

SIL-Mexico Branch Electronic Working Papers #012: Ngigua (Popoloca) Pronouns

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1. Introduction¹

The pronoun system in Ngigua (Popoloca) as spoken in Tlacoyalco (see section 1.2) and the surrounding areas is rich and very productive. This is especially true of the third person pronouns where numerous nouns have a specific pronomial form as seen in sections 2-4. In addition to this, any noun that does not have one of these specific pronouns can be used as a pronoun simply by removing the stress on that noun, explained and illustrated in section 5.

Ngigua (Popoloca) pronouns do not change to indicate how they are used in a sentence; there is only one form for each person.

	Singular	Plural
1st. person	ja'an	ja'an ná
2nd. person familiar	ja'a	ja'a ra
2nd. person formal	suixin	suixin nthá
3rd. person familiar	je'e	je'e ná
3rd. person formal	je'e sen	je'e sen

In example (1) below **ja'an** is the subject, in example (2) it is the object of the verb and in example (3) it indicates possession².

(1) **Ja'an** bikon naa kunia.
I saw a dog
I saw a dog.

(2) Chjana **ja'an** naa xranchitja.
give.me me a hat
Give me a hat.

(3) Ruthena **ja'an** juxon chjon dikunchjian ruthe.
shawl.my my pure wool is.made shawl
My shawl is made of pure wool.

But the richness of the pronoun system is shown in the third person forms.

¹ I would like to thank the many Ngigua people who taught me their language, beginning back in 1971 with Natividad Gamez and her husband Pedro Hernández. More recently Jacob Luna Hernández and Veronica Luna Villanueva have helped me unravel the complexities of their language.

² For more information on how possession is shown in Ngigua, see Stark & Luna (2006: section 5.4).

1.1. The pronoun *je'e*

At first impression one could easily think that Ngigua pronouns in the third person are quite limited because *je'e* can refer to anything: men, women, animals and all other things. Below in example (4), *je'e* refers to a man, in (5) five to a woman, in (6) to fruit, and in (7) to an animal. Although all the examples were provided by native speakers of Ngigua several years ago, in a careful read through recently, others wanted to use an unmodified *je'e* only for people. Their changes appear in parentheses in examples (6) and (7).

- (4) *Je'e* kuanda naa carro nii.
he picked a truck.load dry.corn
He harvested a truckload of corn.
- (5) Are María sakjui, *je'e* ndachro ixin tuin tsii.
when Mary went she said that soon will.come
When Mary left she said she'd be back soon.
- (6) Thi nthaxenua nchechjian nthaxenua, ko *je'e* (xe) anto jni
the tree.chichituna makes it(tree) chichitunas and they very tasty
xe jine chujni.
it(cactus fruit) eat people
The chichituna cactus produces chichitunas, and they are very tasty.
- (7) Are naa kuxiigo jine'a jian, *je'e* (ba) tulantha ba.
when an animal eat.not well it becomes.thin it(anim.)
When an animal doesn't eat well, it becomes thin.

But this is only part of the story. There are actually numerous third person pronoun forms in Ngigua. Following some background information below, section 2 covers the common short pronouns. Section 3. then discusses the pronouns that echo a prefix. Pronouns which are derived from nouns beginning with *ji* are covered in section 4. Finally, the unique ability to form pronouns from any noun (not already covered in sections 2 through 4) by simply removing the stress is exemplified in section 5.

1.2. Background information

The language spoken in San Marcos Tlacoyalco is a member of the [Popolocan](#) language family. San Marcos Tlacoyalco is located in the state of Puebla in southern Mexico, about 25 miles north of Tehuacán and five miles southeast of the municipal seat of Tlacotepec de Juárez. It is also spoken in the nearby town of San José Buenavista and in a high valley on the other side of the mountain just to the east of San Marcos. The towns and hamlets of that valley are Piedra Incada, Palo Verde, San Juan Sacabasco, San Martin Esperilla, Sopantle and San Francisco Esperilla. In addition there are numerous speakers in Cabo San Lucas, B.C. and near San Antonio, Texas. Speakers of this language use the name Ngigua to refer to it. It has also been referred to as Northern Popoloca and Tlacoyalco Popoloca.

The population of all the towns speaking the San Marcos variety of Ngigua is about 30,000 people, with the vast majority living in San Marcos itself. The data in this paper was collected beginning in 1971 up to the present (2011).

As with other Otomanguan languages, Ngigua is a tonal language, having three levels of tone. There are words with the same vowels and consonants but with different tones and different meanings. In the popular orthography tone is not marked unless by not writing it there would be confusion (for example the word for one is *naa* with mid tone followed by a high tone and the word for nine is also *naa* but with two low

tones.³) When tone is indicated, high tone is written with an acute accent over the vowel (**á**), low tone by underlining the vowel (**ǎ**) and mid tone is unmarked. (In this paper only two pairs of pronouns will be marked: **ná** *we* and **na** *they* along with **no** *it* referring to a corn plant or a cornfield and **no** *it* referring to rope.) Examples of tone sets:

dí'í	<i>I drink</i> (both tones are high tones)
di'i	<i>you drink</i> (both tones are mid tones)
di'ǐ	<i>vapor, steam</i> (both tones are low tones)
yaó	<i>despacio</i> (the first tone is mid and the second is high)
yao	<i>sharp</i> (both tones are mid tones)
yaǒ	<i>up to here and no further</i> (both tones are low tones)

See Stark & Machin (1977) for more information about tone in Nginua. For a description of the Nginua orthography, see the appendix.

2. Common short pronouns

The use of the general third person pronoun **je'e** was shown above in section 1.1. **Je'e** is rarely used alone, however, and this is part of what makes the pronoun system of Nginua so productive. There are many short pronouns (or pronominal clitics) used to classify groups of people, animals and things that go far beyond what most languages can do with pronouns. These are most often used without **je'e**, but can be used in conjunction with it⁴.

These short pronouns require a specific antecedent and show a relationship to the noun they are derived from. That noun or a noun using the prefix form must occur for the short pronoun to be used. (See section 3 for a discussion of pronouns that echo a prefix.) These pronouns include:

	Pronoun	Noun	Prefix
<i>man</i> (sing.)	xa	xii	xi-
<i>woman</i> (sing.)	nchra	nchrii	nchri-
<i>child</i> (sing. o pl.)	xan	chjan ⁵	xan-
<i>father</i> (sing. o pl.)	ndo ⁶	nduda'a ⁷	ndu-
<i>mother</i> (sing. o pl.)	jan	janna'a	jan-

In the examples below the pronouns follow the full noun form. (In all the following examples the noun (or prefix of the noun) which is the antecedant of the pronoun is in bold and the pronominal form is in bold italic.)

³ Because **naa** *one* is the far more common of the two words, being used not only as the number one, but also as an indefinite article meaning *a, an*, it was decided to leave this word unmarked and write tone only on **naa** *nine*.

⁴ This paper will not deal with when **je'e** is required, optional or not allowed at all, but only the use of clitic pronouns.

⁵ **Xan** is also used as the pronoun for **xan'na** *mi hijo*, **xa'an** *tu hijo* and **xe'en** *su hijo*

⁶ Note that **o** is written as **u** word medially. See the appendix for further explanation.

⁷ Other nouns can use the **ndu-** and **jan-** prefixes. For example: **ndunchee** *su suegro*; **jannuelitue** *su abuela*.

- (8) Ja'an bikon naa **xii** kuame **xa** yoo thi kan ko the kilo
I saw a man carried he(man) two the twenty and ten kilos
 nua.
shelled.corn
I saw a man who carried fifty kilos of shelled corn.
- (9) Tsje **nchrri** icha nchexruxinhi **nchra** riaado seda.
Many women more like they(women) shawl silk
Many women prefer shawls of silk.
- (10) **Chjan** anto nchexruxi'in **xan** tsuntaun xan.
Children very like they(children) play they(children)
Children very much like to play.
- (11) Naa **janna'a** jian anseen **jan** ixin rinao **jan** kain xe'en
one mother fine heart she(mother) because loves she(mother) all children
jan.
hers(mother)
A mother has a good heart because she loves all her children.

In addition to the pronouns listed above, there are two that do not require a specific antecedent. They are:

	Pronoun	Noun form
<i>they</i> (only people)	na	
<i>they, one</i> (speaking in general)	ni	chujni

In (12) note that even though singular and plural is not indicated for the vast majority of Ngigua nouns, **nchrri** in this sentence is plural as indicated by the adjective **tsje** *many*. Therefore the speaker chose the pronoun **na** *they*.

- (12) Atho **tsje** **nchrri** nchegunda kakje ke je'e **na** taa **na**.
very many women use strength.belts that they weave they
Lots of women use strength belts that they weave themselves.
- (13) Are dise **ni** nguixin ncha'on, anto tuntaungi'li **ni**.
when is.bent.over one all day very becomes.sore one
When one (works) bent over all day, one becomes very sore.

3. Pronouns that echo a prefix

Some groups of nouns begin with a classifier prefix which can also be used as a pronoun. The more common of these include:

	Prefix and pronoun
<i>wooden item or the name of a tree</i>	ntha
<i>plants</i>	ka
<i>fruits, vegetables</i>	tho
<i>cactus fruit</i>	xe ⁸
<i>things from corn or wheat dough</i>	nio
<i>liquor</i>	xran

⁸ A few changes are taking place in recent years. For instance, in sentence (6) above it would be acceptable to replace **tho** with **xe**.

Another classifier in this group is that for animals. But it is irregular in that the prefix and the pronoun are different. The animal prefix is **ku-** and the clitic pronoun is **ba** as in sentence (14) below and again in (15) which has examples of both the animal and plant prefixes and pronouns.

- (14) **Kul**ucho sakjui **ba** ko are bingasaan iku'a **ba**.
donkey went it(anim.) and when dawned no.longer.was It(anim.)
The donkey left and in the morning it was no longer there.
- (15) Ko **kun**thuji sakjui **ba** ngain thi tajin na **kachro**, ko nthi'a anto
and opossum went it(anim.) to where drain they century.plant And there very
*yee tsjen teria **ka**.*
much syrup was.in it(plant)
And the opossum left again, (and went) where they were draining the century plant and
there was a lot of syrup in it.
- (16) Ja'an kuani **nthatsja** aro chjenda **ntha** ko baritsinga nunthe.
I climbed tree.mesquite but broke it(tree) and fell.I ground
I climbed the mesquite tree but (a branch) broke and I fell to the ground.
- (17) Kain **thuchjuin** kue'na ja'an ndarrena **tho**.
all fruit bought I rotted it(fruit)
All the fruit I bought rotted.
- (18) **Niun**thao chrjuin xrajni **nio** ixin disia **nio** kathjaue
dough.meat pretty smells they(dough) because are.wrapped they(dough) Husks.of
nii.
dry.corn
The tamales smell good because they are wrapped in corn husks.

4. Pronouns from nouns beginning with **ji**

In addition to the above pronouns, nouns beginning with **ji**, lose that first syllable and the final syllable is then used as a pronoun.

	Pronoun	Noun
<i>rope</i>	no	jino
<i>cornfield, cornplant</i>	n \bar{o}	j \bar{i} no
<i>ground, dirt</i>	nche	jinche
<i>water, liquid</i>	nda	jinda
<i>hunger</i>	ntha	jinth

- (19) **Ji**no anto nchinnchin **no**, ko xra chru'a tsjagi'i ni
corn plants very small.pl they(corn plants) and not.yet couldn't receive they
no
they(corn plants)
The corn plants are very small and they still haven't been able to work the field.

In the second line of the following example sentence, the pronoun **nda** refers back to **jinda water, liquid**. Then in the last line, **nda** again refers back to **jinda** and **nche** is the pronoun referring back to **jinche's dirt**. But note that the **nda** in the third line is echoing the prefix **nda-** (which comes from **jinda water, liquid** and means *it(liquid)*).

- (20) Chujni nchegunda nthau'e nthaxepilo ixin ncheruaxin na **jinda** are
people use meat.of chipilo in.order.to clean they water when
 chunda **nda** jinche ixin ndandue nthaxepilo mee anto se **nda**,
has it(water) dirt because sap.of meat.of that very sticky it(liquid)
 mexinxin kain **jinche'e nda** xratse **nche**.
therefore all dirt.of it(water) gathers it(dirt)
People use the flesh of the chipilo cactus to clean water that has dirt in it because its sap
is sticky and all the dirt collects on it.

5. Pronouns formed from nouns by removing the stress

Finally, what is most unusual in the Tlacoyalco variant of Ngigua is that any noun not included in the groups above can be made into a pronoun simply by omitting the stress.

Every word in Ngigua has word stress that falls on a particular letter and is realized as length; both vowels and consonants can be lengthened. There is no way to predict if a given word has vowel or consonant stress but there are some generalizations.

Words that end in two distinct vowels almost always lengthen the first of those two vowels. Everywhere else vowel stress is written as a double vowel. Examples:

saon	<i>bed</i>	the accent is on the a
kunthua	<i>bird</i>	the accent is on the last u
nchia	<i>house</i>	the accent is on the i
kuxiigo	<i>animal</i>	the double i indicates that it has the accent
ndaasin	<i>market</i>	the double a indicates that it has the accent
yoo	<i>two</i>	the double o indicates that it has the accent

If a word has consonant stress, it always occurs in the final syllable. If the final syllable begins with a single consonant, that of course receives the stress. If that syllable begins with a combination of vowels, stress will first fall on the glottal, if there is one, then on the **j** if present and if neither of these is present, an **n** will occur and it will receive the stress. (See Stark & Machin 1977 for more information on Ngigua stress.)

tsuka	<i>incense</i>	the accent is on the k
dicha	<i>ripe</i>	the accent is on the ch
ni'ngo	<i>church</i>	the accent is on the '
nthatjo	<i>shotgun</i>	the accent is on the j
xijntha	<i>salt</i>	the accent is on the j
kantha	<i>prickly pear cactus</i>	the accent is on the n

When a noun is used as a pronoun, it loses only the word stress of the noun, and otherwise remains the same. As with other pronouns, there must be an antecedent to these pronouns and it must be that exact noun. For instance, **xii man**, *male* may not be the antecedent for **tathita**, the pronominal form of **tathiita man**.

5.1. Pronouns from nouns with vowel stress

Because stress is realized as length, mother-tongue speakers describe the difference between the noun and pronoun forms by saying the pronoun is spoken faster, and it is, but the reason is the lost of length on the stressed phoneme. When the noun which is used as a pronoun has vowel stress, the difference is quite easy to hear, and, if written

as a double vowel, it is also easy to see. In sentences (21) and (22) below, note how **nthaa tree** becomes **ntha** when used as a pronoun and **tsaaga ravine** becomes **tsaga**.

(21) Naa **nthaa**⁹ tujieto **ntha** are chundaja **ntha** tsje nano.
A tree thickens it(tree) when has.afterwards it(tree) many years
A tree becomes thicker when it is older.

(22) Ko are dixi'in naa chujni ixin si'i jinda, **tsaaga** ji'i ndadijee
and when enters a person in.order.to will.drink water ravine this closes
tsaga.
it(ravine)
When someone would enter to take a drink, the ravine would close.

In example (23), though **nchia house** has vowel stress and there is a clear difference in the way the word is pronounced as a noun and as a pronoun, there is no difference in the way it is written. That is because it is one of the many words ending in two distinct vowels that has stress (length) on the first of the two. So the first instance of **nchia** is phonetically [ndʒi:a] and in the other two it is a pronoun and pronounced [ndʒia].

(23) Thi **nchia** kue'na ja'an chunda **nchia** techue **nchia** kunixin teja.
the house bought I has it(house) roof.of its(house) with tiles
The house I bought has a tile roof.

5.2. Pronouns from nouns with consonant stress on a fricative or nasal

When the stress falls on a fricative¹⁰ or a nasal as the **n** of **thuni** in example (24), it is also easy to hear because of the way the consonant is lengthed in the noun form. But, again, there is no difference in the way the two are written.

(24) **Thuni** ndabaaña jino ixin anto suji juui **thuni**.
Hail chopped corn.plants because very forcefully came it(hail)
The hail destroyed the corn because it came very forcefully.

5.3. Pronouns from nouns with consonant stress on a glottal

As stated above, if a word contains a glottal, the stress falls there. But if the stress moves, the glottal disappears. For instance compare **sa'on shade** where the stress is on the glottal with **sauen its shade** where it moves to the **u** with the addition of the **-e** morpheme showing third person possession. In the case of a noun with a glottal becoming a pronoun, the glottal also disappears as in the case of **ni'ngo** in (25).

(25) **Ni'ngo** ngain rajna anto jie **ningo**.
Church in town very big it(church)
The church in (our) town is very big.

5.4. Pronouns from nouns with consonant stress on a stop or affricate

If the stress falls on a stop (other than a glottal) or an affricate, it is realized as a slight pause before that consonant is released. In the pronoun form of such a noun, there is no such pause. In example (26) the stress falls on the **th** and in (27) on the **chr**.

26. Jaan, **kathe** jichjanga xanchian anto chrjuin te **kathe**.
Yes sandals is.wearing sister.my very pretty are they(sandals)
Yes, the sandals my sister is wearing are very pretty.

⁹ In this and following sections the nouns in focus are in bold and their pronominal forms are in bold italic.

¹⁰ The only fricatives which can receive stress are **s**, **x** and **xr**. The **b**, **d** and **g** are never stressed.

27. Jii naa **kachro** di'in kachrue kaxra; ko **kachro** mee
there.is a century.plant is.called century.plant.of ixtle and century.plant that
 anto jian **kachro** ixin jino.
very good it(century.plant) for rope
There is a century plant called ixtle century plant and it is very good for making rope.

5.5. Pronouns from nouns with consonant stress on a j

If the stress falls on the **j** of a noun, it is usually realized as aspiration¹¹. When a noun with stress on a **j** becomes a pronoun, the difference is realized as lighter aspiration in the pronoun than in the noun. Therefore the difference is not as obvious as when the stress falls elsewhere.

28. Chujni nchegunda na kasa¹² ixin thengaxinxin na **chjon**, ko jamee
people use dodder in.order.to dye they wool And thus
chjon tunsine **chjon**.
wool becomes.yellow it(wool)
People use dodder to dye wool, and thus the wool becomes yellow.
29. Isi tse'na **tsjin**, ndatsjee na **tsjin**.
If will.buy.I milk will.finish I milk
If I buy some milk, I'll drink it.
30. Kain ncha'on anto tsje **nchinnchinchjan** diji nchiandui ixin tsuntaon
all days very many children arrive house.your In.order.to play
nchinnchinchjan.
they(niños)
Every day lost of children come to your house to play.

5.6. Pronouns from Spanish loan words

The process of making pronouns from nouns is also used when the speaker employs a Spanish loan word. The vast majority, if not all, of Spanish words used in Ngigua have vowel stress. In (31) the first **a** of **plaatano** is lengthened, but in the second occurrence it is used as a pronoun and the length (stress) is lost. (Therefore the **aa** becomes **a**.) In example (32) it is also the first **a** which is lengthened to show stress in **guitaarra**, but that length is lost in the last two occurrences where it is a pronoun.

31. Naa xichjan juine **plaatano** kuntui rue **platano**.
a boy ate banana along.with peel.of banana
A boy ate a banana along with its peel.
32. Kuthimeja chjee kulaano kunthakjan **guitaarra**. Jidinga ba **guitarra**.
then gave rabbit skunk guitar was.playing it(anim) guitar
 Kuthimeja anto see tajiya ba **guitarra**.
then very long.time was.carrying it(anim) guitar
Then the rabbit gave the guitar to the skunk. He was playing it. He had it for a very long time.

¹¹ In those instances when a **j** precedes a nasal, the **j** is realized as a voiceless nasal.

¹² A yellow parasitic vine that grows in tress of the area.

5.7. Pronouns from possessed nouns

Up to now the discussion has just been about non-possessed nouns, but possessed nouns may also become pronouns. The only difference is that the pronominal form is the non-stressed form of the non-possessed noun, not its possessed form.

In example (33) **ndaxree** is the possessed form¹³ of **ndaxra** a soup-type meal.

33. **Ndaxree** jmathuluntsin anto jni **ndaxra**.
Meal.of peas very tasty it(meal)
A meal/soup of peas is very tasty.

Below, **tsji'in** is the possessed form of **tsjin** *milk*.

34. **Tsji'in** kanthachinsua xruan **tsjin** ixin thi thon di'in
milk.of teperronero medicine it(milk) for the small.bumps Are.called
 kuthune'e dachrjema raa o ruthee chujni.
mezquinos come.out.on hands.of or feet.of people
Milk of the teperronero is medicine for the small bumps called mezquinos that come out on the hands or feet of people.

In example (35) **tsju'e** is the possessed form of **tsjo** *flower*.

35. **Tsju'e** kanthachikalo xruan **tsjo** ixin chjan chunda kuchichjajan denda.
flower.of chicalote medicine it(flower) for child has whooping.cough
Flowers of the chicalote are medicine for a child with whooping cough.

Finally, example (36) has another example of a pronoun from a possessed noun.

Riaaduna *my shawl* is from **riaado** and **riado** is the non-stressed form used as a pronoun.

36. **Riaaduna** ja'an juxon seda dikunchjian **riado**.
shawl.my my pure silk is.made shawl
My shawl is made of pure wool.

6. Conclusion

We have seen that the Ngigua pronoun system is actually much more complex than most languages. Like most Otomanguean languages of Mexico, it has several short classifying pronouns that cover far more things than is done in Spanish or English. But unlike most Otomanguean languages it even allows de-stressed nouns to act as pronouns when none of the normal short pronouns can be used. This is not even true of all other Ngigua variants. The Temalacayuca variant, which is the closest variant both linguistically and by distance to Tlacoyalco Ngigua, does do the same thing. But the Atzingo variant does not (Jeanne Austin, personal communication). At this time data is not available for other variants.

¹³ For more information on possession in Ngigua, see Stark & Luna (2006:section 5.4).

Appendix

Ngigua Orthography

The written alphabet used for Ngigua has five oral vowel and their nasal counter parts and twenty consonants. In the charts, the practical orthography is given, with the IPA equivalent following the orthographic symbol where they are different.

A. Vowels

The vowels are **a**, **e**, **i**, **o** and **u**. (See the following section for a discription of the nasal counterparts.)

	Front	Back unrounded	Back rounded
High	i		u / _~#, o/_#
Mid	e = ε		
Low		a	

However, phonemically there are only four vowels and their nasal counterparts because the **o** and **u** is a single phoneme that varies from **o** to **u**. Due largely to the influence of Spanish in the area and because of the variation of this back vowel, it has been decided to write **u** word medially and **o** word finally. Also if the word ends in **o** plus a glottal and another **o**, (**o'o**), both vowels are written as **o**.

Nasalized vowels

When an **n** is written at the end of a syllable, it indicates that all immediately preceding vowels not interrupted by a consonant are nasalized. The only exceptions are when a nasalized syllable begins with a glottal or a **j**, the nasalization also affects the preceding syllable. For example all the vowels in the words below are nasalized.

ncha'on *sun, day*
chrujan *someone, something*

When a **m**, **n** or **ñ** precedes a vowel, that vowel (or vowels) sounds nasalized, but in word final position no **n** is written on these syllables. Only if another syllable follows the one beginning with a nasal consonant will it be know if that syllable is in fact nasalized. For example: the vowels of **naa** *one* and **naa** *nine* both sound nasalized. But with the addition of the suffix **-kua** *only*, they are clearly different as shown below.

nakua *only one* nankua *solamente nine*

Some other examples:

kunixin *with* ninxin *third*
nichja *speaks* nchuninchjan *little pieces of carbon*

So when a syllable begins with a nasal consonant and is the final syllable of the word or it precedes another syllable begining with just a **j** or a glottal the nasalization is neutralized and not written.

Vowel combinations

There are many combinations of two vowels in the language and up to a five vowel combination is possible, though very rare. Almost all combinations of three or more vowels are made up of more than one morpheme.

B. Consonants

The consonants are: **b, ch, chr, d, g, j, k, l, m, n, ñ, p, r, s, t, th, ts, x, xr, y** and **'**.

	Bilabial	Dental	Alveolar	Alveo-palatal	Retro-flexed	Palatal	Velar	Glottal
Stop	p	t = t̥	th = t				k	' = ʔ
Affricate			ts = ts	ch = tʃ	chr = tʃ̣			
Fricative (vl)			s	x = ʃ	xr = ʃ̣			j = h¹⁴
Fricative (vd)	b = β	d = ð					g = ɣ	
Nasal	m		n			ñ = ɲ		
Lateral			l					
Flap			r = r					
Approximant						y = j		

The consonants do not require much comment but there are a couple of things that should be pointed out. First of all, note that the letters **b, d** and **g** all represent voiced fricatives, not voiced stops.

The other consonants that need some explanation are the **t** and **th**. Both of these consonants are stops and they sound almost identical. (The **th** is not at all like the **th** of English.) The **t** is pronounced very much like the Spanish **t**, with the tongue tip against the back of the front teeth or even between the upper and lower front teeth. The **th** is like the English **t** in that it is pronounced with the tongue tip against the alveolar ridge.

the *n̄a* *they danced* te *n̄a* *they are*
 bithuna *ná* *we stayed* bitunna *ná* *they commanded us*

C. Consonant combinations

Ngigua has many consonant combinations. A **j** can follow stops (except for the glottal) and affricates being realized as aspiration. (There is no data showing **j** following **p**, but that is probably because **p** is quite rare.) The **j** can also precede the nasals **m** and **n**. In this case it is realized as a voiceless **m** or **n**.

An **n** can precede all the stops (except glottal) and affricates, though it is rare preceding **ts**. When **n** precedes these consonants, they are voiced. (When **n** precedes **t** it is written as **nd** as in Spanish.)

¹⁴ When a **j** precedes a nasal, the **j** is realized as a voiceless nasal at the same point of articulation as the following nasal, so **jm** is pronounced [ɲm] and **jn** is pronounced [ɲn].

References

- Stark Campbell, Sharon and Veronica Luna Villanueva. 2006. *Gramática del Ngigua: Ngigua de San Marcos Tlacoyalco*. México, D.F.: Instituto Lingüístico de Verano.
- Stark, Sharon and Polly Machin. 1977. Stress and tone in Tlacoyalco Popoloca. In William R. Merrifield (ed.), *Studies in Otomanguean phonology*, 69-92. Dallas: Summer Institute of Linguistics and the University of Texas at Arlington.