntNo

[**Comment 18**.](#_Comment_18.)

## 9 Additional information, comments

Please add any remaining comments below.

[**Comment 19**](#_Comment_19.).

**End of the questionnaire. Thank you very much for your participation!**

## 

**Additional part**

## Types of syllables

List all possible types of syllables.

List all possible tonal variations with different types of syllables

## Types of feet

*List all possible types of feet.*

There are the following types of feet:

one syllable (light foot): V, CV, CVŋ;

two syllables (heavy foot) VV, CVV, CvLV, CvLvŋ.

*List all possible tonal variations with different types of feet*

Syllables which are part of a foot may bear different tonal units, so inside a heavy foot there are found the following combinations: HL (v́v̀), LH (v̀v́), MH (v̄v́), ML (v̄v̀), HM (v́v̄) and LM (v̀v̄): *kpàa3* ‘dry’, *kpáa2* ‘arbre (sp.)’, *kpáa3* ‘shed’; *tàa3* ‘grandfather’, *tāa3* ‘or (particle)’, *ta2a3* ‘you should’; *wɛ̀ɛ3* ‘to look for’, *wɛ́ɛ2* ‘how many’; *kɔ̀ɔ3* ‘hand’, *kɔ3ɔ3* ‘we, us’.

*по этому признаку CVŋ – однозначно тяжёлые стопы! ср. glèŋ́ пригарок, giŋ́ пробковое дерево, и т.д.*

The frequency of TU combinations varies considerably: the most frequent being HL and LH. The less frequent is the combination ML (v̄v̀) attested only for CVV feet.

## Types of morae

List all possible types of morae.

List all possible tonal variations with different types of morae

##### **[Comment](#_Coding) 1.** The CIL way of coding tones

##### **Comment 2.**

##### **[Comment 3.](#_1.1.2_Tone_bearing)** The notion of foot

##### **[Comment 4.](#_2.1._Level_of)**

##### **[Comment 5.](#_2.2._Existence_of)**

##### **[Comment 6.](#_2.3.Medium_number_of)** Counting word length for Bambara

100 word text was traditional narrative without French borrowings. In the text, contextual fused forms (primarily, "predicative markers" with subsequent personal pronouns) are counted as one word, one syllable and one foot, e.g.: *y'à* (pronounced as *yáà,* a non-fused form, *yé à* pfv.tr 3sg*,* is also acceptable, but rarely realized).

Average word length in text:

1.29 feet (129 feet per 100 words), 1.75 syllables (175 syllables per 100 words).

1. words of the dictionary (Dumestre 2011) starting with the letter F.

2.15 feet; 3.11 syllables.

The dictionary used for the counting is a big one, it includes a great number of derived and compound words.

##### **Comment 7.**

##### **Comment 8.**

Bambara has no modulated tones on the underlying level. In the surface realization, there are three modulated tones (rising, fallin, rising-falling) which are interpreted as combinations of level tones on one syllable.

##### **[Comment 9.](#_3.2.1._Structure_of)**

Falling tone appears as a context variant for the low-tone in certain postpositions after a high-tone word.

A low-tone postposition *la*1 ‘in, under’ changes its tone according to another pattern: after middle or low tones, it keeps the low tone; after the high tone it acquires the F modulated tone: *vɛ̀ diin là* [vɛ1 dĩ2ĩ2 la1] ‘under a kapok tree’; *gàà là* [ga1a1 la1]‘under the thatched roof’; *fɛ́ ɛ́ lâ* [fɛ3 ɛ3 la31] ‘in the house’.

This is also true for some other words (see Comment 13. Coordinative pattern).

##### **[Comment 10.](#_4.1._Number_of)**

##### **[Comment 11.](#_4.1.1._Toneme_structure)**

##### **[Comment 12.](#_4.1.1.1._Toneme_structure)**

##### **[Comment 13.](#_4.2._Tonal_sandhi)** Contextual modifications of tones in Bambara

The contextual modifications of tones in Bambara can be described by the following rules and conventions.

1) All syllables can be classified into (tonally) dominant and (tonally) recessive ones. A dominant syllable has a tone which is attributed to it lexically; no tone is lexically attributed to a recessive syllable. A sequence of a dominant syllable and all subsequent recessive syllables is a tonal domain. Minimally, a tonal domain may consist of a dominant syllable (without recessive syllables). By default, a tonal domain equals a phonological word; there are however some words containing two tonal domains.

2) By default, the tone of a dominant syllable spreads on all the recessive syllables of the tonal domain. E.g. (the dominant syllables are in bold): ***sì****ri* 🡪 ***sì****rì* ‘to attach’, ***jú****gu* 🡪 ***jú****gú* ‘evil’.

3) When two low-tone domains follow one another, a buffer high tone is attributed to the final segment (a mora, a syllable, a foot, a component of a compound word) of the first low-tone domain. E.g.: ***mù****so* ***sà****ba* 🡪 ***mù****só* ***sà****bà* ‘tree women’.

##### **[Comment 14.](#_5_Additional_features)**

Downstep plays in Bambara a grammatical function: it appears as a definite article at the end of noun phrase. E.g. (superficial tones are marked; the downstep is indicated by an indexed "!"):

|  |  |  |
| --- | --- | --- |
| *Jírí!* | *tɛ́* | *yèn.* |
| tree\art | neg.cop | there |

‘There is no tree there’.

Besides, a downstep may be a part of a tonal contour of a word: *jɔ̃́`* ‘who?’, *mĩ́`* relativization marker’, *bí`* ‘ten’ (in compound numerals), etc.

Downdrift is, in fact, a floating low tone.

Upstep is an automatic rising of the final high tone in a sequence of high tones followed by a low tone.

##### [**Comment 15.**](#_3_Functions_of)

The inflectional function of tone:

1) The definite article is represented by a floating low tone at the end of a noun phrase (realized as a downstep), see Comment 14.

2) Conversion of tonally dominant syllable into recessive ones (so-called "tonal compactness") plays a syntactic role: it signals more tight syntactic relation between words (or can be also interpreted as a formal means of word compounding). E.g.:

(underlying tones:) *jàkuma` sèn`,* (surface tones:) *jàkúmá! sẽ̌`* ‘a paw of a cat’

(underlying tones:) *jàkuma sen`,* (surface tones:) *jàkùmà sẽ́`* ‘cat paw’

The derivational function of tone:

In Bambara, verbal prefixes are tonally autonomous (i.e., a prefix represents a tonal domain separate from the tonal domain of the verbal stem). When a prefixal verb is converted into noun, it becomes "tonally compact" (i.e., the entire word functions as one tonal domain). E.g.:

(underlying tones:) *lá|jɛ̀*, (surface tones) *lájɛ̀* ‘to gather’ 🡪 (underlying tones:) *lájɛ,* (surface tones) *lájɛ́* ‘meeting’ (the latter form is given without tonal article).

For a number of prefixal verbs, the abovementioned merger of tonal domains is accompanied with an attribution of a low tone to the word; this low tone can be regarded as a derivational morpheme of nominalization. E.g.:

(underlying tones:) *lá|dège*, (surface tones) *ládègè* ‘to imitate’ 🡪 (underlying tones:) *làdege,* (surface tones) *làdègè* ‘imitation’ (the latter form is given without tonal article).

##### **[Comment 16.](#_7.2.1._Tonal_paradigmatic)**

##### **Comment 17.**

##### **Comment 18.**

##### **Comment 19.**

##### **Comment 20.**

##### **Comment 21.**

1. Uniformed transcription of our Project assumes the designation of tonal units with numbers. For level systems: 1 - the lowest level, then, depending on the number of levels: 2, 3, 4, 5. [↑](#footnote-ref-1)