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ZMP article

Cognate Sets in Six Zoque-Mixe-Popoluca Languages
Lawrence E. Clark

1. Cognate sets observed in one hundred common nouns.

One hundred nouns in frequent use by people indigenous to the Zoque-Mixe-Popoluca (ZMP) culture of southern Mexico were selected for this study, using six dictionaries published by SIL personnel who have done extensive language analysis in Sayula Popoluca, Oluta Popoluca, Totontepec Mixe, Coatlan Mixe, Francisco Leon Zoque, and Sierra Popoluca.¹

The Sayula (SYP) and Oluta Popoluca (OL) live within ten miles of each other in the coastal regions of southern Veracruz state. The Totontepec (TM) and Coatlan Mixe (CM) live in the mountainous state of Oaxaca. The Francisco Leon Zoque (FLZ) live in Chiapas state, whereas the Sierra Popoluca (SP) live in the mountains of Veracruz. Though closer geographically to Sayula and Oluta, the Sierra Popoluca language is closer linguistically to Zoque, whereas the Sayula and Oluta languages are closer to the Oaxaca Mixe.

The word *popoluca* is a derogatory Aztec term that described speakers of non-aztec groups as babblers. The Aztecs coined the term for the Popoluca of Veracruz; also for the Popoloca of Puebla, a Mazatec

¹The six dictionaries are Vocabulario Popoluca de Sayula Veracruz, Mexico; Vocabulario Indigena 104, Tucson, 1995. Diccionario Popoluca de OLuta, Vocabulario Indigena 25, Mexico, DF, 1981. Both dictionaries were compiled by Lawrence E. Clark.

Vocabulario Mixe de Totontepec. Vocabulario Indigena 14, compiled by Alvin and Louise C. Schoenhals, Mexico, DF 1965.

Diccionario Mixe de Coatlan, Vocabulario Indigena 32, compiled by Searle Hoogshagen Noordsy and Hilda Halloran de Hoogshagen, Mexico DF 1993.

Diccionario Zoque de Francisco Leon, Vocabulario Indigena 30, compiled by Ralph Engel and Mary Allhiser de Engel, with principal collaborator Jose Mateo Alvarez, Mexico DF, 1987.

Diccionario Popoluca de la Sierra, Veracruz, Vocabulario Indigena Benjamin F. Elson and Donaciano Gutierrez G., Tucson, 1999.

language unrelated to Zoque-Mixe. We use the name Popoluca in this study since the word is firmly embedded in their culture as the way to refer to themselves and their language.

1.1 Six-Cognate Sets. The search through the six dictionaries revealed cognate sets in all but one of the 100 common nouns selected. A cognate set includes from two to six cognates of a given noun. Of the 100 common nouns tested, thirty eight of them share cognates in all six languages. For instance, the noun *k+* 'arm, hand' is a six-cognate set:

[SYP: *k+*, OL: *k+*, TM:² *k++* *, CM: *k+*, FLZ: *k+*, SP: *k+*³]

1.2 Five-Cognate Sets. Eight of the 100 nouns have cognates in five of the six languages. Cognate sets are bracketed; distinct sets and non-cognates are separated by #. Consider the noun *bird* in the following example where only the Oluta Popoluca word is a non-cognate.

[SYP: *jojn*, TM: *joojn*, * CM: *joon*, FLZ: *jon*, SP: *jon*] #
OL: *muuxi*, *bird*.

1.3 Four-cognate sets. Thirteen of the 100 nouns have four cognates in SYP, OL, TM, CM; but the FLZ and SP noun may or may not be cognates.

²Totontepec Mixe presents an anomaly in its vowel nuclei structure. While most zoque-mixe-popoluca languages have six phonemic vowels (i, +, u, e, a, o), TM has a nine-vowel system. In addition to (i, +, u, e, a, o), TM has the phonemic vowels (æ, ə, ɔ). To simplify this study, we have conformed TM vowels to a six-vowel system. Such TM words are indicated by asterix (*).

The six dictionaries present their words using Spanish orthography. However, the SP, OL high central vowel is indicated with the barred [u] orthograph. FLZ indicates the same vowel with barred [o]. TM, CM and SP use the barred [i]. For consistency, this vowel is written here with the plus symbol [+]. Vowel glottal nuclei is written with the vowel followed by the symbol ['], as in the above examples. Long vowel is written with two like vowels, eg., SYP: *joojt* /*river*. The vowel nuclei may occur with vowel plus [h], written here with the symbol ['], as in the previous example.

³The consonants follow Spanish orthography, as follows: /p t ts ch k, b d g, f v s j, m n, r l, w y/. Note that the velar stop is written /k/ instead of Spanish /c, qu/. The classical Nahuatl symbol [x] is used for the alveo-palatal sibilant (English: [sh]). The alveo-palatal nasal is written [ny]. The velar nasal is written [ng].

In the following example FLZ and SP have a shared cognate set distinct from the four-cognate set.

[SYP: j+jp, OL: j+p+, TM: j+jp *, CM: j+jp] #
[FLZ: kin+, SP: kiiny⁴], *nose*.

In the following example, the noun *cotton* occurs in FLZ and SP as non-cognates:

[SYP: pixtin, OL: pixti'n, TM: pixt+n, CM: pixy] #
FL: tsoja, SP: puuki, *cotton*.

1.4 Irregular Cognate Sets. Forty nouns occurred with irregular sets. They do not follow the pattern in 1.3. Instead, the Mixe groups may share cognates with Zoque and Sierra Popoluca. These irregularities indicate that certain ZMP groups developed their language independent of the others. The cognates are listed here with two examples for each pattern.

^^ Four-cognate sets, with distinct two-cognate set. Two nouns followed this pattern:

[SYP: mixtuun, OL: mixtu'n, TM: miistu, SP: misi] #
[CM: chiid, FLZ: chitu], *cat*.

[SYP: kujy, OL: kuy+, FLZ: kuy, SP kuy] #
[TM: k+p, CM: kipy], *tree, wood*

^^ Four-cognate sets, with two non-cognates. Four nouns followed this pattern:

[SYP: nu'p, OL: nu'pu, TM: no'op, SP: nu'upu] #
CM: luud⁵, FLZ: ju'ki, *vulture*.

[SYP: apuy, OL: apu, TM: ap, FLZ: apu] #
CM: tatpiid, SP: jaatung weewe, *grandfather*.

^^ Three-cognate set, with distinct three-cognate set. Four nouns followed this pattern:

⁴The FLZ and SP words for nose are written here as kin+, kiiny. Here and elsewhere we use the [k] symbol instead of Spanish [c, qu].

⁵CM: luud may be derived from Spanish zopilote, vulture. ZMP often borrow words based on the stressed vowel in Spanish.

[SYP: ka'wak, OL: kava'k, CM: ka'ak] #
[TM: tsa'am, FLZ: samne, SP: samyi], *banana*⁶

[SYP: ja'x, TM: ja'axy, CM: ja'axy] #
[OL: k+pi, FLZ: k+pi, SP: k++pi], *firewood*⁷

^^ Three-cognate set, with three non-cognates. Six nouns followed this pattern:

[OL: ju'ka'n, TM: ju'uk, CM: ju'uky] #
SYP: ayik, FLZ: otsi, SP: ts++w+, *tobacco*⁸

[SYP: na'way, OL: na'av, TM: na'av] #
CM: m+j ja'ay, FLZ: tsamb+n, SP: w+tyi, *old man*⁹

^^ Three-cognate set, two-cognate set, one non-cognate. Six nouns followed this pattern:

[SYP: tajp, FLZ: tajpi, SP: tajpi] #
[OL: viicts+'n, TM: viits+n] # CM: me'ky, *hawk*.

[SYP: to'xay, TM: t+'x *, CM to'oxy ja'ay] #
[FLZ: yomo, SP: yomo] # OL: majau, *woman*.

^^ Three distinct two-cognate sets. One noun followed this pattern where the cognate sets are equally divided between [SYP OL], [TM CM], and [FLZ SP]:

[SYP: n++n, OL: n++n+] # [TM:¹⁰ kaaky, CM: kaagy] #
[FLZ: ane, SP: aanyi], *tortilla*.

⁶The TM, FLZ, SP words for banana are derived from the verb 'to ripen'.

⁷The SYP, TM, CM words are noun forms derived from the verb 'to cut firewood'. [TM CM] use the forms [k+p, kipy] for the generic term *tree, wood*. [OL FLZ SP] apparently use a form derived from [TM CM] as their word for firewood.

⁸ The OL, TM, CM examples are nouns derived from the verb *to smoke (tobacco)*. SYP: ayik is derived from the noun *ajy leaf*, referring to tobacco leaf rolled into a cigar. While OL: ju'ka'n means *tobacco*, the cognate term SYP: ju'gan means a cigarette or cigar holder.

⁹The CM term means big [respected] man. The FLZ term means ripe [mature] man. The SP term is distinct from the other five languages.

¹⁰The TM, CM forms are derived from the verb 'to eat.' Apparently the Oaxaca Mixe groups consider the tortilla an equivalent of food.

^^ Two-cognate set, two-cognate set, two non-cognates. Nine nouns followed this pattern:

^^ [SYP: wek, OL: veka] # [FLZ: nak, SP: nak] #
TM: poty+'v, CM: tuk, *frog*

[TM: poj, CM: poj] # [FLZ: sava, SP: saawa] #
SYP: xe'm, OL: jaamu, *wind*

^^ Two-cognate set, with four non-cognates: Eight nouns followed this pattern. In most cases only [TM CM] are cognates. In formula: [TM CM] # SYP OL FLZ SP.

[TM: tek, CM: teky] #
SYP: ta'n, OL: k+'xta, FLZ: koso, SP: puy, *foot, leg*

[TM: ok, CM: uk] #
SYP: tak, OL: xu'ni, FLZ: tu'yi, SP: chimpa, *dog*

These irregular noun cognate sets show the flexibility of ZMP speakers to coin new words. Some groups developed nominalized or compound forms while others retained a generic form. (See footnotes 4 to 10.) The cognate sets reveal less conformity in people and kinship terms, and in terms for insects, reptiles, fruits and plants. The 38 six-cognate noun sets show more conformity in words for body parts [9], basic cultural items [11], animals [9], nature [7] and religious objects [2].

1.5 Semantic Shift. Certain words occur with generic meaning in one ZMP language, while its cognate may occur with specific meaning in another ZMP language.

1.5.1 In present day ZMP speech, the noun *fish* occurs in the pattern [SYP TM CM] # [OL FLZ] # SP (1.4.5).

[SYP: akx, TM: ajkx, CM: akx] # [OL: ko'ki, FLZ: koke]
SP t+'pi, *fish (generic)*.

However, the cognate noun for fish in [SYP TM CM] occurs in [OL SP] with specific meanings:

[OL: akxa (minnow), SP: akx+ (mero fish)]

Note that OL shares both a generic cognate with FLZ and a specific cognate with [SYP TM CM].

Other examples with ZMP generic forms are given here followed by specific cognates:

^^ [OL: tsu'chi, TM: tsu'uts, CM: tsu'uch] # [SYP: xix, FLZ: sis] # SP: maayi, *meat (generic)*.

[SYP: xix, *meat*; CM: xiixy *human flesh*; FLZ: sis *meat*; SP: xix, *cattle*]

The generic word in SP for *meat* is maayi, a non-cognate. Consider the word for *beef*; in SYP it is tuuruxix, whereas in SP the term is xixmaayi.¹¹

^^ [OL: tsachi, TM: tsach] # [FLZ: j+j+, SP: j++j+] # CM: niix, SYP: jujuuy, *fly (insect)*.

[OL: tsachi, TM: tsach, CM tsach (blue fly)] # SYP: jujuuy, OL: juyju'y (mosquito)

^^ [SYP: iichim, OL: iits+m+, CM: +dz+m] # TM: keem * # [FLZ: yoya, SP: yooya], *pig (generic)*.

[SYP: moogiichim (corn pig), OL: pajpi iits+m+ (wild pig), TM: iits+m, CM: keemy, ujts +dz+m (bush pig)] # [FLZ: tsa'ma yoya (field pig), SP: mokyooaya (corn pig)], *boar*.

Note that TM and CM have reversed the names for pig and boar, and CM and the other ZMP languages use a descriptive name for the boar. Though SP: yooya is a shared cognate with FLZ, both SP and SYP call the boar a corn pig (because he raids their corn supply).

^^ [SYP: pach, TM: paach, FLZ: tsanbatsi, SP: paachi] # OL: pariko'n, CM: jaydik, *lizard (generic)*.

[OL: pachi (crested lizard), CM: tsajpach (salamander), FLZ: patsi (iguana)].

^^ [SYP: x+jw, OL: x+v+, TM: x++ *, CM: x++] # [FLZ: jama, SP: jaama], *sun, day*.

¹¹Intelligibility studies have not been done between Sayula and Sierra Popoluca. This example illustrates the confusion of terms between the two languages. The average SYP speaker probably understands less than 25 percent of SP speech.

[SYP: maax+jw, OL: maaxanx+v+] # [TM: x++, CM: x++] #
[FLZ: s+ng, SP: s+ng], *religious festival*.

SYP: maax+jw and its cognate in OL once meant *sacred day*, but now the term denotes a joyous festival. [TM CM] use the word x++ *sun, day* to denote the festival. However, [FLZ SP] use a distinct two-cognate set for *sun, day* but retain the cognate s+ng for the festival day. This suggests that s+ng was once their term for the sun.¹²

1.6 Of the 100 nouns selected, only one noun occurs with no cognates.

SYP: chek, OL: kutu'n, TM: n+xoya, CM: ni'ijen,
FLZ: camisa (Spanish), SP: yo'otyi, *shirt*

2. Cognate sets observed in 100 common ZMP verbs.

One hundred common verbs were selected from SYP and compared with the five zoque-mixe-popoluca languages. Because in SYP there are only about 300 simple verb roots,¹³ the 100 verbs selected represent about one third of SYP verb inventory.

2.1 Six-Cognate sets. Verb cognate sets are not distributed as generously as ZMP nouns. Of the 100 verbs tested, only 25 occurred as six-cognate sets in ZMP. For example:

[SYP: wix, OL: vix, TM: vix, CM: wix, FLZ: vix, SP: wix],
to uproot (a plant).

¹²See 2.1 where Mixe /w/ becomes /ng/ in [FLZ SP]. There is linguistic evidence that the ZMP were sun worshippers and combined their early beliefs with the new religion imposed on their culture. Consider also the Sayula Popoluca term x+utan *to get fright sickness*. The literal translation is 'the sun stays,' while the term x++piu *to cure fright sickness* means literally 'to pick up the sun.'

¹³See the introduction to Sayula Popoluca Verb Derivation, by Lawrence Clark, SIL, Dallas, Texas, 1983. Even with so few verb roots, SYP is able to express variety by means of extensive derivational and inflectional formations.

A number of verb roots in the Mixe groups [SYP, OL, TM, CM] occur with alternating vowel nuclei,¹⁴ and in [FLZ SP] the consonant [ng] occurs instead of [w/v]

[SYP: chiu, OL: chiv, TM: tsiiv, CM: tsiiu;
FLZ: tsing, SP: ching], *to bathe*.

2.2 Thirteen verbs occurred in five-cognate sets. In the examples below, one ZMP verb is a non-cognate.

[SYP: kipx, OL: kipx, TM: kijpx, CM: kipx, SP: ki'ps] #
FLZ: muk *to measure*.

[OL: autsov, TM: ats+v *, CM: adzou, FLZ: angdzong,
[SP: angtsong] # SYP: po'n, *to answer*.

2.3 Another 22 verbs occurred in four-cognate sets. They follow the pattern of four-cognate noun sets: [SYP OL TM CM] versus distinct cognates or non-cognates in [FLZ SP]. Examples:

[SYP: to'k, OL: took, TM: too'k *, CM: took] #
[FLZ ma'a, SP ma'y], *to sell*.

[SYP: xo'k, OL: xook, TM: xoo'k *, CM: xook] #
FLZ: nung, SP: muj, *to get wet*.

2.4 There occurred 39 irregular cognate sets in patterns of three- or two-cognate sets. As noted with the irregular nouns (1.4), the Mixe groups may share cognates with Zoque and Sierra Popoluca. The cognates are listed with two examples for each pattern.

^^ Three-cognate set, with distinct three-cognate set. Two verbs followed this pattern:

[SYP: yo'y, TM: yo'oy *, CM: yo'oy] # [OL: vit, FLZ: vit,
SP: wity], *to walk*.

[SYP: wi'x, OL: viix, TM: vii'x] # [CM: ajog+', FLZ: joko'aj,
SP: jo'ogaap], *to smoke (fire)*.

¹⁴ The alternation occurs as follows: [SYP: chiu,chi'u, OL: chiv,chi'v, TM: tsiiv, tsi'iv, CM: tsiiu,tsi] *to bathe*. There is no clear phonological reason why this alternation occurs in certain Mixe verbs, and it is not pertinent to this study to indicate alternation in the verb cognate sets. .

In the above example [CM FLZ SP] cognates are verbalized forms of the noun *smoke*.

^^ Three-cognate set, with three non-cognates. Nine verbs followed this pattern:

[SYP: tsum, OL: tsum, TM: tsum] # CM: xots, FLZ: vat,
SP: tsen, *to tie*.

[OL: tsu'ts, TM: tsu'uts, CM: tsu'uts] # SYP: to', FLZ: k+'s,
SP: was, *to bite*.

^^ Three-cognate, two-cognate sets, with one non-cognate. Seven verbs followed this pattern:

[OL: pet, TM: pet, CM: pet] # [FLZ: ki'm, SP: ki'm] #
SYP: ku't, *to go up*.

[OL: tun, TM: tun, CM: tun] # [SYP: wat, SP: wat] #
FLZ: ts+k, *to do make*.

^^ Three distinct two-cognate sets. Two verbs followed the pattern of [SYP OL] # [TM CM] # [FLZ SP].

[SYP: j+y,, OL: j+y] # [TM: yaax, CM: yax]
[FLZ: vej, SP: wej, *to weep*].

[SYP: tsook, OL: tsook] # [TM: mujoy, CM: kojuy]
[FLZ: koyoj, SP: yoj], *to pay*.

^^ Two-cognate, two-cognate sets, with two non-cognates. Twelve verbs followed this pattern:

[SYP: jutuk, OL: jutuk] # [TM: mavij, CM: ma'ywij] #
FLZ: sa', SP: yus, *to wake up*.

[SYP: kots, TM: kojts] # [OL: kapx, CM: kapx] #
FLZ: on, SP: j+y, *to talk, speak*.

^^ Two-cognate set, with four non-cognates. Seven verbs followed this pattern:

[TM: win'++'n, CM: win'++n] # SYP: weet, OL: jan
FLZ: ma'ts, SP: m+go'y, *to lie, deceive*.

[SYP: ts+k, SP: ts+k] # OL: mats, TM: t+n, * CM: xaj+',
FLZ: pi'k, *to touch*.

2.4.7 Of the 100 verbs selected, only one occurred with no cognates:

SYP: tinin, OL: yupup, TM: yee'n CM: j++nmajts,
FLZ: tsok, SP: jips, *to burn (fire)*.

2.5 Semantic shift. In some cases [FLZ SP] have undergone semantic shift from the generic Mixe verbs.

In present day ZMP speech, the verb *to fall* appears as a four-cognate set in [SYP OL TM CM], with FLZ and SP as non-cognates:

[SYP: ka'u, OL: ka', TM: ka'a, CM: ka'a] #
FLZ: kec, SP: tsut, *to fall*.

However, the verb *to die* in [FLZ SP] has shared cognates with the verb [ka'] *to fall*; they have the specific meaning of dying rather than the general idea of falling:

[SYP: o'k, OL: ook, TM: oo'k *, CM: o'k] #
[FLZ: ka', SP: ka'], *to die*.

Other examples are given here with the ZMP generic forms, followed by specific cognates:

^^ The verb *to get burned* occurs as non-cognates in FLZ SP:

[SYP: toy, OL: toy, TM: toy, CM: tooy]
FLZ: pong, SP: jips, *to get burned*.

The verb toy occurs in [FLZ SP] with semantic shift to denote the subjective meanings *to hurt* and *to love*:

[FLZ: toy (*to hurt*), SP: toy (*to hurt, to love*)].

^^ [SYP: yo'y, TM: yo'oy *, CM: yo'oy] # [OL: vit, FLZ: vit,
SP: wity], *to walk*.

But [yo'y] occurs in [OL SP] with specific meanings: OL: yo'y *to crawl*,
SP: yo'y *to jump*.

2.7 Of the 100 nouns and verbs tested, the following graph shows the number of cognates that exist between the six languages. For example, Sayula Popoluca and Oluta Popoluca have 73 shared noun cognates and 68 shared verb cognates.

		Noun	Verb			Noun	Verb
Sayula	Oluta Popoluca	73	68				
Sayula	Totontepec Mixe	70	66	Oluta	Toton Mixe	75	69
Sayula	Coatlan Mixe	66	59	Oluta	Coatl Mixe	63	67
Sayula	FL Zoque	52	37	Oluta	FL Zoque	49	34
Sayula	Sierra Popoluca	52	44	Oluta	Sierra	50	37
Sierra	FL Zoque	61	59	Toton Mixe	Coatl Mixe	81	77
Sierra	Toton Mixe	49	36	Toton Mixe	FL Zoque	49	31
Sierra	Coatl Mixe	45	41	Coatl Mixe	FL Zoque	49	36

The graph shows that the Veracruz Mixe [SYP OL] have over 70 percent shared cognates. However, they share about the same percentage with [TM] and over 60 percent with CM, which would indicate that [SYP OL] had their origins in Oaxaca. The Oaxaca Mixe [TM CM] are even closer to each other with about 80 percent shared cognates. [FLZ SP] have less than 50 percent shared cognates with [SYP OL], and even fewer with [TM CM], but only 60 percent with each other. These data are summarized in section 6.

3. Religious acculturation. After the conquest of Mexico, the Catholic Church introduced its beliefs and practices and constructed their churches throughout Mexico. The cognate sets for *church building* in ZMP suggest again that [SYP OL] were developing their languages independent of [TM CM] and [FLZ SP].

[SYP: puuxt+jk, OL: puuxt+k+] # [TM: tsapt+k, CM: tsajpt+k] #
[FLZ: masand+k, SP: maast+k], *church building*.

[SYP OL]: puux was probably their term for the catholic religion. In present day speech, the term occurs with locative suffix -m, (e.g., t+n+xp puuxm *I go to the church*), or in compounds with t+jk *house, building*.

The [TM CM] cognates consist of the compound sky/heaven plus house (= God's house?). The [FLZ SP] cognates use the compound [masan] *sacred* plus t+k *house* (= sacred house).

4. Two-Cognate Sets.

Since two-cognate sets are the most prolific in ZMP, they highlight important distinctions between the six ZMP languages. Of the 100 nouns and 100 verbs selected, there were 99 sets. These two-cognate sets are distinct from the remaining four ZMP words of a given noun or verb. The chart below summarizes their distribution.

4.1 [FLZ SP] had the most sets with a total of 37. They are illustrated in 1.3 and 2.3, and in this example:

[FLZ: van, SP: wan] # [SYP: +u, OL: +v, TM: +v *, CM: +u], to sing.

The high number of distinct [FLZ SP] two-cognate sets highlight the long time period that the Zoque groups have been separated (perhaps 2000 years) from the Oaxaca and Veracruz Mixe.

4.2 The Oaxaca Mixe [TM CM] had 22 two-cognate sets, which shows their affinity with each other. These sets are illustrated in 1.4 and 2.4, and in this example:

[TM: yaax, CM: yax] # [SYP: j+y, OL: j+y] # [FLZ: vej, SP: wej], to cry (weep).

The Veracruz Mixe [SYP OL] had 10 distinct two-cognate sets. This pattern is illustrated in 1.4 and 2.4, and in this example:

[SYP: ka'k, OL: ka'ka] # [TM: kach, CM: kach] # FLZ: vaka
SP: koong, basket.

4.3 There were fewer two-cognate sets (20) between [SYP OL] and [TM CM], which indicates the Veracruz Mixe are closer to each other than to the Oaxaca Mixe.

^^ Five [SYP TM] sets, as in this example:

[SYP: jayau, TM: jayu] # [FLZ: p+n, SP: p++xiny] # OL: yo'ojwa,
CM: ye'eyd+jk, man (generic).

^^ One [SYP CM] set:

[SYP: xe'nk, CM: xe'ny] # [OL: maaxan kava'k, TM: maaxan ka'ajk] # ZMP: taki samne # SP: nuu, zapote (fruit).

^^ Six [OL CM] sets:

[OL: kapx, CM: kapx] # [SYP: kots, TM: kojts] # FLZ: on # SP: j+y, to speak, talk.

^^ Eight [OL TM] sets:

OL: viikts+'n, TM: viits+n] # [SYP: tajp, FLZ: tajpi, SP: tajpi] # CM: me'ky, hawk.

4.4 There were only ten two-cognate sets between the Mixe groups and the Zoque groups. Examples:

^^ [CM FLZ]:

[CM: chiid, FLZ: chitu] # [SYP: mixtuun, OL: mixtu'n, TM: miistu, SP: misi], cat.

^^ [OL FLZ]:

[OL: ko'ke, FLZ: koke], fish (generic). See 1.5.1.

^^ [SYP FLZ]:

[SYP: ju'p, FLZ: jup] # [OL: v++n, TM: v+n*] # SP: j++k, to pull.

^^ [CM SP]:

[CM: kony, SP: koonykuy] # [OL: kovo't, TM: koov*] # SYP: kuxk # FLZ: vangguy, stool.

^^ [SYP SP]:

[SYP: wat, SP: wat] # [OL: tun, TM: tun, CM: tun] # FLZ: ts+k, to do.

Distribution of Two-Cognate Sets

	Nouns	Verbs	Total	Total Sets
[FLZ SP]	14	23	37	37
[TM CM]	11	11	22	
[SYP OL]	4	6	10	32

[SYP TM]	1	4	5	
[SYP CM]	1		1	
[OL CM]		6	6	
[OL TM]	6	2	8	20
<hr/>				
[CM FLZ]	1		1	
[OL FLZ]	1	1	2	
[SYP FLZ]	2	1	3	
[CM SP]	1		1	
[SYP SP]		3	3	10

5. Non-Cognates

In addition to the many cognate sets throughout the six ZMP languages, each ZMP language has developed vocabulary items independent of the others.

Examples of noun innovations: SYP: *kooy egg, pem drum*; OL: *muuxi bird, poochi'k cricket*; TM: *t+jkts * mouse, taak mother*; CM: *jaydik, lizard, jok cloud*; FLZ: *pa't liver, j+y+ flower*; SP: *tu'ut+ mud, tsoogoy liver*.

Examples of verb innovations: SYP: *p++t to fear, to' to bite*; OL: *joy to get lost, napap to fly*; TM: *num to run, koo'ya to play*; CM: *xots to tie, yaab to swim*; FLZ: *mang to go, tu'y to extinguish*; SP: *pu'c to rot, muk to get wet*.

See 1.6 and 2.4.7 where all six ZMP words are non-cognates. The following chart shows the number of these innovations in the 100 nouns and 100 verbs:

ZMP Non-Cognates				
	Noun Verb Totals			
Sayula Popoluca [SYP]	14	16	30	Veracruz Mixe
Oluta Popoluca [OL]	15	16	31	Veracruz Mixe
<hr/>				
Totontepec Mixe [TM]	5	12	17	Oaxaca Mixe
Coatlan Mixe [CM]	14	9	23	Oaxaca Mixe

Sierra Popoluca [SP]	31	30	61	Veracruz Zoque
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Fran. Leon Zoque [FLZ]	25	35	60	Chiapas Zoque
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total non-cognates: 222

The abundant non-cognates in SP and FLZ suggests a long time period of separation both from Oaxaca and Veracruz Mixe and from each other. The Oaxaca Mixe [TM CM] have the fewest innovations, showing closer affinity within their language group. The Veracruz Mixe have more, indicating that SYP and OL are not as close to each other as the Oaxaca Mixe are to each other.

6. Comments

In earlier SIL publications, Zoquean was the general term for all ZMP languages since a cursory glance at any ZMP data shows they are related. Closer studies, however, reveal a clear distinction between Zoque and Mixe. A better term is Mixe-Zoquean. Thus Mixean includes the Oaxaca [TM CM] and Veracruz Mixe [SYP OL]. Zoquean includes the Chiapas Zoque and the two Chimalapa Zoque groups in the Isthmus of Tehuantepec. A Gulf Zoquean subgroup includes the Veracruz Zoquean, (Sierra and Textistepec Popoluca) and Ayapa Zoque in Tabasco).¹⁵ See 3. below.

6.1 Oaxaca Mixean.

The Oaxaca Mixe groups are closely related to each other. Totontepec is situated in the northeast corner of the Mixe region, Coatlan in the southeast. The southwest Mixe section is represented by the town of Tlahuitoltepec, the central section by the town of Juquila Mixes.¹⁶ The [TM CM] people live some 40 miles from each other, but Oaxaca's rough terrain has hindered communication between the villages. Even so, [TM CM] average 79 shared cognates, showing more linguistic affinity with each other than with the Veracruz Mixe [SYP OL]. It is likely that the other Mixe towns have the same ratio of shared cognates. However, each Mixe town has its own innovations and idiolects.

¹⁵I'm grateful to Soren Wichman for pointing out to me this classification, which distinguishes SP from the Chiapas Zoque groups.

¹⁶Miller (1956) also presents the Mixe region in four sections: Northern Highland Mixe (Totontepec). Southern Highland Mixe (Tlahuitoltepec), Midland Mixe (Juquila Mixes), Lowland Mixe (Coatlan and San Juan Guichicovi).

6.2 Veracruz Mixean.

The Veracruz Mixe [SYP OL] share an average of 70 cognates with each other and with the Totontepec Mixe, indicating they may have once lived in the northeast Mixe region near Totontepec, but in separate villages. The average of 65 shared cognates with CM indicate that SYP and OL also had contact with the Coatlan Mixe people to the southeast.

At one time this author wondered if SYP was a subdialect of TM, and OL perhaps a subdialect of CM.¹⁷ However, the cognate data indicate that [SYP OL] developed their own language apart from the Oaxaca Mixe. The data make a strong case for many independent language groups within the ZMP language family, i.e., the Veracruz Mixe are not sub-dialects of Oaxaca Mixe. The cognate ratios indicate that the [SYP OL] people must have lived in separate villages where they developed different vocabulary items. SYP and OL probably did not migrate from Oaxaca at the same time, but the languages were close enough to encourage them to settle near each other in present-day Veracruz.¹⁸

The Sayula and Oluta villages are located some 90 miles from the Oaxaca Mixe but less than 10 miles from each other. Foster posits that "Popoluca-speaking people once occupied the entire northern part of the Isthmus of Tehuantepec, but the arrival in pre-conquest times of Aztec-speaking groups forced the present-day Popoluca onto less desirable land and disrupted their contact with the Mixe and Zoque groups."¹⁹ If so, their logical migration route took them eastward through friendly Mixe

¹⁷Syllable patterns in SYP show a striking resemblance to TM, especially CVJC, e.g., SYP: x+jk, TM: x+jk *, bean. Wichman suggests a hypothesis to explain SYP shared cognates with their nearby neighbors, Texistepec Popoluca.

"Marriages would motivate bringing women from Texistepec to Sayula. These women would shift to Sayula Popoluca, but retain their own technical vocabulary for food preparation, etc." The same hypothesis might explain the closeness of TM with SYP through intermarriage.

¹⁸SYP and OL person markers are identical in form but not in function. SYP and OL stem-forming affixes are similar, but SYP is more conservative with many more verb affixes and enclitics. There is enough similarity between SYP and OL for native speakers to understand each other.

¹⁹Quoted in Texistepec Popoluca Vocabulary, Clark and Nordell, (1980). George M. Foster, professor of anthropology at U. Cal. Berkeley, wrote the foreword for the Totontepec Mixe dictionary, published in 1965. Foster did extensive anthropology and language research among the Sierra Popoluca in the mid-forties

villages down to the Isthmus of Tehuantepec, where they traveled northward to their present locations near the trans-isthmus highway in southern Veracruz. Today, OL is almost extinct but SYP is still spoken in Sayula, Veracruz, the last remnant of what was once a larger language group in Oaxaca state.

6.3 Veracruz Zoquean.

Long ago the Sierra Popoluca settled in the mountain range that overlooks the Gulf of Mexico. Today, they number over 25,000 and prefer their language over Spanish. Not so the other two Gulf Zoquean languages which are rapidly dying out: Texistepec Popoluca and Ayapa Zoque. (The town of Texistepec is in the lowland regions near Acayucan, Veracruz; the town of Ayapa is near Cardenas, Tabasco.)

The Sierra Popoluca [SP] probably had little contact with the Sayula and Oluta people. (In this study SYP and OL share less than 50 cognates with SP.) "Campbell and Kaufman (1976) have proposed that the archological Olmec living in southern Veracruz and western Tabasco, the presumed Olmec heartland, were speakers of Zoquean languages. Speakers of modern Zoquean languages occupy part of this area today."²⁰

6.4 Chiapas Zoquean.

The cognate data clearly sets apart the Zoque groups from the Mixe groups, but it is not clear why we have this gap between Mixe and Zoque. Perhaps they divided into two strong City-States, with the Zoques settling in the lower elevations of Chiapas, the Mixes choosing the isolation of the Oaxaca mountains. The two groups had their ceremonial centers, which probably vied with each other for religious superiority.

SP is grammatically closer to Chiapas Zoque but their vocabulary items indicate a long time period of separation²¹. Sierra Popoluca has only 60 shared cognates with FLZ. Even more striking are the 60 non-cognates in FLZ and 61 in SP. Presumably, the Chiapas Zoque groups remained aloof and isolated from their Oaxaca and Veracruz neighbors.

²⁰Quoted in Mesoamerican: A Proposed Language Phylum; Witkowski and Brown, 1978.

²¹John Lind, an SIL colleague, has lived among the Sierra Popoluca over the past 40 years. He writes, "Sierra Popoluca is definitely another language, not a version of Zoque. They developed from some ancient language, probably that spoken by the Olmecs, who lived in the very area where the Sierra Popoluca are living. Their rock carvings, pottery objects and objects of worship are to be found all over the area now occupied by the highland people." (Lind, personal communication.)

Proto Zoque

<u>Zoquean</u>		<u>Mixean</u>	
Chiapas Zoquean	Gulf Zoquean	Oaxaca Mixe	Veracruz Mixe
Fran. Leon Copainala Rayon	Sierra Texistepec Ayapa	Totontepec Coatlan Tlahuitoltepec Juquila Guichicovi etc. etc.	Sayula Oluta
Chimalapas [Oaxaca lowlands]			

24P NOOVS

Six ZMP lang. zmpcopy.wks 3/1/01

English	Spanish	Sayula	Oluta Popo	Teton Mixe	Coatl Mixe	FL Zoque	Mtn Popo
1 head	cabeza	kopak	ko'pa'k	kuvajk	kowajk	kopak	koobak
2 eye	ojo	wijn	vin+	viijn	wiin	vit+m	ixkuy
3 nose	nariz	j+jp	j+p+	j+jp *	j+jp put	kin+	kiinyi
4 mouth	boca	ajw	av+	aaj	aawak	angnaka	j+p
5 ear	oreja	taats+k	taats+'k	taatsk	ta'ats ak	tats+k	taats+k
6 hand	mano	k+'	k+'	k+'+ *	k+'	k+'	k+'
7 foot	pie	ta'n	k+'xta	tek	teky	koso	puy
8 head hair	cabello	kuajy	vay+	vaajy	ko'owaay	vay	way
9 tongue	lengua	toojts	toots+	toots *	toots	tots	tots
10 liver	higado	joojt	t+'sjot+	joot *	jot	pa't	tsoogoy
11 bone	hueso	pajk	pak+	pajk	pajk	pak	pak
12 nail of hand, foot	una	xoojk	xooki	xoo'ky *	xooky	k+tsus	k++ts+s

English	Spanish	Sayula Popo	Oluta Popo	Teton Mixe	Coatl Mixe	FL Zoque	Mtn Popo
25 buzzard	zopilote	nu'p	nu'pu	no'op	luud	ju'ki	nu'upu
26 bat	murcielago	t++x	t++xi	t++x	t++xy ak	t+si	t++xi
27 fly	mosca	jujyuy	tsachi	tsach	niix	j+j+	jeeje
28 gnat	chaquiste	uux	uuxu'k	oox	uux	k+pi'nyi	uusu
29 louse	piojo	aawat	aava't	a'v+t	aad	avat	a'awat
30 snake	culebra	tsanay	tsana'y	tsaa'n	tsa'ny	tsan	tsaany
31 lizard	lagartija	pach	pariko'n	paach	jaydik	tsanbatsi	paachi
32 termite	comejen	wech	vetse	vets *	wech	vetseng	weechi
33 wasp	avispa	pajak	v++ni'k	v+k *	ukxu'uts	ve'ni	we'eny+k
34 ant	hormiga	jajtsuk	tsukuti'k	tsok+n	tsuk	najchuku	jajtsuk
35 cockroach	cucaracha	maage'ch	chiik+	tsiik	muguk	tsu'ni	t+kchi
36 cicada	chicharra	xiigit	xiiixkiti	xik+tiiv	x+gity	isyk+ting	xiiktiny

27 OL: mosquito
juju'y

27 CM: blue
fly tsach

31
~~27~~ OL: crested
lizard: pachi

English	Spanish	SYP	OL	TM	CM	FLZ	SP
49 tortilla	tortilla	n++n	n++n+	kaaky	kaagy	ane	aanyi
50 tamale	tamale	m+'k	m+'ki	m+'+k	m+'+k	yo'o	aanyi mo'onyi
51 cornfield	milpa	kam	kama	kam	kam	kama	kaama
52 egg	huevo	kooy	tu'ti'k	tu'ut	tu'uty	poka	ka'npu
53 man	hombre	jayau	yo-ojwa	jayu	ye'eyd+jk	p+n	p++xiny
54 woman	mujer	to'xay	majau	to'oxy *	to'oxy ja'ay	yomo	yomo
55 skin	piel	ak	ak+	ak	ak	naka	naaka
56 thorn	espina	apit	api't	apit	apy	apit	aapity
57 body hair	pelo	p+jk	p+k+	p+jk *	p+jk	p+k	p+k
58 old man	anciano	na'way	na'av	na'av	m+j ja'ay	tsamb+n	w+tyi
59 granddad	abuelo	apuy	apu	ap	tatpiid, ap	apu	jaatung weewe
60 grandma	abuela	ogoy	taata	ok *	oktaag	oko	aap choomo

English	Spanish	SYP	OL	TM	CM	FLZ	SP
61 basket	canasta	ka'k	ka'ka	kach	kach	vaka	koong
62 stool	banquito	kuxk	kovo't	koov *	kony	vanguy	koonykuy
63 mother	mama	maam	ts+'	taak	taj	mama	aapa
64 father	papa	teet	takau	tee'	teedy	jata	jaatung
65 tree	arbol	kuji	kuy+	k+p	kipy	kuy	kuy
66 flower	flor	pijik	p+ji	p+j	p+jy	j+y+	mooya
67 leaf	hoja	aji	ay+	aaji	aay	ay	ay
68 palm	palma	tuujts	tuuts+	t++x+x	t'+xy	sa'ni	suyat
69 reed	carrizo	kap	kape	kapy	tsajkapy	kape	kaapi
70 zapote	zapote	xe'nk	maaxan kava'k	maax+n ka'ajk	xe'ny	taki samne	nuu
71 cotton	algodon	pixtin	pixti'n	pixt+n	pixy	tsoja	puuki
72 quelite*	quelite	ts+'p	ts+'pi	ts+'p	paanbikxy	ts+p+	ts++p+
*edible herb							

English	Spanish	SYP	OL	TM	CM	FLZ	SP
85 lightning	relampago	aniway	ye'k+	vits+k	w+dzuk	ne'm-	ke'enyi
86 rain	lluvia	tuu	tuuj+	tuu *	tuu	tuj	tuj
87 cloud	nube	wintuk	vinjoye'k	vin+ts	jok	o'na	uks+
88 earthquake	terremoto	ux	ux+	ujx *	ujx	nasa miksk+	nas angpaaki
89 wind	viento	xe'm	jaamu	poj	poj	sava	saawa
90 road	camino	toou	tu-a'u	tuu' *	tu'	tung	tung
91 lime	cal	jajm	jam+	jaajm	jaam	jam	jam
92 earth	tierra	naax	naax+	naax	naax	nas	nas
93 sand	arena	po'y	pu'+	pu'u *	pu'	po'yo	po'oy
94 mud	lodo	mo'ts	mo'tso	mo'ots	mo'nts	mote	tu'ut+
95 stone	piedra	tsa'	tsoaj+	tsoa	tsoa	tsoa'	tsoa'
96 fire	fuego	j+jn	j+n+	j++jn *	j++n	jukty+k	jukty+

English	Spanish	SYP	OL	TM	CM	FLZ	SP
97 water	agua	n+' n++j+	n++ *	n++ *	n++	n+' n+' aksa	n+' kanapooki
98 sugar cane	cana	waaxuk	vaaxu'k	vaaxk	waax	maaxan masan	maasan ***
99 sacred foreign	sagrado	maaxan	**maaxa'n ***	maax+n	maaxan	masan	maasan ***
100 incense	copal incienso	poom	poom+	poom *	poom	pomo	pooma
[99]		syp: high class	ol: departed spirit	tm: sacred	CM: idol flz: sacred	sp: white man	

Num	English	Spanish	Sayula Popo	Oluta Popo	Toton Mixe	Coatl Mixe	FL Zoque	Mtn Popo
1	go	ir	n+x, n+kx	n+kx	n+jkx	n+kx	mang	n+k
2	come	venir	min	min	min	min	min	miny
3	go up	subir	ku't	pet	pet	pet	ki'm	ki'm
4	go down	bajar	manak	ka'	vany+k	m+nak	m+n	ket
5	go out	salir	pichin	pits+m	pits+m	pidz++m	put	put
6	go in	entrar	t+g+y	t+kil	t+ka *	t+g++y	t+k+y	t+g+y
7	go back	regresar	pituc	nivimpit	vimpit	wimbit	vitu'	seet
8	go by	pasar	nax	nax	naxy	nax	k+jt	nas
9	nurse	mamar	tsu'ts	chi'ts	tsi'its	tsi'its	tsu'ts	tsu'ts
10	spit	escupir	tsuj	tsuj	tsuj	tsuj	tsuj	tsuj

English	Spanish	SYP	OL	TM	CM	FLZ	SP
11 jump	saltar	tsut	yokx	yejts+k *	t+px++k	m+'ng	m+'ng; yo'y
12 bathe	banarse	chiu	chiv	tsi'iv	tsiiu	tsing	ching
13 wake up	despertarse	jutuk	jutuk	mavij	juyuk; ma'ywij	sa'	yus
14 cry, weep	llorar	j+y	j+y	yaax	yax	vej	wej
15 play game	jugar	iik	..j+ytaak	koo'ya	..+y++y	m+jts+y	m++ch
16 to be	haber	it	it	it	it	it	ity
17 get up	levantarse	ka'x+'k	tsap+'k	pojtk	p+d+'k	te'nchu'ng	tsukum
18 fall	caerse	ka'u	ka'	ka'a	ka', ka'a	kek	tsut
19 fly	volar	keek	napap	jei *	keek	sitit	kek
20 arrive	llegar	koy, koja	jamat	mets	ja't; meech	nu'k	nu'k
						18 FLZ: ka' to die	18 SP: ka' to die

English	Spanish	SYP	OL	TM	CM	FLZ	SP
21 sleep	dormir	maa	maa	ma'a	maa	.+ng	mong
22 die	morir	o'k	ook	oo'k *	o'k	ka'	ka'
23 go & return	ir y volver	oy	oy	?	oy	oy	oy
24 flee	huirse	po'k	poy	ke'ek *	keek	poy	poy
25 run	correr	puj+'k	piy+'k	num	poy+'k	poy	poy
26 laugh	reir	xiik	xiik	xi'ik	xik	sik	xik
27 get wet	mojarse	xo'k	xook	xoo'k *	xook	nung	muk
28 stay	quedar	tan	tij	tan	it	ts+'y	ts+'y
29 get lost	perderse	togoy	joy	toki *	t+goy	tokoy	togoy
30 get burned (person)	quemarse	toy	toy	toy	tooy	pong	jips
						30 FLZ: toy to hurt	30 SP: toy to hurt, love

English	Spanish	SYP	OL	TM	CM	FLZ	SP
31 lay eggs	poner... huevos	tun	tuut	tu'ut	tut	po'kah	yoj
32 sing	cantar	.+u	.+v	.+v *	.+u	van	wan
33 grow	crecer	ye'k	yeek	yeek	yeek	ye'ng	yo'n
34 swim	nadar	yun	yun	n+v++'n *	yaab	pu'n	pu'n
35 walk	andar, caminar	yo'y	vit	yo'oy *	yo'oy	vit	wity
36 cook, bake	cocer	k+u	k++	k++v	k++	k+ng	k+ng
37 put out light or fire	apagarse	pi'ch	pi'ts	pi'ts	pi'ts	tu'y	pi'ch
38 rot	podrir	puuts	puuts	pu'uts	pu'uts	puts	pu'c
39 bloom	florece	p+j	v+j	nuk	p+j	j+y+'aj	moy
40 burn (flame)	arder	tinin	yupup	yee'n	j++nye'en	tsok	jum
			35 OL: yo'y to crawl				35 SP: yo'y to jump

English	Spanish	SYP	OL	TM	CM	FLZ	SP
41 get dry	secarse	t++ts	t++ts	t++ts	t+ts	t+ts	t+ts
42 smoke (fire)	ahumar	wi'x	viix	vii'x	ajog+'	joko'aj	jo'ogaa
43 be straight	estar derecho	yakx	pakaa	yajkxy	t+y	viyu'ng	no'mtsak
44 boil water	hervir	yup	yon	..++'ts	..++ts	yum	yum
45 push	empujar	tsak	ton	ti'its	tij	ton	yak
46 pay	pagar	tsook	tsook	mujuy *	kojuy	koyoj	yoj
47 cut w/knife	cortar con cuchillo	tsuk	tsuk	tsuk	tsuk	v+k	w+k
48 tie	amarrar	tsum	tsum	tsum	xofs	vat	tsen
49 touch	tocar	ts+k	mats	ton *	xaj+'; ni'idon	pi'k	ts+k
50 scold	reganar	che'k	tseek	ooj *	oj	on	woga'y

English	Spanish	SYP	OL	TM	CM	FLZ	SP
51 seek	buscar	che'n	kep	ixta	ijxta'	me'ts	me'ts
52 pick corn	pizar	chik	chik	tsik	tsik	tsik	chik
53 see, look	ver, mirar	e'p: ix	eep	ix	ix	is	ix; a'm
54 write	escribir	ja'y	jay	ja'a	jay	jay	jay
55 smoke tobacco	fumar	ju'k	ju'k	ju'uk	ju'k	juk	juk
56 pull	jalar	ju'p	v++n	v+n *	p+gon	jup	j++k
57 buy	comprar	juy	juy	joy	juy	juy	juy
58 eat	comer	kay	kay	kay	kay	vi'k	wi'k
59 untie	desatar	kej	kej	kej	kej	puks	kujun
60 braid hair	trenzar	ke'kx	ke'kx	ke'kx	ku'ud+--+k	pe't	wekx

English	Spanish	SYP	OL	TM	CM	FLZ	SP
61 measure	medir	kipx	kipx	kijpx	kipx	muk	ki'ps
62 speak	hablar	kots	kapx	kojts	kapx	on	j+y
63 finish	acabar	k+x	k+x	k+x *	k+x	yaj	yaj
64 hear, listen	oir, escuchar	marau	motov	motu *	m+doou	man	matong
65 count	contar	..may	..may	machov *	m+chou	..may	..may
66 sharpen	afilarse	mee	meej	ame'e	mee'	mej	angmej
67 plaster with mud	embarrar	meex	pots	tukn+joo'y	pots	?	me'es
68 kick	patear	nep	poj	nep	nep	nep	nep
69 plant	sembrar	niip	niip	niip	niip	nip	nyip
70 sew	coser, costurar	nu'	xuy	xoy	xuy	na'k	nu'n

English	Spanish	SYP	OL	TM	CM	FLZ	SP
71 steal, rob	robar	nu'm	jo'n	mee'ts	meets	nu'm	nu'm
72 sweep	barrer	peet	peet	peet *	peed++k	pet	pet
73 answer	contestar	po'n	autsov	atsov *	adzou	angdzong	angtsong
74 wash	lavar	puj	puj	puj	puj	tse'	tse'
75 cut with ax or machete	cortar con hacha, machete	pux	pux	pux	pux	chets	t+ng
76 be afraid	tener miedo	p++t	ts+'ki	ts+'ga *	tsig++	na'ts	k++ng
77 smell	oler	xu'k	xuuk	xuu'k	xuuk	su'k	suk
78 dig	escarbar	taj	taj	taj	taj	taj	taj
79 give light	alumbrar	ta'kx	t+'kx	aamp	t+kx	s+'ng	y+'k
80 bite	morder	to'	tsu'ts	tsu'uts	tsu'uts	k+'s	was

English	Spanish	SYP	OL	TM	CM	FLZ	SP
81 sell	vender	to'k	took	too'k *	took	ma'a	ma'y
82 shoot w/gun	tirar	tuj	tuj	tuj	tuj	tuj	tuj
83 drink	beber	uuk	uuk	uu'k	uk	uk	uk
84 shell corn	desgranar maiz	..+kx	..+kx	..+jkx	..+kx	..+ks	..+ks
85 lie, deceive	enganar	weet	..jan	win'++'n	win'++'n	ma'ts	m+go'y
86 uproot	arrancar	wix	vix	vix	wix	vis	wix
87 pound, hit	golpear	wop	vop	v+p *	wop	pats	na'ks
88 yell	gritar	yaax	yaax	yaax	yax	vej	angwej
89 fan (fire or person)	soplar abanicar	yem	yem	yem	yeem	yem	yem
90 ask, beg	pedir rogar	yo't	ko'tsov	amotuva	p+جتsoo	va'k	wa'k

English	Spanish	SYP	OL	TM	CM	FLZ	SP
91 know how	saber como	jat	jat	jaty	yajijjt+	musoy	joodong
92 know	saber	jawi	vinii	n+java *	nejw++by	mus	joodong
93 give	dar	moy	moy	mo'o *	mo'	chi', c+	chi'
94 burn [tr]	quemar algo	no'k	yaktoy	yaktoy	no'k; yajtooy	pong	no'ok
95 say, tell	decir	n+m	n+m	n+jma	n+m	n+m	n+m
96 find	encontrar	paat	paat	paa'ty	paat	pa't	pa't
97 take, get	tomar	p+k	p+k	p+k	p+k	p+k	p+k
98 want, love	querer	wan	van	va'an	wan	sun	sun
99 do, make	hacer	wat	tun	tun	tun	ts+k	wat
100 give away, leave it	dar, dejar algo	yak	yak	yaky	yek	tsak	tsak
				91 TM: jaty to learn			