

GRAMMATICAL STRUCTURE OF SANTA ANA KERESAN

By

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O. Introduction

Data for this paper were gathered at intervals from the fall of 1954 through the winter of 1959-60. While a number of informants, including some from each of the seven Keresan-speaking Pueblos, were used during the earlier stages of investigation, the final analysis is based on material obtained from one informant. He is a man now in his late forties who was born and raised at Santa Ana. In the early years of his life he spoke only Santa Ana Keresan, but he now speaks English with a fair degree of fluency, having attended a United States Indian school, served in the army and had many other contacts with English-speaking persons. He also speaks a limited amount of Spanish learned through association with local Spanish-American residents.

Much of my data is in the form of texts recorded on tape and later transcribed and analyzed. The description of the morphological structure is based on this text material together with elicited paradigms. The analysis of syntax, on the other hand, is based exclusively on the recorded text material.

It is hoped that the present study will contribute to the knowledge of the grammatical structure of Keresan, which to the present has received little systematic treatment. Published grammatical material is confined to Boas' annotated Laguna texts and Toomey's brief outline.¹

¹Boas, A Keresan Text. Boas, Keresan Texts. Toomey, Outline of Keresan Grammar.

Unpublished manuscripts include Spencer's Master's Thesis which contains considerable data but suffers from faulty transcription, a failure to keep the several dialects separate and a lack of an over-all structural analysis.¹ At the present time a thorough analysis of Acoma Keresan is being undertaken by Wick R. Miller of the University of California.

The present analysis follows, in general, the type of approach to morphology that has become traditional in American descriptive linguistics. Morphological structure is analyzed primarily in terms of the distribution of morpheme classes and the classification of words on the basis of their constituent morphemes.

In the analysis of syntax I have been influenced to a great extent by Pike's "tagmemics", although this author has not been followed rigidly nor has his elaborate terminology been adopted.²

The Keresan orthography employed in this paper is based on my own phonemic analysis.³ The only published phonemic analysis, that of Spencer, is found to be inadequate and is not followed here.⁴ The only Keresan material in print that is based on an adequate phonemic analysis

¹Spencer, Preliminary Sketch of Keresan Grammar.

²Pike, Language. See also the entire issue of International Journal of American Linguistics, Volume 24, Number 4 (Oct. 1958).

³This is contained in an unpublished Master's Thesis (University of New Mexico, 1958). The present orthography takes into account a few minor corrections in the earlier analysis.

⁴Spencer, Phonemes of Keresan.

is that of Miller.¹ My analysis is in essential agreement with Miller's, although he analyzes aspirated and glottalized consonants as unit phonemes while they are treated here as clusters. Other differences such as the treatment of voiceless vowels stem from differences in the Santa Ana and the Acoma dialects of Keresan.

The following symbols are used in this paper:

Voiceless unaspirated stops: p, t, t^ʰ and k.

Aspirated stops: ph, th and kh.²

Glottalized stops: pʔ, tʔ and kʔ.

Voiceless unaspirated affricates: c and ç.

Aspirated affricates: ch, čh and çh.²

Glottalized affricates: cʔ, čʔ and çʔ.

Spirants: s, š and ʂ.

Glottalized spirants: sʔ, šʔ and ʂʔ.

Nasals: m and n.

Glottalized nasals: mʔ and nʔ.

Flap: r.

Glottalized flap: rʔ.

Semivowels: w and y.

Glottalized semivowels: wʔ and yʔ.

Glottal fricative: h.

¹Miller, Loanwords in Acoma. Miller, Acoma Kinship.

²Immediately preceding voiceless vowels aspirated stops and affricates do not contrast with their unaspirated counterparts. In this position the h is not written: cʔíçl water.

Glottal stop: ʔ.

High front unrounded vowel: i.

Mid to low front vowel: e.

Low central to back vowel: a.

High central to back unrounded vowel: ɨ.

Mid to high back rounded vowel: o.

Corresponding voiceless vowels: I, E, A, ɨ and O.

Stress with level pitch: ˊ

Stress with falling pitch: ˆ

Vowel length: ˙

1. Morphophonemics

The morphophonemic rules outlined below include only those statements which will simplify the morphological description to follow. These cover vowel reduction in the thematic adjunct, voicing and unvoicing of vowels, the assimilative change from $\dot{\text{z}}$ to o in certain pronominal affixes, the loss of a glottal stop in the thematic adjunct, the introduction of an o following some stem-final vowels and the change from c to t in the final syllable of some verb stems.

Excluded from consideration here are numerous cases of phonologically similar forms (e.g., second person subject markers z- and z'-) which at an earlier stage in the language may have been amenable to morphophonemic statements. In a synchronic description of the present Santa Ana dialect, however, they are most conveniently treated as allomorphs whose distribution is morphologically rather than phonologically defined.

1.1. Vowel Reduction

Changes in the vowel or vowels immediately following the pronominal affix in verbs may often be explained on the basis of vowel reduction. This involves a fusing of the thematic adjunct with a preceding voice marker or with the vowel of a preceding pronominal affix. Vowel reduction normally follows the patterns outlined below.

1. Two contiguous identical vowels reduce to a single vowel of the same quality. This reduction takes place, for instance, when

a pronominal prefix of the shape CV- precedes a stem whose initial vowel is of the same quality as the vowel of the prefix:

ṣʔáhkO (ṣʔa- + -áhkO) I bit you

Compare:

ṣʔáoni (ṣʔa- + -óni) I know you

Apparent shifts in accent in the above and other examples arise from orthographic conventions. Accent is indicated only on the first vowel of a cluster, although it is the entire cluster that is accented. This, together with the fact that accent is not indicated on prefixes of the shape CV- (the prefix vowel assumes the accent of the following thematic adjunct), results in a shift of the written accent to the prefix vowel.

Vowel reduction of the above type also takes place when the reflexive prefix -a- or the passive prefix -aʔa- occurs preceding a verb stem beginning with -a-:

ṣʔáhkO (ṣʔ- + -a- + -áhkO) you bit yourself

šáʔáhkónʔE (š- + -aʔa- + -áhkónʔE) you were bitten

Compare:

ṣʔáohkAČA (ṣʔ- + -a- + -óhkAČA) you saw yourself

šáʔáohitiʔtA (š- + -aʔa- + -óhtiʔtA) it was given to you

2. No vowels or vowel clusters occur with more than two moras of length. A reduction from three to two moras of length takes place when a short and a long vowel are juxtaposed:

cʔí·cóWA (cʔi- + -í·cóWA) I paid him
 čʔóicóWA (čʔo- + -í·cóWA) you paid me

3. The vowel -o- followed immediately by -a- reduces to the single vowel -a-. This occurs when the pronominal prefix ends with -o- and the verb stem begins with -a-:

čʔáhko (čʔo- + -áhko) you bit me
 kʔáhko (kʔo- + -áhko) bite me
 skʔáhko (skʔo- + -áhko) he bit me

Compare:

čʔóicóWA (čʔo- + -í·cóWA) you paid me
 kʔóicóWA (kʔo- + -í·cóWA) pay me
 skʔóicóWA (skʔo- + -í·cóWA) he paid me

4. The vowel -i- immediately followed by -a- reduces to the single vowel -e-. This takes place when a pronominal prefix ending with -i- precedes a verb stem beginning with -a-:

séhko (si- + -áhko) I bit him
 théhko (thi- + -áhko) maybe I bit him
 pʔéhko (pʔi- + -áhko) let him bite him

Compare:

síohkAČA (si- + -óhkAČA) I saw him

thíohkAČA (thi- + -óhkAČA) maybe I saw him

pʔíohkAČA (pʔi- + -óhkAČA) let him see him

5. The vowel -i- followed immediately by -i- reduces to the single vowel -i-. This takes place when certain stems beginning with -i- are preceded by a prefix containing -i-:

síhskʔA (si- + -íhskʔA) I drank

sí.tʔá (si- + -í.tʔá) I am full

Compare:

káhskʔA (k- + -íhskʔA) he drank

kí.tʔá (k- + -í.tʔá) it is full

6. The vowel -a- followed immediately by -i- reduces to the sequence -ai-. This change occurs in the first person hortative form of some verbs whose stems begin with -i-:

kháihskʔA (kha- + -íhskʔA) let me drink

Compare:

kháipáʔtO (kha- + -í.páʔtO) let me sleep

The patterns of vowel reduction outlined above avoid vowel sequences which do not occur in Santa Ana Keresan: -oa-, -ia-, -ií-, -ai- and double vowels. An exception is the single occurrence of the

sequence -oa- recorded in p'ákoara salamander. Other non-occurring sequences, -ie-, -ae-, -eí-, -ea-, -ie-, -ii-, -ia-, -io-, -oe- and -oi-, are not covered in morphophonemic statements because there are no morphological constructions which would bring the two vowels in juxtaposition.

In addition to the vowel reduction already described there are certain patterns of reduction which involve a vowel plus semi-vowel. These patterns may be summarized as follows:

-i- plus -ow- reduces to -iw-
 -a- plus -iy- reduces to -ay-
 -o- plus -iy- reduces to -oy-

Examples involve verb stems beginning in -ow- or -iy-:

síwí·tEyA (si- + -ówí·tEyA) I worshipped
 sáy'éipa·tE (sa- + -íy'éipa·tE) I looked for you
 sk'óyanikOyA (sk'o- + -íyanikOyA) he told me

Compare:

kówí·tEyA (k- + -ówí·tEyA) he worshipped
 c'íy'éipa·tE (c'i- + -íy'éipa·tE) I looked for him
 c'íyanikOyA (c'i- + -íyanikOyA) I told him

There are, in addition, two verbs in the present data in which the sequence -owi- reduces to -oi-:

kóišIkOyA (k- + -ówišIkOyA) he scolded him

kóitáʔA (k- + -óvitáʔA) he asked him

Compare:

síwíʃIkOyA (si- + -ówíʃIkOyA) I scolded him

síwítáʔA (si- + -ówítáʔA) I asked him

This type of reduction does not occur if the -w- is followed by a glottal stop or by a long vowel:

khówʔískIcA he scratched

kówí·tEyA he worshipped

Vowel reduction sometimes operates across an intervening glottal stop. The following patterns have been recorded:

1. -i- plus -aʔa- reduces to -eʔe-:

séʔéčʔA (si- + -éʔáčʔA) my tooth

Compare:

cáʔáčʔA (c- + -áʔáčʔA) his tooth

2. -iʔ- plus -a- reduces to -eʔe- when followed by a voiced consonant:

phéʔéyakA (phíʔ- + -áyakA) let him burn it

Compare:

cáyakA (c- + -áyakA) he burned it

3. -iʔ- plus -aʔa- reduces to -é.ʔe-:

phé.ʔé.šA (phíʔ- + -áʔá.šA) let him close it

Compare:

šáʔá.šA (š- + -áʔá.šA) you closed it

The second person hortative form of this verb contrasts with the third person form above only in the length of the first vowel:

phéʔé.šA (phi- + -áʔá.šA) close it

4. -iʔ- plus a short -i- or -i- reduces to -iʔ- when followed by a voiceless consonant:

phíʔkOpAWA (phíʔ- + -íkOpAWA) let him chop

phíʔčanʔI (phíʔ- + -ičanʔI) let him stand

Compare:

cíkOpAWA (c- + -íkOpAWA) he chopped

káčanʔI (k- + -áčanʔI) he stood

If the second vowel is -a- rather than -i- or -i- the sequence reduces to the single vowel -eʔ- under the above conditions:

phéʔcé (phíʔ- + -ácé) let him be talkative

This pattern of reduction does not occur if the second vowel is long and/or the sequence is followed by a voiced consonant or a glottal stop:

phí'í.pá'tO (phí'- + -í.pá'tO) let him sleep

phí'ínáhtA (phí'- + -ínáhtA) let him buy it

phí'í'çáçA (phí'- + -í'çáçA) let him run

5. -a'- plus -o- reduces to -o'o-:

thó'ót^yašI (thá'- + -ót^yašI) maybe I fasted

Compare:

s'ót^yašI (s'- + -ót^yašI) I fasted

thá'áohtA (thá'- + -áohtA) maybe I killed it

In a small minority of verbs a special type of vowel reduction occurs in addition to the usual patterns. No vowel clusters are retained in these verbs, and reduction follows the pattern V₁ plus V₂ reduces to V₁:

s'ást'i (s'a- + -íst'i) I gave you a liquid

t^yóst'i (t^yo- + -íst'i) you gave me a liquid

Compare:

st^yíst'i (st^y- + -íst'i) I (didn't) give him a liquid

1.2. Voicing

Voiceless vowels occurring in the final syllable (and sometimes those occurring in the penultimate syllable) of a word become voiced under certain conditions of suffixation.

A word-final voiceless vowel becomes voiced if it is followed by a suffix containing a voiced vowel:

t^yóhkáčhanikOyA (t^yóhkáčA + -nikOyA) you are looking at me
 tá'ác'ino. (tá'ác'I + -no.) when he arrived

Compare:

t^yóhkáčA you saw me
 tá'ác'I he arrived

Suffixes consisting of a glottalized voiced consonant followed by a voiceless vowel have a similar effect on a preceding vowel:

káhk^o (káhkO + -n^oE) they bit him
 čhóč^han^h (čhóčA + -n^hʔ) they two fell

Compare:

káhkO he bit him
 čhóčA he fell

A voiceless vowel cluster becomes voiced when followed by any suffix:

sč'íhkaitE (sč'íhkAI + -tE) I (didn't) lie down

Compare:

skʔóihkAI I lay down

Vowel clusters resulting from the suffixation of -kOyA (see 1.3) are voiced:

sóʔpeokOyA (sóʔpE + -kOyA) I am eating

Compare:

sóʔpE I ate

Those voiceless vowels which become long when they are voiced (indicated by the vowel length symbol in parentheses in the listing of forms: -ótʲomišE(·) to remember someone) are voiced when followed by any suffix:

ʂʔáotʲomiše·tE (ʂʔáotʲomišE + -tE) we (don't) remember you

Compare:

ʂʔáotʲomišE I (don't) remember you

Voiceless vowels in both the final and the penultimate syllables of a word are voiced when followed by any suffix if the two vowels are separated by a potentially voiced consonant (m, n, r, w or y):

ʂáhtIkoyasɛ (ʂáhtIkOyA + -sɛ) you are crying

Compare:

ʂáhtIkOyA you cried

Of much less frequent occurrence than the above processes is the unvoicing of a stem-final vowel. This occurs when a completely voiceless suffix follows a stem normally terminating in an unaccented voiced vowel which is preceded by a voiceless consonant:

s'áotIs̄ (s'áoti + -s̄) I am planting

Compare:

s'áoti I planted

1.3. Miscellaneous Processes

Four processes of rather restricted occurrence are as follows:

1. Vowel assimilation. The vowel -i- occurring in prefixes of the shape C*i*C- changes to -o- when the prefix is attached to verb stems beginning in -o-:

kóçóhkAČA (k*i*ç- + -óhkAČA) he saw you

nóçóhkAČA (n*i*ç- + -óhkAČA) let him see me

Compare:

k*i*çáhkO he bit you

n*i*çáhkO let him bite me

2. Loss of glottal stop. The glottal stop occurring in thematic adjuncts of the shape -Vʔ- is lost following a pronominal prefix containing a glottalized consonant:

ç'ópE (ç'- + -ó'pE) eat

Compare:

s'ópE you ate

3. Introduction of -o-. The addition of the continuative suffix -kOyA to a verb stem ending in -a, -e or their voiceless counterparts results in the formation of a vowel cluster the second member of which is -o-:

s'ópEekOyA (s'ópE + -kOyA) I am eating

síwí·teyaokOyA (síwí·tEyA + -kOyA) I am worshipping

Compare:

s'ópE I ate

síwí·tEyA I worshipped

4. Change of ç to t. The phoneme ç in the final syllable of a word changes to t when followed by a high front vowel:

sów'í·tItA (sów'í·çA + -(i)tA) I am making it¹

Compare:

sów'í·çA I made it

Certain pronominal prefixes also show a shift from ç to t (e.g., s'ç- and s't-; see Charts I and II). These allomorphs have undoubtedly

¹For an explanation of the change in the stem-final vowel see Sections 2.2.1.1.2.2 and 2.2.1.2.2.

developed from the process outlined above, but are, in the present stage of the language, no longer phonologically defined. Forms ending in t sometimes occur before vowels other than i:

síta I am

2. Morphology

2.1. Definition of the Word

While the validity of the word as a universal linguistic unit is sometimes questioned, it is found convenient in this description of the grammatical structure of Santa Ana Keresan to define such a unit. The morphology-syntax division employed here is based on the assumption that the word can be defined with sufficient precision for descriptive purposes. This does not mean that there may not remain a certain degree of arbitrariness in the drawing of some word boundaries, nor does it mean that the criteria for word division used here are necessarily applicable to other languages.

A number of definitions of the word as a universal linguistic unit have appeared in print. Perhaps the most rigorous of these is that of Greenberg.¹ This author's definition recognizes a hierarchy of units of varying degrees of freedom of distribution. The unit immediately below the word in hierarchical order is the "nucleus" which includes, in general, what would ordinarily be regarded as a morphemically complex stem as well as a single morpheme which is not part of a complex stem. A nucleus boundary, according to Greenberg, is an infra-word boundary if there is a maximum to the number of nuclei that can be inserted at that point. While this definition is accepted in principle,

¹Greenberg, *Essays in Linguistics*, pp. 27-34.

it presents certain difficulties from an operational point of view. To apply it to a specific language one must presumably have either a knowledge of the language comparable to that of a native speaker or else unlimited access to an exceptionally competent native informant. A third alternative would be to have at hand a sufficient corpus of text material so that essentially all possible nucleus sequences would be included. Even if such a corpus were collected the mechanical labor involved in cataloging every sequence would preclude the practicability of the method.

For the purpose of the present description a short-cut method of identifying word boundaries in Santa Ana Keresan has been adopted which, it is felt, will give results generally in keeping with the Greenberg type of definition. Rather than examine separately every nucleus boundary, boundaries between classes of nuclei will be examined as to whether or not they are word boundaries. It is assumed that the available text material will furnish sufficient distributional evidence on which to base a decision for all commonly occurring types of boundaries. In addition, a number of phonological cues are recognized which will be considered as supplementary criteria.

The phonological features which are regarded as relevant to word boundaries in Santa Ana Keresan are as follows:

1. Pauses. Whenever they appear, pauses indicate a highly probable word boundary. It is assumed that if pauses occur at all within words they will be extremely infrequent.

2. **Voicelessness.** No Santa Ana utterance is completely voiceless in normal speech. It is assumed that any morpheme or morpheme sequence that is consistently voiceless in all contexts cannot be a separate word. It is recognized, however, that certain short words may occur completely voiceless in some contexts. A one-syllable verbal auxiliary, for instance, occurring at the end of an extended utterance may be phonetically voiceless. On the basis of distributional evidence and of phonological evidence in other contexts it must, however, be regarded as a separate word.

3. **Pitch.** Normally the absolute pitch on accented syllables gradually falls off toward the end of certain phonological units. A rise in pitch on an accented syllable as compared to the preceding accented syllable ordinarily marks the beginning of a new phonological unit. It is assumed that this rise in pitch will not occur within a word except in hortative expressions characterized by an intonational pitch rise on the final syllable. Because phonological units marked by pitch contours coincide in general with those marked by pauses and because pitch differences are not so easily heard in recorded text material as pauses, only the latter criterion will be used in the present analysis.

The procedure for determining word boundaries will now be outlined in more detail and will be illustrated by its application to one of the more common classes of "nuclei": Type A verb stems, i.e., verb stems which in the non-future tense are regularly preceded by the pronominal indicator. Distributional and phonological evidence is based on a recorded text of about twelve minutes duration consisting

of a myth recounted by a native speaker of Santa Ana Keresan. The procedure involves three major steps as follows:

1. A tabulation is made of all elements preceding and following the class of nuclei under consideration. A very limited variety of elements at either position is taken as evidence of obligatory affixation at that point. Of 192 occurrences of Type A verb stems in the text 182 are preceded by a pronominal indicator and the remainder of 10 by a future tense indicator. This suggests but does not offer conclusive proof that the pronominal and future tense indicators are prefixes of Type A verbs.

A wide variety of elements either preceding or following the class of nuclei under consideration indicates that there is no obligatory affixation at that point, although some of the elements may be optionally occurring affixes. A tabulation of the elements occurring after those Type A verb stems which are preceded by a pronominal indicator shows the following:

Narrative particles

so	39	occurrences
?eo	22	"
?ai	4	"
?e	4	"
Aspect markers	22	"
Conditional markers	17	"
Number markers	13	"
Past tense markers	11	"

Referentials	9	occurrences
Pronominal markers	8	"
Prepositions	8	"
Modals	7	"
Exclamations	5	"
Connectives	4	"
Others	9	"

2. Each element which occurs in juxtaposition with the nucleus class under consideration is then examined separately as to its distribution. The two types of elements which are found to precede a Type A verb stem each have a limited distribution. Pronominal indicators occur only preceding or following a verb stem or preceding a verbal auxiliary stem; future tense indicators occur only preceding or following a verb stem. This restricted distribution is taken as a further indication that these elements are affixes rather than free words.

Of the elements which may follow a Type A verb stem the most commonly occurring is the narrative particle, *so*. An examination of this particle in the text shows a very wide distribution. It is found to be preceded by the following elements:

Verb stems	39	occurrences
Narrative particles		
?e	32	"
?ai	10	"
?eo	8	"
Referentials	16	"

Conditional markers	12 occurrences	
Prepositions	9	"
Number markers	5	"
Pronominal markers	4	"
Aspect markers	4	"
Verbal auxiliaries	4	"
Others	20	"

This particle is seen to be relatively unrestricted in its distribution and is apparently not a verb suffix. Further inspection of the text fails to reveal any limitation on the insertion of elements between the verb stem and the particle *şo*. An analysis of a short portion of the text chosen at random shows successively the following elements in this intervening position:

?eo plus referential

aspect marker plus number marker plus instrumental

pronominal indicator plus verbal auxiliary stem

?eo plus referential

referential plus pronoun plus ?e

number marker plus ?eo plus pronoun plus referential

future marker plus pronominal marker plus verbal auxiliary stem

A consideration of the other elements which may follow a Type A verb stem reveals that, with four exceptions, they exhibit a similar freedom of distribution. The four exceptions are the aspect, conditional, number and past tense markers. Aspect and past tense markers are found

in the text to be always preceded by a verb stem while number and conditional markers are preceded by either a verb stem or an aspect marker. The evidence is that the boundary between the verb stem and any one of these morphemes is an infra-word boundary.

3. The final step is to look for phonological cues which either support or contradict the conclusions arrived at on the basis of distributional evidence. Turning to the elements which precede a Type A verb stem (i.e., pronominal and future tense indicators), the text material fails to reveal any phonological cues that would contradict the conclusion that these are prefixes. A pause never intervenes between them and the following verb stem.

The situation is much different, however, in relation to the particle *šo* which so often immediately follows a verb stem. An examination of the text reveals that the two elements are nearly always separated by a pause. Of the 39 sequences of a verb stem plus *šo* only 5 were not interrupted by a pause, 8 were interrupted by a brief pause and 28 by a pause of one second or longer.

Aspect, number, past tense and conditional markers, which the distributional evidence indicates are included in the verb, are never separated from the verb stem nor from each other by a pause. Furthermore, certain of these markers such as the dual subject indicator, *-tI*, are always completely voiceless and cannot be free words.

The evidence, in brief, is that Type A verb stems always occur with a prefix (either a pronominal or a future tense marker) and may occur with one or more suffixes (an aspect, number or conditional

marker). The past tense markers, which we have concluded are part of the verb, are placed in a special class of morphemes which are regarded as neither free words nor suffixes but as clitics. These will be given further consideration below. All other elements found next to a Type A verb stem in the text must be regarded as separated from the verb by a word boundary. A full analysis of the elements included in a Type A verb would necessarily take into consideration the possibility of other affixes occurring in positions farther removed from the stem. This possibility, as well as the nature of nucleus boundaries not involving verb stems, can be evaluated by the procedure outlined above.

As has been noted in the preceding paragraph, there is a special class of morphemes, i.e., clitics, which are regarded as neither free words nor affixes. Distributional evidence indicates that clitics are never separated from the preceding stem (or stem plus affixes) by a word boundary. They are not regarded as suffixes, however, for the following reasons:

1. Clitics follow various kinds of words and are not, as are suffixes, part of a system of inflection:

mé·sA-š̌i (referential plus clitic) on the table

hínO-š̌i (pronoun plus clitic) to me

sʔátʲómI-š̌i (verb plus clitic) to my brother

2. Unlike suffixes, clitics do not cause the morphophonemic voicing of a preceding voiceless vowel:

kóʔpE-tʲano· (verb plus clitic) he who eats

2.2. Word Classes

Three major word classes are distinguished on the basis of their internal structure. Of these, the verbs and the verbal auxiliaries occur with inflectional affixes and are described in Sections 2.2.1 and 2.2.2 respectively. The third major word class is composed of all uninflected words and is described in Section 2.2.3.

Three principal levels of internal structuring are recognized in words: inflection, stem formation and derivation. The terms inflection and inflectional affixes are used only with reference to those affixes (described in Sections 2.2.1.1.2. and 2.2.2) which are external to the stem. Stem formation (described in relation to verbs in Section 2.2.1.2.1) involves the combination of a thematic adjunct with a core. The term derivation is used with reference to the internal structuring of certain verb cores and of some words of the uninflected class. Although clitics are, by definition, parts of words rather than free words, they are disregarded in the following description of word structure and are reserved for separate consideration in Section 2.3.

The general structure of the three major word classes may be distinguished as follows:

1. Verbs are always inflected, always include stem formation and sometimes include derivation.

2. Verbal auxiliaries are always inflected but never include stem formation or derivation.

3. Uninflected words include neither inflection nor stem formation but may include derivation.

Specific morphemes involved in each level of structuring may also serve to distinguish the major word classes. Verbs are distinguished from verbal auxiliaries, for instance, in that all verb stems are potentially capable of occurring with a future tense marker while verbal auxiliaries never include this morpheme.

2.2.1. Verbs

2.2.1.1. Verb Inflection

2.2.1.1.1. Grammatical Categories

The following grammatical categories are expressed by verb inflection, or, less commonly, by changes in the verb stem:

Subject person. First, second or third person subject is recognized in all intransitive verbs in the non-future tense. It is most commonly indicated by a prefix, although in some verbs the pronominal element is a suffix:

s-ó'pE	<u>I</u> ate	cóh-sE	<u>I</u> went
s-ó'pE	<u>you</u> ate	cóh-sO	<u>you</u> went
kh-ó'pE	<u>he</u> ate	cóh-kO	<u>he</u> went

In addition, some verbs occur with a pronominal morpheme indicating indefinite subject:

sk'-âok'oi one's wives

Subject-Object person. The subject and object of every transitive verb in the non-future tense are indicated by a single prefix. Seven principal subject-object combinations are recognized:

1. First person subject with third person object,
s-áhko I bit him.
2. Second person subject with third person object,
s-áhko you bit him.
3. Third person subject with third person object,
k-áhko he bit him.
4. First person subject with second person object,
sʔ-áhko I bit you.
5. Second person subject with first person object,
čʔáhko you bit me.
6. Third person subject with first person object,
skʔ-áhko he bit me.
7. Third person subject with second person object,
kʔc-áhko he bit you.

In some, but not all, transitive verbs a fourth person subject with third person object is recognized which is distinct from the third person subject with third person object:

k-óhkAČA he (third person) saw him
 cí-ohkAČA he (fourth person) saw him

Fourth person is used when the subject of the action is obscure as when the speaker is telling of something that he did not himself observe.

Number. Singular, dual and plural number are recognized in both the subject of intransitive verbs and in the subject and object of transitive verbs. The dual and plural of transitive verb subjects are normally expressed by suffixation, while the absence of number suffixes indicates singular subject:

káhkO he bit him

káhko-nʔɛ they two bit him

káhko-nʔE they bit him

Subject number of intransitive verbs may be indicated in a variety of ways:

1. By suffixation as in the case of transitive verbs:

cíkOpAWA he chopped

cíkOphawa-nʔɛ they two chopped

cíkOphawa-nʔE they chopped

2. By changes in the thematic adjunct (i.e., the vowel or vocalic complex that ordinarily immediately follows the pronominal affix). These changes are usually accompanied by other number markers but may sometimes constitute the only indication of number:

k-áo-tʲašI he fasted

k-ó.ʔó-tʲašI they two fasted

k-ó.wʔá-tʲašI they fasted

3. By the prefixation of different sets of pronominal allomorphs together with suffixation and/or changes in the thematic adjunct:

s-íhskʷA I drank
 sɛ́c-áʷskʷA we two drank
 sɛ́c-áʷskʷA-tA we drank

4. By suppletion of the verb stem:

cóh-sE I went
 sɛ́t-éʷéyO we two went
 sɛ́t-éʷkO we went

Object number of transitive verbs is indicated by changes in the thematic adjunct:

s-éhkO I bit him
 s-eʷéhkO I bit them two
 s-éiyʷáhkO I bit them

Tense. Future and non-future tenses are recognized. Verbs which include pronominal affixes are non-future. Future tense is indicated by replacing the pronominal affix with a tense marker. The pronominal element is then incorporated in a separate word, the verbal auxiliary, which follows the verb:

sáicóWA <u>I paid you</u>	nʷí·cóWA sáomʷA <u>I will pay you</u>
sóʷpE <u>I ate</u>	nóʷpE si <u>I will eat</u>

Mode. Pronominal affixes indicate not only the person of the subject or the subject and object but also indicate the mode. For each mode there is a distinctive set of pronominal affixes. A total of six modes is recognized -- indicative, negative, dubitative, hortative, negative hor-

tative and future hortative -- although for each subject-object combination only certain modes are formally indicated in the inflection:

cʷ-í·cóWA	<u>I paid him</u>	š-í·cóWA	<u>you paid him</u>
stʷ-í·cóWA	<u>I (didn't) pay him</u>	š-í·cóWA	<u>you (didn't) pay him</u>
tʷ-í·cóWA	<u>maybe I paid him</u>	ch-í·cóWA	<u>maybe you paid him</u>
kʷá-icóWA	<u>let me pay him</u>	ph-í·cóWA	<u>pay him</u>
nʷ-í·cóWA	<u>let me (not) pay him</u>	stʷ-í·cóWA	<u>(don't) pay him</u>
nʷ-í·cóWA	<u>let me pay him (in the future)</u>	ch-í·cóWA	<u>pay him (in the future)</u>

Certain particles characteristic of specific modes may precede the verb and are often necessary in order to avoid ambiguity. Verbs in the negative mode, for instance, are always preceded by the negative particle cáci, and those in the negative hortative mode by the particle pá·mí :

cáci stʷ-í·cóWA	<u>I didn't pay him</u>
pá·mí stʷ-í·cóWA	<u>don't pay him</u>

Voice. Reflexive, reciprocal and passive voice are indicated by prefixes following the pronominal prefix of transitive verbs. Reflexive and reciprocal voice are indicated by the prefix -a- and are distinguished one from another by different thematic adjuncts:

sʷ-á-ohkAčA	<u>I saw myself</u>
sʷ-á-ohkAčhanitI	<u>we two saw ourselves</u>
sʷ-á-yʷáhkAčhanitI	<u>we two saw each other</u>

Passive voice is indicated by the prefix -aʷa-:

skʔ-áʔá-icówa·nʔE I was paid

Aspect. There are three aspect morphemes. The most common of these expresses continuative action:

síohkAčha-nikOyA I am looking at him

Compare:

síohkAčA I saw him

A less common aspect morpheme indicates unfulfilled action:

sóʔpE-wE I have come to eat

Compare:

sóʔpE I ate

The third aspect morpheme indicates a remote state and occurs with only a limited number of verb stems:

kí·tʔá·-mA it is full (something remote from the speaker)

Compare:

kí·tʔá it is full (something at hand)

Benefaction. The benefactive relationship in verbs is indicated by a suffix:

cʔíthá·nʔiça-ni I worked for him

şáokʔáihca-ni I hit him for you

Compare:

sóthá·n'icA I worked

síok'áihcA I hit him

Condition. There are two morphemes which, when affixed to verbs, indicate action that is conditioned in relation to other verbs in the syntactic construction. These affixes cannot be consistently translated by any single English term but sometimes have the meaning of "if" or "when":

sk'óicówa·ne when he paid me (accomplished fact)

sk'óicówa·no· when he pays me or if he pays me

Compare:

sk'óicówa he paid me

2.2.1.1.2. Inflectional Affixes

Each inflectional affix is assigned an identification number and is a member of a century class. Century classes are numbered according to the relative order of occurrence of their members within transitive verbs. An exception to this sequential numbering of century classes is the case of classes 100 and 200 which are never represented in the same verb. Members of both Century Class 100 and 200 are always in initial position in the verb. The system of numbering is briefly as follows:

1. Century Class 100 includes all pronominal affixes.¹

¹These are termed affixes rather than specifically prefixes or suffixes because they sometimes precede and sometimes follow the verb core.

Within Century Class 100 are nine decade classes (100, 110, 120, 130, 140, 150, 160, 170 and 180), each of which includes affixes indicating a specific subject or subject-object combination. Within each decade class, with the exception of Decade Class 180, are six morphemes (numbered 101 through 106, 111 through 116, etc.), each of which is characteristic of a specific mode.

2. Century Class 200 consists of one morpheme, the future tense affix.

3. Century Class 300 consists of voice prefixes.

4. Century Class 400 consists of aspect suffixes.

5. Century Class 500 consists of the benefactive suffix.

6. Century Class 600 consists of number suffixes.

7. Century Class 700 consists of condition suffixes.

2.2.1.1.2.1. Century Class 100.

Affixes of Century Class 100 are tabulated in Charts I and II and comprise a set of pronominal indicators. Those affixes which occur with transitive verbs in their primary paradigms appear in Chart I; those occurring with intransitive verbs and with transitive verbs in their secondary paradigms are listed in Chart II. The two charts overlap to a considerable extent, as many forms appear both with transitive and intransitive verbs. This overlap is so extensive that it is convenient to group those pronominal indicators which occur with intransitive

Chart I

Century Class 100: Pronominal Affixes

Occurring with Transitive Verbs in Their Primary Paradigms

Indicative Mode	Negative Mode	Dubitative Mode	Hortative Mode	Negative Hortative Mode	Future Hortative Mode
Decade Class 100T: First person subject, third person object.					
101A si	102A sk	103A thi	104A kha	105A ni	106A ni
101B c ^ʔ i	102B st ^y	103B t ^ʔ i	104B k ^ʔ a	105B n ^ʔ i	106B n ^ʔ i
Decade Class 110T: Second person subject, third person object.					
111A ɣ	112A ɣ	113A ɕh	114A ph	115A sk	116A ɕh
111B š ⁱ	112B š ⁱ	113B chi	114B phi	115B st ^y	116B chi
Decade Class 120T: Third person subject, third person object.					
121A k	122A k	123A t ^y	124A phi	125A phi	126A phi
121B ci	122B ci	123B ti	124B p ^ʔ i	125B p ^ʔ i	126B p ^ʔ i
Decade Class 130: Fourth person subject, third person object.					
131A ci	132A ci	133A ti	134 p ^ʔ i	135 p ^ʔ i	136 p ^ʔ i
131B c ^ʔ	132B c ^ʔ	133B t ^ʔ			

Chart I -- continued.

Indicative Mode	Negative Mode	Dubitative Mode	Hortative Mode	Negative Hortative Mode	Future Hortative Mode
Decade Class 140: First person subject, second person object.					
141A ɣa	142A ɣa	143A ɕa	144A ɣa	145A ɣa	146A ɕa
141B ɣʔa	142B ɣʔa	143B ɕʔa	144B ɣʔa	145B ɣʔa	146B ɕʔa
Decade Class 150: Second person subject, first person object.					
151A tʲo	152A tʲo	153A tʲo	154A ko	155A ko	156A tʲo
151B ɕʔo	152B ɕʔo	153B ɕʔo	154B kʔo	155B kʔo	156B ɕʔo
Decade Class 160: Third person subject, first person object.					
161A sk	162A stʲ	163A thɕ	164A nɕ	165A nɕ	166A nɕ
161B skʔo	162B sɕʔ	163B thɕti	164B nɕti	165B nɕti	166B nɕti
Decade Class 170: Third person subject, second person object.					
171A kɕ	172A kɕ	173A tʲɕ	174A ɕ	175A stʲ	176A tʲɕ
171B kɕti	172B kɕti	173B tʲɕti	174B ti	175B sɕʔ	176B tʲɕti

Chart II

Century Class 100: Pronominal Affixes

Occurring with Intransitive Verbs and

with Transitive Verbs in their Secondary Paradigms

Indicative Mode	Negative Mode	Dubitative Mode	Hortative Mode	Negative Hortative Mode	Future Hortative Mode
Decade Class 100I: First person Subject.					
101A si	102A sk	103A thi	104A kha	105A ni	106A ni
101B c'i	102B st ^y	103B t'i	104B k'a	105B n'i	106B n'i
101C s	102C st ^y i	103C th	104C kh	105C kha	106C n
101D s'	102D skh	103D thá'	104D khá'	105D k'a	106D n'
101E s'i	102E sk'	103E thĕc	104E n	105E kh	106E nĕc
101F sĕc	102F ska	103F thĕt	104F n'	105F khá'	106F nĕt
101G sĕt	102G skhá'	103G ti	104G nĕc	105G n	
101H sk	102H sc'		104H nĕt	105H n'	
101I sk'o			104I š	105I nĕc	
			104J st'	105J nĕt	
				105K š	
				105L st'	

Chart II -- continued.

Indicative Mode	Negative Mode	Dubitative Mode	Hortative Mode	Negative Hortative Mode	Future Hortative Mode
Decade Class 110I: Second person subject.					
111A s̄	112A s̄	113A ch	114A ph	115A sk	116A ch
111B š̄i	112B š̄i	113B chi	114B phi	115B st ^y	116B chi
111C š̄	112C š̄	113C ch	114C t [?]	115C st ^y i	116C ch
111D s̄ [?]	112D s̄ [?]	113D chá [?]	114D č [?]	115D skh	116D chá [?]
111E k̄č	112E k̄č	113E t ^y č	114E č	115E sk [?]	116E t ^y č
111F k̄t	112F k̄t	113F t ^y ít	114F t ^y č	115F ska	116F t ^y ít
111G k̄ti	112G k̄ti	113G t ^y íti	114G t ^y ít	115G skhá [?]	116G t ^y íti
			114h ti	115H sc̄ [?]	
			114I ?		
Decade Class 120I: Third person subject.					
121A k	122A k	123A t ^y	124A phi	125A phi	126A phi
121B ci	122B ci	123B ti	124B p [?] i	125B p [?] i	126B p [?] i
121C kh	122C kh	123C čh	124C ph	125C ph	126C ph
121D k [?]	122D k [?]	123D č [?]	124D p [?]	125D p [?]	126D p [?]
121E ka	122E ka	123E t ^y a	124E pha	125E pha	126E pha
121F khá [?]	122F khá [?]	123F čhá [?]	124F phá [?]	125F phá [?]	126F phá [?]
121G c	122G c	123G t	124G phí [?]	125G phí [?]	126G phí [?]
121H c [?]	122H c [?]	123H t [?]			
121I c [?] i	122I c [?] i	123I t [?] i			
121J chi	122J chi	123J thi			
Decade Class 180: Indefinite subject.					
181A sk [?]					
181B sc̄ [?]					

verbs together with those which occur with transitive verbs and which indicate first, second or third person subject with third person object. Affix 101, for instance, occurs with intransitive verbs indicating first person subject and with transitive verbs indicating first person subject with third person object. The difference lies in the fact that there are more allomorphs of each affix affiliated with intransitive verbs than with transitive verbs. The overlapping decade classes appear in the two charts with the designations T or I (e.g., 100T, 100I) indicating transitive or intransitive. The morpheme membership of T and I decade classes are identical: both Decade Class 100T and 100I, for instance, consist of affixes 101, 102, 103, 104, 105 and 106. Decade Class 100I, however, includes many more allomorphs than does Decade Class 100T.

Affixes of Century Class 100 form a rather elaborate system. With few exceptions, there is a distinctive affix for each subject-object combination within each of the three principal modes (indicative, dubitative and hortative). There is, in addition, a distinctive affix for certain subject-object combinations within the negative and the negative hortative modes. A sixth mode, the future hortative, is indicated by affixes that, in most instances, are identical in form with the corresponding dubitative, hortative or negative hortative affix. For purposes of description, however, the entire series is filled in for each of the six modes, although this results in assigning two numbers to certain forms that, from one point of view at least, may be regarded as the same affix (e.g., affixes 111 and 112, 121 and 122). This arrangement results in eight decade classes, each of which contains six morphemes indicating the same subject-object combination, plus Decade Class 180 which consists

of a single morpheme. Each of the six morphemes within a decade class indicates a different mode. Within each mode the final digit of the affix identification number remains constant.

Allomorphs of each pronominal affix are distinguished by upper case letters following the identification number. All allomorphs listed in the charts are morphologically defined, i.e., their occurrence cannot be predicted in terms of phonological environment. Phonologically defined allomorphs (e.g., kóç derived by morphophonemic vowel assimilation from káç) are not listed in the charts but may be predicted from the morphophonemic processes described in Section 1.

The same upper case letters have been used to identify allomorphs which tend to be affiliated with the same group of verbs. This consistency is especially evident in transitive verbs and within each decade class:

cʔí·cówA (101B + verb stem) I paid him
 stʲí·cówA (102B + verb stem) I (didn't) pay him
 tʔí·cówA (103B + verb stem) maybe I paid him
 etc.

This tendency is also manifested to a lesser degree from one decade class to another within each mode:

cʔí·cówA (101B + verb stem) I paid him
 ší·cówA (111B + verb stem) you paid him
 cí·cówA (121B + verb stem) he paid him
 etc.

The fact, though, that not all affixes have the same number of allomorphs makes it obvious that this tendency cannot hold true in the case of every verb. Intransitive verbs, especially, often show a shift from one series of allomorphs to another even within the same decade class:

síçá.ʔApe (101F + verb stem) we two ate
 ská.ʔApeʔ (102A + verb stem) we two (didn't) eat
 thíçá.ʔApe (103E + verb stem) maybe we two ate
 etc.

The phonetic shape and distribution of many affixes of Century Class 100 is suggestive of certain historical processes. It is probable that many of the B-allomorphs were derived from the corresponding A-allomorphs either through glottalization (compare 141B with 141A, for instance) or through palatalization (compare 111B with 111A). B-allomorphs that appear to be a palatalized form of the corresponding A-allomorph nearly always occur with verb stems beginning in -i-. The few exceptions to this prevent the phenomenon from being described as a morphophonemic process.

Another type of historical development is suggested by the overlap in phonetic form of certain allomorphs of affixes belonging to different decade classes. This overlap is evident when one compares affixes of Decade Class 100I with those of Decade Class 160, affixes of Decade Class 110I with those of Decade Class 170, and affixes of Decade Class 120 with those of Decade Class 130. This suggests that the system of pronominal affixation may have developed from one in which intransitive subject and transitive object were equated.

2.2.1.1.2.2. Century Classes 200-700

Century Class 200 is comprised of a single morpheme which indicates future tense. It replaces affixes of Century Class 100 as to position in the verb but not as to function. The future tense affix includes the following allomorphs:

201A	n
201B	ni
201C	nʔ
201D	nʔi
201E	nʔc
201F	nʔt

Examples of allomorphs of affix 201 are as follows:

n-óʔpē	<u>will</u> <u>eat</u>
ní-ohkAČA	<u>will</u> <u>see</u>
nʔ-áohA	<u>will</u> <u>kill</u>
nʔí-ohAʔ	<u>will</u> <u>give</u>
nʔc-áʔApeʔ	<u>will</u> <u>eat</u> (dual subject)
nʔt-aʔ	<u>will</u> <u>be</u>

Century Class 300 contains two morphemes, 301 and 302, which function as voice indicators and occur prefixed to transitive verbs following the pronominal prefix.

Affix 301 expresses reflexive or reciprocal action with the single allomorph:

301	-a-
-----	-----

Affix 302 indicates passive voice and likewise includes only one allomorph:

302 -a'a-

The following examples illustrate the affixes of Century Class 300:

s'á-ohkAČA I saw myself

sk'á'á-icówa·n'E I was paid

Century Class 400 is comprised of three morphemes, 401, 402 and 403, which function as aspect indicators and (except for 401G) are suffixed to verb stems.

Affix 401 indicates continuative action and includes the following allomorphs:

401A -kOyA

401B -nikOyA

401C -tIkOyA

401D -kO

401E -(i)tA(·)

401F -s±

401G reduplication of the verb core

The following examples illustrate occurrences of allomorphs of affix 401:

só'peo-kOyA I am eating

kóhkAČha-nikOyA he is looking at him

c'ít^ya^z-tIkOyA I am catching him

lháiskʔí·ʔɬai-kO he is turning around

síokʔáihcI-tA I am hitting him

sʔáotI-sɬ I am planting

wíkʔí-wíkʔí-kA it is shaking

Associated with allomorph 401E, -(i)tA, is a change from -a or -A to -i or -I in the stem-final vowel of the verb to which it is suffixed. Compare síokʔáihcA I hit him with síokʔáihcItA I am hitting him.

Affix 402, which refers to unfulfilled action, contains the following allomorphs:

402A -nE(·)

402B -nʔE(·)

402C -wE

402D -tE

402E -ʔ

Illustrations of the occurrence of allomorphs of affix 402 are as follows:

skóhkAčA-nE I (didn't) see him

cʔí·cówa·-nʔE I came to pay him

sóʔpE-wE I came to eat

sčʔínkai-tE I (didn't) lie down

sčʔó·pe-ʔ I (didn't) tell him

Affix 403 expresses remote state and has the following allomorphs:

403A -mA

403B -še

The following illustrate the allomorphs of affix 403:

kí·tʔá.-mA it is full (something remote)

kʔátʔá.-še it is his (a living animal not immediately obvious)

Century Class 500 contains one morpheme, the benefactive suffix, which has two allomorphs:

501A -ni

501B -mʔi

These are illustrated by the following examples:

šáokʔáihca-ni I hit him for you

šʔáoti-mʔi I planted it for you

Century Class 600 contains two morphemes, 601 and 602, which express subject number. They are suffixed either directly to the verb stem or follow affixes of Century Classes 400 and/or 500.

Affix 601 indicates dual subject and includes the following allomorphs:

601A -nʔɛ

601B -nɛtɪ

601C -tʔɪ

601D -mʔɛ

601E -m̄tI
 601F -mʔIsOtI
 601G -sOtI
 601H -p̄

The occurrence of these allomorphs is illustrated by the following examples:

sʔíkOphawa-nʔ̄ we two chopped
 síohkAčha-n̄tI we two saw him
 sʔitʔaʔ-tʔ̄I we two caught him
 sʔáoti-mʔ̄ we two planted
 sáiskʔ̄.ʔ̄Içai-m̄tI we two turned around
 sʔíoni-mʔ̄IsOtI we two know him
 s̄té.ʔ̄E-sOtI we two are
 síwí.teya-p̄ we two worshipped

Affix 602, expressing plural subject, has the following allomorphs:

602A -nʔ̄E(·)
 602B -nE(·)
 602C -tA
 602D -mʔ̄E
 602E -mE
 602F -mʔ̄AsA
 602G -wA
 602H -wE
 602I -š̄E

602J -ʔE

602K -(i)yA

602L -sE(·)

Examples of the allomorphs of affix 602 are as follows:

sʔíkOphawa-nʔE we choppedsíohkAčĀ-nE we saw himsʔítʲaʔ-tA we caught himsáwʔá·ti-mʔE we plantedsáyʔá·skʔá·ʔɪçai-mE we turned aroundsʔíoni-mʔAsA we know himsíwí·teya-wA we worshippedcáʔá·tʔA-wE they opened itsówʔAtʲómĪ-šE our brothersówʔawáhne-ʔE we huntedcí·cówi·tĪ-yA they are paying himkóhkAčĥanikoya-sE they are looking at him

Century Class 700 is comprised of two morphemes, 701 and 702, which express conditional action.

Affix 701 has two allomorphs:

701A -ne

701B -tE

Affix 702 has a single allomorph:

702 -no·

The following examples illustrate the occurrence of allomorphs of affixes 701 and 702:

sk'óicówa.--ne when he paid me

kóhkAčhane.--tE when they saw him

sk'óicówa.--no. when he pays me

It is difficult to differentiate affixes 701 and 702 by meaning function except that 702 apparently has a dubitative connotation lacking in 701.

2.2.1.1.3. Distribution of Affixes

The structure of verbs may be represented by the following formulas:

1. TV = + 100/200 ± 300 + Stem ± 400 ± 500 ± 600 ± 700

2. IVA = + 100/200 + Stem ± 400 ± 600 ± 700

3. IVB = + Core ± 400 + 100/200 + TA ± 700

These formulas are to be read as follows:

1. Transitive verbs are composed of two obligatory parts, a stem and a prefix of either Century Class 100 or Century Class 200. Prefixes of Century Class 300 and suffixes of Century Classes 400, 500, 600 and 700 may also occur.

2. Intransitive verbs of Type A are composed of a stem preceded

by an affix of either Century Class 100 or 200, with or without suffixes of Century Classes 400, 600 and 700. The inclusion of a suffix of Century Class 500 would cause the verb to be transitive.

3. Intransitive verbs of Type B are composed of a verb core, an affix of either Century Class 100 or 200 and a thematic adjunct in that order. The core plus the thematic adjunct comprises in this case a discontinuous stem. Affixes of Century Classes 400 and 700 may also be included. The only member of Century Class 400 which may occur with this type of verb, however, is 401G (i.e., reduplication of the verb core).

Although there are four orders of optionally occurring suffixes that may follow transitive verbs, no verbs in the present data occur with more than three suffixes and very few with more than two. The following examples illustrate some of the more expanded types of verb construction occurring in the data:

sk-óhkAča-nikoya-se--tE (102A + Stem + 401B + 602L + 701B)

we are (not) looking at him

sá-ok'áihcI-tha·-ni (141A + Stem + 401E + 501A)

I am hitting him for you

čh-ó'peo-koya-ne (123C + Stem + 401A + 701A)

when he was eating

A complete set of paradigms of transitive verbs in all of their possible inflections includes the following:

1. Primary paradigms. The simplest verb paradigm is composed of the seven or eight subject-object combinations within each of the six modes (a maximum of forty-eight forms). These forms consist of a prefix of Century Class 100 attached to the verb stem and belong to one of four transitive verb classes depending on the particular set of allomorphs with which they occur (see Section 2.2.1.3 and Appendix A).

2. Forms with prefixes of Century Class 300. Transitive verbs occurring with the reflexive or the passive voice prefix take a different set of pronominal allomorphs than they do in their primary paradigms. Furthermore, the four-fold class division disappears and all transitive verbs in the reflexive or passive voice occur with the same set of pronominal allomorphs.

Verbs in the reflexive voice occur with the following set of pronominal allomorphs:

sʔ	skháʔ	tháʔ	kháʔ	nʔ	nʔ
101D	102G	103D	104D	105H	106D
sʔ	sʔ	cháʔ	cʔ	skháʔ	cháʔ
111D	112D	113D	114D	115G	116D
kháʔ	kháʔ	čháʔ	pháʔ	pháʔ	pháʔ
121F	122F	123F	124F	125F	126F

Those in the passive voice occur with the following:

skʔo	sčʔ	ti	ni	ni	ni
101I	102H	103G	104F	105A	106A
š	š	ch	c	sčʔ	ch
111C	112C	113C	114E	115H	116C
cʔ	cʔ	tʔ	pʔi	pʔi	pʔi
121H	122H	123H	124B	125B	126B

See Appendix A for transitive verb paradigms showing these inflections.

Verbs in the passive voice regularly take the plural subject suffix:

ekʔ-áʔá-icówa·-nʔE (101I + 302 + Stem + 602A) I was paid

An alternative translation of this verb would be they (some unspecified persons) paid me. This translation is consistent with the presence of the plural subject suffix and with the expansion of the thematic adjunct to indicate dual or plural person being acted upon. It is not consistent, however, with the presence of pronominal affixes of Decade Classes 100I, 110I and 120I, which express first, second and third person subject respectively.

5. Forms expressing dual and plural person. Dual and plural subjects are indicated by suffixes of Century Class 600. The particular allomorphs of suffixes 601 and 602 which occurs with transitive verbs depends on the class to which the verb belongs. These classes are described in Section 2.2.1.3. Dual and plural object are indicated by the expansion of the thematic adjunct as described in Section 2.2.1.2.1.

In contrast to the pronominal forms of their primary paradigms, most transitive verbs take a different set of pronominal allomorphs in forms indicating dual or plural object. Verbs which occur with B-allomorphs of the pronominal prefixes in their primary paradigms take the A-allomorphs when the object is dual or plural:

čʔóicówa (151B + Stem) you paid me

tʔáʔáicówa (151A + Stem) you paid us two

With the exception of affix 101, the same set of pronominal allomorphs occur in transitive verbs expressing dual or plural subject as occur in their primary paradigms. Those verbs which include allomorph 101B in their primary paradigm take the E allomorph in those forms indicating dual or plural subject:

cʔí·cowa (101B + Stem) I paid him
 sʔí·cowa·nʔE (101E + Stem + 601A) we two paid him
 sʔí·cowa·nʔE (101E + Stem + 602A) we paid him

4. Benefactive forms. The presence of a benefactive suffix often results in the affixation of a different set of pronominal allomorphs than would otherwise occur. This is true of verbs that, without the benefactive suffix, are intransitive as well as those that are transitive:

cʔíthá·nʔiçani (101B + Stem + 501A) I worked for him
 sʔáhkoni (141A + Stem + 501A) I bit him for you

Compare:

sóthá·nʔiçA (101C + Stem) I worked
 sʔáhkO (141B + Stem) I bit you

5. Forms with suffixes of Century Classes 400 and 700. The allomorphs of these suffixes which occur with specific transitive verbs depend on the verb class as outlined in Section 2.2.1.3.

6. Verbs in the future tense. All forms of transitive verbs

outlined above may be changed to the future tense by replacing the pronominal prefix with affix 201. This results in a form of the verb that does not include subject-object person and which must be followed by a verbal auxiliary.

Transitive verbs which occur with allomorph 101A in forms indicating first person subject with third person object (transitive verb Classes A and B) take allomorph 201B:

síohkAčA (101A + Stem) I saw him

níohkAčA (201B + Stem) will see

Those verbs which occur with allomorph 101B (Classes C and D) take allomorph 201D:

c'í·cówA (101B + Stem) I paid him

n'í·cówA (201D + Stem) will pay

Type A intransitive verbs follow the same pattern of inflection as transitive verbs with the exception that they do not occur with any of the affixes of Century Classes 300 or 500 nor with certain affixes of Century Class 100 (e.g., those which express first person subject with second person object). Like transitive verbs, they must be classified on the basis of their occurrence with particular sets of allomorphs of the inflectional affixes.

Type B intransitive verbs are more restricted in their inflection than Type A, never occurring with affixes of Century Class 600. They are also characterized by expressing continuative action by the reduplication of the verb core (allomorph 401G):

wá'k'íkA it moved

wá'k'íwá'k'íkA it is shaking

A few Type B intransitive verbs always occur with -n'I in word-final position. This morpheme cannot be assigned a meaning function and does not fit in any of the classes of inflectional affixes:

khá'--k-a-n'I (Stem + l2lA + TA + -n'I) it is red

Compare:

khá'·sen'I I am red

Specific verb stems vary considerably in their potentiality for occurring with the full gamut of inflectional affixes. Some verbs never occur with a continuative action suffix. The verb sóthá·n'icA, for instance, may mean either I worked or I am working. Other verbs may lack a dual or a plural subject suffix:

síhsk'A I drank

sá'çá'sk'A we two drank

khó'pE he ate

kâ'·ApE they ate

Many verbs are defective in that because of semantic limitations they do not take a full set of pronominal prefixes. The verb -áh-čA to rain, for instance, regularly occurs with third person subject prefixes, but never occurs with a first or a second person subject prefix.

There is a tendency for words beginning in k-, kʔ- or kh- to develop by analogy a set of inflectional affixes even though the word may not have originally been a verb. This may be seen in the word kasí·kI cacique borrowed from the Spanish. The initial k- no longer behaves like a part of the stem but is identified with the third person prefix and may be replaced by other pronominal or future tense affixes:

sesí·kI I am a cacique

nesí·kI si I will be a cacique

Some words have an indicative and a dubitative form but never occur with the future tense prefix or any other inflectional affix:

kʔó·thí mountain

čʔó·thí there may be a mountain

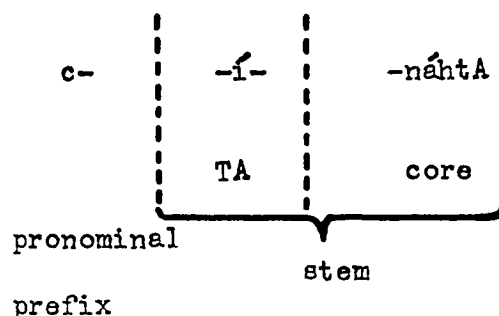
2.2.1.2. Verb Stems

Verbs are analyzed as consisting of a stem plus inflectional affixes of the various classes previously described. The stem itself is analyzed as consisting of two obligatory components, a thematic adjunct and a core. Thematic adjuncts and the manner in which they combine with verb cores to form verb stems are described under "stem formation" in the section to follow. Certain verb cores may, in turn, be further analyzed. These will be described under "core derivation" in Section 2.2.1.2.3.

2.2.1.2.1. Stem Formation

The thematic adjunct (abbreviated TA) is an element of the verb

occurring, in most cases, immediately preceding the core (i.e., it is the initial element of the verb stem). The verb *cínáhta* he bought it, for instance, may be dissected as follows:



In those verbs in which the pronominal affix follows the core the thematic adjunct is the element immediately following the pronominal affix:

cóh-k-0 (core + pronominal affix + TA) he went

The stem in such cases, as *cóh- -0* in the above example, is discontinuous.

Thematic adjuncts occurring in transitive verbs are either simple, indicating singular object, or expanded to indicate dual or plural object. Simple thematic adjuncts in transitive verbs are most commonly single vowels, short or long, or single vowels followed by h:

k-ó-ni he knows him

cʔ-í·-cówa I paid him

tʏ-óh-ti you gave it to me

A few transitive verbs occur with vowel clusters within the simple thematic adjunct:

sʔ-áih-khó·mi I brought it to you

A particular transitive verb ordinarily retains the same thematic adjunct throughout its primary paradigms (see Appendix A). Frequently, however, there is a different thematic adjunct in certain of the secondary paradigms such as the passive voice (see 2.2.1.2.2).

To indicate dual or plural object the thematic adjunct of transitive verbs is expanded according to a pattern that is regular but not analyzable in terms of additive morphemes. Chart III lists simple transitive thematic adjuncts together with their dual and plural expanded forms. With the simple thematic adjuncts are listed vowels or vowel clusters which result from a combination of the final vowel of a pronominal prefix together with the following thematic adjunct. This includes, for instance, -e- resulting from a combination of -i- plus -a- and -ao- resulting from a combination of -a- and -o- (see 1.1 for examples of vowel reductions). Only those vowels and vowel clusters are listed which have actually been recorded in transitive verbs. This accounts for the omission from the chart of many vowels and vowel combinations that might be expected to occur.

Thematic adjuncts and their expansions are listed in the chart by verb types. Verbs are typed according to their principal thematic adjunct and the thematic adjunct which occurs in the passive voice. Verbs of type oh/ah, for instance, occur with -óh- as thematic adjunct in most forms, but with -áh- in the passive voice:

kóhkAČA (k- + -óhkAČA) he saw him

skʔáʔáhkAČAnE (skʔo- + -aʔa- + -áhkAČAnE) he was seen

Chart III

Expansion of Thematic Adjuncts

Verb Type	Simple	Dual Expanded	Plural Expanded
ah/ah	-áh- -éh-	-á'áh- -é'éh-	-áiy'áh- -éiy'áh-
aih/aih	-áih- -éih-	-á'áih- -é'éih-	-áiy'áih- -éiy'áih-
ao/ao	-áo- -éo-	-á'áo- -é'éo-	-áiy'áo- -éiy'áo-
i·/i·	-í·- -ái- -ói-	-á'ái- -á'ái- -á'ái-	-áiy'á·- -áiy'á·- -áiy'á·-
i/a	-í- -á- -ó-	-áh- -áh- -áh-	-áiy'áh- -áiy'áh- -áiy'áh-
oh/ah	-óh- -áoh- -íoh- -áh-	-ó'óh- -á'áoh- -íy'óh- -á'áh-	-ów'áh- -áow'áh- -íow'áh- -áow'áh-
oh/oh	-óh- -áoh- -íoh-	-á'áoh- -á'áoh- -á'áoh-	-áiw'áh- -áiw'áh- -áiw'áh-

Examples of the expansion of thematic adjuncts in the order that they occur in Chart III are as follows:

sáhkO you bit him

sá'áhkO you bit them two

sáiy'áhkO you bit them

séhkO I bit him

sé'éhkO I bit them two

séiy'áhkO I bit them

s'áihkhó.mi I brought it to you

sá'áihkhó.mi I brought it to you two

sáiy'áihkhó.mi I brought it to you all

c'éihkhó.mi I brought it to him

sé'éihkhó.mi I brought it to them two

séiy'áihkhó.mi I brought it to them

sáo'0 I gave you something flat

sá'áo'0 I gave you two something flat

sáiy'áo'0 I gave you all something flat

c'éo'0 I gave him something flat

sé'éo'0 I gave them two something flat

séiy'áo'0 I gave them something flat

ší.cóWA you paid him

sá'áicóWA you paid them two

sáiy'á.cóWA you paid them

ṣáicóWA I paid you

ṣá'áicóWA I paid you two

ṣáiy'á·cóWA I paid you all

č'óicóWA you paid me

t^yá'áicóWA you paid us two

t^yáiy'á·cóWA you paid us

šít^ya you caught him

šáht^ya you caught them two

šáiy'áht^ya you caught them

ṣ'át^ya I caught you

ṣáht^ya I caught you two

ṣáiy'áht^ya I caught you all

č'ót^ya you caught me

t^yáht^ya you caught us two

t^yáiy'áht^ya you caught us

kóhkAČA he saw him

kó'óhkAČA he saw them two

ków'áhkAČA he saw them

ṣáohkAČA I saw you

ṣá'áohkAČA I saw you two

ṣáow'áhkAČA I saw you all

síohkAČA I saw him

síy'óhkAČA I saw them two

síow'áhkAČA I saw them

sk'á'áhkAČAnE I was seen

sk'á'á'áhkAČAnE we two were seen

sk'á'á'áow'áhkAČAnE we were seen

t^yóhti you gave it to me

t^yá'áochti you gave it to us two

t^yáiw'áhti you gave it to us

š'áochti I gave it to you

šá'áochti I gave it to you two

šáiw'áhti I gave it to you all

šíochti you gave it to him

šá'áochti you gave it to them two

šáiw'áhti you gave it to them

Thematic adjuncts occurring in intransitive verbs may be single vowels, vowel clusters, single vowels or vowel clusters followed by -h- or -?-, or other types of sequences involving vowels, semivowels, -h- and -?-:

k-ó-yá he skinned it

š-â•-ni you walked

s'-ái-natA I cooked it

cʔ-íh-kAI he lay down
 s-óʔ-pE I ate
 sʔ-áoh-tA I killed it
 s-áoʔ-pínacA I sewed
 k-á.ʔA-pe they two ate
 s-ówʔA-thá.nʔiçanʔE we worked

Intransitive verbs normally retain the same thematic adjunct in all their forms as long as the subject number is the same. There often is, however, a change in the thematic adjunct corresponding to a change in the number of the subject. This change may resemble the expansion of thematic adjuncts in transitive verbs:

s-ó-thá.nʔiçA I worked
 s-ówʔA-thá.nʔiçanʔE we worked

There is no regular pattern of expansion, however, in intransitive as there is in transitive verbs. Stem variants based on changes in the thematic adjunct are described in more detail in Section 2.2.1.2.2.

2.2.1.2.2. Stem Variants

Stem variants result primarily from changes in the thematic adjunct and from changes in the final vowel of the verb stem. These changes may occasionally involve the initial consonant of the stem or a non-final vowel as well. Certain of these changes are unpredictable and must be indicated in a listing of stems. Others may be predicted on the basis of morphophonemics or other regular patterns of change previously described.

Various of the morphophonemic processes involve changes in the verb stem. Vowel reduction (see 1.1) usually results in a fusing of the thematic adjunct with a preceding vowel. If the resultant vowel is regarded as belonging to the stem rather than to the preceding prefix, stem variants will show a shift in the initial (thematic adjunct) vowel:

k-áhko (k- + -áhko) he bit him
 ɛʔ-áhko (ɛʔa- + -áhko) I bit you
 s-éhko (si- + -áhko) I bit him

If, on the other hand, the vowel which results from such a fusion is assigned to the prefix, stems will show a loss of the initial vowel:

k-áhko he bit him
 ɛʔá-hko I bit you
 sé-hko I bit him

Of the two alternative ways of making the prefix-stem cut, the first is preferred.

Morphophonemic reduction of vowel plus semivowel sequences likewise results in stem changes:

k-ówí·tEyA (k- + -ówí·tEyA) he worshipped
 sí-wí·tEyA (si- + -ówí·tEyA) I worshipped
 k-óišIkOyA (k- + -ówíšIkOyA) he scolded him
 sí-wíšIkOyA (si- + -ówíšIkOyA) I scolded him

cʔ-íyʔéipa·tE (cʔi- + -íyʔéipa·tE) I looked for him

sá-yʔéipa·tE (sa- + -íyʔéipa·tE) I looked for you

Morphophonemic processes involved in suffixation, too, often result in stem changes (see 1.2 and 1.3):

k-óhkAčA (k- + -óhkAčA) he saw him

k-óhkAčha-nikOyA (k- + -óhkAčA + -nikOyA) he is looking at him

k-óʔpE (k- + -óʔpE) he ate

k-óʔpeo-kOyA (k- + -óʔpE + -kOyA) he is eating

s-ówʔî·çA (s- + -ówʔî·çA) I made it

s-ówʔî·tI-tA (s- + -ówʔî·çA + -(i)tA) I am making it

All of the preceding examples of stem variants involve changes that are based on regular morphophonemic processes. They are predictable if the verb class is known, i.e., if it is known which set of allomorphs of the inflectional affixes occurs with the verb.

Stem variants may also result from regular changes which do not involve morphophonemic processes. The most common of these is the expansion of the thematic adjunct to indicate dual or plural object of transitive verbs. This kind of change is regarded as stem change rather than inflection because (1) the changes are of such a nature that no additive morphemes can be isolated and (2) it parallels in many ways the kind of irregular change which takes place in certain intransitive verb stems in the dual and plural as compared with the singular forms. The expansion of thematic adjuncts in transitive verbs has been described in Section 2.2.1.2.1 and examples given.

The change to -i or -I of a stem-final -a or -A preceding allomorph -tA of the continuative action suffix has been mentioned in Section 2.2.1.1.2.2:

cʔí·cówA (cʔi- + -í·cówA) I paid him

cʔí·cówi·-tA (cʔi- + -í·cówA + -tA) I am paying him

This change is not explainable on the basis of morphophonemics but is regular and predictable in that it always takes place in those stems belonging to classes which occur with the allomorph in question.

Stem variants resulting from unpredictable changes and which are indicated in the listing of stems are of three types: (1) Variants based on irregular changes in the thematic adjunct, (2) variants based on changes in the final syllable of a verb under certain conditions of suffixation and (3) variants based on changes that take place in the stem in the future as compared with the non-future tense.

1. Certain transitive verbs as well as many intransitive verbs of both major types (i.e., those in which the pronominal element precedes the stem and those in which it follows the core) occur with changes in the thematic adjunct that are comparatively irregular and unpredictable.

A complete shift of the thematic adjunct vowel of transitive verb stems often occurs when the verb is inflected to indicate passive voice. This is illustrated by the following examples in which the thematic adjunct is set off by hyphens:

sk-óh-kAČA he saw me

skʔáʔ-áh-kAČAnE I was seen

This is in contrast to other verb stems which exhibit no such change:

sk-óh-ti he gave it to me

skʔáʔá-oh-tiʔtA it was given to me

The shift from -óh- to -áh- in the verb to see and in similar verbs is predictable neither on the basis of phonological environment nor on the basis of verb classes as the term is used in this paper.

Such stems are therefore listed in the following form:

-óh/áh-kAČA to see

Stems which are not characterized by such vowel change are listed with their single unexpanded thematic adjunct:

-óh-ti to give

Those verbs in which all vowel sequences reduce to the first member of the sequence exhibit a number of stem variants:

cʔ-ístʔi I gave him the liquid

ʂʔ-ástʔi I gave you the liquid

tʲ-óstʔi you gave me the liquid

The fact that there is this type of irregular vowel reduction in forms within the primary paradigms is indicated by listing the stem with an asterisk. The stem of the above verb, which is also characterized by a shift to -á- in the passive voice, is listed thus:

-í/á-stʔi* to give a liquid

Intransitive verbs are commonly characterized by a different thematic adjunct for each of the three numbers:

s-í--páʔtO I slept

síç-áʔái-páʔtO we two slept

sít-éʔé--páʔtO we slept

This stem is listed with its three thematic adjuncts:

-í./áʔái/éʔé--páʔtO to sleep

Other verbs may have the same thematic adjunct in the singular and dual forms but a different one in the plural:

s-ó-thá·nʔiçA I worked

s-ó-thá·nʔiçanʔE we two worked

s-ówʔA-thá·nʔiçanʔE we worked

Still others have a distinct thematic adjunct in the singular forms but the same in the dual as in the plural forms:

k-íh-skʔA he drank

k-áʔ-skʔA they two drank

k-áʔ-skʔAtA they drank

These are listed as -ó/ó/ówʔA-thá·nʔiçA to work and -íh/áʔ/áʔ-skʔA to drink respectively.

A few intransitive verbs maintain the same thematic adjunct throughout all of their inflections:

cʔ-íkOpAWA I chopped

sʔ-íkOphawanʔI we two chopped

sʔ-íkOphawanʔE we chopped

Stems of this type are listed with their single thematic adjunct:

-í-kOpAWA to chop

The change in the thematic adjunct in the dual and/or the plural forms of intransitive verbs often resembles very closely the expansion of thematic adjuncts in transitive verbs:

k-áʔ-kO he is located

k-á.ʔA-kO they two are located

There is, however, no consistent pattern in intransitive verbs and each thematic adjunct must be listed separately rather than attempt to describe patterns of expansion as was done in the case of transitive verbs.

Intransitive verbs in which the pronominal element follows the verb core are often characterized by changes in the thematic adjunct similar to those already described:

chá.-k-A he breathed

chá.-k-á.ʔA they two breathed

chá.-c-é they breathed

Stems of this type are listed thus:

chá.---A/á.ʔA/é to breathe

Type B intransitive verbs in the first person singular form normally occur with a thematic adjunct the vowel quality of which is independent of the second or third person forms. If the thematic adjunct consists of a single voiceless vowel the first person form is -E, although the vowel may be either -A or -O in the other numbers:

cóh-s-E I went

?ésO-s-E I sneezed

Compare:

cóh-k-O he went

?ésO-k-A he sneezed

The first person form of a voiced thematic adjunct is -i if it is unaccented and -é if accented:

?é-s-i I am willing

?é.-s-é my name

While this phenomenon is only partly explainable in terms of morphophonemics, it is regular and not indicated in the listing of stems. The citation form of the stem indicates only the thematic adjunct which occurs in the second and third person:

cóh--O to go

2. The stem-final vowel in some verbs alternates from a voiceless vowel in those forms without suffixes to a long voiced vowel in forms with a suffix:

cʔí·cówA I paid him

sʔí·cówá·nʔE we paid him

This is in contrast to most stem-final voiceless vowels which remain voiceless or change to a short voiced vowel under varying conditions of suffixation (see 1.2):

síohkAČA I see him

síohkAČAnE we see him

síohkAČhanikOyA I am looking at him

Stems in which this type of lengthening occurs are listed with a vowel length symbol in parenthesis following the stem:

-í·-cówA(·) to pay

This lengthening occurs not only when the vowel quality remains the same but also when it is changed to -i- preceding certain suffixes:

cʔí·cówi·tA I am paying him

Certain verbs show another type of change in the stem-final syllable when it is followed by a suffix. This involves the addition of a glottal stop if the initial consonant of the suffix is voiceless or the rearticulation of the stem-final vowel if the suffix begins with a potentially voiced consonant:

cʔítířa I fed him

cʔítířaʔ-tA I am feeding him

sʔítířaʔa-nʔI we two fed him

Stems which exhibit this phenomenon are listed thus:

-í/á-tíša(?) to feed

3. Verb stems normally remain unchanged in the future tense as compared with the non-future tense:

s-ó'pE I ate

n-ó'pE will eat

Some verbs, however, have different forms of the stem in the two tenses. Changes are of two types, either the voicing of otherwise voiceless vowels or the addition of a glottal stop in the future tense. Those verbs which are described above as adding a glottal stop under certain conditions of suffixation also add the glottal stop in the future tense:

n'ítíša' will feed

The following examples illustrate the voicing in the future tense of vowels that are otherwise voiceless:

káistAyA it is cold

néistaya will be cold

c'ínkAI he lay down

n'ínkai will lie down

In the listing of stems of this type the two variants are separated by a virgule:

-ái-stAyA/staya to be cold

An additional type of stem variant may be noted which involves a change in the phonemic content of the stem, but which is regarded as an intonational feature rather than part of the morphology. This is an optional form which includes stressing together with voicing and/or rearticulation of the final vowel of verbs in the hortative, negative hortative and future hortative modes:

phónkAčA or phónkAčhá look at him!

č'ópeE or č'ópe'é eat it!

2.2.1.2.3. Verb Core Derivation

The verb core is the element which together with the thematic adjunct makes up the verb stem. The verb core may be a single morpheme and often consists of one or two syllables:

-et'i to give a liquid

-kAčA to see

-pE to eat

-tIšA to speak to

chá.-- to breathe

-náhta to buy

Some two-syllable cores and most, if not all, polysyllabic cores show evidence of being derived from simpler forms. Very few derivational affixes can be identified, however, which are still productive. The majority of polysyllabic verb cores are suspected of being derived for one of the following reasons:

(1) They include sequences of phonemes which recur with great frequency in verb cores, although such sequences cannot be correlated with any common semantic feature.

(2) They include sequences of phonemes which occur in two or more semantically related verb cores.

(3) They include sequences of phonemes which if eliminated from the core would leave a remainder that would itself be a verb core semantically related to the longer form.

1. Among the sequences of phonemes which recur with great frequency in semantically unrelated verb cores are the following:

A. -wA in

-cʔAyAwA to be angry

-čá·čhówA to wake up

-kOpAwA to chop

B. -yA in

-wí·tEyA to worship

-wʔainʔIyA to fight

-wácAšAyA to stir

C. -mʔI in

-witʔo·nimʔI to care for

-tistowimʔI to be sticky

-stItʔinamʔI to sweat

D. -kOyA in

-caʔanikOyA to preach

-nʔikOyA to bathe

-tIkOyA to cry

-wĩsIkOyA to scold

2. Among the sequences of phonemes which recur in semantically related verb cores are the following:

A. -stʔO in

-yamʔAstʔO to be hungry

-phānioʔstʔO to be thirsty

B. -stA in

-somʔeʔestA to teach

-cʔitʲOstA to ponder

3. Sequences of phonemes isolable by a comparison of longer with semantically related shorter forms include the following:

A. -cI in

-sčʔó·cI windpipe; compare sčʔó- to swallow

It also recurs in many semantically unrelated cores:

-cáʔaci to swim

-sá·pacI to pound

-skó·çOcI to drool

B. -çA in

-kʔóicA man's sister; compare -kʔoi wife

-tʲomiçA to learn; compare -tʲomi to remember

Other cores in which it occurs include the following:

-thá·nʔiçA to work

-w'é'émíçA to braid

-wíçá·çA to listen

C. -cA in

-c'áyocA to break; compare c'áyó- to be broken.

It also recurs in a great many semantically unrelated cores including the following:

-phé·rocA to lick

-tá'awAcA to boil

-c'ê·nacA to chew

-y'oc'It^yi·cA to rest

D. -tO in

-m'etO to freeze; compare -m'e'E to be frozen,
and hã·m'e· ice.

-pá'tO to sleep; compare -pa' to be sleepy.

E. -t'A in

-pe·t'A to ask; compare -pe to tell.

F. -ta- in

-tác'çIçIcA to cut; compare -c'çIçIcA to cut.

G. -wai- in

-wáič'A to be hot (liquid); compare -č'A to be hot.

-wáistAyA to be cold (liquid); compare -stAyA to be cold.

2.2.1.3. Verb Classes

The primary division in verbs is between transitive and intransitive verbs. Transitive verbs occur with a full set of pronominal affixes (except Decade Class 180) while intransitive verbs occur with only those of Decade Classes 100, 110, 120 and sometimes 180. Some verbs which are intransitive according to this inflectional definition must be translated by an English transitive expression with a third person object:

s'áohA I killed it

This verb never occurs with affixes expressing first or second person object. To say I killed you one must use another verb.

2.2.1.3.1. Transitive Verbs

Transitive verb stems are classified on the basis of their occurrence with specific allomorphs of inflectional affixes. The most important such classification is based on allomorphs of the pronominal prefixes.

While the number of verb classes is considerable, this number is only a small fraction of what could theoretically result from all possible combinations of the many allomorphs of inflectional affixes. There are rather strict limitations on the freedom of distribution of specific allomorphs. Groups of allomorphs rather than individual allomorphs may be viewed as independent units in an examination of the combinations which may constitute a complete verb paradigm.

Allomorphs of Century Class 100 occurring with transitive verbs may be arranged in two sets of three partial paradigms. These are designated 1a, 2a, 3a (Chart IV), 1b, 2b and 3b (Chart V). Each allomorph is listed by its phonemic shape and its reference number. In general, the occurrence with a specific verb of one allomorph within a partial paradigm presupposes the potential occurrences of all other allomorphs of that partial paradigm with the same verb. For instance, if a verb occurs with allomorph 141A it may be predicted that the same verb will occur with 142A, 143A, 144A, 145A and 146A; if it occurs with 151A it may be predicted that it will also occur with 152A, 153A, 161A, etc.

The combination of three partial paradigms (1a or 1b with 2a or 2b and 3a or 3b) plus, in certain cases, allomorphs of Decade Class 130 forms the primary paradigm of a transitive verb. The partial paradigms may combine in four different ways resulting in four principal classes of transitive verbs:

Class A	transitive	verbs	occur	with	partial	paradigms	1a,	2a	and	3a.
Class B	"	"	"	"	"	"	1b,	2b	and	3a.
Class C	"	"	"	"	"	"	1a,	2b	and	3b.
Class D	"	"	"	"	"	"	1b,	2a	and	3b.

There is one irregularity in the inflection of Class D verbs which is not revealed in the above scheme. One would expect homophonous forms in the negative mode for first person subject with third person object and third person subject with first person object (102B st^y- and 162A st^y-). In actual fact this ambiguity is removed by the

Chart IV

Transitive Verb Partial Paradigms 1a, 2a and 3a

	Subj	Obj	Ind	Neg	Dub	Hort	NHort	FHort
Partial Paradigm 1a	1	2	sa-	sa-	ca-	sa-	ea-	ca-
			141A	142A	143A	144A	145A	146A
Partial Paradigm 2a	2	1	t ^y -	t ^y -	t ^y -	k-	k-	t ^y -
			151A	152A	153A	154A	155A	156A
	3	1	sk-	st ^y -	thiç-	nç-	nç-	nç-
			161A	162A	163A	164A	165A	166A
Partial Paradigm 3a	3	2	kç-	kç-	t ^y ç-	ç-	st ^y -	t ^y ç-
			171A	172A	173A	174A	175A	176A
	1	3	si-	sk-	thi	kha	ni-	ni-
			101A	102A	103A	104A	105A	106A
	2	3	s-	s-	çh-	ph-	sk-	çh-
			111A	112A	113A	114A	115A	116A
	3	k-	k-	t ^y -	phi-	phi-	phi-	
		121A	122A	123A	124A	125A	126A	

Chart V

Transitive Verb Partial Paradigms 1b, 2b and 3b

	Subj	Obj	Ind	Neg	Dub	Hort	NHort	FHort
Partial Paradigm 1b	1	2	sʔa- 141B	sʔa- 142B	çʔa- 143B	sʔa- 144B	sʔa- 145B	çʔa- 146B
	2	1	čʔo- 151B	čʔo- 152B	čʔo- 153B	kʔo- 154B	kʔo- 155B	čʔo- 156B
Partial Paradigm 2b	3	1	skʔo- 161B	sčʔ- 162B	tháti 163B	náti 164B	náti 165B	náti 166B
	3	2	káti 171B	káti 172B	tʔíti 173B	ti- 174B	sčʔ- 175B	tʔíti 176B
Partial Paradigm 3b	1	3	cʔi- 101B	stʔ- 102B	tʔi- 103B	kʔa- 104B	nʔi- 105B	nʔi- 106B
	2	3	ši- 111B	ši- 112B	chi- 113B	phi- 114B	stʔ- 115B	chi- 116B
	3	3	ci- 121B	ci- 122B	ti- 123B	pʔi- 124B	pʔi- 125B	pʔi- 126B

substitution of allomorph 162B for 162A:

sč'óhti? (162B plus stem) he (didn't) give it to me

Compare:

st^yóhti? I (didn't) give it to him

Similarly allomorph 175B is substituted for 175A in the negative hortative mode:

sč'óhti'í (175B plus stem) let him (not) give it to you

Compare:

st^yóhti'í (don't) give it to him

Class A transitive verbs occur with the following allomorphs of Decade Class 130:

ci-	ci-	ti-	p'i-	p'i-	p'i-
131A	132A	133A	134	135	136

Those of Class B occur with the following:

c'-	c'-	t'-	p'i-	p'i-	p'i-
131B	132B	133B	134	135	136

Verbs of Classes C and D do not occur with prefixes of Decade Class 130.

The primary paradigms of all four classes of transitive verbs are given in full in Appendix A.

A further subclassification of transitive verbs may be made on the basis of their occurrence with specific allomorphs of the inflectional suffixes. Most transitive verbs fall into one of three subclasses, although an exhaustive subclassification of these verbs in the present data has not been undertaken.

1. Subclass 1 occurs with the following allomorphs of the inflectional suffixes:

- a. 401B -nikOyA in all forms expressing continuative action: kóhkAč̣anikOyA he is looking at him.
- b. 601B -n̄tI in these forms expressing dual subject which lack other suffixes: kóhkAč̣an̄tI they two saw him.
- c. 602B -nE in those forms expressing plural subject which lack other suffixes: kóhkAč̣AnE they saw him.

2. Subclass 2 suffixes the following allomorphs of these affixes:

- a. 401C -tIkOyA indicating continuative action: cí^ya[?]tIkOyA he is catching him.
- b. 601C -t^yI in the simpler dual subject forms: cí^ya[?]t^yI they two caught him.
- c. 602C -tA in the simpler plural subject forms: cí^ya[?]tA they caught him.

3. Subclass 3 occurs with the following allomorphs:

- a. 401E -(i)tA expressing continuative action: cí·cówi·tA he is paying him.

- b. 601A -nʔɛ expressing dual subject: cí·cówa·nʔɛ
they two paid him.
- c. 602A -nʔE expressing plural subject when other suffixes are lacking: cí·cówa·nʔE they paid him.

The complete pattern of suffixation has not been analyzed in detail for each subclass. It should be noted, however, that in the case of some suffixes the particular allomorph which occurs depends not only on the subclass to which the verb belongs, but also on the presence or absence of other suffixes:

kóhkAčA-nE (verb + 602B) they saw him

kóhkAčha-nikoya-sE (verb + 401B + 602L) they are looking at him

kóhkAčha-ne·-ʔE (verb + 402A + 602J) they came to see him

The major transitive verb classes crosscut these subclasses. Among Class A transitive verbs, for instance, some (e.g., -óh/áh-kAčA to see) belong to Subclass 1 while others (e.g., -ó·-kʔáihca to hit) belong to Subclass 3.

2.2.1.3.2. Intransitive Verbs

Like transitive verbs, intransitive verbs are classified on the basis of the particular pronominal allomorphs with which they occur. There are, however, many more intransitive than transitive verb classes. Furthermore, intransitive verbs in general may be transitivized by the addition of the benefactive suffix. This means, in effect, that every

intransitive verb belongs not only to its own intransitive class but is also linked to the particular transitive class to which its benefactive forms belong.

An intransitive paradigm consists of those forms expressing the three subject persons within each of the six modes, a total of eighteen forms. Most intransitive verbs have three distinct paradigms, one for singular subject, one for dual and one for plural. Some verbs, though, are restricted to only one of the three numbers and hence have only one paradigm.

An intransitive paradigm is made up of six partial paradigms as indicated in the diagram below:

	Ind	Neg	Dub	Hort	NHort	FHort
First Person	1	2	1	3		1
Second Person	4			5	2	4
Third Person	2			6		

Partial paradigm 1, consisting of first person indicative, dubitative and future hortative affixes, has nine alternate forms as follows:

Partial paradigm 1a:	si	thi	ni
	101A	103A	106A

Partial paradigm lb:	cʔi	tʔi	nʔi
	101B	103B	106B
Partial paradigm lc:	s	th	n
	101C	103C	106C
Partial paradigm ld:	sʔ	tháʔ	nʔ
	101D	103D	106D
Partial paradigm le:	sʔi	thi	nʔi
	101E	103A	106B
Partial paradigm lf:	sǎç	thǎç	nǎç
	101F	103E	106E
Partial paradigm lg:	sǎt	thǎt	nǎt
	101G	103F	106F
Partial paradigm lh:	sk-	thǎç	nǎç
	101H	103E	106E
Partial paradigm li:	skʔo	thǎt	nǎt
	101I	103F	106F

Partial paradigm 2, consisting of third person indicative, negative and dubitative, as well as first person negative and second person negative hortative, has ten alternate forms as follows:

Partial paradigm 2a:	k	k	tʏ	sk	sk
	121A	122A	123A	102A	115A
Partial paradigm 2b:	ci	ci	ti	stʏi	stʏi
	121B	122B	123B	102C	115C
Partial paradigm 2c:	kh	kh	čh	skh	skh
	121C	122C	123C	102D	115D
Partial paradigm 2d:	kʔ	kʔ	čʔ	skʔ	skʔ
	121D	122D	123D	102E	115E
Partial paradigm 2e:	ka	ka	tʏa	ska	ska
	121E	122E	123E	102F	115F
Partial paradigm 2f:	kháʔ	kháʔ	cháʔ	skháʔ	skháʔ
	121F	122F	123F	102G	115G

Partial paradigm 2g:	c	c	t	st ^y	st ^y
	121G	122G	123G	102B	115B
Partial paradigm 2h:	cʔ	cʔ	tʔ	sčʔ	sčʔ
	121H	122H	123H	102H	115H
Partial paradigm 2i:	cʔi	cʔi	tʔi	sčʔ	sčʔ
	121I	122I	123I	102H	115H
Partial paradigm 2j:	chi	chi	thi	st ^y i	st ^y i
	121J	122J	123J	102C	115C

Partial paradigm 3, consisting of first person hortative and negative hortative affixes, has ten alternate forms as follows:

Partial paradigm 3a:	kha	kha
	104A	105C
Partial paradigm 3b:	kʔa	kʔa
	104B	105D
Partial paradigm 3c:	kh	kh
	104C	105E
Partial paradigm 3d:	kháʔ	kháʔ
	104D	105F
Partial paradigm 3e:	n	n
	104E	105G
Partial paradigm 3f:	nʔ	nʔ
	104F	105H
Partial paradigm 3g:	nšç	nšç
	104G	105I
Partial paradigm 3h:	nšt	nšt
	104H	105J

Partial paradigm 3i: š š
 104I 105K

Partial paradigm 3j: st? st?
 104J 105L

Partial paradigm 4, which consists of second person indicative, negative, dubitative and future hortative affixes, has the following seven alternate forms:

Partial paradigm 4a: ṣ ṣ çh çh
 111A 112A 113A 116A

Partial paradigm 4b: ṣ̌i ṣ̌i chi chi
 111B 112B 113B 116B

Partial paradigm 4c: ṣ̌ ṣ̌ ch ch
 111C 112C 113C 116C

Partial paradigm 4d: ṣ? ṣ? chá? chá?
 111D 112D 113D 116D

Partial paradigm 4e: ḳč̣ ḳč̣ t^yč̣ t^yč̣
 111E 112E 113E 116E

Partial paradigm 4f: ḳṭ ḳṭ t^yíṭ t^yíṭ
 111F 112F 113F 116F

Partial paradigm 4g: ḳti ḳti t^yíti t^yíti
 111G 112G 113G 116G

Partial paradigm 5 consists of the single second person hortative affix and has nine alternate forms:

Partial paradigm 5a: ph
 114A

Partial paradigm 5b: phi
 114B

Partial paradigm 5c:	tʔ
	114C
Partial paradigm 5d:	çʔ
	114D
Partial paradigm 5e:	ç
	114E
Partial paradigm 5f:	tʔç
	114F
Partial paradigm 5g:	tʔit
	114G
Partial paradigm 5h:	ti
	114H
Partial paradigm 5i:	ʔ
	114I

Partial paradigm 6, consisting of third person hortative, negative hortative and future hortative affixes, has seven alternate forms as follows:

Partial paradigm 6a:	phi	phi	phi
	124A	125A	126A
Partial paradigm 6b:	pʔi	pʔi	pʔi
	124B	125B	126B
Partial paradigm 6c:	ph	ph	ph
	124C	125C	126C
Partial paradigm 6d:	pʔ	pʔ	pʔ
	124D	125D	126D
Partial paradigm 6e:	pha	pha	pha
	124E	125E	126E
Partial paradigm 6f:	pháʔ	pháʔ	pháʔ
	124F	125F	126F

Partial paradigm 6g: phi' phi' phi'
 124G 125G 126G

At least twenty-four intransitive paradigms result from various combinations of the above partial paradigms:

Paradigm A	consists of partial paradigms	1a, 2a, 3a, 4a, 5a and 6g.
Paradigm B	" " " "	1a, 2a, 3a, 4a, 5i and 6g.
Paradigm C	" " " "	1a, 2a, 3d, 4a, 5e and 6g.
Paradigm D	" " " "	1a, 2c, 3c, 4b, 5c and 6g.
Paradigm E	" " " "	1a, 2d, 3a, 4a, 5i and 6b.
Paradigm F	" " " "	1a, 2j, 3c, 4b, 5a and 6g.
Paradigm G	" " " "	1a, 2b, 3a, 4b, 5i and 6g.
Paradigm H	" " " "	1b, 2g, 3b, 4c, 5b and 6g.
Paradigm I	" " " "	1c, 2a, 3i, 4a, 5d and 6c.
Paradigm J	" " " "	1c, 2a, 3e, 4a, 5d and 6c.
Paradigm K	" " " "	1c, 2c, 3c, 4a, 5d and 6c.
Paradigm L	" " " "	1c, 2d, 3a, 4e, 5e and 6d.
Paradigm M	" " " "	1d, 2f, 3d, 4d, 5d and 6f.
Paradigm N	" " " "	1d, 2d, 3f, 4e, 5e and 6d.
Paradigm O	" " " "	1d, 2e, 3f, 4e, 5e and 6e.
Paradigm P	" " " "	1e, 2b, 3j, 4b, 5b and 6g.
Paradigm Q	" " " "	1e, 2b, 3f, 4b, 5b and 6g.
Paradigm R	" " " "	1f, 2a, 3i, 4e, 5e and 6c.
Paradigm S	" " " "	1f, 2a, 3g, 4e, 5e and 6c.
Paradigm T	" " " "	1g, 2g, 3h, 4f, 5g and 6g.
Paradigm U	" " " "	1g, 2g, 3j, 4f, 5g and 6g.
Paradigm V	" " " "	1h, 2b, 3g, 4e, 5e and 6a.

Paradigm W consists of partial paradigms 1h, 2h, 3g, 4e, 5f and 6b.

Paradigm X " " " " 1i, 2i, 3h, 4g, 5h and 6b.

Examples of the above paradigms are given in Appendix A.

Intransitive verbs may be classified according to their paradigms in the singular, dual and plural, e.g., Class KRS, or if the verb has only one number it is classified according to its one paradigm, e.g., Class M.

Intransitive verbs may also be subclassified on the basis of their occurrence with allomorphs of the inflectional suffixes. It is difficult, however, to find two intransitive verbs that occur with exactly the same set of these allomorphs. The number of subclasses, if one were to attempt to list them, would be very large and the number of verbs in each subclass very small. Rather than attempt such a subclassification it is probably simpler to list with each verb the suffix allomorphs with which it occurs. An entry for an intransitive verb, giving the necessary information about the thematic adjunct, form of verb core, allomorphs of affixes 400-600, class and meaning, would list the following:

-í-kOpAwA (401E, 402B, 601A, 602A) Intransitive Class HPQ,
to chop

2.2.2. Verbal Auxiliaries

Verbal auxiliaries are a class of words which are always inflected to indicate person and are sometimes inflected to indicate other grammatical categories as well. They are formally distinguished from verbs in that they are never inflected to indicate future tense. Semantically they are distinguished from verbs in that they do not express action, perception, relationship or state of being as do verbs.

The function of the verbal auxiliary is to indicate the person of the subject or the subject and object of an action when this is not otherwise indicated. The most common occurrence of verbal auxiliaries is in conjunction with verbs in the future tense. The verb itself in such cases does not include a pronominal affix:

nó?pE si (future tense prefix, n- + verb stem followed
by auxiliary, si) I will eat

n'í·cóWA si I will pay him

Compare:

só?pE (first person prefix, s- + verb stem) I ate

c'í·cóWA I paid him

The verbal auxiliary may also occur following a verb containing an allomorph of affix 124 (third person subject with third person object in the hortative mode). The result is a hortative expression with an added pronominal element:

phí'ínáhtA si (hortative prefix, 124G phí'- + verb stem followed by auxiliary, si) I want him to buy it

Compare:

phí'ínáhtA let him buy it

Occasionally an uninflected word will function as a predicate, in which case a verbal auxiliary indicates the subject and object:

théné. si I like him

The word théné. fulfills the function ordinary performed by a verb both semantically (it may be translated to like) and syntactically (it fills a predicate slot). It is, however, never inflected.

The basic forms of the verbal auxiliaries are listed in Chart VI. As in the case of pronominal prefixes occurring with transitive verbs, verbal auxiliaries appear with seven principle subject-object combinations. In addition, there is a form expressing fourth person subject with third person object, distinctive forms for the passive voice and a form expressing indefinite subject. Unlike the set of verb affixes, however, only three modes are recognized.

A comparison with Charts I and II reveals that verbal auxiliaries are based on a set of prefixes identical in form to certain allomorphs of the affixes of Century Class 100. Verbal auxiliaries actually have nothing that can be regarded as a stem unless it is the vowel -o (or -i in a few cases). This vowel, however, is comparable to the thematic adjunct of verbs. The -m'A occurring in many forms

Chart VI

Basic Forms of Verbal Auxiliaries

	Indicative	Negative	Dubitative
<u>Subject</u> <u>Object</u>			
1st per. 3rd per.	si	sko	thi
2nd per. 3rd per.	so	so	cho
3rd per. 3rd per.	ko	ko	t ^y o
4th per. 3rd per.	ciom ^ʔ A	ciom ^ʔ A	tíom ^ʔ A
1st per. 2nd per.	sáom ^ʔ A	sáom ^ʔ A	çáom ^ʔ A
2nd per. 1st per.	t ^y óm ^ʔ A	t ^y óm ^ʔ A	t ^y óm ^ʔ A
3rd per. 1st per.	skóm ^ʔ A	st ^y óm ^ʔ A	thóçóm ^ʔ A
3rd per. 2nd per.	kóçóm ^ʔ A	kóçóm ^ʔ A	t ^y óçóm ^ʔ A
<u>Passive voice</u>			
1st person	sk ^ʔ á ^ʔ ám ^ʔ As ^ʔ A	sč ^ʔ á ^ʔ ám ^ʔ As ^ʔ A	t ^ʔ é ^ʔ ém ^ʔ As ^ʔ A
2nd person	šá ^ʔ ám ^ʔ As ^ʔ A	šá ^ʔ ám ^ʔ As ^ʔ A	chá ^ʔ ám ^ʔ As ^ʔ A
3rd person	c ^ʔ á ^ʔ ám ^ʔ As ^ʔ A	c ^ʔ á ^ʔ ám ^ʔ As ^ʔ A	t ^ʔ á ^ʔ ám ^ʔ As ^ʔ A
<u>Indefinite Subject</u>	skón ^ʔ E		

may best be regarded as a suffix, although it cannot be assigned a meaning.

Transitive verbs occur with the full set of verbal auxiliaries:

nʔí·cówA si I will pay him

cáci nʔí·cówA sko I won't pay him

nʔí·cówA thi maybe I will pay him

nʔí·cówA ʂo you will pay him

cáci nʔí·cówA ʂo you won't pay him

nʔí·cówA ʂho maybe you will pay him

nʔí·cówA ko he will pay him

cáci nʔí·cówA ko he won't pay him

nʔí·cówA tʲo maybe he will pay him

nʔí·cówA cíomʔA he (fourth person) will pay him

cáci nʔí·cówA cíomʔA he won't pay him

nʔí·cówA tíomʔA maybe he will pay him

nʔí·cówA ʂáomʔA I will pay you

cáci nʔí·cówA ʂáomʔA I won't pay you

nʔí·cówA ʂáomʔA maybe I will pay you

nʔí·cówA tʲómʔA you will pay me

cáci nʔí·cówA tʲómʔA you won't pay me

nʔí·cówA tʲómʔA maybe you will pay me

nʔí·cówA skómʔA he will pay me

cáci n'í·cowa st'óm'A he won't pay me
 n'í·cowa thóçóm'A maybe he will pay me

 n'í·cowa kóçóm'A he will pay you
 cáci n'í·cowa kóçóm'A he won't pay you
 n'í·cowa t'óçóm'A maybe he will pay you

 n'é'écowa sk'ám'As'A I will be paid
 cáci n'é'écowa sč'ám'As'A I won't be paid
 n'é'écowa t'ém'As'A maybe I will be paid

 n'é'écowa šám'As'A you will be paid
 cáci n'é'écowa šám'As'A you won't be paid
 n'é'écowa chá'ám'As'A maybe you will be paid

 n'é'écowa c'ám'As'A he will be paid
 cáci n'é'écowa c'ám'As'A he won't be paid
 n'é'écowa t'ám'As'A maybe he will be paid

Most intransitive verbs occur with those verbal auxiliaries listed in the first three rows of Chart VI:

nó'pE si I will eat
 cáci nó'pE sko I won't eat
 nó'pE thi maybe I will eat

 nó'pE so you will eat
 cáci nó'pE so you won't eat
 nó'pE cho maybe you will eat

nó'pE ko he will eat
 cáci nó'pE ko he won't eat
 nó'pE t^yo maybe he will eat

A few intransitive verbs (those with paradigms V, W and X; see Section 2.2.1.3.2) occur with the verbal auxiliaries which normally express third person subject with first person object, third person subject with second person object and fourth person subject with third person object:

níoc'ípA skóm'A I will need it
 cáci níoc'ípA st^yóm'A I won't need it
 níoc'ípA thóçóm'A maybe I will need it

níoc'ípA kóçóm'A you will need it
 cáci níoc'ípA kóçóm'A you won't need it
 níoc'ípA t^yóçóm'A maybe you will need it

níoc'ípA cíom'A he will need it
 cáci níoc'ípA cíom'A he won't need it
 níoc'ípA tíom'A maybe he will need it

In addition to their basic forms, verbal auxiliaries may be inflected to indicate dual or plural subject and/or object. Those forms indicating dual or plural subject are, in general, constructed from the basic forms by the addition of a suffix. Dual subject is expressed by the addition of either the suffix -'O to those forms which terminate in -o or the suffix -n'Ī to those forms which termin-

ate in -m'A:

néçá·?Ape? kó·?O they two will eat

n'í·cówa·n?E sáom'an?E we two will pay you

Note that dual subject is indicated in both the verb and the auxiliary. Compare:

nó?pE ko he will eat

n'í·cówa sáom'A I will pay you

Plural subject is expressed by the addition of the suffix -s'A:

néçâ·?ApE kós'A they will eat

n'í·cówa·n?E sáom'as'A we will pay you

Some dual and plural verbal auxiliaries are constructed not from the basic form, but from distinctive dual/plural forms. The following are those which differ from the basic forms:

1. First person subject with third person object indicative:
sóçó-. Example: néçá·?Ape? sóçó·?O we two will eat.
2. First person subject with third person object dubitative:
thóçó-. Example: néçá·?Ape? thóçó·?O maybe we two will eat.
3. Second person subject with third person object indicative and negative: kóçó-. Example: néçá·?Ape? kóçó·?O you two will eat.

4. Second person subject with third person object dubitative:
 t^yóçó-. Example: nǎçá.ʔApeʔ t^yóçó.ʔO maybe you two will eat.

Those verbal auxiliaries which terminate in -mʔA may be inflected to indicate dual or plural object. This involves a change similar to the expansion of thematic adjuncts in verbs plus, in the case of plural object, the addition of -çó-. The following indicates the forms of the auxiliaries expressing singular, dual and plural object:

<u>singular</u>	<u>dual</u>	<u>plural</u>
-ómʔA	-óʔómʔA	-ówʔáçómʔA
-áomʔA	-áʔáomʔA	-áowʔáçómʔA
-íomʔA	-íyʔómʔA	-íowʔáçómʔA

These forms are illustrated in the following examples:

nʔí.cówA t^yómʔA you will pay me
 nʔé.éicówA t^yóʔómʔA you will pay us two
 nʔéy.áčówA t^yówʔáçómʔA you will pay us
 nʔí.cówA şámʔA I will pay you
 nʔé.éicówA şáʔáomʔA I will pay you two
 nʔéy.áčówA şáowʔáçómʔA I will pay you all
 níoc.ʔípA cíomʔA he will need it
 níy.óc.ʔípA cíyʔómʔA they two will need it
 níow.áč.ʔípA cíowʔáçómʔA they will need it

In addition to being inflected for person and number, verbal auxiliaries may occur with one of three condition suffixes. These are

-n'E, corresponding to the verbal suffix 701A, -te, corresponding to suffix 701B, and -no·, corresponding to suffix 702:

níohkAČA sí-n'E when I will see him

n'i·cowa·n'E kós'a·-te when they will pay him

n'íhkai kóčóm'a-no· if you will sleep

2.2.3. Uninflected Words

Included in the major class of uninflected words are words expressing a wide variety of functions and exhibiting a considerable number of derivational formations. A division of these words into function classes will be outlined in the section to follow, although a full description of syntactic function will be reserved for the chapter on syntax. Subclasses based on derivational formations will be described in Section 2.2.3.2.

2.2.3.1. Function Classes

Uninflected words belong to one of the following classes depending upon their grammatical function:

Referentials. All uninflected words, with the exception of pronouns, that may alone fill a subject or an object slot are referentials (see 3.2.2 and 3.2.3). Included in this class are a very wide variety of noun-like words such as names of beings, things and places.

Pronouns. This is a class of rather limited membership comparable to English pronouns. The most commonly occurring members of this class are:

hínO <u>I, we</u>	we <u>that one</u> (inobviate)
hísO <u>you</u>	mí·ka <u>another one</u>
to <u>this one</u>	?ískA <u>one</u>
he <u>that one</u>	hao <u>someone</u>

Attributives. Included in this class are a variety of adjective and adverb-like words. They may modify a referential, a pronoun or a verb:

ráwá· tíyA <u>good dog</u>
hínO ráwá· <u>I am good</u>
ráwá· sí·pá'tO <u>I slept well</u>

Temporals. This class is made up of words which specify the relative or the absolute time of an action. Some of the more common temporals are as follows:

sówá <u>yesterday</u>	há·w'íná <u>right away</u>
híw'á <u>today</u>	má·no <u>a long time</u>
čhámá <u>tomorrow</u>	hám'a· <u>long ago</u>
ná·no <u>next day</u>	t ^y áwa <u>early</u>
šomí <u>already</u>	ché·yá <u>first</u>

Also included are names of days, seasons or the time of day. Many of these, however, are Spanish loanwords.

Prepositions. Included in this class are a number of words which specify the location and/or direction of an action with respect to the speaker. Among the more common prepositions are the following:

tók'é· <u>that way</u> (near and away from the speaker)

- tów'é. this way (near and toward the speaker)
 yók'é. that way (at a distance and away from the speaker)
 yók'0 yonder
 ti' right here
 yósí. from afar

Directionals. This class comprises a rather limited number of commonly occurring words such as:

- t^yi up
 n'± down
 si back here
 sa back (to previous location)

Also included are the points of the compass which occur with great frequency in native text.

Interrogatives. Included in this class is the interrogative particle 'a which, occurring at the beginning of a sentence, makes it a question. Also included are:

- | | |
|-------------------------|----------------------------------|
| ci <u>what?</u> | há·ti <u>where?</u> (location) |
| háití <u>which one?</u> | hai <u>where?</u> (destination) |
| hao <u>who?</u> | háiw'e <u>from where?</u> |
| háik'0 <u>when?</u> | háik'oma. <u>what direction?</u> |

Modals. This class includes a number of words which fix the mode of a following verb. Negative, negative hortative and future hortative modes are obligatorily marked by such words:

cáci not (negative mode)

pá·mí don't (negative hortative mode)

pa future hortative mode marker

In addition, dubitative mode is sometimes marked by k'áocIkai maybe and hortative mode by the hortatory exclamation, há·n'é.

Connectives. This is a class of very limited membership including ko and, 'e and and 'éskiskO but.

Narrative particles. This class contains a few short words, so, 'e, 'ai, 'eo and to, which occur in various combinations with very high frequency in narrative text. They cannot be translated except in a general way as and then.

Exclamations. Included in this class are a variety of exclamations such as:

ha· yes

hin'á O.K.

ca no

mí look!

me don't!

2.2.3.2. Derivation

Most uninflected words are not amenable to internal structural analysis. There are, however, a number of subclasses, largely of quite limited membership, which exhibit specific types of derivational formations. These subclasses will be described below.

1. Nominalized verbs. There is a considerable variety of

referentials which are derived from verbs by the omission of all verb prefixes and the addition of a nominalizing suffix. These are of three general types:

The first type, which includes principally certain body parts, is based on the verb core; i.e., the thematic adjunct is excluded. The nominalizer in such words is regularly -ni. The following examples show first the verb form (translatable into English possessed body parts) followed by the nominalized form:

kánáskái	<u>his</u> <u>head</u>	náskáini	<u>head</u>
káy'ó.spI	<u>his</u> <u>shoulder</u>	y'ó.spini	<u>shoulder</u>
séw'í.šI	<u>my</u> <u>nose</u>	w'íšI.ni	<u>nose</u>

The second type of nominalized verb also includes body parts primarily and is based on the verb stem (which includes the thematic adjunct) preceded by h-. The nominalizer in these words is either -ni or -nani:

śásti	<u>your</u> <u>foot</u>	hástini	<u>foot</u>
śá.móčO	<u>your</u> <u>toe</u>	há.móčhoni	<u>toe</u>
śá'áč'A	<u>your</u> <u>tooth</u>	há'áč'anani	<u>tooth</u>

The third type of nominalized verb includes a wide variety of action words and is based on the verb core preceded by 'ó- or 'ó--. The nominalizer in these words is most commonly -n'I, but may be any one of several suffixes:

c'íkOpAwA	<u>I</u> <u>chopped</u>	'ókopháwan'I	<u>ax</u>
sókóyA	<u>I</u> <u>sat</u> <u>down</u>	'ókóyán'I	<u>seat</u>
síope·	<u>I</u> <u>told</u> <u>him</u>	'ó·pé·thá·n'I	<u>story, news</u>
só'pE	<u>I</u> <u>ate</u>	'ópéwí	<u>food</u>
sópáyA	<u>I</u> <u>built</u> <u>a</u> <u>fire</u>	'ó·páyán'I	<u>fireplace</u>

2. Numerals. Keresan numerals are based on a decimal system. Cardinal numbers one through ten are unanalyzable, although the terms for seven, eight and nine are polysyllabic and may be derived forms. The term for seven, for instance, includes a sequence of phonemes similar to those in the term for four.

'ískA	<u>one</u>	sč'ísA	<u>six</u>
t ^y ô·mí·	<u>two</u>	m'áiht ^y ana	<u>seven</u>
čémI	<u>three</u>	kók'ómišI	<u>eight</u>
t ^y â·na	<u>four</u>	máyok'ô	<u>nine</u>
thâ·m'A	<u>five</u>	k'ácI	<u>ten</u>

Numbers eleven through nineteen are designated by the word for ten followed by the word for one, two, three, etc.:

k'ácI	'ískA	<u>eleven</u>
k'ácI	t ^y ô·	<u>twelve</u> (note omission of -mí· here and in derived forms)
k'ácI	čémI	<u>thirteen</u>

The addition of the suffix -wa or -ya to the terms for cardinal numbers one through ten results in forms that occur both in the

designations for 20, 30, 40, etc. and, in other contexts, as ordinal numbers. The suffix *-ya* occurs following the terms for two and three while *-wa* is suffixed to the remainder of the number terms:

tʲô·ya twice, second

tʲô·ya kʲácI twenty

čhémíya three times, third

čhémíya kʲácI thirty

tʲâ·nawa four times, fourth

tʲâ·nawa kʲácI forty

5. References to Pueblos and their inhabitants. Place names are sometimes derived from the term designating an inhabitant of that place, while in other cases the reverse is true. The former type of derivation involves the addition of the suffix *-cé*:

tʲí·wʲA a Tiwa Indian

tʲí·wʲá·cé a Tiwa Pueblo

hé·mišI a person from Jemez

hé·mišI·cé Jemez Pueblo

sí·ni a person from Zuni

sí·nícé Zuni Pueblo

The addition of the suffix *-mʲE* to a place name indicates an inhabitant of that place:

támáyá Santa Ana Pueblo

támáyâ·mʲE a person from
Santa Ana

tʲí·wi· Santo Domingo Pueblo

tʲí·wi·mʲE a person from
Santo Domingo

4. Diminutives and augmentatives. The prefix *rǎ-* occurs in a large number of words indicating smallness:

rǎ·skhǐšI little
rǎ·kʔá·pǎčI thin
rǎ·kʔá·šIka narrow
rǎ·kʔá·cʔI shallow
rǎ·chíčhá a small person

The prefix *mʔé-*, on the other hand, occurs with words expressing largeness:

mʔé·cíčI big
mʔé·kʔá·pǎčI thick
mʔé·kʔátʔIka wide (something rigid)
mʔé·cʔíyA wide (something like cloth)
mʔé·chíčhá a tall person

5. Derived prepositions. Many prepositions are derived from a combination of two morphemes. In these words *to-* expresses nearness and *yo-* distance. Among the second elements, *-kʔé·* expresses motion away from the speaker, *-wʔé·* motion toward the speaker, *-si* a return and *-ʔai* a fixed location:

tókʔé· that way (near and away from the speaker)
tówʔé· this way (near and toward the speaker)
yókʔé· that way (at a distance and away from the speaker)
yówʔé· this way (at a distance and toward the speaker)

yósi. back from afar

yó'ái there (located at a distance)

6. Points of the compass. Several types of derived forms are based on the points of the compass, t^yít^yA north, pǎ west, kho south and ha· east. Motion toward the cardinal points of the compass is expressed by the following derived forms:

t^yít^yámí toward the north

pánámí toward the west

khówámí toward the south

há·námí toward the east

Motion from the cardinal points is likewise expressed by derived forms:

t^yítis'A from the north

pánis'A (or pǎni) from the west

há·nis'A from the east

khón'is'A from the south

Terms for northeast, northwest, southeast and southwest result from a combination of modified forms of the terms for the cardinal points:

t^yítiyapí northwest

khóyapí southwest

Less frequently occurring forms derived from the terms for the points of the compass include those designating the east or the west side of the river (the Rio Grande) and those designating the four corners of the Pueblo world:

pánísté the west side

há-šok'0 Santa Fe (literally east corner)

7. Interrogatives. A large majority of interrogatives begin with ha-, suggesting that this is a derivational morpheme:

hao who?

hái where? (destination)

há·ti where? (location)

háiw'e from where?

háik'oma. what direction?

háik'0 when?

háití which one?

hác'0 how many?

2.3. Clitics

Clitics are a class of morphemes which do not effect morpho-phonemic voicing of a previous vowel as do suffixes (see Section 1.2), but which, on the basis of distributional evidence, are not treated as free words (see Section 2.1). Their position, then, is intermediate between that of an affix and a free word.

In terms of function there are three kinds of clitics, all of which occur as postclitics: 1) pluralizing clitics, 2) locatives and 3) past tense narrative clitics.

1. Pluralizing clitics occur following a limited number of referentials and verbs which function as subject or object. The most

commonly occurring of these clitics is $-t^y\acute{e}\cdot m\acute{i}$:

$k^?á\cdot w^?I-t^y\acute{e}\cdot m\acute{i}$ his children

$k^?a\ piy\acute{o}\cdot na-t^y\acute{e}\cdot m\acute{i}$ his servants

2. Locative clitics occur following words which function as subject or object and include the morphemes $-ti$, $-š\check{i}$ and $-si$:

$m\acute{e}\cdot sA-ti$ on the table

$kaw\acute{a}\cdot yo-š\check{i}$ on horse-back

$kh\acute{a}\cdot m^?A-si$ in his house

3. The clitics $-sano\cdot$ and $-t^yano\cdot$ occur following referentials which refer to living beings or following kinship terms (verbs) which function as subject or object. They occur rather frequently in narrative text recounting happenings of the distant past. The clitic $-sano\cdot$ occurs in ordinary narrative while $-t^yano\cdot$ carries a dubitative connotation:

$k^?áok^?oi-sano\cdot$ his wife

$k^?át^y\acute{o}m\acute{i}-t^yano\cdot$ his brother (reported to be)

Both pluralizing and past tense narrative clitics may occur in the same word. In such cases the past tense clitic always follows the pluralizing clitic:

$\check{c}^?á\cdot w^?I-t^y\acute{e}\cdot m\acute{i}-sano\cdot$ his children

3. Syntax

In Section 2 a definition of the word was developed and words were described and classified on the basis of their internal structure. In this section there is a shift of focus. The emphasis here is on the grammatical function of words and phrases and the sequential arrangement of functional units rather than the sequential arrangement of words of various structural classes. The word-class categories of Section 2 are abandoned except in describing the kinds of words which may fill a function slot. This approach is adopted for the reason that there is in Santa Ana Keresan a lack of correlation between structural classes and function classes. Words which structurally are verbs, for instance, may have not only a verb-like function but may have a noun-like function as s'â·m'A in the following example:

yók'é. s'â·m'A 'e sa còhsE I am going home
that wat my home back I go

3.1. Definition of Syntactic Units

1. Function Slots. Syntactic structure will be analyzed in terms of function slots. The term is used here to mean a position within the clause or larger syntactic unit which is characterized by:

a. A more or less fixed location in relation to other function slots. This does not imply an absolutely rigid sequential ordering of

elements within the clause, but rather a relatively narrow limit to the kinds of sequences which are admissible.

b. A uniform grammatical function assignable to the slot together with the elements which may fill that slot. These grammatical functions (e.g., subject, object, predicate) will be discussed in detail in Section 3.2.

c. The potentiality of being filled by a single word. This criterion defines the lower limit of a function unit. Any position within the clause that is always filled by more than one word is not a single function slot.

d. The potentiality of being filled by a continuous sequence of words. A function slot, therefore, may be filled alternatively by a single word or by a sequence of words that are functionally equivalent to a single word. Such a sequence of words constitutes a phrase. Two or more non-contiguous positions within a clause which are filled by words or phrases having the same or similar grammatical functions will be treated as separate slots rather than a single discontinuous slot.

2. Clauses. The usual definition of a clause as a sequence of words containing a subject and predicate needs to be modified somewhat for the purposes of describing Santa Ana syntactic structure. The term clause will be understood to refer to a syntactic unit which includes a verb functioning as a predicate as well as to certain other relatively infrequently occurring types of units to be described below.

A predicate clause in its minimal form consists of a single verb.

There need not be an expressed subject other than the pronominal marker incorporated in the verb. Expanded forms of the predicate clause may contain an expressed subject and/or object as well as various other elements whose descriptions will follow in Section 3.2.

Certain kinds of word sequences which do not include a verb functioning as predicate are treated as special types of clauses. These word sequences lend themselves to description as clauses comparable to predicate clauses because of the following characteristics:

a. They are units with a more or less fixed structure. They may be described in terms of function slots in the same manner as predicate clauses.

b. They are units whose semantic content is comparable to that of predicate clauses. Although they do not contain a predicate they are usually best translated by full English sentences.

c. They correlate closely with phonological units in the same manner as predicate clauses. There is a strong tendency for clauses of all types to be set off by pauses in a connected text.

d. Their length and distribution in the text is such that their incorporation into contiguous predicate clauses would often result in unwieldy units.

Special clauses are of three types: prepositional clauses, interrogative clauses and *ʔeo* clauses. These will be described in Section 3.3.2.

3. Sentences. The term sentence will be used much in its traditional sense to refer to a word or group of words which expresses an independent utterance, not part of any larger syntactic construction. A sentence may be a single independent clause or it may consist of two or more clauses, one of which is an independent clause.

3.2. Major Function Slots and their Fillers

Nine major function slots are identified within Santa Ana Keresan clauses. Each function slot, assigned an upper-case letter for easy reference, is described in the sections to follow.

In the description of the elements which may fill a function slot the occurrence of narrative particles will be ignored. These particles occur with very high frequency in narrative text but are not considered to be an essential part of the syntactic structure. Although they contribute to the sense of continuity of a narrative and are roughly equivalent to English "And then . . .", their omission in no way changes the basic structure and meaning of the utterance.

The narrative particles, *so*, *'e*, *'eo*, *'ai* and *to*, occur either singly or in various combinations. The more commonly occurring combinations are:

so 'e

'eo so

so 'e so

'eo so 'e

so to

'ai so

so 'e to

'ai so 'e

'e so

Longer combinations made up of two or more of the above combinations sometimes occur:

so 'e 'ai so

so 'e so 'eo so

etc.

When the informant is searching for words he often fills in with a rather long series of narrative particles.

These particles occur most commonly at the beginning of a clause:

so 'e so t^yi tíka·nikOyA čé'cI higâ·ntI č'át^yá.še

Then the giant's eagle looked up, too.

Roughly half of the clauses in the text are introduced by a narrative particle or combination of narrative particles.

Narrative particles occur less commonly, although with considerable frequency, between function slots within a clause:

so 'e tísí kho so 'e so t^yá'áiy'0

Then they flew southward.

In the analysis of clause structure narrative particles are assigned, where possible, to the initial position within the function slot. The above clause, for instance, is analyzed as consisting of two function slots with the division occurring between *kho* and *so*.

Narrative particles occur occasionally in non-initial position

within a function slot. This may be true in certain function slots, such as the D slot (see 3.2.5, below), which sometimes includes two or more elements with intervening narrative particles:

D slot

ʂo ʔe ʂo tówʔé. ʂo si čʔâ.ničAtʔAyA
 this way back he was walking
Then he was walking back.

3.2.1. Predicate Slot (P).

The grammatical function of a predicate slot with its filler is that normally associated with the term "verb". Among the more common types of concepts which may be expressed by this unit are the following:

Action: skʔáhko he bit me.

Perception: skóhkáčA he saw me.

State of being: cʔíyamʔastʔO I am hungry.

Relationship: kʔa it is his.

The predicate slot is normally filled by a single verb. It may comprise the entire utterance (as in the above examples) or may be part of a larger construction:

P

ʂo ʔe ʔáisi yókʔé. tʔáʔéiyʔO yóʔai há.ti čʔó.thí
 there away they flew there where mountain
Then they flew away to the mountains.

A verb phrase rather than a single verb may fill the predicate slot, although this construction is statistically much less frequent. The following types of modifying elements may occur with a verb in a verb phrase:

1. A qualifying word may occur either preceding or following the verb:

————— P —————

so ʔáisi ha· nóyó kʔâ·ni
 there east alone he walked
He walked east alone.

————— P —————

ʔe so ʔe so čháʔáici čhéʔci
 he went also
 to bed
Then he went to bed, too.

2. The particle ʔeo may precede or follow the verb. This particle, which cannot be adequately translated into English, gives additional emphasis to a particular word or phrase:

————— P —————

so ʔe ʔai haoʔ tʔáʔá·cʔI ʔeo
 near they arrived
Then they came near.

┌ P ───┐

ʔeo skócʔípA

I need him.

3. The verb may be preceded by an uninflected word which functions semantically as the principal carrier of meaning:

┌ P ───┐

ʂomí há·kʔO tʔáwicanʔI ʔeo čʔâokʔoi-sano·

already ready she made his wife

His wife had things already prepared.

4. Certain verbs are preceded in most of their occurrences by characteristic particles which have no close semantic equivalent in English. These include ʔe, which precedes most forms of the verbs meaning to go and to say, and koiʔ, which precedes the verb to do:

┌ P ───┐

ʂo ʔe ʔeo tʔá·mí ʔe čʔáca

eagle he said

And then the eagle said:

┌ P ───┐

ʂo ʔe yókʔé· kʔó·thí ʔe cóhphe

away mountain go

Go away to the mountains!

P
 ci koi' káté'kOyA
 what you are doing
What are you doing?

Predicate slots may be subdivided on the basis of whether or not the verb that fills the slot incorporates a pronominal marker indicating the person of the subject or of the subject and object. P1 slots, illustrated by all of the above examples, are filled by verbs in the non-future tense and incorporate pronominal markers. P2 slots are filled by future tense verbs which do not incorporate pronominal markers:

P
 níté'éyO tísí kho sóc'ó'º há·ti hígâ·ntI t^yâ·m?A
 will go there south we where giant his house
We will go south to the giant's house.

3.2.2. Auxiliary Slot (A).

The occurrence of a P2 slot presupposes the presence in the same clause of an A slot filled by a verbal auxiliary (as sóc'ó'º we in the example above). Verbal auxiliaries comprise both a structural class (see Section 2.2.2) and a function class. The A slot is always filled by a single verbal auxiliary and performs the function of indicating the person of the subject or subject and object when this is not included in the verb itself. The A slot generally immediately follows the P slot:

┌ P ─┐
┌ A ─┐

háikʔO tówʔé. si có·ne ʂo
 when this way back will you
 come

When will you come back?

The occasional occurrence of other elements between the P and A slots prevents treating the verb plus its auxiliary as a verb phrase filling a single slot.

3.2.3. Subject Slot (S).

The grammatical function of a subject slot with its filler is to indicate the subject of the verb in the predicate slot. This unit is not obligatory to a complete clause, as the person and number of the subject is indicated in the verb itself or in the verb together with its auxiliary. The filling of the subject slot either adds redundancy or else indicates the subject with more specificity.

The subject slot may be filled by any one of the following elements:

1. Pronouns. Included in this category are the first person pronoun, hínO, the second person pronoun, híʂO, and various third person pronouns such as ʔískA one, to this one, he that one, hao some-one and ʔískáwa both of them:

┌ S ─┐
┌ P ─┐

ʂo ʔe ʔískáwa ʔai ʂo ʔe ʂo čhóʔtʲáʔtʲI
 both they fought

Then the two of them fought.

2. Verbs. The most common type of verbs filling a subject slot are those indicating inalienably possessed objects (e.g., kinship terms and terms referring to body parts):

$\overbrace{\hspace{10em}}^{\text{S}}$	$\overbrace{\hspace{10em}}^{\text{P}}$
'e ʂo 'e ʂo k'an'ai'st ^y o	'e t'yéin'é ^t 'A
his father	he said

Then his father said.

3. Referentials. These are, in general, noun-like words and are the most commonly occurring fillers of the S slot:

$\overbrace{\hspace{10em}}^{\text{S}}$	$\overbrace{\hspace{10em}}^{\text{P}}$
'eo 'áisi t'y ⁱ t'yá·mí ʂo 'e čhókóyA	
there up eagle	he sat

Then the eagle perched there.

4. Phrases based on the above elements. These are of the following general types:

a. Two or more words linked in possessive relationship:

$\overbrace{\hspace{10em}}^{\text{P}}$	$\overbrace{\hspace{10em}}^{\text{S}}$
ʂo 'e ʂo čhé'cI tíok'amI kasí·kI č'âok'oi-ʂano·	
also she waited king	his wife

The king's wife was waiting, too.

$\overbrace{\quad\quad\quad}^S$ $\overbrace{\quad\quad\quad}^P$
 kʔa háčánI tʔi káʔAšome
 his hair up it stood
His hair stood up.

$\overbrace{\quad\quad\quad}^S$ $\overbrace{\quad\quad\quad}^P$
 higâ·ntI čʔátʔá·še tʔá·mí so ʔe tʔó·ščʔéhca
 giant his eagle he cried out
The giant's eagle cried out.

b. Two or more words linked in coordinate relationship:

$\overbrace{\quad\quad\quad}^P$ $\overbrace{\quad\quad\quad}^S$
 tíʔai tʔáʔâoʔO háčIce·ca ko čʔâokʔoi·sano·
 there they lived man and his wife
A man and his wife lived there.

c. A combination of two or more pronouns or a combination of one or two pronouns with a referential or a verb:

$\overbrace{\quad\quad\quad}^S$ $\overbrace{\quad\quad\quad}^P$
 so ʔe ʔeo ʔai ʔískA hao čháʔáotIsĚ
 one someone he was planting
There was someone planting.

$\overbrace{\quad\quad\quad}^S$ $\overbrace{\quad\quad\quad}^P$
 ci háití kané·ro so tʔówʔásčʔéhca
 something which sheep they bleated
There were some sheep bleating.

d. A verb or a referential with an attributive:

$\overbrace{\quad\quad\quad}^{\text{P}} \quad \overbrace{\quad\quad\quad}^{\text{S}}$
 'ai t'a t'yá'kO ríkOsI háçIcE
 thus he was rich man
Once there was a rich man.

e. A pronoun, verb, referential or phrase of one of the above types preceded and/or followed by 'eo and/or čhé'cI:

$\overbrace{\quad\quad\quad}^{\text{P}} \quad \overbrace{\quad\quad\quad}^{\text{S}}$
 so 'e so t'yókAČA 'eo mō·k'aiçA
 he saw him mountain lion
Then the mountain lion saw him.

$\overbrace{\quad\quad\quad}^{\text{S}} \quad \overbrace{\quad\quad\quad}^{\text{P}}$
 so 'e 'eo santiyâ·kO čhé'cI so yók'O n'± čhókóyano·
 St. James also away down he sat
Then St. James dismounted, too.

$\overbrace{\quad\quad\quad}^{\text{P}} \quad \overbrace{\quad\quad\quad}^{\text{S}}$
 so 'e so tíope·t'A 'eo č'a piyó·na-çano·
 he asked him his servant
Then his servant asked him.

Clauses with compound subjects (i.e., two or more words in coordinate relationship) sometimes have two S slots with the subject split between the two:

$\overbrace{\quad\quad\quad}^S$ $\overbrace{\quad\quad}^P$ $\overbrace{\quad\quad\quad\quad\quad\quad}^S$
 'e háw'ái bóiyasI cé'és ko kawâ·yo ko mó·la
 here oxen they are and horse and mule
Here are oxen, horses and mules.

3.2.4. Object Slot (O).

An object slot with its filler indicates the object of the action expressed by the verb in the predicate slot. Like the subject slot, this is a non-obligatory element which adds redundancy or specificity.

The same types of words or phrases may fill the object slot as the subject slot:

1. Pronouns:

$\overbrace{\quad\quad\quad}^P$ $\overbrace{\quad\quad}^O$
 'eo şáy'éipa·tE híşO
 I look for you you
I am looking for you.

2. Verbs:

$\overbrace{\quad\quad\quad\quad\quad\quad}^O$ $\overbrace{\quad\quad\quad\quad\quad\quad}^P$
 şo 'e şo 'eo şo k'á·w'I-t^yé·mí şo t^yów'ápéocA
 his children he called them
Then he called his children.

3. Referentials:

$\overbrace{\text{P}}$ $\overbrace{\text{O}}$
 ʂo 'e čhã'áchtano. mō·k'aiçA

he killed it mountain lion

Then he killed the mountain lion.

4. Phrases:

a. Two or more words in possessive relationship:

$\overbrace{\text{S}}$ $\overbrace{\text{O}}$ $\overbrace{\text{P}}$
 ʂo 'e santiyâ·kO k'amá'kĪ kasî·kĪ tíowak'oiçA

St. James his daughter king he married her

Then St. James married the king's daughter.

b. Two or more words in coordinate relationship:

$\overbrace{\text{P}}$ $\overbrace{\text{O}}$
 há·ti 'éko 'eo ʂów'áhKĀčĀnE kawiyá·ra wá·kašĪ
 where then you saw them horses cattle

Where, then, did you see the horses and cattle?

c. Combination of pronoun plus pronoun, verb or referential:

$\overbrace{\text{O}}$ $\overbrace{\text{P}}$ $\overbrace{\text{A}}$
 to má·čA 'eo néy'açicE si

this mule will choose I

I will choose this mule.

d. Combination of verb or referential plus attributive:

$\overbrace{\hspace{10em}}^O \quad \overbrace{\hspace{10em}}^P$
 so 'e so 'eo káŕé kawâ·yo 'eo so 'e 'e tíwiçani-t^yano·
 white horse he saddled him

Then he saddled the white horse.

- e. Any of the above elements in combination with 'eo or čé'ci:

$\overbrace{\hspace{10em}}^P \quad \overbrace{\hspace{10em}}^O$
 so 'e 'ai tá'ámot^yOcan'E 'eo to higâ·ntI
 they killed him this giant

Then they killed the giant.

When both the subject and the object slots in a clause are filled the two are distinguished by relative order (see Section 3.3.1). When one but not the other is filled the context determines whether it is an object or a subject slot. A clause may occasionally have two object slots:

$\overbrace{\hspace{10em}}^O \quad \overbrace{\hspace{10em}}^P \quad \overbrace{\hspace{10em}}^O$
 'a cáci 'ai há·ti kawiyá·ra t^yów'áhkáčAnE ko wá·kašI
 question not anywhere horses you saw them and cattle

Haven't you seen some horses and cattle anywhere?

The two object slots may be filled by a split compound object as in the example above, or they may be filled by a direct and an indirect object respectively:

$\overbrace{\hspace{10em}}^O \quad \overbrace{\hspace{10em}}^P \quad \overbrace{\hspace{10em}}^O$
 so 'e so 'áisi sai ci tá'áwiya'ani'tA 'eo santiyâ·kO
 there all thing they left to him St. James

Then they left everything to St. James.

3.2.5. Directional-Locational Slot (D).

A directional-locational slot with its filler specifies the direction taken by an action and/or its location either in an absolute sense or in relation to the speaker.

The D slot may be filled by one of the following elements:

1. A preposition:

$\overbrace{\quad\quad\quad}^{\text{D}} \quad \overbrace{\quad\quad\quad}^{\text{P}}$
 ?e ʒo ?e háw?é. čʔâ.ni
 this way he came

Then he advanced.

2. A directional:

$\overbrace{\quad\quad\quad}^{\text{D}} \quad \overbrace{\quad\quad\quad}^{\text{P}}$
 ?e ʒo ?e t^yi té?éyO
 up they went

Then they went up.

3. A referential which includes a locative clitic:

$\overbrace{\quad\quad\quad\quad\quad\quad\quad\quad\quad}^{\text{P}} \quad \overbrace{\quad\quad\quad}^{\text{D}}$
 ʒo ?e tíyʔátʔIsiwist^yano. ká.ro-ti
 he hitched them wagon to

Then he hitched them to the wagon.

4. A phrase belonging to one of the following general types:

a. Two prepositions:

$\overbrace{\hspace{2cm}}^D \overbrace{\hspace{2cm}}^P$
 yók'é. háw'é. tíka·nikOyA

that way this way he was looking

He was looking this way and that.

b. Two directionals:

$\overbrace{\hspace{2cm}}^D \overbrace{\hspace{2cm}}^P$
 so 'e sa t^yi čhókóyano·

back up he sat

Then he sat up again.

c. A combination of one or more prepositions with one or more directionals:

$\overbrace{\hspace{2cm}}^D \overbrace{\hspace{2cm}}^P$
 so 'e yósi n'í cóht^yO
 from
 there down he went

Then he went back down.

$\overbrace{\hspace{2cm}}^D \overbrace{\hspace{2cm}}^P$
 tók'é. kho n'í 'eo sê·nIčAt^yAyA

that way south down I am going

I am going on down south.

d. A preposition plus a referential:

$\overbrace{\hspace{10em}}^D$ $\overbrace{\hspace{10em}}^P$
 ʒo ʔe yókʔé. kʔó·thí ʔe cóhphe
 that way mountain go
Go away to the mountains!

e. A verb phrase:

$\overbrace{\hspace{10em}}^D$ $\overbrace{\hspace{10em}}^P$
 sʔétIt^yA ʔai t^yi ʔókóyá
 my back up sit
Sit up on my back.

Most clauses occurring with a D slot contain only one such slot. Occasionally, however, a clause occurs with two D slots, one preceding and the other following the P slot:

$\overbrace{\hspace{10em}}^D$ $\overbrace{\hspace{10em}}^P$ $\overbrace{\hspace{10em}}^D$
 ʒo ʔai haoʔ t^yi ʒókóyano. mé·sA-ti
 near up when you sit table at
When you sit up at the table.

3.2.6. Time Slot (T).

The grammatical function of a time slot with its filler is to specify the relative time of an action. This slot is usually filled by one of the temporals (see 2.2.3.1):

$\overbrace{\quad D \quad} \overbrace{\quad T \quad} \overbrace{\quad P \quad} \overbrace{\quad A \quad}$
 tów'é. si há.w'íná có.ne si
 this way back soon will come I

I will come back soon.

$\overbrace{\quad T \quad} \overbrace{\quad P \quad}$
 'e ʒo 'e ná.no čhá'áiča.no.
 next day it occurred

The next day arrived.

The T slot is sometimes filled by a phrase composed of two temporals or of the negative, cáci, plus a temporal:

$\overbrace{\quad T \quad} \overbrace{\quad P \quad}$
 ʒomí háw'a. čhá'áiča.no.
 already long ago it occurred

It happened long ago.

$\overbrace{\quad T \quad} \overbrace{\quad S \quad} \overbrace{\quad P \quad}$
 'éskiskO cáci na sai cá'A
 but not yet all it is
But this isn't all yet.

As in the case of the D slot, a clause may occasionally occur with two T slots, one preceding the P slot and the other following:

$\overbrace{\quad T \quad} \overbrace{\quad D \quad} \overbrace{\quad P \quad} \overbrace{\quad T \quad}$
 'emí tów'é. kho cíyát^yO ʒomí má.no
 already ^{this} south he passed already long time
 way

It has been a long time since he passed by here going south.

3.2.7. Modifier Slot (M).

A modifier slot with its filler functions as a modifier of the predicate. The filler of this slot is ordinarily a single attributive:

M	D	P
so 'e so nópita	so 'e so 'ai hao' n'±	t'yópiño.
alone	near down	he entered

Then he went in alone.

M	P	A
'éskiskO so w'ínó	čé'cI n'±té'e-ya'at'A	sóćó.O
but	fast also	will travel we

But we, too, will travel fast.

3.2.8. Interrogative-Modal Slot (I).

An interrogative-modal slot may be filled by a variety of uninflected words classified as either interrogatives or modals (see Section 2.2.3.1). The function of this slot with its filler is to form a question or to reinforce the mode (other than indicative) of the clause.

I	D	S	P
cáci	há·ti	hao	ká'kO
not	where	someone	he is

There is nobody here.

I P

sə ʔe ci sʔáotIsɿ

what you are planting

What are you planting?

I O P

kʔáocIkai to thícháhkO

maybe this I change

Maybe I will change it.

I D P

hánʔé tókʔé. kháihká

let me that way let me look

Let me look around.

Interrogative or modal phrases sometimes fill the I slot.

These are ordinarily composed of an interrogative or a modal together with cáci not or ʔéko then:

 I P

cáci ʔí·tʔe tʔómʔɿ

not able to he got out

He couldn't get out.

 I D P A

ʔéko kówʔa sa níomʔɿ si

then how back will I
get out

How, then, will I get back out?

3.2.9. Connective Slot (C).

The connective slot with its filler occurs in clause-initial position and relates that clause to the preceding one. This slot is filled by one of the following connective particles: *ko* and, *'e* and, *'éko* then, *'éskiskO* but, or by the combination *'e t'a* and thus.

C P
ko 'eo čón'Aca
 and he is healthy
And he is healthy.

C P
'éskiskO 'eo so 'e so tíow'áwa.sa čé'cI
 but they were sick also
But they were sick, too.

3.3. Sequential Ordering of Function Slots

The structure of clauses will now be analyzed in terms of the sequential ordering of the function slots. The statistical treatment is based on the types of clauses occurring in a sample of text material. The sample consists entirely of myths narrated by one informant and contains about 4500 words. This was transcribed from fifty-five minutes of recorded narrative.

3.3.1. Predicate Clauses

The large majority of clauses in the text are predicate clauses.

Of 910 clauses identified in the text there are 868 of this type.

Predicate clauses are built around a predicate slot filled by a verb or verb phrase. The predicate clause may contain only a predicate slot, or it may include a wide variety of slots preceding and/or following the predicate slot. The structure of all predicate clauses in the text is indicated in Charts VII and VIII. Chart VII shows the structure of P1 clauses, i.e., clauses in which the predicate slot is filled by a non-future tense verb. P2 clauses, outlined in Chart VIII, contain verbs in the future tense. Formulas indicate the sequential arrangement of the function slots and employ the following abbreviations:

- P = Predicate slot
- S = Subject slot
- O = Object slot
- D = Directional-locational slot
- T = Time slot
- M = Modifier slot
- I = Interrogative-Modal slot.
- C = Connective slot
- A = Auxiliary slot

The number of occurrences of each type of predicate clause is indicated following the formula. The arrangement of the formulas in the charts indicates varying levels of complexity, although certain details of the arrangement are arbitrary. The order of introduction of the slots from left to right in the charts reflects to a certain degree an increasing peripheral nature of the slot.

Chart VII

Pl Clause Types

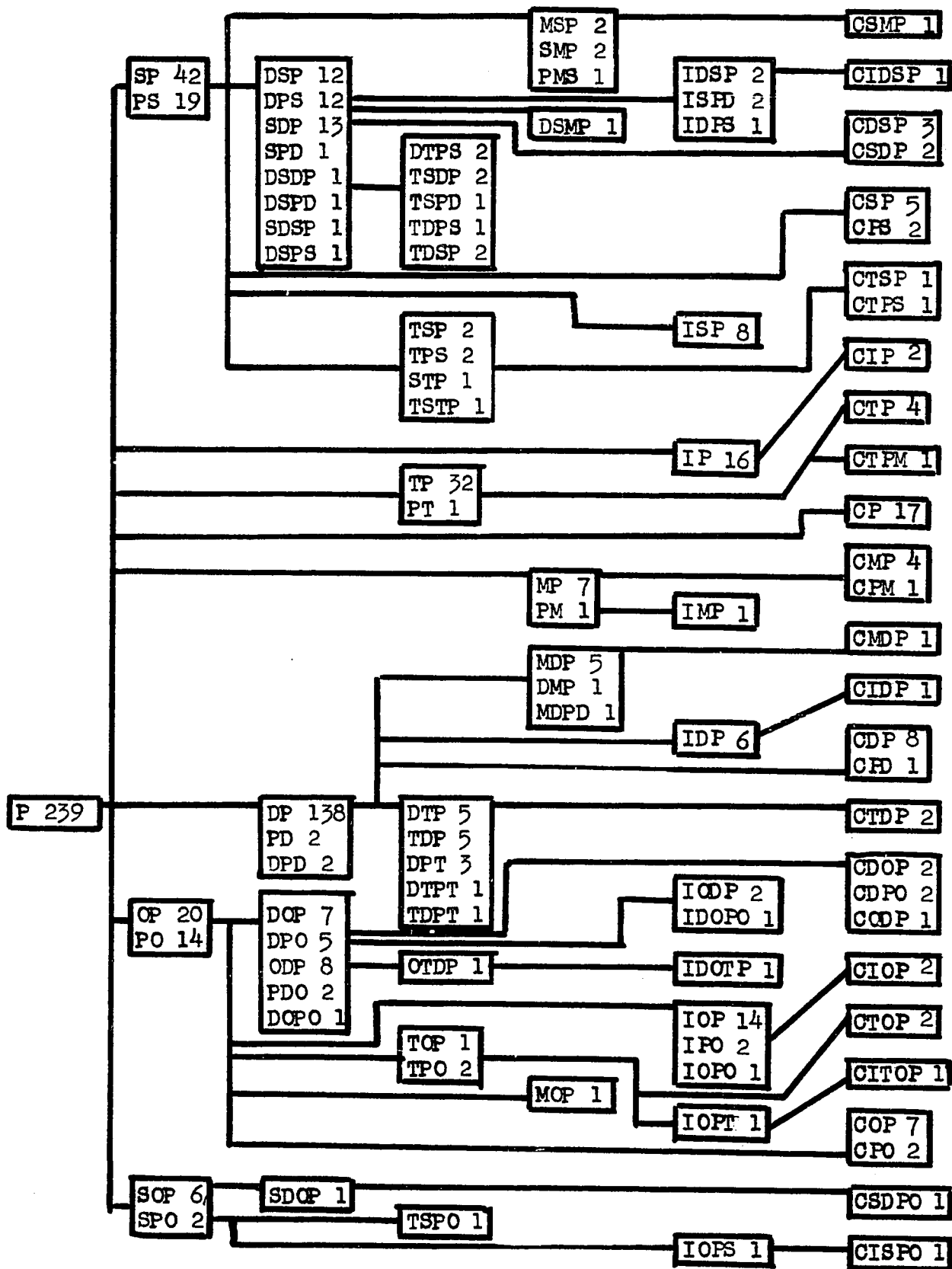
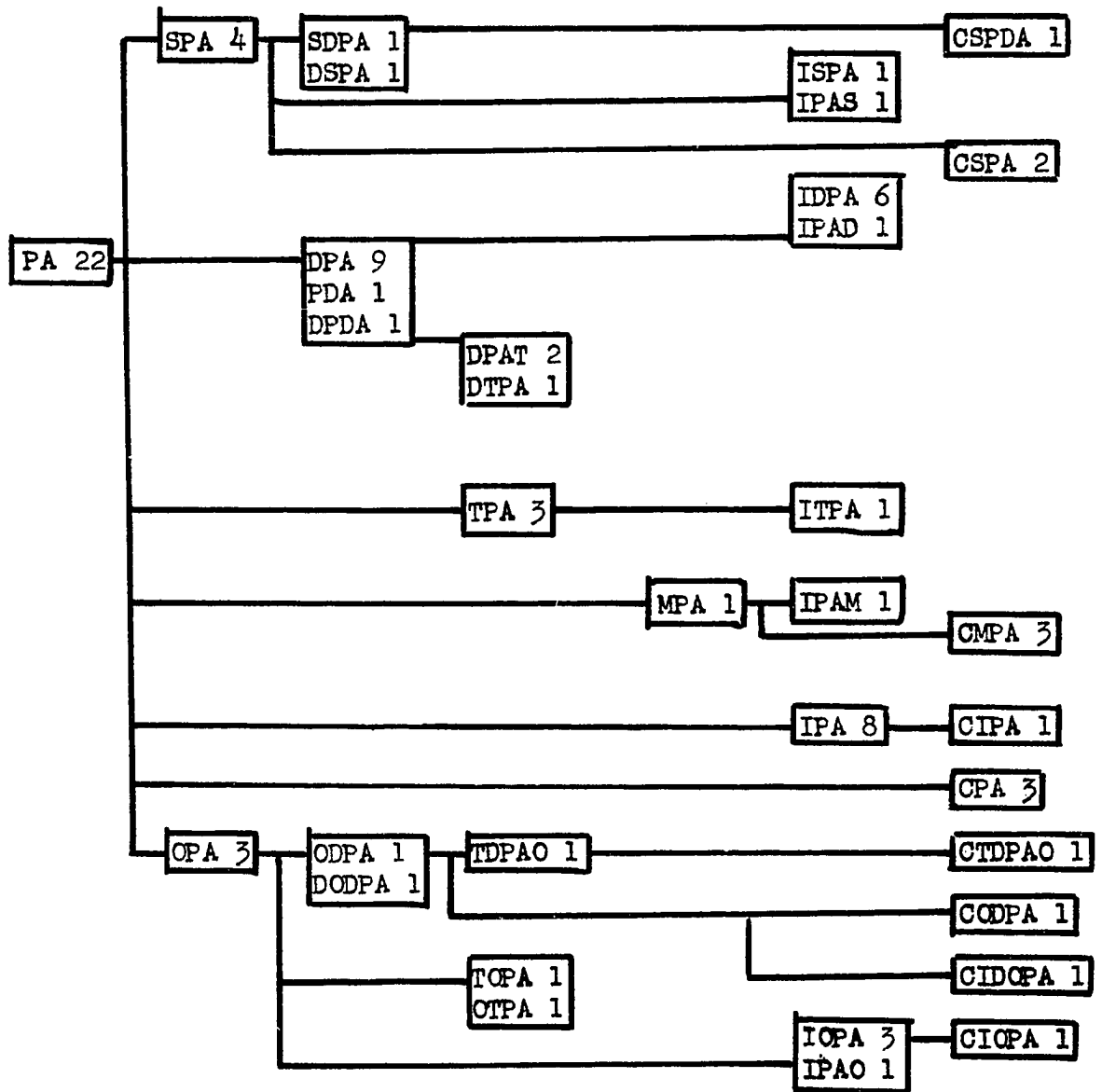


Chart VIII
P2 Clause Types



In spite of some freedom of order in the arrangement of slots within the clause there are definite restrictions on their distribution. Considering the slots in the order that they are introduced in the charts following the P slot, the following observations can be made.

The A slot always follows the P slot, usually contiguously. There are a few occurrences, though, of a D slot intervening between the P and A slots (PDA, DPDA and CSPDA).

The S and O slots may each occur either preceding or following the P slot. The S slot and, to a lesser extent, the O slot occur with greater frequency preceding than following the P slot. These slots are generally contiguous to the P slot or separated from it by one another, but occasionally a D, T or M slot may intervene as in the sequences SDP, OTDP, DSMP, etc.

Most commonly the D slot occurs immediately preceding the P slot or separated from it by an S or O slot, or less frequently by a T or M slot. When not occurring in this position it immediately follows the P slot, or there may be two D slots in the clause as in the sequences DSDP, DSPD and MDPD.

The distribution of the T and M slots is comparable to that of the D slot. They generally precede, but sometimes immediately follow the P slot. When preceding the P slot they may be separated from it by an S, O, D, T or M slot.

The I and C slots are the most restricted in their distribution. An I slot occurs only clause-initially or preceded by a C slot, while a C slot may occur only in initial position in the clause.

3.3.2. Non-predicate Clauses

Non-predicate clauses are of rather infrequent occurrence in the text, comprising only 42 of the 910 clauses. Of these the most commonly occurring is the prepositional clause, of which there are 30 in the text.

Of the prepositional clauses seven consist of a D slot only:

D
 ti' pánísté n'í
 here west side down
It was down here on the west side.

Sixteen are composed of a D slot followed by an S slot:

D S
 tów'és. t'yítí n'í čhí.ná
 this way north down river
It was at the river flowing from the north.

Four are made up of a D slot preceded by an S slot:

S D
 higâ.ntI 'á'á.t'áwI yók'és.
 giant key there
They giant's key is there.

In addition, there is one clause of the type CD and two of the type CDS:

C D S
 ko tíyo' pisâ·ri
 and here blanket
And here is a blanket.

There are ten ?eo clauses in the text. These all contain an S slot either introduced or closed by the particle ?eo. In this context ?eo may be translated as it was or there was.

— S —
 ?eo č'ásápA
 Satan
It was Satan.

All but one of the ?eo clauses is composed entirely of an S slot. The one exception has a C slot preceding the S slot:

— C — — S —
 ?e ʒo ?e t'a ?eo ʒo ?e má·čA ?ískA háití ?eo
 thus mule one which
There was one special mule.

There are only two interrogative clauses in the text, but such clauses are more common in ordinary conversation than this sampling would indicate. An interrogative clause consists uniformly of an I slot followed by an S slot:

I S
 há·ti t^yá·mí Where is the eagle?
 where eagle

3.3.3. Independent Versus Dependent Clauses

Most clauses are independent clauses and as such may stand alone as full sentences. A dependent clause, on the other hand, never occurs in isolation but is closely linked to a contiguous independent clause. Three types of dependent clauses are identified in the text:

1. Prepositional clauses:

tiʔ pánísté nʔi It was down here on the west side.

2. Clauses introducing or closing a quotation:

tʔéinʔétʔA ʔeo tʔá.mí The eagle said:

3. Clauses introduced by a C slot filled by ko and:

ko ʔískA ʔeo ʂo čháʔáopínaiʔI And he put one of them in
(his pocket).

Clauses introduced by ko differ from those introduced by other connectives in that they presuppose a preceding clause to which they are linked:

$\overbrace{\text{O}}^{\text{O}}$ $\overbrace{\text{D}}$ $\overbrace{\text{P}}$ C $\overbrace{\text{O}}$ $\overbrace{\text{D}}$ $\overbrace{\text{P}}$
 to ʔískA ʔeo hé.yʔá chá.cha.tʔani / ko to ʔískA ʔeo hé.yʔá thĩsá.tĩsá
 this one with it he breathes and this one with it he has power
With one he breathes and with the other he has power.

Clauses introduced by ʔéskisk0 or other connectives, on the other hand, may stand alone as independent clauses:

C	T	P	M
ʔéskiskO	na	čhápAŠI	kʔóimi
but	yet	dark	slightly
<u>But it was still a little dark.</u>			

3.4. Supra-clause Structure

In this section the clause will be examined within the context of longer stretches of speech. Certain elements will first be described which are not considered to be an integral part of any clause. This will be followed by a consideration of the position of dependent clauses within larger syntactic units.

3.4.1. Fragment Utterances

Certain words or short sequences of words occur both in narrative and in conversation which may be spoken in isolation, but which are meaningless apart from the context in which they are spoken. The fragment may be semantically dependent on the immediate linguistic context or on the non-linguistic context.

Fragment utterances are most commonly exclamations or short answers to questions. They do not occupy a definable slot within a clause or larger unit and are themselves too brief for syntactic analysis. The following are examples of the 105 fragment utterances occurring in the text:

ha. Yes.

hinʔá O.K.

he What?
 'eo he Is that so?
 mī na so Let's go!
 khe. Indeed!
 haw'í Here!
 wí·'é Thanks.
 káitI há·n'é Come on!

3.4.2. Complex Sentences

The narrative text on which this analysis is based consists, for the most part, of a series of independent clauses, each of which is in itself a complete structural unit. Since each independent clause is a complete sentence and is in general relatively brief, a Santa Ana narrative appears highly fragmented as compared with English.

There are in the text two types of complex sentences, each composed of an independent clause with one or more dependent clauses. The first type of complex sentence is composed of an independent clause followed by one or more dependent clauses of the type introduced by the connective *ko*. There are 43 sentences of this type in the text including the following example:

independent clause	dependent clause
'ai so 'e 'ískA čhá'óc'áyocA	ko 'ískA 'eo so čhá'áop+nai'I
one he broke it	and one he put it in
<u>Then he broke one and put one in his pocket.</u>	

The second type of complex sentence is composed of an independent clause preceded or followed by one or more prepositional clauses. There are 27 occurrences of this type of sentence in the text including the following examples:

_____ independent clause _____ dependent clause _____
 'e so 'e so si yók'0 cóhk0 'eo santiyâ.k0 'ai tí'ai pák'acIş0
 back away he went St. James there gully

Then St. James went away again into the gully.

_____ dependent clause _____ dependent clause _____ dependent clause _____
 tów'é. t'yíti n'í čhí.ná ti' pánísté n'í k'ótáisk'ír'í tí'ai
 this way north down river here west side down round-top there

_____ independent clause _____
 tí'ai t'yá'âo'0 háçIce.ca ko č'âok'oi-şano.
 there they lived man and his wife

On the west side of the river flowing from the north at Roundtop Mesa there lived a man and his wife.

3.4.3. Quotations

Of the three types of dependent clauses described in Section 3.3.3 two occur as parts of the complex sentences discussed above. The third type is that which introduces or closes a quotation and is ordinarily translated by such expressions as he said, he said to him, etc. The occurrence of these clauses closely parallels the English equivalents in that they may precede or follow the quotation, or they may be omitted entirely.

┌ quotational clause ───┐ ┌ independent clause ───┐

šo 'e šo 'e t'á'cIkOyA šo n'áici' si

he said to him will lie I

Then he said to him, "I am going to lie down."

┌ fragment utterance ───┐ ┌ quotational clause ───┐

'e šo 'e šo hin'á. t'yéin'ét'A 'eo santiyâ.kO

O.K. he said St. James

"O.K.," said St. James.

Quotations are sometimes preceded and followed by dependent quotational clauses:

┌ quotational clause ───┐ ┌ fragment quotational clause ───┐

šo 'e 'eo t'yá.mí 'e č'áca hin'á t'yéin'ét'A

eagle he said O.K. he said

Then the eagle said, "O.K."

Constructions such as these are not regarded as complex sentences for the reason that dependent quotational clauses may be linked not only to a single fragment or independent clause but, in extended quotations, to a whole series of sentences, some of which may themselves be complex.

APPENDIX A: VERB PARADIGMS

Contents:

1. Transitive Verbs
 - a. Class A primary paradigm
 - b. Class B primary paradigm
 - c. Class C primary paradigm
 - d. Class D primary paradigm
 - e. Passive paradigm
 - f. Reflexive paradigm
2. Intransitive Verbs
 - a. Paradigm A
 - b. Paradigm B
 - etc.

1. Transitive Verbs
 - a. Class A primary paradigm

Indicative

síohkAČA I saw you

sóhkAČA you saw him

kóhkAČA he saw him

cióhkAČA he (fourth person) saw him

sáohkAČA I saw you

t^yóhkAČA you saw me

skóhkAČA he saw me

kóčóhkAČA he saw you

Negative

cáci skóhkAČA I didn't see him

cáci šóhkAČA you didn't see him

cáci kóhkAČA he didn't see him

cáci cíohkAČA he (fourth person) didn't see him

cáci šáohkAČA I didn't see you

cáci t^yóhkAČA you didn't see me

cáci st^yóhkAČA he didn't see me

cáci kóčóhkAČA he didn't see you

Dubitative

thíohkAČA maybe I saw him

čóhkAČA maybe you saw him

t^yóhkAČA maybe he saw him

tíohkAČA maybe he (fourth person) saw him

čáohkAČA maybe I saw you

t^yóhkAČA maybe you saw me

thóčóhkAČA maybe he saw me

t^yóčóhkAČA maybe he saw you

Hortative

kháohkAČA let me see him

phóhkAČA see him

phíohkAČA let him see him

p^ʔíohkAČA let him (fourth person) see him

ṣáohkAČA let me see you

kóhkAČA see me

nóçóhkAČA let him see me

çóhkAČA let him see you

Negative Hortative

pá·mí níohkAČA let me not see him

pá·mí skóhkAČA don't see him

pá·mí phíohkAČA let him not see him

pá·mí p'íohkAČA let him (fourth person) not see him

pá·mí ṣáohkAČA let me not see you

pá·mí kóhkAČA don't see me

pá·mí nóçóhkAČA let him not see me

pá·mí st^yóhkAČA let him not see you

Future Hortative

pa níohkAČA let me see him (in the future)

pa çóhkAČA see him

pa phíohkAČA let him see him

pa p'íohkAČA let him (fourth person) see him

pa çáohkAČA let me see you

pa t^yóhkAČA see me

pa nóçóhkAČA let him see me

pa t^yóçóhkAČA let him see you

b. Class B primary paradigm

Indicative

séhkO I bit him

he What?
 'eo he Is that so?
 m̄ na ʒo Let's go!
 khe· Indeed!
 haw'í Here!
 wá·'é Thanks.
 káitI há·n'é Come on!

3.4.2. Complex Sentences

The narrative text on which this analysis is based consists, for the most part, of a series of independent clauses, each of which is in itself a complete structural unit. Since each independent clause is a complete sentence and is in general relatively brief, a Santa Ana narrative appears highly fragmented as compared with English.

There are in the text two types of complex sentences, each composed of an independent clause with one or more dependent clauses. The first type of complex sentence is composed of an independent clause followed by one or more dependent clauses of the type introduced by the connective ko. There are 43 sentences of this type in the text including the following example:

independent clause	dependent clause
'ai ʒo 'e 'ískA čhá'óc'áyocA	ko 'ískA 'eo ʒo čhá'áop̄nai'I
one he broke it	and one he put it in
<u>Then he broke one and put one in his pocket.</u>	

Hortative

kháhkO let me bite him
 phéhkO bite him
 phéhkO let him bite him
 p'éhkO let him (fourth person) bite him
 s'áhkO let me bite you
 k'áhkO bite me
 náçáhkO let him bite me
 çáhkO let him bite you

Negative Hortative

pá·mí néhkO let me not bite him
 pá·mí skáhkO don't bite him
 pá·mí phéhkO let him not bite him
 pá·mí p'éhkO let him (fourth person) not bite him
 pá·mí s'áhkO let me not bite you
 pá·mí k'áhkO don't bite me
 pá·mí náçáhkO let him not bite me
 pá·mí sč'áhkO let him not bite you

Future Hortative

pa néhkO let me bite him (in the future)
 pa cháhkO bite him
 pa phéhkO let him bite him
 pa p'éhkO let him (fourth person) bite him
 pa ç'áhkO let me bite you
 pa č'áhkO bite me
 pa náçáhkO let him bite me

pa t^yčáhkO let him bite you

c. Class C primary paradigm

Indicative

cʔí·cowa I paid him
 ší·cowa you paid him
 cí·cowa he paid him
 šáicowa I paid you
 čʔóicowa you paid me
 skʔóicowa he paid me
 kátí·cowa he paid you

Negative

cáci st^yí·cowa I didn't pay him
 cáci ší·cowa you didn't pay him
 cáci cí·cowa he didn't pay him
 cáci šáicowa I didn't pay you
 cáci čʔóicowa you didn't pay me
 cáci sčʔí·cowa he didn't pay me
 cáci kátí·cowa he didn't pay you

Dubitative

tʔí·cowa maybe I paid him
 chí·cowa maybe you paid him
 tí·cowa maybe he paid him
 čháicowa maybe I paid you
 čʔóicowa maybe you paid me
 thátí·cowa maybe he paid me
 t^yítí·cowa maybe he paid you

Hortative

kʷáicóWA	<u>let me pay him</u>
phí·cÓWA	<u>pay him</u>
pʷí·cÓWA	<u>let him pay him</u>
sáicóWA	<u>let me pay you</u>
kʷóicóWA	<u>pay me</u>
nʷtí·cÓWA	<u>let him pay me</u>
tí·cÓWA	<u>let him pay you</u>

Negative Hortative

pá·mí nʷí·cÓWA	<u>let me not pay him</u>
pá·mí stʷí·cÓWA	<u>don't pay him</u>
pá·mí pʷí·cÓWA	<u>let him not pay him</u>
pá·mí sáicóWA	<u>let me not pay you</u>
pá·mí kʷóicóWA	<u>don't pay me</u>
pá·mí nʷtí·cÓWA	<u>let him not pay me</u>
pá·mí sčʷí·cÓWA	<u>let him not pay you</u>

Future Hortative

pa nʷí·cÓWA	<u>let me pay him (in the future)</u>
pa chí·cÓWA	<u>pay him</u>
pa pʷí·cÓWA	<u>let him pay him</u>
pa cháicóWA	<u>let me pay you</u>
pa čʷóicóWA	<u>pay me</u>
pa nʷtí·cÓWA	<u>let him pay me</u>
pa tʷítí·cÓWA	<u>let him pay you</u>

d. Class D primary paradigm

Indicative

c'íoh̄ti	<u>I gave it to him</u>
š'íoh̄ti	<u>you gave it to him</u>
c'íoh̄ti	<u>he gave it to him</u>
s'áoh̄ti	<u>I gave it to you</u>
t'y'óh̄ti	<u>you gave it to me</u>
skóh̄ti	<u>he gave it to me</u>
kát'íoh̄ti	<u>he gave it to you</u>

Negative

cáci st'y'óh̄ti?	<u>I didn't give it to him</u>
cáci š'íoh̄ti?	<u>you didn't give it to him</u>
cáci c'íoh̄ti?	<u>he didn't give it to him</u>
cáci s'áoh̄ti?	<u>I didn't give it to you</u>
cáci t'y'óh̄ti?	<u>you didn't give it to me</u>
cáci sč'óh̄ti?	<u>he didn't give it to me</u>
cáci kát'íoh̄ti?	<u>he didn't give it to you</u>

Dubitative

t'íoh̄ti	<u>maybe I gave it to him</u>
ch'íoh̄ti	<u>maybe you gave it to him</u>
t'íoh̄ti	<u>maybe he gave it to him</u>
ç'áoh̄ti	<u>maybe I gave it to you</u>
t'y'óh̄ti	<u>maybe you gave it to me</u>
thát'íoh̄ti	<u>maybe he gave it to me</u>
t'y'ít'íoh̄ti	<u>maybe he gave it to you</u>

Hortative

k'áoh̄ti	<u>let me give it to him</u>
ph̄iohti	<u>give it to him</u>
p'íoh̄ti	<u>let him give it to him</u>
ṣ'áoh̄ti	<u>let me give it to you</u>
kóhti	<u>give it to me</u>
n̄tíoh̄ti	<u>let him give it to me</u>
tíoh̄ti	<u>let him give it to you</u>

Negative Hortative

pá·mí n'íoh̄ti	<u>let me not give it to him</u>
pá·mí st ^y óhti	<u>don't give it to him</u>
pá·mí p'íoh̄ti	<u>let him not give it to him</u>
pá·mí ṣ'áoh̄ti	<u>let me not give it to you</u>
pá·mí kóhti	<u>don't give it to me</u>
pá·mí n̄tíoh̄ti	<u>let him not give it to me</u>
pá·mí s̄č'óhti	<u>let him not give it to you</u>

Future Hortative

pa n'íoh̄ti	<u>let me give it to him (in the future)</u>
pa ch̄iohti	<u>give it to him</u>
pa p'íoh̄ti	<u>let him give it to him</u>
pa ṣ'áoh̄ti	<u>let me give it to you</u>
pa t ^y óhti	<u>give it to me</u>
pa n̄tíoh̄ti	<u>let him give it to me</u>
pa t ^y ítíoh̄ti	<u>let him give it to you</u>

e. Passive paradigm

Indicativesk'á'áhkačAnE I was seenšá'áhkačAnE you were seenc'á'áhkačAnE he was seenNegativecáci sč'á'áhkačAnE I wasn't seencáci šá'áhkačAnE you weren't seencáci c'á'áhkačAnE he wasn't seenDubitativeté'éhkačAnE maybe I was seenchá'áhkačAnE maybe you were seent'á'áhkačAnE maybe he was seenHortativené'éhkačAnE let me be seencá'áhkačAnE be seenp'é'éhkačAnE let him be seenNegative Hortativepá·mí né'éhkačAnE let me not be seenpá·mí sč'á'áhkačAnE don't be seenpá·mí p'é'éhkačAnE let him not be seenFuture Hortativepa né'éhkačAnE let me be seen (in the future)pa chá'áhkačAnE be seenpa p'é'éhkačAnE let him be seen

f. Reflexive paradigm

Indicative

s'áohkAČA I saw myself
 s'áohkAČA you saw yourself
 khá'áohkAČA he saw himself

Negative

cáci skhá'áohkAČA I didn't see myself
 cáci s'áohkAČA you didn't see yourself
 cáci khá'áohkAČA he didn't see himself

Dubitative

thá'áohkAČA maybe I saw myself
 čhá'áohkAČA maybe you saw yourself
 čhá'áohkAČA maybe he saw himself

Hortative

khá'áohkAČA let me see myself
 č'óhkAČA see yourself
 phá'áohkAČA let him see himself

Negative Hortative

pá·mí n'áohkAČA let me not see myself
 pá·mí skhá'áohkAČA don't see yourself
 pá·mí phá'áohkAČA let him not see himself

Future Hortative

pa n'áohkAČA let me see myself (in the future)
 pá čhá'áohkAČA see yourself
 pa phá'áohkAČA let him see himself

2. Intransitive Verbs

a. Paradigm A

Indicativesíoyá I skinned itsóyá you skinned itkóyá he skinned itNegativecáci skóyá I didn't skin itcáci sóyá you didn't skin itcáci kóyá he didn't skin itDubitativethíoyá maybe I skinned itchóyá maybe you skinned itt^yóyá maybe he skinned itHortativekháoyá let me skin itphóyá skin itphí'óyá let him skin itNegative Hortativepá·mí kháoyá let me not skin itpá·mí skóyá don't skin itpá·mí phí'óyá let him not skin itFuture Hortativepa níoyá let me skin it (in the future)pa chóyá skin itpa phí'óyá let him skin it

b. Paradigm B

IndicativesǐhskʔA I drankʂǐhskʔA you drankkǐhskʔA he drankNegativecáci skǎhskʔA I didn't drinkcáci ʂǎhskʔA you didn't drinkcáci kǎhskʔA he didn't drinkDubitativethǐhskʔA maybe I drankchǐhskʔA maybe you dranktʰǐhskʔA maybe he drankHortativekhǎhskʔA let me drinkʔhskʔA drinkphǐʔskʔA let him drinkNegative Hortativepá·mǐ khǎhskʔA let me not drinkpá·mǐ skǎhskʔA don't drinkpá·mǐ phǐʔskʔA let him not drinkFuture Hortativepa níhskʔA let me drink (in the future)pa chǐhskʔA drinkpa phǐʔskʔA let him drink

c. Paradigm C

Indicativechá·sE I breathedchá·sA you breathedchá·kA he breathedNegativecáci chá·skA I didn't breathecáci chá·sA you didn't breathecáci chá·kA he didn't breatheDubitativechá·tE maybe I breathedchá·çA maybe you breathedchá·t^yA maybe he breathedHortativechá·khá'á let me breathechá·çA breathechá·phé'é let him breatheNegative Hortativepá·mí chá·khá'á let me not breathepá·mí chá·skA don't breathepá·mí chá·phé'é let him not breatheFuture Hortativepa chá·nE let me breathe (in the future)pa chá·çA breathepa chá·phé'é let him breathe

d. Paradigm D

Indicativesí'čǎ·cA I ranšǐ'čǎ·cA you rankhǐ'čǎ·cA he ranNegativecáci skhǐ'čǎ·cA I didn't runcáci šǐ'čǎ·cA you didn't runcáci khǐ'čǎ·cA he didn't runDubitativethǐ'čǎ·cA maybe I ranchǐ'čǎ·cA maybe you rančhǐ'čǎ·cA maybe he ranHortativekhǐ'čǎ·cA let me runt'í'čǎ·cA runphǐ'í'čǎ·cA let him runNegative Hortativepá·mǐ khǐ'čǎ·cA let me not runpá·mǐ skhǐ'čǎ·cA don't runpá·mǐ phǐ'í'čǎ·cA let him not runFuture Hortativepa ní'čǎ·cA let me run (in the future)pa chǐ'čǎ·cA runpa phǐ'í'čǎ·cA let him run

e. Paradigm E

Indicativesê·ni I walkedşâ·ni you walkedkʔâ·ni he walkedNegativecáci skʔâ·ni I didn't walkcáci şâ·ni you didn't walkcáci kʔâ·ni he didn't walkDubitativethê·ni maybe I walkedçhâ·ni maybe you walkedčʔâ·ni maybe he walkedHortativekhâ·ni let me walkʔâ·ni walkpʔê·ni let him walkNegative Hortativepá·mí khâ·ni let me not walkpá·mí skʔâ·ni don't walkpá·mí pʔê·ni let him not walkFuture Hortativepa nê·ni let me walk (in the future)pa çhâ·ni walkpa pʔê·ni let him walk

f. Paradigm F

Indicativesíyá I was bornšíyá you were bornchíyá he was bornNegativecáci st^víyá I wasn't borncáci šíyá you weren't borncáci chíyá he wasn't bornDubitativethíyá maybe I was bornchíyá maybe you were bornthíyá maybe he was bornHortativekhíyá let me be bornphíyá be bornphí[?]íyá let him be bornNegative Hortativepá·mí khíyá let me not be bornpá·mí st^víyá don't be bornpá·mí phí[?]íyá let him not be bornFuture Hortativepa níyá let me be born (in the future)pa chíyá be bornpa phí[?]íyá let him be born

g. Paradigm G

Indicativesí·páʔtO I sleptší·páʔtO you sleptcí·páʔtO he sleptNegativecáci stʲí·páʔtO I didn't sleepcáci ší·páʔtO you didn't sleepcáci tí·páʔtO he didn't sleepDubitativethí·páʔtO maybe I sleptchí·páʔtO maybe you slepttí·páʔtO maybe he sleptHortativekháipáʔtO let me sleepʔí·páʔtO sleepphíʔí·páʔtO let him sleepNegative Hortativepá·mí kháipáʔtO let me not sleeppá·mí stʲí·páʔtO don't sleeppá·mí phíʔí·páʔtO let him not sleepFuture Hortativepa ní·páʔtO let me sleep (in the future)pa chí·páʔtO sleeppa phíʔí·páʔtO let him sleep

h. Paradigm H

IndicativecʔéyakA I burned itšáyakA you burned itcáyakA he burned itNegativecáci stʔáyakA I didn't burn itcáci šáyakA you didn't burn itcáci cáyakA he didn't burn itDubitativetʔéyakA maybe I burned itcháyakA maybe you burned ittáyakA maybe he burned itHortativekʔáyakA let me burn itphéyakA burn itphéʔéyakA let him burn itNegative Hortativepá·mí kʔáyakA let me not burn itpá·mí stʔáyakA don't burn itpá·mí phéʔéyakA let him not burn itFuture Hortativepa nʔéyakA let me burn it (in the future)pa cháyakA burn itpa phéʔéyakA let him burn it

i. Paradigm I

Indicativesóthá·n'íçan'ɪ we two workedʂóthá·n'íçan'ɪ you two workedkóthá·n'íçan'ɪ they two workedNegativecáci skóthá·n'íçan'ɪ we two didn't workcáci ʂóthá·n'íçan'ɪ you two didn't workcáci kóthá·n'íçan'ɪ they two didn't workDubitativethóthá·n'íçan'ɪ maybe we two workedçhóthá·n'íçan'ɪ maybe you two workedt^yóthá·n'íçan'ɪ maybe they two workedHortativešóthá·n'íçan'ɪ let us two workç'óthá·n'íçan'ɪ work (you two)phóthá·n'íçan'ɪ let them two workNegative Hortativepá·mí šóthá·n'íçan'ɪ let us two not workpá·mí skóthá·n'íçan'ɪ don't work (you two)pá·mí phóthá·n'íçan'ɪ let them two not workFuture Hortativepa nóthá·n'íçan'ɪ let us two work (in the future)pa çhóthá·n'íçan'ɪ work (you two)pa phóthá·n'íçan'ɪ let them two work

j. Paradigm J

Indicativesów'Athá·n'íçan'E we workedsów'Athá·n'íçan'E you all workedków'Athá·n'íçan'E they workedNegativecáci sków'Athá·n'íçan'E we didn't workcáci sów'Athá·n'íçan'E you all didn't workcáci ków'Athá·n'íçan'E they didn't workDubitativethów'Athá·n'íçan'E maybe we workedçhów'Athá·n'íçan'E maybe you all workedt'ów'Athá·n'íçan'E maybe they workedHortativenów'Athá·n'íçan'E let us workç'ów'Athá·n'íçan'E work (you all)phów'Athá·n'íçan'E let them workNegative Hortativepá·mí nów'Athá·n'íçan'E let us not workpá·mí sków'Athá·n'íçan'E don't work (you all)pá·mí phów'Athá·n'íçan'E let them not workFuture Hortativepa nów'Athá·n'íçan'E let us work (in the future)pa çhów'Athá·n'íçan'E work (you all)pa phów'Athá·n'íçan'E let them work

k. Paradigm K

Indicativesó'pE I atesó'pE you atekhó'pE he ateNegativecáci skhó'pE I didn't eatcáci só'pE you didn't eatcáci khó'pE he didn't eatDubitativethó'pE maybe I atechó'pE maybe you atečhó'pE maybe he ateHortativekhó'pE let me eatç'ópE eatphó'pE let him eatNegative Hortativepá·mí khó'pE let me not eatpá·mí skhó'pE don't eatpá·mí phó'pE let him not eatFuture Hortativepa nó'pE let me eat (in the future)pa chó'pE eatpa phó'pE let him eat

1. Paradigm L

Indicativesáca I saidk'áca you saidk'áca he saidNegativecáci sk'áca I didn't saycáci k'áca you didn't saycáci k'áca he didn't sayDubitativetháca maybe I saidt'áca maybe you saidč'áca maybe he saidHortativekháca let me saycáca sayp'áca let him sayNegative Hortativepá·mí kháca let me not saypá·mí sk'áca don't saypá·mí p'áca let him not sayFuture Hortativepa náca let me say (in the future)pa t'áca saypa p'áca let him say

m. Paradigm M

Indicatives'áohtA I killed its'áohtA you killed itkhá'áohtA he killed itNegativecáci skhá'áohtA I didn't kill itcáci s'áohtA you didn't kill itcáci khá'áohtA he didn't kill itDubitativethá'áohtA maybe I killed itçhá'áohtA maybe you killed itčhá'áohtA maybe he killed itHortativekhá'áohtA let me kill itç'áohtA kill itphá'áohtA let him kill itNegative Hortativepá·mí khá'áohtA let me not kill itpá·mí skhá'áohtA don't kill itpá·mí phá'áohtA let him not kill itFuture Hortativepa n'áohtA let me kill it (in the future)pa çhá'áohtA kill itpa phá'áohtA let him kill it

n. Paradigm N

Indicatives'a it is minek'čá it is yoursk'a it is hisNegativecáci sk'a it isn't minecáci k'čá it isn't yourscáci k'a it isn't hisDubitativetha maybe it is minet^yčá maybe it is yoursč'a maybe it is hisHortativen'a let it be mineča let it be yoursp'a let it be hisNegative Hortativepá·mí n'a let it not be minepá·mí sk'a let it not be yourspá·mí p'a let it not be hisFuture Hortativepa n'a let it be mine (in the future)pa t^yčá let it be yourspa p'a let it be his

o. Paradigm O

Indicatives'ót^yašI I fastedkóçót^yašI you fastedkáot^yašI he fastedNegativecáci skáot^yašI I didn't fastcáci kóçót^yašI you didn't fastcáci káot^yašI he didn't fastDubitativethó'ót^yašI maybe I fastedt^yóçót^yašI maybe you fastedt^yáot^yašI maybe he fastedHortativen'ót^yašI let me fastçót^yašI fastpháot^yašI let him fastNegative Hortativepá·mí n'ót^yašI let me not fastpá·mí skáot^yašI don't fastpá·mí pháot^yašI let him not fastFuture Hortativepa n'ót^yašI let me fast (in the future)pa t^yóçót^yašI fastpa pháot^yašI let him fast

p. Paradigm P

Indicativec'íkOphawan'ɪ we two choppedšíkOphawan'ɪ you two choppedcíkOphawan'ɪ they two choppedNegativecáci st^yíkOphawan'ɪ we two didn't chopcáci šíkOphawan'ɪ you two didn't chopcáci cíkOphawan'ɪ they two didn't chopDubitativethíkOphawan'ɪ maybe we two choppedchíkOphawan'ɪ maybe you two choppedtíkOphawan'ɪ maybe they two choppedHortativest'íkOphawan'ɪ let us two chopphíkOphawan'ɪ chop (you two)phí'kOphawan'ɪ let them two chopNegative Hortativepá·mí st'íkOphawan'ɪ let us two not choppá·mí st^yíkOphawan'ɪ don't chop (you two)pá·mí phí'kOphawan'ɪ let them two not chopFuture Hortativepa n'íkOphawan'ɪ let us two chop (in the future)pa chíkOphawan'ɪ chop (you two)pa phí'kOphawan'ɪ let them two chop

q. Paradigm Q

Indicatives'íkOphawan'E we choppedš'íkOphawan'E you all choppedc'íkOphawan'E they choppedNegativecáci st'^yíkOphawan'E we didn't chopcáci š'íkOphawan'E you all didn't chopcáci c'íkOphawan'E they didn't chopDubitativeth'íkOphawan'E maybe we choppedch'íkOphawan'E maybe you all choppedt'íkOphawan'E maybe they choppedHortativen'íkOphawan'E let us chopph'íkOphawan'E chop (you all)phí'kOphawan'E let them chopNegative Hortativepá·mí n'íkOphawan'E let us not choppá·mí st'^yíkOphawan'E don't chop (you all)pá·mí phí'kOphawan'E let them not chopFuture Hortativepa n'íkOphawan'E let us chop (in the future)pa ch'íkOphawan'E chop (you all)pa phí'kOphawan'E let them chop

r. Paradigm R

Indicativesáçá.ʔApe we two atekáçá.ʔApe you two ateká.ʔApe they two ateNegativecáci ská.ʔApeʔ we two didn't eatcáci káçá.ʔApeʔ you two didn't eatcáci ká.ʔApeʔ they two didn't eatDubitativetháçá.ʔApe maybe we two atet^yáçá.ʔApe maybe you two atet^yá.ʔApe maybe they two ateHortativešá.ʔApe let us two eatçá.ʔApe eat (you two)phá.ʔApe let them two eatNegative Hortativepá.mí šá.ʔApe let us two not eatpá.mí ská.ʔApe don't eat (you two)pá.mí phá.ʔApe let them two not eatFuture Hortativepa náçá.ʔApe let us two eat (in the future)pa t^yáçá.ʔApe eat (you two)pa phá.ʔApe let them two eat

s. Paradigm S

Indicativesɨçâ·ʔApE we atekɨçâ·ʔApE you all atekâ·ʔApE they ateNegativecáci skâ·ʔApE we didn't eatcáci kɨçâ·ʔApE you all didn't eatcáci kâ·ʔApE they didn't eatDubitativethɨçâ·ʔApE maybe we atetʰɨçâ·ʔApE maybe you all atetʰâ·ʔApE maybe they ateHortativenɨçâ·ʔApE let us eatçâ·ʔApE eat (you all)phâ·ʔApE let them eatNegative Hortativepá·mí nɨçâ·ʔApE let us not eatpá·mí skâ·ʔApE don't eat (you all)pá·mí phâ·ʔApE let them not eatFuture Hortativepa nɨçâ·ʔApE let us eat (in the future)pa tʰɨçâ·ʔApE eat (you all)pa phâ·ʔApE let them eat

t. Paradigm T

Indicativesáta I amkáta you areca he isNegativecáci st^ya I am notcáci káta you are notcáci ca he is notDubitativetháta maybe I amt^yíta maybe you areta maybe he isHortativenáta let me bet^yíta bephé·'é let him beNegative Hortativepá·mí náta let me not bepá·mí st^ya don't bepá·mí phé·'é let him not beFuture Hortativepa náta let me be (in the future)pa t^yíta bepa phé·'é let him be

u. Paradigm U

Indicativesíté·ʔEsOtI we two arekíté·ʔEsOtI you two arecé·ʔEsOtI they two areNegativecáci st^yé·ʔEsOtI we two are notcáci kíté·ʔEsOtI you two are notcáci cé·ʔEsOtI they two are notDubitativethíté·ʔEsOtI maybe we two aret^yíté·ʔEsOtI maybe you two areté·ʔEsOtI maybe they two areHortativest^yé·ʔEsOtI let us two bet^yíté·ʔEsOtI be (you two)phé^yé·ʔEsOtI let them two beNegative Hortativepá·mí st^yé·ʔEsOtI let us two not bepá·mí st^yíté·ʔEsOtI don't be (you two)pá·mí phé^yé·ʔEsOtI let them two not beFuture Hortativepa níté·ʔEsOtI let us two be (in the future)pa t^yíté·ʔEsOtI be (you two)pa phé^yé·ʔEsOtI let them two be

v. Paradigm V

Indicativeskówa·sa I am sickkóćówa·sa you are sickcíwa·sa he is sickNegativecáci st^yíowa·sa? I am not sickcáci kóćówa·sa? you are not sickcáci cíwa·sa? he is not sickDubitativethóćówa·sa maybe I am sickt^yóćówa·sa maybe you are sicktíwa·sa maybe he is sickHortativenóćówa·sa let me be sickćówa·sa be sickphíwa·sa let him be sickNegative Hortativepá·mí nóćówa·sa let me not be sickpá·mí st^yíowa·sa don't be sickpá·mí phíwa·sa let him not be sickFuture Hortativepa nóćówa·sa let me be sick (in the future)pa t^yóćówa·sa be sickpa phíwa·sa let him be sick

w. Paradigm W

Indicativeská·nawan?I I am meankáçá·nawan?I you are meanc'á·nawan?I he is meanNegativecáci sc'á·nawan?I I am not meancáci káçá·nawan?I you are not meancáci c'á·nawan?I he is not meanDubitativetháçá·nawan?I maybe I am meant^yáçá·nawan?I maybe you are meant'á·nawan?I maybe he is meanHortativenáçá·nawan?I let me be meant^yáçá·nawan?I be meanp'é·nawan?I let him be meanNegative Hortativepá·mí náçá·nawan?I let me not be meanpá·mí sc'á·nawan?I don't be meanpá·mí p'é·nawan?I let him not be meanFuture Hortativepa náçá·nawan?I let me be mean (in the future)pa t^yáçá·nawan?I be meanpa p'é·nawan?I let him be mean

x. Paradigm X

IndicativeskʷóihkAI I lay downkʷtíhkAI you lay downcʷíhkAI he lay downNegativecáci sčʷíhkAI I didn't lie downcáci kʷtíhkAI you didn't lie downcáci cʷíhkAI he didn't lie downDubitativethátíhkAI maybe I lay downtʷítíhkAI maybe you lay downtʷíhkAI maybe he lay downHortativenʷtíhkAI let me lie downtíhkAI lie downpʷíhkAI let him lie downNegative Hortativepá·mí nʷtíhkAI let me not lie downpá·mí sčʷíhkAI don't lie downpá·mí pʷíhkAI let him not lie downFuture Hortativepa nʷtíhkAI let me lie down (in the future)pa tʷítíhkAI lie downpa pʷíhkAI let him lie down

APPENDIX B: TEXT

$\overbrace{\text{D}}^{\text{D}}$ $\overbrace{\text{P}}$ S $\overbrace{\text{D}}$ $\overbrace{\text{S}}$
 tí'ái¹ so 'e hao² tá'ác'I³ santiyâ.kO⁴ / 'ai so 'e so há.ti⁵ chí.ná⁶
 there near he arrived St. James where river

$\overbrace{\text{I}}$ $\overbrace{\text{P}}$ $\overbrace{\text{C}}$ $\overbrace{\text{P}}$
 t'yí.t'â.ma⁷ / cáci⁸ 'í.t'e⁹ t'yóm'í¹⁰ / so 'e t'a¹¹ so čói'tá.'anikOyA¹²
 it is full not able to he crosses thus he was asking

$\overbrace{\text{D}}$ $\overbrace{\text{O}}$ $\overbrace{\text{P}}$ $\overbrace{\text{I}}$
 tók'é.¹³ t'yí¹⁴ / so 'eo so s'écán'ái'tst'Y¹⁵ čói'tá.'anikOyA¹² / ków'a¹⁶
 that way up Our Father he was asking how

$\overbrace{\text{D}}$ $\overbrace{\text{O}}$ $\overbrace{\text{P}}$ $\overbrace{\text{A}}$
 'éca¹⁷ tók'é.¹³ kho¹⁸ c'íci¹⁹ k'í.t'ê.ma²⁰ níom'í²¹ kón'E²² / 'e so
 at least that way south water it is full will cross he-it

$\overbrace{\text{D}}$ $\overbrace{\text{O}}$ $\overbrace{\text{D}}$ $\overbrace{\text{P}}$
 'e yósi²³ n'í²⁴ 'eo²⁵ / t'yá.mi²⁶ 'eo so 'e yósi²³ n'í²⁴ tá'ákoyan'E²⁷ /
 from there down eagle from there down he was sent

St. James arrived at the ocean and could not get across. Then he asked God how he could cross the ocean. Then an eagle was sent from above.

$\overbrace{\text{D}}^{\text{D}}$ P $\overbrace{\text{P}}^{\text{P}}$ $\overbrace{\text{I}}^{\text{I}}$
 ʂo ʔe haoʔ² tíowʔacʔI²⁸ / ʂo ʔe ʔe tʔáʔcIkOyA²⁹ / ci³⁰ háití³¹ yʔo³² /
 near he approached he said to him what which maybe

fragment P P I P A $\overbrace{\text{I}}$
 ha.³³ / tʔéinʔétʔA³⁴ / ʂʔácʔipA³⁵ / yʔo³² níotʔá.wʔa³⁶ ʂho³⁷ / ʂo ʔe
 yes he said I need you maybe will be of use you

fragment P $\overbrace{\text{S}}$ $\overbrace{\text{fragment}}$ P
 hé.mʔé.³⁸ / tʔéinʔétʔA³⁴ ʔeo²⁵ tʔá.mi²⁶ / ʂo ʔe hinʔá³⁹ ʔéko⁴⁰ / nítéʔéyO⁴¹
 all right he said eagle O.K. then will go

$\overbrace{\text{D}}$ A D $\overbrace{\text{S}}$ $\overbrace{\text{D}}$
 tísi⁴² kho¹⁸ sóçó.ʔO⁴³ / há.ti⁵ higâ.n̄tI⁴⁴ tʔâ.mʔA⁴⁵ / ʔeo ʔai haoʔ²
 there south we two where giant his house near

P A S $\overbrace{\text{O}}$ P $\overbrace{\text{I}}$
 nítéʔéyO⁴¹ sóçó.ʔO⁴³ / kasî.kI⁴⁶ kʔâokʔoi⁴⁷ ʔeo to⁴⁸ ʂíwiçA⁴⁹ / ʔeo ʂo
 will go we two king his wife this he lost her

$\overbrace{\text{P}}$ A $\overbrace{\text{S}}$ $\overbrace{\text{P}}$ fragment
 níyʔéipa.n̄tI⁵⁰ sóçó.ʔO⁴³ / ʂo ʔe ʔeo tʔá.mi²⁶ ʔe ʂʔáca⁵¹ / hinʔá³⁹ /
 will look for we-her eagle he said O.K.

The eagle approached and said, "What is it?" "Yes," he said, "I need you. Maybe you will be of use." "All right," said the eagle. "O.K., then, we will go south to the giant's house. The king lost his wife. We are going to look for her." "O.K.," said the eagle,

P
fragment
D
 t'yéin'et'A³⁴ / so 'e tów'é.⁵² 'éko⁴⁰ so / s'étIt'yA⁵³ 'ai t'y¹⁴
 he said this way then my back up

P
D
P
S
 ç'ókóya⁵⁴ / so 'e 'ai t'y¹⁴ č'ókóya⁵⁵ 'eo²⁵ santiyâ·kO⁴ / so 'e
 sit up he sat St. James

D
P
D
P
D
 tísi⁴² k'ho¹⁸ so 'e so t'yá'áiyo⁵⁶ / so 'e t'y¹⁴ t'é'éyo⁵⁷ / so 'e t'y¹⁴
 there south they flew up they went up

P
P
D
 há·ti⁵ so t'é'é·ya'at'anE⁵⁸ / so 'e so t'yóhkAčA⁵⁹ / 'ai n'zi²⁴ 'eo²⁵
 where they were going he saw it down

S
P
S
 čhá'á·st'yi·čA⁶⁰ higâ·ntI⁴⁴ / so 'e so t'yóhkAčA⁵⁹ / so 'e č'hé'ci⁶¹ so
 his city giant he saw it also

O
P
P
 higâ·ntI⁴⁴ t'yá·mi²⁶ č'át'yá·še⁶² / so 'e so čhá'áot'yO⁶³ /
 giant eagle his he knew

"come sit on my back." Then St. James got on. Then they flew south and up they went. As they were flying up there they saw the giant's city down below. The giant also had an eagle and he knew what was happening.

D P S S
 ʂo ʔe ʂo tʃi¹⁴ tíka·nikOyA⁶⁴ čhéʔci⁶¹ higâ·ntI⁴⁴ čʔátʃá·še⁶² / ʂo ʔe
 up he was looking also giant his

S P S
 ʂo ʔeo higâ·ntI⁴⁴ čʔátʃá·še⁶² tʃá·mí²⁶ ʂo ʔe tʃó·ščʔéhca⁶⁵ / ʂo ʔe
 giant his eagle he cried out

S P P S O
 higâ·ntI⁴⁴ čhákhá.⁶⁶ / ʂo ʔe tʃómʔI¹⁰ higâ·ntI⁴⁴ / ʂo ʔe ʔeo to⁴⁸
 giant he heard he came out giant this

P P fragment P S
 tʃá·mí²⁶ ʔe tʔáʔánʔEyAwA⁶⁷ / hinʔá³⁹ ʔéko⁴⁰ / čó·wasí⁶⁸ / ʂo ʔe
 eagle he commanded him O.K. then attack

P S D P S
 čháʔó·wasí⁶⁹ ʔeo tʃá·mí²⁶ / ʂo ʔe ʂo haoʔ² ʂo táʔácʔino.⁷⁰ / ʔai ʂo
 he attacked eagle near he arrived

P S O P S
 čhávʔáinʔIyA⁷¹ / ʔe ʂo ʔeo santiyâ·kO⁴ híhskai⁷² tʃáočO⁷³ / ʔeo ʂo
 they fought St. James knife he had

The giant's eagle looked up and cried out. Then the giant heard and came out. "O.K., attack!", he commanded his eagle. So the eagle attacked. When he came near they began fighting. St. James had a knife.

^D ^O ^P
 'e so hé·y'á-ši⁷⁴ so 'e 'eo to⁴⁸ higâ·ntI⁴⁴ č'át'yá·še-ši⁶² tít'yáwA⁷⁵/
 with it this giant his he stabbed

^D ^P ^D
 tí'ái¹ so 'e so čhá'áochtapi-t'ano.⁷⁶ / so 'e so yów'é.⁷⁷ n'í²⁴ so 'e
 there they killed him this way down

^P ^S
 t'yô·ca·č'á⁷⁸ 'eo to⁴⁸ higâ·ntI⁴⁴ t'yá·mí²⁶ č'át'yá·še⁶²/
 he fell this giant eagle his

He stabbed the giant's eagle with it. They killed him and down fell the giant's eagle!

1. Preposition, there.
2. Preposition, near.
3. Verb, he arrived. Affix 123G + stem, -á'á-c'I.
4. Referential, St. James. From Spanish Santiago.
5. Preposition, where, somewhere.
6. Referential, river.
7. Verb, it is full. Affix 123A + stem, -í--t'á + Affix 403A.
8. Modal, not.
9. Modal, able to.
10. Verb, he emerged or, in this context, he crosses over. Affix 123A + stem, -ó-m'I.
11. Connective, thus.

12. Verb, he was asking. Affix 123C + stem, -óí?-tá?A + Affix 401B.
13. Preposition, that way.
14. Directional, up.
15. Verb, our father. Affix 101F + stem, -á-n?ái?st^yO.
16. Interrogative, how?
17. Modal, at least.
18. Directional, south.
19. Referential, water.
20. Verb, it is full. Same as 7 but with Affix 121A instead of 123A.
21. Verb, will emerge or cross over. Same as 10 but with Affix 201B instead of 123A.
22. Verbal auxiliary, third person subject with third person object, plus conditional suffix -n?E.
23. Preposition, from there, from afar.
24. Directional, down.
25. Particle which, in certain contexts, adds emphasis to other words.
26. Referential, eagle.
27. Verb, he was sent. Affix 123G + Affix 302 + stem, -á-koyA + Affix 602A.
28. Verb, he approached. Affix 123B + stem, -ó-w?ac?I.
29. Verb, he said to him. Affix 123H + stem, -á?-cIkOyA.
30. Interrogative, what?
31. Interrogative, which?
32. Modal, maybe.
33. Exclamation, yes.
34. Verb, he said. Affix 123A + stem, -éi-n?ét?A.

35. Verb, I need you. Affix 141B + stem, -á-c'ípA.
36. Verb, will be of use. Affix 201B + stem, -ó-t^yá.w'a.
37. Verbal auxiliary, second person subject.
38. Exclamation, all right, that will do.
39. Exclamation, O.K.
40. In some contexts a connective, here part of an exclamatory phrase.
41. Verb, will go (dual subject). Affix 201F + stem, -é'é-yO.
42. Preposition, there.
43. Verbal auxiliary, first person dual subject.
44. Referential, giant. From Spanish, gigante.
45. Verb, his house. Affix 123A + stem, -â.-m'A.
46. Referential, king. From Spanish cacique.
47. Verb, his wife. Affix 121D + stem, -âo-k'oi.
48. Pronoun, this one.
49. Verb, he lost it (or her). Affix 121J + stem, -í-wiçA.
50. Verb, will look for (dual subject). Affix 201B + stem, -í-y'éipA
+ Affix 601B.
51. Verb, he said. Affix 123D + stem, -á-ca.
52. Preposition, this way.
53. Verb, my back. Affix 101E + stem, -á-tIt^yA.
54. Verb, sit (imperative). 114D + stem, -ó-kóyA with hortatory final stress.
55. Verb, he sat. Same as 54 but with Affix 123C instead of 114D.
56. Verb, they flew. (dual subject). Affix 123A + stem, -á'ái-y'O.
57. Verb, they went (dual subject). Same as 41 but with Affix 123G instead of 201F.

58. Verb, they went (dual subject). Affix 123G + stem, -é'é--
ya'at'A + Affix 402A.
59. Verb, he saw him (or it). Affix 123A + stem, -ón-kAČA.
60. Verb, his city. Affix 123C + stem, -á'á--st'i·çA.
61. Particle, also.
62. Verb, his (referring to a living animal). Affix 123D + stem,
-á-t^yá. + Affix 403B.
63. Verb, he knew. Affix 123C + stem, -á'áo-t^yO.
64. Verb, he was looking. Affix 123B + stem, -í-kA + Affix 401B.
65. Verb, he cried out. Affix 123A + stem, -ó--sč'éhçA.
66. Verb, he heard. Affix 123C + stem, -á-khá. .
67. Verb, he was commanded. Affix 123G + Affix 302 + stem,
-á-n'EyA + Affix 602G.
68. Verb, attack. Affix 114E + stem, -ó--wasI with hortatory final
stress.
69. Verb, he attacked. Same as 68 but with affix 123F instead of 114E.
70. Verb, he arrived. Same as 3 with the addition of Affix 702.
71. Verb, they fought. Affix 123C + stem, -á-w'áin'IyA.
72. Referential, knife.
73. Verb, he had. Affix 123A + stem, -áo-čO.
74. Preposition, by means of, including locative clitic.
75. Verb, he stabbed him. Affix 123B + stem, -í-t^yáwA.
76. Verb, they killed him (dual subject). Affix 123F + stem,
-áoh-tA + Affix 601H + clitic, t^yano.
77. Preposition, this way at a distance.
78. Verb, he fell. Affix 123A + stem, -ô--ça·č'A.

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