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INSTITUTE OF SOCIAL ANTHROPOLOGY  
PUBLICATION NO. 8

# SIERRA POPOLUCA SPEECH

*by*

MARY L. FOSTER AND GEORGE M. FOSTER





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MARY L. FOSTER AND GEORGE M. FOSTER

*Prepared in Cooperation with the United States Department of  
State as a Project of the Interdepartmental Committee  
on Scientific and Cultural Cooperation*



LETTER OF TRANSMITTAL

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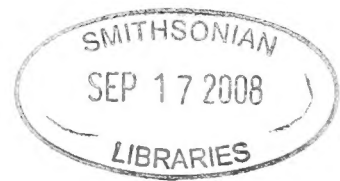
SMITHSONIAN INSTITUTION,  
INSTITUTE OF SOCIAL ANTHROPOLOGY,  
*Washington 25, D. C., June 25, 1947.*

SIR: I have the honor to transmit herewith a manuscript entitled "Sierra Popoluca Speech," by Mary L. Foster and George M. Foster, and to recommend that it be published as Publication Number 8 of the Institute of Social Anthropology.

Very respectfully yours,

GEORGE M. FOSTER, *Director.*

DR. ALEXANDER WETMORE,  
*Secretary of the Smithsonian Institution.*



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# Sierra Popoluca Speech

By MARY L. FOSTER and GEORGE M. FOSTER

## INTRODUCTION

In the southeastern part of the State of Veracruz, at the north end of the Isthmus of Tehuantepec, are four small groups of Indians who speak languages known to themselves and their neighbors as Popoluca. The name is from the Aztec "popoloca," applied in a deprecating sense to a number of backward Mexican groups. Four different languages exist. Texistepec Popoluca, Oluta Popoluca, and Sayula Popoluca are limited to the villages of the same name. Sierra Popoluca is spoken in about 25 villages and settlements in the mountainous area between Lake Catemaco and the Tehuantepec railway, by perhaps 10,000 persons.<sup>1</sup> All four languages are correctly classified in the Mixe-Zoque family, and because of the collective term "Popoluca" it usually has been assumed that they form a third basic division of this stock and that differences within this division are less pronounced than between these languages and Mixe and Zoque. Actually, the name "Popoluca" has given a false impression of linguistic relationships within the Mixe-Zoque family. In a strictly analytical sense there are but two basic divisions, Mixe and Zoque, each composed of a number of distinct, not mutually intelligible languages. Two of the Popoluca languages, Oluta and Sayula, fall in the Mixe division, along with the Western Mixe and the Guichigovi Mixe, both in Oaxaca. The other two, Sierra and Texistepec, must be classed with the Copainala and San Andres Tuxtla Zoque, in Chiapas, and with the dialects spoken in Santa Maria Chimalapa and San Miguel Chimalapa, Oaxaca, in the Isthmus of Tehuantepec. Data are as yet too limited to prevent more than this rough classification. Although the Sierra Popoluca commonly refer to themselves as Popoluca, in their own

language they use the expression ?aηmáŕi (*the*) *word* to denote their linguistic group.

The data which form the basis of this study were gathered in the spring of 1941, when we lived for 10 weeks in Soteapan, *cabecera* of the *municipio* of the same name, which includes more than half of the Sierra Popoluca and which is the only *municipio* entirely composed of Popoluca-speaking inhabitants. The principal objective of the field trip was ethnographic research, and the linguistic work was carried on as a more or less accidental and unplanned side line. When we discovered that one of our principal informants, Leandro Pérez, at that time about 35 years of age, knew a great many stories, we decided to record as many as time permitted, in spite of our lack of formal linguistic field training. Eventually we found ourselves with about 300 pages of textual material. These data, in addition to phonetic and grammatical material which we gathered simultaneously, form the basis for this study. Although the speech here analyzed is that of Pérez, we made enough use of other linguistic informants to know that his manner of speaking is typical of Soteapan.

In the initial stages of the organization of our material Dr. Harry Hoiijer aided us with many valuable suggestions. In December 1944, we returned to Soteapan for 10 days to recheck our data. During this period we had a number of stimulating conversations with Mr. Ben Elson, who at that time lived in nearby Ocotlal Chico and who also was studying the language. Mr. Elson recently has published an excellent article entitled "Sierra Popoluca Syllable Structure," to which reference occasionally is made in this paper.<sup>2</sup> Dr. Stanley S. Newman has given generously of

<sup>1</sup> For more detailed information on the location of the Popoluca, see: GEORGE M. FOSTER. The geographical, linguistic and cultural position of the Popoluca of Veracruz. *Amer. Anthropol.*, vol. 45, pp. 531-546. 1943.

<sup>2</sup> ELSON, BEN. Sierra Popoluca syllable structure. *Internat. Jour. Amer. Linguistics*, vol. 13, pp. 13-17. 1947.

his time in reading preliminary manuscripts, and has made a number of suggestions which we have tried to incorporate in the finished paper. To these persons who have aided us, we wish to express our appreciation. No one is more aware

than we of the limitations inherent in our data and manuscript. We hope, however, that a sketch of a heretofore undescribed language will be of use to those persons working in the field of comparative Mexican linguistics.

## ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols have been used:

<i>Abbreviations</i>	
adj.	—adjective
ag.	—agentive
asp.	—aspect
at.	—attributive
ben.	—benefactive
caus.	—causative
com.	—comitative
comb.	—combining
comp.	—compound
compl.	—completive
cond.	—conditioned
conj.	—conjunction
const.	—construction
def. art.	—definite article
dem.	—demonstrative
dur.	—durative
en.	—enumerative
enc.	—enclitic
excl.	—exclusive
gen.	—generalized
ger.	—gerundial
i.	—intransitive
imp.	—imperative
inc.	—incompletive
incl.	—inclusive
ind.	—independent
indef. art.	—indefinite article
indir.	—indirective
inst.	—instrumentative
intro.	—introducing
inter.	—interrogative
lim.	—limiting, limited
lit.	—literally
loc.	—locative
modif.	—modifying, modified
neg.	—negative
nom.	—nominalizing

<i>Abbreviations</i>	
obj.	—object
p.	—pronominal
pas.	—passive
per.	—person
part.	—particularizing
perf.	—perfective
pers.	—personal
pl.	—plural
pos.	—possessive
pred.	—predicative
pref.	—prefix
pron.	—pronoun
purp.	—purposive
quant.	—quantitative
rel.	—relative
repet.	—repetitive
res.	—resultative
sim.	—simulative
Sp.	—Spanish
st.	—stative
sub.	—subject
subj.	—subjunctive
subord.	—subordinate
suf.	—suffix
t.	—transitive
tem.	—temporal
verb.	—verbalizing

### *Symbols*

·	(raised dot) long vowel
.	(period) syllabic division
´	(acute accent) loud stress
`	(grave accent) medial stress
*	(asterisk) verb theme
#	zero prefix, suffix
/t/	etc. phonemic recording
[t]	etc. phonetic recording



## PHONOLOGY

## 1. PROSODIC FEATURES

1.1. Syllabic structure. Two basic types of syllables are found in Popoluca, (1) open or free and (2) closed or checked.<sup>3</sup> They correspond to the following patterns. (Syllabic division is indicated by a period.)

- |          |  |
|----------|--|
| (1). CV  | hú.kum <i>fireplace</i> , ?á.pa <i>mother</i>  |
| (2). CVC | hon <i>bird</i> , ?ép.ši <i>bright reddish</i> |
| CVCC     | so?k <i>fodder</i>                             |
| CVCCC    | *tΛ?ps <i>twist rope</i>                       |

A syllable may begin with any consonant.

The syllable is always a single vowel.<sup>4</sup>

The syllable may terminate in a vowel, consonant, or consonant cluster.

1.2. Most commonly the morpheme corresponds to the syllable. Disyllabic morphemes are also frequent, and in some cases the morpheme consists only of a consonant.

1.3. The word. The word is a minimum free form composed of one or more syllables. It may be distinguished as such on the morphophonemic level by means of patterns of stress and internal sandhi. It may be distinguished on the morphologic and syntactic levels by means of patterns of affixation and phrasal position. It exhibits the following phonetic characteristics:

All words begin with a consonant.

Medial consonant clusters may consist of as many as four consonants, of which not more than three are parts of a single syllable.

Since a syllable may not begin with a vowel, there are no vowel clusters.

A word terminates in a long or short vowel, a consonant, or a consonant cluster.

<sup>3</sup> Elson lists an additional "special type" of syllable, so classed because of its infrequent occurrence. This type consists of syllables with an initial consonant cluster. His examples, which apparently include the only two clusters he has noted, are CCVC, tráy.ti *lad* and CCVC krú?y.éi *quail*. Our data show two initial clusters only, both limited to the single morpheme. These are the clusters tr in the word triṅ.ló?kaé a kind of witch, and kw in the form ?ṅ.kwás.tak *both of you* (the syllable kwas appears in several contexts) <?iñ- 2d. per. pos. p. pref. + ku- numerical prefix + was stem of "two" + -tak numerical suffix added only to derivatives of "two." On the phonetic level, at least, the u of the prefix ku is pronounced so lightly, if at all, that the cluster appears to exist. Since this apparently is a unique case, we were unable to devise a test to determine the true phonemic nature of this construction. Our data suggest the strong possibility that r occurs in Popoluca only in loan words, except in one case (2.9) in which it varies freely with n. Since except for the cluster kw, the true phonemic nature of which is uncertain, all initial clusters have r as the second consonant, we have hesitated to set up an additional syllable type. Elson gives the form rɪ:tuhóp.kay *having bumps on the skin*, to illustrate a syllable-initial r. Hence, it may well be that r is a true, though deficient, Popoluca phoneme.

<sup>4</sup> The nasals and y occur as nonphonemic syllabics (2.6, 2.7).

1.4. Stress. There are three levels of stress, loud (´), medial (˘), and weak (no accent). Loud stress is characterized by the force with which it is uttered, in contrast to the other two stresses. Medial stress, uttered with slightly less force, is a displaced loud stress. Thus, ?ikká? *he killed him*, when given a final loud-stressed suffix, becomes ?ikká?yahtá? *they were killed*. Both loud and weak stress are inherent in certain morphemes, e. g., some suffixes, such as the locative -hom, are loud-stressed, while others, such as the incomplete -pa, are always weak-stressed. Noun and verb stems have an inherent loud stress. The loud stress in a word shifts under certain conditions of suffixation, compounding, and phrasal juxtaposition. Thus, kó.bak *head* > ko.báktak *hat* (kó.bak + tak *house*) > ko.báktakhóm *in the hat* (-hom loc. suf.) > ko.báktakhó?m íṭpa *it is in the hat* (?íṭpa *it is*). (Single syllable morphemes with inherent loud stress, such as -hom, when in isolation have not been written with stress.)

1.5. Phrase melody. Phrase melody is somewhat similar to that of English. A statement ends with a falling pitch on the final syllable. A question usually ends with a slightly rising pitch. A phrase-final syllable is accompanied by a falling pitch and followed by a pause.

1.6. Vowel length. One of the most difficult aspects of the Popoluca vowel is that of length. Both long and short vowels occur in free accented and unaccented and checked accented and unaccented syllables. Stress changes may result in the lengthening of a short vowel or the shortening of a long vowel. Our data are not adequate to permit fine phonetic distinctions, e. g., whether a stress-shortened long vowel is phonetically identical to a stress-lengthened short vowel, but the general tendencies may be pointed out.

(1) A long vowel in either a free or checked syllable which receives loud stress as a free form loses some of its length, especially in rapid speech, when through affixation the loud stress shifts to another syllable. This is particularly noticed in compounding words.

pu?yúkma *on the garbage* (pu?é- comb. form of pú?éi *garbage* + yúkma *locator*)

sa?kká?m *to the daughter-in-law* (sa?k- comb. form of sá?ki *daughter-in-law* + -ká?m loc. suf.)

éi?áhóm *in the cradle* (éi?á *cradle* + -hom loc. suf.)

(2) A short stressed vowel in a checked syllable tends to become phonetically long when, through morphological processes it comes to occupy a syllable final word medial position.

ʔákʌ *leave it!* (\*ʔak *leave something*)  
 míñʌ *come!* (\*míñ *come*)  
 pétʌ *sweep!* (\*pet *sweep*)

## 2. CONSONANTS

2.1. The consonantal system of Popoluca may be represented as follows:

	Bilabial	Alveolar	Palato-alveolar	Velar	Glottal
Stops:					
Voiceless	p	t	t̃	k	ʔ
Voiced	b	d	d̃	g	
Affricates		ʧ	ʧ̃		
Spirants		s	š		h
Nasals	m	n	ñ	ŋ	
Semivowels	w		y		
Lateral		l			
Flap		r			

### DESCRIPTION OF CONSONANTS

2.2. Stops. The voiceless stops p, t, and k are at bilabial, alveolar, and velar points of articulation respectively. The palato-alveolar t̃ is blade-palato-alveolar in point of articulation, the tip of the tongue turns down. All are unaspirated except in syllable final position, e. g., mak *fog*, hap *mouth*, ʔampát *I met*.

The quality of the glottal stop depends upon its position in the word and syllable. In word initial it is unaspirated and almost inaudible, e. g., ʔá'č̃i *uncle, older brother*, ʔé'š̃i *crab*, ʔóma *fog*, ʔúš̃piñ *alligator*.

In syllable initial and word medial position the glottal is clearly audible, e. g., má.ʔa *deer*, ná.ʔa *chicle*, pó.ʔa *piece*.

In syllable medial position preceding k the glottal closure is practically simultaneous with that of the stop. Hence, in this position it is often difficult to hear, e. g., soʔk *grass fodder* (Sp. "zacate"), muʔk *grass*. In syllable medial position preceding any other consonant it is clearly audible, e. g., huʔŋ *owl*, \*heʔn *dig*.

In syllable final position followed by another syllable the glottal is so strongly aspirated that the preceding vowel reappears as a voiced or unvoiced partial rearticulation following the glottal, e. g.:

[káʔʌ.ba] *he dies* (-pa inc. suf.) ----- /káʔba/  
 [kʌʔʌ.tʌk] *ladder* (kʌʔ + tʌk *house*) --- /kʌʔtʌk/

[tʌʔʌ.pʌ] *fish* ----- /tʌʔpʌ/  
 [mʌʔʌ.ši] *wall* ----- /mʌʔši/  
 [háʔʌ.yuk] *younger sibling* ----- /háʔyuk/

In word final position the glottal is strongly aspirated, e. g., nʌʔ *water*, yuʔ *hunger*, kʌʔ *hand*, čaʔ *stone*, \*kaʔ *die*.

Syllables of the form consonant short vowel, when final in an utterance, are always pronounced CVʔ. This inorganic glottal disappears when the syllable is in included position, whereas a true glottal remains.

ʔá'č̃i [ʔá'č̃iʔ] *uncle*, ʔaʔná'č̃i pútʌ *my uncle goes out*  
 \*č̃iʔ *give*, ʔanéiʔ péʔm *I give it to that one*

(Throughout this grammar and the accompanying text the inorganic glottal, though phonemic, will be omitted.)

2.3. The voiced stops b, d, d̃, and g are unaspirated and lenis. Their occurrence is restricted to word-medial syllable-initial position except for d̃ which is also word initial in the single morpheme ða *no*.

2.4. The voiceless affricates ʧ and ʧ̃ correspond to the English values in "hits" and "church" respectively.

2.5. Spirants. The voiceless spirants s and š are at alveolar and palato-alveolar points respectively. The voiceless spirant h most frequently is an aspiration (cf. English "hat"). In syllable final position following a vowel it is more strongly spirantal, e. g., tuh *rain*, wóhno *crane*.

2.6. Nasals. The voiced nasals m, n, ñ, and ŋ are at bilabial, alveolar, palato-alveolar, and velar points of articulation respectively. In word final position they are aspirated, e. g., ham *lime*, hon *bird*, ča'ñ *serpent*, huʔŋ *owl*. In syllable final position following a glottal, as in the example huʔŋ, a nasal is given syllabic value. For descriptive purposes, however, since nonnasals also may occupy this final position, the syllabic quality of the nasals is considered nonphonemic.<sup>5</sup>

2.7. Semivowels. Bilabial w is voiced, rounded, slightly aspirated. Palato-alveolar y in word or phrase final ends in a very strong aspiration or voiceless off-glide, e. g., puy *foot*, čoy *remedy*, way *hair*. Following a glottal in the syllable form CVʔC y is phonetically syllabic, e. g., hoʔy *become angry*. It is, however, treated as nonsyllabic on the phonemic level for the reason indicated in 2.6.

<sup>5</sup> Elson has an excellent treatment of this phenomenon. (See p. 13 of citation given in footnote 2.)

2.8. Lateral. The voiced lateral l occurs primarily in loan words, either Spanish or Aztec, e. g., *lúpuhti wolf* (Sp. "lobo"), *paléna brown sugar* (Sp. "panela"), *túlin tule* (Aztec), *ṭagálin spider* (Aztec?).

2.9. Flap. The alveolar flap r corresponds to the Spanish single flap r. It is found principally in loan words or in Popoluca words and constructions that are atypical in nature. Its very limited occurrence in initial clusters already has been mentioned (p. 3, fn. 3). In addition, it varies freely with n in the sequence of transitive pronominal prefix plus the benefactive prefix ?aη- (6.5), the causative prefix ?ak- (6.6) and the comitative prefix na- (6.7).

?anaηmátpa or ?araηmátpa *I speak with him*  
 ?ananákpá or ?aranákpá *I carry something*  
 ?ininákpá or ?irinákpá *you carry something*  
 ?anakká?ba or ?arakká?ba *I kill him*

These constructions in many respects do not follow the morphophonemic rules which govern other apparently similar phenomena (4.21).

2.10. When consonants dissimilar in points of articulation follow the nasals n, ñ, and η, a voicing in the form of the indefinite or shwa vowel ə tends to occur.

[kánəpa] < \*kAn smell + -pa inc. suf. . . . /kánpa/  
 [sánəñi] day . . . . . /sánñi/  
 [wínəpak] forehead . . . . . /wínpak/  
 [ká?nəpu] egg . . . . . /ká?npu/

2.11. Geminate clusters excepting ? actualize as long consonants.

?anəihhákpá *I throw across* (\*əih throw +  
 \*hak cross)  
 yo'mmának *girl* (yo'm- comb. form of yó·mo *woman*,  
 + mának *child*)  
 miñné? *he has come* (\*miñ come + -ne? perf. suf.)  
 ?ápičči·hi *porcupine* (?ápič thorn + čí·hi fox)  
 kuyyúkma *up in the tree* (kuy tree + yúkma locator)  
 wáṭṭák *large house* (wáṭ- comb. form of wáṭi *big*, +  
 ták house)  
 ?ikká? *he killed him* (?i- 3<sup>d</sup> per. t.p. pref. + ?ak- caus.  
 pref. + \*ka? kill + # compl. suf.)  
 ku?ttá·p *it is eaten* (\*ku? eat + -ta· pas. suf. + -p  
 inc. suf.)  
 ?anhéppa *I scratch it* (\*həp scratch + -pa inc. suf.)

2.12. Consonant distribution. All consonants occur in syllable initial position. p, k, and ? are the only consonants found in syllable medial position. All consonants except the voiced stops b, d, ḍ, and g, and the alveolars l and r, are found in syllable final position.

Clusters of consonants observed in syllable final position are ps, ks, ?ps, ?ks, and ? plus a voiceless stop, an affricate, a nasal, or the semivowel y.

The clusters kw, kr, and tr are the only observed cases of syllable initial clusters.

Consonants in word initial and final position follow syllabic rules except that b, d, g, and η are not found initially. Word medial clusters do not consist of more than four consonants, and of these never more than three are in the same syllable. Permissible patterns for word medial clusters are -VC.CV-, -VCC.CV-, -VCCC.CV-, and -VC.CCV-. Word medial geminate clusters of consonants may be formed by the voiceless stops, the nasals (except for η), and by h, č, š, and y.

### 3. VOWELS

3.1. Vowel phonemes occur in two qualities, long and short. The distinctiveness of length as a phonemic feature of the vowel is shown by such minimal pairs as *pok gourd container* and *po·k cornstalk*, ?ákpak *a species of tree* and ?á·kpak *cheek bone*, kAηné? *it has ripened* and kA·ηné? *he was afraid*, míši *cat* and mí·ši *Oaxaqueno* (from "Mixe").

Vowel length varies considerably as the result of stress shifts (1.6) and morphophonemic changes (4.18). Because of the relatively few minimal pairs encountered it was not possible in most cases to subject words characterized by absolutely defined vowel length to tests which would have determined the behavior of the length aspect of vowels under varying conditions. In some cases, doubtless, words we have written with a long vowel actually represent short vowels recorded in contexts in which they appeared in a lengthened form, and vice versa. Admittedly our notes leave much to be desired on this very important point.

3.2. Popoluca vowels may be represented phonemically as follows:

i, i·	u, u·
e, e·	Δ, Δ·
a, a·	o, o·

3.3. i and i· are high, front, rather close. They vary to open when syllable medial in checked syllables preceding nasals and š, or when preceded by p or ? and followed by k.

\*?ič be, pí·ñAḥ *horse fly*, píštAk *flea*, \*?i·š see,  
 píksi *bow*, ?ikkó·ñ *he made him sit down*

3.4. e and e· are mid, front, unrounded. In most cases rather open, they become close when preceding y.

ʔem *urine*, hé·pe *tree gourd*, ʔapméyñʔ *ocean* (archaic form), ʔéya *also*

3.5. a and a· are low, central, unrounded, and constant in value. They have the approximate value of a in German "Mann."

pak *bone*, ʔá·či *uncle*, čáhka *deaf mute*

3.6. u and u· are high, back, moderately close, rounded. They are somewhat more open preceding a nasal.

muʔk *grass*, hú·ki *cigarette*, tum *one*

3.7. ʔ and ʔ· are central, tending to back, open, unrounded, slightly higher than double o in English "took." The lip position is more spread than for any English vowel.

tak *house*, nʔʔ *water*, wastén *two*

3.8. o and o· are mid, back, semirounded. In free syllables they are rather close unless in nexus with k, when they are open; in checked syllables they tend to be open unless in nexus with y when they are close.

ʔóma *fog*, čó·mo *woman*, só·ki *snail*, kó·so *knee*, hos *cave*,  
\*ho·t *scratch*, ʔógoy *spirit*, hóymʔ *tomorrow*

3.9. Vowel distribution. There are no initial vowels in syllables.

All vowels may occur in word medial and final positions.

There are no vowel clusters. When through morphological processes two vowels fall in contiguous positions, an h arises to maintain vocalic identity.

hú·hi *roar* (\*hu· *roar* + -i nom. suf.)  
yo·šá·hi *work* (\*yo·šá· *work* + -i)  
yaʔčá·hi *necessity* (\*yaʔčá· *suffer* + -i)  
yo·šá·hʔ *work!* (\*yo·šá· *work* + -ʔ imp. suf.)

3.10. Limitations between consonants and vowels in syllables.

With the consonant in syllable initial position: d does not precede i; d, l, and r have not been observed preceding e; l and r have not been observed preceding ʔ.

With the consonant in syllable final position: ʔ, s, y, l, and r have not been observed following i; ʔ, č, w, r, and l have not been observed following e; ʔ, š, and w have not been observed following a; l and r have not been observed following o;

ñ, l, and r have not been observed following u; ʔ, ñ, w, l, and r have not been observed following ʔ. Consonantal clusters and the glottal stop do not follow long vowels.

With rare exceptions which seem to follow no rule, the alveolars are not found in nexus with i or y; their place is taken by the palato-alveolar forms.

wó·ñi *girl*, čkiñ *a skin disease* (Sp. "pinto"),  
tiñ *excrement*, \*ʔiñ *be*, šiš *bull*, čí·ča *cradle*<sup>6</sup>

Examples of alveolars in nexus with i are as follows: mákti *a supernatural female wood spirit*, tí·tí *civilized person*, (Sp. "gente de razon"), šíkuhti *a type of bee*, máʔksi *beforehand*, ʔišímat *enchanted place*. Spanish loan words often show alveolars in nexus with i, e. g., animat *animal*, sintirón *cinturon*, así *así*.

#### 4. MORPHOPHONEMICS

4.1. On the morphophonemic level Popoluca is characterized by extensive sandhi phenomena. Most of this is of the type known as internal or word sandhi, i. e., morphophonemic changes which occur when grammatical elements are combined into words. In some cases the sandhi phenomena are also external, or phrasal in nature, i. e., the morphophonemic changes occur both when grammatical elements are combined into words and when words are combined into phrases. The sandhi processes most commonly used in Popoluca are metathesis, syllabic division changes, palatalization, consonant changes, consonant syncope, vocalic changes, and vocalic syncope. The strictly internal phenomena are first discussed, and then those that are also external.

##### INTERNAL SANDHI

4.2. Changes in syllabic division. Certain morphological and phonological processes cause changes in the syllabic division of many words. Thus, when morphemes of the pattern -V, -VC,

<sup>6</sup> When ñ (or n[?]) follows i preceding a palato-alveolar, or when it is the final consonant of a closed syllable of the pattern čñ, šiñ or tiñ, it usually is only slightly palatalized, but may vary from almost no palatalization to complete palatalization. This phonetic range causes some question as to how n in such cases should be interpreted phonemically. Since ñ preceding an alveolar tends to be very weakly palatalized, and in some cases not at all (4.5), it appears that with respect to palatalization ñ is phonetically "weaker" than the other palato-alveolar forms, to which some of the palatalizing quality assimilates. Hence, it is assumed that [n]~[ñ] is /ñ/.

nánči/ñ/ varies from nánči[n] to nánči [ñ]

pá·ši/ñ/ varies from pá·ši[n] to pá·ši[ñ]

tí/ñ/ varies from tí[n] to tí[ñ]

kí/ñ/či varies from kí[n]či to kí[ñ]či

-?V, or -?VC are added to stems ending in a consonant, the final consonant becomes the first phoneme of a new syllable. In the case of those morphemes with glottal initial, the glottal either metathesizes (4.23) or disappears (4.25).

- há.ʃi *thought, idea* (\*háʃ think + -i nom. suf.)  
 há.ka *piece* (\*háʃ break + -a nom. suf.)  
 kíp.sʌ *measuring stick* (\*kíp measure + -ʌ nom. suf.)  
 hé.mum *just there* (hé there + -um enc.)  
 ?a.ku.ʃi.ñá.p *I am becoming lazy* (ku.ʃiñ lazy + -?a verb. suf. + -p inc. suf.)  
 híp.saŋ *fire brand* (\*híp burn + -aŋ nom. suf.)

4.3. Palatalization. One of the outstanding phonological characteristics of Popoluca is the marked palatalizing effect of *i* and *y* when bearing certain relationships within the word to the alveolars *t*, *ʃ*, *s*, and *n*. As a general rule these alveolars assimilate to the palato-alveolar forms *tʃ*, *ʃ*, *š*, and *ñ* under the following conditions: (1) when preceded or followed by *i*; (2) when preceded by *i*?; (3) when preceded by *y*.

- (1) ?aŋmáʃi *word* (\*?aŋmát speak + -i nom. suf.)  
 ?ií.ʌk *his house* (?i- pos. p. pref. + ʌk house)  
 ?ié.ʌ.mi *his load* (?i- + é.ʌ.mi load)  
 há.ʃi *thought* (\*háʃ think + -i nom. suf.)  
 ?iśéʔt *he fried it* (?i- t. p. pref. + \*śéʔt fry)  
 miñá.spa *you pass* (mi- i. p. pref. + \*na.s pass + -pa inc. suf.)  
 (2) ?anči?íá?mpa *you (pl.) give it to me* (?an- t. p. pref. + \*či? give + -ta?m pl. suf. + -pa)  
 ?anči?ñé? *I have given it to him* (?an- t. p. pref. + \*či? + -ne? perf. suf.)  
 (3) kúy.ʌm *avocado* (kuy tree + ʌm fruit)  
 hay.é.ʃi *boy* (hay- comb. form of háya male + é.ʃi child)  
 éy.š.ʌk *string bean* (éy vine + s.ʌk bean)  
 ?i.š.kuy.ñá? *tear* (?i.š.kuy eye + ná? water)

4.4. Limitations to the palatalization rule. When *n* would be in syllable final position, but because of metathesis becomes initial in the following syllable preceding *i*, it does not palatalize.

- ?a?nf.špa *I see (him, her, it)* (?an- t. p. pref. + \*?i.š see + -pa inc. suf.)  
 wa?á.p ta?nié *we are able to live* (\*wa?á be able + -p inc. suf. + tan- t. p. pref. + \*ié be, live.)

When *n* falls between two *i*'s it does not palatalize. Furthermore, when *ñ* falls between two *i*'s it assimilates to the alveolar form. These patterns have been observed only in the case of constructions involving the comitative (6.7), causative (6.6), and benefactive (6.5) verbal prefixes, and the simulative noun prefix (10.5). Also, the second *i* in these constructions does not palatalize alveo-

lars which may follow. Additional data on these morphemes are given in 4.21.

- ?ininúka *he brings it* (?i- t.p.pref. + na- com. pref. + \*nuk arrive + -pa inc. suf.)  
 ?inisé.tum *he has just returned with him (or it)* (?i- + na- + \*sé.t return + -um enc. just)  
 ?inikkí?mpa *you pull him up* (?iñ- t.p.pref. + ?ak- caus. pref. + \*ki?m go up + -pa)  
 ?iniŋmát *you spoke with him* (?iñ- + ?aŋ- ben. pref. + mat stem of \*?aŋmát speak with)

4.5. A palato-alveolar preceding an alveolar usually causes palatalization of the alveolar. When *ñ* is a part of the cluster its palatalization often is weakened, sometimes to the point of entirely disappearing.

- ?ʌč.é.tam *we* (?ʌč I + -tam pl. suf.)  
 \*piñčúks *pinch lightly* + \*čuks *pinch*  
 ?iñ.ʌk *your house* (?iñ-pos. p. pref. + ʌk house)

4.6. Consonant change. The phoneme *ñ* becomes *ŋ* before *k*. But *n* changes to *ŋ* before *k* only when the syllable contains a vowel other than *a* or *u*. When the syllabic is *a* or *u*, the following *n* (or ?*n* cluster) remains unchanged before *k*. In this latter case there is a tendency to pronounce the indefinite shwa vowel between the two consonants. This is a part of the rule governing relationships between consonants with dissimilar points of articulation (2.10).

- ?iŋkómpa *you will fill it* (?iñ- t. p. pref. + \*kom fill + -pa inc. suf.)  
 ?aŋk.ʌpi *my firewood* (?an- pos. p. pref. + k.ʌpi firewood)

But

- k.ʌnk.ʌ? *neck* is pronounced [k.ʌnk.ʌ?]  
 t.ʌ?n.kuy *branding iron* is pronounced [t.ʌ?n.kuy]  
 kú?n.ki *squirrel* is pronounced [kú?n.ki?]

4.7. Before *m* or *p*, the nasals *n* and *ñ* of the pronominal prefixes of nouns and verbs become *m*.

- ?ammóya *my flower* (?an- 1st. per. pos. p. pref. + móya flower)  
 ?immának *your child* (?iñ- pos. p. pref. + mának child)  
 ?ampát *I found it* (?an- t. p. pref. + \*pat find)  
 ?imp.ʌk *you took it* (?iñ- t. p. pref. + \*pak take, get)

4.8. Before *y* and *n* the voiceless stops *t* and *ʃ* become *h*.

- wahñà h.ʌyi *many words* (wañ-comb. form of wáñ many + na- en. suf. + h.ʌyi word)  
 se.h.yáhpa *they return* (\*sé.t return, -yah pl. suf.)  
 ?i.h.yáh *there are* (\*?ié be, + -yah)  
 se.h.né? *he has returned* (\*sé.t return + -ne? perf. suf.)  
 aŋ.wahné? *I have done it* (\*wat do)

4.9. Consonant syncope. The possessive verbalizing suffix  $-ʔ^{\Delta}y$  (6.12), the repetitive suffix  $-ʔoʔy$  (6.14), the indirective suffix  $-ʔaʔy$  (6.17), the suffixes  $-ʔ^{\Delta}y$  and  $-ʔaʔy$  also in combined affixation (6.18–6.23), and the verbal pluralizing suffix  $-taʔm$  (8.4) fall in a position of loud stress in a majority of their occurrences. When they fall in a position of weak stress the medial glottal disappears. The initial glottal of those with initial glottal disappears (4.25) or metathesizes (4.23).

$ʔa\eta-$  + \*kom fill +  $-ʔ^{\Delta}y$  > \* $ʔa\eta koʔm\Deltaʔy$  marry +  $-neʔ$  perf. suf. >  $ʔa\eta k\deltaʔm\Delta y\eta\tilde{e}ʔ$  I have married  
 \*kuʔt eat +  $-ʔoʔy$  > \*kuʔd\deltaʔy eat people +  $-p\acute{a}ʔap$  ag. suf. > k\deltaʔdoyp\acute{a}ʔap he who eats people  
 \*top take out +  $-ʔaʔy$  > \*tob\acute{a}ʔy take it out of something +  $-taʔ$  pas. suf. > t\delta bayt\acute{a} it was taken out of something  
 mi- + \*kuʔt (eat) +  $-taʔm$  > mikuʔtt\acute{a}ʔm he ate you (pl.) +  $taʔ$  > mik\deltaʔttamt\acute{a} you were eaten

4.10. The possessive verbalizing suffix  $-ʔ^{\Delta}y$  (6.12), the repetitive suffix  $-ʔoʔy$  (6.14), and the indirective suffix  $-ʔaʔy$  (6.17) when followed by the incompletive suffix  $-p$  (8.9) as an occasional free variant drop the final  $ʔy$ .

h\acute{a}waʔ\eta\lambda p he has a fever (h\acute{a}wa\eta fever +  $-ʔ^{\Delta}y$  +  $-p$ )  
 t\lambda ksob i\delta\lambdaʔ he is beating (a drum) (\*t\lambda ks hil +  $-ʔoʔy$  +  $-p$ )  
 ʔi\eta\lambdaʔm\acute{a}p\tilde{t}im he then said to him (ʔi- t. p. pref. + \*n\lambda m say +  $-ʔaʔy$  +  $-p$ )

4.11. The perfective suffix  $-neʔ$  (8.3) and the instrumentative compounding theme  $-kaʔ$  (6.29) fall in a stressed position in a great majority of their occurrences. When they fall in an unstressed position the final glottal disappears. The  $e$  of  $-neʔ$  often assimilates to  $i$  (4.17).

n\lambda kniy\acute{a}h they have gone (# i. p. pref. + \*n\lambda k go +  $-neʔ$  +  $-yah$  pl. suf.)  
 ʔaʔn\acute{a}ʔmnit\acute{a}ʔm we have looked at it (ʔan- t. p. pref. + \*ʔaʔm look +  $-neʔ$  +  $-taʔm$  pl. suf.)  
 ʔik\delta-\eta kan\acute{e}ʔ t\delta m serpi\acute{e}nte he has seated himself on a serpent (ʔi- t. p. pref. + \*ko-\eta sil +  $-kaʔ$  +  $-neʔ$  + t\delta m serpi\acute{e}nte a serpent [Sp.])  
 t\delta m o\tilde{m}\lambda\tilde{c}i ʔamm\delta hkataʔm i\tilde{t} was a bet that we had begun (t\delta m o\tilde{m}\lambda\tilde{c}i a bet + ʔan- t. p. pref. + \*moh begin +  $-kaʔ$  +  $-taʔm$ )

4.12. Under certain circumstances, not all of which can be precisely defined,  $h$  is either very weakly aspirated, or disappears entirely. When syllable initial and following a stop, especially  $k$ ,  $h$  often follows this pattern.

k\acute{a}p\tilde{t}\lambda k\delta m in the house of arrows (k\acute{a}p\tilde{t}\lambda k arrow house +  $-hom$  loc. suf.)

ʔok\acute{a}t\eta\eta godfather (ʔok- nominal pref. + h\acute{a}t\eta\eta father)  
 ʔan\lambda kpa heʔ\delta m I go among the tree gourds (ʔan\lambda kpa I go + heʔ- comb. form of h\acute{e}pe tree gourd [Sp. "jícara"] +  $-hom$  loc. suf.)  
 huk\delta m in the fire (hukt- comb. form of h\acute{u}ktu fire +  $-hom$ )  
 w\lambda\delta\acute{a}ya husband, old man (w\lambda\tilde{-} comb. form of w\lambda\tilde{t}i big + h\acute{a}ya male)  
 hos\delta m in the cave (hos cave +  $-hom$ )  
 ham\tilde{m}\delta m in the forest (ham\tilde{-} comb. form of h\acute{a}m\tilde{m}i forest [Sp. monte] +  $-hom$ )  
 kuy\acute{a}m ashes (kuy tree + ham lime [Sp. "cal"])  
 \*ci\eta\lambda k throw in a definite direction (\*ci\eta throw + \*n\lambda k go)  
 i\tilde{t}ios anus (i\tilde{t}i\eta excrement + hos hole, cave)

4.13. The verbal pluralizing suffix  $-taʔm$  (8.4), when in word final position, as a free variant often loses the final  $m$ .

ʔakiʔmt\acute{a}ʔ or ʔakiʔmt\acute{a}ʔm we climbed (ʔa- i. p. pref. + \*kiʔm climb, go up +  $-taʔm$  pl. suf.)  
 mi\eta-tt\acute{a}ʔ or mi\eta-tt\acute{a}ʔm you (pl.) returned (mi- i. p. pref. + \*set return +  $-taʔm$ )

4.14. When geminate clusters of  $ʔ$  occur the cluster reduces to one phoneme.

k\lambdaʔ\acute{a}pa thumb (k\lambdaʔ hand + ʔ\acute{a}pa mother)  
 n\lambdaʔiʔ\delta kuy spring (Sp. "ojo de agua") (n\lambdaʔ water + ʔiʔ\delta kuy eye)  
 ʔaʔ\acute{a}pa metale (ʔaʔ stone + ʔ\acute{a}pa mother)  
 ʔuʔ\acute{e}si tarantula (ʔuʔ night + ʔ\acute{e}si crab)

4.15. Special voicing rules for  $p$ . The incompletive suffix  $-pa$  when following a verb theme ending in  $Vʔ$  becomes  $-ba$ .

n\deltaʔba it burns (\*noʔ burn)  
 ʔamp\deltaʔba I break it (\*poʔ break)  
 ʔak\acute{a}ʔba I die (\*kaʔ die)

4.16. Voiceless stops have been observed to voice consistently in a number of cases which appear to follow no general rule beyond the fact that, with one exception, they fall between vowels. The most common cases noted are as follows.

n\lambda\eta go! (\*n\lambda k go +  $-A$  imp. suf.)  
 w\lambda\delta\acute{a}ya husband (w\lambda\tilde{-} comb. form of w\lambda\tilde{t}i big + h\acute{a}ya male)  
 w\lambdaʔb\lambda k good (w\lambdaʔ good + p\lambda k enc.)  
 t\acute{e} daw\tilde{i}ʔki let's eat! (te: let's! + taw\tilde{i}ʔki ger. verb form of \*wiʔk eat)  
 \acute{e}yb\lambda k again (\acute{e}ya also + p\lambda k enc.)

4.17. Vocalic changes. When the perfective suffix  $-neʔ$  is followed by any suffix requiring a shift of accent away from the  $-neʔ$ , the  $e$  varies freely with  $i$ . Furthermore, neither the  $n$  nor a conso-

nant following the *i* palatalize following the usual palatalizing rules (4.3).

*ʔiʔiʃniyáh* they have seen it (*ʔi-* t. p. pref. + *\*ʔiʃ* see + *-neʔ* perf. suf. + *-yah* pl. suf.)

*nłkniyáh* they have gone (# *i* p. pref. + *\*nłk* go + *-neʔ* + *-yah*)

*ʔaʔnàʔmniťáʔm* we have looked at it (*ʔan-* t. p. pref. + *\*ʔaʔm* look + *-neʔ* + *-taʔm* pl. suf.)

4.18. Reduction of vowel length. Since a long vowel cannot precede a *ʔ* (3.10), when through metathesis a *ʔ* is caused to follow a long vowel, the vowel reduces to the short form.

*ʔipiʔʔáʔy* he gathered it for someone (*\*pi-ŋ* gather)

*aŋkusuʔnłʔýpa* I keep something (*\*su-n* want)

4.19. Vocalic syncope. Nouns and attributives which end in a vowel usually lose the vowel when followed by another morpheme. This is not invariably the case, and no hard and fast rule is apparent from our notes. A few nouns have two distinct combining forms, one which maintains the final vowel, and the other which loses it. In the final analysis each noun and attributive must be considered as a unique form with unique characteristics.

*éł-wʔóm* among the tobacco (*éł-wi* tobacco + *-hom* loc. suf.)

*éđ-wihóm* among the mojarra (Sp.) (*éđ-wi* mojarra + *-hom*)

*tłʔphóm* among the fish (*tłʔpa* fish + *-hom*)

*ʔuksyúkma* up in the cloud (*ʔúksł* cloud + *yúkma* locator)

*kopkúkma* in the middle of the savanna (*kóp* pa savanna + *kúkma*)

*kóʔso* knee has the following forms:

*koʔstéñ* kneel (*kóʔso* + *\*teñ* stop)

*koʔspút* sprout at the knee (*kóʔso* + *\*put* come out)

*kóʔsoyúkma* on the knee (*kóʔso* + *yúkma*)

*kóʔsokłʔak* boot (*kóʔso* + *kłʔak* shoe)

4.20. Vocalic syncope and palatalization. When words or syllables with the alveolars *t*, *s* or *n* in initial position are combined after words or syllables ending in *i*, the alveolars palatalize and the *i* drops out, to produce the combining form.

*káʔpłłak* house of arrows (*káʔpi* arrow + *tłłak* house)

*kaʔpñłʔ* Arrow Water (proper noun) (*káʔpi* + *nłʔ* water)

*wóññam* girls (*wóññi* girl + *-tam* pl. suf.)

*ʔłkšťuh* hail stones (*ʔłkšł* corn grains + *tuh* rain)

4.21. The noun prefix *ʔaŋ-* (10.5) and the thematic verbal prefixes *ʔaŋ-* (6.5), *ʔak-* (6.6) and *na-* (6.7), when preceded by the pronominal prefixes (7.2, 7.5) undergo certain changes which do not follow the morphophonemic rules which

govern other apparently similar phenomena. The phenomena involved are failure of the glottal to metathesize with preceding nasals, failure of *i* to palatalize alveolars, consonantic syncope, reduction of geminant clusters, and vocalic assimilation. Since these phenomena are limited to the morphemes in question, they are treated as aspects of one problem rather than separately in the several sections involved.

The following chart shows the pronominal prefix, the noun or verb prefix, the resultant combined form, the form which might be expected if the general rules were followed, and the paragraph number of the general rule. The verbal prefix *ʔak-* is not used in the chart, since it behaves in exactly the same manner as *ʔaŋ-*. Also see 4.4 for data bearing on these phenomena.

Pronominal prefix	Noun or verb prefix	Resultant combined form	Expectable combined form	General rule
<i>ʔa-</i> ( <i>ta-</i> )	+ <i>ʔaŋ-</i>	> <i>ʔaŋ-</i>	<i>ʔaʔaŋ-</i>	4. 25
<i>ʔan-</i> ( <i>tan-</i> man-)	+ <i>ʔaŋ-</i>	> <i>ʔanaŋ-</i>	<i>ʔaʔnaŋ-</i>	4. 23
"	+ <i>na-</i>	> <i>ʔana-</i>	<i>ʔanna-</i>	2. 11
<i>ʔiñ-</i>	+ <i>ʔaŋ-</i>	> <i>ʔiniŋ-</i>	<i>ʔiʔñaŋ-</i>	4. 23
"	+ <i>na-</i>	> <i>ʔini-</i>	<i>ʔiñña-</i>	2. 11, 4. 5
<i>mi-</i>	+ <i>ʔaŋ-</i>	> <i>miŋ-</i>	<i>miʔaŋ-</i>	4. 25
"	+ <i>na-</i>	> <i>mini-</i>	<i>miña-</i>	4. 3
<i>ʔi-</i>	+ <i>ʔaŋ-</i>	> <i>ʔiŋ-</i>	<i>ʔiʔaŋ-</i>	4. 25
"	+ <i>na-</i>	> <i>ʔini-</i>	<i>ʔiña-</i>	4. 3

4.22. Stress patterns and shifts. Loud or weak stress is, as has been said (1.4), an inherent feature of certain morphemes. Word classes are characterized by stress position as well as by morphological considerations. Nouns, stative verbs, attributives, pronouns, and enumeratives of more than one syllable, with certain exceptions, have a loud stress on the penultimate syllable, while active verbs have a loud stress on the final syllable. Some conjunctions such as *ʔiga* that, and the negative attributive *đa*, except when in isolation, are given weak stress.

The greatest variation in noun stress occurs in the case of secondary, compound nouns. In the case of compounds composed of noun and noun loud stress may occur on the penult (of disyllabic nouns) or final syllable (of monosyllabic nouns) of the final member of the compound, and a medial stress on the inherently stressed syllable of the first member, as *ʔiʃkuyñłʔ* tears (*ʔiʃkuy* eye + *nłʔ* water), or a loud stress may occur on the penult of the compound form, e. g., *koʔbáktak* hat (*kóʔbak*

*head* + *tak house*). When a secondary noun stem is composed of attributive and noun, loud stress falls on the noun penult and medial stress on the attributive penult, e. g. *šũtuná?* (*šũtu small* + *ná? water*).

Certain affixes of nouns, attributives and enumeratives are always weakly stressed, causing the loud stress to fall as it would in the unaffixed word. These are:

The thematic noun prefixes *ma-* and *way-*, e. g., *mačá? star*, *wayčá? pebble*, *masáwa hurricane*.

The possessive pronominal prefixes, e. g., *?anták my house*, *?iká? his hand*.

The thematic suffix *-ti*, e. g., *lúpuhti wolf*, *šũnuhti a supernatural spirit*.

The plural nonthematic suffixes *-tam* and *-yah*, e. g., *náwahyah witches*, *mánaktam sons*.

The adverbial enumerative suffix *-kay*, e. g., *mátaskay four times*.

Certain noun and enumerative nonthematic suffixes have an inherent loud stress. These include:

The locative suffixes *-kám*, *-hom*, *-?aηkám* and *-?aηhóm*, the locative nominalizing suffix *-kom*, and the enumerative suffixes *-ten* and *-na*, e. g., *kuyhóm in the tree*, *takkám at the house*, *monkóm sleeping place*, *wástén two*, *wasná two*.

A few nonthematic verb suffixes have inherent weak stress, causing the loud stress to fall as it would on the unaffixed word. These are the incomplete suffix *-pa*, the imperative suffix *-a*, the subjunctive suffix *-?iñ*, and the gerundial suffix *-i*, e. g., *?a?éčpa I dance*, *nága go!*, *yú?miñ that it may boil*, *?éči dancing*.

All of the enclitics have an inherent weak stress and thus when attached to a word do not cause the loud stress of the word to shift.

All active verb stems (on the final syllable) and noun stems (on the penult) have an inherent loud stress, so that when through affixation the loud stress is shifted away from the stem so that one or more syllables intervene, the stem receives a medial stress, e. g., *nò?yahtáp they will be burned* (*\*no?* stem of verb "burn"). Noun compounds of inflected verb plus noun (10.23) follow the rules of phrase stress (4.29), not word stress.

#### INTERNAL AND EXTERNAL SANDHI

4.23. Metathesis. When a nasal, *y*, *l*, or *r* is followed by a glottal, the resultant cluster undergoes metathesis.

*kù?n ičá.mi with his burden* (*kun with* [Sp. "con"] + *?i-* pos. p. pref. + *čá.mi burden*)  
*tù?m anták my house* (*tum ind. art.* + *?an-* pos. p. pref. + *tak house*)  
*?ana?ηá?m I waited for him* (*?an-* t. p. pref. + *?aη-* ben. pref. + *\*a?m look*)  
*pu?yá?pa big toe* (lit. "foot-mother") (*puy foot* + *?á?pa mother*)  
*mà?l iηwát you did it badly* (*mal bad* [Sp.] + *?iñ-* t. p. pref. + *\*wat do*)  
*láma?raηnáka at the edge of the ocean* (*lámár ocean* [Sp.] + *?aηnáka edge*)

4.24. Consonantic changes. Before *w*, the nasals *n*, *ñ*, and *m* become *η*.

*?aηwít I untied it* (*?an-* t. p. pref. + *\*wih untie*)  
*?iηwíši your beard* (*?iñ-* pos. p. pref. + *wíši beard*)  
*đaη wá?á? he could no longer* (*đa neg. at.* + *-m enc.* + *\*wá?á? be able*)

4.25. Consonantic syncope. When a syllable ending in a voiceless consonant is followed by *?* the glottal is lost. If the syllable ends in a vowel the glottal remains.

*?láč ačíη I bathed* (*?láč I* + *?ačíη I bathed*)  
*mič iηkít you broke it* (*mič you* + *?iηkít you broke it*)  
*?i?iš he saw it* (*?i-* t. p. pref. + *\*iš see*)

4.26. When a word or syllable ending in a voiceless stop is followed by a word or syllable beginning with *?V*, voicing of the stop occurs. The glottal drops out (4.25).

*hù?đ í? where is it* (*hu?í where* + *?í? it is*)  
*má?adá?pa mother-in-law* (*má?at-* in-law + *?á?pa mother*)  
*sá?abam right now* (*sá?ap now* + *-?am enc.*)  
*táη iháp door* (*tak house* + *?i-* pos. p. pref. + *hap mouth*)  
*mogáy corn husk* (*mok maize* + *?ay leaf*)  
*?antobá?ypa I forcibly take out something* (*?an-* t. p. pref. + *\*tóp take out* + *-?a?y indir. suf.* + *-pa inc. suf.*)  
*mánačá?y conceive a child, possess a child* (*mának child* + *-?a?y verb. suf.*)

4.27. In certain syntactical situations a single syllable will span two words. When words beginning with *?V-* follow those ending in consonants, the glottal either metathesizes, as in the case of nasals and *y*, *r*, and *l* (4.23), or disappears (4.25). In both cases the final consonant of the first word becomes the initial phoneme of a syllable which is split between two words.

*kù?n i.čá.mi with his burden* (*kun with* [Sp. "con"] + *?i-* pos. p. pref. + *čá.mi burden*)  
*tù?m anták my house* (*tum indef. art.* + *?an-* pos. p. pref. + *tak house*)  
*?lá.č a.číñ I bathed* (*?láč I* + *?a-* i. p. pref. + *\*čiñ bathe*)  
*hó?b i.háp bird's beak* (*hon bird* + *?i-* pos. p. pref. + *hap mouth*)



4.28. A tendency has been noted in the case of syllables consisting of pa or ba, when followed by ?i, for the a to assimilate to the quality of i. Our data do not permit more accurate definition of the conditions under which this phenomenon occurs.

đi ?ihódoŋ *he doesn't know it* (đa neg. at. + ?ihódoŋ  
*he knows it*)

si di ?iŋkupákpa *if you don't believe it* (si if [Sp.] +  
đa + ?iŋkupákpa *you believe it*)

wánpí ?ilibrohóm *he reads his book* (wanpa *he reads*)

4.29. Phrase stress cuts across word stress to the extent that the loud stress in an utterance tends to come as nearly as possible at the end of the utterance, within the limitations fixed by the presence of any inherently weak-stressed syllables in utterance final position. Thus, other loud-stressed syllables in words preceding that with the final loud stress usually are given medial stress. Groupings of words into utterances with

one final loud stress and other medial stresses tend to be groupings of noun or verb with preceding modifying words, e. g., çùg iŋúç *rat's tail*, tùŋgam háma *another day*, hémú'm i'í's *there he saw it*. Gerundial clause constructions also follow this pattern, with the final (gerundial) verb receiving the loud stress and the preceding (main) verb receiving a medial stress, e. g., mòh ihás *he began to think*, táksoh išá? *he continues hitting*. Modifying elements following the word which they modify retain their loud stress, e. g., túh pámbak *hard rain*. In an utterance in which a noun subject or object follows a verb the noun is characterized by loud stress, while the loud stress of the verb, if on the final syllable which is not the stem, shifts back to the stem leaving a medial stress on the final syllable, e. g., ?ikunuktá'p *he came to where they were* + táhwiñ *minnows* > ?ikunúktá'p táhwiñ *he came to where the minnows were*.

## MORPHOLOGY

### 5. GENERAL REMARKS

5.1. Word classes. Popoluca words fall into four major classes: verbs, pronouns, substantives, and enumeratives. This classification is based on purely formal criteria, and words of each class have their own paradigmatic sets. Pronouns partake of a small part of verb inflection, but because pronominal themes are free while those of the verb class are always bound, and because pronoun inflection is much less extensive than that of the verb, pronouns have been considered as constituting a separate form class. The substantive class includes nouns and attributives. Attributives are largely analytic, but some may partake of a part of noun inflection, often in stereotyped form. Enumeratives likewise partake of a part of noun inflection, but also have their own inflectional system. A few attributives may be given a part of the enumerative inflection.

5.2. Morphological processes. There are three processes involved in the formation of Popoluca words: affixation, compounding, and reduplication. Affixation includes prefixation and suffixation, of which the latter is more widely used. It is convenient for purposes of analysis to distinguish two levels of Popoluca morphology: theme formation, and word formation or inflection. All of the

morphological processes are used in the formation of the theme, while only affixation is used in the formation of the word. The processes of theme and word formation are more complex for verbs than for words of the other form classes.

5.3. Theme formation. Themes may consist of a simple stem or root morpheme, a reduplicated stem morpheme, a simple or reduplicated stem plus thematic affixes, or a compound of two or (rarely) more themes. Every stem or theme belongs inherently to one form class, and must be given special suffixes to change it to a theme of another form class. Thus, verb themes may be formed from substantive themes by the addition of certain thematic verb suffixes, and noun themes may be formed from verb themes by the addition of certain thematic noun suffixes. In addition, one theme may become a new theme of the same form class by the attachment of thematic prefixes and/or suffixes of that form class. Themes may be bound or free, i. e., they may be words in absolute (or theme) form, or may become words only through the attachment of nonthematic affixes. Themes of the substantive and pronoun classes are free themes, while most enumerative and all verb themes require nonthematic affixes (which phonetically may be zero).

5.4. Word formation. Word formation pro-

ceeds by the attachment of paradigmatic sets of nonthematic affixes to themes. The paradigmatic sets used differ on the whole for words of different form classes, although there is some overlapping. Each paradigmatic set constitutes a separate morphological category.

5.5. Morphological categories may be defined as follows.

(1) Pronominal reference. This is a category of nouns, verbs, and enumeratives, and is expressed by means of prefixes. For nouns and enumeratives it is a category of possession, and for verbs one of resolution. For verbs there are two sets of prefixes which indicate intransitivity (subject) and transitivity (both subject and object). The noun and enumerative set corresponds to the transitive set for verbs. Number is expressed only in the first person.

(2) Case. This is a category of nouns, and to a limited extent of attributives. It is expressed by means of suffixes of locative, indirective, and durational reference.

(3) Number. Number is expressed in verbs, pronouns, nouns, enumeratives, and (occasionally) attributives by means of suffixation and prefixation for the first person.

(4) Aspect, mode, voice, agent, and subordination. These are categories of the verb and are expressed through suffixation.

(5) Enumeration. These are categories of the enumeratives (and of a few attributives) and are expressed through prefixation and suffixation.

5.6. Enclitics are suffixes which may be attached to a formally complete word of any form class; they are qualifying, intensifying, or limiting.

## 6. THE VERB THEME

6.1. One of the most complex and productive morphological processes in Popoluca is the system of formation of new verb themes from verb and substantive themes through affixation and compounding. This, with the system of verb inflection (or attachment of nonthematic affixes of the verb to the verb theme), accounts for most of the functional expression of the language. A verb theme is a single morpheme or a group of morphemes built up through affixation, compounding, or both, to which nonthematic prefixes and suffixes (which may be phonetically zero) must be attached to form a complete verb.

The thematic prefixes and suffixes are attached to a root verb morpheme, or stem, which may also be a verb theme. There are also thematic prefixes and suffixes, which, attached to a word of the substantive class, form verb themes. Other thematic affixes may then be attached to these. Compound verb themes are formed through the juxtaposition of substantive themes and verb themes, or two verb themes. Thematic affixes may then be attached to a compound theme to form a new theme. Most verb stems are also verb themes, though a few are found only with their thematic affixes, or as a member of a compound theme. Verb stems may be reduplicated, but stem reduplication has been noted only in conjunction with certain thematic affixes.

### THE VERB STEM

6.2. Verb stems usually are monosyllabic of the patterns CVC and CVCC and, rarely, CV and CVCCC. A few are disyllabic of the pattern CV.CVC. Examples:

\*pʌː *get fat*  
 \*ʔiːʂ *see*  
 \*kaʔ *die*  
 \*čiŋ *bathe*  
 \*kips *knead dough*  
 \*heʔk *frighten*  
 \*tʌʔps *twist rope*  
 \*hi.kiŋ *take apart*  
 \*ʕu. kúm *arise*

Verb stems are reduplicated only when used with the repetitive and durative thematic suffixes.

### THEMATIC PREFIXES OF THE VERB

6.3. Five thematic prefixes of the verb have been isolated. These may be attached to a verb stem or to a compound verb theme in order to form special categories of meaning. These semantic categories are apparently not always clear-cut, but insofar as they have been established they are purposive, simulative, benefactive, comitative, and causative.

6.4. The prefix ku- is purposive and defines an action undertaken with a definite purpose in view.

\*kuʔáʔm *search for* (\*ʔaʔm *look*)  
 \*kunáːs *go beyond* (\*naːs *pass*)  
 \*kupíŋ *choose* (\*piŋ *touch lightly*)  
 \*kucéːn *tie to something* (\*ʕeːn *tie*)  
 \*kupút *free* (\*put *go out*)  
 \*kukéh *dawn* (\*keh *appear*)  
 \*kumatóŋ *hear where something is* (\*matóŋ *hear*)

6.5. The prefix *ʔaŋ-* usually is benefactive or comitative in meaning, that is, the action of the verb with this prefix is performed for, with, or because of someone. This significance is most apparent when the verb theme with this prefix is transitive. In a few cases where the theme is intransitive the prefix seems to be simulative in meaning (see noun prefix *ʔaŋ-* (10.5)). In other cases the meaning is specialized and cannot be clearly defined. The vowel of this prefix is the same as that of the pronominal prefix which it follows. For vowel change and loss of *ʔ* see 4.21.

- ʔanaʔŋáʔmpa* I await (someone) (\**ʔaʔm* look)  
*ʔiniŋmát* you spoke with him (mat bound stem of \**ʔaŋmát* speak)  
*miʔŋá* he fought with you (*ʔa* bound stem of \**ʔaŋʔá* fight)  
*ʔaŋhálypa* it thunders (\**haly* speak)  
*ʔaŋwéhA* shout! (\**weh* weep)  
*ʔiniŋnúk* you had it coming to you, it was owed you (\**nuk* arrive)  
*ʔanaŋwéhpa* I weep because of something (\**weh* weep)

6.6. The causative prefix *ʔak-* expresses action that is caused by the subject of the verb, that is, to have something done or to cause another person to do it. As an object must be expressed, the transitive pronominal prefixes are used with verbs formed in this manner. For vowel change and loss of *ʔ* see 4.21.

- ʔanagáʔm* I showed him (\**ʔaʔm* look)  
*ʔanaknák* I sent him (\**nak* go)  
*ʔanakkáʔ* I killed him (\**kaʔ* die)  
*mikkét* he made you go down (\**ket* go down)  
*ʔikhák* he passed him over (as over an obstacle) (\**hak* go across)  
*ʔinikkíʔmpa* you pull him up (\**kiʔm* go up)

6.7. The comitative prefix *na-* expresses action performed with someone or something. Since an object must be expressed, the transitive pronominal prefixes are always used with themes with this prefix. For vowel change see 4.21.

- ʔananák* I carried it (\**nak* go)  
*ʔanaʔíŋpa* I have it (lit. "I am with it") (\**ʔiŋ* be, live)  
*ʔanaméŋ* I searched with him (\**meŋ* search)  
*ʔinimíŋpa* you are bringing it (\**miŋ* come)  
*ʔiniwátŋpa* you helped him do it (\**wat* do)  
*ʔinimóŋ* he slept with her (him, it) (\**moŋ* sleep)

6.8. The personal comitative prefix *waga-* expresses action that is undertaken with another person. It is often placed before the comitative prefix *na-* (6.7) to give added emphasis. In contrast to themes with the prefix *na-* the pro-

nominal prefixes used with *waga-* themes may be intransitive as well as transitive.

- tawagasákʔba* we go about together (\**sAʔ* go about)  
*ʔaŋwaganamóŋpa* I am going to sleep with him (her) (*ʔan-* 1st. per. sub. 3d. per. obj. t. p. pref., \**moŋ* sleep)  
*tawagamóŋpa* we will sleep together (ta- 1st per. incl. pl. i. p. pref.)

6.9. Order of prefixation. In some cases two thematic prefixes may be attached to the same verb theme. The prefixes *na-*, *ʔaŋ-*, and *ʔak-* are mutually exclusive. Permissible combinations are *waga-* plus *na-*, and *ku-* preceded by *na-* or *ʔak-*.

- ʔanakkut.ŋŋpa* I fell a tree (taŋ bound stem of \**ʔaktAŋ* fell)  
*ʔanakkupagáʔypa* I cause him to buy everything for someone (\**pagáʔy* < \**pak* get + \**ʔaʔy* indir. suf.)  
*ʔanakuŋéŋpa* I tie it someplace with something else (\**éŋ* tie)

#### THEMATIC SUFFIXES OF THE VERB

6.10. There are two types of thematic suffixes, the verbalizing suffixes which may be attached to a substantive theme to convert it into an intransitive verb theme, and the qualifying suffixes which are attached to a verb stem or verb theme to define the limits or quality of the action. Certain of the latter when used in conjunction with certain of the thematic prefixes form a theme whose meaning is not readily deducible from the meanings of the individual morphemes. Each verb theme has an inherent transitivity or intransitivity. Certain thematic suffixes impart intransitivity to a verb stem which in its absolute state would be transitive. A verb theme with the indirective suffix, since it must have an object, is always transitive. This is also the only thematic suffix which may be used in conjunction with other thematic suffixes, and always follows them. It may be used after any of them, except the verbalizing suffixes, including all those in combined affixation.

6.11. The inchoative verbalizing suffix *-ʔa* may be added to a substantive to form a verb. The meaning usually is that of "becoming" although in other cases the noun from which the verb is derived is the substance of the action. Verb themes formed with this suffix usually are intransitive, unless preceded by prefixes which require the transitive pronominal prefixes, such as *na-* (6.7) and *ʔak-* (6.6).

- ʔayaʔá* I am hungry (yAʔ hunger)  
*ʔakuŋíʔnáŋp* I am getting lazy (kuŋíŋ lazy)

ʔatΔʔbáʔp *I fish* (tΔʔp- comb. form of tÁʔpÁ *fish*)  
 ʔuʔáʔp *it is becoming night* (ʔuʔ *night*)  
 miʔúkiʔáʔ *you got drunk* (ʔúki (a) *drink* < \*ʔuk to  
*drink*)  
 ʔanakmabáʔ *I grew* (lit. "was caused to become big")  
 (mah *big*)

Pronouns also may be verbalized by means of this suffix, but when this is done they cannot be given any verbal nonthematic suffix except the incomplete agentive suffix -paʔap (it is probable that -wΔʔap, complete agentive, may also be used, but it has not been noted).

ʔiʔaʔpáʔap *who is it?* (ʔi *who*)  
 miʔaʔpáʔap *who are you?* (mič > mi- *you*)

6.12. The possessive verbalizing suffix -ʔΔʔy is freely attached to nouns to indicate possession of the noun. Themes formed with this suffix are always intransitive.

ʔatAgÁʔy *I had a house* (tak *house*)  
 mičʔsÁʔy *you had a bed* (ʔeʔs *bed*)  
 háwaʔηÁʔy *he has a fever* (háwaη *fever*)  
 ko-báktAgÁʔy *he had a hat* (ko-báktak *hat*)

6.13. The qualifying suffixes. There are four qualifying suffixes, three of which define the continued or repeated quality of the action, one of these with reference to the mobility of the actor. The repetitive and the durative suffixes may be attached to a verb stem in either its simple or reduplicated state. The fourth suffix is indirective.

6.14. The repetitive suffix -ʔoʔy when attached to primary or secondary verb stems indicates action repeated many times in quick succession or (occasionally) sustained action. It is always used with the intransitive pronominal prefixes. Often it is used with reduplicated verb stems. It differs primarily from the durative suffix -neʔ (6.15) in that it is used especially with verb themes which imply sudden or repetitive action, such as hitting, grabbing, throwing, brushing, etc., rather than with verb themes which convey a smoothly continuative meaning such as dancing, sleeping, or writing. Sometimes the two concepts overlap, e. g., ʔahèʔnheʔnóʔy and ʔahèʔnheʔnnéʔba, both of which mean *I keep digging* (\*heʔn *dig*). Examples with unreduplicated stems:

ʔamaéʔy *I hold on* (\*maé *grasp*)  
 ʔégʔy *he rings (a bell), he wags (his tail)* (\*ʔak  
*make a wagging or swinging motion*)  
 hΔʔyóʔy *he made a speech* (\*hAy *speak*)  
 tAkSóʔy *he beat (a drum)* (\*tAkS *touch*)  
 ʔihóʔy *tuh it is raining* (\*ʔih *hit, tuh rain*)

Examples with reduplicated stems:

ʔamàʔmaéʔy *I take hold of lots of things in succession*  
 (cf. ʔamaéʔy above) (\*maé *grasp*)  
 ʔačihčihóʔy *I keep hitting things* (cf. ʔihóʔy above)  
 (\*cih *hit*)  
 ʔawátwadóʔy *I do lots of things in succession* (\*wat  
*do*)  
 ʔašikšigóʔy *I keep on laughing* (\*šik *laugh*)

In two cases this suffix has been noted attached to noun stems: \*ʔeʔmóʔy *urinate* (ʔem *urine*), \*ʔiʔnóʔy *defecate* (ʔiñ *feces*).

6.15. The durative suffix -neʔ contrasts with the suffix -ʔoʔy (6.14) in that the action expressed by the verb themes to which it is attached is durative rather than repetitive in nature. It is almost always used with reduplication of the verb stem. Verbs with this suffix always take the intransitive pronominal prefixes.

ʔaηhamnóʔba *I remember* (\*aηhám *believe*)  
 ʔamumnéʔ *I was sick* (\*mum *lie on one's side*)  
 mðηmohnéʔ *he kept on sleeping* (\*moη *sleep*)  
 ʔèʔeʔnéʔba *he keeps on dancing* (\*ʔeé *dance*)  
 nÁknaknéʔ *he kept going* (\*nAk *go*)  
 hipshipsnéʔ *it kept burning* (\*hips *burn*)

6.16. The mobile-repetitive suffix -ʔΔʔyÁʔy expresses a repeated or continued action performed while the actor is in motion. Either transitive or intransitive pronominal prefixes are used, depending upon the underlying verb.

ʔampèΔʔyÁʔy *I go along sweeping things* (\*pet  
*sweep*)  
 ʔampèdΔʔyÁʔy *I go along laying things together*  
 (\*peʔt *lay together*)  
 ʔanλgΔʔyÁʔy *I go along this way* (\*nAk *go*)

6.17. The indirective suffix -ʔaʔy is used when an indirect object of the verb is to be expressed. The direct object usually expressed with the transitive pronominal prefix (7.5) becomes in this case the indirect object. Thus, verbs with this suffix always take the transitive pronominal prefixes. When this suffix gives a specialized meaning, it sometimes is reduplicated to give again an indirective meaning, e. g., ʔikót *he inserted it* (\*kot) > ʔikodáʔy *he copulated* > ʔikòdayáʔy *he inserted something in it for someone*.

ʔannegáʔy *I hid it from him* (\*nek *hide*)  
 ʔaηwadáʔy *I do it to him* (\*wat *do*)  
 manʔagáʔy *I left it for you* (\*ʔak *leave*)  
 ʔipiʔáʔy *he gathered it for someone* (\*pi-η *gather*)  
 ʔiʔugáʔy *he drank it with him* (\*ʔuk *drink*)  
 ʔanaʔmáʔy *he said it to me* (\*nAm *say*)

## COMBINED THEMATIC AFFIXATION

6.18. In most cases of simultaneous attachment of a prefix and a suffix to a verb stem the meaning of the resulting word is logical and foreseeable. Sometimes, however, the combination gives rise to a totally new meaning. This is the case when the prefixes ?ak- (6.6) or ku- (6.4) are affixed to the same stem as the suffixes -?A?y/ -?Ag.Á?y (6.19-20) or -?a?y (6.17).

6.19. Causative-dispersive affixes of the pattern ?ak- . . . -?A?y/-?Ag.Á?y. The subject of a verb with these affixes generally causes the object to disperse in a direction away from the position of the subject. (The form of the suffix varies freely between -?A?y and -?Ag.Á?y. It can be used only in cases of combined affixation as illustrated here, and in paragraphs 6.20 and 6.21. The verbalizing suffix -?A?y (6.12) is distinct, in that it is never attached to verb themes.)

?anakkèb.Ág.Á?y I drive something away from me  
(\*kep drive [as of animals])

?anakya?g.Á?y I push something away from me  
(\*ya?k push)

tanakn.Ág.Á?y let's go in different directions! (\*n.Ák go)

?anakpe?d.Á?y I lay things out in a row (\*pe?t lay together)

?anaga?m.Á?y I watch someone out of sight (\*?a?m look)

6.20. Resultative affixes of the pattern ku- . . . -?A?y/-?Ag.Á?y indicate that the action of the verb leads to a definite result. There is probably also a certain purposive significance.

?a?ku?i.š.Á?y I see where something is (that I didn't know of before, or that wasn't there before)  
(\*?i.š see)

?a?kupad.Á?y I find something (that wasn't there before, or that I was looking for) (\*pat meet, encounter)

?a?kusu?n.Á?y I keep something (because I like it)  
(\*su'n want)

?a?kuna?s.Á?y I pass someone going in the opposite direction (\*na's pass)

6.21. Resultative affixes of the pattern ?a?- . . . -?A?y are very rare and it has not been possible to determine with certainty the precise meaning. Apparently, as in the case of 6.20, the action of the verb leads to a definite result.

?a?ko?m.Á?y he marries (\*kom fill)

?ana?me?Á?y I go and search for more of something (to have enough) (\*me? look for, search)

6.22. Benefactive affixes of the pattern ?ak- . . . -?a?y have the meaning of doing something for someone else, using his implements or materials.

?anakt.Á?m.Á?y I am keeping his money for him (\*t.Ám keep, ?i.t.Ám his money)

manakyu?m.Á?y I boil your squash for you (\*yu'm boil, ?imp.Ásu, your squash)

?anakwa?ná?y pè?m iviktróla I am going to play that person's victrola (\*wa'n sing, pe?m dem. pron. "that person," ?iviktróla his victrola)

6.23. Terminative affixes of the pattern ku- . . . -?a?y express the idea of performing an action until it is finished.

kukehá?y it appeared (something that had been lost)  
(\*keh appear)

?akku?i.š.Á?y find it! (\*?i.š see)

?a?kupe?d.Á?y I lay together all the things that I am going to lay together (\*pe?t lay together)

## THE COMPOUND THEME

6.24. A compound theme may consist of two verb themes in juxtaposition, or one or two substantive themes compounded with a verb theme. Compound themes may be further developed by the use of thematic affixes. When two verb themes are compounded neither can actually be said to be modifying the other in most cases, for the two separate actions expressed are both integral parts of the action of the resultant compound theme. In a few cases, however, the action expressed by the second theme directly follows the action expressed by the first. The special compounding themes modify the theme to which they are attached.

6.25. Compounds of two verb themes.

?a?na?msét I looked back (lit. "turned around and looked") (\*?a?m look + \*se't turn around)

?anakmo?é.Ákpa I leave him sleeping (?ak- caus. pref. + \*mo? sleep + \*é.Ák leave)

?ampa?kí?mpa I throw it up in the air (\*pa? throw + \*ki?m go up)

?amò?kuké?pa I wake up at dawn (\*mo? sleep + \*kuké? dawn < \*keh appear)

?inèihhá?kpa you throw it across (\*èih throw + \*hak cross)

?a?kù?tkuké?pa sÁk I will breakfast on beans (\*ku?t eat + \*kuké? dawn)

èipùtse:dayítap he was reversed and changed into (something) (\*èipùt reverse + \*se't change into)

?anne?mkí?spa I taste it (test it by tasting) (\*ne?m lick + \*kí?spa test)

?annè?mkí?Á?y I taste it for him (-?a?y indir. suf.)

?ann?mayé.Ákpa I tell him and leave (\*n.Á?m.Á?y tell to someone + \*é.Ák leave)

6.26. Special compounding verb themes. There are six compounding verb themes which when joined to another verb theme form special semantic categories. These are perhaps derived from verb stems which are phonetically identical but which, as independent themes, differ in meaning.

6.27. The temporary compounding theme *poy-* is the only compounding theme which precedes the verb theme which is modified (cf. \**poy* run). As a compounding theme it means . . . "for a little while."

*poy*μόνη *he slept for a little while* (\**μον* sleep)  
 ?*apoy*ήκπα *I rest for a little while* (\**hek* rest)  
 ?*amp*ōykyφάκ *I left it here for a little while* (ku- *purp.* + \**φak* leave)

6.28. The originative compounding theme *-na's* to do first (cf. \**na's* pass).

?*an*akná's *I went first* (\**nak* go)  
 mimiññá's *you came first* (\**miñ* come)

6.29. The instrumentative compounding theme *-ka?* usually indicates that the action expressed in the main verb theme is performed through the use of some instrument or agent (either implicitly understood or expressed), although it may have other specialized meanings (cf. \**ka?* die).

?*any*ōhoyká?ba *I have with which to pay* (\**yohó'y* keep paying < \**yoh* pay)  
 ?*amo*ηká?ba *I sleep covered up* (\**μον* sleep)  
 nΛ?kká? *he drank water out of something* (\**nΛ?k* drink water)  
 yemká? *he fanned himself with something* (\**yem* fan)  
 šikká?ba *he laughs at something* (\**šik* laugh)  
 ?*ik*ō-ñkané? *tum serpiente he has seated himself on a serpent* (\**ko-ñ* sit)

6.30. The compounding theme *-pak* is used to express stasis after action (cf. \**pak* wrestle, throw over).

?*am*matōηpák *I listened without entering into the conversation* (\**matóη* listen)  
 ?*a?*na?mpák *I watched (someone do something)* (\**a?m* look)  
 ?*ima*φpák *he held on to it* (\**maφ* grasp)  
 he?npákpa *he covers something hollow* (\**he?n* dig)

6.31. The inchoative compounding theme *-?aη*φúkúm is made up of the thematic prefix ?*aη-* (6.5) plus the stem φúkúm (cf. \*φúkúm arise, go out).

pò?yaηφúkúm *he began to run* (\**poy* run)  
 ?*aη*wèhaηφúkúm *he began to shout* (\**aηwèh* shout < ?*aη* sim. pref. + \**wèh* weep)  
 kègaηφúkúm *it began to fly* (\**kek* fly)

6.32. The continuative compounding theme *-?aη*hák is made up of the thematic prefix ?*aη-* (6.5) plus the stem *hak* (cf. \**hak* go across).

?*am*ò?ηaηhák *I remained sleeping* (\**μον* sleep)  
 ko'stè?ñaηhák *he continued to kneel* (\**ko'stè-ñ* kneel)  
 wi?gaηhák *he continued to eat* (\**wi?k* eat)  
 nλgaηhákpa *he goes and stays away* (\**nΛk* go)  
 mi?ñaηhák *he came to stay* (\**miñ* come)

6.33. Compounds of noun themes and verb themes.

?*ah*apko'ñpa *I stop talking, keep quiet* (hap mouth + \**ko-ñ* sit down)  
 ?*ana*?hó'ñpa *I swim, paddle (as a boat)* (nΛ? water + \**he?n* dig)  
 ?*ana*κΛ?máφpa *I shake hands with him* (κΛ? hand + \**maφ* grasp)  
 ?*aη*ko'bakpíhpa *I annoy him* (kó'bak head + \**píh* heat)  
 ?*iñ*λ?κΛ?nákspa *he blesses him* (nΛ? water + κΛ? hand + \**naks* hit)  
 ko'stè-ñ *he knelt* (ko's- comb. form of kó'so knee + \**te-ñ* stop)

6.34. Compounds of an attributive theme and a verb theme.

?*an*ñtahálypa *I really speak* (núnta really + \**hay* speak)  
 ?*aη*wΛ'éák *I fixed it* (wΛ' good + \**φak* leave)  
 wΛ'pút *he was successful* (lit. "came out well" as in some undertaking) (wΛ' + \**put* come out)  
 ?*an*šútuwátpa *I make it smaller* (šútu small + \**wat* make, do)  
 ?*aη*wΛ'?'aηhám *I desire, like* (wΛ' + \*?'aηhám believe)  
 ?*an*φámma?íí *I have a great deal* (φám much, very + \**na?íí* have)

## 7. NONTHEMATIC PREFIXES OF THE VERB

7.1. There are two sets of nonthematic verb prefixes, which are mutually exclusive and which are used to indicate pronominal reference and resolution. Each verb theme, to be conjugated in the active voice, must be given the prefixes of one set or the other (or such as are phonetically zero) except for the main verb in syntactic clause sequences of main verb plus resultative gerundial verb (19.8-9) and main verb plus conditioned gerundial verb (19.10). Only a few verb themes may take either. The first set indicates the intransitivity and the second the transitivity of the verb. Thus the first set indicates subject and the second both subject and object. Verbs conjugated in the passive voice (with the passive nonthematic suffix) must use the intransitive set of prefixes, although only verbs which are transitive when in

the active voice may be conjugated for the passive. Conversely there are some changes from the intransitive to the transitive set in gerundial and contemporaneous clause constructions (19). Number, ordinarily expressed by suffixation, is only expressed by the pronominal prefixes of the first person of both sets to indicate the inclusive plural (8.4).

#### THE INTRANSITIVE SET

7.2. The intransitive set includes pronominal prefixes for the first, second, and third persons singular, and the first person plural.

Person	Singular	Plural
1st.....	ʔa-	ta-
2d.....	mi-	
3d.....	# (zero)	

ʔan.ákpá *I go* (\*n.ák go), tan.ákpá *we (incl.) go*,  
miñ.ákpá *you go*, nákpá *he goes*

7.3. Verb themes which take the intransitive set of prefixes can neither be defined phonetically nor morphologically, except for the verb themes with the thematic suffixes -ʔa· (6.11), -ʔΔʔy (6.12), -ʔoʔy. (6.14), and -neʔ (6.15) which must always use the intransitive pronominal prefixes except in syntactic constructions as indicated above (7.1). Similarly, verbs conjugated in the passive, with the passive nonthematic suffix, always use the intransitive set, although in the active voice they are transitive. A very few verb themes have been found which can take either the transitive or intransitive set, with such meanings as "marry" and "marry someone," "look," and "look (at) someone," "speak" and "speak (to) someone."

7.4. Stative verbs. Nouns, pronouns, and attributives which may modify nouns may be inflected with the intransitive set of pronominal prefixes when used predicatively, e. g., ʔap.á·šĩñ *I am a man*, ʔaʔá·čé *it is I*, mimič *it is you*, heʔ *it is he (she, it)*. Since the prefix in the third person is phonetically zero, the independent third person pronoun heʔ usually is placed before the verbalized noun or attributive, e. g., heʔ p.á·šĩñ *he is a man*, heʔ w.á· *he is good*.

#### THE TRANSITIVE SET

7.5. Both subject and object are expressed by the transitive prefixes. Verb themes which require an expressed object must have one of the prefixes of this set. Phonetically and morpho-

logically they are indistinguishable from those used intransitively, except for themes formed with the thematic prefixes na- (6.7) and ʔak- (6.6), and those formed with the indirective suffix -ʔaʔy (6.17), which, since an object must be expressed, are always transitive. The transitive prefixes also are used with the verb of the subordinate (linear) clause (and sometimes with the verb of the main clause) in linear-punctual contemporaneous clause constructions (19.4), with the main verb of linear-linear contemporaneous clause constructions (19.5), and with the subordinate verb of conditioned gerundial clause constructions (19.10).

	1st. per. obj.	2d. per. obj.	3d. per. obj.
1st. per. sub.....		man-	ʔan- (sing.) tan- (incl. pl.)
2d. per. sub.....	ʔan- (sing.)---		ʔiñ-
3d. per. sub.....	ʔa- (sing.)---	mi-	ʔi-
	ta- (incl. pl.)		

Ambiguity which might result from the overlapping of the prefix ʔan- for both 1st. per. sub. 3d. per. obj. sing. and 2d. per. sub. 1st. per. obj. sing. can be avoided by the use of the independent personal pronouns before the prefixes. If the independent pronoun is omitted the meaning usually is understood as first person subject third person object.

ʔančí? or ʔá·čé ančí? *I gave it to him* (\*čĩ? give)  
mič ančí? *you gave it to me*

Only the first person may have inclusive plural prefixation. (See 8.4 for discussion and illustrations of plurals.) The transitive prefixes are given here with the verb theme \*ʔi·š see.

(ʔá·čé) maʔní·špa *I see you*  
(ʔá·čé) ʔaʔní·špa *I see him (her, it)*  
mič aʔní·špa *you see me*  
(mič) ʔiʔní·špa *you see him*  
(hèʔm) ʔaʔí·špa *he (she) sees me*  
(hèʔm) miʔí·špa *he (she) sees you*  
(hèʔm) ʔiʔí·špa *he (she) sees him (her, it)*  
taʔní·špa *we (incl.) see him (her, it)*  
taʔí·špa *he (she) sees us (pl. incl.)*

## 8. NONTHEMATIC SUFFIXES OF THE VERB

8.1. Aspect, number, voice, mode, agent, and subordinacy are expressed through nonthematic

suffixation of the verb (table 1). Each formally complete verb must have a suffix (which may be phonetically zero) of orders I, VII, VIII, or IX. These suffixes are mutually exclusive, while those of the other orders are optional. The order of suffixation, as given in table 1, is subject to the following limitations: (a) the suffixes of orders II and IX, orders IV and VI, and orders VI and IX cannot be used simultaneously; (b) the collective suffix -num of order III has not been observed with

suffixes of orders IV and VI; (c) the suffixes of orders I and VII have been observed only with those of order III; (d) the linear-completive suffix of order VIII has been observed only with suffixes of orders II and III; (e) the linear-incompletive suffix of order IX has been observed only with suffixes of order III.

A formally complete verb most frequently has only one nonthematic suffix, and rarely more than three.

TABLE 1.—Order of suffixation of verbal nonthematic suffixes

I	II	III	IV	V	VI	VII	VIII	IX
Gerundial	Perfective	Number	Aspect	Passive	Purposive	Modal	Completive aspect	Incompletive aspect
-i #(zero)	-ne?	-ta?m -yah -num	Desiderative -to?	-ta·	-tap	Subjunctive -?iñ	#(zero) Agentive -wa?ap	-pa, -p Agentive -pa?ap
			Iterative -gak			Imperative -Δ	Linear -wam	Linear -pam

Examples of suffixation order:

tohāyniyahtá·wom *they (tortillas) had just been made for him* (\*tohá?y make (tortillas) for someone)  
 taḡwattamgákpa *we (gen. incl.) are doing it again* (\*wat do)  
 mikù?ttamtá·p *you are going to be eaten* (\*ku?t eat)  
 iñā?mayniwá?ap *he is the one who has said it* (\*nā?má?y say)

8.2. The gerundial suffixes—order I. The gerundial suffixes are -i and # (zero). Verbs with the -i suffix are identical in form to those nouns derived from verb themes by the addition of the suffix -i (10.9). They may not, however, be given the nonthematic suffixes of nouns, and are very different from them in function. Whereas the nominalized verbs have the same syntactic usage as a standard noun the gerundials are used only as subordinate predicators following a main predicative verb in gerundial clause constructions. The syntactic usage of gerundial verbs is discussed in 19.6–11. Verbs with gerundial suffixes also may have the plural suffixes -yah and ta?m.

mòh yo·sá·hi *he began to work* (\*yo·sá· work)  
 nākpa mi ?iñi *you are going (there) to live* (\*?iñ live)  
 wa?ā·b ikú?t *he can eat it* (\*ku?t eat)

8.3. The perfective suffix—order II. The perfective suffix -ne? may be translated by either “have” or “had.” Since perfective action is

always completed action, this suffix cannot be used with the incompletive suffixes.

?a?ni·šné? *I have seen it* (\*?i·š see)  
 nāknc?om *he had just gone* (\*nāk go, -om enc. “just”)  
 nā?maynitáwom *it has just been said* (\*nā?má?y say to someone, -wom enc. “just”) (for -ne? > -ni?, see 4. 17)  
 fè·nniyáh *they had tied themselves* (\*fè·n tie)

8.4. The number suffixes—order III. There are three number suffixes: -ta?m, used when either the subject or object (expressed by the nonthematic prefixes) is in the first or second person, and pluralizing either the subject or object; -yah, used when either the subject or object is in the third person, and pluralizing either the subject or object; -num, used as a collective plural of the third person subject. -ta?m, in its unstressed form -tam (4.9), is also the pluralizing suffix of first and second person pronouns, while -yah is the pluralizing suffix of third person pronouns (9.2). -tam and -yah also are used as



noun plural suffixes, but without the pronominal connotation (12.2). Plurality is unexpressed and contextually understood unless this would result in ambiguity, in which case it may be indicated in the ways discussed below.

#### VERB PLURALIZATION

There are three categories of first person subject or object plurals: the exclusive plural, the limited inclusive plural, and the generalized inclusive plural. The exclusive plural excludes the person or persons addressed. The limited inclusive plural includes the speaker and the person or persons addressed, and excludes any others who may be present or referred to. The generalized inclusive plural includes the speaker, person or persons addressed, and any other person or persons present, or absent and referred to.

The first person exclusive plural is formed with the suffix *-taʔm* with or without the personal pronouns, or by means of the plural personal pronouns without the suffix *-taʔm*.

*ʔamoŋtáʔmpa* we are sleeping (*ʔa*- 1st. per. i. p. pref. + *\*moŋ* sleep + *-taʔm* + *-pa* inc. suf.)

*ʔləčtaʔm amóŋpa* same meaning; 1st. per. pl. pron. *ʔləčtam* has been used, excluding the verbal suffix *-taʔm*

*ʔləčtaʔm amoŋtáʔmpa* same meaning; both 1st. per. pl. pron. and the verbal suffix *-taʔm* are used

*ʔaʔləčtaʔm amoŋtáʔmpa* same meaning; occasionally in plural constructions the verbalized personal pronouns are used for emphasis.

*maʔništáʔmpa* I see you (pl.), we see you (pl. or sing.) (man- 1st. per. sub. 2d. per. obj. t. p. pref. + *\*ʔiš* see + *-taʔm* + *-pa*)

In the case of the transitive pronominal prefix *ʔan-* which means both 1st. per. sub. 3d. per. obj. and 2d. per. sub. 1st. per. obj., the independent personal pronouns are often used to avoid ambiguity.

Without pronouns:

*ʔaʔništáʔmpa* I see them, we see him, you (sing.) see us, you (pl.) see me

With pronouns:

*ʔləč aʔništáʔmpa héʔyah* I see them

*ʔləčtam aʔníš(taʔm)pa héʔ* we see him

*ʔləčtam aʔnišyáhpá* we see them

*mīč aʔništáʔmpa ʔaʔləčtam* you (sing. or pl.) see us (verbalized pron.)

*mīčtam aʔništáʔmpa ʔaʔləčtam* you (pl.) see us

*mīčtam aʔníš(taʔm)pa ʔaʔləč* you (pl.) see me

The first person limited inclusive plural is formed by attaching the pronominal prefix *ta-*

(1st. per. pl. intransitive, and 3d. per. sub. 1st. per. obj. pl. transitive) or *tan-* (1st. per. pl. sub. 3d. per. obj. transitive) before the verb stem.

*tamóŋpa* we will sleep (*\*moŋ* sleep)

*taʔníšpa* we see him (her, it, them) (*\*ʔiš* see)

*taʔíšpa* he sees us

The generalized first person inclusive plural is formed by attaching both the plural pronominal prefixes *ta-* or *tan-* before the verb stem and the plural suffix *-taʔm* after the verb stem.

*tamoŋtáʔmpa* we will sleep (*\*moŋ* sleep)

*taʔništáʔmpa* we see him (her, it, them) (*\*ʔiš* see)

*taʔíštáʔmpa* he (she, it, they) see us

The second person plural is expressed by the use of the suffix *-taʔm*, the plural personal pronoun, or both.

*mimóŋtáʔmpa* you (pl.) sleep (mi- 2d. per. i. p. pref., *\*moŋ* sleep)

*mīčtam mimóŋpa* same meaning; plural personal pronoun used to express the plural

*mīčtam mimoŋtáʔmpa* same meaning; both plural pronoun and suffix used

*ʔiʔništáʔmpa* you (pl.) see him

*miʔíštáʔmpa* he sees you (pl.)

The third person plural is expressed by use of the suffix *-yah*. If both subject and object are in the third person the independent pronouns may be used to indicate whether subject or object or both are plural. When subject is first or second person and object third person, *-yah* pluralizes the object.

*moŋyáhpá* they sleep (*\*moŋ* sleep)

*nakýáhpá* they go (*\*nak* go)

*ʔiʔišyáhpá* they see him, he sees them (*\*ʔiš* see)

*héʔyah iʔišyáhpá* they see him

*hèʔ iʔišyáhpá péʔmyah* he sees them

*hèʔyah iʔišyáhpá péʔmyah* they see them

*ʔaʔnišyáhpá* I see them

The collective suffix *-num* is used to express action undertaken collectively or by a group. It has been observed only with the third person pronominal prefixes.

*seʔnúnum* they just returned in a group (*\*seʔ* return -um enc. just)

*wiʔknúmpam* they were already eating in a group (*\*wiʔk* eat, -m enc. "just", "already")

8.5. The aspect suffixes—order IV. The iterative suffix *-gak* may be translated as "again," "once more."

*miŋgákpa* he comes again (*\*miŋ* come)

*wásgaktáʔp* he is being bitten again (*\*was* bite)

*miʔišnigaktáʔ* you have been seen again (*\*ʔiš* see)

*ʔamóŋnigákpa* I have slept again (*\*moŋ* sleep)

The desiderative suffix *-to?* may be translated by "wish" or "want."

*ʔayo·ša·tóʔba* I wish to work (\*yo·šá· work)  
*mip̄l̄kyahtóʔba* they want to marry you (\*p̄ak̄ marry)  
*tam̄ð̄tamtóʔba* we want to sleep, are sleepy (\*mōñ sleep)

8.6. The passive suffix—order V. The suffix *-ta·* indicates passive voice and is attached only to verb themes which in the active voice may take the transitive pronominal prefixes. Since in the passive voice there is no object, the intransitive pronominal prefixes (7.2) are used.

*kuéattá·* he was sent (\*kuéat̄ send)  
*ʔakh̄ò·doʔna·tá·* he was informed (\*ʔakh̄ò·doʔná· in-  
 form, lit. "cause to know")  
*ʔaéiʔíá·p̄* I am given (\*éiʔ give)  
*nan̄l̄knetá·wom* he has just been taken (\*nan̄.l̄k take)  
*mikuʔttá·* you were eaten (\*kuʔt eat)

8.7. The purposive suffix—order VI. The purposive suffix *-táp* is used to express an action that was intended or purposed but not carried out.

*ʔanakkaʔtáp* I meant to kill him but didn't (\*ʔakkáʔ kill)  
*ʔamōñtáp* I wanted to sleep but couldn't (\*mōñ sleep)  
*miñ̄aktáp* you meant to go but didn't (\*nak̄ go)  
*n̄lmaȳtá·táp* it was going to be said but wasn't  
 (\*n̄lá·máʔy say (to))

8.8. The modal suffixes—order VII. The subjunctive mode is expressed by the suffix *-ʔiñ*, which is used in phrases of possibility and exhortation. It may be preceded by the plural suffixes but has not been observed with other nonthematic suffixes.

. . . . *ʔiga yúʔmiñ* that it may boil (ʔiga conj. "that,"  
 \*yu·m boil)  
*tawf̄ʔgiʔñam* shall we (lim. incl.) eat now? (\*wiʔk eat,  
 -ʔam enc. "now")  
*ʔaéiʔiʔñ anyo·šá·hi* that I be given work (from a prayer)  
 (\*éiʔ give, ʔanyo·šá·hi my work)  
*n̄láʔmáʔyá ʔiñmádiʔñ iñ̄láyi* say to him that he shall tell  
 his name, (n̄láʔmáʔyá say to him, \*ʔāmát tell,  
 ʔiñ̄láyi his name)

The imperative suffix *-á* is used only in the second person. The plural suffix *-taʔm* (8.4) placed before the imperative suffix forms the plural imperative. For transitive verbs the third person object is implicit unless first person object is to be expressed, in which case the verb is preceded by *ʔa-* 3d. per. sub. 1st. per. obj. t. p. pref. which substitutes for the 2d. per. sub. 1st. per. obj. t. p. pref. *ʔan-* which one might logically expect to find. The imperative suffixes have been observed with no nonthematic suffixes other than the 2d. per. plural

suffix *-taʔm*. The temporal or limiting enclitic *-m* (15.2) is often used after the imperative suffix, in some cases frozen by usage.

*n̄lága go!* (\*nak̄ go)  
*naktáʔmá go!* (plural)  
*p̄l̄kam* take it (him, her)! (\*p̄ak̄ take, -m enc. "just")  
*húyam* buy it! (\*huy buy, -m enc. "just")  
*éiʔá* give it to him! (\*éiʔ give)  
*ʔaéiʔá* give it to me!

8.9. The completive and incompletive suffixes—orders VIII and IX. Tense is not expressed in Popoluca, but every action expressed by a verb which does not have a gerundial, modal, or purposive suffix must have a completive or incompletive aspect suffix. The completive, except in agentive and linear-punctual clauses, is expressed by a suffix which is phonetically zero, and the incompletive by a morpheme in which the phoneme *p* is initial. Since the completive suffixes designate an action which has been completed, they are usually to be translated by the English past tense. Since the incompletive suffixes designate an action which has not been completed, they are usually to be translated by the English present or future tenses. In a narrative an action may actually have been completed, but is not yet completed with reference to the other action of the narrative, and therefore may be given one of the *-p-* suffixes.

The incompletive suffix *-pa* may be attached to all verb themes except those of more than one syllable which end in *-a·*; those having the nonthematic passive suffix *-ta·*, and those ending in the reduced form of the verbal suffixes *-ʔaʔy*, *-ʔoʔy*, and *-ʔáʔy* (4.10), in which cases the form *-p* is used.

*ʔan̄l̄kpa* I am going (\*nak̄ go)  
*ʔaʔní·špa* I see it (\*ʔi·š see)  
*ʔaʔi·šíá·p̄* I am seen  
*ʔayo·šá·p̄* I work (\*yo·šá· work)  
*t̄l̄ksob iš̄l̄ʔ* he is (repeatedly) hitting (full form \*t̄l̄ksóʔy-  
 pa < \*t̄l̄ksóʔy keep hitting)

The incompletive agentive suffix *-paʔap* indicates the doer of an action not yet completed. In order to take this suffix certain pronouns may be transformed into verbs through the same derivational process by which a noun is verbalized, i. e., the addition of the thematic suffix *-ʔa·* (6.11).

*hèʔm iñoʔpáʔap nás* he who burns the earth (hèʔm 3d.  
 per. pers. pron., \*noʔ burn, nás earth)  
*túm animat takuʔtpáʔap* an animal that eats us (túm  
 indef. art., animat animal (Sp.) \*kuʔt eat)  
*ʔiʔa·páʔap* who is it? (lit. "who is the one who  
 [does it]") (ʔi inter. pron. "who" + -ʔa· verb.  
 thematic suf.)

mi?apá?ap *who are you?* (lit. "you are the one who [does it]") (mič 2d. per. pers. pron. > mi)  
wΛ?ā-yahpá?ap *those who are able* (\*wΛ?ā- be able)

The completive agentive suffix -wΛ?Δp indicates the doer of a completed action.

?iñΛ?maynewΛ?Δp *he is the one who said it* (\*nΛ?má?y say [to someone])  
?ini?iñ hē?m pák ikka?wΛ?Δp *he had the bone which killed him* (?ini?iñ he had, hē?m def. art., pák bone, \*?akká? kill)  
nā'snewΛ?Δp *that which has passed* (\*nā's pass)

### THE LINEAR SUFFIXES

The linear suffixes -pam (incompletive) and -wam (completive) are used only with the linear verb form in clause constructions expressing linear-punctual contemporaneous action. The syntactic usage of verbs with these suffixes is discussed at length in 19.4.

?amohpám *as I sleep . . .* (\*moh sleep)  
?awi?kniwám *as I have been eating . . .* (\*wi?k cat)

## 9. PRONOUNS

9.1. Pronouns are personal, interrogative-relative, and demonstrative. All are monosyllabic stem morphemes except the negative pronouns formed by compounding, the demonstrative *tungak* (tum *a* + -gak), and the emphatic personal pronouns. The personal and the demonstrative pronouns may be inflected with the plural suffixes -tam and -yah. The others may not be inflected, except the interrogative-relative pronoun *ñi* which is sometimes given the noun indirective suffix -mΛ, i. e., *ñi which, what* + -mΛ > *ñimΛ with which, with what*.

9.2. The personal pronouns.

?Λč *I*                    ?Λč'iam *we*  
mič *you*                mič'iam *you* (pl.)  
he? *he, she, it*      hē?yah *they*

9.3. The emphatic personal pronouns. The bound stem -yá?ak, always used with the possessive pronominal prefixes, forms an emphatic pronoun, often used following and in apposition to the personal pronouns. The three emphatic pronouns are:

?anyá?ak *myself*  
?iñyá?ak *yourself*  
?iyá?ak *himself*

9.4. The interrogative-relative pronouns.

?i *who*  
hup *which*  
ñi *what, which*

9.5. The demonstrative pronouns.

yΛ?p *this one*                    yΛ?pyah *these ones*  
pe?m *that one*                pé?myah *those ones*  
túngak *the other one*

9.6. The negative pronouns.

đā?i *no one* (đā neg. at. + ?i *who*)  
đāñi *nothing* (đā + ñi *what*)

## 10. THE NOUN THEME

10.1. A noun theme may be composed of a single, unanalyzable, thematic element, or stem, a frozen reduplicated stem, a stem consisting of two unanalyzable elements the first of which is reduplicated, a stem plus a thematic prefix or suffix, (rarely both) or a compound of two noun themes or an attributive theme and noun themes. Noun themes may be formed from verb themes by the addition of a thematic suffix.

Most noun themes ending in a vowel have a combining form (4.19) which omits the final vowel when suffixed or as the first member of a compound, e. g.:

yó'mo *yo'm-woman*  
móya *moy-flower*  
tékēi *tekš-skiri*

### THE NOUN STEM

10.2. Noun stems are mono- or disyllabic conforming to the patterns CVC, CVCC, CV.CV, CVC.CV, CVCC.CV, CV.CVC, and CVC.CVC. A few trisyllabic stems have been noted but it seems probable that these are either borrowed forms or capable of further analysis.

hon *bird*  
čú? *night*  
hu?n *owl*  
?á:či *uncle*  
ká.ma *milpa*  
čáh.ka *deaf mute*  
kú?n.ki *squirrel*  
há.waŋ *fever*  
piš.čak *flea*  
?a:tébet *town*  
triŋló?kΛč (a one-legged witch)

Reduplicated noun stems are of the pattern CV(CV) or CVC(CVC) or a reduplication of the first syllable (CV) of a two-syllable stem.

č'č'Λ *aunt, older sister*  
nóno *mushroom*  
núnu *breast, nipple*  
tútu *penis*  
héhe *mosquito*

méme *butterfly*  
 pó?po? *fish trap*  
 éíéimat *enchanted place* (Sp. "encanto")  
 pupúsu *lung*  
 kukúma *ring*

#### THEMATIC PREFIXES OF THE NOUN

10.3. Most thematic prefixes of nouns are attached to one or two noun themes only, and are of unanalyzable meaning. A few are attached to a larger group of themes, and their meaning may be isolated.

10.4. Some prefixes of unanalyzed meaning:

kutúhka? *rain storm* (tuh *rain*)  
 ?ákpak *cheek* (pak *bone*)  
 ?áktalé *molar* (talé *tooth*)  
 hápak *car of corn* (pak *bone*)  
 wíupak *forehead* (pak *bone*)

10.5. The simulative prefix ?aŋ- usually is used to form a noun theme that is similar to or possesses some resemblance to the noun theme to which it is attached.

?a?ŋá·ni *pimple* (?á·ni *tortilla*)  
 ?áŋéay *row, line, furrow* (éay *vine*)  
 ?aŋwí·ši *mustache* (wí·ši *beard*)  
 ?aŋnáka *edge* (náka *skin*)  
 ?aŋkó·bak *top* (kó·bak *head*)  
 ?áŋka? *patio* (ka? *hand*)  
 ?aŋnáksa *rafter* (náksa *stick*)

10.6. The qualifying prefix ma- apparently has the meaning of "great".

maéá? *star* (éa? *stone*)  
 masáwa *King of the Hurricane* (mythological character) (sáwa *wind*)

10.7. The qualifying prefix way- means "small."

wayéá? *pebble* (éa? *stone*)  
 waypá·nak a small variety of tick (Sp. "pinolillo") (pá·nak *tick*)  
 wayé·ča a net suspended from a hoop, resembling a small Popoluca-type cradle, used to store things (é·ča *hanging net cradle*)

#### THEMATIC SUFFIXES OF THE NOUN

10.8. Most thematic suffixes of nouns are nominalizing suffixes attached to verb themes. Six suffixes of this type have been isolated. One suffix (locative) may be attached widely either to substantive or verb themes, and one (qualifying) may be attached widely to noun themes. There are a few other thematic suffixes of nouns analyzable as such and forming small groups of nouns of which they are a part.

10.9. The nominalizing suffix -i may be attached to many verb themes to denote the substance of the action.

?i·špáki *friend* (\*?i·špák *know*)  
 wi?kimóŋi *supper* (\*wi?k *eat* + \*moŋ *sleep*)  
 hípsi (a) *blaze* (\*hips *burn*)  
 háyi *voice* (\*hay *speak*)  
 ?ákši *grain of corn* (\*?aks *shelled corn*)  
 wáči (a) *drop* (\*walé *drip*)  
 ká·ni (a) *smell* (\*ka·n (to) *smell*)

10.10. The nominalizing suffix -kuy may be attached to many verb themes to denote act, instrument, or material.

hécukuy (a) *comb* (\*heé *comb*)  
 ?i·škuy *eye* (\*?i·š *see*)  
 wí?kkuy *food* (\*wi?k *eat*)  
 yémkuy *fire fan* (Sp. "aventador") (\*yem *fan*)  
 yo·šá·kuy *work* (\*yo·šá· *work*)  
 páhkuy *cage* (\*pah *lock up*)  
 má·ékuy *toy* (\*ma·é *play*)

10.11. The collective nominalizing agentive suffix -ká?wih is attached to verb themes to indicate the habitual "doers" as a class. It is a collective agentive except in the word for *the devil*, wokká?wih, lit. "barkers" (\*wok *bark*).

yo·ša·ká?wih *workers* (\*yo·šá· *work*)  
 ?eé·ká?wih *dancers* (\*?eé *dance*)  
 wi?kká?wih *caters* (\*wi?k *eat*)

10.12. The nominalizing suffix -a occurs rarely. It is attached to a few verb themes to denote the result or substance of the action.

háka *piece* (\*hak *break, shatter*)  
 pó?a *picce* (\*po? *break, split*)  
 tóya *pain* (\*toy *suffer*)

10.13. The nominalizing suffix -a has been noted attached to three verb themes.

kípsa *measuring stick* (\*kips *test, measure*)  
 náksa *stick* (\*naks *hit*)  
 na?táléa *thirst* (\*na?tálé *to be thirsty*)

10.14. The nominalizing suffix -aŋ has been noted attached to two verb stems.

púhaŋ *crowd* (\*puh *go out*)  
 hípsaŋ *firebrand* (\*hips *burn*)

10.15. The locative suffix -kom may be attached to verb or substantive themes to indicate place.

?i·moŋkóm *his sleeping place* (?i- 3d. per. pos. p. pref. + \*moŋ *sleep*)  
 pahkóm *cage* (lit. "lock-up place") (\*pah *lock up*)  
 pé?m kúy íf tómi tákkóm *that tree is near (the) house (place)* (pé?m kúy *that tree*, ?íř *it is*, tómi *near*, tak *house*)

A specialized usage is wa·kóm which may mean either "a nice day" or "a nice place" (wa· *nice, pretty*)

10.16. The qualifying suffix -tuku is attached freely to noun themes usually to convey the idea of old, unserviceable, or unwanted.

- taktúku *old, unserviceable house* (tak house)  
 ée'stúku *old, unserviceable bed* (ée's bed)  
 ko'báktaktúku *old, unserviceable hat* (ko'báktak hat)  
 pu'ktúku *clothing* (pu'k- comb. form of pú'ki cotton)

10.17. The suffix -ti has been observed attached to Spanish loan words and other unanalyzable bound stems. All of these words are of three syllables, atypical in that the accent falls on the first syllable. The suffix -ti is itself atypical in that the t does not palatalize, following the usual pattern.

- kúkuhti *coconut palm* (Sp. "coco")  
 lúpuhti *wolf* (Sp. "lobo")  
 šúnuhti *supernatural being in cat form*  
 šíkuhti *a type of bee*  
 kákašti *cage*

10.18. Miscellaneous suffixes. There are a number of miscellaneous suffixes of which one or more examples have been noted but the significance of which is not clear.

- suf. -éi tákčei *cockroach* (tak house)  
 kí'nčei (a) *cold* (ki'n- comb. form of kí'ni nose)  
 suf. -ní sáŋni *daytime* (saŋ sky)  
 suf. -ka kutúhka *rainy season, rainstorm* (tuh rain)  
 ká'nka *throat* (\*ka'n taste)  
 pó'ka *pus* (\*po' split, break)

### COMPOUNDING

10.19. The most productive type of compounding is that of a noun theme and an attributive locator. Other types are those of noun theme plus noun theme, or attributive theme plus noun theme.

10.20. Compounds of noun theme plus locator. Most locative concepts indicating position in relation to nouns, that may not be expressed by the use of nonthematic locative suffixes, are expressed by the compounding of a noun with a locator.

- takkò'bakyúkma *on the house-top* (takkò'bak house-top + yúkma above)  
 ko'pkúkma *in the center of the plain* (ko'p- comb. form of ko'pa plain + kúkma in the center)  
 taknášwiñ *under the house* (tak house + nášwiñ under)

10.21. Compounds of noun theme plus noun theme. The second theme is the head of the compound.

- éayčiča *hammock bridge* (éay vine + čiča woven net cradle)  
 kuykò'bak *tree trunk* (kuy tree + kò'bak head)

- kò'soká'ak *knee boots* (kò'so knee + ká'ak shoe)  
 ?ápiččfhi *porcupine* (?ápič thorn + čfhi fox)  
 kl'áŋkí'ni *finger tip* (ka' hand + ?áŋkí'ni tip or point < ?aŋ- sim. pref. + kí'ni nose)  
 nł'áŋnáka *edge of the water* (nł' water + ?áŋnáka edge)  
 yo'mtá'wa *sister* (yo'm- comb. form of yó'mo woman + tá'wa sibling)

10.22. Compounds of attributive theme plus noun theme. The attributive is always placed in the initial position.

- šúŋuná' *small stream* (šúŋu small + ná' water)  
 pa'má'ni *thick tortilla* (Sp. "gordita") (pa'm thick + ?á'ni tortilla)  
 pophúktá' *a white candle* (pop- comb. form of pópo white + húktá' fire)  
 tomtá'wa *neighbor* (tom- comb. form of tómi near + tá'wa sibling)

10.23. Noun compounds of inflected verb plus noun. Phrases of an inflected verb (which may have an enclitic -m) and a subject noun involving the movements or position of the sun or moon are treated both formally and syntactically as a noun unit.

- kí'mpamháma *east* (kí'mpam it rises + háma sun)  
 taŋlypamháma *west* (taŋlypam it just enters)  
 kukehháma *sunrise* (kukéh it appeared)  
 kùga'páma *noon* (kugá'p it is in the center)  
 kùga'p'ú' *midnight* (kugá'p + éu' night)

### 11. NONTHEMATIC PREFIXES OF THE NOUN

11.1. There is one paradigmatic set of nonthematic prefixes of the noun. These prefixes correspond to the third person object, transitive, nonthematic prefixes of the verb, and are attached to noun themes to indicate pronominal possession of that noun.

- ?an- 1st. per. sing. or pl.  
 tan- 1st. per. incl. pl.  
 man- 1st. per. possessor 2d. per. possessed in direct discourse  
 ?iñ- 2d. per. sing. or pl.  
 ?i- 3d. per. sing. or pl.

#### Examples:

- ?anták *my (our) house*  
 tanták *our house*  
 ?iñák *your (sing. or pl.) house*  
 ?iák *his (their) house*  
 mané'á'si *you my child!* (é'á'si child)

### 12. NONTHEMATIC SUFFIXES OF THE NOUN

12.1. There are two plural suffixes of the noun, which correspond to the plural suffixes of verbs and pronouns, but without a corresponding pro-

nominal reference, and five case suffixes of locative, indirective, and durative reference. No noun has been observed with more than one nonthematic suffix.

#### THE PLURAL SUFFIXES

12.2. The two pluralizing suffixes attached to noun themes are -tam and -yah (cf. verb and pronoun pl. suffixes 8.4, 9.2). Often neither is used, since pluralizing of nouns usually is implicit or accomplished by use of verb pluralization. -tam is used to pluralize nouns signifying human beings, and -yah to pluralize those signifying animals and objects. -tam, when used with the first person possessive pronominal prefix ?an-, may pluralize the possessor rather than the noun possessed. Insufficient data were obtained on the use of plural suffixes with other possessive pronominal prefixes.

- éšštam children (éšš- comb. form of éšš child)  
 yómtam women (yó'm- comb. form of yó'mo woman)  
 mánaktam sons (mának son)  
 kúyyah trees (kuy tree)  
 émpayah dogs (émpa dog)  
 tákyah houses (tak house)  
 ?antáktam our house (?an- 1st. per. pos. p. pref.)

#### THE CASE SUFFIXES

12.3. The five case suffixes are used to indicate location, duration, and indirection. Three of these suffixes are composed of unanalyzable morphemes, but the other two are composed of a simulative element like that of the thematic noun prefix -?aη (10.5), plus one of the suffixes of the first group. Directional concepts such as motion to or from an object can be expressed only by the use of such verbs as those meaning "go in" or "go out," while the noun keeps the same locative suffix indicating static position.

12.4. The locative-durative suffix -ka?m means "at" or "during." Used with verbs of motion it may be translated as "to" or "from."

- éu?ká?m during the night (éu? night)  
 nòko ?íú ìum ták antakká?m a house is near my house  
 (nòko near, ?íú ìum ták there is a house, ?anták my house)  
 tanákpá nA?kA?m we go to the river (tanákpá we [incl.]  
 go, nA? water, river)  
 ?amínpa ?iníákká?m I come from your house (?amínpa  
 I come, ?iníák your house)  
 kukéhaká?m in the morning (kukéha morning)

12.5. The locative suffix -hom indicates position within or among.

- tAgá?ypa ?íúákhóm he enters (into) his house (tAgá?ypa  
 he enters, ?íúák his house)

- ?afáypa yA?p takhóm I am going to stay in this house  
 (?afáypa I am going to stay, yA?p this, tak house)  
 wánpa ?ilibrohóm he reads his book (wánpa he reads,  
 ?ilibro his book [Sp. "libro"])  
 ?ayošá'b aηka'mhóm I will work in my milpa (ayošá'b  
 I will work, ?aηká'ma my milpa [comb. form ka'm-])  
 ?íúúpa tum ko'báktakhóm he takes it out in a hat  
 (?íúúpa he takes it out, tum indef. art., ko'báktak  
 hat)

12.6. The indirective suffix -ma may be translated as "with," "at," or "to." It may not be attached to nouns designating human beings.

- nákstà· éáyma he was hit with a vine (nakstá· he was  
 hit, éay vine)  
 mimínpa ?antákma you come to my house (mimínpa  
 you come, ?anták my house)  
 ?a?íd antákma I was at my house (?a?íú I was)  
 manhá?mki?mpa tápsma I will raise you with (the)  
 rope (manhá?mki?mpa I will raise you, táps- [comb.  
 form of tápsí rope])  
 ?inó?ba ?íúúéma he burns it with his tail (?inó?ba he  
 burns it, ?íúú his tail)

A variant -m has been observed only with the noun nA? "water":

- nákpa nA?m he goes to the water (nákpa he goes)

12.7. The suffix -?aηhóm (cf. sim. noun pref. ?aη- and loc. suf. -hom) expresses position "among."

- nákpa tágaηhóm he goes into town (lit. "among the  
 houses") (nákpa he goes, tak house sing. or pl.)  
 ?ikótpa ipuktúgaηhóm she thrusts it among her clothing  
 (?ikótpa she thrusts it, ?ipuktúk- [3d per. pos. p.  
 pref. + comb. form of puktúku] her clothing)

12.8. The suffix -?aηká?m (cf. sim. noun pref. ?aη- + loc. suffix -ka?m) expresses position "at."

- nákpa íú?náηká?m he goes behind him (lit. "at his  
 back") (nákpa he goes, ?íúúñ- 3d. per. pos. p.  
 pref. + comb. form of ?íúúñi his back)

#### 13. ATTRIBUTIVES

13.1. Attributives are noun, verb, or phrase modifiers, and include descriptives, locators, tensors, intensifiers, demonstratives, participial adverbs, interrogatives, quantitatives, negatives, conjunctions, and interjections. Although sometimes found with nonthematic affixation of nouns, often in stereotyped form, they are largely uninflected. This classification of attributives is a loose one, since many attributives can be used in various ways syntactically, and there is much overlapping of categories.

13.2. Descriptive stems may be monosyllabic, disyllabic, and reduplicated of the same patterns

as noun stems. Most descriptive themes are simple stems and include such words as  $w\Delta'$  *good, pretty*,  $\acute{e}ba\acute{c}$  *red*,  $h\acute{o}ko\acute{s}$  *hot*,  $p\acute{o}po$  *white*,  $s\acute{u}ksuk$  *cold*, and the like. A few are compounded of two descriptive stems, e. g.,  $p\acute{o}ha\acute{c}\acute{e}ba\acute{c}$  *pink* ( $p\acute{o}ha$  *faded*+ $\acute{e}ba\acute{c}$  *red*). In some cases a descriptive may function as a noun, with nonthematic affixation of nouns, e. g.,  $^?i\eta w\acute{\Delta}'m\Delta$  *with your goodness*. A descriptive may also occasionally be given a noun plural suffix, e. g.,  $\acute{e}ba\acute{c}y\Delta$  *red tigers* ( $\acute{e}ba\acute{c}$  *red*, - $y\Delta$  pl. suf.,  $ka\eta$  *tiger*). Some descriptives ending in a vowel have a combining form like that of nouns (10.1), used when they are compounded or suffixed, e. g.,  $pop\acute{h}\acute{u}k\Delta$  *candle* ( $pop$ -comb. form of  $p\acute{o}po$  *white*+ $h\acute{u}k\Delta$  *fire*).

13.3. Locators usually are stereotyped forms of a bound stem plus the noun indirective case suffix - $m\Delta$  (12.6). A thematic prefix  $^?a\eta$ - probably equivalent to the noun thematic prefix (10.5) is often found with words of this category. Some of the most common locators are:  $y\acute{u}k\Delta$  *above*,  $m\acute{u}h\Delta$  *in the center*,  $k\acute{u}k\Delta$  *in the center, halfway*,  $h\acute{o}h\Delta$  *deep*,  $hu^?m\Delta$  *far*,  $^?a\eta s\acute{\Delta}k\Delta$  *outside*,  $^?a\eta w\acute{\Delta}'m\Delta$  *to the right, right hand* ( $w\Delta'$  *good*),  $^?a\eta n\acute{a}y\Delta$  *to the left, left hand*. The suffix - $wi\acute{n}$  is attached to two noun stems to form locators:  $n\acute{a}swi\acute{n}$  *down, below* ( $nas$  *earth*),  $s\acute{\Delta}\eta wi\acute{n}$  *up, above* ( $s\Delta\eta$  *sky*). As noun modifiers locators are freely compounded following a noun theme (10.20).

13.4. Tensors are monosyllabic or disyllabic themes, some with a suffix - $\Delta k$ . Most commonly they are used adverbially to give a time orientation to the modified verb or phrase. Some of the most common tensors are  $wi\acute{n}\Delta k$  *long ago*,  $h\acute{e}s\Delta k$  *then, when*,  $ma\acute{\Delta}k$  *yesterday*,  $h\acute{o}y\Delta$  *today*,  $^?i\Delta k$  *imperfective tensor*,  $^?o\Delta k\Delta$  *afterwards, then*,  $h\acute{o}bi\acute{t}$  *soon*,  $s\acute{\Delta}^?a\eta$  *now*. A tensor may occasionally modify a noun, e. g.,  $wi\acute{n}\Delta k$   $p\acute{\Delta}'\acute{s}i\acute{n}$  *men of long ago*.

13.5. Intensifiers are most commonly used adverbially. They indicate concepts such as "very" and "also." Some intensifiers are stereotyped forms of a stem plus an enclitic. Some of the most common are:  $\acute{c}am$  *very*,  $^?a\eta$  ( $^?a\eta i$ ,  $^?a\eta ki$ ) *very*,  $me\acute{s}$  *also*,  $\acute{e}ya$  *also*,  $\acute{e}yb\Delta k$  *again* (enc. - $p\Delta k$ ),  $k\acute{a}k\acute{t}i\acute{m}$  *also* (enc. - $\acute{t}i\acute{m}$ ).

13.6. Demonstrative adjectives are the demonstrative pronouns used as noun modifiers:  $y\Delta^?p$  *this (this one)*,  $pe^?m$  *that (that one)*, and  $t\acute{u}\eta g\Delta k$  which varies with  $t\acute{u}\eta g\Delta m$  *another*. The third person pronoun  $he^?$  *he, she, it* should also be included here in its usage as the definite article.

The demonstrative adjectives, except  $t\acute{u}\eta g\Delta k$ / $t\acute{u}\eta g\Delta m$ , and the definite article may be given the pluralizing suffix - $y\Delta$ . Demonstrative adverbs are  $y\Delta^?m$  *here*,  $hem$  *there*,  $h\acute{e}m\Delta k$  *there*,  $h\acute{e}^?s\Delta k$  *there*.

13.7. Interrogatives include both simple stem and compound stem interrogatives, two formed with a thematic suffix - $\acute{c}a\eta$ , and one consisting of a stereotyped form of stem plus the noun indirective suffix - $m\Delta$  (12.6). The interrogative adjectives are  $hup$  *which* (also inter. pron.) and  $hu^?c$  *what kind of, how*, which may also be used adverbially. Interrogative adverbs are  $h\acute{u}\acute{c}m\Delta$  *to where*,  $\acute{t}i^?i\eta g\Delta$  *why* ( $\acute{t}i$  inter. pron. "what" +  $^?i\eta g\Delta$  conj. *that*),  $hu^?t$  *where*,  $h\acute{u}\acute{c}a\eta$  *to where, how much*,  $\acute{t}i\acute{c}a\eta$  *how is it that, to what* ( $\acute{t}i$  inter. pron. "what"). Most interrogatives may also be used as relatives.

13.8. There are several quantitative adjectives which have a thematic suffix - $a\eta$  or - $p\Delta y$ .

$h\acute{e}sa\eta$  *this much, this many*  
 $^?u\acute{s}a\eta$  *a little*  
 $h\acute{a}^?ya\eta$  *much, many*  
 $h\acute{u}\acute{c}p\Delta y$  *how much, what size*

13.9. There are two negatives,  $\acute{d}a$  and  $^?o\acute{d}oy$ .  $\acute{d}a$  is used in all but modal clauses.  $^?o\acute{d}oy$  is the modal negative, used in imperative phrases and subjunctive clauses. A compound theme  $\acute{d}ak\acute{e}m\Delta n$  means "never."

13.10. Conjunctions are simple stem and compound stem themes, and stereotyped themes of a stem plus an enclitic. Some of the most common conjunctions are  $^?i\eta g\Delta$  *that, as*,  $h\acute{u}n\Delta m$  *since, as*,  $i\eta g\acute{a}t\acute{u}m$  *it is that*,  $^?i\eta g\Delta n\Delta m$  *while*,  $he^?y\acute{u}k\Delta$  *for this, that is why* ( $he^?$  3d pers. pron. +  $y\acute{u}k\Delta$  *above, on*),  $h\acute{e}s\Delta k$  *when*,  $mu$  ( $ma$ ,  $mo$ ,  $mi$ ) *when*,  $^?i$  *and* (probably Sp. "y"),  $me^?i\eta g\Delta$  *if* ( $^?i\eta g\Delta$  *that*),  $me^?da$  *if not*,  $\acute{t}i^?i\eta g\Delta$  *because* ( $\acute{t}i$  rel. pron. "what" +  $^?i\eta g\Delta$  *that*).

13.11. Interjections include phrase words as  $h\Delta$  *yes*,  $\acute{d}a$  *no*,  $mop$  *certainly*, and  $^?ay$  *exclamatory*.

13.12. Participial adverbs are formed from verb themes plus the suffix - $\acute{u}mu$ , e. g.,  $\acute{s}ik\acute{u}mu$  *laughing* ( $^*s\acute{u}k$  *laugh*).

## 14. ENUMERATIVES

14.1. Popoluca numbers beyond six have been replaced by Spanish. Numerals (except "one") are always composed of a bound stem plus nonthematic affixes. There are two suffixes for cardinal enumeration. These seem roughly to divide into temporal and objective categories. There are, however, many exceptions, so that it

can only be said that some nouns always are modified by numerals with one suffix and other nouns by numerals with the other suffix. Pronominal enumeration such as "both of us" or "all three of them" is done by means of both prefixation and suffixation, while adverbial enumeration is accomplished by means of suffixation alone.

14.2. The enumerative suffix *-ten* is attached to all numeral stems except *tum* *one* for counting when no noun is modified, and for enumerating objects, usually nontemporal.

1. <i>tum</i>	4. <i>maktastén</i>
2. <i>wastén</i>	5. <i>mostén</i>
3. <i>tukutén</i>	6. <i>tuhtutén</i>

#### Examples of use:

*wastén č'mpa* *two dogs*  
*hè'm tukutén* *the three*  
*maktastén p'á'siñ* *four men*  
*mostè'n ámíu* *five years* (*ámíu* *year*)  
*wastén háma* *two suns* (cf. 14.3)

14.3. The suffix *-na* is used in enumeration of nouns, usually but not always periods of time.

*wasná háma* *two days*  
*maktasná šemána* *four weeks* (Sp. "semana")  
*tukuná túmín* *three coins*  
*mosná ?anána* *five sides*  
*wahná h.áyi* *many words* (*wah-* < *wař-* [ř > h 4.8]  
 comb. stem. of *wáři* *many*)  
*wasná kukéha* *two (o'clock in the) morning*

14.4. Pronominal enumeration is accomplished by means of both prefixation and suffixation, and may be translated "all (number) of us, you, them." All pronominal numerals are given one of the possessive pronominal prefixes followed by the prefix *ku-* (*k-* or *kuk-* before the stem "two"). Only the number "two" is given a special suffix, *-tak*. (The suffix *-tak* also is given to the stem *was-* in its use as a tensor followed by the noun ind. suf. *-ma* < *wastákma* *day after tomorrow*, cf. *maták tomorrow*.) The other numeral stems are unsuffixed (save for the plural suffix) except "five" which retains the enumerative suffix *-ten*.<sup>7</sup> First person pronominal numerals, like verbs, may be either inclusive or exclusive. The inclusive numerals (including the person or persons addressed) are given the plural possessive pronominal prefix *tan-*, while the exclusive numerals (excluding the person or persons addressed) are given the

<sup>7</sup> The extreme irregularity of this inflectional system in contrast with the great regularity which characterizes the rest of Popoluea morphology would lead one to believe that it has broken down through the infiltration of Spanish numerals.

possessive pronominal prefix *?an-* and the plural suffix *-tam*. The second person numerals are given the possessive pronominal prefix *?iñ-*, and may or may not be given the plural suffix *-tam*. The third person numerals are given the possessive pronominal prefix *?i-*, and may or may not be given the plural suffix *-yah*. The enumerative *túmpay* "all" lacks the prefix *ku-*.

*tankwástak* *both of us* (incl.) (*was-* stem of "two" + *-tak*)  
*?anikumáktastam* *all four of us* (excl.) (*máktas-* stem of "four")  
*tanikumostén* *all five of us* (incl.) (*mos-* stem of "five")  
*?iñkwástak* *both of you*  
*?iñtúmpaytam* *all of you*  
*?ikumáktasyah* *all four of them*  
*?aktánpa ?ikukwástak he'm p'á'siñ* *both of the men fall*  
 (*?aktánpa he (they) fall(s)*, *hè'm p'á'siñ the man (men)*)

14.5. Adverbial enumeratives are given the suffix *-kay*.

*wáskay* *twice*  
*máktaskay* *four times*  
*wáikay* *many times* (*wáři* *many*)

## 15. ENCLITICS

15.1. There are a few one-syllable enclitics which may be attached to a formally complete word of any class to qualify or intensify the significance of the word or phrase. In the case of a few attributives the stem is never used without the enclitic. Substantives with a combining form use the combining form when an enclitic is attached.

15.2. The temporal or limiting enclitics. The morphemes *-?am*, *-m*, *-um*, *-om*, *-wum*, and *-wom* are most conveniently described as variants of the same enclitic, temporal when attached to verbs or verbalized nouns, and temporal or limiting when attached to nouns, pronouns, and attributives (no form has been noted attached to enumeratives). Although the only constant feature of this enclitic is the final *-m*, the meaning, though somewhat variable in English translation, is constant, and may usually be translated by the Spanish "ya," which in English must be interpreted variously according to the context as "just," "already," "truly," "only," or "now."

The variant *-?am* is used after nouns, pronouns, stative verbs, verbs with the nonthematic incomplete suffix *-p*, verbs with the nonthematic



subjunctive suffix *-ʔiñ*, verbs with the agentive suffix *-wʔap*, and most attributives.

ʔáčam *just I* (or, "I am the one who") (ʔáč I)  
 sʔap nùma wʔam *now certainly it is truly good* (wʔam good st. verb)  
 sʔabam *right now* (sʔap now)  
 hésagam *just then* (hésak then)  
 ʔiga ʔídiʔnam *that he should then be there* (ʔiga that + \*ʔiñ be [there] + -ʔiñ subj. suf. + -ʔam)  
 hèʔ iḡhám ʔiga kùʔn iháʔyagam ʔikyúʔmiñ *he believed that just with his little brother-in-law he should boil it* (ʔiháʔyák his little brother-in-law)  
 ʔawaʔáʔbam *I am already able* (wʔáʔp I am able)  
 kuʔtáʔbam *it is just eaten* (kuʔtáʔp it is eaten)

The variant *-m* is used after verbs with the imperative suffix *-a* and words ending in *a*, of which those ending in the incomplete verbal suffix *-pa* are the most frequent. It is also used after the negative *ʔódoy* which loses the final *y*, *ʔódom* *not anymore*, and sometimes after the definite article *heʔ*.

ʔúkam *just drink!* (ʔúka drink!)  
 nʔkpa nʔm *he is just going to the water* (nʔkpa he is going)  
 ʔamónpa *I will just sleep* (ʔamónpa I sleep, I will sleep)  
 đam *already not* (đa not)  
 hèʔm piy *just the chicken* (heʔ def. art.)

The variant *-um* is used after a few attributives.

hémum *just there* (hem there)  
 yʔmum *just here* (yʔm here)

The variant *-om* is used after the linear nonthematic verbal suffixes *-wam* and *-pam* (8.9) and the perfective suffix *-neʔ* (8.3).

ʔiñakwámom *just as he was going* (\*nʔak go)  
 ʔiñakpámom *just as he is going*  
 ʔanaknéʔom *I had just gone*  
 miñomnéʔom *you had just slept* (\*moñ sleep)

The variants *-wom* and *-wum* vary freely after *a* (as the passive suffix *-ta* and the verbalizing suffix *-ʔa*).

nanaktáʔwom *he was just taken* (\*nanák take)  
 ʔačiʔíʔwum *I was just given* (\*eiʔ give)  
 wʔáʔwum or wʔáʔwom *he was then able* (\*wʔáʔ be able)

After any verbal form other than those stated above, *-um*, *-om*, *-wum*, or *-wom* may be used interchangeably, although *-wum* and *-wom* are most frequently found following nasals, and *-um* is perhaps the form most frequently used.

ʔanákum *I just went*  
 móḡom *he just slept*

tapastáʔwom *we* (gen. incl.) *just arrived* (-taʔm pl. suf.)  
 ʔanakkaʔtáʔpum *I just meant to kill him* (-taʔ purp. suf.)

15.3. The temporal enclitic *-nam* may be translated as "yet" or "still" (Sp. "todavía").

đanam *not yet* (đa not)  
 ʔiñam *who still* (ʔi who)  
 ʔiganam *while* (ʔiga that)  
 ʔanaḡhamnénéʔnam *I had still believed it* (ʔanaḡhamnénéʔ I had believed it)  
 éʔyñéʔnaʔm aḡko-báktak *my hat had still remained* (éʔyñéʔ it had remained)  
 hèʔnaʔm ammaʔypa *still it I will sell* (hèʔ it) (more freely, *this yet remains for me to sell*)

15.4. The limiting enclitic *-ñim* usually may be translated by "only," "then," or "just."

ʔáčñim *only I* (ʔáč I)  
 hèʔñim háma *just this day* (heʔ the, háma sun)  
 ʔipákñim éʔy *only his bones remained* (ʔipák his bones)  
 ʔóyñim *then he went* (\*ʔoy defective verb "go" used only in compl. asp.)

15.5. The particularizing enclitic *-pak* most commonly is attached to attributive forms, and less frequently to nominal, pronominal, or verbal forms. A special usage is that of the formation of a temporalized noun by the suffixation of the enclitic *-pak* to a nominalized verb (with the suffix *-i*, see 10.9). *-pak* may be translated as "that which (is)," "he who (is)," or "having the quality of."

wʔbak páʔšim *a good man* (wʔ good)  
 mʔhpak éʔmpa *a large dog* (mʔh large)  
 minatitlápak *one from Minatitlan*  
 hèʔm đapak iḡóʔḡ *he who didn't answer* (heʔm he + đa neg. + pak + iḡóʔḡ he answered)  
 ʔimpátnèʔ wʔbak *you have found that which is good* (ʔimpatnéʔ you have found)  
 ʔimatopákpak *he who listened* (ʔimatopák he listened)  
 ʔammónipak hésʔam hèʔm ʔuʔyáʔ *after I went to sleep thus it became night* (ʔan- 1st. per. pos. p. pref. + \*moñ sleep + -i nom. suf. + -pak, modif. hésʔam it is thus)  
 ʔišéʔipagaʔm ipátpa hèʔm páʔšim *just after his return he met the man* (ʔi- 3d. per. pos. p. pref. + \*seʔ return + -i + -pak + -ʔam enc. "just," modif. ʔipátpa he met him)

15.6. There are two quotative enclitics which may be attached after any word in a quoted phrase. The first person quotative is *-wey* *I said, I say*, and the third person quotative is *-ʔun* *he said, he says, it was said, it is said*.

đáʔun *he says "no"* (đa neg. at.)  
 miñákpaʔun *he says "are you going?"* (miñákpa you are going)

dáwey *I said "no"*

?í?u?n iññáyi *he says "what is your name?"* (lit., "who," he says, "is your name?") (?i *who* + -?un + ?iññáyi *your name* [is])

?í?úkpa?un ná? *it is said that he drinks water* (?í?úkpa *he drinks*, ná? *water*)

15.7. The enclitic -?am often is attached after the enclitic -pak, e. g., máhpagam *he is already big*. The enclitic -ñim occasionally follows -pak, e. g., ?éybakñim *just again*. These are the only constructions in which two enclitics have been observed together.

## SYNTAX

### 16. GENERAL REMARKS

16.1. Popoluca word classes, which have been discussed from the standpoint of the morphological processes used in their formation, serve syntactically according to their various functions. Verbal forms function as predicative words in simple sentences, or in main modifying or subordinate clauses. Independent pronouns and nouns serve as independent subjects and objects. Certain nouns also may serve as verb modifiers. Attributives serve as noun or verb modifiers or phrase or word connectives. Enumeratives serve as noun or verb modifiers or as independent subjects or objects.

These syntactic elements are combined into clauses of various types. Main clauses are formed as simple sentences except in constructions with contemporaneous and gerundial clauses where the structure of the main clause verb undergoes certain changes. Modifying clauses are juxtaposed or connected with a main clause by a conjunction or a relative attributive. Subordinate clauses may be agentive, contemporaneous, or gerundial. Word order is not rigid, but certain rules may be laid down within the bounds of which syntactic elements may be combined into phrases.

### 17. THE SIMPLE SENTENCE

17.1. The simple sentence must contain one, and not more than one, predicative verbal form, which may be either a verb theme with non-thematic affixes, or a stative verb. Other words may be incorporated into the simple sentence in their functions as subjects, objects, or modifiers of the verb, subject, or object.

?apá?iñ *I am a man* (the noun pá?iñ verbalized)  
miñakné?om *you have just gone* (\*nak go)  
ná?mayiá?p *it is said* (\*ná?má?y say to)  
ká?neyáhum *they have just died* (\*ka? die)  
wiñak hē?m kó?ya ?ikú?tpa šánña *a long time ago the rabbit was eating watermelons* (wiñak *a long time ago*)

+ he?m *the* + kó?ya *rabbit* + ?ikú?tpa *he eats* + šánña *watermelon* [Sp. "sandía"])

hēmum pútpa wastè?n iñčēmpa *right there your two dogs will come out* (hēmum *right there* + ?ipútpa *he [they] will come out* + wastēn *two* + ?iñčēmpa *your dog[s]*)

sá?ap impáka yá?p pá?šīñ *now you will marry this man* (sá?ap *now* + ?impáka *you will marry him* + yá?p *this* + pá?šīñ *man*)

?ac yá?m amóhpa *I am sleeping here* (?ac *I* + yá?m *here* + ?amóhpa *I sleep*)

hēsak nákum ihá?tuñká?m *then he just went to his father* (hēsak *then* + nákum *he just went* + ?ihá?tuñká?m *to his father*)

wiñak hē?am é?šīam ininák iēññhá?tuñ *a long time ago only the children went with their stepfather* (wiñak *a long time ago* + hē?am *only the* + é?šīam *children* + ?ininák *he [they] went with* + ?iēññhá?tuñ *his [their] stepfather*)

?ókma nakýáhpa hēmak hōhma hūmñi *then they go there deep in the forest* (?ókma *then* + nakýáhpa *they go* + hēmak *there* + hōhma *deep* + hūmñi *forest*)

me?táwom tūm yó?ya ?i tūm šīs i tūm čó?mo *a pig and a bull and an old woman were then searched for* (me?táwom *were then searched for* + tūm *a* + yó?ya *pig* + ?i *and* + tūm *šīs a bull* + ?i *and* + tūm *čó?mo an old woman*)

17.2. Interrogative sentences generally are not distinguished syntactically from other simple sentences. A slightly rising intonation on the final word may be the only indicator of a question. Some questions are, however, preceded by an attributive, ke, which probably is derived from the Spanish "qué."

kē pó?pa sáwa *is it windy?* (lit. "does the wind run?")  
kē móhpa *is he asleep?*

### 18. MODIFYING CLAUSES

18.1. Clauses modifying verbs are of three types: those which are juxtaposed preceding or following a main clause; those which precede or follow a main clause and are introduced by a conjunction; and those which precede or follow a main clause and are introduced by a relative pronoun or attributive. A relative clause may modify a

noun which it follows. In all types of modifying clause construction the main clause is formed like a simple sentence.

### JUXTAPOSED CLAUSES

18.2. The perceptive clause. In this type of construction the action of the subordinate verb takes place simultaneously with and is seen or heard by the subject of the main verb. The subordinate verb is best translated by the English present participle. The two clauses may be merely juxtaposed rather than connected by an attributive, and both are formed like simple sentences.

?i?i?špa mĩnum řábař káŋ *he sees a red tiger coming*  
(?i?i?špa *he sees* + mĩnum *it just comes* + řábař *red* + káŋ *tiger*)

?i?i?špa sá?ap řšć?t sámñi *he now sees bananas frying*  
(?i?i?špa + sá?ap *now* + řšć?t *it fries* + sámñi *banana*)

?imatónpa řĩpa *he hears it making a noise* (?imatónpa *he hears* + řĩpa *it makes a noise*)

?imatónpa ?a?řá?yapa ták *he hears a house (door) open*  
(?imatónpa + ?a?řá?yapa *it opens* + ták *house*)

18.3. The juxtaposed discourse clause. Clauses of direct discourse, and occasionally of indirect discourse, are preceded in the main clause by some form of the verbs \*NAM *say* or \*NA?MÁ?Y *say to*, and may be juxtaposed following the main clause. Both clauses are formed like simple sentences.

námpa hě?m pá?šĩn pòs ini?ř tũm řúkĩĩ *the man says, "well, she has a birthmark"* (námpa *he says* + hě?m pá?šĩn *the man* + pòs *well* [Sp. "pues"] + ?ini?ř *she has* + tũm řúkĩĩ *a birthmark*)

námpa hũ?đ aknúknetá? hũkta *he says, "where has fire been gathered?"* (námpa *he says* + hũ?đ *where* + ?aknúknetá? *it has been gathered* + hũkta *fire*)

18.4. The juxtaposed stative verb clause. Stative verb clauses may be juxtaposed preceding or following a main clause.

ũna ves mĩmahtá?mam yò?maytá?wom *once you are big you will then be married* (mĩmahtá?mam *you are big* st. verb, yò?maytá?wom *you will then be married* [lit. "you were then wived"])

đá wá? ?anřák *it is not good to take it* (lit. "it is not good I took it") (wá? st. verb *it is good*, ?anřák *I took it*)

młě ñnam mĩpákpa řám mĩkuřĩñ *you, who still will marry you, you (who) are so lazy?* (mĩpákpa *he will marry you*, mĩkuřĩñ *you are lazy* st. verb)

18.5. The juxtaposed temporal clause. A clause giving a time reference to a main clause may be juxtaposed preceding it.

núkpa kũgapáma wĩ?kpa *at noon they will eat* (lit. "noon arrives, they eat") (núkpa *it arrives* verb of subordinate clause modif. wĩ?kpa *they will eat*)

### CLAUSES INTRODUCED BY A CONJUNCTION

18.6. Clauses introduced by a conjunction may either precede or follow a main clause. Both clauses are formed like simple sentences. The conjunction ?iga *that, as*, is often used to introduce indirect discourse clauses (occasionally direct discourse) as well as subjunctive and other clauses.

?łě a?řĩu?m iga ?aku?ttá?p *I am just here that I be eaten*  
(?łě *I* + ?a?řĩu?m *I am just here* + ?iga *that* + ?aku?ttá?p *I am eaten*)

si?iga mĩčam inikká? mĩŋko?má?yapa *if you (are the one who) killed him, she will marry you* (si?iga *if* (Sp. "si") + mĩčam *you (are the one who)* + ?inikká? *you killed him* + mĩŋko?má?yapa *she will marry you*)

?akna?stá? ?a cabáyo porkeřĩ?iga mağó?y *he was passed on a horse* (fig. "torn apart by horses") *because he deceived* (?akna?stá? *he was passed* + ?a cabáyo *on a horse* [Sp.] + porkeřĩ?iga *because* (Sp. "porque") + mağó?y *he deceived*)

simada ?anéřmpa đa ?apá?spa *if (it were) not for my dogs I would not revive (myself)* (simadá *if not for* [Sp. "si"] + ?anéřmpa *my dog(s)* + đa *neg.* + ?apá?spa *I revive* [myself])

kun hě?a?m ihũyapa pára?iga ?ikú?tpa *with it he buys something so that he eats it* (kun *with* (Sp. "con") + hě?a?m *it* + ihũyapa *he buys it* + pára?iga *so that* (Sp. "para") + ?ikú?tpa *he eats it*)

mě?iga ?iřwł?ařhám ?łčam mampákpa *if you like I will marry you* (mě?iga *if* + ?iřwł?ařhám *you like* + ?łčam *I [am the one who]* + mampákpa *I will marry you*)

námpa ?ařhagó?yi ?iga tammářpa pè?m pá?šĩn *the authority says that "we will seize that man"* (námpa *he says* + ?ařhagó?yi *the authority* ["public official"] + ?iga *that* + tammářpa *we* [lim. incl.] *will seize* + pè?m *that* + pá?šĩn *man*)

?anámpa ?iga ?anáł *I said that I went* (?anámpa *I said* + ?iga + ?anáł *I went*)

námpa ?iga đa nakné? *he says that he has not gone* (námpa *he says* + ?iga + đa *neg.* + nakné? *he has gone*)

?akpútpa ?iga nágiñ *she made him leave that he might go* (?akpútpa *she made him leave* + ?iga *that* + nágiñ *he might go*)

wĩ?ktá?mum wának mĩpá?tá?miñ *eat, children, that you may get fat!* (wĩ?ktá?mum *eat!* [pl. imp.] + wának *child* + mĩpá?tá?miñ *that you* [pl.] *may get fat*)

hě? iřhá?m iga ?ikyú?miñ *he believed that he should boil it* (hě? *he* + ?iřhá?m *he believed* + ?iga + ?ikyú?miñ *he should boil it*)

### RELATIVE CLAUSES

18.7. Relative attributives and pronouns may introduce modifying clauses which are otherwise

formed like simple sentences. The relative clause generally but not always follows the main clause. A relative clause modifying a noun directly follows the noun.

?i dūŋ hùʔĩ ká'npa sámni *who knows where it smells of bananas* (?i dūŋ *who knows* + huʔĩ *where* + ká'npa *it smells* + sámni *banana*)

ḍa ?aʔniʔspákpa hùʔé hēsák yú'mpa *I don't know how (it is) when it boils* (ḍa ?aʔniʔspákpa *I don't know* + huʔé *how* + hēsák *when* + yú'mpa *it boils*)

?aʔná'pa ḍa ?iwλʔaŋháʔm i ?amλgoʔáʔypa *my mother doesn't like who (ever) deceives me* (?aʔná'pa *my mother* + ḍa ?iwλʔaŋháʔm *she doesn't like him* + ?i *who* + ?amλgoʔáʔypa *he deceives me*)

?aŋkupák húbam miē annaʔmáʔy *I believed that which you said to me* (?aŋkupák *I believed* + húbam [*hup < which* + -ʔam enc. "just"] + miē annaʔmáʔy *you said to me*)

?aʔniʔspákpa ĩ ?iniʔíí *I know what you have* (?aʔniʔspákpa *I know* + ĩ *what* + ?iniʔíí *you have*)  
miē miñákpa ka'póm ĩma tanakkúpa ?á'ni *you will go to (get) firewood with which we will cook tortillas* (ĩma *with which* intro. clause modif. ká'pi *firewood* [ká'póm *into the firewood* < ká'p- comb. form of ká'pi + -hom loc. suf.]

hē'am iwλʔagáʔypa ?icéʔs hùʔĩ móŋpa *she fixes his bed where he will sleep* (huʔĩ *where* intro. clause modif. ?icéʔs *his bed*)

## 19. SUBORDINATE CLAUSES

19.1. There are three principal types of subordinate clauses: agentive, contemporaneous, and gerundial. The main clause in an agentive clause construction is formed like a simple sentence, but the verb of the main clause in certain contemporaneous and gerundial constructions must undergo morphological modifications in structure.

### AGENTIVE CLAUSES

19.2. The verb of the agentive clauses is formed with the agentive suffixes -páʔap (incompletive) and -wáʔap (completive), and the transitive or intransitive pronominal prefixes in accordance with the inherent transitivity or intransitivity of the verb theme. Both main and agentive clauses are formed like simple sentences and either may precede the other. An agentive clause subordinate to a noun must follow the noun.

ná'spa ?imaʔypáʔap paléna *one who sells brown sugar passes (by)* (ná'spa *he passes* + ?imaʔypáʔap *one who sells* + paléna *brown sugar* [Sp. "panela"])

ḍa ?iʔiʔspák si hē'am pá'šiiñ inλʔmayñewáʔap *she doesn't know if it is the man who has spoken to her* (ḍa ?iʔiʔspák *she doesn't know* + si *if* [Sp. "si"] +

hē'am pá'šiiñ *the man* + ?iñλʔmayñewáʔap *he who has spoken to her*)

hēʔm pá'šiiñ hēʔm iŋéʔwáʔap mōʔŋaŋhakyáŋpa *the men, those who answered, remained asleep* (hēʔm pá'šiiñ *the man* [men] + hēʔm *he* [they] + ?iŋéʔwáʔap *he* [they] *who answered* + mōʔŋaŋhakyáŋpa *they remained asleep*)

hēmuʔm iniʔíí hēʔm pák ikkaʔwáʔap *there he had the bone which had killed him* (hēmuʔm *there* + ?iniʔíí *he had* + hēʔm pák *the bone* + ?ikkaʔwáʔap *that which killed him*)

### CONTEMPORANEOUS CLAUSES

19.3. There are two types of contemporaneous sentence constructions. In the first the action of the subordinate verb is linear, and that of the main verb punctual. In this case the subordinate verb theme is given special suffixes. In the second type the action of both subordinate and main verbs is linear, and the two clauses are joined by a conjunction. In both types the pronominal prefixes undergo changes.

19.4. Linear-punctual contemporaneous clauses. The action of the subordinate verb is linear while that expressed by the main verb is punctual. The subordinate verb theme is given the suffix -wam if the action is completive in aspect, and -pam if the action is incompletive (8.9). The transitive pronominal prefixes are used with the subordinate verb theme regardless of the normal transitivity or intransitivity of that verb. When the conjunction ma (mo, mu, mi) (13.10) *since, when* is used to introduce the main clause, the transitive pronominal prefixes are also always attached to the main verb theme.

?aŋwiʔkwám núkpa tùm pá'šiiñ *when I had been eating a man arrived* (?an- 1st. per. sub. 3d. per. obj. t. p. pref. + \*wiʔk *eat* [i. theme] + -wam + núkpa *he arrives* + tùm pá'šiiñ *a man*)

?iʔñaʔmpáʔm iʔniʔšpa tùm pá'šiiñ *as you were looking you saw a man* (?iñ- 2d. per. sub. 3d. per. obj. t. p. pref. + \*ʔaʔm *look* [t. theme] + -pam + ?iʔniʔšpa *you saw* + tùm pá'šiiñ)

?içhoʔywámom tuh hēsák anúk *it was already raining when I arrived* (?i- 3d. per. sub. and obj. t. p. pref. + \*çihóʔy *keep hitting* [i. theme] + -wám + -om enc. "already" + tuh *rain* + hēsák *when* + ?anúk *I arrived*)

?içhoʔypám tuh mu ?annúk *it was raining when I arrived* (?an- 1st. per. sub. 3d. per. obj. t. p. pref. + \*nuk)

?ançukumwámom ?aʔniʔšpa tùm éi'mpa *just as I got up I saw a dog* (?an- + \*çukúm *arise* [i. theme] + -wam + -om + ?aʔniʔšpa *I saw* + tùm éi'mpa *a dog*)

19.5. Linear-linear contemporaneous clauses. The action of both subordinate and main verbs is durative rather than punctual. The conjunction *ma* (*mo*, *mu*, *mi*) usually is used to introduce the main clause, and the pronominal prefix of the main verb must be transitive.

ḍa waʔá· mo ʔikód iñáka *he could not put on his skin*  
(ḍa waʔá· *he could not* + *mo* + ʔi- 3d. per. sub. and  
obj. t. p. pref. + \**kot* *put on* [t. theme] + ʔiñáka  
*his skin*)

šíkpa mi ʔiñák *he laughed as he went* (šíkpa *he laughed*  
+ *mi* + ʔi- + \**nak* *go* [i. theme])

ʔaṇwécha ʔiñák *shouting he went* (ʔaṇwécha *he shouts* +  
ʔiñák *he went*)

ma ʔaṇwí káya ʔaʔníš ukkúʔwih *as I walked in the*  
*street I saw drinkers* (*ma* + ʔan- 1st. per. sub. 3d.  
per. obj. t. p. pref. + \**wí* *walk* [i. theme] + # *compl.*  
suf. + *káya* *street* [Sp. "calle"] + ʔaʔníš *I saw* +  
ʔukkúʔwih *drinkers*)

hèʔm iwáʔaṇháʔm ikék *he likes to fly* (*heʔm* *he* +  
ʔiwáʔaṇháʔm *he likes it* + *i-* + \**kek* *fly* [i. theme])

pèʔm hón kékpa ʔiš.ʔ *that bird flies when it goes along*  
(pèʔm *hón that bird* + *kékpa* *it flies* + ʔi- + \**sáʔ*  
*go along* [i. theme])

hèʔ ḍa waʔá· ʔimón ʔúʔmak *he couldn't sleep last night*  
(*heʔ* *he* + *ḍa waʔá·* *was not able* + ʔi + \**mon*  
*sleep* [i. theme] + ʔúʔmak *last night*)

ĩʔiga ḍa waʔá·p imíñ *why can't he come?* (ĩʔiga *why* +  
ḍa waʔá·p *he is not able* + ʔi- + \**miñ* *come* [i.  
theme])

ma ʔanséʔt sámñi tóypa ʔíḍak aṇkó·bak *as I fried*  
*bananas my head was aching* (*ma* + ʔan- + \**seʔt*  
*fry* [t. theme] + *sámñi* *banana* + *tóypa* ʔíḍak *it*  
*was aching* + ʔaṇkó·bak *my head*)

#### GERUNDIAL CLAUSES

19.6. Gerundial clauses are resultative and conditioned. The main and subordinate verbs have the same subject. The chief characteristic of gerundial constructions is that the pronominal prefixes of both main and subordinate verbs undergo certain changes such as loss of pronominal prefixes or shifts from the intransitive to the transitive forms, and that the gerundial verb has one of the gerundial suffixes (8.2).

19.7. Resultative gerundials. The action of the resultative gerundial is the result or purpose of the main verb. The construction differs for transitive and intransitive gerundial verbs. The main verb used in these constructions is always intransitive, and usually expresses such a concept as going, coming, beginning, or finishing. The first person imperative construction is of the same type, although the main verb is defective in that it is only found in this one type of construction. This imperative

verb is *te*. In this imperative construction the first person inclusive pronominal prefixes (7.2, 7.5, 8.4) are always attached before the stem of the gerundial verb.

19.8. Intransitive resultative gerundials. The main verb takes the regular aspect or imperative suffixes, and no pronominal prefix. The gerundial verb retains the regular intransitive pronominal prefixes and is given the gerundial suffix *-i*. The plural verbal suffixes may also be attached, in final position, to the gerundial verb.

nákpá miʔíñi *you go (somewhere) to live* (\**nak* *go* +  
*-pa* *inc. suf.* + *mi-* 2d. per. i. p. pref. + \**íñ* *live* +  
*-i*)

mòh èçiyáh *they began dancing* (\**moh* *begin* + \**eç*  
*dance* + *-i* + *-yah* *pl. suf.*)

míñ tawíʔki *we (incl.) came to eat* (\**miñ* *come* + *ta-*  
1st. per. lim. incl. pl. i. p. pref. + \**wíʔk* *eat* + *-i*)

tè· dawíʔki *let's eat*

tè· damóñi *let's sleep* (*mon* *sleep*)

mòh aṇwéhi *he began to shout* (\**aṇwé* *shout*)

náglá mikó·ñi *go and sit down!* (*nak* *go* + *-A* *imp. suf.* +  
*mi-* 2d. per. i. p. pref. + \**ko·ñ* *sit down* + *-i*)

nákpá ʔayóʔyíñam *we (excl.) are going to jump* (*nákpá*  
+ ʔa- 1st. per. i. p. pref. + \**yoʔy* *jump* + *-i* + *-tam*  
*pl. suf.*)

19.9. Transitive resultative gerundials. The main verb stem takes the regular aspect or imperative suffixes, but no pronominal prefixes. The gerundial verb stem takes the transitive pronominal prefixes, the zero gerundial suffix, and the plural suffixes, except that in the third person the pronominal prefix ʔi- may be omitted and the gerundial suffix *-i* attached to the subordinate verb theme. The plural suffixes are always in final position. Passive gerundials may have either the completive or the incompletive suffixes, and are given, as are the active verb stems, the regular transitive pronominal prefixes. Transitive gerundials with imperative inflection omit the pronominal prefixes for both main verb and gerundial.

#### Active gerundials:

mòh ihá·s *he began to think* (\**moh* *begin* + # *compl.*  
*suf.* + ʔi- 3d. per. sub. and obj. t. p. pref. + \**há·s*  
*think* + # *ger. suf.*)

mòh iwát or mòh wáñi *he began to do it* (\**wat* *do*)

yáh itopyáh *they finished taking it out* (\**yah* *finish* +  
# *compl. suf.* + ʔi- + \* *top* *take out* + # *ger. suf.* +  
*-yah* *pl. suf.*)

míñ manakwák *I came to ask you* (\**miñ* *come* + #  
*compl. suf.* + *man-* 1st. per. sub. 2d. per. obj. t. p.  
pref. + \**akwák* *ask* + # *ger. suf.*)

mīn ta'ná'm *we came to look* (\*mīn + # compl. suf. + tan- 1st. per. sub. 3d. per. obj. lim. incl. pl. t. p. pref. + \*ʔa'm look + # ger. suf.)  
 tē· da'ná'm *let's look*  
 tē· damméʔ *let's search* (\*meʔ search)

#### Passive gerundials:

mōh imōʔgáyťá·p *he began to be teased* (\*moh + # compl. suf. + ʔi- + \*moʔgáy·y tease + -ta·p inc. pas.)  
 mōh imōʔgáyťá· *he began to be teased*. This form has the completive passive suffix -ta·. There is no good direct English translation to express the difference between the two concepts.  
 mīhpa ʔiʔaʔmtá· *he was come to see*. (In English this is best translated as "he was visited" or "they came to see him".) (\*mīh come + -pa inc. suf. + ʔi- + ʔaʔmtá· he was seen)

#### Imperative gerundials:

nága meʔťtáʔma *go and search for it!* (nága go! + \*meʔť search + -taʔm pl. suf. + -a imp. suf.)  
 móha wátá *begin doing it!* (móha begin! + wátá do!)  
 kíʔma nága máʔa *climb up to go and seize it!* (kíʔma climb! + nága go! + máʔa seize!)

19.10. Conditioned gerundials. The action of the gerundial verb is conditioned by the action of the main verb, which expresses ideas such as "being able," "keeping on," "liking," "knowing," and so forth. The main verb stem takes the regular aspect suffixes but not the pronominal prefixes. The gerundial verb stem takes the transitive pronominal prefixes, whether it is regularly transitive or intransitive, and the zero gerundial suffix. This construction has not been observed in the passive voice.

ʔáē sàʔba ʔaʔwíʔk *I am (continuing) eating* (ʔáē I + \*saʔ keep on + -pa inc. suf. + ʔan- 1st. per. sub. 3d. per. obj. t. p. pref. + \*wiʔk eat + # ger. suf.)  
 miē sàʔba ʔiñhʔs *you are burning* (lit. "keep on burning") (miē you + sàʔba + ʔiñ- 2nd. per. sub. 3d. per. obj. t. p. pref. + \*hips burn # ger. suf.)  
 huťá·p taʔwíʔk *how are we going to eat?* (\*huťá· how [verb] + -p inc. suf. + tan- 1st. per. sub. 3d. per. obj. lim. incl. pl. t. p. pref. + \*wiʔk + # ger. suf.)  
 dá waʔá·p taʔníʔ *we cannot live* (dá neg. + \*waʔá· be able + -p inc. suf. + tan- + \*ʔi live + # ger. suf.)  
 dá waʔá·p ampák *I can not marry her* (\*pak marry)

19.11. The conditioned gerundial following a stative verb. Only one case has been observed of a gerundial following a stative verb. The main (stative) verb keeps the regular intransitive pronominal prefixes. The gerundial verb is unprefixes, and uses the gerundial suffix -i.

miē mikáʔnpu makkíʔmi *you are an egg taken out with a net* (mikáʔnpu you are an egg st. verb, makkíʔmi taken out with a net)

## 20. CLAUSE COMBINATIONS

20.1. As has been seen, the complex sentence usually is rather short, consisting of a main clause and a modifying or a subordinate clause. However, a modifying or subordinate clause may in turn be modified by another modifying or subordinate clause, and this in turn modified by another in an indefinite sequence.

20.2. Main clause + gerundial clause + relative clause:

hèʔm hayéʔ·ši nàkpa ʔiméʔť hùʔť seʔťtá·p *the boy went to search where it was being fried* (hèʔm hayéʔ·ši the boy + nàkpa ʔiméʔť went to search + huʔť where + seʔťtá·p it was being fried)

20.3. Main clause + relative clause (modif. noun) + gerundial clause:

ʔikupadáʔypa tùm ták hùʔť sàʔba ʔiwiʔkkuywát tùm éó·mo *he found a house where an old woman was (kept on) preparing dinner* (ʔikupadáʔypa he found + tùm ták a house + huʔť + sàʔba kept on, continued + ʔiwiʔkkuywát making dinner + tùm éó·mo an old woman)

20.4. Relative clause + gerundial clause + main clause:

hèsak mīhpa ʔiʔaʔmyahtá· ʔiñkèhayyáhpá ʔùg iťúʔ *when she came to look at them they showed her a rat's tail* (hèsak when + mīhpa she came + ʔiʔaʔmyahtá· to look at them (pas. const.) + ʔiñkèhayyáhpá they showed her + ʔùg iťúʔ rat's tail)

20.5. Main imperative clause + gerundial imperative clause + relative clause + connective clause + connective clause:

nága meʔťtáʔma hèʔm pá·šiñ hùʔd iť sīʔiga nùma hèʔam ʔikupuhnéʔ ʔanyo·mmának *go and search for the man where he is if it is certain that he (is the one who) has liberated my daughter* (nága go + meʔťtáʔma search [imp. pl.] + hèʔm pá·šiñ the man + huʔť where + ʔiť he is + sīʔiga if + nùma certain [st. verb] + hēʔam he is the one + ʔikupuhnéʔ he has liberated + ʔanyo·mmának my daughter)

20.6. Main clause + connective clause + connective clause + relative clause (modif. noun) + gerundial clause + connective clause:

hèʔm iyó·mo éáʔm iťóypa porke hèʔ tùm iśwérte ʔipát hèʔm lagúna hùʔť náktáp imáʔ táʔpa ʔi hēmuʔm ikuʔiśáʔy hèʔm yó·mo *he loved his wife very much because she was his good luck (which) he found in the lake where he went meaning to catch fish and there he met the woman* (hèʔm iyó·mo the his wife + éam much + ʔiťóypa he loved her + porke because (Sp. "porque") + hèʔ tùm iśwérte she was his good luck [Sp. "suerte"] [st. verb] + ʔipát he found + hèʔm lagúna the lake [Sp.] + huʔť where + náktáp he went

meaning + ?imàg tál'pà to catch fish + ?i hému  
and there [?i Sp. "y"] + ?iku?i'sá'y he met + hè'm  
yó-mo the woman

?i'f's tukutén he saw three (tukutén three)  
miè antóppa ?aḡkutúkutam you will take all three of us  
out (?aḡkutúkutam all three of us)

## 21. THE SYNTACTIC ELEMENTS OF THE CLAUSE

21.1. The predicative word. The predicative word may be an active, passive, or stative verb form. Stative verbs may be verbalized nouns, pronouns, or attributives (7.4).

?iñá'má'yypa he says to him (\*nà'má'y say to)  
nà'mayítá'p iyó-mo it is said to his wife  
hè? kó'ya it is a rabbit (kó'ya rabbit)  
?a'á'c it is I (?á'c I)  
mimáhpak you are big (máhp big)

21.2. The independent subject. Subject always is expressed by the subjective pronominal element of the verb, and in addition it may also be expressed appositionally by a noun, a series of nouns (which may or may not be joined by the conjunction ?i and), a pronoun, an attributive with the enclitic -pak, or a cardinal or pronominal enumerative.

pè'm é'tmpa wókpa that dog barks (é'tmpa dog)  
me?étá'wom tùm yóya ?i tùm šiš i tùm é'ó-mo a pig  
and a bull and an old woman were searched for (yóya  
pig, šiš bull, é'ó-mo old woman)  
?ac amín hù'd í' íñhátu?η íñá'pa I came from where  
your father and mother live (?íñhátu?η your father,  
?íñá'pa your mother)  
pè'm sé'tpa that one returns (pè'm that one)  
?i ?iwátpa who is doing it (?i who)  
hèsagám dápak íñg'ó'η namýáhpá then those who didn't  
answer say . . . (da neg. at. + -pak part. enc. >  
dápak those who didn't)  
hè'm tukuté'n iniká'má'g the three shook hands with  
him (hè'm def. art., tukutén three)  
?aktá'pa ?ikukwástak the two of them fell (?ikukwástak  
the two of them)

21.3. The independent object. Object is always expressed by the objective pronominal element of the verb, but, like the subject, it may also be expressed appositionally by a noun, a series of nouns (which may or may not be joined by the conjunction ?i and), a pronoun, an attributive with the enclitic -pak, or a cardinal or pronominal enumerative.

?i'f'spa ?i'ó'mi he saw his master (?i'ó'mi his master)  
?ančí? tùm máhkuy ?i tùm pók I gave him a pitcher  
and a calabash (máhkuy pitcher, pok calabash)  
?a'ní's pé'm I saw that one (pé'm that one)  
miè impátne? wá'bak you have found that which is good  
(wá' good + -pak part. enc. > wá'bak that which is  
good)

21.4. The predicate modifier. The predicate modifier may be a word, a modifying clause, a subordinate clause, or a series of modifying and/or subordinate clauses. The modifying word may be a noun inflected with one of the case suffixes, a noun with a locative modifier or used with a locative significance, a temporalized noun, an adverbial enumerative, or an attributive of one of the following types: negative, intensifier, locator, tensor, demonstrative adverb, relative, or interrogative adverb, participial adverb, or quantitative.

?òkma póypa hamñóm then he ran into the woods  
(hamñ- comb. form of hámñi woods + -hom loc. suf.)  
kí'mpa takkò'bakyúkma he climbs on the roof  
(takkò'bak roof + yúkma on)  
núk kúkma lámar he arrived in the middle of the ocean  
(kúkma middle)  
?išé'tipak ?ipátpa after his return he met him (?išé'tipak  
after his return temporalized noun modif. ?ipátpa  
he met him)  
hè? pá'siñ wáskay sé't the man turned twice (wáskay  
twice)  
?ódoy póya don't run away! (?ódoy modal neg.)  
fám mišikpa you will laugh much (fám much)  
pè'm hón kékpa yúkma that bird is flying above  
(yúkma above)  
?apá'si'ñ ídak he was a man (?ídak tensor)  
yá'm a'í I am here (yá'm here)  
hù'd í' where is it? (hu't where)  
hú'paya miháya how valiant you are (hú'paya how much)  
šikímu ná'k laughing he went (šikímu laughing)  
?imató'ηpa íñpa he heard it make noise (íñpa it  
makes noise pred. verb of modif. perceptive clause)  
hè'm hayé'á'si nákpa ?imé'g hù't se'ttá'p the boy  
went to search for where it was being fried (?ime'g  
to search for pred. verb of subord. ger. clause, hù't  
se'ttá'p where it was being fried rel. modif. clause)

21.5. The subject or object modifier. The subject or object modifier may be a word or a relative or agentive clause. Modifying words may be of the following types: possessor noun or pronoun modifying a possessed noun, descriptive, locator, tensor (rarely), quantitative, demonstrative adjective, cardinal enumerative.

?iñkèhayáhpá fúg ítú'g they showed her the rat's tail  
(?ítú'g his tail obj. noun modif. by fú'k rat)  
?a'ní'spa miè inčí'mpa I see your dog (mič you modif.  
inčí'mpa your dog)  
?ičagayné'om tùm pák fú'papak she had left a sharp  
bone (fú'pa sharp + -pak part. enc., modif. pak  
bone)

kí?mpa yúkmapak kúy *he climbs the high tree* (yúkma above locator + -pak part. enc. > yúkmapak high modif. kuy tree)

wĩñak pá'si'ñ ñ í yá'm *men of long ago lived here* (wĩñak long ago tensor modif. pá'siñ man, men)

núk hà?yañ é'stám *many children arrived* (há?yañ many quant. modif. é'stám children)

yá'p káwa pópá *this horse is running* (yá'p this dem. adj. modif. káwa horse)

?ana?í wásté'n ammának *I have two children* (wástén two modif. ?ammának my children)

?ikupadá?yapa tùm ták hù?í sù?ba ?iwi?kkuywát tùm éó'mo *he found a house where an old woman was making her dinner* (hù?í where intro. rel. clause modif. ták house)

hèmu?m ini?í hè'm pák ikka?wá?ap *there he had the bone which killed him* (?ikka?wá?ap which killed him ag. clause modif. pák bone)

## 22. USE OF SYNTACTIC ELEMENTS

### VERBS

22.1. The verb. The verb is used as the predicative word of a main, modifying or subordinate clause (see examples sections 17, 18, 19). When a pronoun is separated by modifying elements from the verb of which it is the subject, or follows the verb of which it is the subject or object, it often becomes verbalized. Pronoun verbalization also is often used for added emphasis.

ta?áé dá ?añháyá *we don't make noise* (ta?áé st. verb "we")

mìé a?ni'spákpa ?a?áéčam *you know us* (?a?áéčam st. verb "us")

nákpa ?a?ná?m a?áé *I will go to see* (?a?áé st. verb "I")

### PRONOUNS

22.2. The personal and demonstrative pronouns. Personal and demonstrative pronouns may be used as independent subjects and objects of the predicative verb, as possessor modifiers of a possessed noun, or in apposition to another independent pronoun used as the subject of a verb.

?láé ?añmátá *I will speak* (?láé I sub.)

hè? éi'á *give it to him!* (hè? him obj.)

tóyá ?láé añkó'bak *my head hurts* (?láé I modif. ?añkó'bak my head)

míčam hè'am míprímepá'siñ *just you are the first man* (lit. "just you, just he, you are the first man") (míčam just you pron. in apposition to hè'am just he. míčam governs st. verb. míprímepá'siñ you are the first man)

?áé hè'm añkò'sputápá?ap *I am he who sprouts at the knees* (?áé I in apposition to hè'm he)

22.3. The relative and interrogative pronouns. The relative and interrogative pronouns are used to introduce relative or interrogative clauses.

í! ?iwátá hè'm nú?pu *what is the vulture doing?* (í what)

?añmátá ?i ?iññáyi *tell what your name is!* (lit. "tell who is your name!") (?i who)

### NOUNS

22.4. The noun. A noun in absolute form, or a noun with possessive pronominal prefixes and/or plural suffixes may be used either as the subject or object of a predicative verb. A noun inflected with one of the case suffixes, or a noun used in a locative or temporal sense, functions as a modifier of the predicative verb. A noun also may be used as a form of address in direct discourse.

?i'f'spa éókpa húkta mènesayúkma *he saw a fire shine on a mesa* (húkta fire sub. of verb éókpa it shines, mènesayúkma on a mesa < ménsa mesa + yúkma on locator)

?ikótpa ?iyó?í *she puts on her shirt* (?iyó?í her shirt obj. of ?ikótpa she puts it on)

wĩñak hè'am é'stám ininák ičunhá'tuñ *long ago the children went with their stepfather* (é'stám children sub. noun, ?ičunhá'tuñ their stepfather obj. noun)

da yo'sá'p kùyamhóm *he doesn't work in the ashes* (kùyam ashes + -hom loc. suf.)

nákpa mí?í wáihámñi *you will go to live in the forest* (wáihámñi forest with loc. significance modif. verb)

?ipačnákpa kù?yañkó'bak *he threw it to the top of the tree* (kù?yañkó'bak top of the tree modif. verb)

nukyáhpá našyúkma *they came down on the ground* (našyúkma on the ground comp. of noun and locator)

hè'm éó'mo ?ikukehháma náko'm inñadayá *the old woman then went to notify him at sunrise* (lit. "the old woman at her sunrise then went to notify him") (?ikukehháma her sunrise modif. verb nákom she then went)

í! ?iñwátá ?á'éi *what are you doing, uncle?* (?á'éi uncle)

### ATTRIBUTIVES

22.5. The descriptive attributives. Descriptive attributives may function as noun or verb modifiers. In both syntactic functions they are usually found with the enclitic -pak.

?a?nf's pèkapak ták (also ?a?nf's pèka ták) *I saw an old house* (pèka old modif. ták house)

?ókma máyma?yam nákom kó'ya *then happily the rabbit went* (máymay happily modif. verb nákom he went)

22.6. The locator. The locator may modify a noun or a verb.

móñpa kúkma táñ *he sleeps in the center of the path* (kúkma in the center modif. tuñ path)

kékpa yúkma *it flies above* (yúkma above modif. kékpa it flies)



22.7. The tensor. A tensor functions chiefly as a verb modifier. The only tensor which has been found as a noun modifier is wĩ̀nak *long ago*, e. g., wĩ̀nak pá'siĩ́n *men of long ago*.

sł'ap nłkpa ʔanaʔhóʔk éybał *now I am going to wait again* (sł'ap *now*)  
ʔòkma hèʔm pá'siĩ́n pútpa *then the man came out* (ʔòkma *then*)

The imperfective tensor ʔíđak gives special time reference to the verb which it modifies. Thus the action may be imperfect, habitual, or conditional in accordance with the aspect suffix of the modified verb.

When modifying an incomplete verb form the action may be either imperfect incomplete, or conditional.

ʔansú'npa ʔíđak túʔm anyó'mo *I would like a (my) wife* (\*su'n *want, like*)  
hèʔm nłkpa ʔíđak *he would go* (\*nak *go*)  
hùʔđ íđak mišá'ba *where were you going along?* (\*sáʔ *go along*)

When modifying the completive verb or stative verb it indicates past habitual or continued action.

ʔłč aʔíđ íđak *I was living, used to live* (\*ʔiĩ́ *live*)  
ʔíđak kó'ń *he was sitting* (\*ko'ń *sit*)  
ʔíđak iwá'ń anyó'mo *my wife used to sing* (\*wa'ń *sing*)

When modifying verbs with the perfective suffix it indicates conditional or continuative perfective action.

hùʔđ íđak miĩ̀naknéʔ *where have you been going?* (\*nak *go* + -neʔ *perf. suf.*)  
ʔłč anłknèʔ íđak méʔiga ʔanaʔiĩ́néʔ lugár *I would have gone if I had had time*  
ʔłč asú'nnèʔ íđak *I would have liked it* (\*su'n *like, want*)  
ʔaʔiĩ́néʔoʔm íđak Chinaméca mèʔiga ʔanłk matłk *I would have already been in Chinameca if I had gone yesterday* (\*iĩ́ *be*)

22.8. The intensifier. The intensifier functions as a verb modifier.

čam wĩ̀lagam múndo *the world is now very old* (čam *very modif. wĩ̀lagam it is now old st. verb*)  
ʔága ʔaŋyáknèʔ múndo *the world has become very sad* (ʔága *very modif. ʔaŋyaknéʔ it has become sad*)

22.9. The demonstrative adjective. The demonstrative adjective functions as a noun or cardinal enumerative modifier.

tammáčpa pèʔm pá'siĩ́n *we will catch that man* (peʔm *that modif. pá'siĩ́n man*)  
ʔananłkpa ył'p tukutén *I will take these three* (ył'p *these modif. tukutén three*)

22.10. The article. The article functions in the same way as the demonstrative adjective. Articles are often omitted entirely; they are generally used only when it is desirable to designate a thing more specifically.

ʔimatóŋpa ʔaʔŋáʔypa tłk *he hears the house open* (tłk [the] *house*)  
ʔimatóŋpa ʔaʔŋáʔypa hèʔ tłk *he hears the (particular) house open* (hèʔ tłk *the house*)  
ʔimatóŋpa ʔaʔŋáʔypa túm tłk *he hears a house open* (túm tłk *a house*)

22.11. The demonstrative adverb. The demonstrative adverb functions as a verb modifier; with the addition of the particularizing suffix -pak it may also be used as a noun modifier.

ĩ́ ʔiŋwattáʔmpa ył'ʔm *what are you doing here?* (ył'ʔm *here modif. \*wat do*)  
ʔaʔní's ył'mpak pá'siĩ́n *I saw men from here* (ył'ʔm + *enc. -pak from here modif. pá'siĩ́n man*)

22.12. The participial adverb is a verb modifier.

šikĩ́mu nłk *laughing he went* (šikĩ́mu *laughing modif. \*nłk go*)  
ʔłč poyĩ́mu ʔasá'ba *I go along running* (poyĩ́mu *running modif. \*sáʔ go along*)

22.13. The interrogative or relative adjective. The interrogative adjective functions as a noun modifier. The relative adjective functions as a noun modifier introducing a relative clause.

hup čł'si ʔiwahnéʔ *which child has done it?* (hup *which modif. čł'si child*)  
ʔi dúŋ hup čł'si ʔiwahnéʔ *who knows which child did it* (hup *which intro. rel. clause čł'si ʔiwahnéʔ [the] child did it*)

22.14. The interrogative or relative adverb. The interrogative adverb functions as a verb modifier. The relative adverb functions as a verb modifier introducing a relative clause.

nłkpa ʔiʔáʔm hùʔĩ́ kũmnetá' *they went to look where he had been buried* (huʔĩ́ *where modif. kũmnetá' he had been buried*)

hùʔđ íĩ́ ʔiĩ́.łk *where is your house* (huʔĩ́ *modif. ʔiĩ́ it is*)

22.15. The quantitative attributive. The quantitative attributive may serve either as a noun or verb modifier.

hùčpaʔŋ anyóhpa *how much will you pay me?* (hùčpa *how much modif. ʔanyóhpa you pay me*)  
ʔiĩ́ hàʔyaŋ yó'mtam *there are many women* (háʔyaŋ *many modif. yó'mtam women*)  
núkpa hèʔm hèsan háma mòhum hłki lámár *after several days the ocean began to recede* (hèsan *several modif. háma day*)

22.16. The negative attributive. The negative attributive *da no, not* is used as a verb modifier in all but modal clauses.

- da* ?anákpa *I am not going* (?anákpa *I am going*)  
*da*?m anákpa *I am not going any more* (*da* + -m lim. enc.)  
*da* ?aηwλ?aηhá?m iga miñák *I don't like it that you went*  
 (\*?aηwλ?aηhám *like*)

22.17. The modal negative ?ódoγ is used as a verb modifier in imperative phrases and subjunctive subordinate clauses. It has not been observed with verbs inflected with the subjunctive suffix, but in itself gives a subjunctive meaning to the phrase, thereby eliminating the necessity for the subjunctive suffix.

- ?ódoγ nάga *don't go!* (nάga *go!*)  
 ?ódom nάga *don't go any more!* (?ódoγ + -m lim. enc.)  
*da* nákpa ?iyá?g iga ?ódo?y ikká? *he didn't go himself*  
*that they might not kill him* (?ódoγ modif. ?ikká? *he*  
 [they] *killed him* > *they might not kill him*)  
 ξè·naytá·hè?m ičímpa ?iga ?ódoγ nλg ikupúh *his dogs*  
*were tied that they might not go to free him* (?ódoγ  
 modif. \*nák go > *they might not go*)

22.18. The conjunction. A conjunction may function only to introduce a modifying clause (for examples see 18.6), except for the conjunction ?i (Sp. "y") which may also be used to join a series of noun subjects or noun objects (for examples see 21.2-3).

22.19. The interjection. Interjections may be used as phrase words in answer to a question, or as exclamatory elements in a phrase.

- miñákpa hóyma (pause) hά *are you going?* *yes* (hά *yes*)  
 ?áy ?á·çi kifu?m anókwíñ *oh, uncle, my chest is*  
*broken* (?ay exclamatory interjection)

22.20. The cardinal enumerative. A cardinal enumerative may function as subject or object of a verb, or as a noun modifier.

- hè?m tukutén *da* ?ičí? ikká? *the three did not give their*  
*hands* (hè?m tukutén *the three* sub. of ?ičí? *they gave*  
*them*)  
 ?immé?épa wastén karpintéro *you will search for two*  
*woodpeckers* (wastén *two* modif. karpintéro *wood-*  
*pecker* [Sp.])

22.21. The pronominal enumerative. The pronominal enumerative may be used as subject or object of a verb, or in apposition to a nominal subject or object.

- taγaytá?ma ?iñtúmpay *get in, all of you!* (?iñtúmpay  
*all of you* sub. of imper. verb)  
 ?i?i·šyáh iúmpay hè?m nάwahyah *all the witches saw it*  
 (?iúmpay *all of them* sub. in apposition to nάwahyah  
*witches*)

22.22. The adverbial enumerative. The adverbial enumerative functions as a verb modifier.

- wλskay ?iñáks *he hit it twice* (wλskay *twice* modif.  
 ?iñáks *he hit*)

22.23. Polite phrases. The only difference noted between the speech of men and women is in the form of greeting used. That for men is šuó?y while that for women is túsam šúciñ. Although there is no apparent direct translation for these forms, the nature of some of the morphemes may be pointed out. The stem \*šúé is common to both. In the masculine form it is followed by the repetitive suffix -?ó?y. In the feminine form it is preceded by túsam (probably tús *God* [Sp. "dios"] plus the enclitic -am) and followed by the subjunctive suffix -?iñ. "Thank you" is expressed by yúkwλ?abam dús (probably a verb stem \*yuk with the agentive suffix -wλ?ap, the enclitic -am, and a variant of Spanish "dios").

### 23. WORD ORDER

23.1. Word order is not rigid in Popoloca, but there are a few definite rules which are always adhered to in the combining of syntactic elements into sentences, and other tendencies which are usually followed.

23.2. A conjunction used to introduce a clause must always precede all the other elements of the clause (see examples 18.6).

23.3. Relative and interrogative adverbs generally precede all other elements of the clause (see examples 18.7) but may occasionally be preceded by another element such as a demonstrative adverb or even the verb subject.

- hèmak hùéma nák ?ipátpa úspiñ *there, where he went,*  
*he encountered an alligator* (hèmak *there, hùéma*  
*where*)  
 yλ?p pά·šiñ hù?t nákpa *this man, where is he going?*  
 (hù?t *where* inter. preceded by yλ?p pά·šiñ *this man*)

23.4. Negatives and intensifiers always directly precede the verb which they modify, with the exception of the intensifier ?éybak *again* which also has been noted following the modified verb with a preceding tensor.

- ?λè *da* ?anákpa *I do not go* (*da* neg. at.)  
 ?ódoγ nάga *don't go!* (?ódoγ neg. at.)  
*da* wά·bak hè?m yómo *the woman is not pretty* (*da*  
 modif. st. verb wά·bak *is pretty*)  
 ?λè ága ?anho?yá?y *I was very angry with them* (?ága  
 very modif. ?anho?yá?y *I was angry*)  
 sλ?ab anapúta ?éybak *now take me out again!* (?éybak  
 again modif. ?anapúta *take me out!*)

23.5. A pronoun as the object of an imperative verb precedes the verb.

hè'am nA'má'yA tell it to him (he? him + -'am enc., obj. of ind. imp. verb)

23.6. Other words which also generally precede the predicative verb are noun subjects when there is also a noun or pronoun object, temporalized nouns, pronouns used as subjects, tensors, demonstrative adverbs, and quantitative attributives.

hè'm pA'si'n i'tóppa ?i'á'ni the man takes out his tortilla (hè'm pA'si'n the man sub., ?i'á'ni his tortilla obj.)

?imñipak apútpa after his coming I go out (?imñipak temporalized noun modif. ?apútpa I go out)

?lě yA'm a'fí I am here (?lě I pron. used as sub., yA'm here dem. adverb)

?ókma hAypátpa then he speaks (?ókma then tensor) hú'fpa miháya how valiant are you? (lit. "how much are you valiant?") (hú'fpa how much quant. at.)

23.7. Words that generally follow the predicative verb are nouns used as subjects (when no object is expressed), nouns used as objects, nouns inflected with one of the case suffixes, nouns used in a locative sense, pronouns used as objects, locators, and phrasal modifiers of a noun and a locator.

éA'yñé? iyó'mo his wife remained (?iyó'mo his wife noun sub.)

mě i'kú'tpa yA'p á'ni you will eat this tortilla (?á'ni tortilla noun obj.)

tanákpa hamñóm we will go into the woods (hamñóm into the woods noun inflected with case suf. -hom)

núkpa hè'm kuyyúkma he arrives up in the tree (kuyyúkma up in the tree noun with loc. sense)

?iñí'ba pé'm you will give it to that one (pe'm that one pron. obj.)

hémaga'm íf yúkma there it was (up) above (yúkma above locator)

?i'ák mλhma túη he left it in the middle of the path (mλhma túη in the middle of the path loc. phrasal modifier)

23.8. The tensor ?i'dak must directly precede or directly follow the verb which it modifies.

?a'id ídak I was living, or ?i'dak a'fí I was living

23.9. A possessor noun or pronoun usually directly precedes the possessed noun which it modifies, though it may directly follow it if the possessed noun is the subject and the possessor the object of the verb (an article or demonstrative adjective may intervene in either case).

da ?i'kA'ypa ?lě aηwáη you will not bear my horns (?lě I possessor pron. modif. ?aηwáη my horns)

?i'ómi hè'm asiyénda ?ikupo'yá'y the owner of the hacienda left it for him (?i'ómi its owner possessed noun sub. of verb, hè'm asiyénda the hacienda possessor noun direct obj. of verb with "for him" expressed by indir. suf. -'a'y)

23.10. Articles, demonstrative adjectives, quantitative attributives, and cardinal enumeratives must directly precede the noun or enumerative which they modify. If either an enumerative, a quantitative, or the demonstrative adjective túηgak/túηgam plus an article modify the same noun, the article precedes the enumerative, quantitative, or demonstrative.

só'psum hè'm ibúrro his burro then tired (hè'm the art. + enc. -m modif. ibúrro his burro)

hè'm tukutén inika'má'f the three shook hands with him (hè'm modif. tukutén three)

yA'p yó'mo hù't mñ this woman, from where did she come? (yA'p this dem. adj. modif. yó'mo woman)

nAk wastèn négro two negroes went (wastèn two cardinal enumerative modif. négro negroes)

mñpa hè'm wasté'n i'f'mpa his two dogs come out (lit. "they come the two his dogs") (hè'm the, wastèn two, ?i'f'mpa his dogs)

hèmu'm ak'faktá' hè'm túηgak f'ó'ka there he was left (unharmed) by the other thunderbolt (hè'm the def. art., túηgak other dem. adj., f'ó'ka thunderbolt)

núkpa hè'm hēsAη háma after several days (lit. "the several days arrive") (hè'm the, hēsAη several quant. modif. háma day)

23.11. Since the main verb and the gerundial verb in a gerundial clause construction have the same subject and, in the case of transitives, the same object, the two verbs are treated as one with regard to other syntactic elements in the clauses. The other syntactic elements precede and follow the two verbs with nothing interposed between them.

sA'ba ?i'f'η hè'm yó'mo the woman was (kept on) bathing (sA'ba ?i'f'η she was bathing main verb + ger. verb construction, hè'm yó'mo the woman sub. of both verbs)

wñak hè'm pA'si'n nλg ikmè'fyahtá' také'f'ñu a long time ago the men were sent to search for bee hives (nλg ikmè'fyahtá' lit. "they went to be caused to search for," main verb + ger. verb, hè'm pA'si'n the men sub., také'f'ñu beehive obj.)

23.12. Descriptive attributives modifying a noun may either directly precede or directly follow the noun.

ēihó'y'pa pλmbak túh it rains hard, or ēihó'y'pa túh pλmbak it rains hard

23.13. A locator modifying a noun will precede the noun if it is not compounded with it (10.20).

nłkpa ?ikʒʌʔy kùkma lámar *he goes to catch up with her in the middle of the ocean* (kùkma *in the middle locator modif. lámar ocean* [Sp.])

23.14. If both an independent subject and ob-

ject follow the verb, the former usually will precede the latter.

?imatóŋpa nanłgayťá'wo'm iwadáyá hè'm ʒó'ka *she hears that her husband was then carried off by the thunderbolt* (?iwadáyá *her husband sub. of nanłgayťá'wom was then carried off, hè'm ʒó'ka the thunderbolt indirect obj.*)

## FOREIGN INFLUENCE

Popoluca has been recognizably influenced both by Spanish and Aztec. We are unable to determine the extent of the influence of the latter, since we know very little about the Aztec language. A number of common Aztec nouns have been noted, however, and the number is undoubtedly much greater. Many of these, though by no means all, are of a botanical nature, e. g., túlin *tule*, húnikuy *hule* (*hule* Aztec "rubber" + *kuy* Popoluca "tree"), kákwa *cacao*, náněin *nanche* (a kind of fruit), náwat *naqual* ("witch"). (The modern Hispanicized rather than the classical Nahautl forms of these nouns are given.)

Spanish borrowing is on two levels: words fully adopted into Popoluca with appropriate sound and stress shifts to conform to Popoluca phonology, and which would not be recognized as foreign in origin if the derivation were not known; words which are sprinkled at random into everyday speech, but which would be suspected of foreign origin because of non-Popoluca phonology, even if the derivation were unknown.

On the first level of borrowing are included many words which have no Popoluca equivalent, e. g., káwa *caballo*, šápun *jabón*, šíwan *Juan*. Some of the sound shifts which have occurred presumably reflect old speech sounds of the Spanish conquerors and their followers, e. g., *j* > *š* in the above examples.

Spanish *o* almost always is given the value of *u*. Probably this is because Popoluca *o* is more open and less rounded than Spanish *o*, so that the latter would seem to the native ear more closely to resemble the Popoluca *u*. Thus, trúhah *troje* ("storehouse"), lúpuhti *lobo* ("wolf"), kusínah *cosina* ("kitchen"), kun *con* ("with").

The sound *f* is unknown in Popoluca; in Spanish loan words *p* is substituted, e. g., kapél *cafe* ("coffee").

Though rarely found in Popoluca words, *l* and *r* are always retained in borrowed words, e. g.,

lámar *la mar* ("ocean"), and trúhah, mentioned above.

Borrowed Spanish words which end in a vowel often are given a final *h*, in contrast to the inorganic glottal often found at the end of Popoluca words which terminate in a short vowel, e. g., pášah *faja* ("belt"), mačítih *machete* ("brush knife"). A variant of this is found in loan words to which a suffix *-ti* is added after the *h*, e. g., lúpuhti *lobo* ("wolf"), kúkuhti *coco* ("coconut").

Numerals above 6 (except *móñi* *four hundred*) are Spanish; no sound or stress shifts occur.

Only a very few cases of Spanish expressions translated into Popoluca have been noted, e. g., nłʔiškuy *ojo de agua* ("spring") nłʔ *water* + ?iškuy *eye*. Borrowed Spanish nouns are freely inflected, e. g., ?iswérte *su suerte* ("his luck") < ?i- *pos. p. pref.* + *suerte*, pàylahóm *en la paila* ("in the kettle") < *paila* + *-hom loc. suf.*

Spanish verbs are borrowed only rarely. Those most commonly used are *ser* and *tener*, the former in the present and imperfect, e. g., ?éra hèʔaŋ káʔnpu *it was just an egg*, and the latter always in the third person form of *tiene que he has to*, regardless of person, e. g., ?éne kè ?ampákpá *I must marry him*.

Compound verbs sometimes are constructed from a Spanish attributive plus a Popoluca verb stem, e. g., \*kùšuhwát *make lame* < kùšuh *cojo* ("lame") + \*wat *make*. Enclitics may be freely attached to borrowed words, e. g., ?asíʔam *just thus* < *así* ("thus") + ?am *lim. enc.*

Some Spanish words, chiefly prepositions and conjunctions, have been adopted so freely that they appear to be supplanting their Popoluca equivalents. In some cases we encountered no Popoluca equivalent at all, e. g., ?i *y* ("and"). Other Spanish phrase connectives are often used, sometimes alone and sometimes combined with the corresponding Popoluca form, e. g., porké *porque* ("because"), poréso *por eso* ("therefore,"

“for this reason”), *porkeĩʔiga* < *porque*+*ĩʔiga* (“because”), *síʔiga* < *sí*+*ʔiga* *that* (expression translated by “if”; in Popolucan “if” is *méʔiga*). Spanish prepositions which are replacing Popolucan forms are *para* and *con*, used with the appropriate thematic affixes of the verb which in Popolucan express these concepts, e. g., *pàra mimíç for you*

(*mimíç* 2d. per. pron. *miç* prefixed as stative verb), *kuʔn iyó-mo with his wife* (*ʔiyó-mo his wife*). The Spanish agentive suffix *-ero*, in the form *-tero*, is often attached to Popolucan verb or noun stems to form an agentive noun, e. g., *ʔeçtéro dancer* (\**eç dance*), *yò-ša-tero worker* (\**yo-ša work*), *taktéro house builder* (*tak house*).

## SPECIMEN TEXT AND ANALYSIS

## STORY OF A WITCH

wiñak (1) Once upon a time	hèʔm (2) the	pá-šiñ (3) men
puhyàhpa (4) went out	ʔiga (5) as	náwat (6) witches.
nakyàhpa (7) They went	hó-yi (8) taking a walk	húʔm (9) far away,
hèʔm (2) the	iwatýó-mo (11) his wife	ʔi (10) and
ʔihóʔdoŋ (13) she knew	ĩ (14) what	ʔiméʔépa (15) he was seeking
ʔiwadáyá (16) her husband.	ʔiñlámáʔyapa (17) She said to him	miç (18) “You,
hùʔt (19) where	misáʔba (20) do you go?”	ďa (12) Not
ʔimátpa (21) he spoke to her	hèʔm (2) the	náwat (6) witch.
hèʔiʔm (22) She herself	iʔi-špa (23) saw him	ʔiwatýó-mo (11) his wife.
ʔikusúépa (24) She spied on him.	çúʔa-néʔom (25) She had already stayed up at night	siéte (26) seven
nóçe (27) nights	ʔi (10) and	ʔòkma (28) then
ʔihákpa (29) he cut it off,	ʔikó-so (30) his knee.	ʔi (10) And
námpa (31) she said	ʔiyó-mo (32) his wife,	sàʔabaʔm (33) “Right now
ihòʔdoʔhá-p (34) he will know	ĩ (14) what	ʔanawadáʔyapa (35) I will do with it.”
ʔi (10) And	ʔòkma (28) then	mòh (36) she began
námpa (31) She said	wà- (38) “It is good	níwi (39) chile.”
mòh (36) she began	imoçá-y (40) to grind it.	ʔiʔi-šum (41) She then saw
hùʔď (42) where	içág (43) he left	ipúy (44) his leg
náwat (6) witch.	námpa (31) She said	yó-mo (45) woman

ʔaŋkòdayáʔyapa (46) “I will insert in it for him	níwi (39) chile.”	ʔiganam (47) while
naknéʔ (48) he has gone	húʔm (9) far away.	
hèsak (49) When	sé-t (50) he returned	kukèhakáʔm (51) n the morning
ʔi (10) and	mòh (36) began	ikkáʔm (52) to put on
ďam (53) no longer	namaçtá-p (54) it is seized with it.	ʔi (10) And
ʔiñlámáʔyapa (17) he said to her	ʔiwatýó-mo (11) his wife	yú-sa (55) “Wake up.
ʔáč (56) I,	ʔi (57) who	dùŋ (58) knows
ʔannà-skaʔnéʔ (59) has happened to me.”	ʔi (10) And	ďa (12) not
ʔiwatýó-mo (11) his wife.	ʔi (10) And	ʔòkma (28) then
aŋwéhi (61) to shout.	námpa (31) He said,	sàʔap (62) “Now
huʔçá-p (63) how will I do	anakkáʔm (64) to put on	ampúy (65) my leg?”
porkè (66) Because	hèʔ (67) they	puhyàhpa (4) they go out
çúʔkáʔm (68) at night.	ʔaŋhàlyapa (69) They make noise	ʔiwihyàh (70) walking.
ʔimatòŋyàhpa (71) They hear it	ʔaŋhàlyapa (69) make noise	ʔiñak (72) (as) he goes,
hèʔam (73) just the	triŋlòʔkaç (74) triŋlòʔkaç	porkè (66) because
ʔaŋhàlyapa (75) it makes noise	ʔipúy (44) his leg	ʔiga (76) that
ʔiçupsnéʔ (77) he has removed.	ʔi (10) And	heʔyúkma (78) because of this
ʔiçakhóʔyapa (79) it angers her	ʔiwatýó-mo (11) his wife	porkè (66) because
ʔikúʔtpa (80) he eats	tantá-wa (81) our brothers.	námpa (31) She spoke
ʔiyó-mo (32) his wife	sàʔabaʔm (33) “Right now	ihòʔdoʔhá-p (34) he will know

sì (82) if	ďa (12) not	ʔaηkùšuhwátpa (83) I will make him one-legged."	ʔi (10) And	hèmmum (103) Just there	kuyáh (111) finished	hèʔm (2) the
ʔòkma (28) then	mòh (36) he began	aηwéhi (61) to shout.		kwénto (112) story.		
nám̄pa (31) She said	ʔiyó·mo (32) his wife,	ʔiηwá· (84) "Your goodness				
ʔiniηnúk (85) you paid for."	ʔi (10) And	ʔòkma (28) then				
kukèh·ʔyyáh (86) they had morning.						
ʔi (10) And	tùηgam (87) the next	há·ma (88) day				
ʔihòʔdoʔηá·p (34) he knows		ʔaηhagóʔyi (89) the head man.				
náʔmaytá·p (90) It is said to him,	pèʔm (91) "That	pá·šĩñ (3) man				
ʔikuʔdáʔypa (92) he eats	tantá·wa (81) our brothers	ʔiěóko·y (93) their spirits."				
ʔi (10) And	nám̄pa (31) he said	ʔaηhagóʔyi (89) the head man				
sáʔabam (33) "Right now	tanakkáʔba (94) we will kill him,	porkè (66) !because				
ʔiěàηwatnéʔom (95) he has already done much	ʔiga (76) that	ʔikúʔtpa (80) he eats				
pá·šĩñ (3) men."	ʔi (10) And	ʔòkma (28) then				
noʔkehtá· (96) he was set afire	hèʔm (2) the	náwat (6) witch.				
nám̄pa (31) He said	ʔaηhagóʔyi (89) head man,	sìʔiga (97) "If				
núma (98) it is certain	náwat (6) he is witch	ďa (12) not	híp̄spa (99) he will burn."			
ʔi (10) And	ʔòkma (28) then	noʔkehtá· (96) he was set afire,	ʔi (10) and			
ďa (12) not	hòbiĩ (100) right away	káʔ (101) he died				
huktóm (102) in fire.	hèmmuʔm (103) Just there	i·šĩtá· (104) it was seen				
ʔiga (76) that	háyaʔyaηhálé·á·č (105) he is brave	hèʔam (73) the one who is				
náwat (6) witch,	porkè (66) because	ďa (12) not	hòbiĩ (100) right away			
káʔ (101) he died	huktóm (102) in fire.	hèmmuʔm (103) Just there				
iʔi·šyáh (106) they saw	itúmp̄ay (107) all of them	hèʔm (2) the				
náwabyah (108) witches.	ʔi (10) And	ʔòkma (28) then				
ku·ηyáhom (109) they were truly afraid	porkè (66) because	nòʔyahtá·p (110) they will be burned.				

## FREE TRANSLATION

Once upon a time men went out as witches. They went traveling far away. One man's wife did not know what her husband was seeking. She said to him, "Where do you go?" The witch did not answer her. His wife saw him go, because she spied on him. After she had kept watch for 7 nights she saw that he cut off his leg at the knee. His wife said, "Right now he is going to find out what I will do with it." She then began to think. She said, "Chile is good," and she began to grind it. Then she saw where the witch had left his leg. The woman said, "I will insert chile (at the joint) for him while he is far away." When he returned in the morning and began to put his leg on at the knee it would no longer fasten on. Then he said to his wife, "Wake up! Who knows what has happened to me?" His wife would not speak. Then he began to shout. He said, "Now, how am I going to put on my leg?" Because when witches go out at night they make a noise as they walk. The people hear a noise and it is the triηlóʔkaé who is going by. Because of the removal of his leg he makes a noise when he walks. It is because he eats our brothers that his wife is angered. His wife said, "Now he will find out if I have made him one-legged." Then he began to shout. His wife said "You have paid for your pleasure." Then they awaited the morning.

The next day the head man found out about it. He was told, "That man eats the spirits of our brothers." The head man said "We must kill him immediately because by eating men he has already done much harm." The witch was then set afire. The head man said, "If he is surely a witch he will not burn." When he was set afire he did not die in the fire immediately. Thus it was seen that he was a brave witch. All the witches saw him there, and they were afraid that they too would be burned. There the story ends.

## GRAMMATICAL ANALYSIS

1. tensor, suf. -ak (13.4)
2. def. art. + -m lim. enc. (15.2)
3. *man*
4. \*put go out (t > h 4.8) + -yah 3d. per. pl. suf. (8.4) + -pa inc. suf. (8.9)
5. conj. *that, as*, here intro. a modif. clause with st. verb (18.6)
6. *witch*
7. \*nak go + -yah 3d. per. pl. suf. (8.4) + -pa inc. suf. (8.9) main verb of i. res. ger. construction (19.8).
8. i. res. ger. (19.8) \*ho·y take a walk + ger. suf. -i (8.2)
9. locator (13.3)
10. Sp. "y" conj.
11. ʔi- 3d. per. pos. p. pref. (11.1) + wáĩ- comb. form of wáĩi large + yó·mo woman, wife; comp. noun (10.22)
12. neg. at. (13.9)

13. ?i- 3d. per. sub. and obj. t. p. pref. (7.5) + \*hó?doŋ know, + # compl. suf. (8.9)
14. rel. pron. (9.4) intro. rel. clause (18.7)
15. ?i- 3d. per. sub. and obj. t. p. pref. (7.5) + \*me?é seek + -pa inc. suf. (8.9)
16. ?i- 3d. per. pos. p. pref. (11.1) + wáŋ- comb. form of wáŋi large, great + haya male; comp. noun (10.22)
17. ?i- 3d. per. sub. and obj. t. p. pref. (7.5) + \*nám say + -?a?y indir. suf. (6.17) + -pa inc. suf. (8.9)
18. 2d. per. ind. pers. pron. (9.2)
19. inter. at. (13.7)
20. mi- 2d. per. i. p. pref. (7.2) + \*sá? go about + -pa inc. suf. (8.9)
21. ?i- 3d. per. sub. and obj. t. p. pref. (7.5) + \*?aŋmat speak (ben. pref. ?aŋ- 6.5) + -pa inc. suf. (8.9)
22. 3d. per. ind. pers. pron. (9.2) + lim. encl. -ŋim (15.4)
23. ?i- 3d. per. sub. and obj. t. p. pref. (7.5) + \*?i:s see + -pa inc. suf. (8.9)
24. ?i- 3d. per. sub. and obj. t. p. pref. (7.5) + ku- purp. pref. (6.4) + sué bound stem of \*kusúé spy + -pa inc. suf. (8.9)
25. éu? night + -?a- verb suf. (6.11) + -ne? perf. suf. (8.3) + -om tem. enc. (15.2)
26. Sp. "siete"
27. Sp. "noche"
28. tensor (13.4)
29. ?i- 3d. per. sub. and obj. t. p. pref. (7.5) + \*hak cut + -pa inc. suf. (8.9)
30. ?i- 3d. per. pos. p. pref. (11.1) + kó'so kneec
31. # 3d. per. i. p. pref. (7.2) + \*nám say + -pa inc. suf. (8.9)
32. ?i- 3d. per. pos. p. pref. (11.1) + yó'mo woman
33. sá?ap tensor (13.4) now + -?am enc. (15.2)
34. ?i- 3d. per. sub. and obj. t. p. pref. (7.5) + \*hò?do?ŋá know + -p inc. suf. (8.9)
35. ?an- 1st. per. sub. 3d. per. obj. t. p. pref. (7.5) + na-com. pref. (6.7) + \*wat do + -?a?y indir. suf. (6.17) + -pa. inc. suf. (8.9)
36. begin, compl. asp. (8.9) main verb of ger. clause construction
37. ?i- 3d. per. sub. and obj. t. p. pref. (7.5) + \*há's think + # ger. suf. (8.2), i. res. ger. (19.8)
38. good, st. verb (7.4)
39. chile
40. ?i- 3d. per. sub. and obj. t. p. pref. (7.5) + \*moé grind + -?a?y indir. suf. (6.17) + # ger. suf., t. res. ger. (19.9)
41. ?i- 3d. per. sub. and obj. t. p. pref. (7.5) + \*?i:s see + # compl. suf. (8.9) + -um tem. encl. (15.2)
42. hu?é where, rel. at. introducing rel. clause (18.7)
43. ?i- 3d. per. sub. and obj. t. p. pref. (7.5) + \*éak leave + # compl. suf. (8.9)
44. ?i- 3d. per. pos. p. pref. (11.1) + puy leg
45. woman
46. ?an- 1st. per. sub. 3d. per. obj. t. p. pref. (7.5) + \*kot insert + -?aya?y redup. ind. suf. (6.17) + -pa inc. suf. (8.9)
47. ?iga conj. that + -nam tem. encl. (15.3)
48. # i. p. pref. (7.2) + \*nák go + -ne? perf. suf. (8.3)
49. conjunction (13.10)
50. # i. p. pref. (7.2) + \*se't return + # compl. suf. (8.9)
51. ku- purp. pref. (6.4) + \*keh appear + -a nom. suf. (10.12) + -ka?m loc.-dur. suf. (12.4)
52. ?i- 3d. per. sub. and obj. t. p. pref. (7.5) + ?ak- caus. pref. (6.6) + -ka?m bound stem of \*akka?m put on + # ger. suf., t. ger. verb (19.9)
53. dá neg. at. + -m lim. enc. (15.2)
54. # i. p. pref. (7.2) + na- com. pref. (6.7) + \*maé seize + -ta- pas. suf. (8.6) + -p inc. suf. (8.9)
55. \*yu's wake up + -a imp. suf. (8.8)
56. 1st. per. ind. pers. pron. (9.2)
57. ?i inter. pron. who (9.4)
58. irregular verb theme used only after ?i who. In other constructions the theme is \*ho?, \*hó?doŋ, or hò?do?ŋá know.
59. ?an- 1st. per. sub. 3d. per. obj. t. p. pref. (7.5) + \*na's pass + -ka? inst. compounding theme (6.29) + -ne? perf. suf. (8.3)
60. # i. p. pref. (7.2) + \*háy speak + -pa inc. suf. (8.9)
61. # i. p. pref. (7.2) + ?aŋ- sim. pref. (6.5) + \*weh cry + -i ger. suf. (8.2), i. res. ger. verb (19.8)
62. tensor (13.4)
63. hu?é rel. at. how + -?a- verb. suf. (6.11) + -p inc. suf. (8.9) main verb of cond. ger. construction (19.10)
64. ?an- 1st. per. sub. 3d. per. obj. t. p. pref. (7.5) + ?ak- caus. pref. (6.6) + -ka?m bound stem of \*akka?m put on, + # ger. suf. (8.2), cond. ger. verb. (19.10)
65. ?an- 1st. per. pos. p. pref. (11.1) + puy leg
66. Sp. "porque"
67. 3d. per. ind. pers. pron. (9.2)
68. éu? night + ka?m loc.-dur. suf. (12.4)
69. ?aŋ- sim. pref. (6.5) + \*háy speak + -pa inc. suf. (8.9), main verb of cond. ger. construction (19.10)
70. ?i- 3d. per. sub. and obj. t. p. pref. (7.5) + \*wií walk + -yah 3d. per. pl. suf. (8.4) + # ger. suf. (8.2), cond. ger. verb. (19.10)
71. ?i- 3d. per. sub. and obj. t. p. pref. (7.5) + \*matóŋ hear + -yah 3d. per. pl. suf. (8.4) + -pa inc. suf. (8.9)
72. ?i- 3d. per. sub. and obj. t. p. pref. (7.5) + \*nák go + # ger. suf. (8.2), cond. ger. verb. (19.10)
73. he? def. art. + -?am lim. encl. (15.2)
74. Name of a variety of witch who removes leg. Since word does not follow usual Popolucan construction foreign origin is suggested.
75. # i. p. prep. (7.2) + \*?aŋháy make noise + -pa inc. suf. (8.9)
76. conj. that
77. ?i- 3d. per. sub. and obj. t. p. pref. (7.5) + \*tups remove + -ne? perf. suf. (8.3)
78. he? 3d. per. ind. pers. pron. (9.2) + yúkna locator on
79. ?i- 3d. per. sub. and obj. t. p. pref. (7.5) + \*éak touch + \*ho?y anger + -pa inc. suf. (8.9); comp. verb (6.24)
80. ?i- 3d. per. sub. and obj. t. p. pref. (7.5) + \*ku?t eat + -pa inc. suf. (8.9)
81. tan- 1st. per. pl. pos. p. pref. (11.1) + tá'wa sibling
82. Sp. "si"

83. ?an- 1st. per. sub. 3d. per. obj. t. p. pref. (7.5) + kúshuh *one-legged* (Sp. "cojo") + \*wat *make* + -pa inc. suf. (8.9); comp. verb (6.34)
84. ?iñ- 2d. per. pos. p. pref. (11.1) + wΛ' *good* at. used as noun
85. ?iñ- 2d. per. sub. 3d. per. obj. t. p. pref. (7.5) + ?aη- ben. pref. (6.5) + \*nuk *arrive*, + # compl. suf. (8.9)
86. # i. p. pref. (7.2) + kukéh- comb. form of kukéha *morning* + -?Λ'y verb. suf. (6.12) + -yah 3d. per. pl. suf. (8.4) + # compl. suf. (8.9)
87. túηgam *another* dem. at. (13.6)
88. *day*
89. Translated in Spanish as "la autoridad," "the authority," perhaps derived thus: ?aη- ben.-sim. pref. (6.5) + \*hak *cross* i. verb stem, or \*hak *break* t. verb stem + -?o'y repet. suf. (6.14) + -i nom. suf. (10.9)
90. # i. p. pref. (7.2) + \*NAM *say* + -?a'y ind. suf. (6.17) + -ta' pas. suf. (8.6) + -p inc. suf. (8.9)
91. dem. at.
92. ?i- 3d. per. sub. and obj. t. p. pref. (7.5) + \*ku?t *eat* + -?a'y ind. suf. (6.17) + -pa inc. suf. (8.9)
93. ?i- 3d. per. pos. p. pref. (11.1) + éókoy *liver* (the liver is the seat of the spirit)
94. tan- 1st. per. incl. pl. t. p. pref. (7.5) + ?ak- caus. pref. (6.6) + \*ka? *die* + -pa inc. suf. (8.9); lim. incl. pl. (8.4)
95. ?i- 3d. per. sub. and obj. t. p. pref. (7.5) + éam *much* + \*wat *do* + -ne? perf. suf. (8.3) + -om tem. enc. (15.2); comp. verb (6.34)
96. # i. p. pref. (7.2) + \*no? *burn* + \*keh *appear* + -ta' pas. suf. (8.6); comp. verb *set afire*, (6.25)
97. Sp. "si" + ?iga conj. *that* > *if*
98. *certain*, intensifier
99. # i. p. pref. (7.2) + \*hips *burn* + -pa inc. suf. (8.9)
100. *right away*, tensor
101. # i. p. pref. (7.2) + \*ka? *die*, + # compl. suf. (8.9)
102. hukt- comb. form of húkta *fire* + -hom loc. suf. (12.5)
103. hem dem. adv. *there* + -um lim. encl. (15.2)
104. # i. p. pref. (7.2) + \*?i's *see* + -ta' pas. suf. (8.6)
105. st. verb. (7.4), much used idiom which has resisted complete analysis; *haya* *manly*
106. ?i- 3d. per. sub. and obj. t. p. pref. (7.5) + \*?i's *see* + -yah 3d. per. pl. suf. (8.4) + # compl. suf. (8.9)
107. ?i- 3d. per. pos. p. pref. (11.1) + tum indef. art. and cardinal enumerative *one* + -pay quant. suf. (13.8); pron. enumeration (14.4)
108. náwat *witch* + -yah 3d. per. pl. suf. (12.2)
109. # i. p. pref. (7.2) + \*kuη *fear* + -yah 3d. per. pl. suf. (8.4) + -om lim. encl. (15.2)
110. # i. p. pref. (7.2) + \*no? *burn* + -yah 3d. per. pl. suf. (8.4) + -ta' pas. suf. (8.6) + -p inc. suf. (8.9)
111. # i. p. pref. (7.2) + ku- purp. pref. (6.4) + \*yah *finish* + # compl. suf. (8.9)
112. Sp. "cuento"

## VOCABULARY

The vocabulary here given consists, with a few exceptions, of simple stem themes of verbs and substantives. The exceptions are chiefly a few reduplicated stems, such as pópo *white*, and bound stems with affixes, such as aηmát *speak*. The other two word classes, pronouns and enumeratives, are

omitted entirely, since all words of these classes are listed in the discussion in morphology (sections 9 and 14). When the translation of a word might lead to confusion, the original Spanish (in some cases, actually Aztec) is included in parenthesis.

Verbs		Verbs—Continued		Verbs—Continued	
<i>answer</i> .....	*éoη	<i>boil</i> .....	*yu'm	<i>cry</i> .....	*weh
<i>arise</i> .....	*éukúm	<i>borrow</i> .....	*nuks	<i>cut down</i> .....	*tΛη
<i>arrive</i> .....	*nuk	<i>break</i> .....	*kił	<i>dampen</i> .....	*muh
<i>ascend, climb</i> .....	*ki'm	<i>bud</i> .....	*éu'm	<i>ache, hurt</i> .....	*toy
<i>ask</i> .....	*wa?k	<i>burn</i> .....	*no?	<i>anger</i> .....	*ho'y
<i>awaken</i> .....	*yu's	<i>burn (with large flame)</i> .....	*yot	<i>deceive</i> .....	*mağó'y
<i>bark</i> .....	*wok	<i>carry (on head in a basket)</i> .....	*éAy	<i>descend</i> .....	*ket
<i>bathe</i> .....	*éiη	<i>charge</i> .....	*ée?k	<i>dig</i> .....	*he'n
<i>be, live, exist</i> .....	*?ił	<i>chop down</i> .....	*wΛ't	<i>dig, excavate</i> .....	*taη
<i>be able</i> .....	*wΛ'á'	<i>close</i> .....	*?aηmíf	<i>drink</i> .....	*?uk
<i>be born</i> .....	*nay	<i>collect</i> .....	*éek	<i>drink water</i> .....	*nΛ'k
<i>bear, endure</i> .....	*?aηkáy	<i>come</i> .....	*miñ	<i>drip</i> .....	*wΛ'é
<i>beat</i> (Sp. "as a drum").....	*tΛks	<i>cook</i> .....	*?uh	<i>dry</i> .....	*tΛé
<i>become fat</i> .....	*pΛ'	<i>copulate</i> .....	*maη	<i>eat</i> .....	*ku?t
<i>begin</i> .....	*moh	<i>cough</i> .....	*suks	<i>eat (dine)</i> .....	*wi?k
<i>belch</i> .....	*?Λ'y	<i>cover</i> .....	*?aηú'é	<i>embrace</i> .....	*nu's
<i>believe</i> .....	*?aηhám	<i>cover (with mud)</i> .....	*éΛt	<i>emerge</i> .....	*put
<i>bite</i> .....	*was	<i>cross</i> .....	*hak	<i>enter</i> .....	*tağAy
<i>blow</i> .....	*suh				



## Verbs—Continued

fall	*çut
fan, wave	*yem
fear	*ka'ŋ
feel dizzy	*su'sá'
fight	*'aŋá'
fine	*moç
finish	*yah
fold	*poks
fold	*mo'o'n
fry	*ma'ʔt
fry, cook	*se'ʔt
gather	*piŋ
get, take	*pʌk
go	*nʌk
go along (andar)	*sʌ'ʔ
go out	*put
grasp	*maç
grasp	*çʌk
grind	*way
grow	*yo'o'n
harvest	*piñ
heat	*pih
hide	*nek
hide	*yam
hit, beat	*naks
hit	*yʌ'ʔk
hunt, shoot	*tuh
jump	*ma'ʔŋ
jump	*yo'o'y
keep	*tu'o'm
kick	*nep
know	*hó'ʔdoŋ
lack	*tak
lasso, fish with a line	*suy
laugh	*şik
leave	*çak
lend	*kak
lick	*ne'o'm
lie on one's side	*mum
light	*çok
listen	*matóŋ
lock up	*pah
look	*'a'o'm
lose	*togóy
make, do	*wat
make noise	*tiñ
make tortillas	*toh
marry	*'aŋko'o'mʌ'ʔy
meet	*pat
meet together	*'aŋtu'o'má'
mix, stick together	*çah
need, want	*su'n
paint	*tok
pass	*na's
pay	*yoh
pinch	*çuks
play	*ma'ç
pluck (fruit)	*tuk
puncture	*çe'ŋ

## Verbs—Continued

push	*yak
put on	*'akká'o'm
raise	*ç'a'm
remain	*çʌ'o'y
remove, undress	*ç'o'ʔt
request, ask for	*wa'ʔk
rest	*heh
return, turn	*se't
revive	*pʌ's
ripen	*kaŋ
run	*poy
say	*nam
scrape	*meh
scratch	*çuks
search	*me'o'ç
sell	*ma'o'y
send	*kuçá't
serve	*tek
sew	*nu'o'n
shell corn	*'ʔʌks
shine	*çok
shoot (with bow and arrow)	*tʌp
sing	*wa'n
sit	*koñ
sleep	*moŋ
smell	*kan
smell	*su'ʔk
sow	*ñip
speak	*hʌy
speak	*'aŋmát
spin	*pi't
spit	*çuh
split	*we'ʔk
split, give birth	*po'ʔ
spread out	*to'ʔk
steal	*nu'o'm
stop	*te'ñ
strain, filter	*pa'ʔ
stretch out	*tʌ'm
stretch one's skin	*'ʔoks
succeed	*wa'ŋ
suck	*tu'ʔt
suck (as a baby), kiss	*çuç
suffer	*ya'açá'
swell	*şik
sweep	*pet
swim	*pu'o'n
take a walk	*ho'y
take out	*top
take out fish with a net	*mak
tell stories	*may
think	*hʌ's
test	*kips
throw	*paç
tie	*çen
tie up	*mek
tire	*so'ʔps
toast	*'aŋmú'ç

## Verbs—Continued

touch	*çʌk
touch lightly	*piñ
tremble	*yʌ'o's
turn, return	*se't
twist	*wi'ʔi
untie	*wih
vomit	*'ʔʌç
walk	*wiñ
wash	*çe'ʔ
weave	*tak
whistle	*su's
work	*yo'sá'
wound	*'akko'o'wá'
wrestle	*pak

## Substantives

a little	ʔúsaŋ
a little while ago	ma'ʔk
above	yúkmʌ
agave fiber (Sp. "ixtle")	náwiñ
aguardiente	ʔóho
alligator	úšpiñ
also	ʔéya
also	meš
angry	çó'ʔi
ant	pókpok
(an) ant (Sp. "arriero")	núku
armadillo	naç
armpit	šákʌ
atole	ʔúnu
aunt	çʌçʌ
back (between shoulders)	tú'ʔñi
bamboo (Sp. "otate")	ʔóhwiñ
banana	sá'miñi
basket	kó'oŋ
basket, large type	pó'ʔpo'ʔ
bat	tʌ'ši
bean	sʌk
beard	wí'ši
bed	çe'ʔs
big	mʌh
bird	hon
(a) bird (Sp. "zenzontle")	ʔámay
birthmark	çúktiñ
bitter	tam
black	yʌk
blanket	çúhmi't
blood	nʌ'ʔpiñ
blouse	ʔása
blue, green	çu's
bone, seed	pak
bow	píkši
breast, teat	núnu
brother-in-law	nʌ'mʌ
butterfly	méme

<i>Substantives—Continued</i>	<i>Substantives—Continued</i>	<i>Substantives—Continued</i>
camote..... mAn	godmother..... ?óko	much..... ?ága
canoe..... ?á·ha	good, pretty, nice..... wA·	much..... há?yaη
cattle, bull..... šiš	gopher (Sp. "tusa")... tA?pič	mud..... tú?tA
certain..... mop	grass..... s6·ti	mushrooms..... nóno
certain..... núma	grass..... pAm	name..... náyi
chest..... éókwiñ	griddle (Sp. "comal")... ?ágaη	narrow..... wáyay
chick..... íáka	guava..... pátaη	navel..... tú·no
chicken..... píyu	gulley (Sp. "barranca") ?aηháka?	near..... nóko
chief..... ?aηhag6?yi	gum (Sp. "chicle")... ná?a	near..... t6·mi
child..... éA·ši	hair..... way	neck..... kAnka?
chile..... níwi	hand..... kA?	nest..... pé?ni
circle, disk..... wóyo	happy..... máymay	new..... máni
cloud..... ?úksA	hawk..... táhpi	night..... éu?
cockroach..... tAkéi	head..... k6·bak	nixtamal..... m6?ši
cold..... súksuk	head tumpline (Sp. "mecapal") ?ámiš	no..... da
cold..... págak	heel..... éÁhéA	nose..... kf·ni
cold mist..... maK	(an) herb (Sp. "quelite")... éÁpa	now..... sA?Ap
incense (Sp. "copal")... p6·ma	here..... ya?m	oak..... soh
corpse..... éu?e	heron..... wóhno	old..... péka
cotton..... pí·ki	hiccough..... tú?ga	owner..... ?6·mi
cradle..... éíéa	honey..... éñu	outside..... ?aηsÁkma
crawfish..... ?éši	honeycomb..... ?6kw6η	palm..... súyat
crazy..... ku?Áši	horn..... wa·η	plain..... noη
crowd..... píhaη	horsefly... pí·ñuh	paper..... t6to
custard apple..... yá·íi	house..... tAk	path..... tuη
daughter-in-law..... sá·ki	hummingbird..... túčti	patio..... ?áηka?
deaf-mute..... ?úma	hunger..... yú?u	penis..... tútu
deep..... h6hma	intestines..... pí?u	pig..... y6ya
deer..... mí?a	jaquar (Sp. "tigre real") tenát	pigeon..... ?ákši
dream..... mawíñ	jealous..... náha	pinole..... p6?íi
dust..... pótpot	joint, knee..... n6?so	plain..... noη
ear..... tá·éAk	later..... sábuγ	post..... kom
earth..... nas	liver, spirit..... é6koy	pot..... sú?uη
egg..... ká?npu	lizard, large variety... pá·éi	pozole..... wáyí
face..... wíñpak	load..... éA·wi	pus, (a) boil..... pí?ka
faded..... póha	loft (Sp. "tapanco")... kok	rabbit..... k6·ya
father..... há·tuη	long ago..... wíñAk	rain..... tuh
feces..... íñ	lung..... pípuúsu	rattle..... éu·m
fence..... tá?ñi	macaw..... ?á·nu	raw..... é6ko
field grass (Sp. "zacate") mu?k	machete..... té·pu	red..... éÁbaé
finger nail, claw..... kÁéAs	maid n..... w6·ni	remedy..... éoy
fire..... húkta	maize..... mok	rock (Sp. "peña")... téhah
firewood..... kÁ·pi	maize for seed..... ?úhgun	root..... íéAk
fish..... tA?pa	man..... pá·šiñ	rubbish..... pí·éi
(a) fish (Sp. "mojarra") é6·wi	many..... wáfi	salt..... kána
flea..... píštAk	meat..... máyi	sand..... p6?oy
flower..... móya	middle, in the..... mÁhuma	sandals, Pleiades... kA?ak
fodder..... so?k	milpa..... kÁ·ma	scar..... sas
fog..... ?6ma	minnow..... táhwiñ	sharp..... éú·pa
foot, leg..... puy	mirror..... té·skat	shirt..... y6?íi
frog, toad..... nak	monkey..... ?ú·éu	shrimp..... éas
fruit..... tam	moon..... póya	sibling..... tá·wa
(a) fruit (Sp. "pitahaya") núčti	mother..... ?á·pa	skin..... náka
fur, feather..... pak	mountain..... k6·éAk	skirt..... t6kši
gift..... šá·ha	mouth..... hap	sky, fiesta..... saη
ghost..... éA?yi		small..... šútu
		smallpox..... núku?
		snake..... éa·ñ
		snail..... súti

## Substantives—Continued

<i>snail, large variety</i> _____	šó·ki
<i>soft</i> _____	pon
<i>son</i> _____	mának
<i>son-in-law</i> _____	máʔat
<i>spindle whorl</i> _____	ší·ku
<i>squash</i> _____	pá·suŋ
<i>squirrel</i> _____	kúʔnki
<i>stone</i> _____	ʃaʔ
<i>stone wall</i> _____	táʔni
<i>strong</i> _____	pá·mi
<i>stupid</i> _____	ʔáksa
<i>sun, day</i> _____	háma
<i>sweet</i> _____	páʔak
<i>swift</i> _____	pámi
<i>tail</i> _____	tuʔé
<i>tall, long</i> _____	yágaé
<i>tarantula</i> _____	ʔá·mu
<i>that</i> _____	peʔm
<i>thick</i> _____	táʔaé
<i>thin, shallow</i> _____	čéhče
<i>this (one)</i> _____	yáʔp
<i>tobacco</i> _____	éá·wi

## Substantives—Continued

<i>tongue</i> _____	toé
<i>tooth</i> _____	táé
<i>tortilla</i> _____	ʔá·ni
<i>tortoise</i> _____	íú·ki
<i>town</i> _____	a·tétbet
<i>tree</i> _____	kuy
<i>tree cotton</i> (Sp. “po- chote”)	pištín
<i>tree gourd</i> (Sp. “ guaje”)	pok
<i>tree gourd</i> (Sp. “ jícara”)	hé·pe
<i>trousers</i> _____	nókkuy
<i>turkey</i> _____	túʔnuk
<i>turtle</i> _____	íúki
<i>twins</i> _____	mé·či
<i>uncle</i> _____	ʔá·či
<i>urine</i> _____	éem
<i>very, much</i> _____	éam
<i>vine</i> _____	éay
<i>vulture</i> _____	núʔpu

## Substantives—Continued

<i>waist</i> _____	muh
<i>wall</i> _____	méʔši
<i>warm</i> _____	hókoš
<i>wasp</i> _____	wéʔnak
<i>water</i> _____	naʔ
<i>water fall</i> _____	táʔksa
<i>wax</i> _____	náyi
<i>(a) well</i> _____	mú·ta
<i>whirlwind</i> _____	súkum
<i>white</i> _____	pópo
<i>wildcat</i> (Sp. “tigre”)_____	kaŋ
<i>wind</i> _____	sáwa
<i>wing</i> _____	šah
<i>witchcraft</i> _____	kutáʔči
<i>woman</i> _____	yó·mo
<i>wood tick</i> _____	pá·nák
<i>worm</i> _____	éúʔkiñ
<i>year</i> _____	ʔám̄tu
<i>yellow</i> _____	púʔué
<i>yes</i> _____	ha
<i>yesterday</i> _____	matákk











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