YUCATEC MAYA

NOUN and VERB MORPHO-SYNTAX

by

Robert Wallace Blair

1964

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Acknowledgments

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INTRODUCTION

This dissertation is a structural analysis of the phonology and essential morphology of the noun and verb complex of Yucatec Maya as it is spoken today by inhabitants of the state of Yucatan, Mexico. The corpus gathered on tape (and deposited in the Archives of the Languages of the World at Indiana University) consists of narrative and conversational texts together with texts elicited directly to exemplify different points of grammar. Informants have been native speakers from different parts of Yucatan and of different ages and backgrounds: Avelino Dzib of Piste (central Yucatan), born ca. 1938, farmer; Gonzalo Pech of Telchac (north-central Yucatan), born ca. 1936, student; Manuel Tun of Valladolid (eastern Yucatan), born ca. 1912, a Protestant lay-preacher; Herculano Pech of Merida, born ca. 1890, an ex-lay-preacher; and Refugio Vermont of Peto (southern Yucatan), born 1939, a colporteur and student. To all of these I owe a debt of gratitude for their patient toil.
1.1 Phoneme Inventory. The phonemes of Maya may be represented by the following symbols:

Non-syllabics (not combinable with accent) are twenty-six in number, including twenty-four consonants and two semi-vowels:

Non-syllabics:

<table>
<thead>
<tr>
<th>.p</th>
<th>.t</th>
<th>.ʃ</th>
<th>.c</th>
<th>.k</th>
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<tr>
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<tr>
<td>(ɾ)</td>
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</table>

Syllabics are fifteen in number, including five vowels /i e a o u/, each of which may combine with either of the accents /ˈ/ (high) and /ˡ/ (low), or may occur without accent.

Junctures, signalling the segmentation of the utterances into macro- and microspans, are four in number, including three contour junctures /./ (period), /,/ (comma), and /;/ (semicolon), together with one disjuncture marked by space between the segmental phoneme symbols. Close
juncture, i.e. any phoneme sequence not containing one of the four junctures, is indicated by adjacent letters or by space bridged by a tie-line (\(\_\)).

1.2 Higher Level Units. A macrospan (or contour) is defined as any minimal section of a given utterance which is bounded by contour junctures, including the transition from silence to phonation that marks the beginning of an utterance. A microspan is defined as the minimal section of a contour bounded by disjunctures or by a disjuncture and a contour juncture. In discussion where a distinction between macrospan and microspan is unnecessary we use the term span for either one. The term utterance is used in reference to a stretch of speech of indeterminate length and containing an integral number of contours with no change of speaker.

1.3 Accent. Within a span some syllables may be more prominent than others. This prominence of certain syllables over others in a span may be due to the presence either of non-distinctive stress (a pulse the occurrence of which is predictable from its phonological environment) or of distinctive accents. The two accents, high and low, are, in fact, bundles of two or three features, including pitch, stress, and quantity.

We describe the allophones of both accents only for environments other than pre-contour-juncture, since the contour junctures are described partly in terms of their
unique pitch configurations imposed upon the prejunctural syllable.

High and low accents both have allophones differing essentially only in their pitch configurations: under either accent a syllable is stressed more than surrounding unaccented syllables; under either accent a syllable is somewhat longer than surrounding unaccented syllables in all environments except before /θ/; however, low accent has a low, level pitch configuration in contrast with high accent which has a high, rising or high, level pitch configuration. E.g. le máko? that man, is allophonically [ . . ] or [ . . ], in contrast to le máko? that cover, which is allophonically [ . . ].

1.4 Stress. Non-distinctive stress is a rhythmic pulse without the pitch or length features of accent. The following rules describe the occurrence of the stress pulse.
(1) In general, unless the pattern is interrupted by the occurrence of an accented syllable, the stress pulse occurs on the initial syllable of a span and thereafter on alternate syllables. (This rule includes the case of unaccented monosyllabic spans which are always stressed.)
E.g. nah house; ku hanal he eats.
(2) Exceptions to the general rule:
(a) Two-syllable length spans containing no accented syllable are stressed about equally on both syllables.
E.g. wenel sleep.
(b) An unaccented syllable preceding or following
an accented syllable does not receive a stress pulse.
E.g. ku hàntik le wàho? he eats the bread.

1.5 Junctures. The contour junctures are generally charac-
terized by a pause (of unspecifiable length) as well as
by features of deceleration in the rate of phonation,
intensity decrescendo, and pitch-turn, these latter
three extending over the previous syllable. Specifically
the contour junctures are characterized as follows:

/. / (period juncture) is distinguished:

(1) usually by a retardando effect on the previous
syllable;

(2) often by a decrescendo effect on the previous
syllable;

(3) by a pitch effect on the previous syllable:

(a) a sharp down-turn if the syllabic is Ŷ.
E.g. 운úl mák. one man has the pitch con-
figuration [. \ ] , the high accent in mák
being realized by a sharp down-turn attributable
to the period juncture;

(b) a slight down-turn or level hold if the
final syllabic is Ŷ or V (an unaccented vowel).
E.g. 운pél màk. one cover and 운pél nah.
one house have the pitch configuration [. \ ]
or [ . \ ];

(4) by a pause generally somewhat longer than that
for comma juncture but equal in length to that
of semicolon juncture. 

//; (semicolon juncture) is distinguished:

(1) usually by a retardando effect on the previous syllable;
(2) often by a decrescendo effect on the previous syllable;
(3) by a pitch effect on the previous syllable:
   (a) extra-high rising pitch if the syllabic is V.
       E.g. 'unpél bát; one axe? has the pitch configuration [ . 1 ], the extra-high rising pitch being attributed to the semicolon juncture;
   (b) high rising pitch if the syllabic is V.
       E.g. 'unpél màk; one cover? and 'unpél bát; one hailstone? have the pitch configuration [ . 1 ];
(4) by a pause generally longer than that for comma juncture but equal in length to that of period juncture.

/,/ (comma juncture) is distinguished:

(1) usually by a retardando effect on the previous syllable;
(2) rarely by a decrescendo effect on the previous syllable;
(3) by a pitch effect on the previous syllable:
   (a) high pitch with dip if the syllabic is V.
       E.g. 'untúl mák, pero ... (a man, but ...)

has the pitch configuration [ . ~ ];

(b) slight rise or level hold if the syllabic
is V or V.  E.g. 'unpél màk, pero ...

one cover, but ... and 'unpél ñat, pero ...

one hailstone, but ... have the pitch
configuration [ . ~ ];

(4) by a pause typically shorter than that for either
of the other contour junctures.

In function, the contour junctures are similar to the
corresponding junctures of English or Spanish: period
juncture and semicolon juncture indicate a full stop in the
utterance, at which point a change in speakers is accept-
able and sometimes solicited. Each instance of either of
these, then, marks a potential utterance terminus. Comma
juncture, on the other hand, rarely marks utterance ter-
minus; rather it usually indicates that the speaker has
not completed his say and does not anticipate (or is not
soliciting) a change in speakers.

1.6 Non-Syllables

1.6.1 Attestation of Contrasts. The following sets of forms
demonstrate the phonemic status of non-syllabics which
contrast in respect to point of articulation. Where
possible, each is attested in post junctural (#--) and
prejunctural (--#) environments.
### Labials

<table>
<thead>
<tr>
<th>#</th>
<th>---</th>
<th>---</th>
<th>---</th>
</tr>
</thead>
<tbody>
<tr>
<td>pàš</td>
<td>music</td>
<td>túp</td>
<td>earring</td>
</tr>
<tr>
<td>pàš</td>
<td>debt</td>
<td>sùp</td>
<td>milpa fence</td>
</tr>
<tr>
<td>bàš</td>
<td>hammer</td>
<td>tüb</td>
<td>spit</td>
</tr>
<tr>
<td>bùřo</td>
<td>donkey</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>fásil</td>
<td>easy</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>màš</td>
<td>chile silvestre</td>
<td>sùm</td>
<td>rope</td>
</tr>
<tr>
<td>wìš</td>
<td>urinate</td>
<td>šíw</td>
<td>grass</td>
</tr>
</tbody>
</table>

### Dentals

<table>
<thead>
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<th>---</th>
</tr>
</thead>
<tbody>
<tr>
<td>tòn</td>
<td>male member</td>
<td>šòt</td>
<td>cut</td>
</tr>
<tr>
<td>tòn</td>
<td>calf muscle</td>
<td>šét</td>
<td>piece</td>
</tr>
<tr>
<td>dòn</td>
<td>gift</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>nöm</td>
<td>partridge</td>
<td>šèn</td>
<td>go</td>
</tr>
<tr>
<td>le'</td>
<td>leaf</td>
<td>šúl</td>
<td>dibble</td>
</tr>
<tr>
<td>řèy</td>
<td>king</td>
<td>péřtenesèf</td>
<td>belong</td>
</tr>
</tbody>
</table>

### Alveolars

<table>
<thead>
<tr>
<th>#</th>
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<th>---</th>
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</tr>
</thead>
<tbody>
<tr>
<td>ŋik</td>
<td>honor it</td>
<td>?uś</td>
<td>good</td>
</tr>
<tr>
<td>ŋik</td>
<td>give it</td>
<td>bùś</td>
<td>vapor</td>
</tr>
<tr>
<td>si?</td>
<td>firewood</td>
<td>tùs</td>
<td>lie</td>
</tr>
</tbody>
</table>

### Alveopalatals

<table>
<thead>
<tr>
<th>#</th>
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<th>---</th>
<th>---</th>
</tr>
</thead>
<tbody>
<tr>
<td>čùn</td>
<td>tree trunk</td>
<td>bàč</td>
<td>quail</td>
</tr>
<tr>
<td>čòm</td>
<td>buzzard</td>
<td>bèč</td>
<td>grouse</td>
</tr>
<tr>
<td>šùn</td>
<td>ma'am</td>
<td>bàš</td>
<td>hammer</td>
</tr>
<tr>
<td>yùm</td>
<td>lord</td>
<td>páy</td>
<td>pull</td>
</tr>
</tbody>
</table>
The following exemplify consonants which contrast in respect to manner of articulation:

### Tense Stops

<table>
<thead>
<tr>
<th>#--</th>
<th>--#</th>
</tr>
</thead>
<tbody>
<tr>
<td>pál</td>
<td>boy</td>
</tr>
<tr>
<td>tál</td>
<td>come</td>
</tr>
<tr>
<td>čól</td>
<td>explain</td>
</tr>
<tr>
<td>čál</td>
<td>wash</td>
</tr>
<tr>
<td>kál</td>
<td>neck</td>
</tr>
<tr>
<td>?am</td>
<td>spider</td>
</tr>
</tbody>
</table>

### Glottalized Stops

<table>
<thead>
<tr>
<th>#--</th>
<th>--#</th>
</tr>
</thead>
<tbody>
<tr>
<td>†penkeč</td>
<td>several</td>
</tr>
<tr>
<td>†tón</td>
<td>calf muscle</td>
</tr>
<tr>
<td>†đón</td>
<td>gun</td>
</tr>
<tr>
<td>†ćöm</td>
<td>buzzard</td>
</tr>
<tr>
<td>†kom</td>
<td>hollow</td>
</tr>
<tr>
<td>†bôn</td>
<td>dye</td>
</tr>
</tbody>
</table>

### Voiced Stops

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>-----</td>
</tr>
<tr>
<td>bufo</td>
</tr>
<tr>
<td>dön</td>
</tr>
<tr>
<td>gónsalo</td>
</tr>
</tbody>
</table>
1.6.2 Allophony.

**Stops and Affricates**

The six voiceless plain stops /p  t  ç  k ʔ/ and five voiceless glottalized stops /p'  t'  ç' k'/ are voiceless in all environments. Following and preceding a juncture the force of release of the stops of the respective series varies from very weak to very strong, depending upon the speaker in part, but more upon certain paralinguistic features of emphasis. Intervocally and pre-consonantally the tense-stops are not ordinarily aspirated,
and the glottalized stops are released somewhat more lightly than in other positions.

The voiced glottalized stop /b/ is a preglottalized fortis bilabial stop initial in the syllable except intervocally. There it is sometimes heard without glottalization as a lenis stop or even as a fricative (as in Spanish) e.g. bète do it : tu bètah he did it. In syllable final the /b/ may be actualized by various allophones, all of which share components of glottal and bilabial closure, and lack plosive release. These allophones of /b/ may be voiced for the initial part of their duration or voiceless throughout; they may or may not be nasalized; they may have the glottal closure simultaneous with or slightly preceding the lip closure. Initially and medially, then, in Maya words both /b/ and /b/ may occur, although in Spanish words only /b/ appears. In final position contrast is maintained between /b p p m/, only /b/ having glottal closure without plosive release. E.g. kab hand kib candle náb hand measure.

The stops /b d g/ occur only in Spanish loans and only span-initially or medially. All allophones of these stops are voiced and plain (unoglottalized). /b/ contrasts with /b/ only initially in respect to the glottal feature.

The glottal stop /ʔ/ as well as the glottalized series often give the impression of laryngealizing a preceding high-accent vowel, more strikingly so when the vowel is also preceded by a consonant of the same set.
Examples: čiĉ bird, kāk fire (ki‘ik blood).

In a sequence /VV’V/ the second glottal stop (if realized at all) is realized only as a slight prolongation and laryngealization of the vowel. Examples: če’o’ob trees, pa’a’an broken.

However in a sequence /V’V/ there is no prolongation or laryngealization. Example: ška’ ’ábil great grandchild.

**Spirants**

The spirants /s ʃ/ are sibilants contrasting with each other in point of articulation. /s/ is an apical alveolar or prealveolar rill fricative as in Spanish and /ʃ/ is a post-alveolar or alveopalatal grooved fricative as in English. E.g. sen very šen go. The spirant /f/ occurs only in Spanish loans. It is a voiceless labiodental fricative.

The phoneme /h/ is realized by the following allophones in the environments specified:

(a) a voiceless pharyngeal spirant:

(1) initially before a vowel. Here its articulatory "shape" is that of the following vowel, and the degree of spirantization varies between that of the Mexican Spanish "jota" or /x/ and the American English /h/. Examples: hîl withe, hèl change, hal let down (arrier), hól hole, hûl illumine;

(2) between a vowel and a consonant or disjuncture
followed by a consonant. Here its shape is largely that of the preceding vowel. Examples:

- síň te’eslo’ he was born there
- ţonkéhnahi he deer-hunted
- tu yénsah čína he picked oranges
- toh le bea? this road is straight
- ku ēun kay he catches fish

(3) following a juncture, disjuncture, or consonant and preceding a consonant. Here its shape is roughly that of a mid-central vocoid. Examples:

- hteman sheep
- hpik a bug
- hćom buzzard
- htu’ul rabbit

(b) a voiced pharyngeal spirant:

(1) intervocalically. Here its shape is or is moving toward that of the following vowel. Examples:

- sihil be born
- čéhel die out
- čahal tickle
- tohol price, value
- púhul get angry
- síhen I was born
- sího’on we were born
- le nahe? the house
le naho? that house
"a nahil your house

(c) a scarcely noticeable devoicing of a vowel ranging through a strong voiceless pharyngeal spirant (l) following a vowel and preceding a juncture:
(If the vowel bears an accent the /h/ is more likely to be less spirantized than if the vowel bears no accent.) Examples:

kéh deer
wàh bread
kòh pound
čúh squash
kih sisal
¿eh hole in egg shell
nah house
koh tooth
puh pus

It should be noted here that in certain contours--and repetitions of these--the final syllable ends in a vowel with consistently little or no noticeable devoicing off-glide, e.g. tia aunt, tio uncle, mesa table, čìna orange, tàta father, etc., most of them loans from Spanish. In other contours, however, the final syllable contains a vowel terminating in either a slight or a heavier degree of devoicing, e.g. hàh true, wàh bread, kéh deer, etc., none of them being loans from Spanish. Furthermore, these latter retain the /h/ as a voiceless pharyngeal spirant
when not followed by a juncture, whereas the former (loan words) under no condition have a postvocalic /h/. For example: [hə'tal] be true is never [hə'tal], [jənkə'hnahi] he deer-hunted is never [jənkə'hnahi]. For these reasons we adopt the convention of writing these latter always with the syllable final /h/, the former always without it. Any slight devoicing glide of a contour final vowel, then, is considered an effect conditioned by the following juncture. And to account for all alternants of /-Vh/, we must add a zero allophone of /h/ which occurs optionally before juncture. Thus mèsa table and wènsah put to sleep are, in their second syllables, optimally both phonetically and phonemically different, though before a juncture they may be phonetically identical.

**Nasals**

The nasals /m n/ contrast as to point of articulation, /m/ being bilabial, /n/ being velar [ŋ] before velar consonants or another /n/ and optionally before a disjuncture or a terminal juncture, alveolar [n] elsewhere. E.g.

- senkeč very
- lén ʔuč quite good
- ʔákánnahi he groaned
- sukinnahen I fasted
- ʔonnaheč you shot

**Semi-Vowels**

The semi-vowels /w y/ are non-syllabic vocoids whose articulatory mechanisms match those of /u i/ respectively
except that the semi-vowels both have only higher vocoidal allophones; in final position they tend to be slightly fricativized and slightly devoiced. Unlike the vowels, moreover, the semi-vowels are never accompanied by an accent nor are they preceded by /?/.  

E.g.  

yó?lal about  "io" that i 
wóp flatten  "uo" that bead 
weč armadillo  "ueč" you are the moon 

Liquids  

The phoneme /l/ is a "clear" lateral in all positions. Following an unaccented vowel and before a juncture, its allophones are sometimes weakly articulated. E.g.  lab old, wenel sleep, tál come. The phoneme /r/ is a voiced alveolar flap as in Spanish. It occurs only intervocally. There are about a dozen words of non-Spanish origin in which it occurs, e.g.  mèreč a lizard, kán klrí wildcat. It occurs also in Spanish loan words where it contrasts with /r/, the Spanish trill, e.g.  però but, búro donkey. The trill is not limited to intervocalic position but occurs (in loans only) also initially, řey king, and finally, ku méresèř he merits.

1.7 Syllabics .  

The vowels /i u/ contrast with /e o/ respectively in tongue height. /i/ and /e/ are front unrounded, /u/ and /o/ are back rounded. /a/ is low central. All vowels may occur with either high or low accent.
Examples:

- šík left
- pik petticoat
- pik insect
- ʔák dirty
- ʔèk star
- ʔeh road
- bát ax
- káb broth
- ʔat hail
- kóm hollow
- ʔóm buzzard
- ʔom piñuela plant
- pút carry
- pút papaya
- ʔuk flea

The quality variation of the vowels under different accents is very slight: without accent the vowels--most notably /a/--are sometimes more lax and more central than the allophones of the corresponding vowels under high or low accent. E.g. káb hand may be /k[ə]b/ or /k[əv]b/, but káb broth is never /k[əv]b/. In general, however, the quality of the vowels approximates that of the Spanish vowels.

1.8 Phonotactics.

1.8.1 Minimal Sequences. An utterance in Maya must contain a contour juncture preceded by a sequence of at least three segmental phonemes, the middle one of which is a syllabic, i.e., any vowel, accompanied by high, low, or no accent. The restrictions on the initial and final segment are as follows: any semi-vowel or consonant except /r/ may occur initially before any vowel (though b, d, g, f, and ʕ are limited in this position to words borrowed from Spanish). In prejunctural position the semi-vowel /w/ does not occur after /u/, nor does /y/ occur after /i/. The other consonants--except b d g f and ʕ which never occur finally--may occur following any vowel.
1.8.2 **Clusters.** In utterances containing more than three segmental phonemes further restrictions obtain. We can describe these in terms of phoneme clusters (which, following A. A. Hill\(^1\), we define as a sequence of two or more phonemes of the same class without the intervention of phonemes of another class). In Maya the phoneme types which cluster are consonants, vowels, and accents.

1.8.2.1 **Accent Clusters.** Few structural limitations have been observed on the clustering of accents in microspans. In two-syllable microspans, for example, the following patterns have been observed:

- CVCVC  "wenel  sleep"
- CVĆVC  "émel  descend"
- CVĆVC  "kanán  guard"
- CVĆVC  "lùbul  fallen"
- CVĆVC  "a klk  your sister"
- CVĆVC  "nánáč  very far"
- CVĆVC  "wá kàš  or chicken"

Only sequences of CVĆVC and CVCYC are not found, though these may occur if a disjuncture intervenes. The description of accent clustering in longer spans must await a closer analysis of disjuncture.

1.8.2.2 **Consonant Clusters.** No consonant clusters occur prejuncturally. Span-initial, prevocalic clusters are those

\(^{1}\) Introduction to Linguistic Structures (New York, 1958), p. 69.
which occur in Spanish loan words. These may consist of:

1. a voiced or voiceless stop (p t k b d g) followed by a liquid (r or l) with the structural limitation that the dental stops cannot be followed by l. E.g. pronto, plasa, bruho, blanda, tren, drama, krus, klima, grasia, gloria.

2. a labial stop (p b) or s, f or h followed by w, e.g. pwes, bweno, swenyo, rweda, hwân.

3. r, b, d, s, t, m followed by y, e.g. ryenda, dyario, syelo, tyan, myan, (the last two of which are not Spanish loans, but Maya forms resulting from the contraction of tí' yan and mí'n yan, respectively. These are the only exceptions noted to the statement that almost the only span-initial prevocalic clusters are those which occur in Spanish loans.)

4. a triple cluster of the form stop + liquid + semi-vowel, e.g. prweba, trweno.

By setting up a special phonological category, pre-onset, we can here make note of other post-junctural consonant patterns. By pre-onset we define a consonant segment which occurs usually before a disjuncture followed by another consonant said to be the span (or syllable) onset. Four consonants can occur in the pre-onset slot, h, š, k, t, and the presence of a pre-onset does not
restrict the onset consonant. In transcription the pre-onset is separated from the following consonant by space (indicating disjuncture), but in this case, of course, the pre-onset consonant is not considered to be a syllable nor a part of any syllable.

Examples:

\[\begin{align*}
\text{'kay} & \quad \text{male singer} \\
\text{s'kay} & \quad \text{female singer} \\
\text{k'kay} & \quad \text{our song} \\
\text{t'kayah} & \quad \text{we sang it}
\end{align*}\]

One other fact of post-junctural consonant patterning is that a pre-pre-onset slot allows three consonants to occur post-juncturally, the first or second being generally followed by disjuncture. Only k can fill the pre-pre-onset position, and it may precede only h or s of the pre-onset consonants. Examples:  
k s čupal \quad \text{our girl} \\
k h ᵗzal \quad \text{our rooster}

Span medially, i.e. neither pre- nor post-juncturally, any consonant can occur singly in intervocalic position.

Examples:

\[\begin{align*}
\text{ʕabal} & \quad \text{plum} \\
\text{čupal} & \quad \text{girl} \\
\text{tópol} & \quad \text{hatch out} \\
\text{ʕatan} & \quad \text{wife} \\
\text{bútul} & \quad \text{pile on} \\
\text{básil} & \quad \text{mutual}
\end{align*}\]
Span-medially a large number of consonant clusters are possible, in fact two-member consonant clusters occur in which almost any consonant which may occur in final position is allowed before almost any consonant which may occur in initial position. A closer study of disjuncture may indicate certain restrictions on medial two-member consonant clusters, since disjuncture may intervene between many combinations. The following observations are pertinent here:
The labial nasal /m/ may occur distinctively as the prior member of a dyadic cluster though in most cases before a non-labial consonant it may optionally be assimilated to the point of articulation of the following consonant. Examples:

\[ 'u \text{ klm}lal \quad \text{his dying} \quad (\text{also } 'u \text{ kln}lal) \]

\[ \text{ma'? klmkeni'} \quad I \text{ didn't die} \quad (\text{also } \text{ma'? k}[\text{g}]\text{keni'}) \]

\[ 'o\text{so'}\text{omte} \quad \text{shell it} \quad (\text{also } 'o\text{so'}\text{onte}) \]

\[ \text{klmse} \quad \text{kill it} \quad (\text{also, and usually klnse}) \]

\[ 'u \text{ támnil} \quad \text{his liver} \quad (\text{but never } 'u \text{ tánnil}) \]

Similarly /n/ may occur distinctively before a labial consonant, although in most cases it is assimilated. E.g.

\[ 's\text{anb}o'\text{ob} \quad \text{shoes} \quad (\text{cf. } 's\text{anab} \text{ shoe}, \text{also } 's\text{ambo'}\text{ob}). \]

A large number of medial consonant clusters of the shape CCC, CCCC, and CCCCC occur which cannot be accounted for simply by positing the juxtaposition of smaller permitted sequences. Some of these clusters are due to vowel syncope, e.g. \( \text{ku hàntko'ob} \) (cf. \( \text{ku hàntiko'ob} \), both meaning 'they eat'); others are due to the joining of a consonantal suffix to a stem-final cluster, e.g. \( 'u \text{ hàntmah} \)

**he has eaten it**; others may be due to the juxtaposition of a word-final cluster with a word-initial onset of C, CC, or CCC, e.g. \( \text{hànt le wàha'} \) **eat this tortilla**, kins kàš kàš kill our hen; still others may be due to a combination of vowel apocope and juxtaposition of word- or stem-final with word-initial clusters. No attempt is made
here to catalog the various combinations and restrictions that may obtain in such clusters.

1.8.2.3 **Vowel Clusters.** Every span contains at least one syllable nucleus made up of one of the five vowels and one of the two accents or no accent. Every syllable peak consists of one of these nuclei and every occurrence of one of these nuclei constitutes the occurrence of a syllable peak. Successive peaks may or may not be separated by a consonant. Twenty-four of the twenty-five theoretically possible dyadic clusters of vowels have been encountered. The only missing dyadic vowel cluster is /uu/. Examples of the twenty-four occurring clusters follow (since the contrast between VV and V?V is rather subtle--and surely lost some of the time--we give for each vowel cluster the identical sequence (if it is found) of V?V:

<table>
<thead>
<tr>
<th>VV</th>
<th>V?V</th>
</tr>
</thead>
<tbody>
<tr>
<td>ii</td>
<td>ma? letii?</td>
</tr>
<tr>
<td>ie</td>
<td>le tie naho?</td>
</tr>
<tr>
<td>ia</td>
<td>ti a tata</td>
</tr>
<tr>
<td>io</td>
<td>tio</td>
</tr>
<tr>
<td>iu</td>
<td>ti u tata</td>
</tr>
<tr>
<td>ei</td>
<td>ku leik</td>
</tr>
<tr>
<td>ee</td>
<td>lee</td>
</tr>
<tr>
<td>ea</td>
<td>tu leah</td>
</tr>
</tbody>
</table>

not he
the fire-wood
this fire-wood
that fire-wood
his father's mouth
he opens it
open it
he opened it
<table>
<thead>
<tr>
<th>vowels</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ea tu lêo'o'ob</td>
<td>they lassoed it</td>
</tr>
<tr>
<td>eu le u nàla'</td>
<td>this corn of his</td>
</tr>
<tr>
<td>ai ma' mèsai'</td>
<td>not a table</td>
</tr>
<tr>
<td>ae le mèsae'</td>
<td>the table</td>
</tr>
<tr>
<td>aa le mèsaa'</td>
<td>this table</td>
</tr>
<tr>
<td>ao le mèsao'</td>
<td>that table</td>
</tr>
<tr>
<td>au 'u mèsa u tàta</td>
<td>his father's table</td>
</tr>
<tr>
<td>oi ma' lâbroi'</td>
<td>not a book for him</td>
</tr>
<tr>
<td>oe le lâbroe'</td>
<td>the book</td>
</tr>
<tr>
<td>oa le lâbroa'</td>
<td>this book</td>
</tr>
<tr>
<td>oo le lâbroo'</td>
<td>that book</td>
</tr>
<tr>
<td>ou 'u lîbro u tàta</td>
<td>his father's book</td>
</tr>
<tr>
<td>ui 'u 'uil</td>
<td>his moon for him</td>
</tr>
<tr>
<td>ue le 'ue'</td>
<td>the moon</td>
</tr>
<tr>
<td>ua le 'ua'</td>
<td>this moon</td>
</tr>
<tr>
<td>uo le 'uo'</td>
<td>that moon</td>
</tr>
<tr>
<td>uu --</td>
<td>--</td>
</tr>
</tbody>
</table>

The maximum vowel clusters contain three vowels. These are rare and almost always due to a loan word being juxtaposed to a vocalic minor morpheme.

E.g. le tioa'? this uncle
      mariae'? as for Maria

One word of questionable origin has been found with a vowel cluster: pao a kind of sabucan, yielding such triadic clusters as the following:
1.9 **Justification of interpretations.**

In this section the phonemic interpretations proposed in this paper are defended against alternative interpretations.

**Glottalized Stops**

The close-knit sequences of sound which have been set up as glottalized stops /'p t ʃ ʒ k/ might be considered as possibly clusters of stops + /'/. This would reduce the phoneme inventory by five members. However, it would introduce unique clusters finally where no other clusters occur and create initial, medial, and final clusters of an oddly restricted pattern.

**Affricates**

The phone sequences [ts ts' tʃ tʂ] are interpreted as unit phonemes because this again preserves the CVC canonical pattern of roots which a cluster solution would give up at the saving of two phonemes. Also the decision to interpret the glottalized stops as unit phonemes almost forces us to recognize the affricates, which also occur both plain and glottalized, as unit phonemes, since otherwise we would have unique triple clusters in both roots and affixes.

**The /h/ Phoneme**

This phoneme with its glottalized allophones before juncture and plain allophones elsewhere is interpreted first of all as a unit phoneme for the same reasons as
those given for the glottalized series.

**The Sequence V°V**

Somewhat problematical is the interpretation of the sequence V°V (as in ha°as **banana**, ma°ay **dust**, bo°ol **pay**, tu°ul **rabbit**, ki°iš **thorn**, se°en **cough**) pronounced with a single chest pulse interrupted or laryngealized by the glottal action (that of closure or "squeezing"). That is, in the cases referred to there is no sublaryngeal reactivation or re-articulation of the vowel. If the glottal interruption is sharp, the echo or "passive" emission of the vowel may be nearly as loud and clear as the "active" portion preceding the glottal closure. In such cases the effect is similar to that of separate pulses. Often, however, the sequence V°V is heard as a single syllabic pulse, the vowel trailing off in a creaky quality referred to as laryngealization. Cases of V°V sequences such as those described above are interpreted as single syllables with "complex" syllabics.

It is not possible to analyze the sequence as V° since V°V is not infrequently in contrast with V° as in pâ°te **wait for him**, pa°ati **it got molded**. Nor is it possible to analyze the sequence as VV since (in prejunctural position) VV° and V°V contrast, e.g. le lîbro° that **book**, lîbro°ob **books**.

Without increasing the phoneme inventory we could alternatively treat the sequence V°V as V (glottalized
vowel). Since the second vowel in such sequences is indeed not a separate syllable as all other vowels are interpreted to be, this would seem to lend support to writing a single glottalized vowel. The main reason for not choosing the V alternative is that it would indicate a contrast of V with sequences we desire to write as V'V in which a morpheme break occurs, e.g. pa'ani it was dug (pán dig), pa'e break it (pa' break), le če?a' this tree (če? tree).

There seems, in fact, to be no articulatory difference between these and the sequences within morphemes where the V interpretation would seem preferable. We have, therefore, preferred to write V'V for all these sequences, whatever their morphophonemic status.

**Semi-Vowels**

The non-syllabic vocoids i and u are not considered allophones of the syllabic vocoids į and ū respectively, because many roots would have the unique patterns of VVC and CVV where only į and ū could occur in initial or final positions, whereas if these non-syllabic vocoids are interpreted as consonants they fit nicely into the patterns of consonant distribution.
2.0 General Introduction. The description in Chapter I of utterances as composed of hierarchically organized sequences of sound units--phonemes, microspans and macrospans--was made independently of the organization of these sound units into meaningful stretches. It is the purpose of the present chapter to relate the former level (phonology) to the latter (morpho-syntax) and to describe the system of sequences of morphemes within certain larger units to be delimited below.

On the phonological level, as we have seen, an utterance is made up of an integral number of contours (one or more) each ending in a contour juncture and at least one of which is independent or isolable; contours are made up of one or more microspans; microspans are in turn composed of one or more syllables, and these are composed of linear (or bilinear) sequences of phonemes. The phonologically minimal utterance, then, is composed of a monosyllabic contour.

On the morpho-syntactic level an utterance is made up of an integral number of sentences (one or more), these typically being made up of verb phrases and/or noun phrases, the minimal, limiting case of which is a single verb or noun complex. A complex is composed of a nucleus or theme with or without a periphery.
It is convenient to speak of three types of morphemes: (1) major or lexical morphemes (equivalent to stems); (2) minor morphemes (including affixes and theme-peripheral morphemes) which are grammatical or relational in function and therefore described in the grammar; (3) ambifunctional morphemes, which occur sometimes as stems and sometimes as minor morphemes.

2.1 General Morphophonemics. A morpheme may have invariant alternants, i.e. be realized always by the same sequence of phonemes or, alternatively, a morpheme may have multiple alternants, i.e. be realized by alternants varying in their shapes in different environments according to the conventions of the language. In this and subsequent sections the representation of morpheme sequences will be by morphophonemic transcription. In any sequence, then, a morpheme is represented by a sequence of morphophonemic symbols, the inventory of which includes all the phoneme symbols plus certain others (represented usually by capitalized letters). Each letter in the morphophonemic representation of a morpheme is to be taken as a morphophoneme, the rules for the phonemic value of which are supplied only for those morphophonemes having more than one phonemic value. That is, except in environments specified by the rules, the morphophonemic symbols have the same value as the phonemic symbols.

The selection of different alternants may be optional
or obligatory; it may be contingent upon the presence of specified phonological, grammatical, or both phonological and grammatical features of the environment; and it may apply only to specified morphemes or to any morpheme fitting the phonological specifications of the rules.

We will discuss general morphophonemic alternation in the following sections. Section 2.1.1 will treat--for stem morphemes and for such minor morphemes as are regulated by these same rules--both automatic and non-automatic alternation the selection of which is contingent upon phonologically specified environment. Section 2.1.2 will treat the special cases of contraction and sporadic alternation. The alternants of minor morphemes, the selection of which is not covered in 2.1.1, and the alternants of stem morphemes not covered in 2.1 will be described in later sections.

### 2.1.1 Automatic and Non-automatic Phonologically Conditioned Alternation

Morpheme alternants whose selection is contingent upon a phonologically definable environment are discussed below according to the phonological nature of the alternation. The following subsections treat the various types: 2.1.1.1 Replacement Alternation; 2.1.1.2 Subtractive Alternation.

#### 2.1.1.1 Replacement Alternation

The substitution in a given environment of a sequence of one or more phonemes by an equal length sequence is termed replacement alternation.
Three types of replacement alternation are found to occur in Maya. These are categorized under the headings (A) Assimilation. (B) Dissimilation. (C) Other.

(A) Assimilation.

(1) **Progressive Vowel Harmony.** A sort of vowel harmony is present in Maya in which the vowel of certain suffixes obligatorily assimilates to (i.e. is determined by) the quality of the vowel of the preceding syllable. The morphophonemic symbol $V$ is used to mark such assimilating vowels.

Examples$^1$:

- wen-$\emptyset$-VL $\quad$ *sleep*  $(wen + 417 + 342)$ is /wenel/
- $\hat{o}$ah-$\emptyset$-VL $\quad$ *waken*  $(\hat{o}ah + 417 + 342)$ is /$\hat{o}$ahal/

---

$^1$ Following the morphophonemic representation of a sequence, a morpheme by morpheme analysis is provided in parentheses. The stem morphemes are identified by a gloss and the minor morphemes by index numbers keyed to the inventory of minor morphemes found in 2.2.1. The identifications are entered in a linear sequence as they occur in the form, with one exception: minor morpheme 332, which has both an infixed allomorph (-$V^?V$-) and a suffixed allomorph (-a$^?a$-) is represented in the analysis as if it occurred in the suffix position. For example:

\[
\begin{align*}
& 332 & 321 & 342 \\
& \hat{o}o + V^?V + n + \emptyset + VL \quad (be \ shot)
\end{align*}
\]

is broken down as follows:

\[(\hat{o}o..n \text{ shoot} + 321 + (-332-) + 342).\]
(2) **Regressive Vowel Harmony.** A regressive vowel harmony may optionally be present, most frequently in accompaniment with other morphophonemic processes. Since the alternation is never obligatory, no special symbols are used to mark it. For example, the sequence heʔ-in bin-ʔ-eʔ **I'll go** (227 + 211 + bin go + 417 + 712) may have either phonemic realization /heʔin 'bineʔ/ or /hiʔin 'bineʔ/, the latter with regressive vowel harmony. Similarly heʔ-a bin-ʔ-eʔ **you'll go** (212) may be either /heʔa 'bineʔ/ or /haʔa 'bineʔ/, and heʔu bin-ʔ-eʔ **he'll go** (213) may be /heʔu 'bineʔ/ or /huʔu 'bineʔ/. The sequences ŋok-ʔ-aʔ-a-n in ŋok-ik-ʔ **I've read it** (224 + 332 + 344 + 211 + ŋok read + 351 + 613) and ŋok-ʔ-aʔ-a-n u ŋok-ik-ʔ **he's read it** (213) may be respectively /ŋokiʔin šokik/ and /ŋokuʔun šokik/.
takin I have no money (min not have + 332 + 344 + 211 + takin money) and mina'an u takin he has no money (213) may be respectively /mini'in takin/ and minu'un takin/.

(3) Assimilation of Nasals. The nasal consonants optionally assimilate to the point of articulation of a following consonant (except for a few cases for which we account by postulating an obligatory disjuncture) (which we represent in our morphophonemic writing with the symbol +); therefore the symbols m and n, as used in morphophonemic representation, are assigned the following phonemic values: n is /m/ before labial consonants except w: Examples: k-in pá°-t-ik-∅ I await it (222 + 211 + pá° await + 321 + 351 + 613), k-in púh-ul I get angry (222 + 211 + púh get angry + 342), k-in bin I go (222 + 211 + bin go), in búfo my burro (211 + búfo donkey) t-in mên-t-ah-∅ I made it (221 + 211 + mên make + 321 + 341 + 613);

/n/ before w, non-labial consonants, vowels, and junctures: Examples: k-in lòš I strike (222 + 211 + lòš strike), in nàl my corn (211 + nàl corn), len ñu'd very good, kin day.
m is /n/ before non-labial consonants: Examples: sam-sam-al /sansamal/ daily (021 + sam day + 514),
t-u kím-s-ah-∅ /tu kínsah/ _he killed him_ (221 + 213 + kím die + 321 + 341 + 613);

/m/ before labial consonants, vowels, optional disjuncture, and obligatory disjuncture:

Examples: 'íčam-o?ob _wives_ ('íčam _wife_ + 616), 'u tám+n-il _his liver_ (213 + táman _liver_ + 515), 'u kím+-l-al _his dying_ (213 + kim die + 342 + 514), 'ín kím+-k-en _I'll die_ (229 + kim die + 351 + 611), k-u yošo?om+-t-ik-∅ _he shells it_ (222 + 213 + yošo?om _shell_ + 321 + 351 + 613).

(B) Dissimilation. The morphophoneme k may optionally be represented by /h/ in the environment of a following stop of the same point of articulation, whether or not a disjuncture intervenes. For example: sak-kun-t-e _whiten it!_ (sak white + 311 + 321 + 613) may be either /sakkunte/ or /sahkunte/; 'a?-ik-∅ _gusto (it) gives pleasure_ ('a? _give_ + 351 + 613 + gusto _pleasure_) may be either /'a?ik gusta/ or /'a?ih gusta/; sak kól _white milpa_ may be either /sak köl/ or/sah köl/; tak kwa' _to Kaua_ may be /tak kwa/ or /tah kwa'/.

The morphophoneme t may optionally be represented by /h/ in the environment of a following plain or glottalized stop of the same point of articulation or a plain or glottalized affricate only if a disjuncture does not intervene. For example: 'in wéttal _my companion_ (211 + 'ét _accompany_ + tal _come_ ) may be either
/ˈin wéttal/ or /ˈin wéhtal/; the form kettan parable (ket like + tan word) may be /kettan/ or /kehtan/; /ˈin wotočoˈo/ my houses (211 + ˈotoč house + 616) may be /ˈin wot(o)čoˈo/ or /ˈin wohčoˈo/.

Glottalized consonants are optionally (but generally) represented by /ˈ/ in the environment of a following consonant if no disjuncture intervenes. Examples: kéknoˈo̞b pigs (kékken pig + 616) may be /kéknoˈo̞b/ or /kéˈno̞o̞b/; le takn-eʔ that ripe one (cp. taken ripe + 712) may be /le takneʔ/ or /le ta⁸neʔ/; lik-s̕ik-∅ he raises it (lik-rise + 321 + 351 + 613) may be /li̲kˈsɪk/ or /li̲kˈsɪk/; /ˈu hobnel his body cavity (213 + hobon cavity, hollow + 512) may be /ˈu hobnel/ or /ˈu hoˈnel/; lúb-s-e fell it! (lúb-fall + 321 + 613) may be /lúˈbse/ or /lúˈsə/; ha̲ğu̲sil beauty may be /ha̲ğu̲sil/, /ha̲˒g̘il/, or /haˈg̘il/.

In the speech of some, ɾ is replaced by h before a stop consonant. Examples: (k-u) kréh-t-ik-∅ (he) believes it (222 + 213 + kré̱ believe + 321 + 351 + 613); cp. (k-u) kré̱ (he) believes (222 + 213 + kré̱ believe); kré̱n-ah-i he believed (kré̱ believe + 417 + 421 + 613).

In many words ɾ in an unaccented syllable before a juncture or a disjuncture is replaced by h. E.g.
šimˈ-al walk (šim walk + 411 + 342) may be /šimˈbal/ or /šimˈbah/; kon-∅-b-iL to be sold (kon sell + 321 + 525 + 532) may be /konˈbil/ or /komˈbih/; t-u-lá̱k-al all (t in + 213 + lá̱k totality + 511) may be /tulákal/ or /tulákah/.
(C) External Sandhi. Most words which in their citation form begin in /ʔ/ have sandhi forms in which /ʔ/ is replaced by /y/ after 213 (ʔu-) and by /w/ after 211 (ʔi-) or 212 (ʔa-). Examples: ʔàl son: ʔin wàl my son (211 + ʔàl son), ʔà wàl your son (212), ʔu yàl his son (213); k ʔàl our son (214); ʔil see: k-in wil-ʔ-ah I see (222 + 211 + ʔil see + 321 + 421), k-a wil-ʔ-ah you see (212), k-u yil-ʔ-ah he sees (213); k ʔil-ʔ-ah we see (214).

A few forms, mostly words borrowed from Spanish, do not undergo this change. For these we set up a morphophonemic symbol ? to indicate a "firm" glottal stop. Examples: ʔámigo friend: ʔin ʔámigo my friend (211), ʔu ʔámigo his friend (213), k ʔámigo our friend (214); ʔon avocado: ʔin ʔon my avocado (211); ʔuh bead, moon: ʔa ʔuh your bead (212), ʔu ʔuh his bead (213).

Usually in compounds, but also in non-compounds, 213 may be only implied by the presence of the sandhi form beginning in /y/. Examples: ʔ-kimen-yičam widow (112 + kimen dead + 213 + yičam husband); t-yét-eL with him (t in + 213 + yét accompany + 512); contrast: t-a-wet-eL with you (212), t-yét-eL with us (214).

2.1.1.2 Phoneme Loss. The phenomena of phoneme loss or subtractive alternation are treated under three headings: (A) Cluster Reduction (B) Vowel Elision (C) Other.

(A) Cluster Reduction. The morphophonemic symbol of a capital letter L is used to indicate a consonant which is realized as /l/ except in the environment of
a following consonant where it is optionally (but generally) lost. Examples: 'bo'oL-t-e pay him (bo'oL pay + 321 + 613) may be /bo'olte/ or /bo'ote/; ším-b-aL-t-e visit him (cp. šimb'Al take a walk) (šim walk + 411 + 342 + 321 + 613) may be /šim'balte/ or /šimbate/; k-in wohéL-t-ik-∅ I know him (222 + 211 + 3ohel know + 321 + 351 + 613) may be /kin wohéltik/ or /kin wohétik/; šik'b-aL-n-ah-i he told a story (šik tell + 411 + 342 + 417 + 421 + 613) may be /šikbalnahi/ or /šikbanahi/.

In a few forms the loss of L is obligatory before a consonant: kuL-t-al to sit down (kuL sit + 416 + 342) and čiLtal to lie down (čiL lie + 416 + 342) can be only /kutal/ and /čital/ respectively. But note kuL-Vk'b-al seated (kuL sit + 522 + 525 + 553) and čiL-Vk'b-al laid out (čiL lie + 322 + 525 + 533).

In some words (e.g. nal corn, kal neck) a syllable final l is never lost, even before a juncture, such forms are written with l instead of L.

In a cluster C₁ C₂ C₃, where C₁ is k or t, C₂ is k, and C₃ is any consonant, C₂ is dropped.

Examples:

k-k-bin we go (222 + 214 + bin go) is realized as /k 'bin/;

t-k-bo'oL-t-ah-∅ we paid him (221 + 214 + bo'oL pay + 321 + 341 + 613) is realized as /t bo'otah/;
\( \text{uš t-k-čič we like it (uš good + t ěn + 214 +}
\text{čič eye) is realized as /uš t čič/;}
\)

a sequence \( V + V'O V \) is reduced to \( V'O V \) as in
\( \text{jo-VO V-n-č Vl be shot (jo..n shoot + 321 + (-332-) +}
\text{342) which is phonemically realized as /jo'onol/;}
\)

a sequence \( V'O V + V \) is reduced to \( V'O V \) as in
\( \text{hàn-t-a-a-a-a-a ak-č let him eat (hàn- eat + 321 + 332 +}
\text{361 + 613) which is phonemically realized as}
\text{/hánta'ak/;}
\)

a sequence \( V' + V'O V \) is optionally reduced to
\( V'O V \) as in \( \text{pa-a-a-a-a-n broken (pa break + 321 + 332 +}
\text{344) may be /pa'an/ or /pa'a'an/;}
\)
\( \text{če-o'oob trees (če tree + 616) may be /če'oob/}
\text{or /če'o'oob/}.
\)

(B) **Vowel Elision.** In disyllabic stems of the shape
\( \text{CVCVC} \) in which both vowels are the same (in quality
\text{though not necessarily in accent), the second vowel}
\text{is optionally elided when the stem final consonant}
\text{is followed by a vowel. Examples: šanabo'oob \text{shoes}
\text{(šanab shoe + 616) may be either /šanabo'ob/ or}
\text{/šambo'ob/; wíniko'oob \text{men (wínik man} +616) may be}
\text{/wíniko'oob/ or /winko'oob/; kékeneč \text{you're a pig}
\text{(kéken pig + 612) may be /kékeneč/ or /kékneč/;}
\text{pákato'o on look at us (pàkat look at} + 614) may be}
\text{/pákat'o' on/ or /pàkto'o' on/}.
\)

The vowel of suffixes of the shape -VC is also
\text{frequently elided when the suffix is followed by a}
vowel. Examples: k-u loš-∅-ik-o?ob they strike (222 + 213 + loš strike + 321 + 351 + 616) may be /ku loško?ob/ or /ku lošiko?ob/; ká wèn-∅-Vk-eč may you sleep (231 + wèn- sleep + 421 + 361 + 612) may be /ká wèn+keč/ or /ká wènekeč/.

(C) Other Reductions. ? is generally lost before h even across disjunctures. Example: letie? hwàn that is Juan is usually /letie hwàn/.

2.1.2 Contraction. A not infrequent phenomenon in Maya is that of contraction. No thorough study of this has been made, but the following examples illustrate the sort of thing it is.

The full form k-u yiL-∅-ik-en he sees me (222 + 213 + ?il see + 321 + 351 + 611) may have the following phonemic realizations:


We can represent these possibilities by writing the full form and indicating the parts which may be dropped:

k([u]y)i(1[i])ken

Similarly: t-u y-il-∅-ah-en he saw me (221 + 213 + ?il see + 321 + 341 + 611) may have the following phonemic realizations:
The following sequences compare other contracted forms with their respective full phonemic forms:

1. 'utia'al in k̞ik > 'uti'īl in k̞ik for my sister;
2. 'il a wil ḩuka'ah u nuši' būro
   > la būk u nuši' būro see how many burros;
3. má' tán a wilik > mán wilik you don't see it;
4. ma' tán in wilik > mín wilik I don't see it;
5. wá u nāl > wu nāl or his corn;
6. bīn ḩa'a'abaken > bīn ḩa'a'aken I'll give;
7. ma'atèč u bīn > ma'ač u bīn he never goes;
8. Ḫo'o'ok u ḩa'a'abal u hanal > Ḫu ḩa'a'al u hanal

   he has already been given his food.

2.2 Morpheme Classes.

2.2.1 Minor Morpheme Classes. Minor morphemes are inventorized according to their privileges of occurrence with stems of different classes and according to their position of occurrence in respect to the stem and other minor morphemes. Each minor morpheme is assigned a three-digit index number and, where possible, given a tag as well. The index
numbers are grouped into decade classes the members of which, in general, are mutually exclusive and distributionally similar so that maximally general statements of the co-occurrence relations of these with stems and other minor morphemes can be made. Preposed minor morphemes are assigned to the first and second century classes. Postposed minor morphemes are assigned to the third through seventh century classes according to their class affiliation: suffixes which occur in verb sequences are assigned numbers within the third and fourth century; suffixes which occur in noun sequences are assigned numbers within the fifth century; suffixes which occur in sequence with stems of two or more classes are assigned numbers within the sixth century; phrase-final enclitics are assigned numbers within the seventh century. Operators (reduplication and accent substitution) are assigned three-digit numbers in which the initial digit is 0.

**Minor Morpheme Inventory**

000 Operators

010

001  Fortitive

\[
\begin{align*}
011 & \quad \text{Fortitive}_1 \\
& \quad \left[ \begin{array}{c} C_1 V_1 V C_2 \\ C_1 V_1 C_2 \end{array} \right] > \left[ \begin{array}{c} C_1 V_1 ? V (C_2) - C_1 V_1 V C_2 \\ C_1 V_1 (C_2) - C_1 V_1 V C_2 \end{array} \right] \\
& \quad \left[ \begin{array}{c} C_1 V_1 V C_2 \\ C_1 V_1 C_2 \end{array} \right]
\end{align*}
\]

012  Fortitive_2

\[
( C_1 V_1 C_2 > C_1 V_1 (C_2) - C_1 V_1 C_2 )
\]

013  Fortitive_3

\[
( C_1 V_1 C_2 > C_1 V_1 ? V (C_2) - C_1 V_1 V C_2 )
\]
Fortitive:  
\[ (c_1 v_1 c_2) \rightarrow (c_1 v_1 - c_1 v_1 c_2) \]

Fortitive:  
\[ \begin{bmatrix} c_1 v_1 c_2 \\ c_1 v_1 c_2 \end{bmatrix} \rightarrow \begin{bmatrix} c_1 v_1 - c_1 v_1 c_2 \end{bmatrix} \]

Fortitive:  
\[ \begin{bmatrix} c_1 v_1 c_2 \\ c_1 v_1 v_2 c_2 \end{bmatrix} \rightarrow \begin{bmatrix} c_1 v_1 - c_1 v_1 c_2 \\ c_1 v_1 v_2 - c_1 v_1 v_2 c_2 \end{bmatrix} \]

Sequentive:  
\[ c_1 v_1 c_2 \rightarrow \begin{bmatrix} c_1 v_1 c_2^{en} - c_1 v_1 c_2 \end{bmatrix} \]

Past Participle:  
\[ \begin{bmatrix} c_v c \end{bmatrix} \rightarrow c_v c \]

Groups of:  
\[ c_1 v_1 c_2 \rightarrow c_1 v_1 - c_1 v_1 c_2 \]

100-200 Preposed minor morphemes

100 Prefixes

Masculine  
\(^\text{?ah-}\rightarrow h-\)

Feminine  
\(^\text{š-}\)

Formative  
\(^h-\)

200 Peripheral minor morphemes

First person singular  
\(^\text{?in-}\)

Second person singular  
\(^\text{?a-}\)

Third person singular  
\(^\text{?u-}\)

First person plural  
\(^k-\)
Modals

Completive  t-

Incompletive  k- ~ t-

Durative  tán ~ t-

Terminative  'oqok ~ q-

Obligative  yan

Precise Present  tánt

Assurative  he'el ~ he?-  

Punctual Future  ken-

Durative Future  bín

Optative  ká-

Suffixes in sequence with transitive verbs

Causative  -kun ~ -kin

Usative  -in

Causative  -b

Celeritive  -k

Transitive  -t ~ (-s ~ -es) ~ -Ø

Perfective  -m

(Past) Participle  -a?a ~ V>V

Gerundial₁ (Active)  -ah

Gerundial₂ (Passive)¹ -aL ~ il ~ -VL

Imperfect (Passive)  -b ~ -Ø

¹ Active with intransitive verbs.
<table>
<thead>
<tr>
<th>Suffixes in sequence with intransitive verbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>344 Perfect (Passive)³ <strong>-n</strong></td>
</tr>
<tr>
<td>350</td>
</tr>
<tr>
<td>351 Conjunct <strong>-ik ~ -iL</strong></td>
</tr>
<tr>
<td>360</td>
</tr>
<tr>
<td>361 Conjunct <strong>-Vk ~ -ak</strong></td>
</tr>
</tbody>
</table>

500 Suffixes in sequence with nouns

511 Collective **-al**
512 Inalienable **-el**
513 Relational **-ul**
514 Relational **-al**
515 Abstractive **-il**
516 "ago" **-ak ~ -(h)ek**
517 "(what)ever" **-ak**

---

³ Active with intransitive verbs.
520
521 Gerundial -b
522 Gerundial -Vk
523 Instrumentive -Vb
524 Active Gerund -ah
525 Passive Gerund -b
530
531 Gerundial -VL ~ -aL
532 Gerundive -iL
540
541 Integrative -tak
542 Relational -il
600 Suffixes in sequence with nouns and verbs
610 Pronominals
611 first person singular -en
612 second person singular -eš
613 third person singular -e ~ -i ~ -∅
614 first person plural -o°on
615 second person plural -e°eš
616 third person plural -o°ob ~ -∅
620
625 second person pluralizer -e°eš
626 third person pluralizer -o°ob
700 Enclitics
710
711 Proximal -a°
712 Referential -e°
713 Distal -o°
714 Locative/Negative -i°
2.2.2 Major Morpheme Classes. Morphemes which are not minor morphemes are major morphemes, i.e. stems. Stems are classed into four general classes on the basis of their respective compatibility with minor morphemes. Minor morphemes which have exclusive privilege of combination with a class (or a subclass) of stems are said to be divisive for that class. In this section we define the stem classes and their respective subclasses. The following are the stem classes:

(1) Particles, which combine with no thematic minor morpheme
(2) Enumeratives, which combine only with 041
(3) Nouns, which combine with both 210 and 542
(4) Verbs, which combine with 220

2.2.2.1 Particle stems always form morphologically simple themes. Subclassification of particles by their syntactic distribution remains still to be done. We simply list some of the members of the class:

<table>
<thead>
<tr>
<th>particle</th>
<th>translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>bweno</td>
<td>well</td>
</tr>
<tr>
<td>pwes</td>
<td>well</td>
</tr>
<tr>
<td>tiʔ</td>
<td>in</td>
</tr>
<tr>
<td>ñan</td>
<td>also</td>
</tr>
<tr>
<td>entonses</td>
<td>then</td>
</tr>
<tr>
<td>teʔ</td>
<td>at</td>
</tr>
<tr>
<td>tun</td>
<td>then</td>
</tr>
<tr>
<td>ademas</td>
<td>furthermore</td>
</tr>
<tr>
<td>miš</td>
<td>nor</td>
</tr>
<tr>
<td>este</td>
<td>(hesitation)</td>
</tr>
<tr>
<td>ka</td>
<td>and then</td>
</tr>
<tr>
<td>kaʔač</td>
<td>before</td>
</tr>
</tbody>
</table>
2.2.2.2 **Enumerators** make up a closed class with six members: the numbers one to five, 'un (also hun-), ka'a-, 'óš-, kàn-, hó', plus the enumerative interrogative hay- **how many**, **how much**. All members of the class are combinable with the reduplicative operator O41 and occur only with a noun classifier. Examples:

- hun-túl mák **one (an. cl.) man**;
- hun-pēl libro **one (inan. cl.) book**;
- hu-hun-túl-il **one by one**;
- ka'a-ka'a-túl-il **two by two**;
- ha-hay-túl-il **how many by how many**.

It should be noted that the Spanish numerals, seis, syète, 'očo, etc., which are the only ones now used in counting from six upwards (and optionally also from one to five) are not members of the enumerative class since they do not combine with O41 nor do they occur with a noun classifier.

2.2.2.3 **Nouns** (N) form a large class defined by their compatibility with 210 and 542. Noun stems of the following shapes are found:

- CVC  bát  **axe**  CVVC  'ain  **alligator**
- CVC  màk  **cover**  CVCVC  gímin  **horse**
- CVC  bat  **hailstone**  CVCVC  tákìn  **money**
- CVVC  ba'al  **thing**  CVVCVC  tohol  **price**
- CVVCVC  ku'ukum  **feather**
- CVVCVC  'ono'ot  **cenote**

A few trisyllabic stems are found, probably all of which
are historically compound or complex forms (as indeed are
many of the disyllabic forms also). Examples: pukai'kal heart
kelámbal shoulder
Also polysyllabic noun stems are frequently borrowed from
Spanish, e.g. délantaľ apron, molíňo mill; sérenāta serenade.

The noun stem class is divided into a number of sub-
classes defined as follows:

(1) One large subclass of noun stems is formed by
those stems which are uniquely compatible with 541 (-tak).
The stems of this subclass will term attributives (At),
which are the only ones now used in counting.

(2) All stems which are not members of the enumerative class 
are also members of different allomorphs of that operator.

At do not reduplicate. These may be monosyllabic 
or bisyllabic. Examples: 
CVC sēp fast CVCVC polok fat
CVC bat bōť axe dark CVVC.CVX kili?iš holy
CVC sak toh straight CVVC.CVX /?šl horiz poor
CVC CVCX ka'am loud CVVCX 'fāsīl money easy
CVVCX ěša'en thing CVVCX ločok rank

021 or 022. Examples: CVVCVC ku?kum feather
sak white sasak or sasak / very white
Čiš čiš hard čišiš or čišiš very hard
čak red čačak or čačak very red
At₃ are stems of the shape CVC which occur with 022.

Examples:

<table>
<thead>
<tr>
<th>Stem</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>kâs</td>
<td>bad</td>
</tr>
<tr>
<td>kâkas</td>
<td>very bad</td>
</tr>
<tr>
<td>nâ pérd</td>
<td>near</td>
</tr>
<tr>
<td>nânâ pérd</td>
<td>very near</td>
</tr>
<tr>
<td>hây</td>
<td>thin</td>
</tr>
<tr>
<td>hâhây</td>
<td>very thin</td>
</tr>
</tbody>
</table>

At₄ are stems of the shape CVC or CV°VC which occur with 023. Examples:

<table>
<thead>
<tr>
<th>Stem</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>nâč</td>
<td>far</td>
</tr>
<tr>
<td>nânâč</td>
<td>very far</td>
</tr>
<tr>
<td>síś</td>
<td>cool</td>
</tr>
<tr>
<td>sísis</td>
<td>very cool</td>
</tr>
<tr>
<td>kâh</td>
<td>bitter</td>
</tr>
<tr>
<td>kâkâh</td>
<td>very bitter</td>
</tr>
<tr>
<td>su'u pérd</td>
<td>sour</td>
</tr>
<tr>
<td>su'usu'u pérd</td>
<td>very sour</td>
</tr>
<tr>
<td>ya'ab</td>
<td>many</td>
</tr>
<tr>
<td>ya'aya'ab</td>
<td>very many</td>
</tr>
</tbody>
</table>

At₅ includes those members of the attributive subclass of nouns which occur only in reduplicated form.

Example:

<table>
<thead>
<tr>
<th>Stem</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>bi'bi'kich</td>
<td>soft (said of animal fur)</td>
</tr>
<tr>
<td>lo'olo'ocś</td>
<td>crooked</td>
</tr>
<tr>
<td>ქ'e ქ'e ქ'e</td>
<td>few</td>
</tr>
</tbody>
</table>

(2) Another subclass of noun stems is formed by those members which can occur in the frame # Enumerator # Noun #. These we call classifiers.

Some members have high accent in the frame # Enum # # N but low accent in any other environment. Examples:

'un kúč one load, 'un kúč 'iši'im one load of corn;
kuč load.
Other members have low accent in the frame
# Enum __ + N # but high accent in any other environment.

Examples:

'\un kàn one mecate\textsuperscript{1}; '\un kánil in sándiáil my mecate
for watermelon.

Nearly all members have unchanging high accent.

A large number of these classifiers have membership
in the noun class as well. Some, though they can occur
in the classifier divisive frame # Enum ___ N #, cannot
occur in the frame # Enum ___ # as most of the classi-
fiers can. E.g. 'un-kilo 'ásukař one kilo of sugar,
but 'un-pél kilo one kilo (not #\un killo#).

In general, classifiers have reference to genus,
shape, or measure. Examples of these follow. Those
which are limited to the frame # Enum ___ N # (i.e. can-
ot occur in the frame # Enum ___ #) are marked with an
asterisk.

Genus Classifiers:

túl animals (incl. humans): 'un-túl mák one man,
'\un-túl čič one bird;
kúl plants: 'un-kúl sakab one corn stalk,
ka’a-kúl čë’ two trees;
pél non-plant, non-animal; general or neutral:
'\un-pél nah one house.

Shape Classifiers:

'git elongated things: 'un-'git ha’as one banana,

\textsuperscript{1}mecate—a measure of land twenty meters square
ka'\text{a}-\tilde{\text{g}}\text{it} \, \text{\textit{\textbf{\textup{\textbackslash 'ok}}} two legs,}
\text{\textit{\textbf{\textup{\textbackslash 'ot\text{\textbackslash 'ot}}} three fingers;}
\text{\textit{\textbf{\textbackslash 'un}}} flat, thin things: \text{\textit{\textbf{\textup{\textbackslash 'un}}} one tortilla,}
\text{\textit{\textbf{\textup{\textbackslash 'un}}} two sheets of paper;}
\text{\textit{\textbf{\textup{\textbackslash 'un}}} pieces: \text{\textit{\textbf{\textup{\textbackslash 'un}}} one piece of meat,}
\text{\textit{\textbf{\textup{\textbackslash 'un}}} two pieces of bread;}
\text{\textit{\textbf{\textup{\textbackslash 'un}}} flat, thin things in a stack:}
\text{\textit{\textbf{\textup{\textbackslash 'un}}} a stack of tortillas.}

Measure Classifiers:

Time: \text{\textit{\textbf{\textup{\textbackslash 'un}}} month: \text{\textit{\textbf{\textup{\textbackslash 'un}}} one month of study;}
\text{\textit{\textbf{\textup{\textbackslash 'un}}} year: \text{\textit{\textbf{\textup{\textbackslash 'un}}} two years;}
\text{\textit{\textbf{\textup{\textbackslash 'un}}} moment (in the future).}

Events: \text{\textit{\textbf{\textup{\textbackslash 'un}}} one time;}
\text{\textit{\textbf{\textup{\textbackslash 'un}}} two times;}
\text{\textit{\textbf{\textup{\textbackslash 'un}}} one time.}

Size, Length, Weight:
\text{\textit{\textbf{\textup{\textbackslash 'un}}}\text{\textbackslash 'ah} drop: \text{\textit{\textbf{\textup{\textbackslash 'un}}} a drop of water;}
\text{\textit{\textbf{\textup{\textbackslash 'un}}}\text{\textbackslash 'ul} pile: \text{\textit{\textbf{\textup{\textbackslash 'un}}} a pile of rock;}
\text{\textit{\textbf{\textup{\textbackslash 'un}}}\text{\textbackslash 'uc} load: \text{\textit{\textbf{\textup{\textbackslash 'un}}} a load of corn;}
\text{\textit{\textbf{\textup{\textbackslash 'un}}}\text{\textbackslash 'ub} league (4 kilometers): \text{\textit{\textbf{\textup{\textbackslash 'un}}} two leagues;}
\text{\textit{\textbf{\textup{\textbackslash 'un}}}\text{\textbackslash 'ek} armful: \text{\textit{\textbf{\textup{\textbackslash 'un}}} an armful of firewood;}
\text{\textit{\textbf{\textup{\textbackslash 'un}}}\text{\textbackslash 'ak} pace, step
\text{\textit{\textbf{\textup{\textbackslash 'un}}}\text{\textbackslash 'oy} bucket
\text{\textit{\textbf{\textup{\textbackslash 'un}}}\text{\textbackslash 'ilo} kilogram
\text{\textit{\textbf{\textup{\textbackslash 'un}}}\text{\textbackslash 'uc} gourd
\text{\textit{\textbf{\textup{\textbackslash 'un}}}\text{\textbackslash 'ul} jug, urn
\text{\textit{\textbf{\textup{\textbackslash 'un}}}\text{\textbackslash 'ic\text{\textbackslash 'ic}\text{\textbackslash 'ak} height one can reach
wa'alah  height of a man
ná'b  measure of thumb-little finger reach
hatkab  measure of thumb-index finger reach
kö'ok  fist width
hàz  part
ò'k  handful
lót  bundle, bunch
mùt  almud

(3) A third subdivision of the noun stem class is based on their morphological characteristics when they occur following a possessive pronoun. Two types of characteristics serve to divide the class in this respect: (1) Accent; (2) Selection of genitive suffixes. These subclass divisive criteria are exemplified in the following:

(1) A number of nouns in which the initial syllable bears either high or no accent in environments other than after a possessive pronoun and before a genitive suffix, have a low accent on the initial syllable in the environment of a possessive when not followed by a genitive suffix. Nouns of this subclass will be identified as N. The mechanics of the alternation of the initial syllabic can be represented by the following formula:

\[
\{\breve{v}\} > \breve{v}.
\]
Some of the more frequent nouns of this subclass are listed here:

- abal  plum  bak  meat  bat  axe
- gedel  bedrock  timin  horse  chuh  squash
- cuk  carbon  cil  granary  cuyub  hanger
- coy  pail  homa?  griddle  isi?im  corn
- kih  henequen  kib  candle  kak  fire
- kan  hammock  kas  bushland  keban  sin
- keken  pig  keyem  pozole  kwik  plaza
- koben  kitchen  kus  tobacco  nal  corn ear
- op  tostado  pul  pitcher  pisun  soul
- sache?  comb  sama?  griddle  sakab  corn plant
- sus  basket  htaman  sheep  tanah  home
- wakas  cow

Nouns not of this class are marked simply N.

(2) The optional selection of possession-possessor suffixes effect another division of the noun class.

(a) A few noun stems, exclusively names of body parts which are not controlled by will, may take 512 (-el). These are termed inalienable nouns.¹

¹ It should be noted that these nouns are not inalienable in the sense that the suffix is obligatory when the noun is possessed or that the noun cannot occur without the possessive prefix plus the relational suffix. Each of these nouns occurs also unpossessed and without the relational suffix, though a difference in meaning obtains in a possessed member of the class with and without the relational suffix: u ko ko? u his hair (not that functioning as a part of his body, but now disassociated, as, say, preserved in a bottle).
Examples:

'ū bākel  his bone  'ū bākel  his flesh
'ū doctrine  his hair  'ū  doctrine  his brain
'ū ḫuṭel  his heart  'ū ḫalaṭel  his rib(s)
'ū ḥoṭel  his intestines  'ū hobnel  his bowels

'ū kiʾikel  his blood  'ū kewlel  his skin
'ū yòtel  his skin  'ū támnel  his liver

(b) At least one noun may take the relational suffix 514 (-al) with or without the second relational suffix 542 (-il): 'ū yikal  his chile (which accompanies something else he is eating); 'ū yîk  his chile; 'ū yîkalil  his chile for eating something with.

(c) At least one noun may take the relational suffix 513 (-ul) with or without the second relational suffix 542; 'ū meyul  his work; 'ū meyah  his work; 'ū meyul  his work relative to something.

(d) Presumably all nouns can take the second relational suffix 542 (-il), the meaning of which seems to be, roughly: relative to, used by or for, etc. For example:

'ū nah-il  his house.

Members of the noun class which occur with the suffixes -el, -al, -ul are to be marked in the dictionary as
N (-el), N (-al), N (-ul) respectively.

A small subclass of noun stems is formed by those time expressions which combine with 516 -ak ~ -(h)eak ~ -yak ~ -ahkeak ago. Examples: hun ha’a6-ak a year ago; sám-eak a moment ago, ho’ohle-ak (or ho’ol-he-ak) yesterday; hun’él kin-ak a day ago; unten-ahkeak one time.

2.2.2.4 Verbs form a large class defined by their exclusive privilege of occurrence with 220. Verb stems of the following shapes are found:

\[
\begin{align*}
\text{CVC} & \quad \text{pán} \quad \text{dig up} \quad \text{CVVC} \quad \text{?ókt} \quad \text{dance} \\
\text{CVVC} & \quad \text{?on} \quad \text{shoot, hunt} \quad \text{CVVC} \quad \text{tükul} \quad \text{think} \\
\text{CVC} & \quad \text{?őv} \quad \text{clean} \quad \text{CVVC} \quad \text{pakač} \quad \text{heat tortillas} \\
\text{CVVC} & \quad \text{bo’ol} \quad \text{pay} \quad \text{CVVC} \quad \text{?ošo?om} \quad \text{shell (e.g. corn)} \\
\text{CVVC} & \quad \text{he’esim} \quad \text{sneeze}
\end{align*}
\]

As with nouns, many of the disyllabic verb stems are historically complex forms. Verb stems borrowed from Spanish may have other shapes, e.g. kréf believe, péřtanesër belong, etc.

Verb stems are grouped into subclasses on the basis of the transitive and intransitive status markers with which they combine. They are further subdivided according to their patterns of stem alternations and certain paradigmatic restrictions. Paradigms for each class are provided in Appendix A.
(1) Verb stem class 1 (Vs₁) is made up of those verb stems which take the zero alternant of the transitive status marker 321 and the -n alternant of the intransitive status marker 417. This class is in turn subdivided according to certain patterns of stem alternation:

Vs₁₁ A large subclass is made up of verb stems with four stem alternants of the shapes (a) CVC, (b) CV,C, (c) CV.C, (d) CVC as with звон to shoot: (a) зон shoot it! (b) зонен shoot! (c) зо(?o)ni it got shot (d) зони it was shot. Examples are listed under the form of alternant (a):

- **Bah** hammer  
  - **Bak** roll up,  
  - **Bal** hide (guardarse)

- **Баш** hammer  
  - **Bit** pinch  
  - **Bon** dye

- **Buh** divide in two  
  - **But** stuff in (embutir)  
  - **Day** splice, place end to end

- **Гол** take off  
  - **Гол** explain,  
  - **Гак** cure, treat line up

- **Гам** submerge  
  - **Гап** heap  
  - **Гак** shave

- **Гот** fling  
  - **Гоп** thrust in (as a pole in the ground)  
  - **Гак** boil

- **Чеп** rub  
  - **Чин** tilt, tip  
  - **Чок** hurl

- **Чуя** sew  
  - **Чах** drip  
  - **Чак** cut

- **Чеб** tilt  
  - **Чех** extinguish  
  - **Чет** change (extinguir, directions acabar)

- **Чот** wind up  
  - **Чуя** hang  
  - **Хаф** separate

- **Нач** whip, strike  
  - **Нач** chew  
  - **Нал** lower, slacken a line (arriar)
<table>
<thead>
<tr>
<th>haš</th>
<th>lay strands</th>
<th>hay</th>
<th>extend</th>
<th>hek</th>
<th>split (separar, despajar, desprender)</th>
</tr>
</thead>
<tbody>
<tr>
<td>hel</td>
<td>change (mudar)</td>
<td>hep</td>
<td>pinch</td>
<td>het</td>
<td>break (partir)</td>
</tr>
<tr>
<td>hit</td>
<td>weave, braid</td>
<td>hoč</td>
<td>harvest</td>
<td>hok</td>
<td>pull up (by roots)</td>
</tr>
<tr>
<td>hok</td>
<td>lasso, cinch</td>
<td>hol</td>
<td>pierce</td>
<td>hul</td>
<td>illuminate; throw (something large)</td>
</tr>
<tr>
<td>huč</td>
<td>grind</td>
<td>hup</td>
<td>throw something small</td>
<td>hub</td>
<td>destroy, knock over (as a pile of wood)</td>
</tr>
<tr>
<td>kač</td>
<td>break apart</td>
<td>ko‡</td>
<td>snap in two</td>
<td>ko‡</td>
<td>coil up</td>
</tr>
<tr>
<td>koh</td>
<td>hit</td>
<td>kol</td>
<td>make milpa</td>
<td>kop</td>
<td>roll up</td>
</tr>
<tr>
<td>kuč</td>
<td>load</td>
<td>kal</td>
<td>close, shut</td>
<td>kam</td>
<td>receive</td>
</tr>
<tr>
<td>kaš</td>
<td>tie up</td>
<td>keč</td>
<td>fold, change directions</td>
<td>keš</td>
<td>change</td>
</tr>
<tr>
<td>kil</td>
<td>hurt a wound</td>
<td>kit</td>
<td>disperse, spread</td>
<td>kop</td>
<td>knock</td>
</tr>
<tr>
<td>kos</td>
<td>cut with scissors</td>
<td>kub</td>
<td>deliver</td>
<td>kuč</td>
<td>spin (hilar)</td>
</tr>
<tr>
<td>kup</td>
<td>cut (something soft)</td>
<td>kut</td>
<td>mash, tamp (food)</td>
<td>lah</td>
<td>slap</td>
</tr>
<tr>
<td>lak</td>
<td>loosen, detach</td>
<td>lam</td>
<td>stick, sink into (meter)</td>
<td>leb</td>
<td>uncover</td>
</tr>
<tr>
<td>loh</td>
<td>redeem</td>
<td>lom</td>
<td>stab, prick</td>
<td>los</td>
<td>hit</td>
</tr>
<tr>
<td>luk</td>
<td>swallow</td>
<td>mač</td>
<td>grab, hold</td>
<td>mah</td>
<td>buy</td>
</tr>
<tr>
<td>mek</td>
<td>fold</td>
<td>mok</td>
<td>tie a knot</td>
<td>mu‡</td>
<td>close eyes</td>
</tr>
<tr>
<td>muk</td>
<td>bury</td>
<td>na‡</td>
<td>(come) near</td>
<td>nuč</td>
<td>join</td>
</tr>
<tr>
<td>nup</td>
<td>close (tapar)</td>
<td>pak</td>
<td>fold up</td>
<td>paš</td>
<td>play (music)</td>
</tr>
<tr>
<td>pat</td>
<td>mold, knead</td>
<td>pe‡</td>
<td>weight down, hold down (apesgar)</td>
<td>pec</td>
<td>flatten, apply pressure, embarrass</td>
</tr>
<tr>
<td>pit</td>
<td>clean off, take off (clothing)</td>
<td>po‡</td>
<td>milk an animal</td>
<td>pot</td>
<td>perforate</td>
</tr>
</tbody>
</table>
Vs.1.2 are those verb stems of class I which have three stem shapes: (a) CVC, (b) CV'C, (c) CV..C.
Examples:

- čuh burn  čuk catch  čup fill
- čul wet  sat lose  šok read, count
- šup spend,  tok snatch  tup put out
- use up
- tus lie  ťan speak  šít spread out

Vs. 1.3 A small number of monosyllabic stems which in their citation (or first) alternant end in /ʊ/ or /n/ have an alternant in which the final consonant is replaced by /b/. Examples:

- 'a' put  ča' permit,  ča' fetch (coger)
- let go
- (dejar, soltar)
- čl' bite  čo' clean (lim- ha' sharpen piar)
- he' open  leh lasso  šeh vomit
- pa' break  po' wash  to' wrap

Vs. 1.4 A large number of verb stems of this subclass have a constant shape. The following are CVC:

- báb empty out  ǧil peel  čúl scrape a pan with the finger or a tortilla
- húk protect  nûy stir up  kól tug, pull (liquids)
- (jalar)
- kél toast  kóc carry on the  kóy dig out
- head
- lál pour out  lěć' lick  mék embrace
mán pass nét scratch (with nól suck (as on a
the teeth) piece of candy)
núk answer núp trap níč take a bite of
náy dream pán dig up páθ massage
páy borrow pól construct, pók heat up,
loan chip out, toast
(prestar) (labrar) (tortillas)
sús peel, tét choose tít shake
whittle
tók burn túb spit tóč peck
yéʔ make jest yéʔ choose

The following are CV?VC:
čuʔuč kiss, smoke, čuʔuč nurse (mamar, chupar)
suck on (chupar)
čaʔač chew haʔač take out by hand
(as honey)
laʔač itch luʔuč pick up and eat a
bite of food with a
section of tortilla
leʔep̂̂ scratch with the naʔat understand
fingernails
šeʔep pinch (pellizcar) taʔak hide

Vs1.5 A few disyllabic verb stems of this sub-
class have two stem alternants: CVCVC or CVCVC and CVCC,
as with (a) tükul, (b) tuklik. Examples:
bokol stir (batir) čahal tickle
čàkat cross (cruzar) čikil shake down
pàkat look (mirar) tükul think
pikit fan
A few verb stems require the suffix 342 (-Vl) in all intransitive forms stative and processive, but not in the transitive forms. Examples of these are listed here with 342 in parentheses: (1) bak(Vl) roll up, (2) kon(Vl) sell, (3) pak(Vl) plant, (4) ?uk(Vl) drink.

(2) A second subclass of verb stems (Vs₂) is formed by those which take the -t alternant of the transitive status marker 321 and the -n alternant of the intransitive status marker 417. No stem alternation has been observed with this class. The following members of this subclass have the shape CVC:

<table>
<thead>
<tr>
<th>Stem</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>gén</td>
<td>feed</td>
</tr>
<tr>
<td>híl</td>
<td>drag</td>
</tr>
<tr>
<td>kýy</td>
<td>pull (as a bucket in a well)</td>
</tr>
<tr>
<td>píb</td>
<td>barbeque</td>
</tr>
<tr>
<td>sít</td>
<td>jump, jump over</td>
</tr>
<tr>
<td>yún</td>
<td>move (mecer)</td>
</tr>
<tr>
<td>bo'ol</td>
<td>pay</td>
</tr>
<tr>
<td>če'eh</td>
<td>laugh</td>
</tr>
<tr>
<td>ku'ul</td>
<td>rub</td>
</tr>
<tr>
<td>nu'uk</td>
<td>indicate</td>
</tr>
</tbody>
</table>

The following members have the shape CV?VC:

<table>
<thead>
<tr>
<th>Stem</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>bo'ol</td>
<td>pay</td>
</tr>
<tr>
<td>če'eh</td>
<td>laugh</td>
</tr>
<tr>
<td>ku'ul</td>
<td>rub</td>
</tr>
<tr>
<td>nu'uk</td>
<td>indicate</td>
</tr>
</tbody>
</table>

(enseñar, dirigir, guiar)
se?en  cough  ŝa?ak  mix up (revolver)
yu?uč  rub hard; crumple  up (paper)

The following members are disyllabic:

bākal  roll up  balak  surround
čulub  collect rain  čeneb  stick out (as head from window)(asomarse)
he?esím  sneeze  kanan  (also kanán) care for, herd
kócak  kick (patear)  lákin  accompany
mahan (also mahán)  loan  mákan  prepare
náhal  earn  ?okot  dance
?ošo?om  shell  pakač  heat tortillas
šáčab  take a step  šušub  whistle (silbar)
tiriş  rattle  tohol  throw out (as someone from a house)
walak  leaf through, wayak  dream
  turn leaves

(3) A third subclass of verb stems (Vs₃) is formed by those which take the -s alternant of the transitive status marker 321.

Vs₃.₁ A large subdivision of Vs₃ is made up of those verb stems which take 342 (-Vl) in the present intransitive, (e.g. k-in wen-Ø-Vl I sleep (222 + 211 + wen sleep + 421 + 342) and the zero alternant of the intransitive status marker 417 in the non-present
intransitive (e.g. wén-∅-en I slept) (wen sleep + 417 + 611). All stems of this subclass have the shape CVC; nearly all have a high accent in their citation form or first alternant and a second alternant with low accent. Since these stems are always bound, we cite the examples as traditionally in combination with 342:

'ahal awaken
vémel descend
kímil die (unique past active participle kimen)
kučul arrive (unique active participle kuhsik)
líkil rise
lukul leave
nákal arrive
típil jut out (asomarse)
wenel sleep

Vs₃.₂ A small subdivision of Vs₃ is formed by the three members bin go, tål come, má'n pass by which take the zero alternant of 417 but do not take 342.

Vs₃.₃ Another subdivision of Vs₃ is formed by those verb stems which take the -n alternant of the intransitive status marker 417 in the non-present intransitive (e.g. pék-n-ah-en I moved) (pék move + 417 + 421 + 611) and the zero alternant of the intransitive status marker 417 in the
present (e.g. k-in pék-∅ I move) (222 + 211 + pék move + 417). Examples: naʔakal ascend, pék move, ʔuʔul arrive.

(4) A fourth class of verb stems (Vs₄) is made up of verbs which combine uniquely with posturative 416 and with the instrumentive formative 523. Since these stems are always bound, we cite the examples as traditionally, in combination with 416 + 342:

čiLtal lie down
hawtal lie supine
mučtal assemble
pektal stretch out
šoltal kneel
waʔatal stand

čuytal hang
kuLtal sit
noktal lie prone
poktal squat
šaktal go on all fours

(5) A fifth class of verb stems is made up of those verbs whose intransitive themes are formed from the transitive theme by the addition of status neutralizer 421 (-ah). Before intransitive status marker 417 (-n) the presence of 421 is optional. Three subdivisions are formed according to which transitive status marker the stem takes:

Vs₅.1 are those which take the zero alternant of the transitive status marker 321. Examples:
ʔeʔes show, ʔil see, key scold, paʔt wait for, expect,
puʔuh scare off, shoo away, saʔas forgive, ʔuʔuy hear, sense
(the unique alternant ʔuʔub is used exclusively with non-third person).
Vs. 5.2 are those which take the -t alternant of 321.
Examples: kúl worship, tún taste, try, tempt, ?us blow.

Vs. 5.3 are those which take the -s alternant of 321.
Examples: haw stop, káh begin, kaʔan teach, kaʔah remember, tuʔup put out; erase.

2.3 Higher Level Formations.

Stems and minor morphemes are the irreducible elements out of which sentences are formed. However, it is simplest to describe sentences as made up not of sequences of stems and minor morphemes, but of sequences of constructions, recognizing levels of phrase formation and theme formation.

Themes, the lowest level of morphological construction considered in sentence formation, may be composed of simple or compounded stems with or without additional thematic minor morphemes. Each theme is affiliated with a class determinable from its internal composition. Thus four theme classes are recognized: Nouns, Verbs, Enumerators, Particles. Noun and verb themes may be derived by certain thematic affixes from other noun or verb themes. That is, a noun or verb theme may be derived by the addition of derivational thematic affixes into a theme of a different class or into a new theme of the same class. Thus, verb themes may be formed from noun themes or other verb themes, and noun themes may be formed from verb themes or other noun themes. Enumerator themes are formed only of enumerator stems ± 021. Particle themes are never
derived and are thus coterminous with particle stems.

Theme formation, the development and distribution of stems in respect to minor morphemes, is discussed in 2.3.1. The formation of certain types of phrases (noun and verb complexes) is left to section 2.3.2.

2.3.1 Theme Formation. We have described a theme as a sequence of morphemes containing a single stem or compounded stems with or without additional thematic (derivational or qualifying) minor morphemes. In the present section we examine the structural parts of themes and their co-occurrence relations in the following order: 2.3.1.1 Verb Compounds, 2.3.1.2 Noun Compounds, 2.3.1.3 Thematic Minor Morphemes.

2.3.1.1 Verb Compounds. Besides having a single verb stem as its nucleus, a verb theme may have compounded stems (forming a compound theme). Compounds are characterized by one or more of a number of features: the members (1) occur in a fixed order in respect to each other; (2) cannot be interrupted by extraneous morphemes; (3) function as a unit, admitting theme-external minor morphemes only at the peripheries; (4) may form an idiom which contrasts in meaning with a phrase containing the same stems; (5) may form a theme of a different subclass from that of either member alone. Verb compounds are formed in the following ways:

(1) Verb Theme + Noun Theme:
I'm wood chopping it
(223 + 211 + ćak chop + će? wood + 321 + 351 + 613);
pil-ič-en-eč peer your eyes! (pil open + ič eye + 417 + 422 + 615);
jon-kén-n-an-i he deer hunted (jon hunt + kéh deer + 417 + 421 + 613);
k-u kanan-taman he (sheep)herds (222 + 213 + kanan take care of, guard + taman sheep);
k-u čin-pół-t-ik-oob they bow (to) it (222 + 213 + čin incline + pòl head + 321 + 351 + 616);
t-u kat-ci-t-an-i he inquired (about) it (221 + 213 + kat ask + či? mouth + 321 + 341 + 613);
?u péć-kab-t-m-an-i he has touched it with his hand (213 + péć touch + kab hand + 321 + 331 + 341 + 613);
t-in ?ay-pać-t-ik-eč I'm following you (223 + 211 + ?ay line up + pać back + 321 + 351 + 612);
ká u tánť-?ól-te may he pay heed (231 + 213 + tánť try, prove + ?ól heart, inside + 321 + 613);
t-u ?á?-nak-t-an-i he girded it (up) (221 + 213 + ba? surround + nak belly + 321 + 341 + 613).
(2) Noun Theme + Verb Theme:

- **k-u \( \text{t}_a' \text{g} \)-mán-s-ik-∅ he passes (by) him (222 +
213 + \( \text{t}_a' \text{d} \) direct + mán pass + 321 + 351 +
613);**

- **k-u hól-čak-t-ik-∅ he cuts a path (222 + 213 +
hól hole + čak chop + 321 + 351 + 613);**

- **sak-če'eh-n-ah-i he smiles (sak white + če'eh
laugh + 417 + 421 + 613);**

- **tán u yà-yah-tan-t-ik-èc he is insulting you**
(223 + 213 + 021 + yàh pain + tan speak +
321 + 351 + 612).

(3) One special kind of verb compound is formed by
a verb theme plus certain noun (or particle?) stems which
we shall call adverbial compounders. Examples:

(a) \( \text{c}_\text{i}_\text{n} \) throw away, out, down. Common to com-
pounds which include this morpheme is the referent
verb of impelling, e.g.: .

- **t-u tohol-čín-t-ah-eč-o'ob they threw you out (221 +
213 + tohol throw out + čín throw + 321 + 341 +
612 + 626);**

- **hól-čín-t-e make hole throwing something! (hól hole +
čín throw);**

- **t-u ŋó-šol-čín-t-ik-∅ they bow down (to) him (221 +
213 + 011 + ŋol kneel + čín throw + 321 + 351 +
613);**

(b) lan action involving repeated sequence of a
given act, e.g.: .
t-u 'toš-lan-t-ah-∅ le wāho? he divided out the bread
one after another (toš divide out);
t-u 'kāš-lán-t-ah-∅ob he tied them one after another
(kāš tie);
(c) tán reciprocal; each other, among themselves.
E.g.: tán u kims-lán-tám-bal they are killing amongst
themselves one after another (kims-die);
t-u 'toš-lan-tám-bal he divides it out one after
another.

(4) Another special kind of verb compound is formed by
preposing certain attributive noun stems or particles to
verb themes. Some of the more common attributives used
as compounders are lah all, čan little, hač intensive,
ka?a two, again, čič hard, fast, seb fast, ki? good,
ma'alob good. Examples:

lahkimo?ob they all died (lah all + kims-die);
tu lahhàntah he ate it all (lah all + han-eat);
tán u čanmeyah he is working a bit (čan little
+ meyah work);
tán u hačmeyah he is really working (hač very +
meyah work);
ka?abino?ob they went again (ka?a two, again +
bin go);
ku sebbin he goes fast (seb fast + bin go);
ku čičbin he goes fast (čič hard + bin go).
2.3.1.2 Noun Compounds. A compound noun theme may be formed in the following ways:

1. Noun theme + noun theme:
   ki'ik'nak dysentery (ki'ik' blood + nak' stomach);
   'etsib fellow man, friend ('et with + šib man);
   šya'aš'ič green eyes (ya'aš green + ič eye);
   nohpöl governor (noh big + pöl head);
   šanabcák (a species of wasp which builds a nest whose shape suggests a shoe) (šanab' shoe + čák rain).

A few elements earlier grammars have treated as affixes we are treating as bound noun stems. These are -bil, -šil, -be'en, -nál, -kab, and bul-.

Examples:
   tatašil father (tata father + šil reverential);
   yunšil Lord (yum lord, gentleman);
   yumbil Lord God;
   čanbil baby (in reference to the Christ Child only) (čan small + bil reverential);
   ko'olebil Virgin Mary (ko'olel lady);
   kolnál farmer (milpero) (kol milpa + nál of the business or nature of);
   lu'umkab inhabitant, man (lu'um land + kab "creature");
   bulkin all day long (bul throughout + kin day);
   bulšákab all night (šákab night);
   hanalbe'en edible (han- eat, food + be'en worthy);
   šikbe'en honorable (šik honor, salute).
Verb theme + Noun theme:
'okha' baptism ("ok enter + ha' water);
'ahkkinsahwínik murderer (kinsah kill + wínik man);
'hkómbak' meat seller (kòn sell + 'b'k meat);
'kulnah' temple, church (kul worship + nah house);
'menwàh' tortilla maker (mèn make + wàh tortilla);
'skaš'bak bone-setter, bandager (kaš tie + 'b'k bone);
'skimenyíčam' widow (kimen dead + 'ičam husband);
'katabće' cross (kat cross + če' wood, tree).

Noun theme + Verb theme:
'smeyahbèt' hired girl (meyah work + 'bèt do);
'sétàl' companion ("ét with + tál come).

2.3.1.3 Verb Thematic Minor Morphemes. On the basis of their internal composition and their relations with the remainder of the verb complex we divide verb themes into transitive and intransitive themes. Verb complexes we divide into three modes, imperative, processive, and stative, the definitions of which we reserve until 2.3.2.

2.3.1.3.1 Transitive Themes. The following chart serves to indicate the modal restrictions (for transitive theme sequences) together with the ordering of these thematic minor morphemes. Where segments of the chart are divided horizontally, those suffixes in lower sections occur only in stative verb complexes; those suffixes in upper sections occur only in processive verb complexes. The unit number
corresponds to that of the index number for the affix in the inventory (2.2.1).

Class 350, 360, and 610 are not thematic suffixes but are included here to show their sequence relation to the other suffixed minor morphemes. Their distribution in respect to verb complexes must await section 2.3.2.

CHART OF THEMATIC, CONJUNCT, AND TERMINAL

AFFIXES COMBINING WITH TRANSITIVE VERBS

<table>
<thead>
<tr>
<th>110</th>
<th>010</th>
<th>BASE</th>
<th>310</th>
<th>320</th>
<th>330</th>
<th>340</th>
<th>350</th>
<th>360</th>
<th>610</th>
<th>620</th>
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<tr>
<td>3 h</td>
<td>REDUPLICATION</td>
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<td>4 o?on</td>
<td>4 o?on</td>
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</tbody>
</table>

A transitive theme consists maximally of three parts: base, transitive core, and margin, minimally of two parts, base and transitive core. We now define these: a base is a stem or a compound. A transitive core consists of a base plus a suffix of 320 or suffixes of 310 and 320 plus, optionally with certain bases, an operator of reduplication. A margin consists of a single suffix (341) or one of four sequences of suffixes of classes 330 and 340, and, optionally with one margin suffix sequence, prefix 113.
It is convenient at this point to define the five margin patterns of transitive themes:
Margin A (forming TRANSITIVE THEME A) is $341$
Margin B (forming TRANSITIVE THEME B) is the sequence $331 + 341$
Margin C (forming TRANSITIVE THEME C) is the sequence $332 + 342$
Margin D (forming TRANSITIVE THEME D) is the sequence $332 + 343$
Margin E (forming TRANSITIVE THEME E) is the sequence $332 + 344$
Margin F (forming TRANSITIVE THEME F) is the sequence $332$ alone.

No other combinations of suffixes of class 330 with class 340 occur; these five patterns then are exhaustive for transitive verb forms.

We shall proceed now to discuss each of the minor morphemes which occur in transitive themes, beginning with the core suffixes of class 310.¹

The discussion which follows the chart gives further details on each thematic morpheme and its relations with other thematic minor morphemes and with stems and themes. The term base is used here to stand for any simple or compound stem with or without an adverbial adjunct.

¹ See fn. 1 on p. 30.
Set 310 are first order suffixes occurring always inside all other verb thematic suffixes.

(1) 311 (-kûn -kín) (kun - kin) causative serves to derive transitive verb themes from noun stems (frequently of the attributive subclass) or from noun themes and from verb stems of class 5. The meaning is cause to turn so or become such (contrary to the natural or original state). In transitive expressions 311 is always followed by either 321 (-t) or 321 (-s). Examples:

sak-kûn-t-e whiten it! (sak white + 311 + 321 + 613);
sasil-kûn-s-e illumine it! (sasil light + 311 + 321 + 613);
miš+baʔal-kûn-s-e cause it to come to nought (miš not + baʔal thing + 311 + 321 + 613).

The alternant -kun occurs following a syllable with a non-back vowel. Examples:
čiʔ-kûn-t-e lay it down! (čiʔ- lie + 311 + 321 + 613);
keʔ-el-kûn-t-e cool it! (keʔ-el cold + 311 + 321 + 613);
sak-kûn-t-e whiten it! (sak white + 311 + 321 + 613).

The alternant -kin occurs (with exceptions noted below) following a syllable with a back vowel. Examples:
toh-kin-t-e straighten it! (toh straight + 311 + 321 + 613);
polok-kin-s-e fatten it! (polok fat + 311 + 321 + 613);
ʔuʔ-kin-t-e repair it! (ʔuʔ good + 311 + 321 + 613).
mul-kin-s-e pile it! (mul mound + 311 + 321 + 613).

Certain exceptions have been observed where the alternant -kun occurs after the vowel o: ko’oh-kun-s-e (also ko’oh-kins-e) raise the price! (ko’oh expensive); ki’imak-’ol-kun-t-e (but not ki’imak-’ol-kin-t-e) make him happy (ki’imak-’ol joy).

The alternants without high accent and those with high accent are free to occur with almost any stem, the difference being that the latter "perhaps indicate more emphasis" (?). Examples:
sak-kun-t-e or sak-kun-t-e whiten it!
čil-kun-t-e or čil-kun-t-e lay it down!
polok-kin-s-e or polok-kin-s-e fatten it!

In some forms, however, the alternant with high accent is obligatory: sas-il-kun-s-e (but not sas-il-kun-s-e) illumine it! (However sás-il-kun-s-e or sás-il-kún-s-e illumine it! are both accepted by the informant).

(2) 312 (-in) usative also serves to derive a transitive verb theme from a noun stem, though the nouns with which it combines are quite few and are never of the attributive subclass. The meaning of 312 is have for, take for, or serve for. 312 is always followed by 321 alternant -t. Examples: (t-u) pāl-in-t-ah-∅ (he) took for his son (221 + 213 + pāl son + 312 + 321 + 341 + 613); (k-u) kàba?-in-t-ik-∅ hwǎn (he) is named Juan (222 + 213 + kàba? name + 312 + 321 + 351 + 613); (tán u) si?-in-t-ik-∅
(he's) making firewood (223 + 213 + si? firewood + 312 + 321 + 351 + 613); kîc-in-t-e use it to get warm! (kîc get warm + 312 + 321 + 613).

(3) 313 (-b) causative serves to derive transitive verb themes from noun (frequently attributive noun) stems or themes and from verb stems or themes. The meaning is cause to turn so, become such or do so. 313 is always followed by 321 alternant -es. Examples:
sak-b-es-e whiten it! (sak white + 313 + 321 + 613);
sahak-b-es-e scare it! (sahak fear, afraid);
sûk-b-es-e tame it! (sûk tame); cîk-b-es-e make it appear! (cîk appear); ¿o'ok-b-es-e finish it! (¿o'ok end).

(4) 314 (-k) celeritive serves to derive verb themes from verb stems or themes. The meaning is do an action; often quickness is implied. 314 in transitive expressions is always followed by 321 alternant -es. Examples: cîl-k-es-e lay it down quick! (cîl- lie + 314 + 321 + 613); ko'd-k-es-e snap it, rip it (ko'd rip); 'bal-k-es-e make it roll (bal roll);
tul-k-es-e over-fill it (tul overflow).

Set 321 is a second order core terminal verb thematic suffix which serves as the transitive status marker. It has four allomorphs.

(1) 321 allomorph -t is suffixed to verb stems of class 2. Examples:
¿ib-t-e write it! (¿ib write + 321 + 613);
mîs-t-e sweep it! (mîs sweep); kanán-t-e guard it!
(kanán guard).

It also occurs following 311 and 312: sis-kún-t-e cool it! (sis cool + 311 + 321 + 613);
kič-in-t-e use it to get warm! (kich get warm + 312 + 321 + 613).

It is mutually exclusive with 313 and 314.

It also occurs as the transitive status marker with most compound verb themes: (k-u) kònbak-t-ik-∅ (he) meat-sells it (e.g. beef) (222 + 213 + kòn sell + ba'k meat + 321 + 351 + 613); jay-pač-t-e follow it (jay line up + pač back + 321 + 613);
(k-u) şot-kín-t-ik-∅ (he) judges him (222 + 213 + şot cut + kin day + 321 + 351 + 613);
(k-u) hól-ţon-t-ik-∅ (he) shoots a hole in it (222 + 213 + hól hole ţon shoot + 321 + 351 + 613).

321 also occurs as the transitive status marker with most verbs borrowed from Spanish: (k-u) krér-t-ik-∅ (he) believes it (222 + 213 + krér believe + 321 + 351 + 613); (k-u) péftenesèr-t-ik-∅ (it) belongs (to) it (222 + 213 + péftenesèr belong + 321 + 351 + 613).

(2) 321 alternants -s and -es are suffixed to verb stems of class 3. Examples: lúb-s-e fell it! (lúb fall + 321 + 613); pék-s-e move it! (pék move);
na'ak-s-e climb it! (na'ak climb); kín-s-e kill it! (kím die); hók-s-e take it out! (hók exit);
'áh-s-e awaken him! ('áh- awaken); tàl-s-e bring it! (tàl come); biN-s-e take it! (biN go).

Alternant -s occurs following 311, as in kuL-kín-s-e seat him! (kuL sit + 311 + 321 + 613).

Alternant -es occurs following 313 or 314: sak-b-es-e whiten it! (sak white + 313 + 321 + 613); hál-k-es-e let it fall! (hál loose + 314 + 321 + 613).

Following stems, the two alternants are in free variation, though -s is more common. Examples: káh-s-∅ le šòk-o° or káh-es-∅ le šòk-o° begin the reading! (káh begin + 321 + 613 + le the šòk reading + 713); but káh-es-∅ begin it! (káh + 321 + 613) or káh-s-e begin it! (káh + 321 + 613).

(3) 321 alternant -∅ is suffixed to verbs of class 1. Examples: jón-∅-e shoot it (jón shoot + 321 + 613); (k-u) man-∅-ik-∅ (he) buys it (222 + 213 + man buy + 321 + 351 + 613).

330 are third order thematic suffixes, first order margin suffixes.

331 is a third order verb thematic suffix which derives verb themes we shall categorize as perfective. This suffix always precedes 341 (-ah) and follows 321. It is mutually exclusive with 220, but cooccurs obligatorily with 210. Examples:
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\[ \text{\textdollar} \text{u m\textit{\textlq}s-t-m-ah-\$} \text{ has swept it} \] \[ (213 + \text{m\textit{\textlq}s\textit{\textlq}s} + 321 + 331 + 341 + 613) \]; \[ \text{\textdollar} \text{in m\textit{\textlq}n-s-m-ah-\textit{\textlq}e\textit{\textlq}c} \text{ I've transferred you} \] \[ (211 + \text{m\textit{\textlq}n\textit{\textlq}s\textit{\textlq}p\textit{\textlq}a\textit{\textlq}ss} + 321 + 331 + 341 + 612) \]; \[ \text{\textdollar} \text{a lo\textit{\textlq}\$-m-ah-en you've struck me} \] \[ (212 + \text{lo\textit{\textlq}s\textit{\textlq}s\textit{\textlq}s\textit{\textlq}t\textit{\textlq}r\textit{\textlq}i\textit{\textlq}k\textit{\textlq}e} + 321 + 331 + 341 + 611) \].

The sequence 331 + 341 comprises margin B.

332 is a third order verb thematic suffix (with one infix alternant). Its interrelations with other thematic suffixes of transitive verb themes is described here; its relations with thematic suffixes of intransitive themes will be described below.

332 may occur with verb stems or verb themes derived by \pm 310 + 320. It may be followed by 342, or by 361--the sequence 332 + 342 comprises margin C; the sequence 332 + 343 comprises margin D; the sequence 332 + 344 comprises margin E. The sequence when it is not followed by 343 or 344 comprises margin F. With a transitive core, it derives a past passive participle. Examples:

\[ \text{kim-s-a\textit{\textlq}a\textit{\textlq}s-a-b-i} \text{ he was killed} \] \[ (\text{kim \textit{\textlq}d\textit{\textlq}e} + 321 + 332 + 343 + 613) \]; \[ \text{\textdollar} \text{ib-t-a\textit{\textlq}a\textit{\textlq}s-a-n-\$} \text{ it has been written} \] \[ (\text{\textdollar} \text{ib\textit{\textlq}s\textit{\textlq}w\textit{\textlq}r\textit{\textlq}i\textit{\textlq}t} + 321 + 332 + 344 + 613) \]; \[ \text{p\textit{\textlq}n-\$-a\textit{\textlq}a\textit{\textlq}s-a-Vk-\$} \text{ may it be dug} \] \[ (\text{p\textit{\textlq}n \textit{\textlq}d\textit{\textlq}i\textit{\textlq}g} + 321 + 332 + 361 + 613) \]; \[ \text{ke\textit{\textlq}el-kun-t-a\textit{\textlq}a\textit{\textlq}s-a-n-\$} \text{ it has been cooled} \] \[ (\text{ke\textit{\textlq}el \textit{\textlq}c\textit{\textlq}o\textit{\textlq}l\textit{\textlq}d\textit{\textlq}e} + 311 + 321 + 332 + 344 + 613) \]; \[ \text{sak-b-es-a\textit{\textlq}a\textit{\textlq}s-a-b-i-} \text{ it was whitened} \] \[ (\text{sak \textit{\textlq}w\textit{\textlq}h\textit{\textlq}t\textit{\textlq}e} + 313 + 321 + 332 + 343 + 613) \].
The alternant -a'a is suffixed to any transitive verb core or to verb stems of stem classes other than Vs₁. Examples are seen above.

The alternant V*V is infixed to verb stems of class Vs₁ to form margins D or F. Examples:

- k-u he-V*V-b-Ø-Vl _it gets opened_ (222 + 213 + he..b open + 321 + (-332-) + 342);
- čo-V*V-b-Ø-Ø-i _it got cleaned_ (čo..b clean + 321 + 332 + 343 + 613).

340 are fourth order thematic suffixes.

341 (-ah) occurs after 331 to form a perfect gerund (Margin B), after 320 to form an imperfect gerund (Margin A). Examples: 'u loš-Ø-m-ah-en he has struck me (213 + loš strike + 321 + 331 + 341 + 611);

(t-u) loš-Ø-ah-en (he) struck me (221 + 213 + loš strike + 321 + 341 + 611); (t-u) gîb-t-ah-Ø (he) wrote it (221 + 213 + gîb write + 321 + 341 + 613);

(t-u) kán-b-es-ah-en (he) taught me (221 + 213 + kán teach + 313 + 321 + 341 + 611).

342 (-Vl) occurs only with 332 in transitive verbs, the sequence 332 + 342 forming margin C and translating as present passive. Examples:

(k-u) han-t-a"a-Vl _it gets eaten_ (222 + 213 + han eat + 321 + 332 + 342); (t-u) čo-V*V-n-Ø-Vl _it is being shot_ (221 + 213 + čo..n shoot + 321 + (-332-) + 342). The remaining alternants of 342 are described below with the intransitive verb forms.
343 (-b ~ φ) occurs only with 332; it has the meaning imperfect (past) (passive). Examples:

lúb-s-a'?a-b-i it was felled (lúb fall + 321 + 332 + 343 + 613); mis-t-a'?a-b-i it was swept (mis sweep + 321 + 332 + 343 + 613).

Alternant -φ of 343 occurs only with the infixed alternant of 332. Examples:

£0-V'n-P-p-i he was shot (¿o...n shoot + 321 + (-332-) + 343 + 613); lo-V'n-s-φ-φ-en I was struck (lo...s strike + 321 + (-332-) + 343 + 613).

Alternant -b of 343 occurs after the other alternant of 332. Examples: han-t-a'a-b-i it was eaten (hàn eat + 321 + 332 + 343 + 613).

344 (-n) occurs only with 332 and has the meaning perfect (past) (passive). Examples: lúb-s-a'?a-n-φ it has been filled (lúb fall + 321 + 332 + 344 + 613); mis-t-a'?a-n-φ it has been swept (mis sweep + 321 + 332 + 344 + 613).

For classes 350, 360, see Section 2.3.2.

2.3.1.3.2 Intransitive Themes. The following chart serves to indicate the modal restrictions for intransitive theme sequences and the respective positions of these thematic minor morphemes. Again in horizontally divided segments, those suffixes in lower sections occur only in stative verb complexes, those in upper sections only in processive verb complexes. The discussion following the chart gives further details on each suffix.
### CHART OF THEMATIC, CONJUNCT, AND TERMINAL AFFIXES COMBINING WITH INTRANSITIVE VERBS

<table>
<thead>
<tr>
<th>110</th>
<th>010</th>
<th>BASE</th>
<th>410</th>
<th>420</th>
<th>330</th>
<th>340</th>
<th>350</th>
<th>360</th>
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An intransitive theme, like a transitive theme, consists maximally of three parts, BASE, intransitive CORE, and MARGIN, minimally of BASE and intransitive CORE. The base may be either a simple stem or a compound. An **INTRANSITIVE CORE** consists of a base plus a suffix of class 410 ± 420. A margin consists of a single suffix 342 or a sequence of 332 + 344 (i.e. margin E). We shall term the margin consisting of 410 + 342 as margin G.

Set 410 are first order suffixes.

411 (-b ~ -n) occurs only with 342, the combination 411 + 342 forming a theme restricted to use only in the processive mode.
The alternant -b occurs with several stems, most of which have to do with some sort of repeated action.
Examples: ším-b-al walk (ším walk + 411 + 342),
kil-b-al shake, thunder, lem-b-al shimmer, shine,
šik-b-al tell a story, converse.
The alternant -n has been found only with one stem:
šik-n-al fly (šik wing + 411 + 342).
For a theme containing 411 + 342 to be used in the stative or imperative mode, it must be rederived by 417.
Examples: ším-b-aL-n-ah-en I walked (ším + 411 + 342 + 417 + 421 + 611); ším-b-aL-n-en walk! (ším + 411 + 342 + 417 + 422).
412 (= 314) (-k) discussed above in relation to transitive themes must now be described in relation to intransitive themes. In intransitive verb themes, 412 is always followed by 421. Examples:
(k-u) čiL-k-ah-VL (he) lies down quickly (222 + 213 + čiL lie + 412 + 421 + 342); čiL-k-ah-en I lay down quickly (čiL lie + 412 + 421 + 611).
413 (-p) forms intransitive themes of either processive or stative mode. It is always followed by 421.
Examples: (k-u) sahak-p-ah-VL (he) is afraid (222 + 213 + sahak fear + 413 + 421 + 342); ki?im-p-ah-eč you got hurt (ki?im hurt + 413 + 421 + 612);
he? a ki?im-p-ah-VL-eº you'll get hurt (227 + 212 + ki?im hurt + 413 + 421 + 342 + 712);
'bín sak-p-ah-ak-eč you'll whiten (229 + sak white + 413 + 421 + 361 + 612).

414 (-č) is tagged inceptive in reference to its meaning become so (or such). There is frequently no meaning difference discoverable between 415 and 414, although the latter more frequently than the former can be translated become, change into. 414 derives intransitive themes from noun stems (most frequently from the attributive subclass of noun stems). It is always followed by 421 and may occur in stative or processive mode only.

Examples:  (k-u) bey-č-ah-VL it happens (222 + 213 + bey thus + 414 + 421 + 342); bey-č-ah-i it happened (bey + 414 + 421 + 613); kā sās-č-ah-Vk-∅ let it dawn! (231 + sās light + 414 + 421 + 361 + 613).

451 (-t - -∅) is termed essive in reference to its meaning of be (or become) so (or such). It derives intransitive verb themes from noun stems (frequently attributive nouns) and from certain noun themes.

Alternant -t occurs only in the processive mode and is always followed by 342. Examples:

(k-u) ke?el-t-al (it) is (or gets) cold (222 + 213 + ke?el cold + 415 + 342); (k-u) yákab-t-al (it) is (or is becoming) night (222 + 213 + yákab night + 415 + 342).

Alternant -∅ occurs only in the stative mode and is always followed by 421. Examples: ke?el-∅-(a)h-i it was (or got) cold (ke?el cold + 415 + 421 + 613);
?ákab-∅-(a)h-i it was (or became) night (?ákab
night + 415 + 421 + 613). (In all instances the
alternant of 421 lacks the vowel but preserves the h.)

416 (-t -1) is termed posturative in reference to
its meaning of assume a position or stance; it forms in-
transitive themes of either mode from verbs of class Vs4.

Alternant -t occurs only in the processive mode and
is always followed by 342. Examples:
(k-u) čiL-t-al (he) lies down (čiL-t-al he lies down)
(222 + 213 + čiL lie down + 416 + 342).

Alternant -1 occurs only in the stative mode where
it may be followed by 421, 351, or 361, or in the impera-
tive mode where it is followed by 422. Examples:
čiL-1-ah-i he lay down (čiL + 416 + 421 + 613);
čiL-1-en lie down! (čiL + 416 + 422);
pek-1-ah-en I stretched out (pek stretch out + 416 +
421 + 611); pek-1-en stretch out (pek + 416 + 422);
ká pek-1-ak-∅ let him stretch out (231 + pek + 416 +
361 + 613).

417 (-n - ∅) is an intransitive theme formative for
stative and imperative modes only. In the imperative mode
it is followed by 422. Examples:
loš-n-en hit! (loš hit + 417 + 422);
kay-n-en sing! (kay sing + 417 + 422);
bo?oL-n-en pay (bo?oL pay + 417 + 422).

In the stative mode, 417 may be followed by 421 or by
361. It is added to bases and intransitive themes not derived by 416. Examples:

loš-n-ah-i he struck (loš strike + 417 + 421 + 611);
klì-n-ah-en I sang (klì sing + 417 + 421 + 611);
bo?ol-n-ah-ec you paid (bo?ol pay + 417 + 421 + 612);
(ká) loš-n-ak-en may I strike (231 + loš strike + 417 + 361 + 611). Also to mode-restricted themes like the following: ki-kil-ank-il-n-ah-i it trembled (011 + kil shake + 418 + 342 + 417 + 421 + 613); ñik-b-al-n-ah-i he told a story (ñik-tell a story + 411 + 342 + 417 + 421 + 613).

Alternant -Ø occurs after stems of class Vs3,1. Examples: ñah-Ø-en I awoke (ñah- awake + 417 + 611);
h-lúb-Ø-i he fell (113 + lúb fall + 417 + 613); ʘok-Ø-en enter! (ʘok- enter + 417 + 422).

Alternant -n occurs after other stems which take 417. Example: pán-n-ah-i he dug (pán dig + 417 + 421 + 613).

It occurs also after themes formed with 411 + 342 or 418 + 342. Examples:

ším-b-al-n-ah-Ø-on we walked (ším- walk + 411 + 342 + 417 + 421 + 614); ki-kil-ank-il-n-ah-i it trembled (011 + kil shake + 418 + 342 + 417 + 421 + 613).

418 (-ank) occurs only with 342, the combination 418 + 342 forming a theme restricted to use only in the processive mode. The meaning imparted by 418 is do an action rhythmically or in a cycle. Examples:
(k-u) lòl-ank-il (it) blooms (222 + 213 + lòl flower + 418 + 342); (k-u) heʔ-ank-il (it) ovates, lays eggs (222 + 213 + heʔ egg + 418 + 342);
(k-u) kuL-ank-il (he) sits down repeatedly (222 + 213 + kuL sit + 418 + 342).

For a theme containing 418 + 342 to be used in the stative or imperative mode, it must be re-derived by 417. Examples: lòl-ank-il-n-ah-i it bloomed (lòl flower + 418 + 342 + 417 + 421 + 613).

421 (-ah ~ φ) is a second-order suffix (or more properly a movable suffix since it can precede 417 whose function can be characterized in some environments as status neutralizer, in other environments as status maintainer. Environments in which its function is to neutralize an established status are after transitive verb stems of class 5. Examples:

?il-φ-ah-n-ah-en I saw (?il see + 321 + 421 + 417 + 421 + 611);
kan-b-es-ah-n-ah-i he taught (kan learn + 313 + 321 + 421 + 417 + 421 + 613);
keʔel-kun-t-ah-n-ah-eʔeʔ you (all) cooled (keʔel cold + 311 + 321 + 421 + 417 + 421 + 615).

Environments in which its function can be better characterized as status maintainer are: after 412--417. A number of examples have been given already under these respective suffix listings.
Alternant -ø occurs following the ø alternant of 417, as in ?éµ-ø-ø-en I descended (?éµ- descend + 417 + 421 + 611).

Alternant -h occurs following the ø alternant of 415, as in ya?ab-ø-h-i there were many (ya?ab many + 415 + 421 + 613).

Alternant -ah occurs following non-zero alternants of suffixes 412--414, 416, 417. Examples: sit-k-ah-i he jumped (sit jump + 412 + 421 + 613); sak-p-ah-i it turned white (sak white + 413 + 421 + 613); nohoč-č-ah-i it got big (nohoč bigh + 414 + 421 + 613); kuš-l-ah-i it lived (kuš live + 416 + 421 + 613).

332, as described above, is a third order verb thematic suffix whose interrelation with other thematic suffixes of transitive verb themes has been described; its interrelation with thematic suffixes of intransitive themes is described in the following:

332 occurs with intransitive themes before 344 to form a past active participle. Examples:
lub-ø-ø-a-n-en I have (or am) fallen (lub fall + 417 + 332 + 344 + 611) (compare lub-s-a?a-n-en I have been felled which, 332 being added to a transitive theme (lub + 321) translates as a past passive participle).

It also frequently follows 421 in such derived intransitive themes as:
I have struck (loš strike +
417 + 421 + 332 + 344 + 611); nohoč-č-a?a-n-eč
you have become big (nohoč big, tall + 414 + 421 +
332 + 344 + 612); čiL-l-a?a-n-∅ he has lain down
(čiL lie down) (čiL lie down + 416 + 421 + 332 +
344 + 613); čik-p-a?a-n-∅ it has appeared (čik-
appear + 413 + 421 + 332 + 344 + 613); bal-k-a?a-n-∅ it has rolled (bal roll + 412 + 421 +
332 + 344 + 613).

342 (-aL ~ iL ~ VL) occurs only in processive mode
intransitive verb sequences in the following environments:

(1) After 421 when this is preceded by 412, 413, 414.
Examples: (k-u) sit-k-ah-VL (he) jumps (222 + 213 +
sit jump + 412 + 421 + 342); (k-u) sahak-p-ah-aL
(he) fears (222 + 213 + sahak fear + 413 + 421 + 342);
(k-u) na?ah-č-ah-VL (he) becomes full (222 + 213 +
na?ah full + 414 + 421 + 342).

(2) After 412, 413 when followed by 418. Examples:
(k-u) sit-k-al-ank-iL (tie) jumps up and down (222 +
213 + sit jump + 412 + 342 + 418 + 342).

(3) After 411, 415, 418. Examples:
(k-u) ším-b-aL (he) walks (222 + 213 + ším- walk +
411 + 342);
(k-u) nohoč-t-aL (he) gets big (222 + 213 + nohoč
big + 415 + 342); k-u he?-ank-iL it lays eggs
(222 + 213 + he? egg + 418 + 342).
Alternant -aL occurs following a member of 410 (except 418): (k-u) ʾim-b-aL (he) walks (222 + 213 + ʾim-walk + 411 + 342); lem-b-aL shines (lem shine + 411 + 342).

Alternant -iL occurs only after 418, as in:

(k-u) lol-ank-iL (it) blooms (222 + 213 + lol flower + 418 + 342). A few forms also have -aL apparently in free variation with -iL after 418.

Alternant -VL occurs following 421 or 332:

keʾel-c-ah-VL get cold (keʾel cold + 414 + 421 + 342);

(k-u) hi-VʾV-t-ʾV-VL (it) is braided (222 + 213 + hi..t braid + 321 + (-332-) + 342).

344 (-n) in intransitive verb sequences occurs only after 332. For examples, see above under 332, p. 87.

Suffixes outside the margin are extra-thematic or peripheral suffixes. These will be treated below in 2.3.2.

2.3.1.3.3 Prefix and Operators.

Prefix 113 occurs optionally before all verbs in the stative mode except those which have margin E or F. Its function is not yet identified, though in certain cases it can provide the only distinction between an imperative and a stative verb. Compare:

h-kím-ʾen I died (113 + kím die + 417 + 611);
kím-ʾen died (kím die + 417 + 422);
Examples of 113 in other stative constructions:

h-biN-s-a’a-b-i it was taken (113 + biN go + 321 + 332 + 343 + 613).

The operators of class 010 share a constant of emphasis or fortitiveness. Each member of the class has two alternants, one a complete reduplication of the stem, the other a partial reduplication. The alternant of complete reduplication occurs with mono-syllabic stems whose final consonant is n. The alternant with partial reduplication occurs with polysyllabic stems and mono-syllabic stems whose final consonant is not n. The alternants of partial reduplication consist of reduplicating the initial consonant and syllabic of the stem.

\[
\begin{align*}
011 & \quad \begin{cases} CV*VC > CV^\prime V(C)CV*VC \\ CVC > CV(C)CVC \end{cases} \quad \text{is illustrated in the following examples:} \\
\end{align*}
\]

\[
\begin{align*}
\text{k-u ba-baš-t-a’a-al it is roundly struck (with a hammer)} & \quad (222 + 213 + 011 + bāš to hammer + 321 + 332 + 342); \\
k-u lo-lom-ğ-ik-ğ he stabs it hard & \quad (222 + 213 + 011 + lom stab + 321 + 351 + 613); \\
k-u bon-bon-ğ-ik-ğ he stains it all up & \quad (222 + 213 + 011 + bon stain, dye + 321 + 351 + 613); \\
t-u čin-čin-ğ-ah-ğ-o’ob they bombarded him & \quad (with }
\]
stones) \((221 + 213 + 011 + \text{cin throw} + 321 + 341 + 613 + 626)\);

\(k\-u \text{ša?a-ša?ak-įk-į} \) \text{he scrambles it up} \((222 + 213 + 011 + \text{ša?ak mix} + 321 + 351 + 613)\).

\(012 \text{ (CVc > CV'(C)CVC)}\) is illustrated in the following examples:

\(t\-u \text{šó-šol-čín-t-ah-u-šo?ob} \) \text{they threw themselves down on their knees} \((221 + 213 + 012 + \text{šol kneel} + \text{čín throw} + 321 + 341 + 213 + \text{ba self} + 626)\).

\(013 \text{ (CVC > CV'?V(C)CV'VC)}\) is illustrated in the following examples:

\(t\-u \text{su?u-su?ut-įk-u-ba} \) \text{(t-u kàn) he tosses and turns (in his hammock)} \((223 + 213 + 013 + \text{sut turn, return} + 321 + 351 + 213 + \text{ba self}) \) \text{(t in + 213 + kàn hammock)};

\(k\-u \text{jó?on-jó?on-t-ik-į} \) \text{he peppers it with shot} \((222 + 213 + 013 + \text{jon shoot} + 321 + 351 + 613)\);

\(k\-u \text{ha?a-ha?aj-įk-į} \) \text{he really beats him up} \((222 + 213 + 013 + \text{ha? hit} + 321 + 351 + 613)\).

\(031\) is an operator of complete reduplication with an additive element connecting the stem to the reduplicated part. Two alternants occur, one with a conjoiner -al, the other with -en. The former occurs only with the stem tan as in:

\(\text{tanai-tan} \ \text{dispute} \) \((031 + \text{tan speak})\); the latter alternant occurs only with other stems. The meaning of
031 involves actions repeated individually one after another, as in the following:

\[ \text{k-u ŝól-šól-o?ob} \quad \text{they kneel one after another} \]
\[ (222 + 213 + 031 + ŝól \text{ kneel} + 626); \]

\[ \text{k-u múl-múl-t-ik-o?ob} \quad \text{he piles them up one upon the other} \]
\[ (222 + 213 + 031 + múl \text{ pile up} + 321 + 351 + 616); \]

\[ \text{k-u 'pok-pok-o?ob} \quad \text{they crouch down one after another} \]
\[ (222 + 213 + 031 + pok \text{ crouch, stoop} + 626). \]

\[
\begin{bmatrix}
032 (\text{[CVC-VC]}) & > \\
\text{[CVC-VC]} & \text{CVC-VC}
\end{bmatrix}
\]

is an operator of accent substitution which serves to derive past active participle forms from verbs of class \( V_{s1.1} \).

Examples:

\[ \text{lúb-Vl-Ø} \quad \text{he is fallen} \quad (\text{está caído}) \]
\[ (032 + lúb \text{ fall} + 342 + 613); \]

\[ \text{?ém-Vl-o?on} \quad \text{we are (have) descended} \quad (\text{estamos bajados}) \]
\[ (032 + ?ém \text{ descend} + 342 + 614); \]

\[ \text{куč-Vl-Ø} \quad \text{he is (has) arrived} \quad (\text{está llegado}) \]
\[ (032 + \text{куč- arrive} + 342 + 613). \]

2.3.1.4 Noun Thematic Minor Morphemes. There are two order classes of noun thematic suffixes, one of noun thematic prefixes, and a noun thematic operator of reduplication. These are taken up in this order.
510 are first order suffixes deriving noun themes from noun stems.

520 are first order suffixes deriving noun themes from verb stems or themes.

511 (-al) occurs with only a few stems: those used as number classifiers and at least two others. It indicates a collection or group and may frequently be rendered together or in all. Examples:

- 'ka?a-pél-al two in all, a group of two(things)
  (ka?a two + pél classifier for inanimates + 511);
- (t-u y) óš-túl-al-o?on the three of us together
  (t in + 213 + óš three + túl classifier for animates + 511 + 614); pàl-al-o?ob they are
  (a group of) boys pàl boy + 511 + 616).

Suffixes 512 through 514 form a paradigmatic set with a constant of relationship. They may be followed by a second relational suffix, 542.

Suffix 512 (-el) occurs with a few nouns (described as a subclass in 2.2.2.3) indicating an inalienable relationship between the noun and its possessor. Examples:

- 'u ño?om-el his brain (213 + ño?om brain + 512);
- 'in ki?ik-el my blood (211 + ki?ik blood + 512);
- a ño?ol-el-il your hair (212 + ño?ol hair + 512 + 542).
Suffix 513 (-ul), whose precise relationship meaning has not been identified, occurs in the form ?u meyah-ul his work (213 + meyah work + 513).

Suffix 514 (-al), whose precise relationship meaning has also not yet been identified, occurs in the form ?u yik-al its chile (accompanying other food) (213 + ?ik chile + 514).

Suffix 515 serves to derive noun themes from noun stems. It may have relational meaning also. It may be followed by the second relational suffix 512. Examples: sak-il whiteness (sak white + 515); ?u sak-il-il its whiteness (213 + sak white + 515 + 512); hadu-il beauty (hadu pretty + 515); wínik-il body (wínik man + 515); dios-il divinity (dios god + 515).

Suffix 516 (-ak ~ (h)eak) occurs only with certain noun stems which have reference to non-future time. Examples: lunes-eak last Monday (lunes Monday + 516); ?ákab-eak last night (?ákab night + 516); ho?ol-heak yesterday; kaw-heak day before yesterday; hun kín-ak one day ago.

Alternant -ak occurs following a nasal consonant; also in hun-ha?ab-ak one year ago. Alternants -eak or -heak occur (in free variation?) elsewhere. A few instances have been observed of a reduplication of 516 in the form -ak(h)eak or -ahkeak, as in hun tenakeak (also hun tenahkeak and hun...
tenakheak) once some time ago.

Suffix 517 (-ak) occurs in conjunction with particles he (and wá) often translated by (whatever, as in:

he tu’uš-ak whatever the place, wherever (he + tu’uš where + 517);

he bahuš-ak whatever the cost, however much (he + bahuš how much + 517);

he máš-ak whoever (he + máš who + 517);

wá ba’aš-ak whatever (wá if + ba’aš what, thing + 517).

Suffixes of 520 serve to derive nouns from verbs. 521 is suffixed to verbs of motion and always precedes 531. Examples:

?u biN-b-al his going (213 + biN go + 521 + 531);

?u tæL-b-al his coming (213 + tæL come ? 521 + 531);

?u luk-b-al his leaving (213 + luk- leave + 521 + 531).

522 (-Vk) plus 525 (-b) + 531 (-al) may be suffixed to verb stems of class Vs4 to derive postural gerunds which have the meaning be in a position or circumstance. 531 always follows 522 + 525. Examples:

kuL-Vk-b-al-en I am seated (kuL sit + 522 + 525 + 531 + 611);

čiL-Vk-b-al-eč you are in a lying down position (čiL lie + 522 + 525 + 531 + 612);

way kah-Vk-b-al-∅-a? he is residing here (way here + kah town + 522 + 525 + 531 + 613 + 711);
kuš-Vk-b-al living, be alive (kuš- live + 522 + 525 + 531).

Suffix 523 is a non-productive suffix which, added to certain verb stems, produces a noun meaning instrument for doing something. For example:

škal-ab lever for tightening (112 + kal tighten + 523).

Suffix 524 (-ah) may be suffixed to a transitive verb core (composed of stem + 310 + 321) to form an active gerund. Examples:

?il-ə-ah seeing (?il to see + 321 + 524);
?ánt-ə-ah aid (?ánt to help + 321 + 524);
kím-s-ah killing (kím- die + 321 + 524);
kan-b-es-ah teaching, doctrine (kan to learn + 310 + 321 + 524).

525 (-b) plus 532 (-il) form a passive gerund which we term a gerundive. Examples:

kon-ə-b-il to be sold, for sale (kon sell + 321 + 525 + 532);
t-u túš-t-ə-h kím-s-b-il he sent him to be killed (221 + 213 + túš send, order + 321 + 341 + 613 + kím- die + 321 + 525 + 532).

525 also occurs after 522 and before 531 to form postural gerunds as illustrated above under 522.

Suffixes of 530 are characterized by their occurrence after suffixes of 520.
Suffix 531 (-VL - aL) occurs with 521 to form a unique gerund for motion verbs, as illustrated above under 521.

It also occurs in the sequence Vs4 + 522 + 525 + 531 as illustrated under 522 above.

It also occurs with verb stems of class Vs3,1 to form nouns or gerunds, as for example:

wen-Vl sleep, sleeping; han-Vl food, eating;
kír-Vl death, dying.

Alternant -VL occurs only with verb stems Vs3,1.

Alternant -aL occurs in all other environments of 531.

Suffix 532 (-il) occurs only with 525 to form a gerundive, as illustrated above under 525.

Suffix 541 (-tak) occurs with perfect participles and attributive nouns. It is optionally followed by a plural member of set 610, i.e. by 614, 615, or 616. Its meaning is each one considered individually, which we translate as ones or each. Examples:

lúb-Vl-tak-o?ob they are fallen ones (032 + lúb fall + 342 + 541 + 616);
lúb'-s-a?a-n-tak-o?on we are felled ones (lúb fall + 321 + 332 + 344 + 541 + 614);
loš-nah-a?a-n-tak-o?ob you are ones who have hit (loš hit + 417 + 421 + 332 + 344 + 541 + 616);
ma?alob-tak-e?eš you are each good (ma?alob good + 541 + 615).
542 (-il) is a suffix which indicates, as do suffixes 512--514, a relationship between two nouns, the relationship expressed by 542 being, roughly, that of thing used to person or thing using, or thing derived to person or thing deriving. 542 can be preceded but not followed by a member of 512--514. It may usually be translated with of. Examples:

?u ha?il in wič the water of my eyes (my tears)
(213 + ha? water + 542 + 211 + ?ič eye, face);

?u hán-(V)1-il kól the food of the milpa (213 +
han + 531 + 542 + kól milpa);

?u če?en-il mák a man's well (213 + če?en well +
542 + mák man);

?u ko?olel-il Sámaria the woman of Samaria (213 +
ko?olel woman + 542 + Sámaria).

The prefixes 111 and 112 and the operator 021 occur in sequence with nouns. 111 and 112 serve to derive noun themes from verb or noun stems. Noun themes derived from verb stems by these are agentives, having the meaning doer of the action. 111 indicates a male, 112 a female agent. Examples:

h-kày singer (male) (111 + kày sing);
š-kày singer (female) (112 + kày sing);

h-men doer, maker (shaman) (111 + men make);
š-kaš-bàk woman bone-binder (112 + kaš tie + bàk bone).
Noun themes derived from noun stems by these prefixes are usually animate nouns. The prefix 111 may indicate strength or male sex, the prefix 112 may indicate weakness or female or indeterminate sex. At times 112 seems to connote lack of respectability. Examples:

with 111 with 112

h-mis  cat   š-turiš  dragonfly
h-tél  rooster  š-lèč  sow
h-tó? tom turkey  š-ya?aš-kač  fly
h-taman sheep  š-ća-wayak  dream-giver

(a species of bird)

Not all nouns or even all animate nouns combine with a prefix. Some animate nouns which do not are:

pék dog, kéh deer, sínik ant, džimin horse.

112 is prefixed to certain verb compounds. Its function here has not been identified. For example:

> t-u š-če?eh-?ókol he is laughing-crying (223 + 213 + 112 + če?eh laugh + ?ókol cry).

Operators of class 020 occur in sequence with certain nouns to indicate emphasis or degree.

021 \((C_{1V_1} C_2 > C_{1V_1} C_2)\) is illustrated in the following examples:

sa-sak very white (sak white);
či-čič very hard (čič hard);
ča-čak very red (čak red).
022 \( \left[ \begin{array}{c} C_1 V_1 C_2 \\ C_1 \dot{V}_1 C_2 \end{array} \right] \) is illustrated in the following examples:

'kà-kaš very bad (kàš bad);
'nà- na very near (nà near);
sà-sak very white (sak white);
šib šib manly man (šib man).

023 \( \left[ \begin{array}{c} C_1 \dot{V}_1 C_2 \\ C_1 V_1?VC_2 \end{array} \right] \) is illustrated in the following examples:

nà-nàč very far (nàč far);
su?u-su?u very sour (su?u'j sour).

2.3.2 Simple Sentence Constituency. Having described in section 2.3.1 the development of noun themes as well as transitive and intransitive verb themes, our main concern now is to describe the development of noun and verb complexes beyond the theme level in forming simple sentences or constituents of simple sentences. That is, we have now to discuss the minimal forms which simple sentences may take, together with some of the simpler expansions of these.

Taking the well-known definition of a sentence as a "grammatical form not in construction with any other grammatical form," we may divide sentences into two ranks, major and minor. A minor sentence is one which contains no predicated (noun or verb) phrase. Typical of such
sentences are such interjections as, for example, "ah oh!", "adyós hello!", "waw? gosh!", etc. A major sentence—or, henceforth, just sentence—is one which contains at least one independent predicated phrase.

We group Maya sentences into two types, Nominal and Verbal. These are described as follows:

(1) Nominal sentences are those with a single predicated noun phrase (NP) or with two noun phrases as immediate constituents, one predicated (i.e. independent) and serving as the topic or item to be described. A predicated noun phrase must include a bound subject (a member of set 610).

(2) Verbal sentences are those with a single verb phrase (VP). A verb phrase, if it does not have 422 (Imperative) as one of its constituents, must include a bound subject morpheme (a member of pronominal set 610) or a bound actor morpheme (a member of pronominal set 210) or a bound goal morpheme (a member of set 610 or 210); it may include both a bound actor morpheme and a bound goal morpheme (210 and 610 respectively), one or more construct suffixes, as well as modifiers, appositives, and the like.

On the basis of the several possible paradigmatic relations (or configurations) of noun and verb themes with sets 610 and 210, 350 and 360, and the modal set 220, we divide noun and verb complexes into the following types, represented diagrammatically:
I. Imperative Mode

A. Intransitive

\[ \text{Core} + V_{imj} + 625 \]

B. Transitive

\[ \text{Core} + V_{tr} + \frac{212+ba}{610} + 625 \]

II. Stative Mode

A. Nominal

\[ \text{Theme} + \text{Nom} + 610 \]

B. Verbal Intransitive

\[ \text{Conjunct} + \frac{3}{4} + 113 + V_{in} + \frac{351}{361} + 610 \]

C. Verbal Transitive

\[ \text{Conjunct} + \frac{3}{4} + 113 + V_{tr} + \frac{E}{D} + \frac{351}{361} + 610 \]
### III. Processive Mode with 210

**A. Transitive Active**

<table>
<thead>
<tr>
<th>Conjunct</th>
<th>Actor</th>
<th>Core</th>
<th>Margin</th>
<th>Goal</th>
<th>Plu</th>
</tr>
</thead>
<tbody>
<tr>
<td>2, 3</td>
<td>210</td>
<td>V_{tr}</td>
<td>A/B</td>
<td>210+ba</td>
<td>620</td>
</tr>
</tbody>
</table>

**B. Transitive Passive**

<table>
<thead>
<tr>
<th>Conjunct</th>
<th>Goal</th>
<th>Core</th>
<th>Margin</th>
<th>Plu</th>
</tr>
</thead>
<tbody>
<tr>
<td>2, 4</td>
<td>210</td>
<td>V_{tr}</td>
<td>C</td>
<td>620</td>
</tr>
</tbody>
</table>

**C. Intransitive Active**

<table>
<thead>
<tr>
<th>Conjunct</th>
<th>Actor</th>
<th>Core</th>
<th>Margin</th>
<th>Plu</th>
</tr>
</thead>
<tbody>
<tr>
<td>2, 4</td>
<td>210</td>
<td>V_{in}</td>
<td>F</td>
<td>620</td>
</tr>
</tbody>
</table>

### IV. Processive Mode without 210

<table>
<thead>
<tr>
<th>Actor</th>
<th>Core</th>
<th>Goal</th>
<th>Plu</th>
</tr>
</thead>
<tbody>
<tr>
<td>NP</td>
<td>V_{tr}</td>
<td>610</td>
<td>620</td>
</tr>
</tbody>
</table>
In the following sections we shall describe and exemplify each of these configurations by showing the complex interrelationships between themes and peripheral or extra-thematic minor morphemes of classes 350, 360, 210, 220, 610 in the three modes, Imperative, Stative, and Processive, respectively.

2.3.2.1 Imperative Mode. Only verb themes occur in the imperative mode, and these may be of either intransitive or transitive status. The imperative mode is uniquely characterized by the obligatory absence of 210 and the construct suffixes 351, 361, as well as the obligatory presence—depending upon the theme status—of either 422 or 610/212 + ba self.

A. Intransitive Imperative. An intransitive verb complex in the imperative mode (abbreviated intransitive imperative) is the only form of the verb complex which does not have a member of either set 210 or 610 present. It is formed by an imperative core made up of 416 + 422 or 417 + 422.

Examples of 416 + 422:

pekk-en stretch out! (pek stretch out + 416 + 422);
wa⁴a-⁴-en stand up! (wa⁴a- stand up + 416 + 422).

Examples of 417 + 422:

kop-en knock! (kop knock + 417 + 422);
či⁸-en bite! (či⁸ bite + 417 + 422);
lúb-∅-en fall (lúb fall + 417 + 422);
ʔok-∅-en enter (ʔok enter + 417 + 422).
Themes derived by suffixes 411 must be completed by 342 and then re-derived as an imperative core.
Examples:
ším-b-aL-n-en walk! (ším- walk + 411 + 342 + 417 + 422);
šik-n-aL-n-en fly! (šik wing + 411 + 342 + 417 + 422).
422 may optionally be followed by 625 to form a plural imperative. Examples:
šok-n-en-e’es read! (šok read + 417 + 422 + 625);
ʔálkab-n-en-e’es run! (ʔálkab run + 417 + 422 + 625).

Two verb stems of class V₃,2 have suppletive alternants in the intransitive imperative:
š-∅-en-e’es go (bin go + 417 + 422 + 625);
koʔot-∅-en-e’es come! (tát come + 417 + 422 + 625).

B. Transitive Imperative. A transitive verb complex in the imperative mode (a transitive imperative) is formed with a transitive core to which a member of 610 other than 612 or 615 is suffixed to mark goal.
Examples:
pàk(a)t-∅-o?on look-at us! (pàkat look-at + 321 + 614);
kán-b-es-o?ob teach them! (kán learn + 313 + 321 + 616).
The reflexive complex 212 + ba self stands in lieu of 612 to mark the goal 2nd p. sg. in transitive imperative constructions. Examples:

he?eL-s-a-ba rest yourself! (he?eL rest + 321 + 212 + ba self);
'búk-b-es-a-ba dress yourself! (búk clothe + 313 + 321 + 212 + ba self).

The 2nd p. pl. suffix 625 occurs in transitive imperative also. Examples:

'ánt-Ø-en-e?eš help me! (?ánt- help + 321 + 611 + 625);

2.3.2.2 Stative Mode. Both noun and verb themes occur in the stative mode. This mode is uniquely characterized by the presence of 610 marking the subject and the absence of 620.

2.3.2.2.1 Nominal Stative. A noun complex in the stative mode (a stative noun phrase) is formed by suffixing to a noun theme a member of 610. The meaning of the resulting complex (of the noun theme and any dependent members of the noun phrase) is: subject (610) is described by the noun phrase to which it is attached. In such a construction the subject is in an immediate constituent relationship with the entire noun complex preceding it, whether this is a simple or derived theme or a phrase the head of which is the noun theme.
Examples of a stative noun phrase based on a simple noun theme:

\[ \text{wínik-eč you are (a) man (wínik man + 612);} \]
\[ \text{wi?ih-o?on we are hungry (wi?ih hunger, hungry + 614);} \]
\[ \text{?ámigo-e?eš you are friends (?ámigo friend + 615).} \]

Examples of a stative noun phrase based on a derived noun theme or noun phrase:

\[ \text{hač in ?ámigo-e?eš you're my real friends (hač very + 211 + ?ámigo friend + 615);} \]
\[ \text{ma? wá k ?ámigo-eč-i? are you not our friend? (ma? not + wá interrogative + 214 + ?ámigo friend + 612 + 714).} \]

Nominal sentences containing two noun phrases in the relation description + item described, i.e. equational sentences, are made up of a noun phrase predicated by 610 plus a pronoun or noun phrase agreeing in person and number with the predicator. Examples:

\[ \text{?in ?ámigo-eč tèč you are my friend (211 + ?ámigo friend + 212 + tèč you);} \]
\[ \text{hač nohoč-Ø le če?-a? this tree is very big (hač very + nohoč big + 613 + le demonstrative + če? tree + 711);} \]
\[ \text{ka?a-pél-Ø in-šikin I have two ears (ka?a- two + ; pél thing + 613 + 211 + šikin ear);} \]
\[ \text{ma? hač toh-Ø k 61-i? we're not very well (ma? not} \]
2.3.2.2 Verbal Stative. A verb complex in the stative mode may be in the intransitive or the transitive status. In either it is terminated by a member of 610 marking the subject. The meaning of the complex is: Subject is in the state of having undergone (or having to undergo) the "action" of the verb.

2.3.2.2.1 Intransitive Stative Non-Conjunct. Intransitive verbs in the stative mode are in the active voice. The minimum form which an intransitive stative may take is:

±113 + INTRANSITIVE CORE + TERMINUS
h-sit-k-ah-en I jumped (113 + sit jump + 412 + 421 + 611);
ču?um-p-ah-eč you began (ču?um begin + 413 + 421 + 612);
bey-č-ah-i it was so (bey so + 414 + 421 + 613);
?ákab-č-h-i it was night (?ákab night + 415 + 421 + 613);
láh-kím-č-č-o'ob they all died (láh all + kím die + 417 + 421 + 616);
ším-b-al-n-ah-eč you walked (ším walk + 411 + 342 + 417 + 421 + 612);
h-seb-tāl-ʤ-ʤ-e’es you came fast (113 + seb fast +
tāl come + 417 + 421 + 615).

Expansions on the minimum may take the following
form (not including the conjunct forms, for which see
below):

+113 + INTRANSITIVE CORE + MARGIN E + TERMINUS
h-sīt-k-ah-aʔa-n-en I have jumped (113 + sit
jump + 412 + 421 + 332 + 344 + 611);
čuʔum-p-ah-aʔa-n-eč you have begun (čuʔum begin +
413 + 421 + 332 + 344 + 612);
kūš-l-ah-aʔa-n-∅ he has lived (kūš live + 416 +
421 + 332 + 344 + 613);
h-loš-n-ah-aʔa-n-ob they have struck (113 + loš
strike + 417 + 421 + 332 + 344 + 616);
h-tāl-ʤ-ah-aʔa-n-eč you have come (113 + tāl come +
417 + 421 + 332 + 344 + 612) (usually this is
pronounced /tālhaʔaneč/ or /talaʔaneč/);
bin-ʤ-ah-aʔa-n-∅ he has gone (bin go + 417 + 421 +
332 + 344 + 613) (usually this is pronounced
/bihaʔan/).

2.3.2.2.2 Transitive Stative Non-Conjunct. Transitive verbs
in the stative mode are in the passive voice. The minimum
forms which a transitive stative may take are:

(a) +113 + TRANSITIVE CORE + MARGIN D + TERMINUS
    or

(b) + TRANSITIVE CORE + MARGIN E + TERMINUS

Examples of (a):
Examples of (b):

han-t-à?a-n-o?ob  they have been eaten  (hàn eat + 321 + 332 + 344 + 616);
wen-s-à?a-n-ô  he has been put to sleep  (wèn sleep + 321 + 332 + 344 + 613);
'on-ô-a?n-en  I have been shot  (on shoot + 321 + 332 + 344 + 611).

2.3.2.2.3 *Conjuncts.* Expansions of such transitive statives, as also of intransitive statives, involve conjunct forms which we now must digress to discuss. The term conjunct is used to refer to a dependency relation in certain forms between certain modals or modal surrogates and the suffixes 351 and 361. Conjunct forms may be either in stative or in processive mode. To illustrate: the presence of a modal (abbreviated M) in a class including the members 228, 229, and 231, or the presence of a time modal surrogate such as *'úç long ago, 'o?ok ka?apeL Kin already two days,* requires the presence of 361 in stative verb sequences:

'bìn ču?um-p-ah-Vk-en  I'll begin  (229 + ču?um begin + 413 + 421 + 361 + 611);
ká ču?um-p-ah-Vk-Ø let him begin (231 + ču?um + 413 + 421 + 361 + 613);
ken ču?um-p-ah-Vk-Ø when he begins (228 + ču?um + 413 + 421 + 361 + 613);
?úč ču?um-p-ah-Vk-Ø long ago he began (?úč long ago + ču?um + 413 + 421 + 361 + 613);
đo?ok ka?apéL kin ču?um-p-ah-Vk-Ø already two days (it is since) he began (đo?ok end + ka?a two + péL cl. + kin day + ču?um + 413 + 421 + 361 + 613).

The presence of a manner modal surrogate (MS) such as 'bey thus, biš how, he?ebis like, as, bikiš when, ma?alob well, ?istikyah with difficulty, tu seblakil suddenly, etc. requires the presence of 351 in stative verbs:
'bey ču?um-p-ah-ik-en thus I began (bey thus + ču?um + 413 + 421 + 351 + 611);
'biš ču?um-p-ah-ik-eč how did you begin? (biš how + ču?um + 413 + 421 + 351 + 612);
ma?alob ču?um-p-ah-ik-Ø he began well (ma?alob good + ču?um + 413 + 421 + 351 + 613);
?istikyah ču?um-p-ah-ik-Ø he began with difficulty (?istikyah with difficulty + ču?um + 413 + 421 + 351 + 613).

In each of these the modal or modal surrogate and the suffix 351 (or 361) are said to be in conjunction; the verb complex containing them we refer to as a conjunct form.
We establish classes of modals and modal surrogates on the basis of their selection of different conjunct suffixes. The classes are numbered in the following chart, the criteria for each class (the conjunct suffix or suffixes required by the M or MS) are given, and the modes in which the conjunctions occur are specified.

**CHART OF CONJUNCT CLASSES**

<table>
<thead>
<tr>
<th>Class</th>
<th>Membership</th>
<th>Criteria</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>221</td>
<td>341</td>
<td>Processive</td>
</tr>
<tr>
<td>2</td>
<td>222-227</td>
<td>351</td>
<td>Processive</td>
</tr>
<tr>
<td>3</td>
<td>228-231/Time MS</td>
<td>361</td>
<td>Stative</td>
</tr>
<tr>
<td>4</td>
<td>Manner MS</td>
<td>351</td>
<td>Processive</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Stative</td>
</tr>
</tbody>
</table>
2.3.2.2.4 Intransitive Stative Conjuncts. Having now defined conjunct forms and classified modals and modal surrogates by the conjunct suffixes associated with them, we return to the description of expanded stative verbs.

An intransitive stative formed without margin E may occur with conjunct$_3$ or conjunct$_4$. Examples with conjunct$_3$:

- bin los-n-ak-en I'll strike (229 + los strike + 417 + 361 + 611);
- ken tål-Ø-ak-Ø when he comes (228 + tål come + 417 + 361 + 613);
- ?úk bib-n-ak-eØ long ago you wrote (?úk long ago + bib write + 417 + 361 + 612).

Examples with conjunct$_4$:

- bey los-n-ah-ik-en thus I struck (bey thus + los strike + 417 + 421 + 351 + 611);
- bib sás-Ø-ik-Ø (tèc) how did it dawn (for you)? (= qué tal te amaneció?) (bib how + sás light + 415 + 421 + 351 + 613);
- ma'alob mis-n-ah-ik-o' on we swept well (ma'alob well + mis sweep + 417 + 421 + 351 + 614).

An intransitive stative formed with margin E may occur only with conjunct$_4$:

- ma'alob cu'um-p-ah-a?a-n-ik-Ø he began well (ma'alob well + cu'um begin + 413 + 421 + 332 + 344 + 351 + 613);
- ?istikyah šök-n-ah-a?a-n-ik-eØ you counted with difficulty (?istikyah with difficulty + šök count, read + 417 + 421 + 332 + 344 + 351 + 612).

2.3.2.2.5 Transitive Stative Conjuncts. A transitive stative formed with margin D may occur with conjunct$_4$:

- bey kím-s-a?a-b-il-ak-en thus I was killed (bey thus + kím die + 321 + 332 + 343 +
351 + 361 + 611);
ma'alob ću?um-b-es-a?a-b-ik-ϕ  it was begun well
(ma'alob well + ću?um begin + 313 + 321 +
332 + 343 + 351 + 613);
ma'alob mís-t-a?a-b-il-ak-ϕ  it was swept well
(ma'alob well + mís sweep + 321 + 332 +
343 + 351 + 361 + 613);
biš ćo-V?V-n-ϕ-ik-ϕ  how was he shot? (biš how +
ćo..n shoot + 321 + (-332-) + 343 + 351 + 613).
A transitive stative formed with margin E may occur
only with conjunct:
bev hàn-t-a?a-n-ik-ϕ thus it has been eaten
(bev thus + hàn eat + 321 + 332 + 344 + 351 + 613).
A transitive stative formed with margin F may occur
only with conjunct:
ka hàn-t-a?a-(a)k-ϕ  let it be eaten!
(231 + hàn
eat + 321 + 332 + 361 + 613);
bìn wèn-s-a?a-(a)k-eϕ  you'll be put to sleep
(229 + wèn sleep + 321 + 332 + 361 + 612);
ken ćo-V?V-n-ϕ-Vk-ϕ  when he is shot
(328 +
ćo..n shoot + 321 + (-332-) + 361 + 613).

2.3.2.3 Procesive Mode. Only verb themes occur in the pro-
cessive mode. A verb complex in the processive mode (a
processive verb) consists of certain forms of intransitive
or transitive themes preceded by an auxiliary (a modal or
modal surrogate plus a pronoun of set 210) or by a noun
phrase without an auxiliary, and followed by appropriate
conjunct suffixes if required. If the form is intransi-
tive or transitive active, the pronoun of set 210 marks
actor; if the form is transitive passive, 210 marks goal;
if the form is transitive active, a pronoun of 610 or a
reflexive complex (210 + ća self) is suffixed to mark goal.
Thus the meaning of a processive mode construction is
Actor-Process-Goal (for transitive active forms),
Goal-Process (for transitive passive forms), or Actor-Process (for intransitive forms).

2.3.2.3.1 Intransitive Processive. Intransitive processive verbs are in the active voice. The minimal form one may have is:

+ Auxiliary + Intransitive Core

k-u Ꝟib he writes (222 + 213 + Ꝟib write);

 tán a mís you're sweeping (223 + 212 + mís sweep).

Expanded sequences may be of the following forms:

Verb stems of subclasses 3.1 and 1.6 occur without core-level suffixes in the processive mode but with 342 (margin C) in combination with conjunct₂ modals (222-227) and conjunct₄ modal surrogates:

k-in wen-Ꝟ VL I sleep (222 + 211 + wen sleep + 417 + 342);

yan a wém-Ꝟ VL you must descend (225 + 212 + wém descend + 417 + 342);

tan u pak-Ꝟ VL he is planting (223 + 213 + pak-plant + 417 + 342);

bey u wen-Ꝟ VL he sleeps well (bey [= MS] + 213 + wen sleep + 417 + 342).

2.3.2.3.2 Transitive Processive. A transitive verb in the processive mode may be in the passive or in the active voice.

A. Passive Voice. A processive verb in the passive voice must have at least the form

Auxiliary + Transitive Core + Margin C + Terminus

The auxiliary may be either conjunct₂ + 210 or conjunct₄ + 210. In this construction 210 marks goal and the construct suffix is 342. The optional terminus is a person pluralizer, 620, which, if it occurs, must be 625 if the pronoun in the auxiliary is 212, and 626 if the pronoun in the auxiliary is 213. Examples:
B. Active Voice with Auxiliary. A processive verb in the active voice may have various forms as seen in the diagrams on pp. and . We exemplify first those with margin A (which occur in combination with the conjunct modal 221); the constructions have the form:

Auxiliary + Transitive Core + Margin A + Terminus

\[
\begin{align*}
\text{t-u hān-t-a'?a-l} & \quad \text{it is being eaten} \quad (223 + 213 + hān \text{ eat} + 321 + 332 + 342); \\
\text{t-u hān-t-a'?a-l-o'?o}' & \quad \text{they are being eaten} \quad (223 + 213 + hān \text{ eat} + 321 + 332 + 342 + 626); \\
\text{k-a meyah-t-a'?a-l-e'?e' } & \quad \text{you (all) are being served} \quad (222 + 212 + meyah \text{ serve} + 321 + 332 + 342 + 625); \\
\text{biš u men-t-a'?a-l} & \quad \text{how is it made?} \quad (\text{biš how} + 213 + \text{men make} + 321 + 332 + 342).
\end{align*}
\]

A processive verb with margin B has the form:

Auxiliary (+ MS₄ + 210) + Transitive Core + Margin B + Conjunct 351 + Terminus

\[
\begin{align*}
\text{t-u kīm-s-ah-u-ìa-o'?o}' & \quad \text{they killed themselves} \quad (221 + 213 + kīm \text{ die} + 321 + 341 + 213 + \text{ba self} + 626). \\
\text{bīš a būk-ì-es-m-ah-u-ìa-o'?o}' & \quad \text{how have you dressed yourself?} \quad (\text{bīš how} + \text{būk clothe} + 313 + 321 + 331 + 341 + 213 + \text{ba self} + 626);
\end{align*}
\]

Processive verbs with conjunct₂ modals have the form:

Auxiliary (M/MS + 210) + Transitive Core + Conjunction 351 + Terminus

Examples:

\[
\begin{align*}
\text{k-u ḫǐb-t-ik-ō } & \quad \text{he writes it} \quad (222 + 213 + ḫǐb)
\end{align*}
\]
write + 321 + 351 + 613);
be'y u ñb-t-1k-ña?ob thus they write it (be'y thus + 213 + ñb write + 321 + 351 + 613 + 626);
yan u ñb-t-1k-ña?ob he must write them (225 + 213 + ñb write + 321 + 351 + 616).

Processive verbs may have a multiple conjunction with the inner conjunction that of 221--3 and the outer conjunction that of manner MS--351 + 361, the entire construction then having the form:
Manner MS + 221 + 210 + Transitive Core + 341 + 351 + 361 + Terminus

Examples:
be'y t-u ñú-ñt-añ-ñ-ña?ob thus they ate it (be'y thus + 221 + 213 + ñú eat + 321 + 341 + 351 + 361 + 613 + 626);
mu?alob t-in ñó-ñ-aña-ñ-eñ I struck you well (mu?alob good + 221 + 211 + ñó strike + 321 + 341 + 351 + 612);
be'y t-a ñó-ñ-ñ-eñ thus you struck me (be'y thus + 221 + 212 + ñó strike + 321 + 351 + 611 + 625).

Processive verbs with conjunct modals (228-231) do not have conjunct suffixes. Their form is:
Auxiliary + Transitive Core + Terminus

Examples:
ken u ñó-ñ-eñ he will hit you (228 + 213 + ñó strike + 321 + 612);
bín in ñú-ñ-eñ I will eat it (229 + 211 + ñú eat + 321 + 613);
ká u ñb-t-ña?ob let them write it (231 + 213 + ñb write + 321 + 613 + 626);
bín a buk-ñ-es-a-ñ-eñ you will get dressed (229 + 212 + buk clothe + 313 + 321 + 212 + ña self + 625).
C. Active Voice without Auxiliary. Processive transitive verbs with a noun phrase in lieu of an auxiliary occur without conjunct suffixes, even though the noun phrase may be preceded by a manner MS. Their form is:

+ Manner MS + Noun Phrase + Transitive Core + Terminus

The meaning of the construction, as of other transitive active constructions in the processive mode, is Actor-Process-Goal; this construction contrasts in meaning with other types of transitive verbs only perhaps in laying more emphasis on the identification of the actor.

Examples:

hwàn hàn-t-e John ate it (hwàn John + hàn eat + 321 + 613);

bey letio'ob kím-s-Ø-o'o'ob thus they killed it (bey thus + letio'ob they + kím die + 321 + 613 + 626);

mås 'il-Ø-eשק who saw you? (mås who + 'il see + 321 + 612).

2.3.2.4 Remainder. We have thus far treated the constituency of themes and described the use and distribution of the alternants of thematic minor morphemes; also we have treated in a limited way the constituency of verbal and nominal sentences and described the cooccurrence relations of modals and modal surrogates with conjunct suffixes. It remains to specify the use and distribution of the alternants of non-thematic minor morphemes, namely the modals, conjunct suffixes, pronominals and phrase termini.

2.3.2.4.1 Modals.

221 (t-) indicates completive aspect. As defined above, it occurs only in the processive mode, only with transitive forms, and only in conjunction with 341.

Examples:

t-u yil-Ø-ah-eשק-o'o'ob they saw you (221 + 213 + 'il see + 321 + 341 + 612 + 626);
t-k-؟il-؟-ah-؟ we helped him (221 + 214 + ？il see + 321 + 341 + 613).

222 (k-~ t) is a minor morpheme which indicates incomplete aspect. (In this it contrasts most directly with 223 and 221.) Alternant k occurs in affirmative expressions; alternant t in negative. Examples:

k-u ？il-؟-ik-؟  he sees it (222 + 213 + ？il see + 321 + 351 + 613);
maً t-u ？il-؟-ik-؟  he doesn't see it (222 + 213 + ？il see + 321 + 351 + 613);

k-in ？ib  I write (222 + 211 + ？ib write);
k-in ？ib-t-ik-؟  I wrote it (222 + 211 + ？ib write + 321 + 351 + 613);

k-a ？em-؟-VL  you descend (222 + 212 + ？em descend + 417 + 342);

k-a ？em-s-ik-؟  you lower it (222 + 212 + ？em descend + 321 + 351 + 613).

223 (تان ~ t) is an ambifunctional morpheme which as a minor morpheme indicates durative aspect. The alternants are in free alternation before vowels; only the alternant tan occurs before consonants or juncture. In combination with 212 and 213 there are the alternant forms ta or tan and tu or tun, respectively. Examples:

tan in ？ib or t-in ？ib  I'm writing (223 + 211 + ？ib write) but:

tan k ？ib  we are writing (223 + 214 + ？ib write);
tan  it is going on  (affirmative response to a question in the durative aspect)(223);

t-in ？ib-t-ik-؟  I'm writing it (223 + 211 + ？ib write + 321 + 351 + 613);

t-a ？em-؟-VL  you're descending (223 + 212 + ？em descend + 417 + 342);

223 (تان ~ t) is an ambifunctional morpheme which as a minor morpheme indicates durative aspect. The alternants are in free alternation before vowels; only the alternant tan occurs before consonants or juncture. In combination with 212 and 213 there are the alternant forms ta or tan and tu or tun, respectively. Examples:

tan in ？ib or t-in ？ib  I'm writing (223 + 211 + ？ib write) but:

tan k ？ib  we are writing (223 + 214 + ？ib write);
tan  it is going on  (affirmative response to a question in the durative aspect)(223);

223 (تان ~ t) is an ambifunctional morpheme which as a minor morpheme indicates durative aspect. The alternants are in free alternation before vowels; only the alternant tan occurs before consonants or juncture. In combination with 212 and 213 there are the alternant forms ta or tan and tu or tun, respectively. Examples:

tan in ？ib or t-in ？ib  I'm writing (223 + 211 + ？ib write) but:

223 (تان ~ t) is an ambifunctional morpheme which as a minor morpheme indicates durative aspect. The alternants are in free alternation before vowels; only the alternant tan occurs before consonants or juncture. In combination with 212 and 213 there are the alternant forms ta or tan and tu or tun, respectively. Examples:

tan in ？ib or t-in ？ib  I'm writing (223 + 211 + ？ib write) but:
224 (joko~k) which as a noun or verb means end, finish, serves as an auxiliary indicating terminative aspect. The alternants are in free variation before vowels; only the alternant joko occurs elsewhere (not infrequently the form joka~an occurs with the same meaning).

joko in jib~k I have finished writing or I have written (224 + 211 + jib write + 417);
joko in jib~t-ik~k I have finished writing it or I have written it (224 + 211 + jib write + 321 + 351 + 613);

j-a wem~k-Vl you have descended (224 + 212 + ?em descend + 417 + 342);

j-u yem~s-ik~k he has lowered it (224 + 213 + ?em descend + 321 + 351 + 613).

225 (yan) is a morpheme often translating as be, have. As a modal it indicates obligation or sometimes simple future. Examples:

yan in jib~k I must write, I'll write (225 + 211 + jib write + 417);
yan in jib~t-ik~k I must (will) write it (225 + 211 + jib write + 321 + 351 + 613);
yan in wem~k-Vl I must (will) descend (225 + 211 + ?em descend + 417 + 342);
yan in wem~s-ik~k I must (will) lower it (225 + 211 + ?em descend + 321 + 351 + 613).
226 (tánt) indicates action just completed. Both 226 and 227 require the enclitic 712 at the terminus of the phrase. E.g.

\[
\text{tánt in } \dib\-e\? \text{ I just now wrote } (226 + 211 + \dib\text{ write } + 417 + 712);
\]

\[
\text{tánt a } \dib\-t\-ik\-e\? \text{ you just now wrote it } (226 + 212 + \dib\text{ write } + 321 + 351 + 613 + 712);
\]

\[
\text{tánt u yém-Ø-VL-e? he just now descended } (226 + 213 + \text{bind descend } + 417 + 342 + 712);
\]

\[
\text{tánt k } \text{bind-s-ik-Ø-e? we just now lowered it } (226 + 214 + \text{bind descend } + 321 + 351 + 613 + 712).
\]

It may occur alone with 712 in response to a question containing 226, i.e.:

\[
\text{tánt wá a míś-t\-ik-Ø-e?; tánte? \text{ Did you just now sweep it? Yes, just now. } } (226 + \text{wá interrogative } + 212 + \text{míś sweep } + 321 + 351 + 613 + 712) (226 + 712).
\]

227 (he? ~ he?el) indicates assurative aspect. The alternants are in free variation before all members of 210. Enclitic 712 is required at the terminus of the phrase. Examples:

\[
\text{he? in } \dib\-e\? \text{ I'll surely write } (227 + 211 + \dib\text{ write } + 417 + 712);
\]

\[
\text{he? k } \dib\-t\-ik\-e\? \text{ we'll surely write it } (227 + 212 + \dib\text{ write } + 321 + 351 + 613 + 712);
\]

\[
\text{he?el u yém-Ø-VL-e? he'll surely descend } (227 + 213 + \text{bind descend } + 417 + 342 + 712);
\]
he' a wém-s-ik-Ø-e? you'll surely lower it (227 + 212 + wém descend + 321 + 351 + 613 + 712).

(The form he'el + 712, i.e. he'ele?, occurs in isolation meaning yes indeed!, that's right!)
The same form + 711-713 also occurs meaning here is, look at in constructions such as he'el le lìbróa?
he're's this book, look at this book!

228, 229, and 231 are modals which occur either in the processive or the stative mode.

228 (ken-) indicates punctual future. Contracted alternants kin, kan, and kun optionally occur (with regressive vowel assimilation) before the pronominal particles 'in-, 'a-, and 'u- respectively. Alternant ken occurs in all other environments and optionally also in these. Examples:

kin in ḣib-t-e (or: ken in ḣibte) I'll write it (228 + 211 + ḣib write + 321 + 613);
kan a ḣib-t-e you'll write it (228 + 212 + ḣib write + 321 + 613);
kun u ḣib-t-e he'll write it (228 + 213 + ḣib write + 321 + 613);
ken k ḣib-t-e we'll write it (228 + 214 + ḣib write + 321 + 613).

228 occurs without conjunct suffix in transitive constructions containing 210 as illustrated.

It requires 351 in transitive constructions not containing 210, but with the actor identified by a noun
phrase as in the following:

ten ken ˈdib-t-ik-∅  I'll write it  (tên I + 228 +
ˈdib write + 321 + 351 + 613);
to'on ken ˈdib-t-ik-∅  we'll write it  (to'on we +
228 + ˈdib write + 321 + 351 + 613);
hwàn ken ˈdib-t-ik-∅  John will write it  (hwàn John
+ 228 + ˈdib write + 322 + 351 + 613).

It requires construct3 in all stative constructions:
ken ˈdib-t-aʔa-Vk-∅  when it gets written  (228 + ˈdib
write + 321 + 332 + 361 + 613);
ken ˈdib-n-ak-∅  when he writes  (228 T ˈdib write +
417 + 361 + 613).

229 (ˈbin) indicates durative future. Its construct patterns are identical with those of 228:

no conjunct ˈbin in ˈdib-t-e  I'll write it  (229 +
211 + ˈdib write + 321 + 613);
ˈbin a ˈdib-t-∅-eʔeš  you'll write it  (229 + 212 +
ˈdib write + 321 + 613 + 625).

conjunct 351

ten ˈbin ˈdib-t-ik-∅  I'll write it  (tên I + 229 +
ˈdib write + 321 + 351 + 613);
to'on ˈbin ˈdib-t-ik-∅  we'll write it  (to'on we +
229 + ˈdib write + 321 + 351 + 613).

conjunct3

ˈbin ˈdib-t-aʔa-Vk-∅  it'll be written  (229 + ˈdib
write + 321 + 332 + 361 + 613);
'bín ʰi'b-n-ak-en  I'll write  (229 + ʰi'b write + 417 + 361 + 611).

231 (ká) indicates optative. In the processive mode it occurs only with transitive active verbs without conjunct suffixes:

ká u ʰi'b-t-e  may he write it, that he write it
(213 + 213 + ʰi'b write + 321 + 613);

ká in ʰi'b-t-e  may I write, that I write it  (231 + 211 + ʰi'b write + 321 + 613).

It occurs with conjunct₂ in the stative mode:

ká ʰi'b-t-aʰ-a-k-∅  may it be written, that it be
written  (231 + ʰi'b write + 321 + 332 + 361 + 613);

ká ʰi'b-n-ak-eč  may you write, that you may write
(231 + ʰi'b write + 417 + 361 + 612).

2.3.2.4.2 Conjunct Suffixes. The suffix 351 (ik ~ iL) occurs in processive verbs in conjunction with conjunct₂ modals. In such constructions only alternant ik occurs. Examples:

tán in han-t-ik-∅  I'm eating it  (223 + 211 + han eat + 321 + 351 + 613).

351 occurs in processive verbs also in conjunction with conjunct₄ modal surrogates outside a conjunction of 221-341. In such constructions only alternant iL occurs; it is optionally followed by 361. Examples:

'bey t-a han-t-ah-il-∅  thus you ate it  (bey thus + 221 + 212 + han eat + 321 + 341 + 351 + 613);
'biš t-u mēn-t-ah-il-ak-∅-o'ob how did they do it?  
('biš how + 221 + 213 + mēn do + 321 + 341 + 
351 + 361 + 613 + 626).

It also occurs after an intransitive verb core in the 
stative mode in conjunction with conjunct₂ modal surro-
gates. In such constructions only the alternant ik occurs.
Examples:
'bey ʔib-n-ah-ik-en thus I wrote (bey thus + ʔib
write + 417 + 421 + 351 + 611);
'biš kuš-l-ah-ik-o'ob how did they live? (biš how + 
kuš live + 416 + 421 + 351 + 616).

351 also occurs in conjunction with conjunct MS₄ in 
transitive and intransitive stative constructions after 
margin E. Here either the ik or the iL alternant is 
selected, as in bey mēn-t-aʔa-n-iL-∅ or
'bey mēn-t-aʔa-n-ik-∅ thus it has been made (bey + 
mēn make + 321 + 332 + 344 + 351 + 613).

It also occurs in conjunction with conjunct MS₄ in 
transitive stative constructions after margin D, and is 
optionally followed by 361. If not followed by 361, either 
alternant may occur; if followed by 361 only alternant iL 
may occur. Examples:
bey ʔib-t-aʔa-b-ik-∅ or bey ʔib-t-aʔa-b-il-∅ thus 
it was written (bey thus + ʔib write + 321 + 
332 + 343 + 351 + 613);
bey ʔib-t-aʔa-b-il-ak-∅ thus it was written (bey 
thus + ʔib write + 321 + 332 + 343 + 351 + 361 + 
613).
The suffix 36l (-Vk ~ ak) occurs with transitive and intransitive verbs in the stative mode in conjunction with conjunct_3 modals and modal surrogates, as in:

ká béy-č-an-ak-∅ may it be so (331 + béy so + 414 + 421 + 361 + 613);
bin ́fRN-ak-ec you will write (229 + ́fRN write + 417 + 361 + 612);
wuš kūš-1-ak-o'ob they lived long ago (wuš long ago + kūš live + 416 + 361 + 616);
ken ́fRN-t-a'a-ak-∅ it will be written (328 + ́fRN write + 321 + 332 + 361 + 613).

It occurs in the stative and processive mode as an optional double conjunct after 35l, as in:

bey t-u ́bêt-∅-IL-ak-∅ thus he did it (bey thus + 221 + 213 + ́bêt do + 321 + 351 + 361 + 613);
ma‘alob ́bêt-∅-a‘a-∅-IL-ak-∅ it was done well (ma‘alob good + ́bêt do + 321 + 332 + 343 + 351 + 361 + 613).

Alternant - Vk occurs only in a construction with the infixed alternant of 332, that is, only in the environment (-332-), as in:

ká ́p.o-VoV-n-∅-Vk-∅ may he be shot (231 + ́p.o..n shoot + 321 + (-332-) + 361 + 613);
bin hi-VoV-t-∅-Vk-∅ it will be braided (229 + hi..t braid + 321 + (-332-) + 361 + 613).
2.3.2.4.3 Pronominals and Pronominal Pluralizers. Certain interpronominal cooccurrence relations not yet described can be illustrated in a chart of pronoun paradigms.

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<thead>
<tr>
<th>Paradigm A</th>
<th>Paradigm B</th>
</tr>
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<tbody>
<tr>
<td><strong>Sg.</strong></td>
<td><strong>Sg.</strong></td>
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<tr>
<td>------------------------------------</td>
<td>------------------------------------</td>
</tr>
<tr>
<td>1 'in-</td>
<td>1 -en</td>
</tr>
<tr>
<td>2 'a</td>
<td>2 -ec</td>
</tr>
<tr>
<td>3 'u</td>
<td>3 -ϕ ~ e ~ i ~ ϕ ` o'o'ob</td>
</tr>
</tbody>
</table>

Paradigm A is made up of members of set 210 (as person markers), three of which members combine with one or the other member of 620. The combinations 'a...-e'es (212--625) and 'u...-o'o'ob (213--626), indicate second and third person plural respectively; the combination k...-e'es (214--625) indicates first person plural inclusive (including plural persons addressed, as you-all and we or you-all and I).

Paradigm A occurs in the following environments with the following functions:

(1) with nouns to mark possessor:

- 'in tata **my father**
- 'a 'amigo **your friend**
- k hu'un-e'es **our paper** (of you-all and me or us)
- 'a suku'un-e'es **your (older) brother**
- 'u yf'in-o'o'ob **their (younger) sibling**
- 'u k'lk hwan **John's (older) sister**
- 'u k'lk a tata **your father's (older) sister**
(2) with processive active verbs to mark actor:

- k-in ʾbin-Ṉ I go (222 + 211 + ʾbin go + 417);
- k-a ʾbin-Ṉ-eʾeš you-all go (222 + 212 + ʾbin go + 417 + 625);
- tan k ʾbin-Ṉ-eʾeš we-all go (223 + 214 + ʾbin go + 417 + 625);
- yan u ʾbin-Ṉ-oʾob they must go (225 + 213 + ʾbin go + 417 + 626);
- yan u ʾʃib-t-ik-Ṉ-oʾob they must write it (225 + 213 + ʾʃib write + 321 + 351 + 613 + 626);

(3) with processive passive verbs to mark goal:

- tán u ʾpek-s-aʾa-al-oʾob they are being moved (223 + 213 + ʾpek move + 321 + 332 + 342 + 626);
- yan a ʾkim-s-aʾa-al-eʾeš you-all are to die (225 + 212 + ʾkim die + 321 + 332 + 342 + 625).

Paradigm B is made up of the members of set 610, one of which combines optionally with 625 to indicate first person plural inclusive (including persons addressed).

Paradigm B occurs in the following environments with the following functions:

(1) with nouns to mark subject (thus forming a nominal stative complex):

- wínik-en I am a man (wínik man + 611);
- koʾolel-oʾob they are ladies (koʾolel lady + 626);
you are his friend
+ 612);
we are brothers (suku'un
brother + 614 + 625);
(2) with transitive and intransitive verbs in the
stative mode to mark subject:
he went (113 + bin go + 417 + 421 + 613);
he was brought (113 + tāl come +
321 + 332 + 342 + 613);
I knelt (sol nose + 416 + 421 + 611);
(3) with transitive verbs in the processive mode to
mark goal:
he struck me (221 + 213 + lo strike + 321 + 421 + 611);
(4) with transitive imperative and transitive pro-
cessive to form a reflexive complex (210 + ba self)
to mark goal in lieu of 610:
they struck themselves
(221 + 213 + lo strike + 321 + 421 +
213 + ba self + 626);
guard yourselves (kanān guard +
321 + 212 + ba self + 625);
I see myself (222 + 211 + 'il
see + 321 + 351 + 211 + ba self);
we saw ourselves (221 + 214 +
'il see + 321 + 351 + 214 + ba self).
It should be noted that the reflexive complex does not occur in the processive mode without an auxiliary. Thus: hwàn t-u loš-∅-ah-uba John hit himself (hwàn John + 221 + 213 + loš strike + 321 + 341 + 213 + ba self) is grammatical (as is hwàn t-u loš-∅-ah-∅ John hit it) (hwàn + 221 + 213 + loš strike + 321 + 341 + 613); but the form hwàn loš-∅-u-ba is not grammatical (as is hwàn loš-∅-e John hit it) (hwàn + loš strike + 321 + 613);

māš loš-∅-eć who struck you? (māš who + loš strike + 321 + 612);

ˊin šok-∅-m-ah-o?ob I have read them (211 + šok read + 321 + 331 + 341 + 616);

yan u meyah-t-ik-∅-o?ob they must serve them (225 + 213 + meyah serve + 321 + 351 + 616 + 626).

The following set of pronoun themes is formed by the conjunction of a morpheme pronoun formative with first and second person marking members of 6l0:

t-ën I, me  t-o?on we, us  t-o?on-e?eš we, us (incl.)
t-èč you  t-e?eš you-all

(The equivalents of these for the third person singular and plural are leti? he, him, and leti?ob (also leobti?) they, them.

Two members of set 6l0 have multiple alternants. Suffix 6l3 has three alternants, -i, -e, and -∅, which have the following distribution:
Alternant -i occurs in stative verbs, except those with margin E or F, in the environment of a following juncture, e.g. šok-n-ah-i he read (šok read + 417 + 421 + 613);

*ánt-Ø-a?a-b-i he was helped (*ánt help + 321 + 332 + 343 + 613);

Alternant -e occurs before a juncture in transitive imperative and transitive processive verbs which do not contain a conjunct suffix, e.g. hans-t-e eat it, (hans eat + 321 + 613), bín u hans-t-e he will eat it (229 + 213 + hans eat + 321 + 613).

Alternant -Ø occurs in all other environments, e.g. in stative verbs with margin E or F:

hans-t-a?a-n-Ø it has been eaten (hans eat + 321 + 332 + 344 + 613);

hans-t-a?a-ak-Ø let it be eaten (hans eat + 321 + 332 + 361 + 613);

in other stative verbs in the environment of any following element which is not a juncture:

šok-n-ah-Ø ?ič' eskwèla he read in school (šok read + 417 + 341 + 613);

*ánt-Ø-a?a-b-Ø tumen hwàn he was helped by John (*ánt help + 321 + 332 + 343 + 613);

before a non-juncture in transitive imperative and transitive processive verbs, e.g. hans-t-Ø-eš eat it! (hans eat + 321 + 613 + 625);
bin u han-t-ø-o'ob they will eat it (229 + 213 +
han eat + 321 + 613 + 625);
in all other processive verb or stative noun constructions,
e.g. nohoč-ø it is big (nohoč big + 613);
k-u 'fib-t-ik-ø he writes it (222 + 213 + 'fib write +
321 + 351 + 613);
k-a 'fib-t-ik-ø-e'es you-all write it (222 + 212 +
'fib write + 321 + 351 + 613 + 625).

Suffix 616 has two alternants, -ø and -o'ob'. The zero alternant occurs only before 626, e.g.
k-u han-t-ik-ø-o'ob they eat them (222 + 213 +
han eat + 321 + 351 + 616 + 636);
the alternant -o'ob occurs in all other environments.

A peculiar ordering relationship obtains when a member of 620 occurs with 614 or 616: if 614 and 625 both occur in a transitive construction, the order of the suffixed pronouns is optional, e.g.

?ánt-ø-o'on-e'es or ?ánt-ø-e'es-o'on help us!

(?'ánt help + 321 + 614 + 625) or
(?'ánt help + 321 + 625 + 614).

If 616 and 625 both occur in a form, 625 must precede 616,
e.g. han-t-e'ešo'ob eat them! (han eat + 321 + 625 + 616).

2.3.2.4.4 Phrase Termini. The minor morphemes of set 710 are phrase closing suffixes or enclitics. The members 711, 712, and 713 comprise a paradigmatic set with a constant of reference.
711 (-a?) refers to something near in time or space, thus it often translates as this or here, e.g.

?in làpis-a? my pencil here or this pencil of mine (211 + làpis pencil + 711);

bey-a? like this (bey thus + 711).

713 (-o?) refers to something not so immediate in time or space. It often translates as that or there, e.g. ?in làpis-o? my pencil there or that pencil of mine (211 + làpis pencil + 713);

bey-o? like that (bey thus + 713).

712 (-e?) may refer to something in mind, something already under discussion, or it may mark or set a topic to be commented on. Thus it often may be translated as the or as for though frequently it is not translated at all, e.g. ?in làpis-e? čak-∅ as for my pencil, it is red.

In nominal stative constructions, if the topic (or dependent part) precedes the comment (or independent part), the topic must be terminated by 712 (if not by 711 or 713), but if the topic follows the comment, it need not contain a member of the reference set (we consider the normal order to be comment + topic and the order topic + comment to be an inversion).

Examples:

hađu∅ u yič mária Mary's face is pretty.

?u yič mária-e? hađu∅ Mary's face is pretty.
Frequently the members of this paradigmatic set occur in conjunction with phrase initial or phrase medial morphemes such as the modals 226 and 227 (which always require 712 as the phrase terminus), the particle le demonstrative, and other morphemes such as bey thus, wá if, etc. Examples:

'ba?as le k-a wa?al-Ø-ik-Ø t-en-o? what is it that you tell me? (in which le and 713 are in conjunction) (222 + 212 + ?a?al tell + 321 + 351 + 613 + pronoun formative + 611 + 713); also

`ja-Ø t-en le tàkin ka?abet a`ik-Ø ti? t-en-Ø give me that money it is necessary for you to give me (`ja give + 613 + pronoun formative + 611 + le demonstrative + tàkin money + ka?abet it is necessary + 212 + `ik give + 613 + ti? to + pronoun formative + 611 + 713);

he? in tàl-e? I'1l surely come (227 + 211 + tàl come + 712);

tánt in wèn-Ø-Vl-e? I just slept (226 + 211 + wèn sleep + 417 + 342 + 712);

bey t-u bèt-Ø-ah-il-ak-Ø-ob-o? thus they did it (bey thus + 221 + 213 + bèt do + 321 + 341 + 351 + 361 + 613 + 626 + 713);

wá ma?-Ø t-u bèl-e?, ?ūq-kin-t-e if it is not correct, make it right! (wá if + ma? negative + 714 + t in + 213 + bèl road + 712), (?ūq good + 311 + 321 + 613).
715 (-ili?) occurs with noun, verb and particle stems. It serves to limit or restrict the meaning of the theme in number or time, and can usually be translated by yet, still, since, already, just, only, or exactly. Examples:

kwàtro syentos mekates-ili? just 400 mecates;
moč-ili? síh-Ø-ik-Ø he was born already a cripple (moč cripple + 715 + síh be born + 417 + 351 + 613);
ma?-ili? síh-ik-Ø before (i.e. not yet) he was born (ma? not + 715 + síh- be born + 351 + 613);
ti hun-pél-ili? kùč-il in just one place (ti in hun one + pél classifier for inanimates + 715 + kùč place + 515).

716 (-ina) is a non-productive enclitic found to occur only with the negative particles ma? and miš:

ma?-ina tèč not even you;
miš-ina tèn nor even me.

714 (-i?) occurs in a variety of functions:

(a) as a transitive imperative phrase terminus indicating immediateness: For example:

phants-Ø-en-Ø help me at once! (phants help + 321 + 611 + 714);
kíms-Ø a hàn-t-Ø-i? kill it for you to eat! (kíms die + 321 + 613 + 212 + hàn eat + 321 + 613 + 714);
sa?as-∅-∅ tēn šan-i? forgive me then also!
(sa?as forgive + 321 + 613 + tēn I, me + šan also + 714);

(b) as a phrase terminus to indicate specific location, "right there" in phrases usually having an indication of motion to, existence at, or position in a place. Examples:

te k-u pa?at-(a)l-i? right there it remains
(te at, there + 222 + 213 + pa?at- remain + 342 + 714);

biblia k-u šovV-k-∅-vl-i? the bible is read there (biblia + 222 + 213 + šovV read, study + 321 + (-332-) + 342 + 714);

yan-∅ t-in wot(o)c-i? it is right there in my house (yan be existent + 613 + t(i) in + 211 + ?otoč house + 714);

hay-pēl ha?ab t-a bēt-∅-ah-∅-i? how many years did you put in there? (hay how many + pēl classifier for inanimates + ha?ab year + 221 + 212 + bēt do + 321 + 341 + 613 + 714);

(c) as a phrase terminus in conjunction with a negative particle (ma? or miš); it is obligatory in the following construction types: 

(1) negative particle with a noun phrase:

ma? sak-∅-i? it is not white (ma? not + sak white + 613 + 714);
ma? wá ?in ?ámigo-eč-i? are you not my friend?

(1) negative particle with certain verb phrases:
Examples:

ma? in woh(e)l-i? I don't know (ma? not + 211 + ?ohel know + 714);

ma? wèn-Ø-en-i? I did not sleep (ma? not + wèn sleep + 417 + 611 + 714);

ma? in kát ká wèn-Ø-Vk-eč-i? I don't want you to sleep (ma? not + 211 + kát want + 231 + wèn sleep + 417 + 361 + 612 + 714);

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<th>PASSIVE</th>
<th>INTRANSITIVE ACTIVE</th>
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<td>I shoot it</td>
<td>I get shot</td>
<td>I shoot</td>
</tr>
<tr>
<td>2</td>
<td>I am shooting it</td>
<td>I am being shot</td>
<td>I am shooting</td>
</tr>
<tr>
<td>3</td>
<td>I'm done shooting it</td>
<td>I'm done being shot</td>
<td>I'm done shooting</td>
</tr>
<tr>
<td>4</td>
<td>I am to shoot it</td>
<td>I am to be shot</td>
<td>I am to shoot</td>
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<td>5</td>
<td>I just now shot it</td>
<td>I've just been shot</td>
<td>I just now shot</td>
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<tr>
<td>6</td>
<td>I'll surely shoot it</td>
<td>I'll surely be shot</td>
<td>I'll surely shoot</td>
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<tr>
<td>7</td>
<td>when I've shot it</td>
<td>when I am shot</td>
<td>when I shoot</td>
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<tr>
<td>8</td>
<td>I'll shoot it</td>
<td>I'll be shot</td>
<td>I'll shoot</td>
</tr>
<tr>
<td>9</td>
<td>I'm going to shoot it</td>
<td>I'm going to be shot</td>
<td>I'm going to shoot</td>
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<tr>
<td>10</td>
<td>that I (may) shoot it</td>
<td>that I be shot</td>
<td>that I (may) shoot</td>
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<td>11</td>
<td>long ago I shot it</td>
<td>long ago I was shot</td>
<td>long ago I shot</td>
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<tr>
<td>12</td>
<td>thus I shoot it</td>
<td>thus I am shot</td>
<td>thus I shoot</td>
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<tr>
<td>13</td>
<td>I shot it</td>
<td>I was shot</td>
<td>I shot</td>
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<td>14</td>
<td>I've shot it</td>
<td>I've been shot</td>
<td>I have shot</td>
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<tr>
<td>15</td>
<td>thus I shot it</td>
<td>thus I was shot</td>
<td>thus I shot</td>
</tr>
<tr>
<td>16</td>
<td>thus I've shot it</td>
<td>thus I've been shot</td>
<td>thus I have shot</td>
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<td>17</td>
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<tr>
<td></td>
<td>TRANSITIVE ACTIVE</td>
<td>PASSIVE</td>
<td>INTRANSITIVE ACTIVE</td>
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</tr>
<tr>
<td>1</td>
<td>k-in ʃon-ʃ-ik-ʃ</td>
<td>k-in ʃo-V?V-n-ʃ-VL</td>
<td>k-in ʃon-ʃ</td>
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<tr>
<td>2</td>
<td>t-in ʃon-ʃ-ik-ʃ</td>
<td>t-in ʃo-V?V-n-ʃ-VL</td>
<td>t-in ʃon-ʃ</td>
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<tr>
<td>3</td>
<td>ʃ-in ʃon-ʃ-ik-ʃ</td>
<td>ʃ-in ʃo-V?V-n-ʃ-VL</td>
<td>ʃ-in ʃon-ʃ</td>
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<tr>
<td>4</td>
<td>yan in ʃon-ʃ-ik-ʃ</td>
<td>yan in ʃo-V?V-n-ʃ-VL</td>
<td>yan in ʃon-ʃ</td>
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<td>7</td>
<td>ken in ʃon-ʃ-e</td>
<td>ken ʃo-V?V-n-ʃ-Vk-en</td>
<td>ken ʃon-ʃ-ak-en</td>
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<tr>
<td>8</td>
<td>бин in ʃon-ʃ-e</td>
<td>бин ʃo-V?V-n-ʃ-Vk-en</td>
<td>бин ʃon-ʃ-ak-en</td>
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<tr>
<td>9</td>
<td>kά in ʃon-ʃ-e</td>
<td>kά ʃo-V?V-n-ʃ-Vk-en</td>
<td>kά ʃon-ʃ-ak-en</td>
</tr>
<tr>
<td>10</td>
<td>ũč in ʃon-ʃ-ik-ʃ</td>
<td>ũč ʃo-V?V-n-ʃ-Vk-en</td>
<td>ũč ʃon-ʃ-ak-en</td>
</tr>
<tr>
<td>11</td>
<td>bey in ʃon-ʃ-ik-ʃ</td>
<td>bey in ʃo-V?V-n-ʃ-VL</td>
<td>bey in ʃon-ʃ</td>
</tr>
<tr>
<td>12</td>
<td>t-in ʃon-ʃ-ah-ʃ</td>
<td>(h-)ʃo-V?V-n-ʃ-VL-әn</td>
<td>(h-)ʃon-ʃ-ah-әn</td>
</tr>
<tr>
<td>13</td>
<td>ʃи in ʃon-ʃ-ah-ʃ-әn</td>
<td>ʃon-ʃ-әn-әn</td>
<td>ʃon-ʃ-ah-әn</td>
</tr>
<tr>
<td>14</td>
<td>bey t-in ʃon-ʃ-ah-il-ak-ʃ</td>
<td>bey ʃo-V?V-n-ʃ-йk-әn</td>
<td>bey ʃon-ʃ-ah-il-әn</td>
</tr>
<tr>
<td>15</td>
<td>bey in ʃon-ʃ-ah-il-ʃ</td>
<td>bey ʃon-ʃ-әn-әn-il-әn</td>
<td>bey ʃon-ʃ-ah-әn-il-әn</td>
</tr>
<tr>
<td>16</td>
<td>bey in ʃon-ʃ-ah-il-әn</td>
<td>bey ʃon-ʃ-әn-әn-il-әn</td>
<td>bey ʃon-ʃ-ah-әn-il-әn</td>
</tr>
<tr>
<td>17</td>
<td>bey in ʃon-ʃ-ah-il-әn-әn-il-әn</td>
<td>bey ʃon-ʃ-ah-әn-il-әn-il-әn</td>
<td>bey ʃon-ʃ-ah-әn-il-әn-il-әn</td>
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Verb Stem Class 1
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<tr>
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<th>TRANSITIVE ACTIVE</th>
<th>PASSIVE</th>
<th>INTRANSITIVE ACTIVE</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>he sweeps it</td>
<td>it gets swept</td>
<td>he sweeps</td>
</tr>
<tr>
<td>2</td>
<td>he is sweeping it</td>
<td>it is being swept</td>
<td>he is sweeping</td>
</tr>
<tr>
<td>3</td>
<td>he's done sweeping it</td>
<td>it's done being swept</td>
<td>he's done sweeping</td>
</tr>
<tr>
<td>4</td>
<td>he is to sweep it</td>
<td>it is to be swept</td>
<td>he is to sweep</td>
</tr>
<tr>
<td>5</td>
<td>he just now swept it</td>
<td>it has just been swept</td>
<td>he just now swept</td>
</tr>
<tr>
<td>6</td>
<td>he'll surely sweep it</td>
<td>it'll surely be swept</td>
<td>he'll surely sweep</td>
</tr>
<tr>
<td>7</td>
<td>when he's swept it</td>
<td>when it is swept</td>
<td>when he has swept</td>
</tr>
<tr>
<td>8</td>
<td>he'll sweep it</td>
<td>it'll be swept</td>
<td>he'll sweep</td>
</tr>
<tr>
<td>9</td>
<td>he's going to sweep it</td>
<td>it's going to be swept</td>
<td>he's going to sweep</td>
</tr>
<tr>
<td>10</td>
<td>that he (may) sweep it</td>
<td>that it (may) be swept</td>
<td>that he (may) sweep</td>
</tr>
<tr>
<td>11</td>
<td>long ago he swept it</td>
<td>long ago it was swept</td>
<td>long ago he swept</td>
</tr>
<tr>
<td>12</td>
<td>thus he sweeps it</td>
<td>thus it is swept</td>
<td>thus he sweeps</td>
</tr>
<tr>
<td>13</td>
<td>he swept it</td>
<td>it was swept</td>
<td>he swept</td>
</tr>
<tr>
<td>14</td>
<td>thus he swept it</td>
<td>it's been swept</td>
<td>he has swept</td>
</tr>
<tr>
<td>15</td>
<td>thus he has swept it</td>
<td>thus it was swept</td>
<td>thus he swept</td>
</tr>
<tr>
<td>16</td>
<td>thus it has been swept</td>
<td>thus it has been swept</td>
<td>it is swept (está barrido)</td>
</tr>
<tr>
<td></td>
<td>TRANSITIVE ACTIVE</td>
<td>PASSIVE</td>
<td>INTRANSITIVE ACTIVE</td>
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<td>---</td>
<td>-------------------</td>
<td>---------</td>
<td>---------------------</td>
</tr>
<tr>
<td>1</td>
<td>k-u mís-t-ik-∅</td>
<td>k-u mís-t-a?-a-al</td>
<td>k-u mís-∅</td>
</tr>
<tr>
<td>2</td>
<td>t-u mís-t-ik-∅</td>
<td>t-u mís-t-a?-a-al</td>
<td>t-u mís-∅</td>
</tr>
<tr>
<td>3</td>
<td>ḕ-u mís-t-ik-∅</td>
<td>ḕ-u mís-t-a?-a-al</td>
<td>ḕ-u mís-∅</td>
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<tr>
<td>4</td>
<td>yáu u mís-t-ik-∅</td>
<td>yáu u mís-t-a?-a-al</td>
<td>yáu u mís-∅</td>
</tr>
<tr>
<td>5</td>
<td>tánt u mís-t-ik-∅-e?</td>
<td>tánt u mís-t-a?-a-al-e?</td>
<td>tánt u mís-∅-e?</td>
</tr>
<tr>
<td>6</td>
<td>he? u mís-t-ik-∅-e?</td>
<td>he? u mís-t-a?-a-al-e?</td>
<td>he? u mís-∅-e?</td>
</tr>
<tr>
<td>7</td>
<td>ken u mís-t-e</td>
<td>ken mís-t-a?-a-ak-∅</td>
<td>ken mís-n-ak-∅</td>
</tr>
<tr>
<td>8</td>
<td>bín u mís-t-e</td>
<td>bín mís-t-a?-a-ak-∅</td>
<td>bín mís-n-ak-∅</td>
</tr>
<tr>
<td>9</td>
<td>ká u mís-t-e</td>
<td>ká mís-t-a?-a-ak-∅</td>
<td>ká mís-n-ak-∅</td>
</tr>
<tr>
<td>10</td>
<td>?úč u mís-t-e</td>
<td>?úč mís-t-a?-a-ak-∅</td>
<td>?úč mís-n-ak-∅</td>
</tr>
<tr>
<td>11</td>
<td>bey u mís-t-ik-∅</td>
<td>bey u mís-t-a?-a-al</td>
<td>bey u mís-∅</td>
</tr>
<tr>
<td>12</td>
<td>t-u mís-t-ah-∅</td>
<td>(h-)mís-t-a?-a-b-i</td>
<td>(h-)mís-n-ah-i</td>
</tr>
<tr>
<td>13</td>
<td>ḕu mís-t-m-ah-∅</td>
<td>mís-t-a?-a-n-∅</td>
<td>(h-)mís-n-ah-a?-a-n-∅</td>
</tr>
<tr>
<td>14</td>
<td>bey t-u mís-t-ah-il-ak-∅</td>
<td>bey mís-t-a?-a-b-ik-∅</td>
<td>bey mís-n-ah-i</td>
</tr>
<tr>
<td>15</td>
<td>bey u mís-t-m-ah-il-∅</td>
<td>ḕey mís-t-a?-a-n-il-∅</td>
<td>ḕey mís-n-ah-a?-a-n-il-∅</td>
</tr>
<tr>
<td>16</td>
<td></td>
<td>bey mís-t-a?-a-n-ik-∅</td>
<td>bey mís-n-ah-a?-a-n-ik-∅</td>
</tr>
</tbody>
</table>

Verb Stem Class 2
<table>
<thead>
<tr>
<th></th>
<th>Transitive Active</th>
<th>Passive</th>
<th>Intransitive Active</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>you fell it</td>
<td>you get felled</td>
<td>you fall</td>
</tr>
<tr>
<td>2</td>
<td>you're felling it</td>
<td>you are being felled</td>
<td>you are falling</td>
</tr>
<tr>
<td>3</td>
<td>you're done felling it</td>
<td>you're done being felled</td>
<td>you're done falling</td>
</tr>
<tr>
<td>4</td>
<td>you are to fell it</td>
<td>you are to be felled</td>
<td>you are to fall</td>
</tr>
<tr>
<td>5</td>
<td>you just now felled it</td>
<td>you've just been felled</td>
<td>you've just fallen</td>
</tr>
<tr>
<td>6</td>
<td>you'll surely felled it</td>
<td>you'll surely be felled</td>
<td>you'll surely fall</td>
</tr>
<tr>
<td>7</td>
<td>when you've felled it</td>
<td>when you are felled</td>
<td>when you fall</td>
</tr>
<tr>
<td></td>
<td>you'll fall it</td>
<td>you'll be felled</td>
<td>you'll fall</td>
</tr>
<tr>
<td>8</td>
<td>you're going to felled it</td>
<td>you're going to be felled</td>
<td>you're going to fall</td>
</tr>
<tr>
<td>9</td>
<td>that you (may) fell it</td>
<td>that you (may) be felled</td>
<td>that you (may) fall</td>
</tr>
<tr>
<td>10</td>
<td>long ago you felled it</td>
<td>long ago you were felled</td>
<td>long ago you fell</td>
</tr>
<tr>
<td>11</td>
<td>thus you fell it</td>
<td>thus you are felled</td>
<td>thus you fell</td>
</tr>
<tr>
<td>12</td>
<td>you felled it</td>
<td>you were felled</td>
<td>you fell</td>
</tr>
<tr>
<td>13</td>
<td>you've felled it</td>
<td>you've been felled</td>
<td>you have fallen</td>
</tr>
<tr>
<td>14</td>
<td>thus you felled it</td>
<td>thus you were felled</td>
<td>thus you fell</td>
</tr>
<tr>
<td>15</td>
<td>thus you have felled it</td>
<td>thus you have been felled</td>
<td>thus you have fallen</td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
<td>you're fallen (estás caído)</td>
</tr>
</tbody>
</table>
1  k-a lúb-s-ik-∅
2  t-a lúb-s-ik-∅
3  ḥ-a lúb-s-ik-∅
4  yan a lúb-s-ik-∅
5  tán-t a lúb-s-ik-∅
6  he Ṛ a lúb-s-ik-∅
7  ken a lúb-s-∅
8  bín a lúb-s-∅
9  kā a lúb-s-∅
10  ḥūč a lúb-s-∅
11  bey a lúb-s-ik-∅
12  t-a lúb-s-sah-∅
13  ṭa lúb-s-s-mah-∅
14  bey t-a lúb-s-sah-il-ak-∅
15  bey a lúb-s-s-mah-il-∅
16

TRANSLATIVE ACTIVE

PASSIVE

INTRANSITIVE ACTIVE

Verb Stem Class 3
Appendix B
Text with Analysis and Translation

1. /ya'ab máke', ku ya'alike',/
y'aab mák- e' k- 'u ya'al- ik- e'
y'aab many mak man + 712 222 + 213 + ya'al say + 321 + 351 + 613 + 712
many people say
Many people say

2. /cen túsil ya'alal/
cen tús- il ya'al- a'a aL
cen just tús lie + 525 ya'al say + 321 + 332 + 342
just lying is said
it is told only falsely (of)

3. /'u bisa' al mák ti' òaktun/
'ú biN- s- a'a aL mák ti' òaktun
213 + biN go + 321 + 332 + 342 mák man ti' in òaktun cave
is carried off man into cave
a man being carried off to a cave

4. /tumen nukuć tatao'o'b. /
tumen nukuć tata- o'o'b
tumen by nukuć great tata father + 616
by great fathers
by the ancients.
5. /ba'ale? lela? ?umpe 'ba? hah./
ba'aL e? lel- a? ?un- pel ba'aL hah
ba'aL thing + 712 lel deixis + 711 ?un one + pel cl. ba'aL thing hah true
(the) thing is that (is) one true thing
but it really happened.

6. /ká 'úc ti? 'untú tánkeleme?,/
ká 'úc- -ó ti? ?un túL tán-kelem- e'
ká and 'úc happen + 417 + 613 ti? to ?un one túL cl. tán-kelem + 713
and it happened to one youth
It happened to one young man;

7. /bisa'abi. sa'ati./
bIN- s- a'a- b- -i sa'at- -ó
bIN go + 321 + 332 + 343 + 613 sa'at get lost + 417 + 613
he was carried off
He was carried off. He got lost.

8. /ma? 'ohéltan tu'us 'óokki./
ma? 'ohél- t- a'a- n- -ó tu'us 'óok -ó i
ma? not 'ohél know + 321 + 332 + 344 + 613 tu'us 'óok end + 417 + 613
not known
It was not known where he had come to an end.
1. A hyphen (-) is used in the morphophonemic representation of a form to mark morpheme cuts. It is used in the representation of single affix morphemes or allomorphs to mark the direction of linkage: postposed, the hyphen marks a prefix; preposed, it marks a suffix; the infixed allomorph of 332 is written (-V?V-).

2. Underlining (____) is used to mark the gloss or glosses of a form.

3. Parentheses ( ) are used to enclose a Spanish gloss; to indicate an elidable vowel (or consonant); also, in English glosses, to enclose words not appearing in the Maya form.

4. The symbol (~) is used to indicate an alternation.

5. The symbol (+) in (morpho)phonemically written forms indicates an obligatory morphophonemic disjuncture. In analytic explanations (between parentheses), the symbol (+) indicates concatenation with no commitment with respect either to a phonemic or to a morphophonemic disjuncture. In all other cases, it represents the word 'plus.'

6. The symbols (# ... #) mark the beginning and the end of a substitution frame.

7. Diagonals (/ /) are used to enclose material in phonemic representation. Maya forms in the second part of this grammar which are not enclosed in diagonals are to be taken as morphophonemic representations.

8. The symbols ( V ) and ( C ) are used as abbreviations of vowel and consonant, respectively.

9. Enumerator classifier is abbreviated (cl.), animate (an.), inanimate (inan.).
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