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THE PHONEMES OF TETELCINGO (MORELOS) NAHUATL

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Tetelcingo is a village of between one and two thousand inhabitants, nearly all of whom speak Nahuatl. The people call themselves and their language Māsiewalli. Most of the women and many of the men are largely monolingual. The village is situated at kilometer 96 of the highway from Mexico City to Cuautla, Morelos. It represents somewhat of a linguistic island since the people are not in regular contact with other Nahuatl speakers, although there are other dialects not far away which are mutually intelligible with this.[1]

Several informants were used in securing this material, but the principal one was Martín Narciso Méndez, a very intelligent bilingual of about 45 years of age.

There are twenty-three segmental phonemes in this dialect:[2] a, ā, ch, cu, e, h, i, ī, ie, k, l, m, n, o, p, s, t, tl, ts, u, w, x, y.[3]

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[1] The material for this paper was gathered by the author in Mexico under the auspices of the Summer Institute of Linguistics during the periods 1940-47 and 1948-51. It was organized in its present form at the University of Pennsylvania while the author was studying under the benefit of a University scholarship. I am indebted to Zellig Harris, W. D. Preston, and H. M. Hoenigswald for comments on the paper. I am indebted, above all, to W. Cameron Townsend, whose prior residence and important work in Tetelcingo did so much to make possible the study on which this paper is based.

[2] For some recent descriptions of the phonemes of other dialects cf. Roberto J. Weitlaner, Chilacachapa y Tetelcingo [Guerrero], El México Antiguo, Vol. 5, Nos. 7-10, pp. 255-300 (1941); Norman A. McQuown, La Fonémica de un Dialecto Nahuatl de Guerrero, El México Antiguo, Vol. 5, Nos. 7-10, pp. 221-32 (1941); La Fonémica de un Dialecto Olmeca-Mexicano de la Sierra Norte de Puebla, El México Antiguo, Vol. 6, Nos. 1-3, pp. 61-72 (1942); Benjamin L. Whorf, The Aztec of Milpa Alta, in Linguistic Structures of Native America, C. Osgood, ed., Viking Fund Publications in American Anthropology and Ethnology, New York, 1946, pp. 367-397; Harold and Mary Key, The Phonemes of Sierra Nahuat, IJAL, Vol. 19, No. 1, pp. 53-56 (1953).

[3] The Spanish scholars of the sixteenth century gave the Nahuatl language an almost completely phonemic alphabet. If they failed occasionally to indicate long vowels, it may have been because the dialects with which they worked, like many of the contemporary dialects, had largely lost the short long contrast. Because of the well-established tradition for Nahuatl, we have endeavored to adhere to the classical alphabet as far as possible. However, the use of w and k, instead of hu and c/qu has been felt necessary in this paper in order to avoid some of the phonetic and phonemic misconceptions to which the older alphabets have given rise among those who have not heard the language in use. For a rough preliminary generalization of the values of these letters, read all as their conventional Spanish counterparts except: ā is roughly as the vowel in cloth, cu = k^w, e as in met, h as in hat, i as in bit (in phonetic transcription ɪ), ī as machine, ie as Sp. piedra, x = Eng. sh. Hyphens indicate principal morpheme boundaries, periods indicate syllable division.

Patterns

A word is defined for this dialect as any phonological sequence beginning after silence or with the second syllable after a loud stress, and ending with the first syllable following a loud stress, i.e., words are distinguished by penultimate accent. The only exception to this which I have noted is that of the enclitic -ka, kiéni-ka *how*. Several proclitics, ma *let*, sa *only*, ye *already*, and ok *another* have an intermediate status between words and bound syllables.

Word stress may be marked by either an accent over the stressed vowel or # (space) after the following syllable. The second of these is probably preferable since it coincides with major grammatical (i.e. word) boundaries, and hence has the advantage of serving to mark both a phonetic and a grammatical phenomenon. The stress-boundary placement between two vowels or two consonants is completely automatic; in interword VCV sequences, e.g. o-k-ihta-k ustu-tl *he saw the cave*, vs. k-ihta kulu-tl *he sees the scorpion*, its placement is determinable by open transition in slow speech.

Appropriate (open) transition at certain morpheme boundaries is in contrast with close transition of intra-morphemic sequences in several cases, e.g. [tieč-ihtak] *he saw us*, [tiečihčał] *his H saliva*.[4] This makes theoretically necessary the symbolization of all morpheme boundaries. Since many of them, however, are predictable on the basis of cluster patterns and stress placement, a symbol such as /-/ is strictly necessary only where the surrounding symbols give no clue to the juncture.[5]

There are no consonant clusters word initial or word final and the maximum word medial cluster is CC.[6] Maximum vowel clusters are VV, occurring either initial, medial, or final in the word. They are, however, infrequent. All vowel and consonant clusters are ambisyllabic and most of them are also ambimorphemic, i.e., a syllable boundary and usually a morpheme boundary bisects each cluster. Geminate clusters are rare, sītlal-li *star*, kin-nunutsa *he talks to them*, māāna *flame*.

The predominant syllable pattern is CV. Less common are V and CVC types. There are only a few VC syllables, e.g. īx- *face*, īn- *their*. VC-V morpheme junctures do not normally shift to major syllable juncture type V.CV, but syllabify VC.V. niech.ihtak, not *nie.chihtak *he saw me*.

Simple Consonants.

The phonetically simple consonants are p, t, k, l, m, n, s, w, h, x, y.

p, t, and k occur as voiceless unaspirated stops with phonetic values similar to

[4] H = honorific (classical "reverential").

[5] Actually the total number of inflectional morphemes (whose boundaries are the ones most pertinent to this discussion) is so reduced that a reader soon becomes familiar with their characteristic shapes and positions and seldom reads a juncture wrong, even when it is not marked. In this paper only the inflectional morpheme junctures will be marked, not those within the stems.

[6] In rapid speech the i of the imperative prefix xi- often drops out giving an apparent word initial xC cluster. [xtiemopaliewɪ] *help him H*.

the corresopnding consonants in Spanish. All occur in word initial, intervocalic, and word final positions except p which has not been observed word final. puk-tli *smoke*, tuch-tli *rabbit*, kulu-tl *scorpion*.[7] The sequence pā is heard as [pwɔ]. ī-kopāk [ikopwɔk] *his throat*.

l is produced with the tongue tip in alveolar position. Syllable initial and geminate it is voiced; syllable final it is voiceless. [kilakatsoa] *he rolls it up*, [iye-katsoɬ] *his nose*. It has been observed word initial in only one word, laliwis *very*, which is probably related to (san) tlaliwis *good-for-nothing (person)*. The noun suffix -tli, when occurring with a stem ending in l, reduces to -li giving a resultant ll cluster. kal+tli > kal-li *house*. l does not occur as the second member of any other consonant cluster.

m and n have phonetic values similar to their Spanish equivalents. Both occur syllable initial and intervocalic. mustla *to-morrow*, nuchtli *prickly pear fruit*. m does not occur either syllable or word final. n does not occur utterance final and only occasionally word final within an utterance in such morphemes as īpa(n) *on*, -tsī(n) honorific suffix, īhua(n) *and*, tlī(n) *what*. The sequence mā is heard as [mwɔ]. ī-mā [imwɔ] *his hand*. An nm sequence often reduces to m. kin+mikti > ki-mikti *he killed them*.

s and x [š] are phonetically similar to the English equivalents. That they are two phonemes rather than allophones of one may be observed from several fixed contrasts in analogous positions: [sakanopalɪtɬ] *nopal*, [šakallɪ] *cornstalk shelter*; [istɬakatɬahtullɪ] *a lie*, [ištɬapač] *upside down*; [sitɬallɪ] *star*, [šikallɪ] *cup*. Both occur word initial, intervocalic, in cluster with the same consonants, and word final.

w and h are in semi-complementary distribution in Tetelcingo.[8] w occurs only syllable initial and intervocalic; h only syllable final (but not word final) and intervocalic. It is in this latter position that the two contrast.

The phonetic character of h is simply that of light aspiration.

w has the following allophones:

[f] following a voiceless consonant and before a front vowel. [ɪɬfɪtɬ] *feast*, [nɪkfika] *I carry it*. It has also been observed in one word with a reduplicated syllable. [fieve] *principal*.

[b] or [v] or [β] (depending on speaker) elsewhere before front vowels. [bieyɪ] *big*, [viktɬa] *day after tomorrow*. It has been observed in intervocalic sequences a()i, ie()e, and i()i as follows: [kwavɪtɬ] *tree*, [fieve] *principal*, [šɪvɪtɬ] *leaf, year*.

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[7] More extensive illustrations are given of the more controversial phonemes. It has not been felt necessary to illustrate at length those about which there is little question. Illustrations of consonant and vowel clusters and certain other significant sequences are given in section 4.

[8] The historical explanation of this is doubtless that the syllable final allophone of w was at one time voiceless [W] (cp. classical Cuauhtemoc, probably [kʷawWtemok] or [kʷaWtemok]) and lost its rounding, thus falling together with h. This syllable final allophone of w occurs in some dialects as [f].

[W] after h. [tehWa] *we*, [kahahWa] *he scolds him*, [ištelolohWa] *his eyes*.

[w] syllable initial before back vowels and in intervocalic sequences ā()a, o()a, i()a. [wɔtsɪnko] *tomorrow*, [kɪnwahWatsa] *it dries them up*, [ɔwakatɬ] *aguacate*, [sowatɬ] *woman*, [iwa] *and*.

h occurs in syllable final position and in intervocalic sequences a()a, i()ī u()u, e()u, e()i, a()ā. [tohtɬɪ] *hawk*, [yaha] *he*, [kɪhišomatɪ] *they know him*, [ihiloak] *they H are*, [tɬininuhu] *what are those?*, [ɔkimehu] *who are they?*, [tɬɪ nemehi] *who are you?*, [mahɔɬtɪa] *you are bathing*.

y is phonetically similar to its Mexican Spanish counterpart. It occurs word initial and intervocalic but not word final nor in any cluster except hy. [yaha] *he*, [iyulo] *his heart*, [išɪhyo] *its leafiness*.

Drawing on data from Spanish, it may be said that Spanish loans are, in general, rephonemicized to fit Māsiewalli. The only Spanish consonant which retains a contrastive niche in Māsiewalli is r. rico *rich*, no-puro *my burro*, por *for*. A fuller discussion of borrowings will be left for another paper.

Complex Consonants.

ts, ch, tl, and cu may be described as phonetically complex consonants.[9] The argument for considering them as unitary phonemes rather than clusters ts, tš, tl, kw, ko, or ku rests principally on the postulation of CVC as the maximum possible syllable pattern, CC and VV as maximum clusters. These patterns, in turn, are supported largely by arguments of elegance and simplicity. They cover very neatly all possible phonemic sequences if the complex consonants above are regarded as units. If these consonants are regarded as clusters, minor syllable patterns CCV, VCC, CCVC, CVCC, CCVCC, and, if kʷ is considered as ko, CVV, CVVC, and CVVCC must be set up for them alone. Since any combination of these syllable patterns within a word would also have to be allowed, this would make, in many cases, word medial cluster of four consonants. [tɪ.mɪts.kwɔs] *I'll eat you*, [vɪts.tɬɪ] *thorn*, [ahWɔtš.tɬɪ] *drizzle*, [its.tɪk] *cold*, [itš.katɬ] *cotton*, [ayok.tsi] *he H is not here*, [kɪ.pɪts.kwa] *he pinches him*, [i.ieɬ.tšɪ.kɪ] *his lung*. Given the choice, then, of these two types of patterning, and there being no evidence other than this against the simpler pattern, we have chosen to interpret these phonetic sequences as complex unit phonemes. This interpretation also fits best with the morpheme patterning.

ts occurs as an alveolar affricate in word initial, intervocalic, and word final positions. tsapo-tl *zapote*, mo-mā-tsī *your hand*, om-wets *he fell down*.

ch occurs as an alveopalatal affricate, in the same positions. chuka *he cries*, kɪ-chiwa *he makes it*, i-tlapech *his bed*. Both ts and ch occur before i and ī. ī-tsīn-tla *underneath it*, chīchīlti-k *red*, tsik-tli *gum*, chikiwi-tl *basket*.

The phoneme tl is of more than ordinary interest, notably because of Whorf's

[9] The reader is specifically warned not to confuse the conventional digraphs (tl, ts, ch, cu, ie) with phoneme clusters.

paper on its origin.[10] Its commonest occurrences are in the verbal prefix tla- meaning 'unspecified object of a transitive verb', the noun suffix -tla meaning 'field or grove of', and the noun suffix -tli meaning 'unpossessed singular noun'. tla-ketsoma *it bites,* alošoš-tla *orange grove,* chān-tli *home.* As has already been mentioned, the latter, following a stem ending in l, reduces to -li. Following a stem ending in a vowel, the i is lost. sowa+tli>sowa-tl *woman.* The full form -tli occurs only after stems ending in a consonant other than l. This morphophonemic variation was recognized long ago by the Mexican scholars. tl has not been observed as the first member of any consonant cluster, but it occurs as second member after k, ts, ch, s, x, n, and h.

cu occurs word initial and intervocalic but not word final. cual-li *good,* no-cuatex *my brains.* It does not occur as the first member of consonant clusters; its occurrences as second member are shown below. The reason for not considering it as a kw cluster has been given above. A further strengthening of the unitary interpretation is given by a minimal pair, ni-k-wīka [nɪkfika] *I carry it,* ni-cuīka [nɪkwika] *I sing.* cu [kw] is not interpreted as /ko/ or /ku/ because that would require a unique VVV cluster. kwā-istāk *white-haired.*

Short Vowels.

The short vowels are a, e, i, o. Their occurrences in clusters and following the less stable consonants are shown in sections on vowel clusters.

a occurs as a low central unrounded vowel. kal-li *house.* After w and kw it is slightly raised and rounded. [iwaˆ] *and,* [nɪ-tɬa-kwaˆ] *I eat.* An aa sequence occurs in the form o-tla-axīlti *he reached it.*

e occurs as a mid front unrounded vowel with a phonetic value similar to that of the English vowel in 'bet'. sente [sɛntɛ] *one.*

i sounds like the vowel of English 'bit' in open unstressed and closed syllables. vɪts-tlɪ *thorn.* In open stressed syllables except CiCi sequences its phonetic nature is approximately [eˆ]. I long recorded it in that position as an allophone of e. My principal informant, Martín, however, who writes his own dialect with an excellent feeling for phonemicity, feels this as an allophone of i. miak [meˆak] *much,* koch-tika [kotšteˆka] *he's sleeping,* ihkiu [ɪhkeˆu] *thus.* Occasionally I have difficulty in distinguishing between i and e in open unstressed syllables [tɬɪtsintɬɪ] or [tɬɛtsintɬɪ] *fire,* [umɛ] or [umɪ] *two,* and closed unstressed syllablts [ihtɪk] or [ihtɛk] *within.*

o is very similar to the Spanish o. te-kol-li *charcoal.* Before h it sounds like the vowel in English 'put'. oh-tli [ʊhtlɪ] *road.*

Long Vowels.

The 'long' vowels ā, ie, ī, u are thus designated because the feature of vowel length is more or less general in Nahuatl and there are many regular alternations between them and their 'short' counterparts in the grammar, particularly in

[10] B. L. Whorf, the Origin of Aztec TL, American Anthropologist 39. 265-274 (1937).

reduplication. However, in Tetelcingo, the term does not easily fit, the distinction between them and the short vowels being more of quality than of quantity.

The long/short contrast may be observed in both open (O) and closed (C), stressed (S), and unstressed (U) syllables. SO āki *who?*, aki *it fits;* SC wīk-tla *day after tomorrow,* tla-mik-ti *he killed something;* UO ā-tsīn-tli *water,* a-wel-li *not able;* UC kal-kune-tsi *little house,* tlālpotuna *it's dusty.*

The contrast seems to disappear, however, in a few positions. Short vowels are much commoner than long vowels before syllable final h, the i/ī and o/u contrasts are frequently recessive word initial, and the a/ā contrast seems difficult to detect after w or cu, tending usually to be heard as ā. ī-ka∼i-ka *with,* u-mik∼o-mik *he died,* watsinko∼wātsinko *tomorrow.* That this may sometimes be due to insufficiently acute hearing, we readily admit. However, there is also the circumstance that, in most of the environments where I find these contrasts elusive, Martín is also inconsistent in writing them, using sometimes the long and sometimes the short vowel.

ā is low, back, open, and rounded [ɔ]. Occasionally one may detect a greater duration than in a. ā-tsīn-tli [ɔ.tsintɬi] *water,* kāni [kɔ.ni] *where?* The contrast between ā and a may be seen in the minimal pair āki *who,* aki *it fits* (in something). The rounding is usually so considerable that for a long time I regarded occurrences of this phoneme as allophones of o. But the distinction is now well attested by at least one minimal pair and several contrasts in analogous environments. sowa-tl *woman,* sāwa-tl *sore;* ni-kāni-ya *I was taking it,* ni-kochi-ya *I was sleeping;* ki-kāwa *he leaves it,* ki-ko-a *he buys it.*

ie is a diphthong [ie] in open stressed syllables, [piewa] *it begins,* and [iɛ] elsewhere, [ópiɛ] *it began.* The contrast between it and its short counterpart may be seen in the pair, ki-temo *he lowers it* and ki-tiemo *he looks for it.* In the proclitic sie [síɛ] *one* this phoneme is ambisyllabic, with stress on the [i]. This is the only case I know where the i of this diphthong is stressed.

The analysis of [ie]∼[iɛ] as a unit phoneme instead of a vowel cluster or ye or C^{y}e requires justification since the interpretation of diphthongs as unit phonemes is still a controversial question in some languages. Part of the evidence consists of the penultimate stress feature in this dialect. When [iɛ] occurs word final, the stress still falls on the preceding vowel, [ópiɛ] *it began.* Another consideration is the fact that all VV clusters are ambimorphemic. [ie]∼[iɛ] is never ambimorphemic. Furthermore, it occurs in clusters with itself and with other vowels, which would require the introduction of unique patterns VVV and VVVV just for this one phoneme if it were regarded as a cluster. tie-ielsisiwilis [tiɛiɛɬsisiwilis] *his H breath,* ni-tie-ilwi [nitiɛiɬfi] *I'll tell him.* An interpretation of it as C^{y}e would require the admission of an entire new series of palatalized consonants, none of which would occur anywhere except before e. To consider it as ye would require unique CCC clusters. n-istlakmieya *it makes my mouth water.* Furthermore, there is a minimal pair differentiating between ye and ie. [yeka] *already,* [ieka] *someone.* I am not

able to detect a phonetic difference, but several informants have assured me that they can.

ī is very similar in quality to Spanish i. There is usually no discernible difference in length between ī and i. I thought I detected two moras in the ī of [nɪkoni:tɪka] *I am drinking,* but such phonetic length is rare in this phoneme. The i/ī contrast may be seen in the pairs xi-h-kwi-ti *go bring some,* xi-h-kwī-ti *name him;* ni-konī-ya *I was drinking,* ni-kochi-ya *I was sleeping.*

u is almost identical in quality to Spanish u. kulu-tl [kulutɬ] *scorpion.* The contrast between it and o may be seen in the pair, kituka [kɪtuka] *he plants (buries) it,* kitoka [kɪtoka] *he follows it.*

Distribution.

This section presents the distribution of phonemes in relation to each other. Distribution of single phonemes in words has already been discussed in the previous sections.

Consonant clusters. Any consonant except p, t, cu, tl, w, and y may occur as first member of a consonant cluster. Any consonant except h may occur as second member of a consonant cluster. m precedes only p and w. s precedes only p, t, k and tl and follows only k and w. x follows only k and n. l follows only l, but occurs freely preceding other consonants. Specific clusters found are listed below with examples.

Clusters beginning with k: kp, kt, ktl, kts, kch, ks, kx, km, kn, kw. Examples: ikpa-tl *thread,* chāchik-te-tl *good luck stone,* puk-tli *smoke,* a-yok-tsi *he H is not here,* ni-k-chīwa-s *I will do it,* ni-k-solo-a *I stick it,* mo-kxī *your foot,* a-yekmo *no longer,* ī-knī *his brother,* ti-k-wel-mati *do you like it?*

Clusters beginning with ts: tsp, tst, tsk, tscu, tstl, tsm, tsn, tsw, tsy. Examples: ma-timits-paliewi *let (me) help you,* ītsti-k *cold,* ki-kītski *he holds it up,* ki-pitscua *he pinches it,* wits-tli *thorn,* timits-maka-s *he will give you,* timits-nunutsa *he speaks to you,* timits-wīkas *he will carry you,* timits-yekāna *he guides you.*

Clusters beginning with ch: chp, cht, chk, chcu, chtl, chts, chm, chn, chw, chy. Examples: xi-niech-paliewi *help me,* niech-toka *he follows me,* ichka-tl *cotton,* ī-kechcuah-yo *his neck,* ahwach-tli *drizzle,* niech-tsiko *it stuck to me,* tiech-maka *he gives it to us,* niech-nunuts *he spoke to me,* niech-wīka *he carries me,* tiech-yekāna-lo *he H guides us.*

Clusters beginning with s: sp, st, sk, stl. *Examples:* ne-tlāka-tilis-pa *Christmas,* īsti-tl *fingernail,* āma-iski-tl *capulin (a variety of wild fig tree),* mus-tla *tomorrow.*

Clusters beginning with x: xt, xk, xcu, xtl, xts, xm, xn. Examples: īx-telolo *his eye,* īx-kokox-ki *blind,* īx-cuahmul-tson-tli *eyebrow,* īx-tlapach *upside down,* n-īx-tso *my eyelash,* k-īx-mana *he smooths it,* īx-niempoli *he got lost.*

Clusters beginning with l: lp, lt, lk, lts, lch, ll, ln, lw. Examples xi-k-ilpi *tie it,* ki-xutlalti-a *he burns it,* ni-k-ilkāwa *I forget it,* pil-tsīn-tli *baby,* ī-ielchiki *his lung,* kal-li *house,* ni-k-ilnāmiki *I remember,* iyolwa *yesterday.*

Clusters beginning with m: mp, mw. Examples: īpampa *because,* om-wets *he fell down.*

Clusters beginning with n: nt, nk, ncu, ntl, nts, nch, ns, nx, nm, nn, nw, ny. Examples: āmantieka-tl *shaman,* chinānkal-li *cornstalk house,* ki-n-cua *he eats them,* ā-tsīn-tli *water,* ni-ki-n-tsiko *I learned them by heart,* ki-n-chīwa *he makes them,* ki-n-semāna *he scatters them,* ki-n-xixīma *he scrapes them,* ki-(n)-mikti *he kills them,* ki-(n)-nunutsa *he calls them,* ki-n-wah-watsa *it dries them up,* ki-n-yekāna *he leads them.*

Clusters beginning with h: hp, ht, hk, hcu, htl, hch, hm, hn, hw, hy. Examples: ki-n-peh-pena *he picks them up,* īhtaka-tl *taco,* ī-ahkol *his shoulder,* k-ihcueni *he takes it away,* ni-tlahtlani *I ask for something,* ki-n-chih-chīwa *he makes them,* tohmi-tl *feather,* neh-nemi *he walks,* wah-wano-a *it barks,* ī-xih-yo *its leaf.*

Vowel clusters. Any vowel except u may occur as first member of a vowel cluster. Any vowel except e may occur as second member of a vowel cluster. a and ā occur as first members only in clusters of identical vowels. ī occurs as second member of a cluster in which o is first member. o occurs as second member only where e is first member. Specific clusters found are listed below with examples.

Clusters beginning with i: iu, ia. Examples: ihkiu *thus,* ni-k-pia *I have it.*

Clusters beginning with ī: īi, īie, īa. Examples: ī-ihyu *his breath,* ī-ielsisiwilis *his spirit,* sīawil-is-tli *coldness.*

Clusters beginning with e: eo, eu. Examples: teo-pan-tla *church area,* iteutla-k *last night.*

Clusters beginning with ie: iei, ieie. Examples: ni-tie-ilwi-s *I will tell him H,* tie-ielsisiwilis *his H spirit.*

Clusters beginning with o: oī, oa, oā. Examples: o-īx-niempoli *he got lost,* o-asi-k *there was enough,* mo-āmik-paliewi-s *it will help your thirst.*

Clusters beginning with a: aa. Example: o-tla-axīlti *it reached.*

Clusters beginning with ā: āā. Example māāna *flame.*

Consonant-Vowel Combinations.

Certain less stable (i.e. of greater morphophonemic variableness) consonants plus vowel.

Combinations of h plus vowel: hi, hī, hie, hu, ha, hā. Examples: ki-h-ilpi *he tied it,* tlī-nin-īhī *what are these?* kanah-ieka *someone,* tlī-nīn-uhu *what are those?* k-ahahwa *he scolds him,* kahālti-a *he bathes him.*

Combinations of w plus vowel: wi, wī, we, wie, wa wā. Examples: cuawi-tl *tree,* wīk-tla *day after tomorrow,* wie-wen-tsi *old man,* ki-chīwa *he makes it,* wātsinko *tomorrow.*

Combinations of y plus vowel: yi, ye, yo, yu, ya, yā. Examples: yi-tsīn-tli or yetsīn-tli *dry beans,* ye-ka *already,* a-yok *he is not here,* ī-yulo *his heart,* ni-wiya *I'm going,* ī-yā-yo *its sap.*

Combinations of cu plus vowel: cui, cuī, cue, cuie, cua, cuā. xi-h-cuitī *go bring it*, cuīka *he sings*, ki-cuepa *he turns it*, chicuieyi *eight*, cual-li *good*, cuā-īstā-k *whitehaired*.

Combinations of s plus vowel: si, sī, se, sie, so, su, sa, sā. Examples: ī-ielsisiwi-līs *his spirit*, sītlal-li *star*, secuis-tli *volcano*, sie *one*, sowa-tl *woman*, suyo-tl *palm*, san tlapī-k *in vain*, sāwatl *sore*.

Combinations of x plus vowel: xi, xī, xe, xie, xo, xu, xa, xā. Examples: xiwi-tl *leaf, year*, xīkal-li *cup*, o-kin-xicxelo *he passed them out*, xokote-tl *plum*, xupan-tla *rainy season*, xakal-li *corn-stalk fence*, xāmi-tl *adobe*.

Combinations of ts plus vowel: tsi, tsī, tso, tsa. Examples: tsik-tli *gum*, ī-tsīn-tla *underneath*, ī-tso *his hair*, tsapo-tl *zapote*.

Combinations of ch plus vowel: chi, chī, cho, chu, cha, chā. Examples: chikiwi-tl *tortilla basket*, ki-chīwa *he makes it*, cholo-a *he runs away*, chuka *he cries*, chachalu-tl *squirrel*, chān-tli *home*.

Combinations of tl plus vowel: tli, tlī, tle, tla, tlā. Examples: tlitsīn-tli (tletsīn-tli) *fire*, tlīlti-k *black*, ki-tlekawi *he raises it*, tlahtlato-a *he talks*, tlāl-li *earth*.

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