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By

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10 INTRODUCTION

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12 The Genetic and Geographical Position of Tzeltal

Tzeltal is a member of the Mayan family of languages, which includes about twenty other languages in Mexico, Guatemala, and British Honduras. It is spoken by about 100,000 Indians living in the State of Chiapas, Mexico. Perhaps 30 percent of these speak some Spanish.

Tzeltal is spoken in the following Indian towns, each of which is a distinct corporate entity:

Pinola (Villa las Rosas)

Aguacatenango

Amatenango

Chanal

Oxchuc

San Martín Abasolo

Tenejapa

Cancuc

San Carlos Altamirano

Sibacá

Guaquitepec

Tenango

Sitalá

Bachajón

Chilón

Tayalón

Petalcingo.

It is also spoken in Ocosingo, where the majority of the population speaks Tzeltal, but where there is no Indian civil-religious hierarchy. It is also spoken in several settlements

which are politically parts of towns speaking different dialects of Tzeltal.

The geographical extent of Tzeltal was formerly greater, including towns which now speak Tojolabal, a related language, towns where now only Spanish is spoken, and one town the site of which is now uninhabited. On the other hand, Tzeltal speakers are now expanding into the jungle which lies to the east of their territory and which was formerly more heavily populated by Lacandón Mayas, speakers of a related language, of whom only about 200 survive at present. The number of speakers of Tzeltal has probably never since the Conquest been greater than it is now.

Each of the towns listed above has a separate dialect which can be defined by a complex of linguistic and cultural features. Initial attempts have been made to define dialect regions on the basis of purely linguistic features, using the methods of dialect geography. The writer's tentative classification of Tzeltal dialects is as follows:

- a) Southern Tzeltal: Pinola, Aguacatenango, Amatenango
- b) West Central Tzeltal: Tenejapa, Cancuc
- c) East Central Tzeltal: Chanal, Oxchuc, San Matín Abasolo
- d) Eastern Tzeltal: San Carlos Altamirano, Sibacá,
Ocosingo
- e) Northern Tzeltal: Guaquitepec, Tenango, Sitalá, Bachajón,
Chilón, Yajalón, Petalcingo.

The present study is a description of the Aguacatenango dialect of Tzeltal. Aguacatenango is a nuclear

town of about 1200 inhabitants, of whom about half have some knowledge of Spanish. The population has remained at about 1200 ever since the first time it was listed in census records, ca. 1620.

13 Format of the Grammar

This grammar contains the following chapters, in addition to the Introduction (10):

- 20 Phonemics
- 30 Morphophonemics
- 40 Grammar: Introduction
- 50 Derivation
- 60 Numerals
- 70 Inflection
- 80 Root Alternants
- 90 Syntax

20 PHONEMICS

21 Introduction and Definitions

The following definitions will be adhered to with respect to phones, phonemes, and allophones.

- a) The allophones of a phoneme are, (1) in complementary distribution or free variation with one another, (2) phonetically similar to one another.
- b) A given phone is always an allophone of the same phoneme, no matter where it occurs.

22 Tzeltal Phonemes22.1 Consonants (C)

p	t	č	č	k	ʔ
p̣	ṭ	č̣	č̣	ḳ	
b	d			g	
f		s	š		h
m	n				
	l				
	r				
	ř				
w			y		

22.2 Vowels (V)

i	u
e	o
a	

22.3 Stresses

ŵ	ŵ
---	---

22.4 Junctures

^ +

22.5 Contours (#)

, . ? !

23 Description of Segmental Phonemes by Features of
Articulation

- 23.1 /p t k/ voiceless fortis stops, aspirated
in some environments, unaspirated
in others
- a. /p/ bilabial
- b. /t/ apicodental
- c. /k/ dorsomidpalatal
- 23.2 /ʔ/ glottal stop (or 'catch'),
aspirated in some environments,
unaspirated in others
- 23.3 /p̚ t̚ k̚/ voiceless fortis glottalized stops,
aspirated in some environments,
unaspirated in others
- a. /p̚/ bilabial
- b. /t̚/ apicodental
- c. /k̚/ dorsomidpalatal
- 23.4 /t̪ ç/ voiceless fortis apical affricates,
optionally aspirated in some en-
vironments, unaspirated in others
- a. /t̪/ apicodental with rill spirant
release

- b. /č/ apicoalveolar with groove spirant release
- 23.5 a. /t̚/ voiceless fortis glottalized apical affricates, optionally aspirated in some environments, unaspirated in others
- b. /t̚/ apicoalveolar with groove spirant release
- 23.6 /f/ voiceless labial slit spirant; labiodental, optionally bilabial
- 23.7 /s/ š/ voiceless apical spirants, optionally aspirated in some environments, long in others, and in others neither
- a. /s/ apicodental rill spirant
- b. /š/ apicoalveolar groove spirant
- 23.8 /h/ nonsyllabic voiceless vowel with the same articulation as an adjacent vowel phoneme in the same syllable
- 23.9 /b d g/ voiced obstruents, stops in some environments and spirants in others

- a. /b/ bilabial; when a spirant may be long, or aspirated, or neither, depending on the environment
- b. /d/ apicodental
- c. /g/ dorsomidpalatal
- 23.10 /m n/ voiced nasal continuants, aspirated in some environments, long in others, and in others neither
- a. /m/ bilabial
- b. /n/ apicodental and dorsomidpalatal
- 23.11 /l/ voiced apicodental lateral continuant, aspirated in some environments, long in others, and in others neither
- 23.12 /r/ voiced apicoalveolar flap, aspirated in some environments, long in others, and in others neither
- 23.13 /r̥/ apicoalveolar trill; usually voiced, optionally voiceless
- 23.14 /w/ nonsyllabic high back rounded vowel, with additional features of aspiration, length, and rubbing, according to environment
- 23.15 /y/ nonsyllabic high front unrounded vowel, with additional features

- of aspiration, length, and rubbing,
according to environment
- 23.16 /u/ a lower-high back rounded voiced
vowel
- 23.17 /o/ a mean-mid back rounded voiced
vowel
- 23.18 /i/ a lower-high front unrounded
voiced vowel
- 23.19 /a/ a low non-front unrounded voiced
vowel
- 23.20 /e/ a mid non-back unrounded vowel

24 Suprasegmentals

- 24.1 Pitch phenomena have not been fully analyzed. The symbols for contours cover phenomena of pitch and terminal countours, and are all different from each other; it is probable that more phonemic entities would be recognized in an exhaustive analysis.
- 24.2 More than one primary stress may occur in a stretch between contours. Stresses become louder as the end of a contour approaches, so that the last primary stress is louder than the next-last, the next-last louder than the previous one, and so forth. The same holds for secondary stresses, which are always less prominent than neighboring primary stresses.

25 Conventions of Phonetic Symbology and Description

25.1 Definitions

- a) aspiration Aspirated release in free variation with voiceless gemination followed by voiceless echo vowel.
- b) syllable Every vowel is a syllable peak. Syllable divisions occur according to the following patterns:
1. /...VCV.../ [...V.CV...]
 2. /...VCC(C)V.../ [...VC,C(C)V...],
- where (C) may be zero, one, or more consonants.

25.2 Symbols

C	voiceless consonant
C ^h	aspirated consonant
C [·]	long consonant
Ċ	glottalized consonant
V	voiceless vowel
V ₁	echo vowel
V [·]	long vowel
V	very short vowel
ƒ	[ɸ] ^f [ɸ]
f	[f] ^f [ɸ]
h	non-syllabic voiceless vowel of same quality as voiced vowel in same syllable

[I U E \curvearrowright] are tense, but lower than [i u e o],
respectively

26 Allophones and Their Distributions

26.1 Voiceless Phonemes

Basic	#-V	V-C	V- +	V-#
Symbol.	V-V	V- $\hat{\alpha}$		
	C-V			
/p/ p } /t/ t } /?/ ? }	C	C	C	C ^h f C ₁ C ₁ V ₁
/k/ k	C ^h	C	C	C ^h f C ₁ C ₁ V ₁
/p'/ p' } /t'/ t' } /k'/ k' }	C	C	C	C ^f C ₁ C ₁ V ₁
/t ^s / t ^s } /t ^š / t ^š } /t ^s / t ^s } /t ^š / t ^š }	C	C	C	C ^f tCV ₁
/f/ f } /s/ s } /š/ š } /h/ h }	C	C	C	C ^f C ₁ C ₁ V ₁

26.2 Voiced Obstruents

Basic	#-V	V-C	V- ⁺	V-#			
Symbol	C-V	V- [^]					
		V-V					
St	Sp						
/b/	b	β	}	St	Sp	Sp [·]	SpSp ^f SpSpV ₁
/d/	d	δ					
/g/	g	γ					

26.3 Voiced Continuants

Basic	#-V	V- ⁺	V-#			
Symbol	V-C					
	V-V					
	V- [^]					
	C-V					
/m/	m	}	C	C [·]	CC ^f CCV ₁	
/n/	n					
/l/	l					
/r/	r					
/r̄/	r̄					
/w/	w					
/y/	y					

26.4 Vowels

	Extra Short	Short	Normal	Long	Glottal
/i/	ɪ̣	ɪ	i	i [·]	ɪ̣ [·]
/e/	ẹ	e	E	E [·]	ẹ [·]
/a/	ʌ̣	ʌ	a	a [·]	ʌ̣ [·]

26.4 Vowels (continued)

	Extra Short	Short	Normal	Long	Glottal
/o/	ɪ	ʊ	ɔ	o	ɔ̃
/u/	ʊ	ʊ	u	u	ũ

- a) Vowels are extra short when unstressed before a consonant following a stressed vowel.
- b) Vowels are short when unstressed before /ə/.
- c) Vowels are normal when, (1) unstressed before a consonant cluster or a vowel, before /+/ or /#/ , preceding a stressed syllable (unless following a stressed syllable), and when (2) stressed before a consonant cluster.
- d) Vowels are long when stressed before a single consonant, a vowel, or /#/.
- e) Vowels are glottal preceding glottalized consonants.

26.5 Stresses, Junctures, and Contours

- a) Stresses, junctures, and contours have certain phonetic features of their own. In addition, they determine certain allophones of certain segmental phonemes with which they occur.
- b) Every utterance begins with /+/ and ends with /./, /!/, or /?/.
- c)
 - (1) Vowels with stress are long if in an open syllable.
 - (2) Vowels are short and consonants normal before /ə/.
 - (3) Vowels are normal and non-stop consonants long before /+/.
 - (4) Stressed vowels are long and consonants aspirated before #.

27 Distributions of /b d g f ã y/ in Loans

27.1 Three types of speakers along the acculturated-conservative axis can be distinguished on the basis of the distributions of the above phonemes in loans from Spanish. I will call them 'acculturated', 'average', and 'conservative'.

/b/, /d/ All speakers have /b/ and /d/ initially and intervocally. Where acculturated speakers have /b/ after /m/ and /d/ after consonants, average and conservative speakers have /p/ and /t/, respectively.

/g/ All speakers have /g/ initially and intervocalically before /a/. Where acculturated and average speakers have /g/ initial and intervocalic before /e, i/ and in the environment V-C, conservative speakers have /y/. Where acculturated and average speakers have /g/ initially and intervocalically before /o, u/, conservative speakers have /w/. Where acculturated speakers have /g/ after consonants, average and conservative speakers have /k/.

/f/ /f/ is found in use only by acculturated speakers. Where acculturated speakers have /f/, average and conservative speakers have /hp/ intervocalically, /p/ elsewhere.

/ã/ /ã/ is used only by acculturated speakers. It occurs initially and intervocalically only. Where acculturated speakers have /ã/, average and conservative speakers have /r/.

/y/ after two consonants. Where acculturated speakers have /y/ after two consonants, average and conservative speakers have zero.

27.2 Examples

	Acculturated	Average	Conservative
'cow'	báka	báka	báka
'Saturday'	sábaro	sábaro	sábaro
'custom'	kostúmbre	kostúmpre	kostúmpre
'Sunday'	domíngo	domínko	domínko
'sou'	káldo	kálto	kálto
'earning'	gánár	gánár	gánár
'kerosene'	gás	gás	gás
'Michael'	migél	migél	miyél
'Peter'	pégro	pégro	péyro
'fault'	fálta	pálta	pálta
'representative'	hfyèról	hpyèról	hpyèról
'coffee'	káféh	kàhpéh	kàhpéh
'receipt'	řesíbo	resíbo	resíbo
'automobile'	káño	káro	káro
'permission'	lesénsya	lesénsa	lesénsa

28 Distributions of Phonemes in General

28.1 Limitations on Distributions

- a) No vowel may occur after any juncture.
- b) Geminate consonants do not occur.
- c) /h/ does not occur before contours.
- d) No more than one consonant may occur after a vowel before a juncture, except a sequence /n/ + affricate or sibilant.

- e) No native morph begins with more than one consonant preceding a vowel, except some onomatopoeic forms in C+r.
- f) /f/, /ř/, /d/, and /g/ occur only in loans from Spanish. They never occur before any juncture, or at the end of any morph.
- g) For monolingual speakers the occurrence of /f/ and/or /ř/ is extremely rare or nonexistent.
- h) For monolingual speakers the occurrence of /d/ and /g/ except after juncture and between vowels is rare or nonexistent.

28.2 Sequences of Phonemes

- a) All VV sequences may occur.
- b) /s/, /š/, and /h/ may be prefixed to most root morphemes, so that in native words initial clusters of /s/, /š/, or /h/ +C may occur in the environment #-V.
- c) Native root morphs end in V, C, or hC_n where C_n is /p t č k, p' t' č' t' k'/; suffixes begin with V or C. Most CC sequences, and many hCC sequences, occur between vowels.
- d) In loans from Spanish all or most of the clusters which are found in the Spanish models are taken over into Tzeltal. All initial clusters may be further prefixed with /s/, /š/, or /h/.

29 Paralinguistic Features

Like all languages, Tzeltal has a variety of paralinguistic features, vocal sounds which are not coded in the linguistic system. Among a great many others, the following are especially prominent in Tzeltal.

- a) falsetto
- b) rasp
- c) pitch perturbation
- d) rounding of /a/ to [ɔ] or [ɔ]

20A APPENDIX: Minimal Pairs

Minimal pairs are easy to find for most of the phonemic contrasts occurring in native morphs. Since most of the Spanish lexical items borrowed into Tzeltal are polysyllabic, it is not easy to find minimal contrasts among borrowed phonemes, or between native and borrowed phonemes. The contrasts can be established on the basis of slightly more complicated distributional criteria.

/p/ ≠ /p̣/	/hpís/	'one stone'
	/hp̣ís/	'I measure'
/p/ ≠ /b/	/spók/	'he washes'
	/sbók/	'his vegetable'
/p̣/ ≠ /b/	/hpal/	'one word'
	/hbal/	'my brother-in-law'
/b/ ≠ /w/	/bá/	'gopher'
	/wá/	'tortilla'
/t/ ≠ /ṭ/	/htúl/	'one man'
	/hṭúl/	'one drop'
/ɸ/ ≠ /ɸ̣/	/sɸák/	'he grabs'
	/sɸ̣ák/	'he mends'
/č/ ≠ /č̣/	/čín/	'pimple'
	/č̣ín/	'small'
/k/ ≠ /ḳ/	/kúš/	'he woke up'
	/ḳúš/	'painful'

/č/ ≠ /č̣/	/čám/	'nice'
	/čáṃ/	'he died'
/č/ ≠ /s/	/čúḳ/	'cornsilk'
	/súḳ/	'he washes'
/č̣/ ≠ /š/	/čán/	'snake'
	/šán/	'palm'
/s/ ≠ /š/	/súl/	'fish-scale'
	/šúl/	'he arrives'
/t/ ≠ /č̣/	/tám/	'it was picked up'
	/čám/	'nice'
/t/ ≠ /č̣̣/	/tám/	'it was picked up'
	/čám/	'he died'
/k/ ≠ /č̣/	/kól/	'he escaped'
	/čól/	'it was lined up'
/k/ ≠ /ʔ/	/sík/	'cold'
	/síʔ/	'firewood'
/ḳ/ ≠ /ʔ/	/hák/	'I answer'
	/háʔ/	'water'
/h/ ≠ /ʔ/	/hám/	'it opened'
	/ʔám/	'spider'
/m/ ≠ /n/	/stám/	'he picks it up'
	/stán/	'his ashes'
/l/ ≠ /r/	/špululét/	'bubbling'
	/špururét/	'fluttering'
/w/ ≠ /u/	/haláw/	'coney' (sub-minimal)
	/...snáu.../	'he spins thread'

/y/ ≠ /i/	/ʔáy/	'there is' (sub-minimal)
	/ʔai/	'particle'
/i/ ≠ /e/	/wilél/	'flying'
	/welél/	'fanning'
/e/ ≠ /a/	/htén/	'one level'
	/htán/	'my ashes'
/a/ ≠ /o/	/tán/	'ashes'
	/tón/	'stone'
/o/ ≠ /u/	/kót/	'my tortilla'
	/kút/	'I say'
/u/ ≠ /i/	/yúč/	'he drinks'
	/yíč/	'he takes'

30 MORPHOPHONEMICS

31 Introduction

Some morphemes have more than one phonemic shape. When these variant shapes can be accounted for in phonological terms, they fall under the general rubric morphophonemics.

Alternations in the phonemic shapes of morphemes correlated with their occurrence with certain other morphemes are treated in the grammar under the heading allomorphs or morphological alternants.

For some alternations either morphological or phonological conditioning can be invoked as the relevant factor, i.e., the case is ambiguous. In such cases the course which requires the fewest entities and the fewest statements is to be preferred.

Morphophonemics ideally accounts for all variations in the shapes of morphemes which are phonologically conditioned. The function and aim of morphophonemic analysis is to separate from each other phonological and morphological conditioning, and to reduce the number of allomorphs in the language.

Morphophonemes are symbols in terms of which morphs are written. Morphophonemic rules specify the phonemic representation of morphophonemes in terms of their occurrence with other morphophonemes, just as phonemics specifies the phonetic representation of phonemes in terms of their occurrence with other phonemes.

Certain alternations among the phonemes of a morpheme can be correlated with limitations on the co-occurrences of certain phonemes. Morphophonemic writing in such cases does not entail the setting up of any new symbols.

Phonological alternations which are not correlated with phonotactic limitations may be of two types, recurrent and unique. (Those alternations which are unique, i.e., which occur in only one morpheme, may be dealt with by a single statement for each, under the heading phonological variants in the grammar.)

For those alternations which are not the result of phonotactic limitations (i.e., which are not universal) but which are the result of phonological conditioning factors (whether recurrent or unique, but a fortiori if recurrent), it is necessary to set up symbols to stand for the alternation, although these symbols are not used in the phonemic writing of the language.

Morphophonemic symbols are of two kinds.

- a) Morphophonemic symbols which are the same as symbols used in the phonemic writing of Tzeltal are in at least some cases represented by the same symbol on the phonemic level.
- b) Morphophonemic symbols which are not also used in the phonemic writing of Tzeltal have more than one phonemic representations. (An exception to this rule is //B//, which is always /b/, as contrasted with //b//, which is sometimes /b/ and sometimes /ʔb/. //b// is chosen for the latter alternation because it is much more frequent

than //B// which is relatively rare.

Phonologically conditioned alternations which occur in only one morpheme are handled in two alternative ways (one of which can be ignored, as the reader prefers), in terms of morphophonemes, and in terms of phonological variants (phonologically conditioned allomorphs).

32 Definitions

- a) segment: a sequence of morphophonemes
bounded by space
- b) form: phonological material between
junctures (in this case // - // does
not count as a juncture)
- c) space and written junctures:

In morphophonemic writing all morphs and desinences are written with a space at each end. This space does not count as a written juncture (as used in the morphophonemic rules). It is not, however, merely a matter of convenience to enable the reader to recognize morpheme boundaries. The placement of the morphophoneme //+// (rule #1) is automatic, but it must be made in terms of spaces being present.

33 Morphophonemes

The ordering of lower-case symbols is articulatory, that of capitals, graphic.

33.1 Consonants (C)

p	t	ɸ	č	k,	p̣	ṭ	ɸ̣	č̣	ḳ,
ʔ,	b	B	d	g,	f	s	š	h	H
H,	m	M	n,	l,	r	ř,	w	y	Y

33.2 Vowels (V)

(V) \tilde{V} ; i e a o u, OE

33.3 Stresses

\acute{V} (acute stress), \grave{V} (grave stress), \hat{V} (circumflex stress)

33.4 Junctures

^ (caret juncture), - (hyphen juncture), + (plus juncture), ~ (compound juncture)

33.5 Contours

, (comma) . (period) ? (interrogation) ! (emphasis)

33.6 Reduplications

$C_1 C_2, V_1, R$

33.7 Cover Symbols

V = a vowel

C = a consonant

S = s \acute{s} \grave{s}

\check{S} = š č ě

= , . ? !

C_n (rule #6) any given consonant

34 Morphophonemic Rules34.1 Application

- a) Rule #1 must be applied first. All other morphophonemic rules have the same status in that they may be applied in any order. After all the applicable rules have been applied, a correct phonemic representation is the result.

- b) Those morphophonemes for which no rules are given are represented by the same symbols on the phonemic level.
- c) Rules preceded by * represent alternations occurring with one morpheme only. They are also treated in the grammar as cases of phonologically conditioned variants. The reader may choose for himself which style of presentation seems more economical.
- d) The rules are listed according to the order of symbols in the chart listing the morphophonemes.

34.2 Rules

(1) Placement of //+//.

//+// is a morphophoneme without morphemic content.

Its occurrence is completely predictable. It must, however, be written in the morphophonemic transcription before certain of the morphophonemic rules can operate. Given the sequential listing of morphs written morphophonemically, //+// is added according to the following rule.

//+// is written wherever there is a space (and no other juncture) preceding a stressed syllable, except that all segments consisting of a single consonant which precede the stressed syllable are included with it and follow //+//.

//lôm háy te.k kù? -e#// 'my shirt is very thin'

//lôm+háyte.kkù?-e#//

/lôm+háyte.kkù?é#/

//+// --- :/+/

(2) // (V) //

The parenthesized vowel is /Ø/ if the preceding segment(s) up to and including a stressed vowel is polysyllabic. Elsewhere, the enclosed vowel is present.

//ták uY (a)wan// /tákuwan/ 'advise'

//mil (a)wan// /milawan/ 'kill'

(3) // \tilde{V} //

a. is /i/ if the immediately preceding vowel is

//o,u//.

//bút \tilde{k} Vh// /bútkih/ 'collapse'

b. is /o/ if the immediately preceding vowel is

//a,e,i// and the following consonant is //w//.

//nà(\tilde{V})weh// /náoweh/ 'build houses'

c. is /u/ if the preceding vowel is //a,e,i//,

and the following morphophoneme is not //w//.

//wàl \tilde{k} Vh// /wàlkuh/ 'tip over'

(4) // E //

a. is /o/ if the preceding form is monosyllabic.

// \cdot y²ič¹ OE h// /yí¹ch/ 'he has taken'

b. is /e/ if the preceding form is polysyllabic.

// \cdot ymàl H iY OE h// /smàliyeh/

'he has waited'

(5) //a,e,o// (unstressed) ---// -// : /Ø/

// \cdot y² óra -il// /yóril/ 'its time'

- (6) //Cn// --//Cn// : /θ/ if no written juncture intervenes, unless Cn is //k,y// preceded by //^//.

//^k čúht tik// /hčúhtik/ 'our bellies'

- (7)* //k// //^-h// : /θ/ (*)

//^-C^{-?},H// : /h/ (*)

--- : /k/ (i.e., ^ -?,H)

//^k hòl// /hól/ 'my head'

//^k čúht// /hčúht/ 'my belly'

- (8) a. //ʔ// //~ C//__ : θ unless a written juncture intervenes.

//^k ʔəʔtan// /kóʔtan/ 'my heart'

//túš~ʔák// /túšak/ 'onion'

- b. //ʔ₁...ʔ₂// //(space)___b// : /ʔ₁/
//C___b// : /ʔ₂/

//ʔəʔbal// /ʔəbal/ 'cough'

//k ʔəʔbal// /kóʔbal/ 'my cough'

- c. //ʔ// --- : /ʔ/

- (9) //C-ʔ// is /C/ when C = //p t č k//

//ʔúč-ʔuč// /ʔúčuč/ 'a lot'

//lèk-ʔay// /lékay/ 'it is good'

- (10) //b// --- : /ʔ/

//h tàB// /htáb/ 'twenty'

- (11) //b// ___//+,#// : /ʔb/

--- : /b/

- //[^]y ʔàʔtahi^b+// /yáʔtahiʔb/ 'his tool'
 //ʔàʔtahi^b a// /ʔáʔtahi^ba/ 'tool'
- (12) //n// //b// : /m/
 //màn bah// /mám^bah/ 'to buy'
- (13) a. //s// //š// : /~~Q~~/
 //s šát// /šát/ 'he splits'
- b. //s...^ˇS// /š...š/
 //s wàkaš// /šwákaš/ 'his cattle'
 //s čùn// /ščún/ 'he obeys'
- c. //s...^ˇS... s// /s... S... s/ with no inter-
 vening written juncture.
 //s kùš H es ik// /skúsesik/ 'they revive'
- d. //s// --- : /s/
- (14) //š// //S// in the following syllable with no
 intervening written juncture except //[^]// : /s/
 //š[^]pàsH// /spás/ 'it is made'
- (15) //h//
- a. //s,š// : /~~Q~~/ if no written juncture other
 than //[^]// intervenes.
 //š[^]hìl// /šíl/ 'he remains'
- b. //#// : /~~Q~~/
 //làn#// /lá#/ 'he died'
- c. --- : /h/

(16) //H//.

//CH// a. /C/ when C = //ʔ b s š h m n l w y//

b. /hC/ when C = //p t ʃ č k p̣ ṭ ʃ̣ č̣ ḳ//

//pàs H// /pás/ 'be done'

//nùp H un// /núhpun/ 'be married'

(17) //H// //~,C//__ : /θ/ with no intervening written juncture.

//^k Hâʔ al// /káʔal/ 'my water'

//pàmal~Hâʔ// /pámalaʔ/ 'stagnant water'

--- : /h/

//Hòʔ eb// /hbʔeʔb/ 'five'

*(18) //M//

a. is /n/ if nearest preceding consonant is

//p p̣ w b m//.

//kòmeM// /kómen/ 'having remained'

b. --- : /m/

//híleM// /hílem/ 'having remained'

*(19) //w//

a. //^__C^{-ʔ,H}// : /θ/ (*)

//a.w čič el// /ačičel/ 'your blood'

b. --- : /w/

*(20) //y//

a. //^__C^{-ʔ,H}// : /š/ if the following form contains

//Ṣ// with no intervening written juncture (*)

//y... Š... S// /ṣ... S... s/

//y... Š// /š... Š/

//[^]y wákaš// /šwákaš/ 'his cattle'

: /s/ otherwise, including before //y//. (*)

//[^]y yòm// /syóm/ 'he gathers'

b. --- : /y/

(21) //Y//

a. _//C// : /ø/

//[^]k pòš taY tik// /hpšštatik/ 'we cure'

b. //C//_ : /ø/

//hič Ya.š.bòn #// /hiča.šbón#/ 'thus I go'

c. -//i// : /ø/

//a.w pòš taY ik// /apóštaik/ 'ye cure'

d. --- : /y/

//pòš taY el// /póštayel/ 'curing'

(22) //Vt// /Vht/ if the consonant or cluster preceding
//V// is preceded by a space (or //+///).

alternatively,

//[˘]Vt// /[˘]Vht/

//[˘]k tà tik// /ntáhtik/ 'we find'

//[˘]mò ta.wiç#// /móhta.wiç#/ 'he climbed the
mountain'

(23) //V̇//

a. is /V̇/ if the form is phrase final and
includes a //-///.

//kristyáno-etik#// /kristyànetik#/ 'people'

b. is /V̇/ if the form is phrase final and has no
//-///; or if the form is phrase medial.

//sábaro#// /sábaro#/ 'Saturday'

(24) The final syllable of a form has phonemic primary stress when the form precedes a contour (//, . ? !//), unless a vowel not more than two syllables earlier has //V̂// and no juncture intervenes.

(25) //V̂//

a. is zeroed after /ʔ/ in an immediately preceding syllable

b. is /V̂/ if the form is not phrase final.

//bàkét// /bákét/ 'flesh'

c. is /V̂/ if the form is phrase final and is not on the last vowel of the contour.

//bàkét#// /bákét#// 'flesh'

d. if V̂ is the last vowel of the phrase, rule #24 applies.

//ʔày#// /ʔáy#// 'there is'

(26) //V̂//

a. is /V̂/ if the form is phrase medial.

//lôm túlan Ya.š. ʔàʔteh#// /lôm+túlana.šʔàʔté#//

'he works very hard'

b. is /Ø/ if the form is phrase final and disyllabic.

//ʔàn lôʔel#// /ʔántloʔél#// 'he fled'

c. is /V̂/ if the form is phrase final and monosyllabic (= rule #24)

//híč#// /híč#// 'thus it is'

- (27) The second vowel of a disyllabic form whose first vowel has $//\hat{V}//$ is $/\text{Q}/$ if the form is phrase medial, and $/\check{V}/$ if the form is phrase final.

$//\text{?àn l\hat{o}^?el \text{?a}\#\#\ //$ $/\text{?án+l\hat{o}^?l+\text{?á}\#\#\ //$ 'he fled'

$//\text{?àn l\hat{o}el}\#\#\ //$ $/\text{?án+l\check{o}^?él}\#\#\ //$ 'he fled'

- (28) $//\wedge//$

a. $+C __ : /Q/$

b. $\wedge __ : /Q/$

$//\text{Ya} \wedge \text{š} \wedge \text{b} \wedge \text{òn} \wedge \text{ta} \wedge \text{k} \wedge \text{nà}\#\#\ //$

$//\text{š} \wedge \text{wòhwun}\#\#\ //$ $/\text{šwóhwun}/$ 'barking'

c. $--- : /\wedge/$

A consequence of this rule is that monosyllabic unstressed segments between $//\wedge//$ and a preceding space are enclitic to the preceding segment if any.

$//\text{híč} \text{Ya} \wedge \text{š} \wedge \text{bòn}\#\#\ //$ $/\text{híča} \wedge \text{šbón}/$ 'thus I go'

- (29) $//-//$ $--- : /Q/$

- (30) $//\sim//$ $--- : /Q/$

- (31) $//C_1//$ is the consonant preceding the preceding vowel.

$//\text{š} \wedge \text{wòh} C_1 \text{un}\#\#\ //$ $/\text{šwóhwun}/$ 'barking'

- (32) $//C_2//$ is the consonant following the preceding vowel.

$//\text{š} \wedge \text{pùr} V_1 C_2 \text{et}\#\#\ //$ $/\text{š} \wedge \text{pùruret}/$ 'fluttering'

- (33) $//V_1//$ is the immediately preceding vowel.

$//\text{k} \text{é}^? V_1 \text{tak}\#\#\ //$ $/\text{h} \text{é}^? \text{itak}/$ 'my dogs'

(34) //R// repetition of the preceding morph, minus stress.

//ná R tik// /nánatik/ 'settlement'

35 Vowel Reduction and Speech Style: An Additional Morphophonemic Rule

Four styles of speech, one 'formal', and three 'informal', are correlated with preservation or change of certain types of unaccented vowels within forms. The style in which no change of the vowels in question occurs is called 'formal' and the styles in which changes occur are called 'informal'. The vowels in question are called 'reducible vowels'.

The four styles of speech are:

1. formal speech, in which reducible vowels are preserved unchanged;
2. casual speech, in which reducible vowels are replaced /a/ or /e/;
3. assimilative speech, in which reducible vowels as well as some other vowels are replaced by echo vowels;
4. clipped speech, in which reducible vowels are zeroed wherever possible, and otherwise generally replaced by /e/ [ə].

The sociological concomitants of 'formal' and 'informal' speech styles are not fully determined, but all four styles of speaking may be found among the members of a single family or household.

Assimilative speech seems to be used by unmarried

children who are living at home and (in the case of males) not yet economically independent.

Clipped speech is characteristically used by men between the ages of 18 and 40 who are married or economically independent of their parents.

Formal and Casual speech are two sides of a single coin, the former being used in contexts of elicitation and speech-making, and the latter used in ordinary conversation. Formal-casual speech is used by older men, but also by men as young as 30, and by most of the married women I heard.

If a form with an accented vowel has three or more syllables, the vowel following the stressed vowel is subject to reduction if it is followed by at least one more vowel before a juncture intervenes and if it is followed by not more than two consonants. The number of consonants preceding the reducible vowel is not relevant. The morphophoneme // -// enters into the determination of reducible vowels, since it has the following functions.

1. //a,e,o// are zeroed before it.
2. vowels following it are never reduced.
3. segments following it belong to the same stress group (or 'form') as segments preceding it.

Reduction takes the following forms:

- a) if the reducible vowel is followed by one consonant.
 - (1) //V// /e/ in casual speech
 - (2) //V// /a/ in casual speech
 - (3) //V// /V₁/ in assimilative speech
 - (4) //V// /ə/ in clipped speech.

- b) if the reducible vowel is followed by two consonants, or if a geminate consonant would result, change #4, zeroing, cannot occur, and clipped speech has change #1.

//ya.k tòh u tes// 'I fix'

formal	/ya.htóhutes/
casual	/ya.htóhates/, /ya.htóhetes/
assimilative	/ya.htóhotes/
clipped	/ya.htóhtes/

36 Distributions of Morphophonemes

36.1 Morphophonemes and Rules of Unique Occurrence or Application

#4 a)	//œ//	/e/~o/	occurs only in the morpheme [œh] 'transitive active perfective'
#7 b)	//k//	/k/~h/	occurs only in the morpheme [k] 'first person'
#17 c)	//M//	/m/~n/	occurs only in the morpheme [eM] 'perfect intransitive participle'
#18 d)	//w//	/a/~a.w/	occurs only in the morpheme [a.w] 'second person'
#19 e)	//y//	/s/~y/	occurs only in the morpheme [y] 'third person'

The alternative to handling these unique alternations by morphophonemic rules is to describe them as cases of phonologically conditioned allomorphy.

36.2 Morphophonemes of Juncture

a) //ˆ// occurs in certain prefixes and particles.

//ˆk//	'first person'
//ˆa.w//	'second person'
//ˆy//	'third person'
//Yaˆ//	'present tense'
//šˆ//	'intransitive incomplete'
//taˆ//	'in, at, to, from'
//âhˆ//	'agent'

b) //-// occurs in certain suffixes and particles, and in certain root-root phrase constructions.

//-iš//	'already'
//-etik//	'plural'
//-on//	'first person singular'
//-at//	'second person singular'
//-otik//	'first person plural'
//-eš//	'second person plural'
//-ik//	'third person plural'
//-e//	'farther'
//-i//	'nearer'
//-il//	'kind of'
//-a//	'transitive imperative'

c) //-// occurs between the members of certain compounds.

Its occurrence is sometimes optional.

36.3 Morphophonemes of Stress

- a) Every root morpheme has one of the three morphophonemic stresses // \acute{V} //, // \grave{V} //, or // \hat{V} // on one of its syllables.
- b) // \acute{V} // most frequently occurs on loans from Spanish, but occurs on a few native words as well. Not all loans from Spanish have // \acute{V} //.
- c) // \hat{V} // is the most frequently occurring stress, being found on most native root morphemes and many loans from Spanish.
- d) // \hat{V} // is found on a few particles, and a few syntactic words, which, although morphemically complex, function as particles.
- e) Most affixes have no morphophonemic stress.

40 GRAMMAR: INTRODUCTION

41 Definitions

For the purposes of this description, the following definitions will be adhered to with respect to morphs, morphemes, and allomorphs.

- a) The allomorphs of a morpheme are:
 - (1) in complementary distribution or free variation with one another;
 - (2) have the same or at least non-contrastive meaning;
 - (3) are similar in phonological shape with one another;
 - (4) have typologically similar distributions.
- b) All the phonemes, or morphophonemes, (except //+//) of a stretch of speech should be assignable to discrete morphs.

42 Alternants

There are three types of morphologically conditioned variation in the shapes of grammatical units.

- a) Roots, which are by definition monomorphemic, have as alternants allomorphs.
- b) Desinences, which are sometimes monomorphemic and sometimes polymorphemic have as alternants alloforms.
- c) Certain syntactic words, which may or may not be morphemically complex, have alternants conditioned by their position, or function, or occurrence with other words in a phrase or clause. These alternants are also called alloforms.

Alternants of desinences ('desinential alternants') are described for each as they are listed according to their function, sections 50 and 70.

Alternants of roots are described in section 80, "Root Alternants."

Alternants of syntactic words are discussed in the "Syntax," section 90.

43 Types of Morphemes

There are two types of morphemes, roots and affixes. Roots are the nuclei of grammatical constructions and in general can occur as stems without derivational material. Affixes are satellites to roots in grammatical constructions and never occur alone.

44 Roots

In order to define the classes of roots, it is necessary to discuss briefly the stem classes. Stem, inflection, and derivation are defined further on in this chapter, under "Affixes," section 45.

There are six stem classes defined by unique sets of inflectional affixes (desinences) with which they may occur. The unique set for each stem class may be increased by one to four affixes which define subclasses of the stem classes. Although the total set for each stem class is a unique configuration, certain subsets of the affixes are shared by more than one stem class.

The stem classes are:

nouns	n
adjectives	aj
transitive verba	tv
intransitive verbs	iv
affect verbs	av
inflectible particles	ip.

There is an additional class, particles, which are not inflected. Particles are stems, radical or derived, which function as words in syntactic constructions, but which are not inflected.

A stem is anything that may occur with the inflectional affixes of a single stem class. A stem consists minimally of a root and maximally of a root plus several derivational affixes.

Stems are formed by affixation, reduplication (reduplication is handled morphophonemically as a type of affixation), juxtaposition (compounding), and combinations of these.

A multivalent stem is one that may occur with the inflectional affixes of more than one stem class without change in morphemic constituency. Multivalent stems are few. Most of them occur with the inflectional affixes of two form classes. Most are also radical stems. Since they are few, and there is no formal basis for setting up morphemes of zero-derivation, such roots are set up as multivalent, e.g.,

a) [čây]	T	'to lose'
	I	'to be lost'
b) [kâhk]	N	'fire'
	A	'hot'
	I	'to get hot'
	T	'to cut'
c) [kòk]	I	'to be cut'
	T	'to sweep'
d) [mès]	T	'to pour out'
	I	'to gush forth'
e) [pùl]	T	'to put out/extinguish'
	I	'to go out/be extinguished'
f) [tùp]	N	'bow'
	T	'to stretch a string'
g) [tim]	N	'snare'
	T	'to snare'
h) [yâk]	T	'to drink'
	I	'to drink'
	N	'louse' (= (blood)drinker)

In all stem classes (except affect verbs, which are always derived) are found both radical and derived stems. There are seven classes of roots:

N	noun root
A	adjective root
T	transitive verb root

P	positional verb root
I	intransitive verb root
Pi	inflectible particle root
Pn	particle root.

When roots function as stems, they belong to the following stem classes:

N > n	noun stem
A > aj	adjective stem
T > tv	transitive verb stem
P > tv	transitive verb stem
I > iv	intransitive verb stem
Pi > ip	inflectible particle
Pn > p	particle.

P roots are distinguished from T roots in terms of the derivational desinences with which they may occur. While virtually all of the T roots function as tv stems, somewhat fewer than all of the P roots do.

45 Affixes

Affixal morphemes occur--singly or in combinations with one another--as desinences.

45.1 Desinences

Desinences are affixes or combinations of affixes which function as units in stem and word formation. In the case of stem formation, the affixation of a derivational desinence to a root or stem always yields a stem, i.e., something to which inflectional affixes can be added. In the case of word formation, the

affixation of an inflectional desinence to a stem always yields a full-fledged morphological word, i.e., something which functions as a unit in syntactic constructions. A morphological word may not be further affixed.

Since desinences function as units, they are more or less readily isolable and show both phonologically conditioned variants and morphologically conditioned alternants. Many desinences are further segmentable into recurrent partials with similarity of form and meaning to parts of other desinences. The total number of desinences (which form a rather large but closed set) can be reduced to a somewhat smaller closed set of affixal morphemes (or elements).

The segmentation of desinences into affixal morphemes, however, does not correspond to any productive form of morphological construction. It is therefore impossible to state whether the variant forms of the affixal morphemes are the result of phonological or morphological conditioning. On the other hand, variant forms of desinences are usually unambiguously attributable either to phonological or to morphological conditioning. That is, although they are often morphemically complex, they act like unit morphemes. Since they are not always so, the variant forms of a desinence cannot properly be called its "allomorphs". The variant forms are called alloforms, and the term

alternant is used for both allomorphs and alloforms of desinences. Thus, roots have allomorphs and desinences have alloforms.

When a desinence is morphemically complex, it consists of two or three morphemes in immediate constituency with one another. Bi- and trimorphemic desinences are treated as units for purposes of stating derivational and inflectional morphology since derivation is defined as: 'the adding of derivational material to roots and stems so as to produce stems', and inflection is defined as, 'the adding of inflectional material to stems so as to produce words'.

The first morpheme of a polymorphemic desinence is not in immediate constituency with the preceding morpheme nor does it form a stem or word.

A derivational desinence may or may not change the stem class of the root or stem to which it is affixed. Derivations which do not change stem class may be followed by other derivations which do in fact change stem class. An inflectional affix is never followed by a derivational affix.

Derivations which do not change stem class nevertheless usually change lexical meaning.

/wɪnik/	n	'man'
/wɪnikil/	n	'manliness'

Derivational desinences which do not change stem class are the following:

{bey}	(51) with tv	'indirective'
//ʔəl//	'to say it'	//ʔəlbe// 'to say it to someone'
{talan}	(49) with tv	'plural object'
//mil//	'to kill him'	//miltalan// 'to kill them'
{Vlan}	(50) with tv and iv	'repeated action'
//ʔuč//	'to drink it'	//ʔučilan// 'to keep on drinking it'
//hul//	'to arrive'	//hulilan// 'to keep on arriving'

These desinences also occur with virtually all the members of the appropriate stem classes, limited only by considerations of congruence.

Other derivational desinences occur with virtually all the members of the stem classes with which they may occur, but by contrast with the previous group they change the stem class. These are:

{awan}	(52) tv>iv	(characteristic/absolute)
{el}	(60) v>n	(gerund)
{em}	(93) iv>aj	(past participle)
{bil}	(94) tv>aj	(past passive participle)
{ot}	(93) tv>iv	(passive)

Stems formed with certain derivational desinences may optionally be derived by additional derivational material. Stems formed with other derivational desinences can not be further derived by additional derivational material. By definition, there are no

derivational desinences which are obligatorily followed by additional derivational material. Morphemes in derivational constructions which do not form a stem when taken with the preceding material are not derivational desinences, but affixal morphemes.

46 Canonical Shapes of Morphemes

T	roots	CV	lè	'seek'
		CVC	lòʔ	'eat fruit'
	one exception:		//ʔàʔi ~ʔàʔy~ʔàʔyi~ʔàʔbiy//	'to hear'
I	roots	CV	čì	'to grow'
		CVC	ʔòč	'enter'
		CVhC	ʔòhč	'contract'
P	roots	CV	čè	'leaning'
		CVC	mèl	'fixed'
N	roots	CV	nà	'house'
		CVC	lùm	'earth'
		CVhC	kàhk	'fire'
		CVV*		
		CVVC*		
		CVCV	páta	'guava'
		CVCVC	wínik	'man'
		CVhCV*		
		CVhCVC	màhtan	'gift'
		CVʔCVC	ʔòʔtan	'heart'
	one exception:		//ʔànc//	'woman'

* occurs with theoretically possible forms for which no examples have been found.

A	roots	CV	čá	'bitter'
		CVC	bòl	'stupid'
		CVV*		
		CVCV	poko	'used up'
		CVVC*		
		CVCVC	tàkin	'dry'
P	roots	CV	to	'yet/still'
		CVC	naš	'only'
		CVCV	màča	'who'
		CVCVC	kàlal	'until'
		CV?CVC	ya'tik	'now'

Affixes

prefixes	C	s	'third person'
	VC	ah	'agent'
	CVC	lah	'plural'
(infixes //H//)			
suffixes	C	t	'stem formative'
	VC	et	'intransitive'
	CVC	tik	'plural'

47 Tactics

This part of the grammar may be viewed as having two parts: morphology (50-80), which deals with the arrangements of affixes, and syntax (90), which deals with the arrangements of words.

* occurs with theoretically possible forms for which no examples have been found.

48 Morphology: Desinence Formation

48.1 There are thirty affixal morphemes which recur or occur with recurring partials such that they are segmentable. The remaining desinences, i.e., those which do not contain one of the thirty recurring affixes, are presumed to be monomorphemic, both because of their shape, and because they may not be segmented.

Segmentable desinences are analyzed at the place of their description in derivational or inflectional morphology, in terms of the thirty recurrent affixal morphemes. The remaining desinences are not segmented; __ indicates that they are not analyzable.

The meanings of the thirty recurrent partials are very general, although combinations of them into desinences usually have very specific meanings.

48.2 Desinence Formation: Recurrent Partial in Desinences

Plural

1. tik
2. ik
3. lah

Stem Formative4. t5. l6. β7. ʔ8. ɔ̃9. k10. ʔa?11. R12. Vm

13. (k)*

14. (Vh)

Substantival15. VnNominal16. Vb 'agent/instrument'17. Vh18. VlAdjectival19. em20. VlAbsolutive21. Vw22. omIntransitive23. Vy24. Vh25. Vn26. hAffect27. et 'inter-
mittency'Transitive28. Vn29. Vy

30. (es) 'causative'

* Forms in parentheses () are not themselves recurrent, but they occur with recurrent partials.

50 DERIVATION

51 Derivation by Affixation

51.1 Charts of Derivational Desinences

The following charts exhibit Tzeltal derivational desinences according to their positions and paradigmatic relationships. The positions of derivational affixes are based on their privileges of occurrence with other affixes of the same types, i.e., verbal, nominal, adjectival, etc. Thus, in the first position of verb derivation are found affixes which occur with verbal roots, but with noun stems which may be either radical or derived. Conversely, in the first position of noun derivation are found affixes which occur with nominal roots, but with verb stems which may be either radical or derived. There are four paradigms of derivation by affixation--verbal, nominal, adjectival, and particle.

51.2 Verb Derivation

	+1			+2	
	tv	iv	av	tv	iv
v root	p̃Vn	p̃Vh	C ₁ un	ṼmtaY	Ṽweh ₁
n stem	ʔ̃Vn	ʔ̃Vh	Ṽnah	in ₅	
or	č̃Vn	č̃Vh	Hawet	taY	
aj stem	k̃Vn	k̃Vh	et	es	
	ʔaʔah	ʔaʔah	V ₁ C ₂ et		
	Han	Hah	lahan		
	VY	V ₁ yin	lahet		
	lVY	Vh	k̃Vnah		
	lin	H ₁			
	an	ih ₂			
	in ₁	ah ₁			
	HC ₁ V ₁ n	anah			
	in ₂	ih ₂			
		in ₃			
		aw ₁			
		in ₄			
		mah			
		ah ₂			
		bah			
		omah			
		Ṽweh ₁			
		Vy			
		ub			

+3		+4		+5
tv	tv/iv	tv	iv	iv
talán	~Vlan	bey	awan	ot

51.3 Noun Derivation

-1		+1	+2
ah ₃	v stem	Vweh ₂	il
	n stem	Vwil	Vl ₁
	or	eh ₁	tikil
	aj stem	al	tik ₁
		mah	Vl ₂
		el	
		eh ₂	
		aw ₂	
		ohel	
		bal	
		ben	
		báil	
		leh	
		emal	
		ib	
		tahib	
		ab	
		Hil	
		ol	
		ikil	
	Vp		
	lal		
	al		
	ilal		
	ek		
	im		

51.3 Noun Derivation (cont'd)

-1		+1	+2
	v stem	am	
	n stem	et	
	or	ub	
	aj stem	Rtik	
		eb	
		hey	
		eh ₃	

51.4 Adjective Derivation

	+1	+2
roots and v stems	em	RH
	bil	
	V ₁ l	
	V ₁ htik	
	V ₁ lahben	
	V ₁ mtik	
	H V ₁ ltik	
	Rtik	
	Vl ₃	
	R	

51.5 Particle Derivation

	+1
roots	tik ₂
	yuk
	tik ₃
	H ₂

51.6

In the following sections, each derivational desinence will be listed separately according to the position it has in the derivational charts.

The following charts (51.7) assign a number to each affix and state which classes of stems and roots it may occur with, how (if at all) it is paired paradigmatically with other derivational desinences (see next paragraph), and which affixes it may be further derived with, other than those of universal occurrence.

Paradigmatic pairing means that whenever a given desinence occurs with a root or stem another given desinence of partially similar and partially different function and meaning will also occur with the same root or stem.

A unique constituent (uc) is a radical which does not occur as a freely-inflectible stem and does not occur with enough derivational desinences to establish its class, and often not in enough constructions to establish its meaning.

In the verb derivation chart, there is one desinence, $\{\tilde{V}weh_1\}$ (34), which occurs in both first and second suffix position.

51.7

Desinence #, Stem Class, and Position	Derived From	Name	Paradig- matic Relatives	Further Deriva- tions
1 tv + 1	P	p̃Vn	14	47,48
2 tv + 1	P	ʔ̃Vn	15	47,48
3 tv + 1	F	č̃Vn	16	47,48
4 tv + 1	P	k̃Vn	17	47,48
5 tv + 1	P	ʔaʔan	18	47,48
6 tv + 1	P	Han	19	47,48
7 tv + 1	P,T,N,A,uc	VY	21	47,48,34
8 tv + 1	T,P	CD { 1VY lin.		47,48,34
9 tv + 1	T			47,48,34
10 tv + 1	T	an		47,48
11 tv + 1	n	in ₁	23	47,48
12 tv + 1	uc	HG ₁ V ₁ n		47,48
13 tv + 1		in ₂	(29)	47,48
14 iv + 1	P	p̃Vh	1	---
15 iv + 1	P	ʔ̃Vh	2	---
16 iv + 1	P	č̃Vh	3	---
17 iv + 1	P	k̃Vh	4	---
18 iv + 1	P	ʔaʔah	5	---
19 iv + 1	P	Hah	6	---
20 iv + 1	P	V ₁ yin		---
21 iv + 1		Vh	7	---
22 iv + 1	T	H ₂		48
23 iv + 1	n	ih ₁	11	---

51.7 (cont'd)

Desinence #, Stem Class, and Position	Der ed From	Name	Paradig- matic Relatives	Further Deriva- tions
24 iv + 1	N	CD { ah ₁ anah		47
25 iv + 1	N			47
26 iv + 1	A	ih ₂		48
27 iv + 1	N,n,T,P,p	in ₃		47,48
28 iv + 1	T	aw ₁		47,48
29 iv + 1	uc	in ₄	13	47,48
30 iv + 1	I, T	mah		47,48,46
31 iv + 1	N, uc	ah ₂		47,48
32 iv + 1	T	bah		47,48,46
33 iv + 1	T	omah		47,48,46
34 iv + 1	T,n	V̄weh ₁	(11)	47,48,46
35 iv + 1				47,48,46
36 iv + 1	aj,n,P,uc	ub		48,46
37 av + 1	N,P,T,uc,onom	C ₁ un		---
38 av + 1	"	V̄nah		---
39 av + 1	"	Hawet		---
40 av + 1	"	et		---
41 av + 1	"	V ₁ C ₂ et		---
42 av + 1	"	lahan		---
43 av + 1	"	lahet		---
44 av + 1	N,uc	kV̄nah		---

51.7 (cont'd)

Desinence #, Stem Class, and Position	Derived From	Name	Paradig- matic Relatives	Further Deriva- tions
45 tv + 2	iv,uc	$\tilde{V}mtaY$		---
46 tv + 2	23,32,33,34, 35,36	in_5		---
47 tv + 2		taY		---
48 tv + 2		es		---
<u>34</u> iv + 2		$\tilde{V}weh_1$		---
49 tv + 2	tv	talan		---
50 tv/iv + 3	tv/iv	$\tilde{V}lan$		---
51 tv + 4	tv	bey		---
52 iv + 4	tv	awan		---
53 iv + 5	tv	ot		---
54 n - 1	n,tv	ah ₃		---
55 n + 1	iv(34)	$\tilde{V}weh_2$ $\tilde{V}wil$ eh ₁ al ₁	54	
56 n + 1	n(55)			
57 n + 1	iv(52)			54
58 n + 1	iv(31)			54

51.7 (cont'd)

Desinence #, Stem Class, and Position	Derived From	Name	Paradig- matic Relatives	Further Deriva- tions
59 n + 1	iv(30)	} imal		54
60 n + 1	tv/iv/av		el	54
61 n + 1	tv		eh ₂	54
62 n + 1	T	aw ₂		54
63 n + 1	T	ohel		54
64 n + 1	T	bal		
65 n + 1	T	ben		
66 n + 1	T	báil		
67 n + 1	P	leh		
68 n + 1	I	emal		
69 n + 1	T,P,I,tv,iv	} ib		
70 n + 1	N,T,I		tahib	
71 n + 1	T,P,tv		ab	(V1)
72 n + 1	P	Hil		
73 n + 1	T	ol		
74 n + 1	P	ikil		
75 n + 1	T,I	Vp		(V1)
76 n + 1	T,N	lal		
77 n + 1	N	al ₂		
78 n + 1	N	ilal		
79 n + 1	N	ek'		
80 n + 1	N,T	im		
81 n + 1	N	am		
82 n + 1	N,uc	et		

51.7 (cont'd)

Desinence #, Stem Class, and Position	Derived From	Name	Paradig- matic Relatives	Further Deriva- tions
83 n + 1	N,T,uc	ub		(V1)
84 n + 1	N	Rtik		
85 n + 1	num	eb		
86 n + 1	num,uc,N	hey	87	
87 n + 1	num,uc	eh ₃	86	
88 n + 2	n	il		
89 n + 2	n	V ₁ ₁		
90 n + 2	n	tikil		
91 n + 2	n	tik ₁		
92 n + 2	aj	V ₁ ₂		
93 aj + 1	iv	em		
94 aj + 1	tv	bil		
95 aj + 1	P,T	{ V ₁ l V ₁ htik V ₁ lahben		
96 aj + 1	P.T			
97 aj + 1	P,T			
98 aj + 1	P,uc	V ₁ mtik		
99 aj + 1	P	HV ₁ ltik		
100 aj + 1		Rtik		
101 aj + 1		V ₁ ₃		
102 aj + 1		R		

51.7 (cont'd)

Desinence #, Stem Class, and Position	Derived From	Name	Paradig- matic Relatives	Further Deriva- tions
103 aj + 2		RH		
104 p + 1		} tik ₂ } yuk		
105 p + 1				
106 p + 1		tik ₃		
107 p + 1		H ₂		103

51.8

In the following charts the following kinds of information are given about each of the 107 derivational affixes, according to this format:

1. number and name of affix gloss
2. morphological constituency (as in 48.2)
3. (allo)forms
4. distributions of alloforms (if any)
5. functions
6. productivity
7. examples.

#1

1. [p̣Ṿn] 'transitivizer'
2. p̣ sf + Vn tv
3. //p̣Ṿn//∞//p̣Ṿn//
4. //p̣Ṿn// after [ʔe] 'leaning'; //p̣Ṿn// elsewhere
5. Derives tv stems from P roots
6. Non-productive
7. Exs.
 - //hòy//P 'twirling' ----> //hòy p̣in// 'to twirl'
 - //ʔèh//P 'leaning' ----> //ʔèh p̣un// 'to tip'

#2

1. [ʔṾn] 'transitivizer'
2. ʔ sf + Vn tv
3. //ʔṾn//
4. No alloforms
5. Derives tv stems from P roots
6. Non-productive
7. Ex.
 - //bil//P 'slippery' ----> //bil ʔun// 'to slide'

#3

1. [čVn] 'transitivizer'

2. č sf + Vn tv

3. //čVn//

4. No alloforms

5. Derives tv stems from P roots

6. Non-productive

7. Exs.

//bál//P 'rolled up' ----> //bál čun// 'to roll up'

#4

1. [kVn] 'transitivizer'

2. k sf + Vn tv

3. //kVn//

4. No alloforms

5. Derives tv stems from P roots

6. Non-productive

7. Exs.

//bùt//P 'toppled' ----> //bùt kìn// 'to topple'

//wál//P ----> //wál kùn//

#5

1. [ʔaʔan] 'transitivizer'
2. ʔaʔ sf + Vn tv
3. //ʔaʔan//
4. No alloforms
5. Derives tv stems from P roots
6. Non-productive
7. Exs.
 - //mèl//P 'fixed' ----> //mèl ʔaʔan// 'to fix'
 - //tìh//P 'near' ----> //tìh ʔaʔan// 'to bring near'

#6

1. [Han] 'transitivizer'
2. h iv + Vn tv
3. //Han// ∞ //HV₁n//
4. //HV₁n// before [taY], [tes]; //Han// elsewhere
5. Derives tv stems from P roots
6. Productive
7. Exs.
 - //çòt//P 'seated' ----> //çòt Han// 'to set down'
 - > //çòt Hòn tes// 'to
cause to set down'
 - //tèk'/P 'standing'----> //tèk' Han// 'to erect'

#7

1. [VY] 'transitivizing'
2. Vy tv
3. //aY// ∞ //iY// ∞ //oY// ∞ //uY//
4. Alloforms are lexically determined:
 - //aY// with [ʔil] [ʔiʔb] [kišin] [ʔiʔil] [ʔaht]
 - //iY// with [ʔühč] [hühč] [ʔòkol] [sòhk] [lòʔil]
 - [màl]
 - //oY// with [hòhk]
 - //uY// with [hàw] [bàl] [kèl] [bàhk] [čàhan] [ʔík]
 Roots of the shape CVCVC have the shape CVCC before [VY]
5. Derives tv stems from P, T, N, and A roots as well as from uc,s.
6. Non-productive
7. Exs.
 - a) with P roots
 - //hàw// 'with arms spread' ----> //hàw uY// 'to measure with arms'
 - //bàl// 'twisted' ----> //bàl uY// 'to twist'
 - b) with T roots
 - //ʔil// 'to see' ----> //ʔil aY// 'to hate'
 - //kèl//* 'to look at' ----> //kèl uY// 'to observe'
 - //màl// 'to pour out' ----> //màl iY// 'to wait for'

c) with N roots

//lò'1// 'joking conversation' ----> //lò'1 iY//

'to deceive'

//bàhk// '400' ----> //bàhk uY// 'to count by 400s'

//čahn// 'cord' ----> //čahn uY// 'to make cord'

//č'i'b// 'writing' ----> //č'i'baY// 'to write'

//'ik// 'wind' ----> //'ik uY// 'to blow'

//tùhk// 'gun' ----> //tùhk aY// 'to shoot'

d) with A roots

//kišn// 'warm' ----> //kišn aY// 'to heat'

//č'i'1 // 'overgrown' ----> //č'i'1 aY// 'to damage'

e) with uc,s

//'àht// ----> //'àht aY// 'to count'

//'ùhč// ----> //'ùhč iY// 'to kiss/smell'

//tāk// ----> //tāk iY// 'to advise'

//hòhk// ----> //hàhk oY// 'to ask a question'

//hùhč// ----> //hùhč iY// 'to blow'

//'òkl// ----> //'òkl iY// 'to watch secretly'

//sòhk// ----> //sòhk iY// 'to clear land'

#8

1. [lVY] 'transitivizing'

2. l sf + Vy tv3. //liY// ∞ //laY//

4. //laY// with [çè?] 'laugh'

//liY// with [çàk] [nà?] [màk]

5. Derives tv stems from T and P roots

6. Non-productive

7. Exs.

a) from T

//çàk// 'to mend' ----> //çàk liY// 'to follow'

//çè?/* 'to laugh' ----> //çè? laY// 'to laugh at'

//nà?// 'to know' ----> //nà? liY// 'to stare at'

b) from P

//màk// 'to close off' ----> //màk liY// 'to listen at'

#9

1. [lin] 'transitivizing'
2. l sf + Vn tv
3. //lin//
4. No alloforms
5. Derives tv stems from T roots
6. Non-productive
7. Exs.

//màk// 'to chew in small pieces' ----> //màk lin//
'to serve food to'

#10

1. [an] 'to make round'
2. Vn tv
3. //an//
4. No alloforms
5. Derives tv stems from T roots
6. Non-productive
7. Exs.

//pàk// 'to slap' ----> //pàk an// 'to make mud walls'
'to mold' 'to make dough'

//à'biy// 'to hear' ----> //à'biy an// 'to talk about'

#11

1. {in₁} 'denominative transitivizing'2. Vn tv

3. //in// ∞ //an// ∞ //n// ∞ //on//

4. //on// with [kòp] 'speech'

//n// with [cù] 'sacred object'

[tù] 'usefulness'

//an// with [č e' b] 'two'

[ʔelk] 'robbery'

[ʔe] uc

[la' b] 'evil genius'

//in// elsewhere

5. Derives tv stems from n stems, radical or derived

6. Productive

7. Exs.

a) Alloform //n//

//cù//* 'sacred object' ----> //cù n// 'to heed'

//tù//* 'usefulness' ----> //tù n// 'to make use of'

b) Alloform //on//

//kòp// 'speech' ----> //kòp on// 'to talk to/about'

c) Alloform //an//

//č e' b// 'two' ----> //č e' b an// 'to consider
seriously'

//ʔelk// 'robbery' ----> //ʔelk an// 'to steal'

//ʔe//* uc ----> //ʔe an// 'to carry corn'

//la' b// 'evil genius' ----> //la' b an// 'to mock'

d) Alloform //in//

//ʔinam// 'wife' ----> //ʔinam in// 'to take as a wife'

//wayč// 'dream' ----> //wâyč in// 'to dream about'

//ʔòkes// 'trumpet' ----> //ʔòkes in// 'to blow a trumpet'

//ʔištaʔ// 'toy' ----> //ʔištaʔ in// 'to play with'

#12

1. [HC₁V₁n]

'intensive'

2. C₁ + V_n tv

3. //HC₁V₁n//

4. No alloforms

5. Derives tv stems from uc,s of the shape CV

6. Non-productive

7. Exs.

*čì ----> //čì hčìn// 'to strain/filter'

*čò ----> //čò hčon// 'to scatter'

#13

1. [in₂] 'transitivizing'
2. Vn tv
3. //in//[∞] //un//[∞] //an//
4. //un// with [tik]
//an// with [mah]
//in// with [tãh] [kãt] [ʔãt] [kùp] [ʔùʔ] [lãh]
5. Derives tv stems from one I root and several uc,s.
6. Non-productive
7. Exs.
 - a) Alloform //un//
//tik//uc ----> //tik un// 'to order, send'
 - b) Alloform //an//
//mãh//uc ----> //mãh an// 'to borrow/lend'
 - c) Alloform //in//
//ʔãt//uc ----> //ʔãt in// 'to wash' cf.//ʔãt in//tv
//tãh//uc ----> //tãh in// 'to play' cf.//tãh in//iv
//kãt//uc ----> //kãt in// 'to heat' cf.//kãt in//iv

//lãh//I ----> //lãh in// 'to spend/waste'
'to be terminated'
//kùp//uc ----> //kùp in// 'to like/enjoy'
//ʔùʔ//uc ----> //ʔùʔ in// 'to bother, harm'

#14

1. [p̣ṽh] 'intransitivizer'
2. p̣ sf + Vh iv
3. //p̣ṽh//∞ //p̣ṽh//
4. //p̣ṽh// with [p̣ḗ] 'leaning'; //p̣ṽh// elsewhere
5. Derives iv stems from P roots
6. Non-productive
7. Exs.

//p̣ḗh//P 'leaning' ----> //p̣ḗh puh// 'to tip'

//hòy//P 'twirling' ----> //hòy p̣ih// 'to twirl'

#15

1. [ɛ̃Vh] 'intransitivizer'
2. ɛ̃ sf + Vh iv
3. //ɛ̃Vh//
4. No alloforms
5. Derives iv stems from P roots
6. Non-productive
7. Ex.
//bil//P 'slippery' ----> //bil ɛ̃uh// 'to slip, slide'

#16

1. [ɛ̃Vh] 'intransitivizer'
2. ɛ̃ sf + Vh iv
3. //ɛ̃Vh//
4. No alloforms
5. Derives iv stems from P roots
6. Non-productive
7. Ex.
//bàl//P 'rolled up' ----> //bàl ɛ̃uh// 'to roll up'

#17

1. {kVh} 'intransitivizer'

2. k sf + Vh iv

3. //kVh//

4. No alloforms

5. Derives iv stems from P roots

6. Non-productive

7. Exs.

//bùt//P 'toppled' ----> //bùt k'ih// 'to topple'

//wàl//P ----> //wàl kuh//

#18

1. {ɬa'ah} 'intransitivizer'

2. ɬa' sf + Vh iv

3. //ɬa'ah//

4. No alloforms

5. Derives iv stems from P roots

6. Non-productive

7. Exs.

//mèl//P 'fixed' ----> //mèl ɬa'ah// 'to be fixed'

//tih//P 'near' ----> //tih ɬa'ah// 'to approach'

#19

1. [Hah] 'intransitivizer'
2. h iv + Vh iv
3. //Hah//
4. No alloforms
5. Derives iv stems from P roots
6. Productive
7. Exs.

//čòt//P 'seated' ----> //čòt Hah// 'to be seated'

//tèk//P 'standing' ----> //tèk Hah// 'to stand up'

#20

1. [V₁yin] 'intransitivizing'
2. Vy iv + Vn iv
3. //V₁yin//
4. No alloforms
5. Derives iv stems from P roots
6. Productive
7. Exs.

//kèh//P 'kneeling' ----> //kèh eyin// 'to kneel'

//wùc//P 'sitting' ----> //wùc uyin// 'to sit down'

#21

1. [Vh] 'intransitivizing: absolutive'

2. Vh iv

3. //ah//

4. Paradigmatically paired with [VY] 'transitivizing'.

It has the same types and distributions of alloforms, although it does not occur with all the roots that [VY] does, and only the form //ah// is represented in our data.

7. Exs.

//ʔil//T 'to see' ----> //ʔil ah// 'to hate'

//ɕiʔb//N 'writing' ----> //ɕiʔb ah// 'to write'

//kišn//A 'warm' ----> //kišn ah// 'to warm'

#22

1. [H₁] 'mediopassive'

2. h iv

3. //H//

4. No alloforms

5. Derives iv stems from T roots

6. Productive

7. Exs.

//pàs// 'to do' ----> //pàs H// 'to get done'

//tòš// 'to split wood' ----> //tòš H// 'to (get) split'

//bùt// 'to fill up' ----> //bùt H// 'to fill up'

#23

1. [ih₁] 'denominative intransitivizing'
2. Vh iv
3. //ih// ∞ //oh// ∞ //ah// ∞ //eh//
4. cf. [in₁] 'denominative transitivizing' (11)
 - //ah// occurs parallel to //an//
 - //oh// occurs parallel to //on//
 - //eh// and //ih// occur parallel to //in//
5. Derives iv stems from noun stems, radical and derived
6. Productive
7. Exs.
 - a) Alloform //oh//
 - //kòp// 'speech' ---->
 - //kòp oh// 'to converse': //kòp on//
 - b) Alloform //ah//
 - //č è'b// 'two' ---->
 - //č è'b ah// 'to consider seriously:
 - //č è'b an//
 - //èlk// 'theft' ---->
 - //èlk ah// 'to steal': //èlk an//
 - c) Alloform //eh//
 - //ihkač// 'load' ----> //ihkač eh// 'to carry a load'
 - //wàyč// 'dream' ----> //wàyč eh// 'to dream':
 - //wàyč in//
 - d) Alloform //ih//
 - //nèal// 'son-in-law' ----> //nèal ih// 'to become
 - someone's son-in-law'

#24

1. [ah₁] 'denominative intransitivizing : absolutive'
2. Vh iv
3. //ah// ∞ //a//
4. //a// before [taY]; //ah// elsewhere
5. Derives iv stems from N roots
6. Non-productive
7. Exs.

//ʔàl// 'child of a woman' ----> //ʔàl ah// 'to give
 birth'

//ničn// 'child of a man' ----> //ničn ah// 'to beget'

//háʔb//* 'vapor' ----> //háʔb ah// 'to yawn'

//čáʔb//* 'fasting/prayer' ----> //čáʔb ah// 'to fast/
 pray'

#25

1. [anah] 'denominative intransitivizing: absolutive'
2. Vn iv + Vh iv
3. //anah// ∞ //an//
4. //an// before [taY], //anah// elsewhere
5. Derives iv stems from N roots
6. Non-productive
7. Exs.

//ʔòʔb//* 'cough' ----> //ʔòʔb anah// 'to cough'

#26

1. [ih₂] 'deadjectival intransitivizer: ingressive'
2. Vh iv
3. //ih// ∞ //ah// ∞ //eh//; //i// ∞ //a// ∞ //ɔ//
4. //ah// occurs with a few roots: [hàl] [tâk] [yàn] [ʔikan]
 //ih// with the remaining monosyllabic roots
 //eh// with the remaining disyllabic roots
 //a//, //i//, //ɔ// occur respectively before [tes]
5. Derives iv stems from A roots
6. Non-productive
7. Exs.
 - a) with //ah//

//hàl// 'enduring'	---->	//hàl ah// 'to endure'
//tàʔ// 'ripe'	---->	//tàʔ ah// 'to ripen'
 - b) with //ih//

//tâk// 'dry'	---->	//tâk ih// 'to dry up'
//ʔùç// 'good'	---->	//ʔùç ih// 'to improve'
 - c) with //eh//

//tùlan// 'strong'	---->	//tùlan eh// 'to get strong'
//ʔàlan// 'low'	---->	//ʔàlan eh// 'to descend'

#27

1. [in₃] 'intransitivizer: absolute'2. Vn iv3. //Hin// ∞ //HV₁n// ∞ //in// ∞ //V₁n// ∞ //n// ∞ //un//
∞ //Hun//

4. //n// with [tù], [bè]

forms with //H// occur with P roots

forms with //V₁// occur with most nouns

forms with //u// occur with [nùp]P, [hèl]T

forms with //i// occur elsewhere

5. Derives iv stems from N, n, T, P, particle stems

6. Non-productive

7. Exs.

a) with N, n

//čùš// 'urine' ----> //čùš un// 'to urinate'

//čâ?// 'feces' ----> //čâ? an// 'to defecate'

//tù/* 'usefulness' ----> //tù n// 'to be useful'

//bè// 'road' ----> //bè n// 'to walk'

//kây oh// 'song' ----> //kây oh in// 'to sing'

b) with T

//čè?/* 'to laugh' ----> //čè? en// 'to laugh'

//hèl// 'to exchange' ----> //hèl un// 'to change'

c) with P

//nùp// 'to join' ----> //nùp Hun// 'to get married'

//kùč// 'to carry' ----> //kùč Hin// 'to (be) blame(d)'

d) with particles

//ʔây// 'existing' ----> //ʔây in// 'to be born/live'

#28

1. [aw₁] 'intransitivizer'

2. Vw abs

3. //aw//

4. No alloforms

5. Derives iv stems from T roots

6. Non-productive

7. Exs.

//kèš// 'to owe' ----> //kèš aw// 'to be ashamed'

//hèl// 'to change' ----> //hèl aw// 'to branch (of
a road)'

#29

1. [in₄] 'intransitivizer'
2. Vn iv
3. //in// ∞ //im//
4. //im// before [al] 'verbal noun'
//in// elsewhere
5. Derives iv stems from uc,s.
6. Non-productive
7. Exs.
 - //tâh// ----> //tâh in// 'to play'
 - //kât// ----> //kât in// 'to heat'
 - //ʔât// ----> //ʔât in// 'to wash'

#30

1. [mah] 'intransitivizer'
2. im iv + Vh iv
3. //imah// ∞ //mah// ∞ //ma//
4. //ma// before [taY], [tes]
//mah// before [in₅], after [pòl]
//imah// after [ʔàn]
5. Derives iv stems from I and T roots (one each)
6. Non-productive
7. Exs.
 - //pòl//T 'to increase' ----> //pòl mah// 'to buy and sell'
 - //ʔàn//I 'to flee' ----> //ʔàn imah// 'to run'

#31

1. [ah₂] 'intransitivizer'
2. Vh iv
3. //ah// ∞ //eh//
4. //eh// after [ʔàʔbat] 'service'; //e// before [taY], [tes]
//ah// elsewhere ; //a// before [taY], [tes]
5. Derives iv stems from N roots and uc,s
6. Non-productive
7. Exs.
 - a) from N roots

//ʔàʔt// 'service' ----> //ʔàʔt eh// 'to work'

//mèbaʔ// 'orphan' ----> //mèbaʔ ah// 'to be lonesome'
 - b) from uc

//wiʔn// 'hunger' ----> //wiʔn ah// 'to be hungry'

#32

1. [bah] 'intransitivizer: absolute'
2. b sf + Vh iv
3. //bah// ∞ //ba//
4. //ba// before [taY] [tes]
//bah// elsewhere
5. Derives iv stems from T roots
6. Fairly productive
7. Exs.
 - //lò?// 'to eat fruit' ----> //lò? bah// 'to eat fruit'
 - //màn// 'to buy' ----> //màn bah// 'to buy things'
 - //cùn// 'to sow' ----> //cùn bah// 'to sow'
 - //nà?// 'to know' ----> //nà? bah// 'to have understanding'

#33

1. [omah] 'intransitivizer: customary activity'

2. om abs + Vh iv

3. //omah// ∞ //mah// ∞ //ma//

4. //ma// before [tes], [taY]

//mah// before other derivational suffixes, i.e., those
beginning with vowels

//omah// elsewhere

5. Derives iv stems from T roots and one uc

6. Fairly productive

7. Exs.

//tòh//T 'to pay for' ----> //tòh omah// 'to pay an
assessment'

//'èis//T 'to sew' ----> //'èis omah// 'to sew'

//'es//*uc ----> //'ès omah// 'to be abundant'

#34

1. [Vweh₁] 'intransitivizer: absolutive'
2. Vw abs + Vh iv
3. //weh//[∞] //we//[∞] //(V)weh//[∞] //Vw//
4. //we// with [Hâ?], [si?] before [taY], [tes]
//weh// before vowel-initial derivational suffixes
//Vw// not with [Hâ?], [si?] before [taY], [tes]
//(V)weh// elsewhere
5. Derives iv stems from T roots and from noun stems,
whether radical or derived
6. Fairly productive
7. Exs.
 - a) from N roots, unpaired
//si?// 'firewood' ----> //si? weh// 'to gather firewood'
//Hâ?// 'water' ----> //Hâ? weh// 'to fetch water'
 - b) from T roots
//tâk// 'to catch/grab' ----> //tâk (V)weh// 'to catch
(fish)'
//kâh// 'to harvest' ----> //kâh (V)weh// 'to harvest'
 - c) from nouns; paired with [in₁]
//?è// *uc ----> //?e (V)weh// 'to carry corn': //?è an//
//kù?// 'clothes' ----> //kù? (V)weh// 'to clothe':
//kù? in//
//?ànc// 'woman' ----> //?ànc (V)weh// 'to chase women':
//?ànc in//
//?i?// 'dog' ----> //?i? (V)weh// 'to hunt with dogs':
//?i? in//

#35

1. [Vy] 'intransitivizer: ingressive'

2. Vy iv

3. //iy// ∞ //ay// ∞ //uy//

4. //iy// with [hòw]

//ay// with [čák]

//uy// with [čùč]

//i// //a// //u// respectively before [taY], [tes]

5. Derives iv stems from A, P and I roots (one each)

6. Non-productive

7. Exs.

//čùč//I 'to end' ----> //čùč uy// 'to come to an end'

//čák//P 'to fix' ----> //čák ay// 'to be completed'

//hòw//A 'crazy' ----> //hòw iy// 'to go crazy'

#36

1. [ub] 'intransitivizer: ingressive'
2. _____
3. // -Hub// ∞ // -Hu// ∞ // -ub// ∞ // -u//
4. // -Hu// [hòč] ___ [tes], [taY]
 // -Hub// [hòč] ___ ---
 // -u// --- ___ [tes], [taY]
 // -ub// ---
5. Derives iv stems from noun and adjective stems, radical or derived, from one P root, and one uc
6. Productive
7. Exs.
 - a) with adjectives

//'pih// 'intelligent' ----> //'pih ub// 'to get smart'
 //'čín// 'small' ----> //'čín ub// 'to diminish'
 - b) with nouns

//'àhan// 'roasting ear' ----> //'àhan ub// 'to get
 ripe' (of an ear of corn)
 - c) with P

//hàč// 'empty' ----> //hòč Hub// 'to grow empty'
 //pòč// 'numb' ----> //pòč ub// 'to get numb'
 - d) with uc

//yàk// 'drunken' ----> //yàk ub// 'to get drunk'

#37

1. [C₁un] 'affective; one object, several repetitions'
2. C₁ + Vn iv
3. //C₁un//
4. No alloforms
5. Derives av stems from N, P, T roots, uc,s and onomatopoeic particles--all of the shape CV(C)
6. Productive
7. Exs.

//bič/* ----> //bič bun// 'wriggling like a snake'

//wòh//onom ----> //wòh wun// 'barking like a dog'

//mèʔ//onom ----> //mèʔ mun// 'mewing like a cat'

//čâw//onom ----> //čâw čun// 'gabbing like a woman'

#38

1. [Vnah] 'affective: one object, several intense occurrences'
2. Vn iv + Vh iv
3. //V̄nah//
4. No alloforms
5. Derives av stems from N, P, T roots and from uc,s and onomatopoeic particles--all of the shape CV(C)
6. Productive
7. Exs.

//čèt// ----> //čèt unah// 'babbling unintelligibly'

//čòʔ//onom ----> //čòʔ inah// 'creaking like a chair'

#39

1. [Hawet] 'affective: one object, several very intense occurrences'
2. h iv + Vw abs + et av
3. //Hawet//
4. No alloforms
5. Derives av stems from N, P, T roots, uc,s and onomatopoeic particles--all of the shape CV(V)
6. Productive
7. Exs.
 - //p'it//* ----> //p'it Hawet// 'jumping up and down'
 - //kòt//P 'on all fours' ----> //kòt Hawet// 'crouching repeatedly'
 - //bàl//P 'rolled up' ----> //bàl Hawet//

#40

1. [et] 'affective: one object, one well performed occurrence'
2. et av
3. //et//
4. No alloforms
5. Derives av stems from N, P, T roots, uc,s, and onomatopoeic particles--all of the shape CV(C)
6. Productive
7. Exs.
 - //'çò?//onom ----> //'çò? et// 'creaking like a chair'
 - //'tòs//T 'to snap fingers' ----> //'tòs et// 'snapping the fingers'

#41

1. [V₁C₂et] 'affective: one object, one extended occurrence'
2. V₁C₂ + et av
3. //V₁C₂et//
4. No alloforms
5. Derives av stems from N, P, T roots, uc,s and onomatopoeic particles--all of the shape CV(V)
6. Productive
7. Ex.
 - //'i?//onom ----> //'i?i?et// 'squealing like a pig'

#42

1. [lahan] 'affective: several objects, several repetitions'
2. lah pl + Vn iv
3. //lahan//
4. No alloforms
5. Derives av stems from I, N, P, T roots, uc,s, and onomatopoeic particles--all of the shape CV(C)
6. Productive
7. Exs.
//tèk// 'standing' ----> //tèk lahan// 'several standing up'
//čam//I 'die' ----> //čam lahan// 'several dying'

#43

1. [lahet] 'affective: several objects, several repetitions'
2. lah pl + et av
3. //lahet//
4. No alloforms
5. Derives av stems from I, N, P, T roots, uc,s, and onomatopoeic particles--all of the shape CV (C)
6. Productive
7. Ex.
//pit// ----> //pit lahet// 'several jumping up and down'

#44

1. [k[~]Vnah] 'affective: walking imperfectly'2. (k) + Vn iv + Vh iv3. //k[~]Vnah//

4. No alloforms

5. Derives av stems from N and uc roots

6. Productive

7. Exs.

//kòš//N 'lame' ----> //kòš kinah// 'to limp'

//t[~]im//P 'stretched' ----> //t[~]im kunah// 'to walk on
tiptoe'

#45

1. { \tilde{V} mtaY}
2. $V_{m_{sf}} + t_{sf} + V_{y_{tv}}$
3. // \tilde{V} mtaY//
4. No alloforms
5. Derives tv stems from monosyllabic iv stems, radical and derived, and from uc,s
6. Non-productive
7. Exs.

a) iv

//wil// 'fly/jump' ----> //wil umtaY// 'to jump up and
down'

// $\text{?}\text{ò}\check{\text{c}}$ // 'enter' ----> // $\text{?}\text{ò}\check{\text{c}}$ imtaY// 'to dare'

b) uc

//hèk// ----> //hèk umtaY// 'to cross over'

//hèš// ----> //hèš umtaY// 'to envy'

#46

1. [in_S] 'transitivizer'2. Vn_{tv}

3. //in//

4. No alloforms

5. Derives tv stems from iv stems in

[ih₁], [bah], [omah], [Vweh], [ub], [Vy]

#23

#32

#33

#34

#36

#35

6. Fairly productive

7. Exs.

a) with [ih₁]//ʔil ob ah// 'to be displeased' ----> //ʔ il bah in//
'to bother'

b) with [bah]

//čòn bah// 'to sell things' ----> //čòn bah in//

c) with [omah]

//ʕis omah// 'to sew' ----> //ʕis mah in//

d) with [Vweh]

//siʔ weh// 'to gather firewood' ----> //siʔ weh in//

e) with [Vy]

//čàk ay// 'to be completed' ----> //čàk ay in//

f) with [ub]

//tòh ub// 'to get arranged' ----> //tòh ub in//

#47

1. [taY] 'transitivizer'
2. $t_{-sf} + Vy_{tv}$
3. //taY// ∞ //HV₁taY// ∞ //ataY// ∞ //etaY//
4. //HV₁taY// with monosyllabic uc,s
 //ataY// with [ʔàn]
 //etaY// with [ʔòk]
 //taY// ---
5. Derives tv stems from N, I, T, and P roots, monosyllabic derived tv stems, derived iv stems, uc,s, and compound noun stems
6. Fairly productive
7. Exs.
 - a) with N roots
 - (1) paired with [in₃] (27)

//čùš taY// 'to urinate it' <čùš 'urine': čùšun
 //čàʔ taY// 'to excrete it' <čàʔ 'feces': čàʔan
 //ʔàw taY// 'to shout it' <ʔàw 'shout': ʔàwun
 //šè taY// 'to vomit it up' <šè 'vomit': šèn
 - (2) otherwise

//ʔàkin// 'clearing brush' ----> //ʔàkintaY// 'to clear brush'
 //čikil// 'tickling' ----> //čikiltaY// 'to tickle'
 //himuč// 'slingshot' ----> //himučtaY// 'to use a slingshot'

b) with I roots

//kòl// 'to extricate oneself' ----> //kòltaY// 'to help'

//ʔòk// 'to weep' ----> //ʔòketaY// 'to bewail'

//ʔàn// 'to flee' ----> //ʔànataY// 'to chase away'

c) T and P roots

//tèk//(P) 'to step on' ----> //tèktaY// 'to step on'

//hìm//(T) 'to throw' ----> //hìmtaY// 'to throw'

d) uc,s

//hùhçutaY// 'to blow'

//kòhkotaY// 'to knock'

//kùšutaY// 'to feel affection for'

//tàwaltaY// 'to be jealous'

//ʔòkoltaY// 'to watch closely'

e) derived tv stems over first vowel in all forms

#1 p'ìhp'un ----> p'ìhpuntaY

#4 wàlkun ----> wàlkkuntaY

#5 mèlç'a'an ----> mèlç'a'antaY

#6 çòhtan ----> çòhtontaY

#7 lò'laY ----> lò'lataY

#11 ʔàhwalin ----> ʔàhwalintaY

#8 çè'laY ----> çè'lataY

#9 mà'klin ----> mà'klintaY

#12 çìhçin ----> çìhçintaY

f) derived iv stems over first vowel in all forms

- #23 ʔàhkanah ----> ʔàhkantaY
 #24 ʔalah ----> ʔàlataY
 #25 ʔòʔbanah ----> ʔòʔbantaY
 #31 pàšyah ----> pàšyataY
 #32 mambah ----> mambataY
 #33 tàhomah ----> tòhmataY
 #30 pòlmah ----> pòlmataY
 #34 sìʔweh ----> sìʔwetaY
 #35 nàʔoweh ----> nàʔowtaY
 #27 kàyohin ----> kàyohintaY

g) compound noun stems

(1) //čèʔbal kòptaY// 'to give bad advice'

//čèʔbal kòp// 'bad advice'

//č//N 'two' + //eʔb// 'numeral' + //a//

'nominalizer'+//kòp//N 'word'

(2) //ʔilʔòʔtantaY// 'to make angry'

//ʔilʔòʔtan// 'anger'

//ʔil//T 'to see' + //ʔòʔtan//N 'heart'

#48

1. [es] 'transitivizing: causative'
2. (t _{sf} +) es tv
3. //tes// ∞ //es//
4. //es// with all iv stems which do not end in a vowel (except [wày], [hù?], [šiw], [tùn], [ká?], [čùh] -- which have //tes//); //tes// elsewhere
5. Derives tv stems from T and P roots, derived tv stems, I roots and derived iv stems, and uc,s
6. Productive
7. Exs.

a) T and P roots

//tàm// 'to pick it up' ----> //tàm tes// 'to make
someone pick it up'

b) derived tv stems over first vowel in all forms

#1 pìhpun ----> pìhpuntes

#4 wàlkun ----> wàlkuntes

#5 mèl'ca'an ----> mèl'ca'antes

#6 čòhtan ----> čòhtantes

#7 hùh'ciY ----> hùh'cites

#11 ?à'telin ----> ?à'telintes

#9 mà'klin ----> mà'klintes

#13 čih'cin ----> čih'cintes

c) I roots and iv stems with [H₁] (22)

(1) with //tes//

hù? 'to be able' ----> hù'tes 'to make possible'

šiw 'to fear' ----> siwtes 'to frighten'

c) (1) with //tes// (cont'd)

mò 'to ascend' ----> mòhtes 'to raise'

(2) with //es//

ʔòč 'to enter' ----> ʔòčes 'to put in'

tòhk 'to be born' ----> tòhkes 'to cause to be born'

nùš 'to swim' ----> nùses 'to cause to swim'

d) derived iv stems

#23 nèalih ----> nèaltes

#26 čiknah ----> čiknates

#31 wi'nah ----> wi'nates

#32 ʔùčbah ----> ʔùčbates

#33 čilomah ----> čilmates

#29 kàtin ----> kàtintes

#34 wàhoweh ----> wàhowtes

#36 tòhub ----> tòhutes

#35 ʔàkay ----> ʔàkates

#27 čù'un ----> čù'untes

e) uc, s

hùč

hùčutes

#34

1. #34 in position +2

a) derives stems in [VY] (7)

hòhkòY ----> hòhkoweh 'to ask a question'

sòhkiY ----> sòhkiweh 'to clear land'

nàuy ----> nàuweh 'to spin thread'

#49

1. {talan } 'plural object'
2. tik_{pl} + lah_{pl} + Vn_{tv}
3. //tal^han//
4. No alloforms
5. Derives tv stem from tv stems
6. Universal
7. No examples are given owing to its universal occurrence;
see 45.1

#50

1. {Vlan} 'repeated action'
2. lah_{pl} + Vn_{tv}
3. //Vlan//
4. No alloforms
5. Derives tv or iv stems from tv or iv stems without
changing the stem class
6. Universal
7. No examples are given owing to its universal occurrence;
see 45.1

#51

1. [bey] 'indirective'
2. ----
3. //be//∞ //bey//
4. //bey// before [el] 'verbal noun'
//be// ---
5. Derives tv stems from tv stems
6. Universal
7. No examples are given owing to its universal occurrence;
see 45.1

#52

1. [awan] 'absolute'
2. aw_{abs} + Vn iv
3. //(a)wan//
4. No alloforms
5. Derives iv stems from tv stems
6. Universal
7. No examples are given owing to its universal occurrence;
See 45.1

#53

1. [ot] 'passive'
2. ----
3. //-ot//
4. No alloforms
5. Derives iv stems from tv stems
6. Universal
7. No examples are given owing to its universal occurrence;
See 45.1

#54

1. [ah₃] 'agent'
2. ----
3. //âh_h//∞//h_h//
4. //âh_h//with the possessive prefixes [k] 'my', [aw] 'your',
[y] 'his'
//h_h// when not possessed, i.e., elsewhere
5. Derives noun stems indicating a personal agent from most noun stems, radical or derived. It always co-occurs with the suffix [Vwil] (56) 'agent' which is paradigmatically paired with [Vweh] (55) 'absolute action'
6. Productive
7. Exs.
 - a) from N roots

//çòm//N 'marriage proposal' ----> //h_hçòm// 'one who proposes marriage'

//kùleh//N 'wealth' ----> //h_hkùleh// 'a rich person'

//kàšlan//N 'Spanish American' ----> //h_hkàšlan//
'a Spanish American'
 - b) from derived n stems

//mil aw// 'murder' ----> //h_hmil aw// 'murderer'

//kày oh// 'song' ----> //h_hkày oh// 'singer'

//kòl taY (a)wan eh// 'salvation' ---->
//h_hkòl taY (a)wan eh//
'savior'

c) with [Ṽwil] : [Ṽweh]

//ʔiʔ (Ṽ)weh// 'hunting with dogs': //hʔiʔ (Ṽ)wil//

'one who hunts

with dogs'

//yàk (Ṽ)weh// 'trapping with snares': //hʔyàk (Ṽ)wil//

'snaretrapper'

#55

1. $\{\tilde{V}weh_2\}$ 'verbal noun'
2. \underline{Vw} abs + \underline{Vh} n
3. $//weh//^\infty //(\tilde{V})weh//$
4. $//weh//$ with $\{H\grave{a}'\}$ 'water'
 $\{s\grave{i}'\}$ 'firewood'
 $//(\tilde{V})weh//$ elsewhere
5. Derives verbal nouns from all iv stems in $\{\tilde{V}weh_1\}$ (34)
 by replacing the suffix
6. Productive
7. Exs.
 $//H\grave{a}' weh//$ 'to fetch water' : $//H\grave{a}' weh//$ 'fetching
 water'
 $//y\grave{a}k(\tilde{V})weh//$ 'to snare-trap' : $//y\grave{a}k(\tilde{V})weh//$ 'snare-
 trapping'

#56

1. [Ṽwil] 'agent'
2. Vw abs + Vl n
3. //wil// ∞ //(Ṽ)wil//
4. //wil// with [Hà?] 'water'
[si?] 'firewood'
//(Ṽ)wil// elsewhere
5. Derives agent nouns from some verbal nouns in [Ṽweh₁](55) by replacing the suffix. Always co-occurs with [ah₃] 'agent'.
6. Fairly productive
7. Exs.
//si? weh// 'gathering wood' : //h.sì? wil// 'wood gatherer'
/yàk (Ṽ)weh/ 'snare-trapping' : //h.yàk (Ṽ)wil// 'snare-trapper'

#57

1. [eh₁] 'verbal noun'
2. Vh n
3. //eh//
4. No alloforms
5. Derives verbal nouns from all iv stems in [awan] (52)
6. Productive
7. Exs.

//tāk uY (a)wan// 'to advise' ----> //tāk uY (a)wan eh//
'advice'

//mīl (a)wan// 'to kill' ----> //mīl (a)wan eh//
'slaughter'

//kòl taY (a)wan// 'to save' ----> //kòl taY (a)wan eh//
'salvation'

#58

1. [al₁] 'verbal noun'
2. Vl n
3. //al//[∞] //el//
4. //el// with [ʔàʔbat] ([eh]) 'to work'

//al// with [wiʔn] ([ah]) 'to be hungry'

[pàšy] ([ah]) 'to take a walk'

with ʔat-in

tah-in

kàt-in

5. Derives verbal nouns from iv in [ah₂] (31) by replacing the suffix and from iv in [in₄] (29) by suffixing //al//.
6. Non-productive
7. Exs.

with [ah]

//ʔàʔt eh// 'to work' : //ʔàʔ tel// 'work'

//wiʔn ah// 'to be hungry' : //wiʔn al// 'hunger'

//pàšy ah// 'to take a walk' : //pàšy al// 'a walk'

with [in]

//tàh in// 'to play' : //tàh im al// 'game'

//ʔàt in// 'to bathe' : //ʔàt im al// 'bath'

//kàt in// 'to heat' : //kàt im al// 'heat'

#59

1. [imal] 'verbal noun'
2. im iv + V1 n
3. //mal// ∞ //imal//
4. //mal// with [pòl] ([mah]) 'to buy and sell'
//imal// elsewhere
5. Derives verbal nouns from iv stems in [mah] (30) and [in₄] (29) by replacing the suffix
6. Non-productive
7. Exs.
 - a) with [mah]

//pòl mah// 'to buy and sell' : //pòl mal// 'commerce'

//ʔànH imah// 'to run' : //ʔànH imal// 'running'
 - b) with [in]

//tâh in// 'to play' : //tâh imal// 'playing'

//kât in// 'to heat' : //kât imal// 'heating'

//ʔât in// 'to wash' : //ʔât imal// 'washing'

#60

1. [el] 'verbal noun'
2. Vl n
3. //el//
4. No alloforms
5. Derives verbal nouns from all verbs except those in [eh₁] (57) [al] (58) [Vweh₂] (55) [imal] (59), and passive verbs in [ot] (53)
6. Productive
7. See 45.1

#61

1. [eh] 'verbal noun'

2. Vh n

3. //eh// ∞ //oh//

4. //eh// with [ɕèʔ] 'to laugh'

[ʔàʔbiy] 'to hear'

[hùʔ] [n] 'to grind corn'

//oh// with [káy] 'to sing'

[kàh] 'to harvest'

5. Derives noun stems from tv stems, radical or derived.

6. Non-productive

7. Exs.

//káy//*T 'to sing' ----> //káy oh// 'song' :

//h-káy oh// 'singer'

//kàh//T 'to harvest' ----> //kàh oh// 'harvest' :

//h-kàh oh// 'harvester'

//ɕèʔ//*T 'to laugh' ----> //ɕèʔeh// 'laughter'

//ʔàʔbiy//T 'to hear' ----> //ʔàʔbiyeh// 'conversation'

//hùʔn//tv 'to grind corn' ----> //hùʔ n eh// 'grinding
corn'

#62

1. [aw₁] 'verbal noun'
2. Vw abs
3. //aw//
4. No alloforms
5. Derives noun stems from T roots
6. Productive
7. Exs.

//mil//T 'to kill' ----> //mil aw// 'murder :

//h.mil aw// 'murderer'

//nùç//T 'to hunt' ----> //nùç aw// 'hunting' :

//h.nùç aw// 'hunter'

//çò'b//T 'to gather' ----> //çò'b aw// 'gathering' :

//h.çò'b aw// 'gatherer'

#63

1. {ohel} 'verbal noun'
2. Vh n + Vl n
3. //ohel//
4. No alloforms
5. Derives nouns stems from T roots
6. Fairly productive
7. Exs.

//kàn//T 'to ask for' ----> //kàn ohel// 'petition' :

//h.kàn ohel// 'beggar'

//nòp//T 'to consider' ----> //nòp ohel// 'study' :

//h.nòp ohel// 'student'

#64

1. {bal} 'that which is ___en'
2. b sf + Vl n
3. //bal//
4. No alloforms
5. Derives noun stems from T roots
6. Fairly productive
7. Exs.

//ʔùč//T 'to drink' ----> //ʔùč bal// 'beverage/drink'

//lòʔ//T 'to eat fruit' ----> //lòʔ bal// 'plantain'

//tìʔ//T 'to eat meat' ----> //tìʔ bal// 'meat'

#65

1. [ben] 'the result of being ___en'
2. b sf + Vn sb
3. //ben//
4. No alloforms
5. Derives noun stems from T roots
6. Fairly productive
7. Exs.

//tí?//T 'to bite/eat meat' ----> //tí? ben// 'bite'

//kàh//T 'to harvest' ----> //kàh ben// 'stubble'

//màh//T 'to strike' ----> //màh ben// 'wound/mark'

#66

1. [báil] 'reflexive/reciprocal verbal noun'
2. [bà] 'self' + Vl n
3. //báil//
4. No alloforms
5. Derives noun stems from T roots
6. Productive
7. Exs.

//mil//T 'to kill' ----> //mil báil// 'suicide' or
'massacre'

//?ùt//T 'to speak/scold' ----> //?ùt báil// 'argument'

//tòy//T 'to raise up' ----> //tòy báil// 'arrogance'

#67

1. [leh] 'verbal noun'
2. Vl aj + Vh n
3. //leh//
4. No alloforms
5. Derives noun stems from P roots
6. Productive
7. Exs.

//kùš//P 'alive' ----> //kùš leh// 'life'

//tèn//P 'pressed flat' ----> //tèn leh// 'field'

//lòm//P 'hollow' ----> //lòm leh// 'valley'

#68

1. [emal] 'verbal noun'
2. em + Vl n
3. //eMal//
4. No alloforms
5. Derives noun stems from I roots
6. Non-productive
7. Exs.

//pùl//I 'to sprout' ----> //pùl eMal// 'shoot/spout'

//kòl//I 'to escape' ----> //kòl eMal// 'agave stalk'

#69

1. [ib] 'instrument/place'
2. (Vh n +) Vb n
3. //ib// ∞ //ohib//
4. //ohib// with T and P roots
//ib// with I roots and with derived tv and iv stems
5. Derives noun stems from tv and iv stems, radical and derived
6. Fairly productive
7. Exs.
 - a) with T and P roots
 - //čùk//P 'to tie up' ----> //čùk ohib// 'jail'
 - //hàm//P 'to open' ----> //hàm ohib// 'opener'
 - //nà?//T 'to know' ----> //nà? ohib// 'memory/remembrance'
 - //mil//T 'to kill' ----> //mil ohib// 'slaughter-house'
 - b) with I roots
 - //wày//I 'to sleep' ----> //wàyib// 'bed'
 - //lâh//I 'to finish' ----> //lâhib// 'end'
 - c) with derived tv stems
 - //lòk es// 'to remove' ----> //lòk es ib// 'an instrument for removing things'
 - d) with derived iv stem
 - //čis omah// 'to sew' ----> //čis mah ib// 'needle'

#70

1. [tahiḅ] 'instrument/place'
2. t sf + Vh n + Vb n
3. //tahiḅ//
4. No alloforms
5. Derives noun stems from N, T, and I roots
6. Non-productive
7. Exs.

//ʔàʔbat//N 'service' -----> //ʔàʔt tahiḅ// 'tool'

cf. //ʔàʔt eh// 'to work'

//nàk//T 'to hide' -----> //nàk tahiḅ// 'hiding place'

//wày//I 'to sleep' -----> //wày tahiḅ// 'sleeping
room'

#71

1. [ab] 'instrument'
2. Vb ag
3. //Hab//∞ //ab//∞ //ub//∞ //ob//
4. //Hab// with [tèk] 'standing' / or with P roots
 //ub// with [hàč] 'to scratch'
 //ob// with [káy] 'to sing'
 //ab// elsewhere
5. Derives noun stems from T roots, P roots, and derived tv stems
6. Non-productive
7. Exs.
 - //tèk//P 'standing' ----> //tèk Hub// 'ladder'
 - //šàn//* 'walking' ----> //šàn ab// 'sandal'
 - //hàl//T 'to weave' ----> //hàl ab// 'loom'
 - //káy//*T 'to sing' ----> //káy ob il// 'drum'
 - //hàč//T 'to scratch' ----> //hàč ub// 'comb'
 - //ʔil//* 'be angry' ----> //ʔil ab// 'disgust'
 - //čì HC₁V₁n// 'to strain' ----> //čì hčín ab// 'strainer'

#72

1. [Hil] 'instrument'
2. Vl n
3. //Hil//
4. No alloforms
5. Derives noun stems from P roots
6. Fairly productive
7. Exs.

//māk//P 'closed off' ----> //māk Hil// 'lid/cover'

//pòč//P 'wrapped up' ----> //pòč Hil// 'sock/stocking'

#73

1. [ol] 'verbal noun'
2. V1 n
3. //ol//[∞] //al//
4. //al// with [p'is] 'to measure'

//ol// with [hèl] 'to exchange'

[tòh] 'to pay'

5. Derives noun stems from T roots
6. Non-productive
7. Exs.

//hèl//T 'to exchange' ----> //hèl ol// 'exchange'

//tòh//T 'to pay' ----> //tòh ol// 'price/value/worth'

//p'is//T 'to measure' ----> //p'is al// 'measure(ment)'

#74

1. [ikil] no gloss
2. ik pl + V1 n
3. //ikil//
4. No alloforms
5. Derives noun stems from P roots--always occurs with the possessive prefix of the third person
6. Productive
7. Exs.

//sèp// 'coin-shaped' ----> //y sèp ikil//

//wòl// 'ball-shaped' ----> //y wòl ikil//

//tèk// 'upright' ----> //y tèk ikil//

#75

1. [Vp] 'nominalizer'
2. ----
3. //Hap// ∞ //p//
4. //p// with [kâ?] 'to rot'
//Hap// with [lâç] 'to hold under the arm'
5. Derives noun stems, once from a T root, once from an I root
6. Non-productive
7. Exs.

//lâç//T 'to hold under the arm' ----> //lâç Hap//
'armpit'

//kâ?//I 'to rot' ----> //kâ? p al// 'garbage/trash/
junk/refuse'

#76

1. [lal] 'nominalizer'
2. V1 n + V1 n
3. //lal// ∞ //lel//
4. //lel// with [čù]N ; //lal// elsewhere
5. Derives noun stems, once from an N root, and twice from a T root
6. Non-productive
7. Exs.
 - //kèš//T 'to be ashamed' ----> //kèš lal// 'shame/embarrassment'
 - //kò'b//T 'to discuss' ----> //kò'b lal// 'news'
 - //kòp//N 'speech/noise/language/sound' ----> //kòp lal// 'opinion, judgment'
 - //čù //N 'holy thing' ----> //čù lel// 'soul'

#77

1. [al₂] 'nominalizer'2. Vl n3. //al//[∞] //el//

4. //al// with [kin] 'festival'

[ʔahaw] 'king'

//el// with [mèʔ] 'mother'

[bè] 'road'

5. Derives noun stems from N roots

6. Non-productive

7. Exs.

//ʔàhkub// 'night' ----> //ʔàhkub al// 'night'

//kàh(k)// 'fire' ----> //kàh(k) al// 'day, sun'

//ʔàhw// "king" ----> //ʔàhw al// 'boss/owner/master'

//kin// 'festival' ----> //kin al// 'property'

//mèʔ// 'mother' ----> //mèʔ el// (1) 'old woman'

(2) 'raccoon'

//bè// 'road' ----> //bè el// 'travel'

#78

1. [ilal] 'nominalizer'
2. Vl n + Vl n
3. //ilal//[∞] //ilel//
4. //ilel// with [winik] 'man'
//ilal// with [lùm] 'earth'
[màm] 'grandfather/grandson'
5. Derives noun stems from N roots
6. Non-productive
7. Exs.
//màm//N 'grandfather/-son' ----> //màm ilal// 'husband'
//lùm//N 'earth' ----> //lùm ilal/ 'terrain'
//wink//N 'man' ----> //wink ilel// 'male relative/
husband'

#79

1. [ék] 'nominalizer'
2. ----
3. //ék//
4. No alloforms
5. Derives noun stems from N roots
6. Non-productive
7. Exs.
//čà?//N 'excrement' ----> //čà? ék// 'rust'
//čà(?)b//N 'honey/bee' ----> //čà(?)b ék// 'wax'

#80

1. [im] 'nominalizer'
2. Vm n
3. //im//
4. No alloforms
5. Derives noun stems, once from an N root, and once from a T root
6. Non-productive
7. Exs.

//nič//N 'flower' ----> //nič im// 'flower'

//čil//T 'to fry' ----> //čil im// 'pinolé'

cf. [am] (81)

#81

1. [am] 'nominalizer (body-part)'
2. Vm n
3. //am//.∞ //um//
4. //am// with [čà?] 'grindstone'
[čin] 'boil'
//um// with [kùk] 'quetzal bird'
5. Derives noun stems from N roots
6. Non-productive
7. Exs.

//čin//N 'boil' ----> //čin am// 'brains/marrow'

//čà?//N 'grindstone' ----> //čà? am// 'molar'

//kùk//N 'quetzal bird' ----> //kùk um// 'feather'

cf. [im] (80)

#82

1. [et] 'nominalizer'
2. ----
3. //et//
4. No alloforms
5. Derives noun stems from N roots and uc,s
6. Non-productive
7. Exs.

//ʔòk//N 'foot/leg' ----> //ʔòk et// 'trivet/tripod'

//bàk//N 'pit/kernel/seed' ----> //bàk et// 'flesh'

//sàm//*uc ----> //sàm et// 'griddle'

#83

1. [ub] 'nominalizer (body-part)'
2. Vb ag
3. //ub// ∞ //ab// ∞ //b//
4. //ab// with [lâç]T 'carry under the arm'
[mâç]*uc
//ub// with [šùhk]N 'corner'
[sèhk]*uc
//b// with [šùl]*uc before [Vl] 'nominalizer'
5. Derives noun stems referring to body parts, once from an N root, once from a T root, and (possibly) three times from uc,s.
6. Non-productive
7. Exs.
//šùhk//N 'corner' ----> //šùhk ub// 'elbow'
//sèhk//*uc ----> //sèhk ub// 'liver'
//lâç//T 'carry under the arm' ----> //lâç ab// 'arm-pit'

//mâç//*uc ----> //mâç ab// 'eyebrow'
//šùl//*uc ----> //šùl bal// 'horn'

#84

1. [Rtik] 'aggregation'
2. R + tik pl
3. //Rtik//
4. No alloforms
5. Derives noun stems from N roots
6. Fairly productive
7. Exs.

//nà//N 'house' ----> //nà natik// 'settlement'

//kàl//N 'cornfield' ----> //kàl kàltik// 'area for
planting corn'

//lùm//N 'earth' ----> //lùm luntik// 'territory'

#85

1. [eb] 'general cardinal numeral'

2. ----

3. //è'b// ∞ //eb// ∞ //e'// ∞ //ø//

//s// after [hùn] 'one'

4. //e'// before certain nouns of measurement, e.g.,

[minúto] 'minute'

[?óra] 'hour'

[kàhk] [al] 'day'

[péso] 'peso'

[béltá] 'repetition'

//è'b// after [čà?] 'two' unless preceded by [lâhun]
'ten' or [bâlung] 'nine'

//eb// elsewhere

5. Derives general cardinal numerals from numeral expressions 'one' through 'nineteen'

6. The idea of productivity is not relevant here.

7. Exs.

//hun// 'one' ----> //hun ø// 'one'

//č// 'two' ----> //č è'b// 'two'

//?oš// 'three' ----> //?oš e'// 'three'

//bùlu č// 'eleven' ----> //bùlu č eb// 'eleven'

//lâh č// 'twelve' ----> //lâh č eb// 'twelve'

//bâlung-lâhun// 'nineteen' ----> //bâlung-lâhun eb//
'nineteen'

10

#86

1. [hey] 'time in the past'

2. ----

3. //e//[∞] //hey//

4. //e// with [ʔàhkub] 'night'

[nàm]uc

[hùn] [Hab] 'one year'

//hey// with [čàʔ] 'two'

[wò]uc

5. Derives noun stems (usually functioning as adverbs of time) from N roots, N + N compounds, and uc,s.

6. Non-productive

7. Exs.

//ʔàhkub//N 'night' ----> //ʔàhkub e// 'last night'

//nàm//uc ----> //nàm e// 'formerly/long ago'

//hùn_Z-Hab//N+N 'one year' ----> //hùn_Z-Hab e// 'a year ago/last year'

//čàʔ//N 'two' ----> //čàʔ hey// 'day before yesterday'

//wò//uc ----> //wò hey// 'yesterday'

#87

1. [eh₃] 'time in the future'
2. ----
3. //eh//
4. No alloforms
5. Derives noun stems (usually functioning as adverbs of time) from N (numeral) roots
6. Non-productive
7. Exs.
//čà'b//N 'two' ----> //čà'b eh// 'day after tomorrow'
//'òš//N 'three' ----> //'òš eh// 'in three days'

#88

1. [il] 'the class of which one is a member'
2. Vl n
3. //-il//
4. No alloforms
5. Derives noun stems from N roots, and possibly from derived n stems
6. Productive
7. Exs.
//pre'sidénte//N 'president' ----> //pre'sidénte -il//
'presidency'
//hwès//N 'judge' ----> //hwès -il// 'judgeship'
//winik//N 'man' ----> //winik -il// 'manliness'

#89

1. {Vl₁} 'place of abundance of objects'
 2. Vl n
 3. //il// ∅ //el// ∅ //al// ∅ //ul//
 4. The variation is morphologically conditioned, but varies from speaker to speaker, and no pattern emerges.
 5. Derives noun stems from nouns, radical and derived
 6. Productive
 7. Exs.
- a) with N

//tâh// 'pine' ----> //tâh al// 'stand of pine'

//'ič// 'chile' ----> //'ič el//, //'ič il// 'chile
grove'

//'išim// 'corn' ----> //'išim el//, //'išim al//
'corn field'

- b) with n

//lò'bal// 'plantain' ----> //lò'bal el// 'plantain
grove'

#90

1. [tikil] 'aggregation'

2. tik pl + Vl n

3. //tikil//

4. No alloforms

5. Derives noun stems from N roots

6. Fairly productive

7. Exs.

//wìç//N 'mountain/hill' ----> //wìç tikil// 'mountain
range'

//tè?//N 'tree' ----> //tè? tikil// 'woods/forest'

//tòn//N 'stone' ----> //tòn tikil// 'rocky place'

#91

1. [tik₁] 'honorific'2. tik pl

3. //tik//

4. No alloforms

5. Derives noun stems from N roots

6. Non-productive

7. Exs.

//?ùn// 'child' ----> //?ùn tik// 'children'

//mè?// 'mother' ----> //mè? tik// 'lady'

//tât// 'father' ----> //tât tik// 'gentleman'

#92

1. [V₁l₂] 'quality'
2. V₁ n
3. //V₁l// ∞ //al// ∞ //il//
4. //V₁l// occurs with those A which take //V₁l// when attributive

//al// occurs with those A which take //al// when attributive, and with [k'išin] 'warm'

//il// occurs elsewhere
5. Derives noun stems from A roots
6. Productive
7. Exs.
 - a) with //V₁l//

//čè// 'raw' ----> //čè el// 'rawness'
 - b) with //al//

//čàh// 'red' ----> //čàh al// 'redness'

//'ihk// 'black' ----> //'ihk al// 'blackness'

//k'išn// 'warm' ----> //k'išnal// 'warmth'
 - c) with //il//

//'ùč// 'good' ----> //'ùč il// 'goodness'

//'pih// 'intelligent' ----> //'pih il// 'intelligence'

//tùlan// 'strong' ----> //tùlan il// 'strength'

//'àl// 'heavy' ----> //'àl il// 'weight'

#93

1. [eM] 'perfect intransitive participle'
2. em
3. //eM//
4. No alloforms
5. Derives a perfect intransitive participle from all
iv stems except passives in [ot]
6. Universal
7. No examples given due to its universal occurrence;
see 45.1

#94

1. [bil] 'perfect passive participle'
2. b sf + Vl aj
3. //bil//
4. No alloforms
5. Derives the perfect passive particle of all transitive
verb stems
6. Universal
7. No examples given due to its universal occurrence;
see 45.1

#95

1. [V₁l] 'adjectivizer'
2. Vl aj
3. //V₁l// ∞ //l//
4. //l// before [an] imperative, [uk] subjunctive; //V₁l// elsewhere
5. Derives adjective stems from many P roots, and a few T and I roots
6. Productive
7. Exs.
 - a) from I roots

//wày// 'to sleep' ----> //wày al// 'asleep'
 - b) from T roots

//kèš// 'to be ashamed' ----> //kèš el// 'ashamed'
 - c) from P roots

//hàm// 'open' ----> //hàm al// 'open'

//hàw// 'face up' ----> //hàw al// 'face up'

//nùh// 'face down' ----> //nùh ul// 'face down'

#96

1. {V₁htik} 'adjectivizer-plural'
2. ----
3. //V₁htik//
4. No alloforms
5. Derives adjective stems with plural meaning (possibly only stative) from many P roots, and a few T and I roots.
6. Productive
7. Exs.

//wày//I 'to sleep' ----> //wày ahtik// 'asleep-pl'

//kěš//T 'to be ashamed' ----> //kěš ehtik// 'ashamed-pl'

//hâm//P 'open' ----> //hâm ahtik// 'open-pl'

//hâw//P 'face up' ----> //hâw ahtik// 'face up-pl'

//nùh//P 'face down' ----> //nùh uhtik// 'face down-pl'

#97

1. [V₁lahben] 'collective'
2. Vl aj + lahpl + b sf + Vn sb
3. //V₁lahben//
4. No alloforms
5. Derives adjective stems of collective meaning
(possibly only stative) from many P roots and a few
T and I roots.
6. Productive
7. Exs. (For glosses see #96)
 - wáy alahben
 - kès elahben
 - hâm alahben
 - hâw alahben
 - nùh ulahben

#98

1. [V₁mtik]
2. Vm sf + tik pl
3. //V₁mtik//
4. No alloforms
5. Derives adjectives from P roots and uc,s
6. Fairly productive
7. Exs.
 - šèl emtik
 - tìim intik
 - wùc' umtik

#99

1. [HV₁ltik] no gloss
2. Vl aj + tik pl
3. //HV₁ltik//
4. No alloforms
5. Derives adjective stems from P roots
6. Fairly productive
7. Exs.

//t'èč// //t'èč Heltik//

//t'èt// //t'èt Heltik//

#100

1. [Rtik] 'diffusive'
2. R + tik pl
3. //Rtik//
4. No allophones
5. Derives adjective stems from A and N
6. Productive
7. Exs.

//yàš// 'green' ----> //yàš yaštik// 'greenish'

//kàn// 'yellow' ----> //kan kantik// 'yellowish'

//čâl// 'smoke' ----> //čâl čaltik// 'brownish/
smoky'

#101

1. [Vl₃] 'adjectivizer'
2. Vl aj
3. //il// ∞ //el//
4. //el// with [nòh] 'to be filled'
//il// elsewhere
5. Derives adjective stems from I, N, and A roots
6. Non-productive
7. Exs.
 - a) I roots
//nòh// 'to be filled' ----> //nòh el// 'full'
 - b) N roots
//pàt// 'back' ----> //pàt il// 'late(r)'
 - c) A roots
//bàč// 'important' ----> //bač il// 'real' (attributive)
//?àč// 'new' ----> //y?àč il// 'new'

#102

1. [R] 'intensive'
2. R
3. //R//
4. No alloforms
5. Derives adjective stems from adjective roots
6. Productive
7. Exs.
 //kùn// 'slow, soft' ----> //kùn kùn// 'very slowly'
 //lèk// 'good' ----> //lèk lek// 'very good'

#103

1. [RH] 'adjectivizer'
2. R + h nc
3. //RH//
4. No alloforms
5. Derives adjective stems from numeral classifiers
6. Productive
7. Exs.
 //pàm H// 'flat things' ----> //pàm H pam H// 'flat'
 //sèt H// 'round things' ----> //sèt H set H// 'round'
 //tèk H// 'upright things' ----> //tèk H tèk H// 'up-
 right'

#104

1. [tik₁] 'plural/collective'
2. tik pl
3. //tik//
4. No alloforms
5. Derives plural/collectives from interrogative/relative particles
6. Non-productive
7. Exs.
 - //màça// 'who' ----> //màça tik// 'those who/people'
 - //tùti// 'what' ----> //tùti tik// 'those which/things'
 - //bà?// 'where' ----> //bà? tik// 'wherever'

#105

1. [yuk] 'indefinite'
2. ----
3. //yuk//
4. No alloforms
5. Derives indefinite pronouns and adverbs from interrogative/relative pronouns and adverbs
6. Non-productive
7. Exs.
 - //màça// 'who' ----> //màça yuk// 'anyone at all'
 - //tùti// 'what' ----> //tùti yuk// 'anything at all'
 - //bà?// 'where' ----> //bà? yuk// 'anywhere at all'

#106

1. [tik₃] 'temporal particle'
2. tik pl
3. //tik//
4. No alloforms
5. Derives adverbials of time from noun stems, radical and derived.
6. Productive
7. Exs.
 - //ʔàhkub al// 'night' ----> //ʔàhkub al tik// 'at night'
 - //sábaro// 'Saturday' ----> //sábaro tik// 'on Saturday(s)'

#107

1. [H₂] 'numeral classifier'
2. h nc
3. //H//
4. No alloforms
5. Derives numeral classifiers from T and P roots; and
a few I roots
6. Productive
7. Exs.
 - a) from I
//wày// 'to sleep' ----> //wày H// 'sleeps, nights'
 - b) from T
//lik// 'to raise up' ----> //lik H// 'coils'
 - c) from P
//kòl// 'spherical' ----> //kòl H// 'spheres'

52 Derivation by Compounding

A compound is defined as a stem formed by the juxtaposition of two stems (either radical or derived), when --

- a) at least one of the members does not normally perform the function it performs in the compound unless said member occurs with inflectional affixes, or
- b) one of the members only occurs in compounds and never as a freely-inflectible stem.

Compounding is found in the formation of noun and transitive verb stems.

52.1 Transitive Verbs

Compound tv stems are extremely rare. Only two stems are found in my Aguacatenango data.

- a) //wòl-čùkan// 'to roll up in a ball'

//wòl// P 'spherical' + //čùk// P 'tied up' + [an]
'make round' (derivational suffix)

- b) //màh-tùm// 'to smite'

//màh// T 'to hit' + //tùm// T 'to hit'

52.2 Noun Stems

There are eight types of compounding yielding noun stems.

- a) aj + n when the aj normally takes {Vl} in order to be attributive. //-// occurs between the members.

//sìk-kàhk// 'malaria' //sìk// A 'cold'

//kàhk// N 'fire'

//pìhk-kinal// 'darkness' //pìhk// A 'black'

//kinal// N 'terrain'

//sàk-ʔòʔbal// 'tuberculosis' //sàk// A 'white'

//ʔòʔbal// N 'cough'

- b) aj + n when the aj is not a freely-inflectible stem.

The most frequently occurring aj stems as first member

are //čul// 'holy', //poko// 'worn out', //ʔáč// 'new'

//poko lùm// 'former settlement', //lùm// 'town/earth'

//ʔáč nà// 'new house', //nà// 'house'

//čul nà// 'church', //nà// 'house'

- c) tv (monosyllabic) + n where tv without inflections does not otherwise occur.

//čòn ʔišim// 'selling corn' //čòn// T 'sell'

// ʔišim// N 'corn'

//nòp hùn// 'studying' //nòp// T 'consider'

// hùn// N 'paper/book'

//č' àk bàk// 'setting bones' //č' àk// T 'repair'

// bàk// N 'bone'

- d) tv (polysyllabic) + eh + n where tv without inflections or with the suffix eh does not otherwise occur. Patterns 3 and 4 are in complementary distribution, with the meaning 'gerund + object'.

//kàtin eh bàk// 'hell' (burning bones)

//kàtin// tv 'burn'

// bàk// N 'bone'

//wiles eh mùt// 'scaring off birds'

//wiles// tv 'cause to

fly'

// mùt// N 'bird'

// tũhk aY eh pẽč// 'hunting ducks'

// tũhk aY// 'shoot' tv

// pẽč// N 'duck'

- e) tv (monosyllabic) + //o// + n where tv without inflexions or with the suffix //o// does not otherwise occur.

Meaning 'instrument'.

// lik o Hã?// 'bucket/water pitcher'

// lik// T 'to lift up'

// Hã?// N 'water'

- f) tv/iv + //bã// (reflexive pronoun)

// ?ilin-bã// 'mutual anger'

// ?ilin// iv 'be angry'

// tõi-bã// 'arrogance'

// tõi// T 'to raise up'

- g) numeral root + n Numerals are a subclass of N roots which always occur only in compounds. Some numeral + non-numeral noun compounds occur.

// bã-?ãl al// 'first child'

N // bã// 'first'

n // ?ãl al// 'child'

// čã?-mè?// 'step-mother'

N // čã?// 'two'

N // mè?// 'mother'

- h) noun + noun Attributive compounds where one of the members does not otherwise occur, i.e. is a cranberry morpheme, or does not occur as a free stem.

// tũš(-)?ãk// 'onion' ; // tũš// * 'onion' + // ?ãk// 'grass'

// ?is(-)?ãk// 'potato' ; // ?is// * 'potato' +

// ?ãk// 'vine'

- // kà²-tè²// 'bridge' ; // kà²// * 'bridge' +
// tè²// 'wood'
- // ɕin-tè²// 'yucca' ; // ɕin²// * 'yucca' +
// tè²// 'tree'
- // hi tè²// 'oak sp.' ; // hi²// 'oak sp.' +
// tè²// 'tree'
- // ɕù tè²// 'burial slab' ; // ɕù²// N 'holy thing' .
+ // tè²// 'wood'
- // hala mè²tik// 'god mother' ; // hala// 'protector(?)'
+ // mè²tik// 'lady'

* In the following section (60) glottalized consonants are symbolized C'.

60 THE STRUCTURE OF NUMERALS *

61

Numeral expressions in Tzeltal are made up of the following four types of elements.

- a) quantifying expressions representing the values 1 - 19, absolute when followed by noun classifiers (d), but multiplicative when followed by quantifying classifiers (b).
- b) quantifying classifiers representing the values 20, 400, and 1/2; always preceded by one of the quantifying expressions (a), the value of (a) + (b) being a X b.
- c) the particle //ta//.
- d) noun classifiers which specify some characteristic of the thing enumerated. They are of two types:
 - 1) non-specific or general; one member, the suffix {eb} (85)
 - 2) specific or characteristic; an open set of which about fifty are of very frequent occurrence.

61.1

Quantifying expressions are made up of a small closed class of thirteen numeral roots which never occur as free forms. The numerals '1-12' are roots and the expressions '13 - 19' are compounded from the roots {3 - 9} respectively plus the root {10}. The numeral expressions '1 - 19', 'how many' are listed here.

{hùn} //h//∞ // hù//∞ // hùn//	'one'
{čàʔ} //č//∞ // čàʔ//∞ // čàʔb//	'two'

* See p. 149A

//ʔòš//	'three'
//čàn//	'four'
//Hòʔ//	'five'
//wàk//	'six'
//hùk//	'seven'
//wàšuk//	'eight'
//bàl un//	'nine'
//làhun//	'ten'
//bùluč//	'eleven'
	(analyzable as [+bàlun] + [+čàʔ])
//ʔòš~làhun//	'thirteen'
	{3} + {10}
//čàn~làhun//	'fourteen'
	{4} + {10}
//Hòʔ~làhun//	'fifteen'
	{5} + {10}
//wàk~làhun//	'sixteen'
	{6} + {10}
//hùk~làhun//	'seventeen'
	{7} + {10}
//wàšuk~làhun//	'eighteen'
	{8} + {10}
//bàlun~làhun//	'nineteen'
	{9} + {10}
//hày//	'how many'
	(relative and interrogative)
//làhč//	'twelve'
	(analyzable as [làhun] + [čàʔ])

These quantifying expressions are always either compounded with quantifying classifiers (b) or specific noun classifiers (d,2) or suffixed with the general noun classifier /{eb}/ (d,1). The resultant form is a noun stem, by which it is meant that it has the inflectional characteristics, as well as the syntactic properties, of a noun.

{hùn} 'one' has allomorphs distributed in the following way:

//h// before specific noun classifiers, and the three quantifying classifiers.

//hù-// before {hùn} as a reduplication of itself.

//hùn// elsewhere, i.e. before the //0// allomorph of {eb}.

{cà²} 'two' has allomorphs distributed as follows:

//c// before {eb}

//cà²b// before {eh₃} (87)

//cà²// elsewhere.

61.2

The quantifying classifiers are as follows:

//tàB//, //wìnik//	'twenty'
//bàhk //	'four hundred'
//²òlil//	'half'

These morphemes are called 'classifiers' because like specific noun classifiers, they occur as the second members of compounds only when preceded by quantifying expressions, the resultant stems being nouns. Unlike specific noun classifiers

however; they may not occur as free forms.

The quantifying classifier 'twenty' includes two suppletive morphemes: //t`aB// occurring after 'one' //h//, and //w`inik// occurring after all other quantifying expressions. //w`inik// occurs elsewhere in the language as a noun stem meaning 'man, male, person'. The semantic connection is probably through the fact that people have twenty digits.

62

Before dealing with the usage of //ta// and the formation of specific noun classifiers, it will be convenient to describe here the formation of numeral phrases and the sequence of enumeration, or counting. There are two types of numeral phrases; general and specific. The sequence of enumeration may be broken up into the values 1 through 19, and 20 through 7,999.

62.1

General numeral phrases 1 -19 are formed by suffixing {eb} to quantifying expressions 1 -19.

Specific numeral phrases 1 -19 are formed by compounding quantifying expressions 1 - 19 with specific noun classifiers.

Both general and specific numeral phrases 1 -19 are nouns and may be inflected as such. When inflections are added to these stems, the inflectional suffix {el} is suffixed before any personal affixes are added. The third person singular possessed form

of the numeral has the meaning 'ordinal'. Other forms mean 'the two of us', 'the three of you', etc.

Examples:

General		Specific (//túl// 'person(s)')
/hùn/	1	/htúl/
/čé?b/	2	/čá?tul/
/?óše?b/	3	/?óštul/
/čáne?b/	4	/čántul/
/hó?e?b/	5	/hó?tul/
/wáke?b/	6	/wáktul/
/húke?b/	7	/húktul/
/wášuke?b/	8	/wášuktul/
/bálune?b/	9	/báluntul/, etc.
/láhune?b/	10	
/búluče?b/	11	
/léhče?b/	12	
/?óšlahune?b/	13	
/čánlahune?b/	14	
/hò?lahune?b/	15	
/wáklahune?b/	16	
/húklahune?b/	17	
/wášuklahune?b/	18	
/bálunlahune?b/	19	
/háye?b/	how many	/háytul/

Examples of possessed forms are:

/hčé?baltik/, or /hčá?tulaltik/

'the two of us' (lit. 'our two')

/ʔawóšebalik/; or /ʔawóštulaltik/

'the three of you' (lit. 'your three')

/ščánebal/ or /ščántulal/

'the fourth' (lit. 'its four')

62.2

The points from 20 to 7,999 are marked at intervals of twenty integers with compounds whose first member is a quantifying expression and whose second member is a quantifying classifier.

General numeral phrases are represented by the simple compounding described above.

Specific numeral phrases are represented by this compound plus the particle /ta/ plus the uninflected specific noun classifier.

Examples are given for the 20-interval points between 20 and 400:

General		Specific
/htáb/	20{1x20}	/htáb ta túl/
/čáʔwinik/	40{2x20}	/čáʔwinik ta túl/
/ʔóšwinik/	60{3x20}	/ʔóšwinik ta túl/
/čánwinik/	80{4x20}	/čánwinik ta túl/
/hóʔwinik/	100{5x20}	/hóʔwinik ta túl/, etc.
/wákwinik/	120{6x20}	
/húkwinik/	140{7x20}	
/wášukwinik/	160{8x20}	
/bálunwinik/	180{9x20}	

/láhunwinik/	200{10x20}
/búlučwinik/	220{11x20}
/láhčwinik/	240{12x20}
/ʔóšlahunwinik/	260{13x20}
/čánlahunwinik/	280{14x20}
/hóʔlahunwinik/	300{15x20}
/wáklahunwinik/	320{16x20}
/húklahunwinik/	340{17x20}
/wášuklahunwinik/	360{18x20}
/bálunlahunwinik/	380{19x20}
/hbánk/	400{1x400}

Quantities over 400 and less than 800 (čaʔbahk') are expressed '400 + 100 (= 500)':

/hbánk sok hóʔwinik/ (/sok/ means 'with, and')

62.3 Between the points 20, 40, 60, etc., the integers 21, 22, 23 ..., 41, 42, 43 ..., are represented by expressions which might be thought of as 'anticipative' of the end point of the counting. Thus, '21' is 'one on the way to forty,' '22' 'two on the way to sixty,' etc.

The statement of this is as follows:

General numeral phrases are represented by the general numeral 1 - 19 plus the third person singular possessed form of the numeral which is a multiple of twenty which is at the end of the counting sequence.

Specific numeral phrases are the same as general phrases, plus addition of /ta/ + specific noun classifier.

Examples are here given for the interval between 20 and 40.

General		Specific
/htáb/	20	/htáb ta túl/
/hún ščá'winik/	21 (1 towards 40)	/hún ščá'winik ta túl/
/čé'eb ščá'winik/	22 (2 towards 40)	/čé'eb ščá'winik ta túl/
/'óše'eb ščá'winik/	23	/'óše'eb ščá'winik ta túl/
/čáne'eb ščá'winik/	24	/čáne'eb ščá'winik ta túl/
/hó'e'eb ščá'winik/	25	/hó'e'eb ščá'winik ta túl/
/wáke'eb ščá'winik/	26	etc.
/húke'eb ščá'winik/	27	
/wášuke'eb ščá'winik/	28	
/bálune'eb šča'winik/	29	

/láhuneʔb ščáʔwinik/ 29

/láhuneʔb ščáʔwinik/ 30

etc. 31

32

33

34

through to

/čáʔwinik/ 40

/čáʔwinik ta túl/

All other areas between intervals of 20 have analogous structure.

62.4 All numerals expressed by this system of numbering are expressed in terms of the above description.

63 The distribution of the particle /ta/ as seen in the above examples is as follows. /ta/ is obligatorily present in specific numeral phrases with values 20 and over. It occurs between the quantifier and the specific noun classifier.

In addition, it occurs optionally before a quantified noun after a general numeral phrase, e.g., /čáʔwinik péso = /čáʔwinik ta péso/ '40 pesos'. (cf English 'twoscore pounds' vs. 'two scores of pounds').

Not enough examples of the 'optional' occurrence of /ta/ have been observed to enable a fruitful generalization to be drawn. It is possible, or even likely, that the class of nouns which can follow /čáʔwinik ta/ as well as /čáʔwinik/ does not contain all Tzeltal nouns.

64 Specific noun classifiers are of two types:

- a. classifier stems formed from verb roots (CVC) by infixation of -h- between vowel and second consonant (suffixing //H//)
- b. noun stems used as classifiers with no change in phonemic shape.

Since infixes /h/ can only occur before plain and glottalized stops and affricates, when the final consonant of a verb root is /s š h m n l w y ?/, the classifier stem is not phonemically distinguished from the tv root whence it is derived. But in the Bachajón dialect, where this same limitation on the distribution of infixes /h/ does not hold, the distinction between the tv roots and the classifier stems is phonemically overt in more cases. In none of the dialects can infixes /h/ occur before /s š h ?/.

64.1 There follows a list of classifiers elicited from informants or extracted from texts whose approximate meanings have been specified by informants.

The list is divided into three sections.

- A. Classifiers known to be derived from verb roots.
- B. Classifiers whose morphology is probably V root + //H// [H₂], but for which the corresponding tv roots are not otherwise attested in my data. This uncertainty leaves open the possibility that some noun stems are listed here.
- C. Classifiers known to be recruited from noun stems.

These (in this list) are probably the most frequently occurring classifiers, but by no means all of them. It appears that any verb root (especially P roots) whose meaning involves specifying the position or shape or state of an object, or a change therein, can be made into a numeral classifier. Hence, this is a very productive class. In contrast, there are very few noun stems which function as numeral classifiers.

A. Numeral classifiers derived from verb roots

- | | | |
|----------|-----------|-----------------------------------|
| 1) bal | | 'rolled up things' |
| -bal | tv | 'roll up' |
| 2) bus | | 'piles' |
| -bus | P | cf busul aj 'piled up' |
| 3) čahp | | 'pairs' |
| -čap | tv | 'agree about' |
| 4) čol | | 'lines, furrows' |
| -čol | tv | 'line up' |
| 5) č'am | | 'piles' |
| -č'am | tv | 'gather' |
| 6) č'o'b | | 'piles, groups' |
| -č'o'b | tv | 'gather together' |
| 7) č'al | | 'packages, loads' |
| -č'al | tv | 'pile up' |
| 8) haw | | 'armsful' |
| -haw | P | cf -hawuy tv 'measure by armsful' |
| 9) him | | 'shots, blows' |
| -him | tv | 'shoot' |
| 10) huht | | 'holes' |
| | cf iv hut | 'be perforated' |

- 11) kah 'floors, levels'
 -kah P cf kahal aj 'on top'
- 12) koht 'animals'
 -kot P cf kotal aj 'on all fours'
- 13) k'as 'pieces, fragments'
 -k'as tv 'break'
- 14) lahč 'piles'
 -lahč tv 'pile up'
- 15) lam 'pieces of clothing'
 -lam P cf lamal aj 'steady'
- 16) lehč 'flat thin things'
 -leč tv 'take hold of (something thin and flat)'
- 17) lihk 'ropes, cords'
 -lik tv 'carry'
- 18) mahk 'chunks (cork-shaped)'
 -mak tv 'stop up'
- 19) mel 'occurrences'
 -mel tv 'explain'
- 20) pal 'bunches'
 -pal P cf -palan tv 'loosen'
- 21) pehč 'flat round things'
 -peč P
- 22) peht 'handful of wood'
 -pet tv 'embrace (below the arms)'
- 23) pohk 'changes of clothing'
 -pok tv 'place clothes on'
- 24) pis 'measures'
 -pis tv 'measure'

- 25) sehp i 'round things'
 *-sep T cf sepel aj 'round (like a
 plate)'
- 26) šaht' 'parts, jobs'
 -šat' tv 'split'
- 27) šeht' 'pieces of paper, tortillas, bark'
 -šet' tv 'split'
- 28) šoht 'rolls of vine, wire'
 -šot P
- 29) tehk 'whole plants'
 -tek P cf -tek' tv 'step on'
- 30) ten 'classes, manners'
 -ten tv 'mash'
- 31) tih 'hours of the day'
 -tih tv 'ring a bell, play an instrument'
- 32) tihk' 'groups, divisions'
 -tik' tv 'put in'
- 33) tul 'people'
 cf -tul tv 'cut off'
- 34) wel 'fannings with a leaf or branch'
 -wel tv 'fan, blow'
- 35) wol 'spherical things'
 cf -wol tv 'lead, manage;' wolol aj 'spherical'

B. Derivation uncertain

- 1) češ 'branches, leaves'
 2) hil 'ropes'
 3) kuh 'tree-trunks, bunches'
 4) pis 'fruits'

- 5) p'al 'words'
 6) p'ih 'small round things'

C. Derived from nouns

- 1) š'iš 'corn cobs, trees, rolls;
 cylindrical things'
 š'iš n 'spine, thorn'
- 2) k'a'b 'fingerbreadth'
 k'a'b n 'hand, arm'
- 3) k'ašel 'occurrence'
 k'ašel n < iv k'aš 'pass by, occur'
- 4) nail 'houses of (bee, ant)'
 na n 'house'
- 5) yalel (in phrase ta hyalel)
 'all at once'
 yalel n < iv yal 'fall from'

65 Both general numerals and specific numerals may be reduplicated. In the case of the latter, only the quantifying element is repeated. In the case of the former, the whole numeral is repeated, but the form of the suffix [eb] in the first half of the reduplication is //e//. Reduplication has not been observed in numeral phrases whose value is larger than twenty, but they might be expected to occur.

The meaning of reduplication is distributive.

- e.g. /húhun/ 'every one, one by one'
 /húhutul/ 'every person'
 /šá'ča'koht/ 'animals, two by two'
 /šéše'k'ahal/ 'every two days'

66 Another type of juxtaposing of numerals is used to indicate vagueness within limits. The mechanism is analogous to that of reduplication as described above. In general numerals, a complete suffixed form is followed by another complete suffixed form. In specific numerals, the quantifying elements are juxtaposed before the classifier is attached, speaking in terms of immediate constituency. The specific mechanism is that a quantifying expression is followed by the next largest one, as in the following examples.

/čá'ʔoštul/	(two-three-person)	'a few people'
/čé'ʔoše ʔu/	(two-three month)	'a few months'
/čáho'koht/	(four-five animal)	'several animals'

67 Certain specific classifiers have storable limits to the quantifying expressions with which they can occur. // tē'b//, meaning 'a little', only occurs with 'one'. // ʔàhk'//, meaning 'a short time', only occurs with 'one' and 'two'.

68 A numeral phrase may be followed by a noun or noun phrase which it quantifies, or it may stand alone as a noun phrase.

68.1 Most nouns when quantified may be preceded by a numeral phrase of either the general or the specific type. Certain nouns, however, may not be quantified in a general way. Such nouns as /té'/'wood', /sí'/'firewood', /hí'/'sand', /há'/'water' are examples. In Tzeltal, one cannot say '3 woods', '10 firewoods', '400 sands', or '7 waters' any more than in English.

In Tzeltal there are classifiers for 'flat thing' /léhč/, 'broken things' /k'ás/, 'small round thing' /p'ih/, and 'drops' /t'úl/, which, among others, are used here with these nouns. We may call nouns of this type mass nouns.

Examples:

/ʔóšlehč téʔ/	(three flat thing wood) 'three planks'
/láhunk'as síʔ/	(ten broken thing firewood) 'ten chunks of firewood'
/hbáhk' ta p'ih híʔ/	(one times four hundred small round thing sand) 'four hundred grains of sand'
/húkt'ul háʔ/	(seven drop water) 'seven drops of water'

Some mass nouns when classified by different classifiers refer to different things.

Examples:

/ʔóšlehč téʔ/	(three flat thing wood) 'three planks'
/ʔóštenk téʔ/	(three plant wood) 'three trees'

68.2 Nouns which are not mass nouns usually may be quantified either with a general or a specific numeral phrase.

e.g., /ʔóšeʔb winik/	= /ʔóštul winik/	'three men'
/ʔóšwol ná/	= /ʔóšeʔb ná/	'three houses'

Some nouns are rarely or never quantified with a specific numeral phrase. These are primarily nouns referring to body parts. Not all body parts are treated this way. The distinction in meaning, if relevant, may

be either internal vs. external, or shaped vs. parts for which shape is not specified. A careful examination of pertinent examples has yet to be made.

Examples of classified body parts.

/káʔb/	'hand, arm'	/čiš/	'cylindrical'
/bák/	'bone'	"	"
/šúluʔb/	'horn'	"	"
/ʔóʔtan/	'heart'	/pis/	'fruit-shaped'
/čúʔ/	'breast(f)'	"	"
/sít/	'eye'	/píh/	'small, round'
/múšuk/	'navel'	"	"
/hól/	'head'	/wol/	'spherical'
/číkin/	'ear'	/lehč/	'flat'

69 (See Syntax [90])

The numeral phrase may function as a nominal, that is, as subject of transitive or intransitive verb, object of transitive verb, or stative predicate. It may precede another nominal which it then quantifies.

Exs.

/ya štál čáʔtul/ (present comes two-person) 'two people are coming' (subject of intransitive verb)

/ya hmíl čáʔkoht/ (present I-kill two-animal) 'I'm killing two animals' (object of transitive verb)

/čáʔkohtik/ (two-animal-they-are) 'they are two animals' (stative predicate)

/ʔáy čáʔtul wínik/ (exist two-person man) 'there are two men' (quantifier of following noun).

70 INFLECTION

71 Paradigmatic Charts of Inflectional Affixes*

71.1 Transitive Inflection

Transitive verbs have two states, an indicative,
and an imperative.

<u>INDICATIVE</u>					
<u>Subject</u>		<u>Perfect</u>	<u>Subjunctive</u>	<u>Subject</u>	<u>Object</u>
{k}	STEM	{Øh}	{uk}	{tik ₁ }	{on}
{aw}				{ik ₁ }	{at}
{y}				{ik ₂ }	{Ø}
				{otik}	{eš}
+	+	±	±	±	+

<u>IMPERATIVE</u>			
	<u>Imperative</u>	<u>Plural</u>	<u>Object</u>
STEM	{a}	{ik ₁ }	{on}
			{Ø}
			{otik}
+	+	±	+

* + = obligatory

± = optional

71.2 Intransitive Inflection

Intransitive verbs have two states, an indicative, and an imperative.

<u>INDICATIVE</u>			
<u>Subject</u>	STEM	<u>Subjunctive</u>	<u>Subject</u>
{lah}			{uk}
±	+	±	+

<u>IMPERATIVE</u>		
STEM	<u>Imperative</u>	<u>Plural</u>
		{an}
+	+	±

Order: {uk} precedes {on}, {otik}
follows {Ø}, {ik₂}

Portmanteaux:

{uk} {at} = {an}

{uk} {eš} = {an} {ik₁}

71.3 Affect Inflection

Affect verbs have an indicative state only.

<u>INDICATIVE</u>			
<u>Tense</u>		<u>Subjunctive</u>	<u>Subject</u>
{š ₂ }	STEM	{uk}	{on} {at} { o } {otik} {eš} {ik ₂ }
+	+	±	+

Order:

{uk} precedes {on}, {otik}
follows {~~o~~}, {ik₂}

Portmanteaux:

{uk} {at} = {an}
{uk} {eš} = {an} {ik₁}

71.4 Stative Inflection

Stative verbs formed from aj stems with the derivational suffix {V₁l} have both an indicative and an imperative state. All other statives have only an indicative state.

<u>INDICATIVE</u>		
	<u>Subjunctive</u>	<u>Subject</u>
STEM	{uk}	{on} {at} {o} {otik} {eš} {ik ₂ }
+	±	+

<u>IMPERATIVE</u>		
	<u>Imperative</u>	<u>Plural</u>
STEM	{an}	{ik ₁ }
+	+	±

Order and Portmanteaux same as for 71.3, 71.4.

71.5 Nominal Inflection

In general, nouns have two states, an absolute, and a possessed. Some nouns have only one state, and some nouns are uninflected.

<u>ABSOLUTE</u>			
<u>Class Marker</u>	STEM	<u>Class Marker</u>	<u>Plural</u>
{š ₁ } {h}			{il} {tik ₂ }
±	+	±	±

<u>POSSESSED</u>				
<u>Possessor</u>	STEM	<u>Class Marker</u>	<u>Noun Plural</u>	<u>Possessor Plural</u>
{k} {aw} {y}			{el}	{ab} {V ₁ tak}
(+)	+	±	±	±

(+) : When {ul} occurs, it may co-occur with {y}, or else no possessor prefix is present; otherwise, a possessive prefix is always present.

Classes of nouns are defined by the occurrence of specific class markers:

<u>Class</u>	<u>Absolute</u>	<u>Possessed</u>	<u>Noun Plural</u>
1	Nothing	Nothing	{V ₁ tak}
2	Nothing	{el}	{V ₁ tak}
3a	{il}	Nothing	{ ab}
3b	{il}	Nothing	{V ₁ tak}
4	{tik}	Nothing	{V ₁ tak}
5	{s}	Nothing	{V ₁ tak}
6	{h}	Nothing	{V ₁ tak}

For the domain of nominal inflection, see the Syntax, Phrase formation, under Noun Phrases.

71.6 Adjectival Inflection

Adjectives in attributive function always precede the nouns they modify. Formation of attributive constructions is classed as syntactic, but a few monosyllabic radical adjectives occur with a suffix of the general shape {Vl} when attributive. When these same adjectives occur attributively without {Vl} the resultant constructions are classed as compounds.

The shapes of the suffix are //al//, //il//, and //V₁l//. Stems taking //al// are:

?ink 'black'

?ip 'a lot'

Stems taking //il// are:

kùn	'soft'
sàk	'white'
lèk	'good'
tù	'stinking'
nàht	'long'
hòw	'rabid'
çàm	'nice'
tút	'stingy'
çàh	'lazy'

Stems taking //V₁// are:

kà'	'rotten'
hày	'thin'
tòh	'straight'
kàhk	'hot'
çà	'bitter'
çè	'raw'
yà	'spicy'
tàt	'thick' (liquids)
pìm	'thick' (solids)
yìh	'hard'
pìh	'intelligent'
kàn	'yellow'
çàh	'red'
yàš	'green'
pàh	'sour'
çì'	'sweet'
mùk	'big'

72. Inflectional Categories

72.1 There are six patterns of inflection:

- a. transitive
- b. intransitive
- c. affect
- d. stative
- e. nominal
- f. adjectival

- a. Transitive inflection occurs with tv stems only.
- b. Intransitive inflection occurs with iv stems only.
- c. Affect inflection occurs with av stems only.
- d. Stative inflection occurs with adjective, noun (possessed or absolute, but non-plural), and some particle stems, whereby they function as predicates.
- e. Nominal inflection occurs with nouns and preceding nouns and/or adjectives in attributing function.
- f. Adjectival inflection occurs with some adjective stems in attributive function.

72.2 Grammatical categories

- a. In transitive inflection the following grammatical categories are marked: subject, object, person, plural, imperative, subjunctive, perfective.
- b. In intransitive inflection the following grammatical categories are marked: subject, person, plural, imperative, subjunctive.
- c. In affect inflection the following grammatical categories are marked: subject, plural, subjunctive, tense.

- d. In stative inflection the following grammatical categories are marked: subject, plural, subjunctive, and, for some types of adjectives, imperative.
- e. In nominal inflection the following grammatical categories are marked: noun class, possession, person, plural.
- f. In adjectival inflection attributive function is marked.

72.3 Person Markers

There are two sets of person markers, set A, and set B. Set A functions as

- a. possessor of noun.
- b. subject of transitive verb.

Set B functions as

- a. subject of intransitive, affect, and stative verb.
- b. object of transitive verb.

73. Analytical Tables of Inflectional Affixes

The following tables give the following information about the inflectional desinences:

1. number and name gloss
2. morphemic constituency
3. form; alloforms, if any
4. functions and/or distributions; limitations on distributions
5. examples

#1

1. {ik₁} 'second person plural'
2. ik pl
3. //-ik//
4. a. subject of tv, set A
- b. possessor of n, set A
- c. imperative plural, transitive, intransitive, and stative

In set A always co-occurs with {aw};

as imperative plural always co-occurs with {a} when transitive, and with {an} when intransitive or stative.

5. Exx:

- a. //a. pōš taY--ik// 'you all cure'
- b. //a. nà -ik// 'your houses'
- c. //pàs -a -ik// 'do it (pl.)'
- //b àn -ik// 'go (pl.)'
- //čòt l an -ik// 'sit down (pl.)'

#2

1. {ik₂} third person plural sets A and B
2. ik pl
3. //ik//
4. a. possessor of noun, set A
- b. subject of intransitive, affect, or stative verb

In set A when possessive always co-occurs with [y]

5. Exx:

- a. //s nà ik// 'their houses'
- b. //tàl ik// 'they came'
- //čòt ol ik// 'they are seated'

#3

1. fukɬ 'subjunctive/optative/hortatory'
2. ---
3. //uk//
4. tv, iv, av, sv
5. Exx:
 1. ---
 2. //ʔa təl uk// 'let him come'
 3. ---
 4. //maʔ ɣəm uk// 'it's not good'

#4

1. fɬɬ first person; set A
2. ---
3. //k//~//h// or //k//
 //k// _ʔ, H
 //h// ---
4. a. subject of tv
 b. possessor of n
5. Exx:
 - a. //k ʔəl// 'I say'
 - //h pàs// 'I do'
 - b. //k ʔòʔtan// 'my heart'
 - //h hòl// 'my head'

#5

1. {aw} second person: set A
2. ---
3. //a^w//~//a^// or //a^w//
 //a^w// -[?]H
 //a^// ---
4. a. subject of tv
 b. possessor of n
5. Exx:
- | | |
|--------------------|--------------|
| a. //a^w 'àl// | 'you say' |
| //a^ pàs// | 'you do' |
| b. //a^w 'ò' tan// | 'your heart' |
| //a^ hòl// | 'your head' |

#6

1. {y} third person: set B
2. ---
3. //y//~//s// or //^y//
 //y// -[?]H
 //s// ---
4. a. subject of tv
 b. possessor of n
5. Exx:
- | | |
|------------------|-------------|
| a. //y 'àl// | 'he says' |
| //s pàs// | 'he does' |
| b. //y 'ò' tan// | 'his heart' |
| //s hòl// | 'his head' |

#7

1. {tik} first person plural, set A

2. tik pl

3. //tik//

4. a. subject of tv

b. possessor of n

Always co-occurs with [k]

5. a. //k 'àl tik// 'we say'

. //h pàs tik// 'we do'

b. //k 'ò'tan tik// 'our hearts'

//h hòl tik// 'our heads'

#8

1. {a} transitive imperative

2. ---

3. //-a//

4. a. transitive imperative

5. Exx:

//pàs -a// 'do it'

#9

1. {Øh} transitive perfective

2. ---

3. //Øh//

4. perfect of tv

5. Exx:

//y 'àl oh// 'he has said'

//h pòš taY eh// 'I have cured'

10

1. {ult} inanimate possessor
2. Vl n
3. //vl//; usually //ul// with monosyllables, //al// with polysyllables, but there are many lexically determined exceptions.
4. Marks inanimate third person possessor of a noun. May or may not co-occur with {y} if first part of a possessive phrase. If functioning as simple subject or object, must co-occur with {y}.

5. Exx:

//s wiɬ ul// 'its mountain'
 //y ʔɔra -il// 'its time'

11

1. {š₁} noun class marker
2. ---
3. //š^//
4. class marker in n, when absolute

5. Exx:

//š^ čùč// 'frog'

12

1. {h} noun class marker
2. ---
3. //h^//
4. class marker in n, when absolute

5. Exx:

//h ʔiʔb// 'armadillo'

#13

1. {il} noun class marker
2. VI n
3. //VI//; normally //al// after polysyllables with //i, e// in final syllable, //il// elsewhere; but with many lexically determined exceptions.
4. class marker in n, when absolute
5. Exx:

// ^o ò ^o tan il//	'heart'
// ^ù lèl al//	'soul'
// ^{kà} 'b al//	'hand'

#14

1. {tik₂} noun class marker
2. tik pl
3. //tik//
4. class marker in n, when absolute
5. Exx:

// ^{kà} l tik//	'cornfield'
--------------------------	-------------

#15

1. {el} noun class marker
2. vl n
3. //vl// usually //al// after polysyllabic stems whose last vowel is //i, e//, //el// elsewhere, with many lexically determined exceptions.
4. class marker in n, when possessed.
5. Exx:

//s čič ¹ e1//	'his blood'
//s nùhkul e1//	'his skin'
//s bàket al//	'his flesh'

#16

1. {etik} absolute noun plural
2. tik pl
3. //-etik//
4. plural in n, when absolute
5. Exx:

//nà -etik//	'houses'
--------------	----------

#17

1. {ab} possessed noun plural
2. ---
3. //ab//
4. plural in n, when possessed, for a few nouns only; in CD with {V₁ tak}
5. Exx:

//h ničn ¹ ab tik//	'our sons'
--------------------------------	------------

#18

1. {V₁tak} possessed noun plural
2. tik pl
3. //(V₁)tak//
4. plural in n, when possessed, for nouns not in {ab};
in CD with {ab}.
5. Ex.
//h ʔi' itak// 'my dogs'

#19

1. {on} first person singular, set B
2. ---
3. //-on//
4. a. subject of stative, affect, or intransitive verb
b. object if tv
5. Exx.
 - a. //winik -on// 'I am a man'
 - //təl -on// 'I came'
 - b. //s məh -on// 'he hits me'

#20

1. {at} second person singular, set B
2. ---
3. //-at//
4. a. subject of sv, av, iv
b. object of tv
5. Exx.
 - a. //ʔənd -at// 'you are a woman'
 - //təl -at// 'you came'
 - b. //s məh -at// 'he hits you'

#21

1. {tɔ} third person singular, set B

2. ---

3. //tɔ//

4. a. subject of sv, av, iv

b. object of tv

5. Exx.

a. //kèrem tɔ// 'he is a boy'

//təl tɔ// 'he came'

b. //s mìl tɔ// 'he kills him'

#22

1. {otik} first person plural, set B

2. on lsB+tik pl

3. //-otik//

4. a. subject of sv, av, iv

b. object of tv

5. Exx.

a. //wìnik -otik// 'we are men'

//təl -otik// 'we came'

b. //s màh -otik// 'he hits us'

23

1. {eš} second person plural, set B
2. ---
3. //-eš//
4. a. subject of sv, av, iv
b. object of tv
5. Exx.
 - a. //bà -eš// 'you all went'
 - //winik -eš// 'you all are men'
 - b. //s màh -eš// 'he hits you (pl.)'

24

1. {lah} third person plural
2. lah pl
3. //lah//
4. subject of iv
5. Exx.
 - //š. lah. wil// 'they fly'

25

1. {an} imperative, set B

2. ---

3. //an//

4. imperative of sv, iv

5. Exx.

//čòt l an// 'sit down'

//òč an// 'enter'

26

1. {š₂} tense of affect verb

2. ---

3. //š₂//

4. tense of av

5. Ex.

//š₂ wòh wun// 'barking'

80 ALLOMORPHS OF ROOT MORPHEMES

The following are most of the root morphemes
having allomorphs.*

80.1 Nouns

- [ʔàhaw] "king" //ʔàhw// before [al₂] (77) 'nominalizer'
//ʔàha// as first member of compound
//ʔàhaw// elsewhere
- [ʔàʔbat] 'service' //ʔàʔt// before [ah₂] (31) 'intransit-
ivizer'
[al₁] (58) 'verbal noun'
//ʔàʔbat// elsewhere
- [čâyil] 'smoke' //čâl// before [ub] (36) 'factitive'
and when reduplicated
//čâyil// elsewhere
- [Hàʔb] 'year' //Hàʔw// before [al₂] (77) 'nominalizer'
//Hàb// after [hùn] 'one' and before
[hey] (87) 'past time'
- [Hàʔben] 'leaf' //Hàʔbin// before [al₂] (77) 'nominal-
izer'
//Hàʔwen// elsewhere
- [hòy] 'companion'
//hò// before [in₁] (11) 'transitivizer'
s//hòy//
//hòy// elsewhere

*s = stylistic variation

[kàšlan]	'Spanish American'	//kàšlan// ^S //kàšan//
[màmal]	'old man'	//màmal// ^S //mà// as first member of compound //màmal// elsewhere
[kóšo]	'cripple'	//kōš// before [kVnah] (44) 'affect verb' //kóšo// elsewhere
[kàhk]	'fire'	//kàhk// ^S //kàh// before vowel initial suffixes //kàhk// elsewhere
[kèšam]	'left hand'	//kèšam// ^S //kèšem//
[là'b]	'evil spirit'	//là'w// before [in ₃] (27) 'intransitivizer' //là'b// before [in ₁] (11) 'transitivizer' //là'// elsewhere
[?ùlab]	'guest'	//?ùla// before [taY] (47) 'transitivizer' //?ùlab// elsewhere

80.2 Numerals

[hùn]	'one'	//h// before a numeral classifier //hù// when reduplicated //hùn// elsewhere, i.e., before [eb] (85)
-------	-------	--

[čàʔ]	'two'	//č// before [eb] (85), after [bàlun] 'nine', [làhun] 'ten' //čaʔb// before [eh ₃] (86) 'time in future' //čaʔ// elsewhere
[bàlun]	'nine'	//bùlu// before [čàʔ] 'two' //bàlun// elsewhere
[làhun]	'ten'	//làh// before [čàʔ] 'two' //làhun// elsewhere

80.3 Transitive Verbs

[ʔàʔbiy]	'to hear'	//ʔàʔbiy// before [in ₃] (27) 'intransitivizer' [in ₂] (13) 'transit- ivizer' [eh ₁] (51) 'verbal noun' //ʔaʔi// ^s //ʔaʔy// ^s //ʔaʔyi// elsewhere
[ʔàk]	'to put'	//ʔàʔ// before [bey] (51) 'indirective' //ʔàk// elsewhere
[hùč]	'to grind'	//hùʔ// before [in ₃] (27) 'intransitive' + [eh ₁] (57) 'verbal noun'
[šiw]	'to fear'	//šiw// as a tv stem //šiw// as an iv stem

80.4 Intransitive Verbs

- [bà] 'to go' //b// before [on] '1st pers. sing.'
(infl) (19)
- [at] '2nd pers. sing.' (infl) (20)
- [otik] '3rd pers. sing.' (infl) (22)
- [an] 'imperative' (infl) (25)
- //bâ// before [el] 'verbal noun' (60)
- [em] 'participle' (93)
- //bà// before [eš] '3rd pers. pl.'
(infl) (23)
- //bàh// before [uk] 'subjunctive' (infl)
(23)
- //bàht// before [Q] '3rd pers. sing.'
(infl) (21)
- [ik₂] '3rd pers. pl.' (infl)
(2)
- [kò] 'to //kò//^s//kòt// as an auxiliary
arrive //kò// before [es] 'causative' (48)
there' [uk] 'subjunctive' (infl) (3)
- //kòt// elsewhere

80.5 Positional Verbs

- [ʔè] 'leaning' //ʔè// before [al₂] (77) 'nominalizer'
//ʔèʔ// before [V₁l] (95) 'adjective'
//ʔèh// before [p̃Vñ] (1), [p̃Vh̃] (14)

80.6 Adjectives

[tâkin]	'dry'	//tâk// before [ih ₂] (26)
		'intransitivizer'
		//tâkin// elsewhere
[ʔûnin]	'young'	//ʔûn// before [tik ₁] (91)
		'honorific'
		//ʔûnin// elsewhere

80.7 Particles

[hâʔ]	'demonstrative'	//hâʔ// before [on] '1st
		pers. sing.' (infl) (19)
		[otik] '1st pers.
		pl.' (infl) (22)
		//hâʔ// elsewhere
[sòk]	'with'	//sòk// ^s //sòyok//

90 SYNTAX

91 Introduction

The structural items to be dealt with in the Syntax are affix, word, phrase, and clause. This description stops at the clause level; that is, it describes the structure of clauses but does not describe how clauses are put together to make sentences, nor does it describe any higher level (discourse, utterance, etc.). The description begins with syntactic word types, proceeds to phrase types, thence to clauses.

92 Abbreviations

Word level (word type names)	
vaj	verbal adjective
ip	inflectible particle
iv	intransitive verb
tv	transitive verb
pv	passive verb
rv	reflexive verb
ppr	personal pronoun
dpr	demonstrative pronoun
epr	emphatic pronoun
nc	numeral classifier
aux	auxiliary
p-v	postverbal modifier
vn	verbal noun
n	noun

aj adjective
 a-p adjective-particle

Phrase level (phrase type names)

N noun phrase
 ivp intransitive verb phrase
 tvp transitive verb phrase
 t time
 l location
 m manner
 e extent
 p purpose
 H head slot
 Mod modification slot
 Num numeral slot

Clause level (slot names)

IP intransitive predicate
 TP transitive predicate
 SP stative predicate
 T time
 L location
 M manner
 P purpose
 I introducer
 S/O subject/object
 Ag agent

+ obligatory

+ optional

slot: filler

93 Syntactic Word Types

In Tzeltal there are six stem-classes; nouns (n), transitive verbs (tv), intransitive verbs (iv), affect verbs (av), adjectives (aj), and particles (p). These six stem-classes on the morphological word level are matched by a good many more on the syntactic word level. In the discussion of phrase and clause structure to follow, word types that are specified are syntactic word types and not stem-classes although the names are similar.

The following syntactic word types occur.

- a) Independent personal pronouns; /hóʔ on/ 'I, me', /háʔat/ 'you (sing.)', /háʔ/ '3rd sing.', /hóʔtik/ 'we, us', /háʔeš/ 'you (pl.)', /háʔik/ 'they, them'. These are, formally speaking, stative verbs formed from the particle /háʔ/+ stative verb endings (see stative predicates 96.1(c), and might be translated, 'it is I who', 'it is you who', etc. From a more fruitful point of view, however, since these pronouns function in precisely the way that all other subjects and objects do, these forms are called independent personal pronouns. The interrogative-relative personal pronouns /máča/ 'who', /mácatik/ '(the) ones, people (who)' are formally particles.

- b) Reflexive pronoun /-bá/ 'oneself, one another', inflected as a noun, is the direct object complement in a reflexive verb construction.
- c) Emphatic personal pronoun /-túkel/ 'by oneself, oneself alone', inflected as a noun, fills the subject/object slot on the clause level, as well as being an expansion to the right of the corresponding (for person) independent personal pronoun.
- d) Demonstrative pronouns /há?/, /há?ili/, /há?ile./, 'this, that' with relative-interrogative /túti/, /túta./, /túta/, /tú/ 'what' and /tútitik/ '(the) things (that)' are partly phrasal in structure and will be discussed in the phrase-level presentation.
- e) Inflectible particles: /hič/ 'thus', /há?/ 'this/that', /?áy/ 'existing', /yák/ 'currently', and perhaps several others, are that subclass of all particles which may occur with stative verb endings on the clause level. These are the so-called inflectible particles.
- f) Numeral classifiers are a special subset of particles which are derived from tv roots and noun stems and occur only as satellites in the numerational slot of the noun phrase.
- g) The single preposition /ta/ is always followed by an 'object' (noun phrase) and occurs in location phrases, in the numeration slot in noun phrases, and in manner phrases.

- h) The particle /sok/ 'with' is optionally followed by any nominal element, or by another clause.
- i) Some particles have wide distribution across phrase types and have a position specifiable in terms of a whole phrase with themselves as the last expansion.
- j) Other particles have positions definable in terms of the whole clause in which they occur.
- k) Clause introducers functioning on the clause level are /me/, /tème/, /kálal/~/'kál/, /tel/.
- l) All other particles are specified by the types of phrases they occur in, which are the following: time, location, manner, extent, purpose, transitive verb, intransitive verb. They include specific (or absolute) as well as relative-interrogative particles.
- m) Verbal nouns are that subclass of noun stems (and syntactic nouns as well) which are derived from transitive and intransitive verb stems by the addition of suffixes (55-60). Verbal nouns (at least those derived from tv stems, and perhaps also those derived from iv stems) may function as satellites in verb phrases. Those derived from transitive verbs may govern objects when part of the verb phrase.
- n) Geographical names (gn), which are uninflected on the morphological level are simply nouns on the syntactic level.

- o) Personal names (pn) are not normally (if ever) possessed or pluralized on the morphological level. They function as nouns on the syntactic level. Personal names optionally have a prefix //h// (infl , 12). This prefix which is present when the name is used referentially, is absent when the word is used in direct address.
- p) All other forms which are nouns on the morphological level are also nouns on the syntactic level.
- q) Verbal adjectives are of two types; those derived from tv stems with the suffix [bil], which are perfect passive participles, and those derived from iv stems with the suffix [em], which are perfect active participles. These verbal adjectives may have attributive function, and stative function. In the latter function they may be preceded by the verbal particle /'áy/, unlike other adjective, and like verbs.

Exs.

from tv	/ʔákbil/	'having been given'
	/mánbil/	'having been bought'
	/páybil/	'having been boiled'
from iv	/tálem/	'having come'
	/ʔáhčem/	'having gotten wet'
	/lókem/	'having gone out'

- r) Adjective-participles are a subclass of adjectives which are derived from v roots with the suffix [V₁l] and generally specify something about the condition of something.

Exs.

a) /páyal/	'boiled'
b) /tékel/	'standing up', 'upright'
c) /čótol/	'seated', 'sitting'
d) /hákal/	'far off'
e) /tíhil/	'near by'
f) /nákal/	'situated'
g) /sépel/	'round and flat'
h) /wólol/	'spherical'

It may be that these words can also occur precede by /ʔáy/, but this is not verified. They are unique, however, in that in stative predications these are the only fillers of that slot that can occur with the inflectional suffixes [an], [an] + [ik₁] '2nd pers. sing./pl. imperative'. This suffix cannot occur with all these a-p's. One cannot say 'be boiled!' (a), 'be round!' (g), 'be spherical!' (h); one can say 'stand up!' (b), 'sit down!' (c), 'get lost!' (d).

- s) All other forms which are adjectives on the morphological level are also adjectives on the syntactic word level.

- t) Passive verbs are derived from tv stems by suffixing [ot], or //bot// (= //be// 'indirect' + //ot// 'passive'). They have the same syntactic properties as other intransitive verbs, with the exception that on the clause level an agent slot optionally occurs when a passive verb is the head of a predicate.
- u) Auxiliaries are uninflected forms of verbs used in leftward expansions of verb phrases of all types (not stative).
- v) Postverbal modifiers are (historically) verbal nouns used in rightward expansions of verb phrases of all types (not stative).
- w) All other words which are intransitive verbs on the morphological level are also iv's on the syntactic level.
- x) All transitive verbs on the morphological level are also transitive verbs on the syntactic level.
- y) Note on relatives: relative particles--personal pronoun, demonstrative (pronoun), time, location, purpose, manner, extent--all have double function. They function in the appropriate slot in the dependent clause, and the dependent clause as a whole functions as the subject or object in the independent clause. The various relative particles will be discussed under the various phrase types of which they are members. The optional /te/ which is described for the

relative clause is filling the subject slot in the main clause.

94 Phrases

Phrases are groups of words or single words which are potentially expandable into more than one word. All words which are not expandable and yet fill slots in levels above the phrase should have been dealt with on the word level.

The following phrase types occur.

Noun phrases (N) head slot

modification slot

enumerational slot

demonstrative slot

Intransitive verb phrases (ivp)

Transitive verb phrases (tvp)

auxiliaries

postverbals

Time phrases (t)

Location phrases (l)

Purpose phrases (p)

Manner and Extent phrases (m, e)

94.1 Noun Phrases

- a) The simple noun phrase consists of an optional demonstrative slot (discontinuous), an optional enumerational slot, an optional modification slot, and an obligatory head slot.

The head slot is filled by a single noun.

Exs.

/htín/ 'Agustín'

/hó'bel/ 'San Cristóbal'

/čán/ 'snake'

/bána/ 'attic'

Any polymorphemic (stem, stem) head is probably to be considered a compound.

- b) The slot occurring immediately to the left of the head slot is the optional modification slot, which may be filled either by a noun or by an adjective, the latter of which is expandable.

Exs. Mod: n + H: n

/ʔánč hóhmut/ (woman crow) 'female crow'

/púkuh ʔíʔ/ (evil-one dog) 'mean dog'

Adjectives are of two types, those which suffix [Vl] when the adjective occurs in attributive function and those which do not. Adjectives may be expanded to the left with /lòm/ 'very'.

Exs. Mod: aj + H: n

/lékil ʔánč/ (good-Vl woman) 'good woman'

/čín kérem/ (little boy) 'little boy'

Mod: A [lom + aj] + H: n

/lòm kíšin háʔ/ (very hot water)

/lòm lékil póšil/ (very good [Vl] medicine)

No examples of more than one adjective filling the

modification slot have been noted heretofore, so it is not possible to say what the ultimate expansion of this slot might be.

- c) Possessive inflection of nouns occurs on the phrase level and includes the optional modification slot and the obligatory head slot. (Possessive affixes are underlined in the following examples).

Exs. + H: n

/shól/ 'his head'

+ Mod : n + H: n

/spúkuh íí'ík/ (their-evil-one dog-their)
'their mean dog(s)'

+ Mod : aj + H: n

/hlékil án'kt / (our-good [V1] woman-our)
'our good women'

No examples of the possessive affixes including the manner particle lom/ have ever been observed.

- d) There are certain complex noun expressions which should be described here. (Do not confuse with complex noun phrases which are quite a different thing; see 94.1 (h)). They consist of one noun in a given state followed by another in the same state (i.e., possessed or unpossessed), except that only the second shows plural inflection. The relation between the two items may be thought of as apposition on the phrase level. The structure is analogous to that of complex intransitive verbs and reflexive verbs .

Exs.

/pát šúhk/	'a neighbor'
/hpát hšúhk/	'my neighbor'
/spát ašúhkik/	'yalls neighbors' (your, pl.)
/kál hníčan/	'my sons and daughters'
/smé' stát/	'his father and mother'
	> 'his ancestors'

- e) The next slot to the left of the modification slot is the optional numeral slot. It may be filled either by a numeral phrase (described in detail in 60) or a numeral expression such as /ʔéšeʔb túč/ 'three spoons (of)', which is an included + Num : num + H : n phrase.

Exs. + Num: num + Mod: aj + H:n

/čáʔtul lékil wínik/ (two-person good [Vl]
man) 'two good' men'

+ Num: num [+ H: n] + Mod: aj + H: n

/ʔóšeʔb túč kíšin háʔ/ (three spoons hot
water)

- f) If not followed by a noun functioning as head of a noun phrase, the numeral slot functions as the head of a noun phrase and can only be expanded by the demonstrative slot, discussed later.

- g) The last slot to the left is the optional demonstrative slot. It is discontinuous, so that the \pm Num \pm Mod \pm H is included within the demonstrative expression.

Demonstrative expressions are the following:

/te + H + e/	'the' (when noun phrase is single, or last in a complex noun phrase string)
/te + H/	'the' (when non-final in a complex noun string)
/há? + H + ?fli/	'this'
/há? il + H + ?fli/	'this'
/há? + H + ?file/	'that'
/há? il + H + ?file/	'that'

The interrogative demonstrative is /túti/, /túta/, /túta/, /tú/ 'what?!' The H at the end is suffixed with //il// when this, or the relative demonstrative occurs. The relative demonstrative is / \pm te túti/ etc. 'what, that which'.

Ex.

/túta ?á?telil/ (?á?tel = work) 'what (kind of) work?'

- h) Complex noun phrases or strings. Also on the phrase level occur sequences of more than one noun phrase strung together by the mechanism of having all but the last phrase of the string possessed in the third person singular (all but the demonstrative part) which represents the possessive or genitive relation

obtaining between the phrases. Noun phrases entering into the complex noun string construction may occur only with /te/, of all the demonstratives

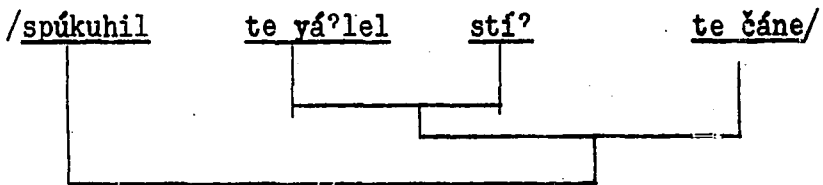
Exs. + H poss + H

/shól hwán/ (his-head John)

i.e., John, his head > John's head

or, his head (of) John > the head of John

The longest string occurring in texts is--



+ N poss + N poss [:te + H:n] + N poss + N [:te + H: n]

'its evil (of) its liquid (of) its mouth (of) the snake'

i.e., 'the evil of the saliva of the snake' (the

power of the snake's venom). It /te/ occurred before

/stí'/, the symmetry would be perfect. As it is,

/yá'lel stí'/ probably are in immediate constituency

with one another.

94.2

Verb phrases (simple) consist of an optional

negation slot, an obligatory tense particle slot, an

optional auxiliary slot, an obligatory head slot,

and an optional postverbal modification slot. There

are two main types of head, transitive and intransitive.

- a) All simple transitive verbs have two aspects, imperfective and perfective. In the imperfective aspect they are preceded by tense markers /ya/ 'present' or /la/ 'past'; in the perfective aspect they are preceded by nothing. Reflexive verbs are a special subset of simple transitive verbs in that they take as direct object the reflexive pronoun /-bá/ (93(b)) which is always inflected for the same person as the subject of the verb; plural is always indicated on the pronoun where relevant, never on the verb. The reflexive pronoun is considered as being included in the main verb expression.

Exs.

/ya hmáh hbá/ 'I hit myself'

/ya hmáh hbántik/ 'we hit each other'

The structure of reflexive verb heads is analogous to that of complex noun expressions (94.1 (d)) and complex intransitive verbs (95.2 (c)).

- b) Simple intransitive verbs have only one aspect, imperfective. They may be preceded by tense markers /š/ 'non-past', /ya + š/ 'present progressive', /ʔa/ 'past', or nothing 'past'. Intransitive verbs are both active and passive.

- c) A complex intransitive verb expression may also function as a head. As in complex noun expressions and reflexive verb expressions, plural is marked only on the second member of the expression. The fact that /š/, above (95.2 (b)) identified as a particle, can occur with both elements of such an expression is evidence in favor of its being considered an inflection (prefixial) rather than a particle.

/ya šʔálah šníčnah/ (give-birth beget) 'they are having children'

/ʔálah níčnahik/ 'they had children'

- d) Imperative verbs are never preceded by tense particles. The negative imperative (see 95.2 (h)) for both transitive and intransitive verbs is --
- + Neg: ma + me + Tense : š + H : tv/iv
i.e., ma (me) š + verb
- e) A simple transitive or intransitive verb head may be expanded to the left with one of several auxiliary verbs, which formally are uninflected (usually intransitive) verb stems. The tense markers that precede the auxiliaries and that specify the whole phrase are those that occur with intransitive verbs. + Aux + Head may be thought of as a complex verb phrase rather than an expansion of a simple verb phrase, i.e., main verb + main verb rather than satellite + nucleus, as it is treated here. The total number of auxiliaries is about ten.

Exs.

/kán/ (<tv -kan 'want')	'to almost'
/línk/ (iv 'get up')	'to start to'
/bá-báht/ (iv 'go')	a) 'to be going to' (future) b) 'to go and'
/tál/ (iv 'come')	'to come and'
/kán čámuk/ (almost he-dies-maybe)	'he almost died'
/línk spás/ (beginning he-does-it)	'he began to do it'
/tál kí/ (coming I-see-it)	'I came to see it'

The imperative of auxiliary + head is the main evidence for the complex verb phrase idea, because the formula is aux_{imper} + head_{imper}.

Exs.

/bán pása/ (go! do-it!)	'go and do it'
/ʔóčan ʔáʔtehan/ (begin! work!)	'start to work'

- f) Post-verbal modifiers. The simple verb phrase may be expanded to the right with certain elements (some of which are still formally identical with verbal nouns, and some of which have an altered shape) which directly follow the head and which specify something about the manner of the action. There are about ten of these.

Exs.

/báel/ (<ba iv 'go' + el)	'going'
/tálel/ (<tal iv 'come' + el)	'coming'
/lóʔel/ (<lok iv 'leave' + el)	'leaving'
/kóyel/ (<ko iv 'descend' + el)	'going down'

/móel/ (←mo iv 'ascend' + el)	'going up'
/ʔán lóʔel/ (he fled, leaving)	'he took off'
/ʔóčan tálel/ (enter! coming)	'came in'

If the simple verb is reflexive, the post-verbal particle may occur between the verb and the reflexive pronoun, or it may follow the reflexive pronoun.

- g) Any verb phrase (simple or complex) may be preceded by /ʔáy/ as the next-last expansion to the left. This too may be thought of as a complex construction; since /ʔáy/ in other contexts means 'existing', /ʔáy/ + verb phrase may be translated as 'it is the case that....' The construction is here regarded as a simple expansion.
- h) Negative expressions occur first in the verb phrase. They are /ma + ba/, and /ma/. The general distribution is that /ma/ occurs when verbs have past tense markers or no tense markers, and /ma ba/ precedes verbs having present tense markers. But this is not always the case. In addition, when negatives are (operationally) added to a verb phrase, the tense markers may disappear. The negative of a verb phrase beginning with /ʔáy/ is to replace /ʔáy/ by /máʔyuk ba/.
- i) Complex verb expressions. There are several types of predicates which consist of a simple verb phrase plus additional matter which it is convenient to consider as part of the verb phrase and not part of the clause

structure. There are two main types of complex verb expressions, verb + verb, and verb + verbal noun.

Each main types has two subtypes.

- j) The transitive verbs /ʔák/ 'put, give', /pás/ 'do, make' may occur in construction with a following verb (perhaps only a head) with no intervening tense particles. The meaning is, 'he causes that he do it' 'he makes/has him do it'.

Exs. with /ʔák/

/ya yákik stúʔbuta/ (they give, he spits) 'they have him spit'

/ya yáʔbeik yáʔlelin/ 'they give to it, he dissolves it'
'they have him dissolve it'

/ya káʔbat awúče/ (I give to you, you drink it) 'I have you drink it'

/ya yák kíšnahuk/ (he gives it, it heats up) 'he makes it heat up'

Exs. with /pás/

/ya spás yíl/ (he makes, he see) 'he makes him see it'

The transformation of transitive active verbs is intransitive passive verbs; therefore, the transform of /ya yáʔbe yúč/ (he causes it, that he drink) 'he makes him drink' becomes /ya šʔáʔbot yúč (yúʔun) / (it is caused, that he drink by him) 'he is made to drink (by him)'.

- k) Certain verbs may be followed directly by verbal nouns. These verbal nouns then govern the objects which optionally follow in the clause. Since nouns cannot precede other nouns and be in construction with them without being possessed 3rd sing., these unmarked verbal nouns must be functioning as transitive verbs.

Exs. with /ʔíč/	'take'
/ya yíč póstayel/	'he takes up the curing of (it)'
/ya yíč lókesel/	'he takes up the removal of (it)'
/ya yíč húlel/	'he takes up the piercing of (it)'

The verbal noun part may be expanded by the demonstrative /te...e/. Thus, /la yíč te húlele = la yíč húlel/.

- l) Other constructions occur in which certain verbs are followed in close construction by /tál/ + verbal noun (also derived from transitive verbs). The objects of these verb phrases are governed by the verbal noun, not the main verb.

Exs. with /ʔák/	'give, put'
/ya yák ta mánel/	'he causes him to buy (it)'
i.e., (pres he-gives to buying)	'he has (him) buy (it)'
/ya yák ta bákutesel/	'he has (him) fry (it)'

/ya yák ta púyel/	'he has (him) pulverize (it)'
/ya yák ta 'úcel/	'he has (him) drink (it)'
with /tíkun/	'send'
/ya stíkun ta léel/	'he sends (him) to look for (it)'
/ya stíkun ta mánel/	'he sends (him) to buy (it)'
with /tá/	'find, meet'
/la stá ta tú'butayel/	'he comes to the point of spitting'
/la stá ta póstayel/	'he comes to the point of curing (it)'
/la stábe ta 'áhtayel/	'he comes to the point of counting (it)'
with /lé/	'look for'
/ya slé ta 'áhtayel/	'he seeks to count it'

Postverbal particle may occur between the main verb and the verbal noun.

e.g., /la stábe lò'el tàlel ta núkel/
 he meets leaving coming to sucking (it)
 + tv + pv + pv + ta + vn
 'he comes to the point of sucking it'

This type of construction contrasts with one of the following type.

Ex. /ya shón ta wáyel (yínam)/
 'he accompanies (his wife) in sleep' = 'he sleeps with (his wife)'. /yínam/ is the object of /shón/ not of /wáyel/ which is derived from an intransitive verb /wáy/ 'sleep'.

94.3

Time phrases may be simple, expanded, or complex. They are of three types, absolute, interrogative, and relative.

a) absolute: simple

/yá'tik/	'nowadays'
/ʔóra/	'now'
/wóhey/	'yesterday'
/náš/	'today'
/čá'beh/	'day after tomorrrw'

: expanded (particle + particle)

/ʔóra yá'tik/	'today'
/ʔásta ʔóra/	'until now'
/ʔóra naš/	'today'

: complex

/yú'un/ + N (indicating point of time)

e.g., /yú'un romínko/ 'on Sunday'

/yú'un skín sánto/ 'on All Saints'

b) interrogative (complex): /tű ʔóra/ 'when?'; /tú/ = interrogative demonstrative (pronoun).

Ex.

/tű ʔóra ya štál/ (what time he-comes) 'when is he coming?'

c) relative /t te + tű ʔóra/ 'when'

Ex.

/ma hná' tű ʔóra ya štál/ 'I don't know when he's coming.'

94.4

Location phrases are simple, expanded, and complex; absolute, interrogative, and relative.

a) absolute

(A) simple

/líʔ/	'here'
/téy/	'there'
/nún/	'yonder'

(B) expanded

/líʔ... i/	'here'
/líʔ to/	'here'
/líʔ naš... i/	'right here'
/téy ʔa/	'there'
/téy... e/	'there'
/téy naš... e/	'right there'
/nún to/	'yonder'
/nún... e/	'yonder'

(C) complex

1. /ta/ + noun phrase. /ta/ and demonstratives are mutually exclusive so that any noun phrase beginning in /te/ or /háʔ/ loses it (operationally speaking) when preceded by /ta/

Exs.

/ya šlók ta stíʔ snáʔ/

(pres he-leaves from its-mouth his-home)

'he's going out his door'

/ya štál ta hóʔbel/ 'he's coming from S. Cristobal'

2. (A) or (B) + (C)

e.g., /líʔ to ta yút hná i/ 'here inside my house'

/líʔ ta hná i/ 'here in my house'

/téy ʔa ta sná/ 'there in his house'

/lúm to ta wíʔ/ 'over there on the
hill'

b) interrogative: /baʔ/ 'where?'

Ex. /bàʔ ay te wínike/ 'where is the man?'

c) relative: /+ te + báʔ/ 'where'

Ex. /ma škíltik te bàʔ ʔa báht/

/ma škíltik te bàʔ ʔa báht/ 'I didn't see
where he went'

94.5

Purpose phrases are perhaps not aptly named, but their structure can be described. It is /yúʔun/ (or /-úʔun/) 'of, to, with respect to, for' + N.

Exs.

a) /te čéʔb wákaš yùʔun hwán/

(the two cattle of-him John)

'the two cattle of John'

b) /ya šnéł yúʔun/

'it is passing for him' (his time of trouble)

The stem /-úʔ un/ is a noun and the translation is 'of me, you, him, us, you, them'. If /-úʔ un/ is 3rd person it can govern an object

which is a noun phrase. If it is not 3rd person, the object is expressed in the inflection and it governs no other object.

/kú?un/	'for me'
/awú?un/	'for you'
/kú?untik/	'for us'

Perhaps the usage in Example (a) (/yù?un hwán/) should be described as part of the noun phrase expansion since /te čé?b wákaš yù?un hwán/ is a perfect candidate for filler of the subject/object slot on the clause level. The second usage (b), however, is different and is paralleled by the corresponding relative and interrogative constructions.

Interrogative: /tú?un/ [tú] [yú?un] 'what for?'
i.e., 'why?' (complex)

Ex: /tù?un ya kapás/ 'why are you doing it?'

Relative: /+ te + tu?un/ 'why', 'for what reason',
'to what end'

Ex: /ma hná? tù?un hič ya šyáku?b/

(neg I-know why thus he-gets-drunk)

'I don't know why he gets drunk that way'.

94.6

Manner and extent phrases. These answer the questions 'in what way?' /tútil/ 'to what extent?' /tù yípal/.

- a) absolute: simple
- | | |
|---------|--------|
| /hič/ | 'thus' |
| /ʔéhuk/ | 'also' |
| /náš/ | 'only' |
- : expanded
- | | |
|-----------|-----------------|
| /hič náš/ | 'just this way' |
|-----------|-----------------|
- : complex
1. /ta/ + adjective
- | | |
|----------|----------|
| /ta lék/ | 'well' |
| /ta kún/ | 'slowly' |
2. /sok/ + N
- | | |
|-------------|-----------------|
| /sok skáʔb/ | 'with his hand' |
| /sók/ | 'with it' |
- b) interrogative: /tútil/ 'how?'
- Ex. /tútil la ʔapás te ʔapíšole/ 'how did you
make your hat?'
- c) relative: /+ te + tútil/ 'how'
- /ma hnáʔ te tútil ya ščí/
'I don't know how it grows'

94.7

There are certain particles which may be thought of as being plugged into phrases but in some sense not part of the structure of that phrase. They can also occur in more than one phrase type, which is why they are described separately here.

- a) The particle /ʔa/ may occur last in any phrase. It may also occur between the first and second elements of a complex noun phrase, e.g., /ta spásel ʔa te snáe/ 'in the making of his house'. The meaning is vague, perhaps something like 'past, away'.
- b) The particle /šân/ 'additional(ly)' may occur after the main verb in a verb phrase either before or after postverbal modifiers and reflexive pronouns. It may occur after the numerational element in a noun phrase.

Exs.

/hčíš šân yákan/ (one additional his foot) 'another
of his feet'

/yán šân hpóšil/ (other additional curer) 'a differ-
ent curer'

/tál šân/ 'he came again'

Possibly /šân/ can also fill the manner-extent slot in clauses.

- c) The numeral expression /htéʔbuk/ 'a little bit' may function as a marker of extent and occur in verb phrases immediately after the verb. It takes precedence over /ʔa/

Exs. (without translation)

1. /yíp ʔa kéhčah htéʔbuk ʔa/
+ ext + ivp + ext + aspect

2. /yíp kân ʔúčubuk htéʔbuk/
+ ext + aux+ivp + ext

95 Clauses

Clauses in general are made up of phrases and individual words. They have the following slots: optional introducer(I), optional subject/object (S/O), optional manner-extent (M), optional time (T), optional location (L), optional purpose (P), obligatory predicate (TP, IP, SP). Clauses may be typed both on the basis of the introducers and of the predicates.

In terms of introducers there are two main clause types, independent and dependent. Independent clauses may be divided into those that have the introducer slot filled and those that do not. Dependent clauses may be divided into those that have relative introducers and those that have non-relative introducers.

In terms of predicates, clauses may be typed as transitive, intransitive, and stative. The first two have two subtypes each and the last has four.

95.1

The nucleus of a clause is an obligatory predicate. There are three predicate types, with subtypes.

- a) Intransitive predicate slot filled by intransitive verb phrase.

Subtype 1) active. General clause formula:

$$\underline{+} \text{ I } + \text{ IP: } \text{ivp}_{\text{act}} \underline{+} \text{ S } \underline{+} \text{ T } \underline{+} \text{ L } \underline{+} \text{ M } \underline{+} \text{ P}$$

Subtypes 2) passive. General clause formula:

$$\underline{+} \text{ + IP: } \text{ivp}_{\text{pass}} \underline{+} \text{ S } \underline{+} \text{ Agent } \underline{+} \text{ T } \underline{+} \text{ L } \underline{+} \text{ M } \underline{+} \text{ P}$$

The Agent slot, which is peculiar to this type of clause may be filled by a noun phrase (N), a noun phrase preceded by /ta/ (ta + N), or a noun phrase preceded by /yù'un/ (yù'un + N).

- b) Transitive predicate slot filled by transitive verb phrase.

Subtype 1) active.

A. general. General clause formula:

$\underline{+} \text{ I } \underline{+} \text{ S } + \text{ TP: tvp } \underline{+} \text{ O } \underline{+} \text{ T } \underline{+} \text{ L } \underline{+} \text{ M } \underline{+} \text{ P}$

B. indirect (predicate slot filled by transitive verb with indirect object suffix).

General formula:

$\underline{+} \text{ I } \underline{+} \text{ S } + \text{ TP: tvp}_{\text{indir}} \underline{+} \text{ dO } \underline{+} \text{ iO } \underline{+} \text{ T } \underline{+} \text{ L } \underline{+} \text{ M } \underline{+} \text{ P}$

Subtype 2) reflexive (predicate slot filled by reflexive verb phrase)

A. general. General clause formula:

$\underline{+} \text{ I } \underline{+} \text{ S } + \text{ TP: tvp}_{\text{refl}} \underline{+} \text{ T } \underline{+} \text{ L } \underline{+} \text{ M } \underline{+} \text{ P}$

B. indirect. General clause formula:

$\underline{+} \text{ I } \underline{+} \text{ S } + \text{ TP: tvp}_{\text{refl}} \underline{+} \text{ iO } \underline{+} \text{ T } \underline{+} \text{ L } \underline{+} \text{ M } \underline{+} \text{ P}$

- c) Stative predicate slot filled by Noun phrase. Adjective phrase, Verbal Adjective phrase, or Inflectible particle.

Subtype 1) filled by noun phrase (N). Plural of a possessed object is never marked, being specified by the stative endings which occur in these clause types.

Ex. /wínikon/ (man-I am) 'I am a man'

Subtype 2) filled by adjective phrase. Adjective phrases are similar to the modification slot in the noun phrase, except that here[V1] does not occur with that subclass of adjectives with which it occurs in the modification slot. The expansion is also slightly different.

Formula: \pm Mod: adj/lom + H : Aj_{stative}

In the modification slot in the adjective phrase, adjectives, as well as the particle /lom/ may occur, limited or modifying the meaning of the head adjective.

Exs. /náht' tú'áhtik/

(long extended) 'it is extended lengthwise'

/čínat/

(little-you are) 'you are small'

Subtype 3) filled by verbal adjective.

Formula: \pm ?áy + H: aj_{stative}

Exs.

/tálem/ (having come-he is) 'he has come'

/?áy tálem/

Subtype 4) filled by inflectible particle

Formula: + H: ip_{stative}

The most frequently occurring particles of the type are

/hič/ 'thus', /?áy/ 'existing', /yák/ 'being in the act/process of'.

d) The general formula for a stative clause is--

+ I + SP + - S (if SP is /háʔ/) + - T + - L + - M + - P

A location slot does not occur in a stative clause unless the particle /ʔáy/ is the predicate. If the demonstrative particle /háʔ/ occurs in a stative clause, it is axiomatically defined as being the predicate.

e) Stative predicates are suffixed (at the end) with affixes in two positions. In the first position (mood) [an] 'subjunctive 2nd pers.', [uk] 'subjunctive 1st, 3rd pers.'; in the second position (person and number) are [on] 'I am', [at] 'you (sing.) are', [o] '3rd pers. sing.', [otik] 'we are', [eš] 'you (pl.) are', [ik₂] 'they are'. The affixes in the first position are optional, those in the second position are obligatory.

f) Stative predicates are negated in two ways. a) /ma ba/ + stative predicate ('indicative'); b) /ma/ + stative predicate in subjunctive mood.

Exs.

- | | |
|----------------|-----------------|
| 1. /ma ba lék/ | 'it's not good' |
| 2. /ma lékuk/ | 'it's not good' |

95.2

In addition to the predicate types discussed above (and the clause types that are their

expansions) there is a clause type of which the nucleus or predicate is an intransitive verb or particle, and the complement of the verb is a phrase of the type /ta/ + un. In clauses of this type all verbal nouns derived from transitive verbs are possessed 3rd sing. and all the verbal nouns derived from transitive verbs are unpossessed.

The general formula of this clause types --

$$\underline{+} \text{ I } \underline{+} \text{ S } \underline{+} \text{ P } \underline{+} \text{ ta } \underline{+} \text{ vn } \underline{+} \text{ L } \underline{+} \text{ T } \underline{+} \text{ M } \underline{+} \text{ P}$$

If vn is from tv then vn can be expanded as

$$+ \text{vn}_{\text{poss}} \underline{+} \text{ N } (\text{poss} \underline{+} \text{ N} \dots)$$

Exs:

- iv /ʔóč ta špóštayel/ 'he enters into the curing
of (it)'
- iv /lɪhk ta yáhtayel/ 'he begins the counting
of (it)'
- p /yák ta stóhel (skál)/ 'he is in the act of
cutting of (his cornfield)'
- p /yák ta ʔáʔtel/ 'he is in the act of
working'

95.3

The subject/object slot is divided into subject of intransitive verb (S_{iv}), subject of transitive verb (S_{tv}), direct object of transitive verb (dO_{tv}), indirect object of transitive verb (iO_{tv}). All have identical structures. This slot may be filled by a noun phrase (N), a personal

pronoun, a demonstrative pronoun, or a dependent clause.

Subtype 1) filled by a noun phrase

Subtype 2) filled by a personal pronoun. There are several types of personal pronouns.

A. independent personal pronouns 93 (a)

/hó'on/ 'I, me', /há'at/ 'you (sing.)', /há'/
'3rd pers. sing.'

/hó'tik/ 'we, us', /há'eš/ 'you (pl.)', /há'ik/
'they, them'

Exs.

/hó'on ya hpóštayat/

(I pres I-cure-you) 'I will cure you'

/ʔá'bon hó'on/

(give-me-it me) 'give it to me'

B. emphatic personal pronoun is /túkel/ inflected as a noun 93 (c). Meaning '(by) oneself', 'oneself alone'

Ex. /la hpás htúkel/ 'I did it myself'

C. independent personal pronoun + emphatic personal pronoun may occur together as a complex slot filler

Ex. /hò'on htúkel la hpás wóhey/

'I myself did it yesterday'

D. interrogative personal pronoun /máča/ 'who?'

Ex. /ya hlé hpóšil, te máča ya sná' póštayel/

(I-seek curer who he-knows curing)

'I'm looking for a curer who knows how

to cure'

Subtype 3) filled by demonstrative pronoun; three types.

A. absolute

/hà? fli/ 'this one, these'

/hà? file/ 'that one, those'

Exs.

/hà? fli lòm náht'/ 'that one is very long'

/ya hkántik hà? file/ 'we want that one'

B. interrogative

/túti/, /túta/, /túta/, /tú/ 'what?'

Ex. /túti ya kapás/ 'what are you doing?'

C. relative

/+ te + túti/ etc. 'what', 'that which'

/te túti ya skán, hà? te póše/ 'what he wants is liquor' (that which he wants, that's liquor)

Subtype 4) filled by a dependent clause. Any dependent clause (except those introduced by kálal, yú'un) will function either as the subject or the object of the independent to which it is adjacent.

95.4 Adverbial Slots

a) The time slot may be filled by

1. a time phrase (95.3)

2. a noun phrase of the following type:

/hún 'áhkubal/ '(for the space of) one night'
 /'óše káhal/ '(for) three days'

3. a dependent clause introduced by /kálal/ 'while, when'
- b) The location slot is filled by a location phrase (94.4)
- c) The purpose slot is filled by
1. a purpose phrase (94.5)
 2. a dependent clause introduced by /yù'un/ 'because'
- d) The manner slot is filled by
1. a manner or extent phrase (94.6)
 2. an adjective (uninflected)
- e.g., /lék/ 'in a good way, well'
 /túlan/ 'hard, difficult'
 /kúnkun/ 'little by little'

9.5.5 Introdncer Slot

There are two main types of introducers, independent and dependent, each of which has two subtypes.

a) independent

1. interrogative

/me/ (marks a question)

/tème/ (marks a question)

2. non-interrogative

/há' yá'un + te/ 'therefore' (it is for this
 reason that....)

/'entónse/ 'so, then'

/poréso/ 'therefore'

b) dependent

1. relative

/téme/ 'if, whether'

/kálal + téme, me/ 'when, while'

/me/ 'if, whether'

2. general

/yí'un + te/ 'because'

/+ te + kálal + te/ 'when, while'

/te ... + e (at end of clause)/ 'that'

95.6

Coordinators can join any two or more structurally parallel items, i.e., word and word, phrase and phrase, clause and clause.

/me/ 'or' /me/ .../me/ a) 'either... or'

/?o/ 'or' b) 'is it... or is it?'

/sok/ 'and'

/?i/ 'and'

/péro/ 'but'

Exs.

/me sík me kíšin/ 'is it cold or is it hot?'

/me ya akán wáh me kášlan wáh/ 'do you want tortillas or bread?'

/ya hkán ?išim sok ?áskal sok wáh sok tómut/

'I want corn and raw sugar and tortillas and eggs.'

95.7

Just as on the phrase level there are particles whose position can best be defined with respect to a whole phrase, so on the clause level there are several particles whose position can be described in an analogous manner.

- a) The particle /lah/ 'so they say' occurs second in a clause if /te/ (demonstrative, relative) is not counted as filling a space. It may also occur in the verb phrase (if this is not first in the clause) if it also occurs in the preceding subject, or if the subject is set off from the verb by 'commas'.
- b) The particles /me/ 'imperative', /to/ 'still, yet', and /wan/ 'perhaps' occur in predicates and their position is second no matter what the first word is. If more than one of these is present, /me/ precedes all others, and /to/ precedes /wan/.

Exs. iv /ma me š'áwunat/	'don't yell!'
tv /ma me šáwúton/	'don't tell me that!'
sv /čínat to/	'you're still small!'

- c) The enclitic particle // -iš // 'already' may occur with any predicate--transitive, intransitive, or stative. With a transitive or intransitive predicate it is attached to the main verb. With a stative predicate it follows directly on the subject affixes.

- d) The particle /*ʔin*/ (meaning vague) may begin a clause, follow the last member of a phrase, or follow the first part of a complex noun phrase. If both /*lah*/ and /*ʔin*/ occur, /*lah*/ takes precedence.

95.8

It might be expected that there would be certain order properties assignable to the various slots in a clause. I can only make the most general observations about Introducers, Subjects, Objects, and Predicates.

- a) Introducers always come first.
- b) The subject of an intransitive clause usually follows the predicate.
- c) The subject of a transitive clause may either precede or follow it.
- d) The object of a transitive clause usually follows the predicate; if the subject also follows the predicate, it usually follows the object as well.
- e) In stative clauses demonstratives, when they occur, come first (except for introducers), and are the predicate.

The relative positions of the Time, Manner, Purpose, and Location slots cannot be described yet. It is probably generally true that subjects and objects are closest to the predicate and that these remaining slots occur to the left and right of subjects and objects when the latter are present.

There can never be more than one introducer or one predicate in a clause. However, the subject/object slot may be filled by two noun phrases in apposition, e.g., /htín[?]errántes,te hčámele/ 'Agustín Hernández, the sick man'. The number of times the Time, Location, Manner, and Purpose slots may each be represented in a clause is probably not limited to one and probably not exceeded by three.