Tones Worldwide

A typological questionnaire

### General Information on the language

**Language name**: Sochiapam Chinantec

**Genetic affiliation**: Chinantecan<Otomangue

**Area**: Central America, Mexico

Please, put geographical information with detalization in the end of the Index.

AF (Africa), AS (Asia), EU (Europe), AM (America), AO (Australia and Oceania).

N (North), E (East), W (West), S (South), C (Central),

H (Himalaya), A (Amazonia); +

e.g.: AM.C (America.Central America); EU.E (Europe.Eastern Europe)

**Language international code**: ISO 639-3: cso

### 1.1. TYPE: Tonal language type

**TYPE INDEX**

**IIIσ(3, 7 (14)—PFα) [LDX] AccNo IntYes{fus3, prdg3, word 1.3}AM.C**

#### 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).

Sochiapam Chinantec (3 level tones: high /1/, mid /2/, low /3/ and 4 contour tones /21/, /32/, /13/, /23/).

tɐ1 ‘be\_prompt.FUT.1SG’ ta3

tɐ2 ‘be\_prompt.PRS.1SG’ ta2

tɐ3 ‘foot.POSS.3SG’ ta1

tɐ13 ‘fight.FUT.1PL’ ta31

tɐ23 ‘fight.PRS.1PL’ ta21

tɐ21 ‘work’ ta23

tɐ32 ‘ladder’ ta12

tɐ́1 ‘entire’ ta3b

tɐ́2 ‘recently’ ta2b

tɐ́3 ‘a weaving’ ta1b

tɐ́13 ‘carve.FUT.1PL’ ta31b

tɐ́23 ‘carve.PRS.1PL’ ta21b

tɐ́21 ‘weave.FUT.3’ ta23b

tɐ́32 ‘weave.PRS.3’ ta12b

***Comment 1****:*

#### 1.1.1. Type of tonal system

In this questionnaire we will distinguish between two broad classes of tonal systems: **level tone systems** and **contour tone systems**. If the language in question does not belong to any of these types, put “other” and describe the type of the language in comments.

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

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

Please in the section **TYPE INDEX** mark the corresponding Latin numbers (I, II or III).

The option III “Other” is provided for so called “register languages” and other types which do not clearly belong to the first two classes.

[***Comment 2****:*](#_Comment_2.)

#### 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)

Please in the section **TYPE INDEX** mark the corresponding letter, e.g. Iσ.

***Comment 3****:*

## 2. 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

Fusion of morphemes is a change in their phonemic composition. In this section, please, indicate the degree of fusion in the subject language. Describe the level of fusion as follows, **absent**, **low** (one or two cases), **medium** (fusion happens in some cases) or **high** (fusion is typical for morpheme boundaries).

In the section **TYPE INDEX** mark in braces the corresponding level of fusion **{fus1}**.

If the subject language completely lacks inflexional and/or derivational affixes, put **fus0.**

[***Comment 4****:*](#_Comment_4.)

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

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

##### Segmental paradigmatic classes are groups of lexemes whose inflexional paradigms differ at the segmental level, and this segmental difference is not phonetically or morpho-phonologically conditioned, i.e., it is unpredictable. If it is always determined by the context (as in many Turkic languages), please, in braces mark **prdg0**. If it is always necessary to know the paradigmatic class of the lexeme in question (as in Russian), mark **prdg3**.

In the section **TYPE INDEX** mark in braces the corresponding level **{ fus1 prdg0}**.

[***Comment 5****:*](#_Comment_5.)

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

☐ in text: 1.3

Please, count the number of syllables in a text containing 100 words. It should be a spontaneous narrative, if possible, without recent borrowings, personal and geographic names, preferably without new names for modern realities.

* ☐ in dictionary: no data

Please, count the number of syllables 100 words of a dictionary the subject language in a row starting with a letter neutral concerning the distribution of parts of speech.

***Comment 6****:*

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

Is the language in question belongs to type II, skip this section. If the language is marked as “**other**” (type III) and the number of level tones is more than two, please, note it in this section.

3.1. Number of tonal levels

☐ 1

☐ 2

☐ 3

☐ 4

☐ 5

Please, put the corresponding number (in brackets) into the section **TYPE INDEX** after the indication of the language type, e.g. Iσ**(3).**

***Comment 7.***

3.2. Number of modulated tones

* ☐ 4

If the language has no modulated tones, skip this question.

***Comment 8****.*

3.2.1. Structure of modulated tones

Please, list all possible types of modulated tonal units, and their proposed term:

e. g. HL (high – low), proposed term F (falling).

If the language has no modulated tones, skip this question.

/23/, /12/ (rising tones), /31/, /21/ (falling tones)

***Comment* *9.***

## 4 Specific features of the languages of the type II (languages with contour tones)

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

* ☐ 7 (14) может быть этот пункт для всех языков давать? или хотя бы для смешанных тоже? а то получается что для уровневых и смешанных мы даем отдельно уровни и отдельно контурные, и только для контурных мы даем общее число единиц. Ведь в трике число уровней не равно число уровневых тонов!.

Please, put the corresponding number (in brackets) into the section **TYPE INDEX** after the indication of the language type, e.g. II**(6)**. вот еще возникает проблема Для смешанных языков интересно и число уровней, и число тональных единиц, и еще число тональных единиц вместе с учетом фонаций поэтому в индексе я указал три параметра.

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

## 5 Tone unit structure

Please, list all functional tonal units of the subject language

/1/, /2/, /3/, /23/, /12/, /31/, /21/, /1b/, /2b/, /3b/, /23b/, /12b/, /31b/, /21b/

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

##### 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 вот что это такое? не фонация ли?
* O ☐ other

In the section **TYPE INDEX**, please, put the corresponding Capital letters (in brackets after the number of tonal units, dividing these numbers with n-dash) e.g. II(6–**PFI**).

##### 5.1. Phonations. Types of phonations

If the language has no phonations, skip this section.

Name phonations characteristic for the subject language

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

[***Comment 12****.*](#_Comment_11.)

##### 5.1.1. Autonomity of phonations

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

нужно ли здесь yes/no?

* ☐ Yes:
* ☐ No

[***Comment 13****.*](#_Comment_11.)

##### 5.2. Tonal sandhi

List variants of changes depending on tonal context.

[***Comment 14****.*](file:///D%3A%5CFOX%5CTONES%5CAnkety%5CAnketa_clean.docx#_Comment_11.)

### 6 Additional features of tonal system

Are the following phenomena characteristic for the subject language?

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

In the section **TYPE INDEX,** please, put the corresponding letters with the sign +Xx into the section “Type” after brackets, e.g. Iσ5(3**)+Dd**

***[Comment 15](file:///D%3A%5C%5CFOX%5C%5CTONES%5C%5CAnkety%5C%5CAnketa_clean.docx%22%20%5Cl%20%22_Comment_11.)****[.](file:///D%3A%5C%5CFOX%5C%5CTONES%5C%5CAnkety%5C%5CAnketa_clean.docx%22%20%5Cl%20%22_Comment_11.)*

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

Do words of different word classes (e.g. nouns, verbs, pronouns) have different tonal behavior in the subject language?

* ☐ Yes:
* ☐ No

[***Comment 16****.*](file:///D%3A%5CFOX%5CTONES%5CAnkety%5CAnketa_clean.docx#_Comment_11.)

##### 6.3. Tonal paradigmatic classes

Are tonal paradigmatic classes characteristic for the subject language?

* ☐ Yes:
* ☐ No

[***Comment 17****.*](file:///D%3A%5CFOX%5CTONES%5CAnkety%5CAnketa_clean.docx#_Comment_11.)

## **7 Functions of tone**

Please, mark the functions of tonal units in the subject language:

* L ☐ Lexical
* D ☐ Derivational
* X ☐ Inflexional
* O ☐ Other

In the section **TYPE INDEX,** please, put the corresponding capital letters (it can be more than one) in square brackets e.g. Iσ5(3)+Dd **[LX]**

***[Comment 18](file:///D%3A%5C%5CFOX%5C%5CTONES%5C%5CAnkety%5C%5CAnketa_clean.docx%22%20%5Cl%20%22_Comment_11.)****[.](file:///D%3A%5C%5CFOX%5C%5CTONES%5C%5CAnkety%5C%5CAnketa_clean.docx%22%20%5Cl%20%22_Comment_11.)*

### 8 Other suprasegementals

##### 8.1. Word accent

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

* ☐ Yes
* ☐ No

In the section **TYPE INDEX,** please, put the corresponding information after square brackets,

e.g. Iσ5(3)+Dd [LX] **AccNo**

[***Comment 19****.*](file:///D%3A%5CFOX%5CTONES%5CAnkety%5CAnketa_clean.docx#_Comment_11.)

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

* ☐ Yes
* ☐ No

[***Comment 20****.*](file:///D%3A%5CFOX%5CTONES%5CAnkety%5CAnketa_clean.docx#_Comment_11.)

##### 8.2. Phrase intonation

##### Does phrase intonation exists in the subject language?

* ☐ Yes
* ☐ No

In the section **TYPE INDEX,** please, put the corresponding information after the information about the accent, e.g. Iσ5(3)+Dd [LX] AccNo **IntNo**

[***Comment 21****.*](file:///D%3A%5CFOX%5CTONES%5CAnkety%5CAnketa_clean.docx#_Comment_11.)

## **9 Additional information, comments**

Please add any remaining comments below.

[***Comment 22****.*](file:///D%3A%5CFOX%5CTONES%5CAnkety%5CAnketa_clean.docx#_Comment_11.)

## **10. Sources**

Put here the list of sources used (books, articles, databases, field materials, etc)

1) D.P. Foris. A grammar of Sochiapan Chinantec. Ph.D. dissertation. Univ. of Auckland, 1993.

2) Jáɨ¹³ quioh²¹ lánh³ jmɨ́¹ zian² tsú² jmɨ́¹tin². Available on <https://mexico.sil.org/resources/archives/55630>

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

**Types of syllables**

List all possible types of syllables.

List all possible tonal variations with different types of syllables

Final syllables: HCV1V2V3ʔ, where H=ʔ, h, V1 and V3  are non-syllabic vowels. All the components of the syllable except V2 are optional. These syllables can have both level and contour tones, ballistic phonation also can be found in final syllables.

Non-final syllables: HCV1V2. All the components of the syllable except V2 are optional. These syllables can have only 3 level tones without ballistic phonation.

**Types of feet**

**Types of morae**

##### **Comment 1.**

This coding of tones is used in Foris’s grammar. Index b denotes «ballistic stress».

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

Only level tones are found in non-final syllables.

##### **Comment 3.**

##### **Comment 4.**

Fusion is very characteristic for Sochiapam Chinantec. Internal inflection (both tonal and segmental) is the only means of expressing certain grammatical categories, e. g. person/number, present or future tense, transitivity, animacity, reciproc, reflexive, as we can see from the paradigm of the verb to12b ‘toast’.

|  |  |  |
| --- | --- | --- |
| toast | Present | Future |
|  | Sg | Pl | Sg | Pl |
| 1 | to2 | tau21 | to3 | tau31 |
| 2 | tauʔ12 | tauʔ3b |
| 3 | to12b | tau1 |

Some verbs have suppletive paradigms.

|  |  |  |
| --- | --- | --- |
| lie down | Present | Future |
|  | Sg | Pl | Sg | Pl |
| 1 | θã12 | θã21 | θã23 | θã31 |
| 2 | θãʔ21b | tiãʔ21 | θãʔ31b | tiãʔ31 |
| 3 | kiau12 | tiãʔ21b | kio12b | tiãʔ1b |

Person/number of possessor also can be marked by means of tonal and/or segmental inflection or suppletive forms.

|  |  |  |  |
| --- | --- | --- | --- |
|  | child | ear | father |
|  | Sg | Pl | Sg | Pl | Sg | Pl |
| 1 | hõ12b | hõ2 | kua12 | kua3b | ŋiuʔ12 | hmei2b |
| 2 | hõʔ12b | kuaʔ1b | ŋieʔ2 |
| 3 | hõ2 | kua3b | hmei2b |
| Vocative | hõ1b |  | tia23 |

##### **Comment 5.**

There are more than 150 verbal tonal paradigms and more 70 nominal tonal paradigms, if we also consider segment alternations, the total number of paradigms will be even greater.

##### **Comment 6.**

100 word text was traditional narrative without Spanish borrowings, haɯ31b kioʔ23 lãʔ1b hmɯ3b θiã2 cu2b hmɯ3btĩ2 (Historia sobre la vida de los antepasados). Average word length in this text is 1.3 syllable per word. A verb can attach up to 5 prefixes.

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

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

Only final syllables can have modulated tones, non-final syllables have only three simple tones.

##### **Comment 9.**

##### **Comment 10.**

«Ballistic phonation» сan be combined with any of the 7 tones, thus the total number of tonal units is doubled

##### **Comment 11.**

##### **Comment 12.**

Foris describes two types of «stress» for final syllables. They can have either «ballistic stress», which is characterised by brevity and high intensity, or «controlled stress», which is characterised by length and medium intensity. Since the opposition of short and long vowels is absent in Chinantec, we consider «ballistic stress» as a special type of phonation, namely «ballistic phonation». «Stress» on non-final syllables is characterised by brevity and medium intensity, thus the opposition of two types of phonation is neutralised in non-final syllables [Foris, 1993: 23 – 24]. According to Foris, “most native speakers equate the high and the mid tones of non-final syllables with ballistic /1/ and /2/, so they are marked with an accent on the nuclear vowel” [Foris, 1993: 36]. Unlike Foris, Since this opposition is neutralised in non-final syllables, we do not mark ballistic phonation in these syllables.

##### **Comment 13.**

«Ballistic phonation» сan be combined with any of the 7 tones, both level and contour tones, thus we can consider phonation as an autonomous part of the tonal unit. However, in the verbal and nominal paradigms, the tone+phonation complex functions as a single unit, see Comment 17, 18. In some cases, the two forms in the paradigm may differ only by phonation: ʔlia12 ‘push.PRS.3’ vs. ʔlia12b ‘push.FUT.3’

##### **Comment 14.**

Tonal sandhi:

1) /3/+/12b/>/3/+/23b/, if tone /12b/ is preceded by a high tone, it permutes to /23b/.

2) ka1>ka3 / /3/ \_\_/2(b)/, /12(b)/, /23(b)/, if ka1- (PAST) is preceded by a high tone and followed by a mid or rising tone, it optionally permutes to ka3- ;

3) ka1>ka2 / /3/, /2/ \_\_/1(b)/, /12(b)/, /23(b)/, if ka1- (PAST) is preceded by a high or mid tone and followed by a low or rising tone, it optionally permutes to ka2- .

##### **Comment 15.**

When tone /31/ follows a /3/, it begins slightly higher than /3/ [Foris, 1993 : 26]Является ли это апстепом????

##### **Comment 16.**

Both verbs and nouns have a large number of tonal paradigms. See Comment 17

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

Tonal paradigmatic classes are very characteristic for Sochiapam Chinantec. Here are fragments of 5 verbal paradigms:

|  |  |  |  |
| --- | --- | --- | --- |
| push | Present | Future | Past |
|  | Sg | Pl | Sg | Pl | Sg | Pl |
| 1 | ʔlia21b | ʔlia21b | ʔlia31b | ʔlia31b | ka1ʔlia1b | ka1ʔlia31b |
| 2 | ʔliaʔ12 | ʔliaʔ3b | ka1ʔliaʔ3b |
| 3 | ʔlia12 | ʔlia12b | ka1ʔlia1b |

|  |  |  |  |
| --- | --- | --- | --- |
| whip | Present | Future | Past |
|  | Sg | Pl | Sg | Pl | Sg | Pl |
| 1 | huoʔ12b | huoʔ12b | huoʔ23 | huoʔ23 | ka1huoʔ12b | ka1huoʔ23 |
| 2 | huoʔ12b | huoʔ23 | ka1huoʔ1 |
| 3 | huoʔ21b | huoʔ1b | ka1huoʔ1b |

|  |  |  |  |
| --- | --- | --- | --- |
| make | Present | Future | Past |
|  | Sg | Pl | Sg | Pl | Sg | Pl |
| 1 | hmu2 | hmu21b | hmu3 | hmu31b | ka1hmu12b | ka1hmu31b |
| 2 | hmuʔ12 | hmuʔ3b | ka1hmuʔ1 |
| 3 | hmu2 | hmu1 | ka1hmu1b |

There exists 86 tonal paradigms, which have separate cells for 1SG, 1PL, 2nd person and 3rd person.

|  |  |  |  |
| --- | --- | --- | --- |
| ignite | Present | Future | Past |
|  | Sg | Pl | Sg | Pl | Sg | Pl |
| 1, 2  | ŋiiʔ23 | ŋiiʔ23 | ka1ŋiiʔ23 |
| 3 | ŋiiʔ21 | ŋiiʔ1 | ka1ŋiiʔ1 |

There exists 29 tonal paradigms, which have one cell for 1st and 2nd persons and another cell for 3rd person.

|  |  |  |  |
| --- | --- | --- | --- |
| sleep | Present | Future | Past |
|  | Sg | Pl | Sg | Pl | Sg | Pl |
| 1, 2, 3  | kuõu12 | kuõu12 | ka1kuõu2 |

There exists 40 tonal paradigms, which have one cell for all persons.

As for nominal inflection, if every variation of tone is taken into account, then over 70 paradigms would need to be established. When the tone of the form of the 3rd person is disregarded, the number of paradigms can be reduced to 18 [Foris, 1993: 263].

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

1) Lexical function: ta23 ‘work’ vs. ta12 ‘ladder’.

2) Derivational function: hnaɯ23 ‘lid, closure’> hnaɯ12 ‘close, shut’, ʔma2b ‘tree, wood’> ʔma2 ‘paralysed’.

3) Inflexional function: tone change can mark number-person of subject, object or possessor, animacy of subject or object, transitivity, reflexive, reciproc, tense (present and future). Tense, mood, andative/ventive prefixes also may cause tone change.

a) transitivity: ŋaɯ21b ‘laugh.PRS.3’ > ŋaɯ12b ‘laugh\_at.PRS.3’

b) animacy: ʔma12 ‘hide.PRS.3 (inanimate)’>ʔma2 ‘hide.PRS.3 (animate)’

c) number-person: hmu2 ‘make.PRS.1SG, make.PRS.3’ vs. hmu21b ‘make.PRS.1PL’

d) tense: hmu2 ‘make.PRS.3’ vs. hmu1 ‘make.FUT.3’

e) reciproc: hŋɯʔ2 ‘kill.PRS.3’ vs. hŋɯʔ21b ‘kill.REC.PRS.3’

f) reflexive: hŋɯʔ2 ‘kill.PRS.3’ vs. hŋɯʔ12 ‘kill.REFL.PRS.3’

g) possessor: kua12 ‘ear.P.1SG’ vs. kua3b ‘ear.P.3, ear.P.1PL’

h) tense prefix: ʔlia12 ‘push.PRS.3’ vs. ka1ʔlia1b ‘push.PRT.3’

Tonal internal flexion may be accompanied by segmental alternations: to2 ‘toast.PRS.1SG’ vs. tau21 ‘toast.PRS.1PL’

4) Other functions: tone 12b in the first syllable of utterance is perturbed to 23b to mark question intonation.

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

Foris describes three types of stress in Chinantec, two in final syllables and one in non-final syllables, i.e. according his description, each syllable in the word must have a stress. In this questionnaire we describe this “stress” as a special type of phonation. See comment 12.

Recent borrowings from Spanish behave in a special way. When a Spanish word has stress on any non-final syllable, the stressed syllable is given a high tone with high intensity similar to a «ballistic syllable», but with length similar to that of a «controlled syllable». See the table:

|  |  |  |
| --- | --- | --- |
|  | short duration | long duration |
| high intensity | ballistic final syllables | recent borrowings from Spanish, non-final stressed syllables |
| medium intensity | non-final syllables in Chinantec words | controlled final syllables |

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

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

Foris notes two specific patterns of intonation, namely question and anger intonation. One way of forming yes/no question is by placing the first syllable of the first word on a higher than normal pitch, but usually it as level or contour one. Anger intonation is marked by the use of a higher register for all the tones in the utterance, and by a diminishing of the span between each of the tone levels [Foris, 1993: 34]

##### **Comment 22.**

Men can use whistle speech to facilitate long distance communication. Three methods are used for this purpose: 1) whistling by putting the tongue against the alveolar ridge 2) bilabial whistling 3) finger-in-mouth whistling. Also falsetto speech can be used for mid- and far-distance communication [Foris, 1993: 29 – 30].

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)