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A Grammar of the Serrano Language

A dissertation submitted in partial satisfaction of the

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by

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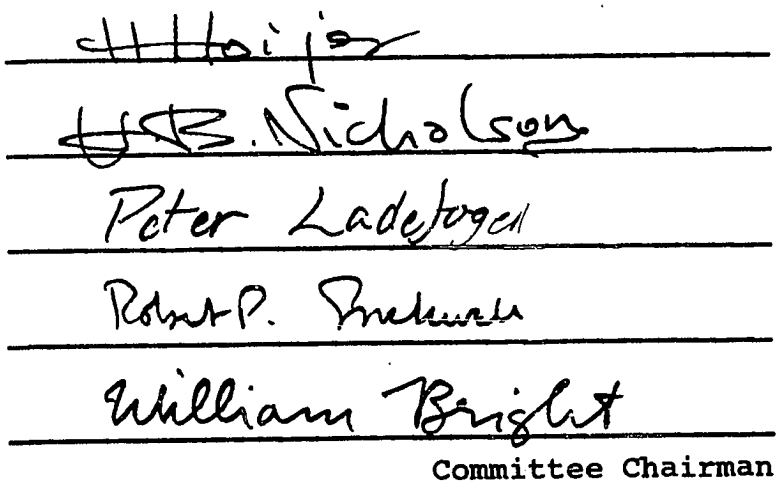

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ABBREVIATIONS

Acc	Accusative case
Adj	Adjective
AdjP	Adjective-Phrase
Adv	Sentence adverbial
Adv_{manner}	Adverb of manner
Adv_{S}	Sentence Adverb
Adv_{TS}	Adverb of time-space
Asp	Aspect
Aux	Auxiliary
Aux_{V}	Verbal Auxiliary
Ben	Benefactive
BenP	Benefactive-Phrase
C	Consonant
Caus	Causative
Conj	Conjunction
CS	Complex Symbol
D	Determiner
Distr	Distributive
DP	Determiner-Phrase
Dub	Dubitative Evidential
Ev	Evidential
EvP	Evidential-Phrase
Freq	Frequentative
Fut	Future Aspect
Gen	Genitive case
Inf	Inferential Evidential
Instr	Instrumental case
Intens	Intensifier
intr	intransitive
Manner	Manner adverbial

Mot	Motion suffix
N	Noun
Nom	Nominal
NomP	Nominal-Phrase
NP	Noun-Phrase
Num	Numeral
NumP	Numeral-Phrase
Perf	Perfective Aspect
pl	plural
PreD	Pre-Determiner
Pred	Predicate
PredP	Predicate-Phrase
PreNum	Pre-Numeral
PS	Phrase-structure
Punct	Punctual suffix
PunctP	Punctual-Phrase
Ques	Question
Quot	Quotative Evidential
Redup	Reduplication
Result	Resultative suffix
S	Sentence
sg	singular
SgSuffix	Singular suffix
subj	subject
TS	Time-Space adverbial
V	Verb
V̲	Vowel
VblP	Verbal-Phrase
VP	Verb-Phrase

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ABSTRACT OF THE DISSERTATION

A Grammar of the Serrano Language

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The grammar of Serrano, a Uto-Aztecan language of Southern California, is described as consisting of a base component, which specifies deep structure, and a transformational component, which maps deep structure into surface form.

The base component consists of a categorial component and a lexicon. The categorial component is stated in terms of context-free phrase-structure rules and context-sensitive rule schemata that map lexical categories into complex symbols (CS). These categorial rules generate

Phrase-markers of strings consisting of various occurrences of CS, which mark the positions of lexical categories, and of grammatical formatives. The lexicon consists of syntactic redundancy rules and of lexical entries, of which only a representative sample are provided. A major emphasis is on the distinction between strict subcategorization rules and selectional rules, which allows for the principled development of the context-free phrase-structure rules.

The transformational component consists of the transformational cycle, having to do with agreements and embedded Sentences; a set of pre-morphological transformations, which adjust specific syntactic formatives and features, including those introduced by the agreement transformations of the transformational cycle; a morphological component, which relates non-lexically introduced material to phonological form; a set of post-morphological transformations, which include late restructurings and reorderings and transformations whose effects are almost entirely phonological; and a set of phonological rules, stated in distinctive feature terms, the output of which is identical with a systematic phonetic notation.

0. INTRODUCTION

0.1. The Serrano Language. Serrano is a hitherto undescribed Uto-Aztecan language. Various Serrano forms have appeared in a number of studies. The fullest lists are in Gatschet (1879), where Serrano is called "Takhtam," Kroeber (1907), and Kroeber (1909); and the most recent publication including Serrano forms is Miller (1961). Sapir used Serrano forms, mostly from Kroeber, in his demonstration of Uto-Aztecan (Sapir 1913-1914); but there has never been any systematic analysis of any aspect of Serrano.

The present description of Serrano is based on field work done during the summer of 1963 and in December, 1964, with support from the American Council of Learned Societies, whose assistance is gratefully acknowledged. I am also greatly indebted to Mrs. Sarah Morongo Martin, my principal informant, and to Louie Marcus, both of the Morongo Indian Reservation at Banning, California, for working patiently with me on their language.

Serrano, which aboriginally was spoken by perhaps 1500 people (Kroeber 1925:617), is spoken by only about half a dozen people at present. It is the last surviving language of the Serrano group of languages, which have been classified as one division of the Southern Californian branch of Uto-Aztecan (Kroeber 1925:577). The Southern

Californian languages have been classified as part of a linguistic unity within Uto-Aztecan known as Shoshonean (Kroeber 1925:575), but this unity has been called into question (Whorf 1935:608; Miller 1964), and perhaps re-examination of the inclusion of Serrano in the Southern Californian branch may also be in order.

Other than Serrano, the Serrano included Kitanemuk, Alliklik, and Vanyume. Presumably all three are extinct. Whether these groups spoke distinct but closely related languages or merely dialectal variants of the same language as Serrano seems impossible to determine at the present.

Serrano was spoken around the San Bernardino Mountains. With the advent of the Missions, some Serranos retreated into the mountains, whence their name, Spanish for 'mountaineer'. The Serranos have no special name for themselves. The term [ta:qtam], the "Takhtam" of Gatschet (1879), means 'people', and is applied to all Indians. The name used for those Serranos at the Morongo Reservation at Banning, California, where most of the present-day Serranos live, is [ma:rɨŋa'iam] 'Morongos', but this term refers only to members of one lineage or local group. Other local groups of Serranos still mentioned are [mɨhia:'niam], ['atiɨ:'abiatam], and [mamai:tam]. For the names of other groups, see Benedict (1924:368-369).

0.2. A Note on Transcription. Serrano examples are cited in either a systematic phonetic or a morphophonemic transcription. The latter is indicated by underlining. (Underlined forms beginning with capital letters are non-phonological tags for specific grammatical formatives.) Spaces between letters in the phonetic transcription correspond to morphophonemic word boundaries. Such spaces have no phonetic value, but rather are intended as a help for the reader. Not indicated in the phonetic transcription is the consonant deletion resulting from the morphophonemic rule $C_1\#\#C_1 \Rightarrow C_1$ (7.56).

The sounds of Serrano may be charted as follows:

Consonants:

p	t	ç	č	k	k^w	q	q^w	'	
f	s	ş	š	x	x^w	X	X^w	h	h^w
m	n	ṇ	ñ	ŋ	$ŋ^w$				
b	d	r	y	g	w				
	l		l^y						

Vowels:

	i	ɨ	ɨ̣	u
ǫ	e			o
		a	ą	

Vowel length: [:]

Medial pause: [,]

Rising pitch (plus pause): [?]

Sentence end: [.] (not indicated after final [?])

The consonants [ç, ʂ, ɳ, r] are apicoalveolar, [b, d, r, y, g, w, l, l^y] are approximants (Ladefoged 1964:25). [ç, ǰ] are affricated, and [q] is often affricated non-initially. In some positions [q] seems to be in free variation with [X], especially in rapid speech (but not all instances of [X] are in free variation with [q]). ['] represents the glottal stop.

The vowels [ɨ, ạ] are retroflexed; [ọ] is rounded and retroflexed.

A number of symbols are used only in the morphophonemic transcription. To be noted in particular are the stress mark ́; the transition ±, which serves to block morphophonemic rules affecting certain segments after vowels; the unrounded mid-central vowel ə; and the boundary symbol #. C and V represent respectively any consonant and any vowel.

0.3. Theoretical Orientation. This statement of the grammar of Serrano is in terms of my understanding of the model for syntactic description proposed by Chomsky (1965). It is an attempt to characterize the syntactic competence of a speaker of Serrano. The statement of this competence is necessarily limited because of the small amount of data available, because of my own limited understanding of the language, and because the lexical material presented here is only a representative sample.

The syntactic component of a transformational grammar consists of the base component and the transformational component. The base component consists of the categorial component and the lexicon. The categorial component is stated in terms of context-free phrase-structure (PS) (branching) rules (section 1) and context-sensitive rule schemata (section 2) that map lexical categories into Complex Symbols (CS) in terms of the following convention:

> ...we impose the following general condition on strict subcategorization rules: each such rule must be of the form
>
> (47) $A \rightarrow CS/\alpha\text{—}\beta$, where $\alpha A \beta$ is a σ,
>
> where, furthermore, σ is the category symbol that appears on the left in the rule $\sigma \rightarrow \cdots A \cdots$ that introduces A.
>
> (Chomsky 1965:99; Chomsky's emphasis)

> If this condition of strict local subcategorization is adopted as a general condition on the form of grammar, then the strict subcategorization rules can simply be given in the form
>
> (48) A → CS
>
> the rest being supplied automatically by a convention. (Chomsky 1965:100)

These categorial rules generate Phrase-markers of strings consisting of various occurrences of CS, which mark the positions of lexical categories, and of grammatical formatives (Chomsky 1965:122). The lexicon (also section 2) consists of the lexical entries, which are mapped on to appropriate Phrase-markers as terminal symbols, and of syntactic redundancy rules (Chomsky 1965:168). The transformational component consists of transformations, which map deep structures into surface structures by adjusting terminal symbols and restructuring Phrase-markers. In the view of grammar adopted here, no transformation is optional, such that the transformational component makes no semantic contribution. This wording differs somewhat from Chomsky's:

> ...<u>the only contribution of transformations to semantic interpretation is that they interrelate Phrase-markers</u> (i.e., combine semantic interpretations of already interpreted Phrase-markers in a fixed way). It follows, then, that transformations cannot introduce meaning-

> bearing elements (nor can they delete lexical items unrecoverably...). (1965:132; Chomsky's emphasis)

The recursive property of language is a feature of the base component. Chomsky (1965:137) suggests that all recursiveness be handled by various reintroductions of the axiomatic symbol S ("Sentence") at appropriate places in the PS rules.

> ...the recursive property is a feature of the base component, in particular, of the rules that introduce the initial symbol S in designated positions in strings of category symbols. There are, apparently, no other recursive rules in the base.

It seems, however, not to be the case that there are no recursive rules in the base other than those which reintroduce the initial symbol S. In particular, at least the Numeral-Phrase must be reintroduced within itself (1.20) and the Nominal-Phrase within itself (1.18).

Once these examples of recursiveness involving symbols other than the axiomatic S were introduced into the PS rules, coordination was reexamined, with the result that coordinated elements are introduced recursively in a variety of places (1.1, 1.2, 1.5, 1.6, 1.16). The following convention is used: all rules containing $[\Sigma]^*$, where Σ is any symbol or string of symbols, are rule schemata which allow for a repetition of Σ $\underline{n}$ times, where $\underline{n} \geq 1$.

This approach to coordination is radically different from Chomsky's:

> Thus wherever we have coordination, some category is coordinated n times in the matrix sentence, and n occurrences of matched sentences are independently generated by the base rules. (1965:224)

It will be noted, however, that the present formulation of coordination seems to handle some of the problems that Chomsky's is unable to:

> Notice that the schemata that underlie coordination... also provide infinite generative capacity, but here too the true recursive property can apparently be limited to the schema S → S#S#...#S, hence to rules introducing "propositions."
>
> This formulation leaves unexplained some rather marginal phenomena (e.g., the source of such expressions as "very, very, ..., very Adjective"[)] and some more significant ones (e.g., the possibility of iterating Adverbials and various kinds of parenthetic elements, the status of which in general is unclear). (1965:225)

Probably Adjective-Phrases should also be recursively introduced within the Predicate (1.6), to account for Sentences which might be like the English "The dog is black and white all over," which surely is not based on the pair of Sentences "The dog is black all over" and "The dog is white all over." However, Serrano data on this particular problem are missing.

The problem of stylistic reordering is seen as excluded from transformational treatment. Chomsky observes that

> grammatical transformations do not seem to be an appropriate device for expressing the full range of possibilities for stylistic inversion. (1965:126)

> In general, the rules of stylistic reordering are very different from the grammatical transformations, which are much more deeply embedded in the grammatical system. It might, in fact, be argued that the former are not so much rules of grammar as rules of performance. (1965:127)

Serrano word order is remarkably free. The sentences of (0.3a) all contain the same morphemic material and all unambiguously mean 'I saw a red moon'.

(0.3a) nɨ' mɨa:çi ʂɨri:'nka'ti hihi.
I-PAST MOON-ACC RED-ONE-ACC SEE

nɨ' mɨa:çi hihi ʂɨri:'nka'ti.

nɨ' ʂɨri:'nka'ti mɨa:çi hihi.

nɨ' ʂɨri:'nka'ti hihi mɨa:çi.

nɨ hihi mɨa:çi ʂɨri:'nka'ti.

nɨ hihi ʂɨri:'nka'ti mɨa:çi.

mɨa:çi nɨ hihi ʂɨri:'nka'ti.

mɨa:çi ʂɨri:'nka'ti nɨ hihi.

ʂɨri:'nka'ti nɨ hihi mɨa:çi.

ʂɨri:'nka'ti nɨ' mɨa:çi hihi.

hihi nɨ' mɨa:çi ʂɨri:'nka'ti.

hihi nɨ' ʂɨri:'nka'ti mɨa:çi.

Also omitted from grammatical treatment is the question of optional deletions. Since only "recoverable deletions" are to be permitted in a grammar (Chomsky 1965:122), any rules which delete lexical items unrecoverably must surely be outside those of grammar, and therefore, presumably, should also, together with the rules of optional reordering mentioned above, be handled by an as yet unformalized theory of performance. An example of lexical deletion, together with its probable source Sentence inferred from context is:

(0.3b) 'ɨmi' tam' payɨka'.
YOU DUB-YOU AWAY
'You'll (go) away.'

< 'ɨmi' tam' payɨka' mi:b.
YOU DUB-YOU AWAY GO-FUTURE

(In context, this Sentence immediately follows and is an expansion from ['ɨmi' tam' mi:b.] 'You'll go.')

1. PHRASE-STRUCTURE RULES

1.0. Start with: #S#

S, representing the category "Sentence," is the axiomatic initial symbol of the grammar (Chomsky 1965:66). # is the boundary symbol and is regarded as a grammatical formative (Chomsky 1965:66), that is, # is not further rewritten in the base component. Every Sentence begins and ends with #.

1.1. $S \rightarrow \left\{ \begin{array}{l} \text{Interjection} \\ S\ ([\#Conj\hat{}S\#]^*) \end{array} \right\}$

Interjection (1.1.1, 2.7)

S = Sentence (1.2)

Conj = Conjunction (2.8)

1.1.1. Interjections are introduced in this first PS rule. They are single-word Sentences with no internal grammatical structure. Interjections cannot be conjoined either with themselves or with any other sort of syntactic material. Examples of Interjections are: #ha:h# 'yeah', #now# 'no', #'eya'# 'hey!'. Possibly Interjections should simply be ignored in a syntactic description.

1.1.2. PS rule 1.1 allows for all coordinated Sentences and also for all disjunctively coordinated constituents smaller than the Sentence, that is, those coordinate constructions with the Conjunction #ha:# 'or'. Examples of these two kinds of coordination are:

(1.1a) S['ibi' tɬhtɬyiǰ 'ɬ:m'qçu'] Conj['ami']
THIS JOB END-MOTION AND
S[m mǫǰ mana'q].
THEY AGAIN RETURN
'This job comes to an end and they go home again.'

(1.1b) wahmąç pɬhpa' Num[mahąç] bɬ' ničamXana'
TEN ON-IT FIVE IT-PAST MY-THOUGHT
Conj[ha] Num[pą:bahi'].
OR SIX
'He was fifteen [years old], I think, or sixteen.'

A reason for introducing all 'or'-type coordinate structures at this point is that the agreement patterns remain unaffected by the transformation which deletes structure when combining the two (or more) disjunctively coordinated elements in the same Sentence; that is, singular Nominal^ 'or'^singular Nominal has singular agreement patterns, while singular Nominal^'and'^singular Nominal has plural

agreement patterns. Compare the following examples:

(1.1c) mia t čičint ha na:št.
MAY DUB(-sg) BOY OR GIRL
'Maybe it's a boy or a girl.'

(1.1d) 'ayɨ' 'ami' 'ana' k^{w}ɨnɨ qɨi, ...
HIS-MOTHER AND HIS-FATHER QUOT-PLURAL SAY
'His mother and his father (they) said, ...'

Thus, coordinated structures with 'or' can be accounted for by simple deletion, while other coordinated constructions have quite different properties.

1.2. S → ([Adv]*) NomP^PredP^Aux (< 1.1)

Adv = Sentence adverbial (1.7)
NomP = Nominal-Phrase (1.16)
PredP = Predicate-Phrase (1.5)
Aux = Auxiliary (1.3)

1.2.1. PS rule 1.2 is somewhat unusual in that the Auxiliary is described as immediately dominated by Sentence. However, there seems to be no compelling reason to treat the Serrano Auxiliary as a Predicate-Phrase constituent,

as is usually done for Auxiliaries in transformational grammar. This usual treatment of Aux, as a PredP constituent, has not, to my knowledge, been justified, except, possibly, on (syntactically irrelevant) morphophonemic grounds, that is, the fact that in most languages the Auxiliary material is phonologically attached to the Verb. The present treatment of the Auxiliary is not altogether novel. For a similar treatment of the English Auxiliary, see Fillmore (1966:7).

1.2.2.0. The following examples illustrate the various combinations of S material. As will be done in all instances of rules involving [...]*, only a sample is given to indicate the possibility that a category may be repeated indefinitely.

1.2.2.1. S[NomP^PredP^Aux]:

(1.2a) NomP[wahi'] Aux[k^{w}ɨnɨbɨ'], PredP[payɨka' pǫ:qp nɨm].

COYOTE QUOTATIVE-HE-PAST ALONG ON-THE-ROAD WALK

'The Coyote was walking along the road.'

1.2.2.2. S[Adv^NomP^PredP^Aux]:

(1.2b) Adv['a:p] NomP[ma:rɨŋa'iam] Aux[k^{w}ɨnɨ]
THERE MORONGOS QUOTATIVE-PLURAL
PredP[nɨ:pq].
SETTLE
'There the Morongos settled.'

1.2.2.3. S[Adv^Adv^Adv^NomP^PredP^Aux]:

(1.2c) Adv['ubiht] Adv[mutu' nɨk^{w}aqpa'], Adv[ni-
LONG-AGO STILL IN-MY-YOUTH MY-
-nančui'b 'amɨm'kibɨi], PredP[hak^{w}up] Aux[
LATE-FATHER WHEN-HE-DIED VERY
čɨmɨ'] PredP(continued)[hohou:ŋan].
WE-PAST BE-POOR
'Long ago, when I was still young, when my father died, we were very poor.'

In (1.2c) the NomP is represented only by [čɨmɨ-], which has been incorporated into the Auxiliary.

1.2.3. The NomP that is immediately dominated by S is defined as "subject." The PredP is some sort of comment about the subject. Because PredP dominates some NomP's,

it will be developed before NomP.

1.3. Aux → Asp^EvP (< 1.2)

Asp = Aspect (2.5)

EvP = Evidential-Phrase (1.4)

In most cases Aspect is phonologically zero, the "unmarked" form, as in (1.3a).

(1.3a) payɨka' EvP[k^{w}ɨn] pɨnqçu' Asp[Ø].
AWAY QUOTATIVE PASS-MOTION UNMARKED
'It passed by way off.'

There are lexical reasons for considering the unmarked form as a member of the category Aspect; see section 2.5.

If there is overt Aspect material, and no Verb (1.12) is present in the Predicate (1.5), the empty Verb #ñi̊ha:# 'do' is introduced transformationally for the Aspect marker to be attached to, as in (1.3b) where the Predicate is a Nominal-Phrase, and (1.3c) where the Predicate is an Adjective-Phrase.

(1.3b) EvP[tan] hou:ŋaničˇ ñi- Asp[-:b].
DUBITATIVE-I POOR-ONE DO FUTURE
'I'll be poor.'

(1.3c) haˇa:'i m ñia:- Asp[-qam].
SHARP THEY DO GOING-TO-PLURAL
'They're going to be sharp.'

1.4. EvP → (Ev) (<u>#ta#</u>) Ev (<u>Past</u>) (?) (< 1.3)

Ev = Evidential (2.6)
<u>#ta#</u> = Dubitative Evidential (Dub) (2.6)
<u>Past</u> = Past tense (1.4.4)
<u>?</u> = Question (Ques) (1.4.5)

1.4.1. The Evidential-Phrase bears the subject-object agreement marker and, except for <u>?</u>, is transformationally reordered to occur early in the Sentence.

1.4.2. Evidentials specify the validity of the statement. Each Sentence must include at least one Evidential, or up to three Evidentials. There are lexical restrictions (2.6) concerning which Evidential can appear where in the string of Evidentials.

1.4.3. The zero-form is the "Direct" Evidential. The Direct is used only in the case of reporting first-hand knowledge, that is, the speaker identifies himself as a witness, as in (1.4a), or in the simple (= Direct) Imperative (2.5), as in (1.4b).

(1.4a) 'i:p Ev[Ø] bɨ' wahi' pɨnq.
HERE (DIRECT) HE-PAST COYOTE PASS
'The Coyote passed here (I saw him).'

(1.4b) ŋɨrɨrq Ev[Ø] ç.
MOVE (DIRECT) YOU
'Move!'

1.4.4. Past is analyzed as an optional part of the expansion of EvP. This is to say, Past is not opposed to any 'present' tense, but merely to its own absence. Sentences lacking Past tense are, for convenience, referred to as "non-past," but this should be understood as having no positive morphemic reference.

When there is enough information already present in the context such that 'past' meaning is understood, the choice to include Past seems to be completely optional (as is the case in some narrative styles in English). Some examples of Sentences with 'past' meaning but no Past (ex-

cept for the first Sentence-fragment) are found in (1.4c), a fragment of a text having to do with a recollected experience.

(1.4c) ...yaŋq 'ama' bɨ' 'akalesa'p mi waha'.
BUT HE HE-PAST IN-HIS-BUGGY GO ALSO
čatɨhpinu' kim. "h^{w}a:n ramo:n" qɨi m atɨwani.
BEHIND-US COME Juan Ramón SAY THEY HIS-NAME-
'ubiht mɨmɨ'. mi, 'a:p. 'ubia č 'amai
ACC LONG-AGO DIE-PERF GO THERE ALREADY WE THE-
qai:či h^{w}ą:čq tuk^{w}uh^{w}paka'. k^{w}ut pɨnq
ACC HILL-ACC CLIMB UPWARD TRAIN PASS
tɨ:buka'. 'ibi' 'ubia houk^{w}p yu:'. houk^{w}p yu:'
DOWNWARD THIS ALREADY ONE CRY ONE CRY
ta:miat. ....
CLOCK
'...but he went in his own buggy too. He comes behind us. They call him "Juan Ramón." (He died a long time ago.) He goes there. We're climbing up the hills already. A train passes on its way down. This [clock] strikes one already. The clock strikes one. ....'

1.4.5.1. Whether or not a Sentence is a Question (Ques) is treated here as a function of the Auxiliary. ? represents rising pitch, which normally occurs on the last syllable of

the Verb stem or of any Auxiliary material postposed to the Verb stem. This is symbolized by placing the ? after the syllable with the rising pitch. Examples are:

(1.4d) Ev[k^{w}ɨ'] n k^{w}a'a ?
POTENTIAL I EAT QUESTION
'Could I eat it?'

(1.4e) na:šť Ev[ta-] -bɨ' hihi ? čičinti.
GIRL DUBITATIVE SHE-PAST SEE QUES BOY-ACCUSATIVE
'Did the girl see the boy?'

(1.4f) tiɨha- Asp[-qa-] -i Ev[ta-] -n ?
TELL GOING-TO ACC DUBITATIVE I QUESTION
'Am I going to tell him?'

(1.4g) k^{w}a'i Ev[ta-] -m ç ? kih^{w}u:çi.
EAT DUBITATIVE PL YOU QUESTION FISH-ACCUSATIVE
'Are you (pl) eating fish?'

1.4.5.2. With a question word, that is, a form beginning with #ha#, the Indeterminate Determiner (2.2), present in the Sentence, ? is transformationally deleted, the presence of #ta#, the Dubitative Evidential (2.6), alone marking the construction as a Question. An example is:

(1.4h) hai:ŋk^{w}a' Ev[ta-] -bɨ' mi.
TO-WHERE DUBITATIVE HE-PAST GO
'Where did he go?'

1.4.5.3. In Questions with no Verb and no question word, the rise in pitch occurs in various places, as in the following examples:

(1.4i) 'i:p Ev[ta-] -bɨ' ?
HERE DUBITATIVE IT-PAST QUESTION
'Was it here?'

(1.4j) Ev[qai] Ev[t] 'a'ayɨ 'i:p ? 'ɨmɨyka'.
NOT DUBITATIVE GOOD HERE QUES TO-YOU
'Isn't it good here for you?'

1.4.6.0. The following examples illustrate the various combinations of EvP material.

1.4.6.1. EvP[Ev]:

(1.4k) 'i:p Ev[t] wahi' pɨnkib.
HERE DUBITATIVE COYOTE PASS-FUTURE
'The Coyote will pass here.'

1.4.6.2. EvP[Ev^<u>?</u>]: see (1.4d).

1.4.6.3. EvP[<u>#ta#</u>^Ev]:

(1.4ℓ) 'ama' t Ev[X] ma:mc̓.
HE DUBITATIVE INFERENTIAL HEAR
'He must hear it (i.e., it must be that he hears it).'

1.4.6.4. EvP[<u>#ta#</u>^Ev^<u>?</u>]: No example; see 2.6.1.

1.4.6.5. EvP[Ev^Ev]:

(1.4m) Ev[qai] Ev[k^{w}ɨn] hamin qɨi.
NOT QUOTATIVE HOW SAY
'He didn't say anything.'

1.4.6.6. EvP[Ev^Ev^<u>?</u>]: see (1.4j).

1.4.6.7. EvP[Ev^<u>#ta#</u>^Ev]:

(1.4n) a:m Ev[mai] t Ev[k^{w}ɨnɨ] q^{w}c̓i'b.
THEY MAY DUBITATIVE QUOTATIVE-THEY DIE-FUTURE
'They might die.'

1.4.6.8. EvP[Ev^<u>#ta#</u>^Ev^<u>?</u>]: No example; see 2.6.1.

1.4.6.9. EvP[Ev^Past]:

(1.4o) 'i:p Ev[k^{w}ɨnɨ-] -bɨ' wahi' pɨnq.
HERE QUOTATIVE HE-PAST COYOTE PASS
'The Coyote passed here (so I am told).'

1.4.6.10. EvP[Ev^Past^?]: see (1.4e), (1.4h), (1.4i).

1.4.6.11. EvP[#ta#^Ev^Past]:

(1.4p) t Ev[Xa-] -bɨ' ma:mç.
DUBITATIVE INFERENTIAL HE-PAST HEAR
'He must have heard it.'

1.4.6.12. EvP[Ev^#ta#^Ev^?]: No example; see 2.6.1.

1.4.6.13. EvP[Ev^Ev^Past]:

(1.4q) Ev[qai] Ev[k^{w}ɨnɨ-] -mɨ' hai:m i:p qaç
NOT QUOTATIVE THEY-PAST WHO HERE DWELL
ta:qtam.
PEOPLE
'No people lived here.'

1.4.6.14. EvP[Ev^Ev^Past^?]:

(1.4r) Ev[qai] Ev[ta-] -bɨ' mi: ?
NOT DUBITATIVE HE-PAST GO QUESTION
'Didn't he go?'

1.4.6.15. EvP[Ev^#ta#^Ev^Past]:

(1.4s) 'ačam Ev[qai] t Ev[Xa-] čɨmɨ'
WE NOT DUBITATIVE INFERENTIAL WE-PAST
wɨ:habɨ'q.
INCREASE-RESULT
'We must not have increased.'

1.4.6.16. EvP[Ev^#ta#^Ev^Past^?]: No example; see 2.6.1.

1.5. PredP → Pred ([(Conj) Pred]*) (< 1.2)

Pred = Predicate (1.6)
Conj = Conjunction (2.8)

1.5.0. Within any Predicate-Phrase any number (≥ 1) of Predicates may occur. They may or may not be separated by Conjunctions.

1.5.1. An example of a Sentence containing several Predicates not separated by Conjunctions is:

(1.5a) k^{w}ɨnɨbɨ' 'awǫčahab Pred[mi], Pred[tum
QUOT-HE-PAST HER-HUSBAND GO SOME
hai:p 'i:p nɨm], Pred[pɨ:ra:k^{w}i ŋa:n].
WHERE HERE WALK THEIR-FOOD-ACC LOOK-FOR
'Her husband went walking around somewhere looking for food for them.'

1.5.2. An example of a Sentence containing a pair of Predicates separated by a Conjunction is:

(1.5b) nɨ:ht k^{w}ɨnɨbɨ' Pred[k^{w}uça:ti 'u:']
WOMAN QUOT-SHE-PAST STICK-ACC TAKE
Conj['ani] Pred['anɨ:pkih^{w}a'p tabɨi].
AND ON-HER-CHAIR PLACE
'The woman took a stick and placed it on her chair.'

1.5.3. It should be noted that PS rule 1.5 provides a source for Sentences like (1.5c), involving the repetition of identical Predicates. Chomsky leaves this sort of phenomenon as a marginal unexplainable residue (1965:225). The present treatment is that such Sentences simply involve

(1.5c) Pred[mi], k^{w}ɨnɨ Pred[mi].
GO QUOTATIVE-THEY GO
'They went and went.'

a number of Predicates which happen incidentally to have identical internal structure.

1.6. Pred → { ([TS]*) (Intens) { NomP / NumP / AdjP / (Manner) VblP } } (< 1.5)

NomP = Nominal-Phrase (1.16)
NumP = Numeral-Phrase (1.19)
TS = Time-Space adverbial (1.8)
Intens = Intensifier (2.4)
AdjP = Adjective-Phrase (1.13)
Manner = Manner adverbial (1.9)
VblP = Verbal-Phrase (1.10)

1.6.0. The following examples illustrate the various combinations of Predicate material, other than Pred[VblP], as in many examples throughout.

1.6.1. Pred[NomP]:

(1.6a) NomP['ama' k^{w}a:'ç 'amai:r] k^{w}ɨn ata:r.

THE BUZZARD'S HIS-SON QUOT HIS-MATERNAL-UNCLE

'His maternal uncle was the son of the Buzzard.'

1.6.2. Pred[NumP]:

(1.6b) pu:puliniam k^{w}ɨnɨmɨ' NumP[waǩk^{w}ubik].

THEIR-DAUGHTERS QUOT-THEY-PAST SEVEN

'Their daughters were seven (i.e., they had seven daughters).'

1.6.3. Pred[AdjP]:

(1.6c) AdjP['ɨçɨ] k^{w}ɨn ta:miat.

HOT QUOT DAY

'The day was hot.'

1.6.4. Pred[Intens^AdjP]:

(1.6d) Intens[hak^{w}up] k^{w}ɨn AdjP[h^{w}uwa:'i].

VERY QUOT DIFFERENT

'It was so different.'

1.6.5. Pred[TS^AdjP]:

(1.6e) nɨ:' n TS[amač pɨhpa'] AdjP[mita:'i].
I I HIS ON-HIM TALL
'I am taller than he is.'

1.6.6. Pred[TS^Intens^AdjP]:

(1.6f) ama' k^{w}uči' Intens[kiti] AdjP[atiɨ'a]
THAT DOG A-LITTLE BIG
TS[ibič pɨhpa'].
THIS-GEN ON-IT
'That dog is a little bigger than this one.'

1.6.7. Pred[Manner^VblP]:

(1.6g) amai' Manner[h^{w}uwa:'ika-] -m VblP[iču'kin].
NOW DIFFERENTLY THEY MAKE
'Now they do things differently.'

1.6.8. Pred[Intens^VblP]:

(1.6h) k^{w}ɨnɨmɨ' Intens[hak^{w}up] VblP[hohou:ŋan].
QUOT-THEY-PAST VERY BE-POOR
'They were so pathetic.'

1.6.9. Pred[TS^VblP]:

(1.6i) nɨ' TS['ahk^{w}] VblP[mana'qçu'].

I-PAST HERE RETURN-MOTION

'I came home here.'

1.6.10. Pred[Intens^Manner^VblP]:

(1.6j) k^{w}ɨnɨmɨ Intens[hak^{w}up] Manner['ɨna:ç]

QUOT-THEY-PAST VERY NICELY

VblP[qaç].

DWELL

'They lived very nicely.'

1.6.11. Pred[TS^Manner^VblP]:

(1.6k) TS['i:p] qai m Manner[pana'] VblP[ñihai].

HERE NOT THEY THAT-WAY DO

'They don't do it like that here.'

1.6.12. Pred[TS^Intens^VblP]:

(1.6ℓ) kimai k^{w}ɨn Intens[hak^{w}up] VblP[wihwi'n]

COME QUOT VERY BE-SHOUTING

TS[kimib].

AS-HE-CAME

'He came and was shouting a lot as he came.'

1.6.13. Pred[TS^Intens^Manner^VblP]:

(1.6m) TS['ubia] Intens[puyu] Manner[k^{w}a'nq]
ALREADY ALL BY-EATING-IT
VblP['i:m'kin amai].
END IT-ACCUSATIVE
'He had finished it up by eating it.'

1.6.14. Pred[TS^TS^TS^VblP]:

(1.6n) TS['a:pia-] -m TS[hawei't] VblP[pičii]
THERE THEY ALWAYS ARRIVE
TS[tamqa'p] 'i:m.
IN-THE-WINTER THESE
'These people always went there in the winter.'

1.7. Adv → $\left\{ \begin{matrix} Adv_S \\ TS \end{matrix} \quad (Adv_{TS}\text{^}\#S\#) \right\}$ (< 1.2)

Adv_S = Sentence Adverb (2.11)
Adv_{TS} = Adverb of time-space (2.12)
TS = Time-Space adverbial (1.8)

1.7.0. The following examples illustrate the various combinations of Adv material.

1.7.1. Adv[Adv_S]:

(1.7a) qai bɨ' pičɨi Adv_S[ya'ki'].
NOT HE-PAST ARRIVE (ECHO-QUESTION)
'He didn't come, did he?'

1.7.2. Adv[Adv_S^Adv_{TS}^#S#]

(1.7b) Adv_S[pɨbei-] Adv_{TS}[-pa'] S[t 'ibi'
IF LOCATION DUB THIS
q^woutkib], tan ɨnanib yɨ:ɋat
BREAK-FUT DUB-I KNOW-FUT WHICH-ONE'S
'amɨm'kibɨi.
HIS-HAVING-DIED
'If this breaks, I'll know which one has died.'

1.7.3. Adv[TS]. Sometimes Time-Space adverbials (1.8) function on the Sentence level, sometimes on the Predicate (Pred) level (1.6). (1.7c) is an example including both a Sentence Time-Space adverbial and a Predicate Time-Space adverbial.

(1.7c) TS['ubiht] qai č Pred[TS[hai:pa'n]
LONG-AGO NOT WE EVER

cookies-ti ya:nɨm].

cookies-ACC HAVE

'We never used to have cookies.'

1.8. TS → ({ NomP (yə#) / NumP / #S# }) Adv_{TS} (< 1.6, 1.7)

NomP = Nominal-Phrase (1.16)

yə# Accusative case (Acc)

NumP = Numeral-Phrase (1.19)

Adv_{TS} = Adverb of time-space (2.12)

1.8.1. In the present description, instead of having separate adverbials of Time, Location, Direction, and so forth, a generalized "Time-Space" adverbial is recognized as being able to serve these different functions depending on the nature of its constituent parts.

Consider (1.8a) and (1.8b):

(1.8a) N[tǫ:ŋa-] Adv_{TS}[-ba'] 'in the summer'

SUMMER LOCATION

(1.8b) N[qai:-] Adv_{TS}[-ba'] 'in the hills'

HILL LOCATION

These are identical in their internal structure except for the particular Nouns involved, yet (1.8a) could be said to function as a time adverbial while (1.8b) functions as a location adverbial, the differences in function reflecting no more than the difference in meaning between [tǫ:ŋa-] 'summer' and [qai:-] 'hill'.

1.8.2.0. The following examples illustrate the various combinations of Time-Space adverbial material.

1.8.2.1. TS[Adv_{TS}]:

(1.8c) nɨ' Adv_{TS}['ahk^{w}] mana'qçu'.
I-PAST HERE RETURN-MOTION
'I came home here.'

1.8.2.2. TS[NomP^Adv_{TS}]:

(1.8d) k^{w}ɨn NomP[mi:ŋaht 'aki:-] Adv_{TS}[-b]
QUOT GOPHER'S HER-HOUSE LOCATION
piču:çu'.
ARRIVE-MOTION
'He arrived at the Gopher's house.'

1.8.2.3. TS[NomP^yə#^Adv_{TS}]:

(1.8e) tamɨnɨç ma:h^{w}a'nib NomP[ki:č-] -i
DUB-YOU-PL-ME BURN-FUTURE HOUSE ACC
Adv_{TS}[pɨmia'].
TOGETHER-WITH-IT
'You'll burn me together with the house.'

1.8.2.4. TS[NumP^Adv_{TS}]:

(1.8f) NumP[pa:hi'-] Adv_{TS}[-ka'] nɨ' tɨ:'wɨm.
THREE DIRECTION I-PAST COUNT
'I counted to three.'

1.8.2.5. TS[#S#^Adv_{TS}]:

(1.8g) S['ibi' tiɨbaç 'ubiht mutu' nama:'i ñia:-]
THIS EARTH LONG-AGO STILL SOFT DO
Adv_{TS}[-w] k^{w}ɨnɨmɨ' qaç wǫh^{w}.
WHEN QUOT-THEY-PAST BE TWO
'When this earth was still soft long ago, there were two.'

1.8.3. Unlike (1.8g), however, most embedded Sentences in TS adverbials are based on nominalizations, as in the following example.

(1.8h) t Xabɨ' puyu 'ayaɨ', 'ɨ:m'qçu' 'añu puahqa'
DUB INF-IT-PAST ALL THEN END-MOTION HIS MONEY
NomP[S[toqq^{w}pi'-]] Adv_{TS}[-biu'] Nom[S[
GAMBLING FROM
(continued) 'amač tǫčiñt pɨyɨka']].
THAT-GEN YOUTH'S TO-HIM
'All of his money, then, must have come to an end
from gambling with that young man.'

1.9. Manner → ({ NomP / AdjP / [#S#]* }) Adv_{manner} (< 1.6)

NomP = Nominal-Phrase (1.16)
AdjP = Adjective-Phrase (1.13)
Adv_{manner} = Adverb of manner (2.13)

1.9.0. The following examples illustrate the various combinations of Manner adverbial material.

1.9.1. Manner[Adv_{manner}]:

(1.9a) hawei't nɨ Adv_{manner}['ɨna:ç] qaç 'ɨsk^{w}ela'p.
ALWAYS I-PAST BE AT-SCHOOL
'I got along nicely all the time at school.'

1.9.2. Manner[NomP^Adv_{manner}]:

(1.9b) NomP['a:č'a'-] Adv_{manner}[-n] tan wɨkɨbib.
AXE INSTRUMENTAL DUB-I HIT-FUTURE
'I'll hit it with the axe.'

1.9.3. Manner[AdvP^Adv_{manner}]:

(1.9c) 'amai' AdjP[h^{w}uwa:'i-] Adv_{manner}[-ka-] -m
NOW DIFFERENT -LY THEY
iču'kin.
MAKE
'Now they do things differently.'

1.9.4. Manner[#S#^Adv_{manner}]:

(1.9d) k^{w}ɨn S[tuka-] Adv_{manner}[-n̄q̄] pičɨi a:p.
QUOT PACK SO-DOING ARRIVE THERE
'He arrived there carrying it on his back.'

1.10. VblP → (BenP) VP^Aux_{V} (< 1.6)

BenP = Benefactive-Phrase (1.15)

VP = Verb-Phrase (1.12)

Aux_{V} = Verbal Auxiliary (1.11)

1.10.0. The following examples illustrate the various combinations of Verbal-Phrase material.

1.10.1. VblP[VP^Aux_V]:

(1.10a) VP[mana'q-] Aux_V[-ɋu'ai] čɨmɨ'.
RETURN MOTION-ACCUSATIVE WE-PAST
'We went home.'

1.10.2. VblP[BenP^VP^Aux_V]:

(1.10b) hawei't k^wɨnɨ VP[pa:ɋi 'iča:-] Aux_V[-ɋu'],
ALWAYS QUOT-THEY WATER-ACC DIP MOTION
BenP[ta:qtam pɨmɨka'].
PEOPLE FOR-THEM
'They always went to dip water for the people.'

1.11. Aux_V → (Freq) (<u>ɋu'a#</u>) <u>yə#</u> (< 1.10)

Freq = Frequentative (2.14)
<u>ɋu'a#</u> Motion suffix (Mot) (1.11.2)
<u>yə#</u> Accusative case (Acc) (1.11.1)

1.11.1. In addition to its appearing after the other Aux_V material, as in (1.10a), Accusative case is transformationally distributed among the Nominal-Phrases which are imme-

diately dominated by constituents of VblP, that is, among the direct object (1.12.1), indirect object (1.12.1), and benefactive object (1.15.1), as in the following examples.

(1.11a) qai k^{w}ɨn ham-i hi:t-i maqa-i.
NOT QUOT WHO-ACC WHAT-ACC GIVE-ACC
'She didn't give anybody anything.'

(1.11b) 'ɨmɨ-yɨ-n mi:ʂk-čuna-qa'.
YOU-ACC-I WET-BENEFACTIVE-GOING-TO
'I'm going to wet it for you.'

In various phonological and morphological contexts, Accusative case is deleted in different patterns. One of these patterns demonstrates the close relationship of the verbal and nominal suffixes. This is the Direct (1.4.2) Imperative, where Accusative case is transformationally deleted such that it does not appear in either its post-nominal or post-verbal position, as in (1.11c). This pattern seems to

(1.11c) pa:ç či' 'ič-ičun.
WATER YOU-ME DIP-BENEFACTIVE
'Dip water for me!'

be the strongest evidence available for the present analysis whereby the [-i] which occurs after verbal material and

that which occurs after nominal material are treated as different occurrences of the same underlying element.

1.11.2.1. <u>çu'a#</u>, the Motion suffix, implies that motion is involved in some way with the action denoted by the Verb, either directly, as in (1.11d), or metaphorically, as in (1.11e).

(1.11d) hɨi:ɱ-çu'a-i k^{w}ɨnɨ wɨçɨham.
HUNT-MOTION-ACC QUOT-THEY MEN
'The men went hunting.'

(1.11e) pǫ:qt 'ɨ:m'q-çu' pa:ç 'ahɨ:bib.
ROAD END-MOTION WATER'S AT-ITS-EDGE
'The road comes to an end at the water.'

1.11.2.2. The meaning of <u>çu'a#</u> with Verbs whose definition already involves motion is more difficult to identify. It may mean simply that the focus is more on the motion involved than it would be otherwise. An example is (1.10a).

1.11.3.0. The following examples illustrate the various combinations of Aux_V material, other than Aux_V[<u>yə#</u>], as in (1.11a), and Aux_V[<u>çu'a#^yə#</u>], as in (1.10a).

1.11.3.1. Aux_V[Freq^yə#]:

(1.11f) t̪im̪i- Freq[-m-] -ina- -i n.
SHUT ITERATIVE CAUSATIVE ACCUSATIVE I
'I keep shutting it.'

1.11.3.2. Aux_V[Freq^çu'a#^yə#]:

(1.11g) Freq[man'-] -man'q-çu'a- -i m.
DISTRIBUTIVE RETURN-MOTION ACCUSATIVE THEY
'They went home (each to his respective home).'

1.12. VP → ({ (NomP) { NomP / N / AdjP } / #S# }) V (PunctP) (< 1.10)

NomP = Nominal-Phrase (1.16)
N = Noun (2.1)
V = Verb (2.15)
AdjP = Adjective-Phrase (1.13)
PunctP = Punctual-Phrase (1.14)

1.12.1. A Nominal-Phrase immediately dominated by VP is defined as an "object." If there are two NomP's immediately dominated by the same VP node, the NomP immediately to the left of the Verb is the "direct object," that to the

left of the direct object is the "indirect object." Verbs that cooccur with objects are referred to as "transitive." Verbs that take one object are sometimes referred to as "simple transitive" and those that take both a direct and an indirect object as "double transitive." Verbs that take no object are "intransitive."

1.12.2. Verbs that appear in the environment __PunctP are referred to as "Q-class" Verbs, this label having reference to the morphophonemic shape of the Punctual suffix (1.14), which is qə#. Most Q-class Verbs are intransitive.

1.12.3.0. The following examples illustrate the various combinations of Verb-Phrase material.

1.12.3.1. VP[V]:

(1.12a) nanąːm k^{w}ɨnɨmɨˈ V[mi].
YOUNG-WOMEN QUOT-THEY-PAST GO
'Some young women went.'

1.12.3.2. VP[NomP^V]:

(1.12b) k^{w}ɨnɨ NomP[h^{w}ukaht-] -i V[mɬkąna-] -qam.
QUOT-THEY DEER ACC KILL GOING-TO -PLURAL
'They were going to kill a deer.'

1.12.3.3. VP[NomP^NomP^V]:

(1.12c) NomP['ama-] -i qai k^{w}ɨn NomP[hi:t-] -i
HER ACC NOT QUOT WHAT ACC
V[maqa-] -i.
GIVE ACCUSATIVE
'She didn't give anything to her.'

1.12.3.4. VP[N^V]:

(1.12d) 'amai' n N[ki:-] V[-ču'].
NOW I HOUSE (VERBALIZER)
'I'm building a house now.'

1.12.3.5. VP[NomP^N^V]:

(1.12e) k^{w}ɨnɨbɨ NomP['amai:ham] pɨnuk^{w} N[habɨ-]
QUOT-HE-THEM HIS-CHILDREN HE-ALONE CLOTHES
V[-'n].
(VERBALIZER)
'He dressed his children alone (i.e., only his own children, not the other children).'

1.12.3.6. VP[AdjP^V]:

(1.12f) 'ubia AdjP[ruma:ruma-] V[-'n].
ALREADY DARK (STATIVE)
'It was dark already.'

1.12.3.7. VP[NomP^AdjP^V]: No example; see 2.15.1.

1.12.3.8. VP[#S#^V]:

(1.12g) 'i:p ni' S['akičami 'ą:ŋ'k-] V[-in].
HERE I-PAST GATE-ACC OPEN-PUNCT CAUSATIVE
'Here I opened the gate.'

1.12.3.9. VP[V^PunctP]:

(1.12h) t Xani' V[čurup-] PunctP[-q] 'a:ŋk^{w}a'.
DUB INF-I-PAST ENTER PUNCTUAL TO-THERE
'I must have gone in there.'

1.12.3.10. VP[NomP^V^PunctP]:

(1.12i) NomP[ama-] -i č NomP(continued)[qai:č-] -i
THAT ACC WE HILL ACC
h^{w}ąč- V[-h^{w}ąč-] PunctP[-q].
DISTR CLIMB PUNCTUAL
'We climbed those hills.'

1.12.3.11. VP[NomP^NomP^V^PunctP]: No example; see 2.15.1.

1.12.3.12. VP[N^V^PunctP]: No example; see 2.1.1, 2.15.1.

1.12.3.13. VP[NomP^N^V^PunctP]: No example; see 2.1.1, 2.15.1.

1.12.3.14. VP[AdjP^V^PunctP]:

(1.12j) AdjP[pɨçɨ-] V[-hab-] PunctP[-q] nɨ:yka'.
HEAVY INCREASE PUNCTUAL TO-ME
'It's getting heavy for me.'

1.12.3.15. VP[NomP^AdjP^V^PunctP]: No example; see 2.15.1.

1.12.3.16. VP[#S#^V^PunctP]: No example; see 2.15.1.

1.13. AdjP → ($\left\{ \begin{matrix} N \\ V \end{matrix} \right.$ (PunctP) $\left. \right\}$) Adj (< 1.6, 1.9, 1.12)

N = Noun (2.1)
V = Verb (2.15)
PunctP = Punctual-Phrase (1.14)

Adj = Adjective (2.16)

1.13.0. The following examples illustrate the various combinations of Adjective-Phrase material.

1.13.1. AdjP[Adj]:

(1.13a) k^{w}a'i'a:ç nɨ:yka' hak^{w}up Adj[čibu'].
FOOD TO-ME VERY BITTER
'The food [tastes] very bitter to me.'

1.13.2. AdjP[N^Adj]:

(1.13b) nɨ:' n amač pɨhpa' N[mita-] Adj[-:'i].
I I HIS ON-HIM TALL-ONE (ADJECTIVALIZER)
'I'm taller than he is.'

1.13.3. AdjP[V^Adj]:

(1.13c) V[hača-] Adj[-:'i] ñia:qa'.
BECOME-SHARP (ADJECTIVALIZER) GOING-TO-DO
'It's going to be sharp.'

1.13.4. AdjP[V^PunctP^Adj]:

(1.13d) k^{w}ɨn a:p 'ɨk Adj['a-] V[-mɨm'-]
QUOT THERE LIE DIE
PunctP[-k-] Adj(continued)[-i'].
PUNCTUAL (ADJECTIVALIZER)
'He lay there dead.'

1.14. PunctP → (ɨ'ɨ#) qə# (< 1.12, 1.13)

ɨ'ɨ# Resultative suffix (Result) (1.14.2)
qə# Punctual suffix (Punct) (1.14.3)

1.14.1. It is necessary to recognize that (ɨ'ɨ#) qə# behaves as a unit for the application of the phonological rules: a metathesis takes place in Verbs appearing in the environment __PunctP. Compare the transitive Verb #qa+tu'a# 'break, cut transversely', as in (1.14a), with

(1.14a) qatua'qai n.
CUT-GOING-TO-ACC I
'I'm going to cut it.'

the related Q-class Verb #qa+tu#, which appears before qə# (> [-k-]) in (1.14b), and before ɨ'ɨ#^qə# (> [-u'q]) in (1.14c) ([q^{w}out] < qau+t < metathesis of qa+tu).

(1.14b) V[q^{w}out-] PunctP[-k-] -ib t.
GET-CUT PUNCTUAL FUTURE DUBITATIVE
'It'll get cut.'

(1.14c) 'ubia V[q^{w}out-] PunctP[-u'q].
ALREADY GET-CUT RESULTATIVE-PUNCTUAL
'It's already cut.'

1.14.2. The Resultative suffix ɨ'ɨ# indicates that the subject of the Sentence is in a condition or posture as a result of the action indicated by the Verb. Examples, with non-resultative forms for comparison, are:

(1.14d) ##ŋąq#ɨ'ɨ#qə## [ŋąqɨ'q.] 'It is perched.'
cp. ##ŋąq#qə## [ŋąqq.] 'It perches.'

(1.14e) ##pu:+t#ɨ'ɨ#qə## [pu:tu'q.] 'It is full.'
cp. ##pu:+t#qə## [pu:tq.] 'It becomes full.'

1.14.3. The suffix qə#, in the absence of the Resultative suffix ɨ'ɨ#, seems to indicate "punctual" or momentaneous action, that is, action begun and terminated in an instant. To be consistent, the tag "Punctual" (Punct) is used for this suffix in all contexts.

1.15. BenP → NomP^Ben (Ben) (< 1.10)

NomP = Nominal-Phrase (1.16)

Ben = Benefactive (2.10)

1.15.1. A Benefactive-Phrase consists of a Nominal-Phrase and either the Directional suffix yəqá# or the Benefactive suffix ičuna# or both. The Benefactives are lexically specified such that only one instance of each Benefactive can occur within any Benefactive-Phrase (2.10.2). The Benefactive suffix, ičuna#, is transformationally reordered to appear after the Verb-Phrase (3.1.4). The Nominal-Phrase immediately dominated by BenP is the "benefactive object."

1.15.2.0. The following examples illustrate the different sorts of Benefactive-Phrases.

1.15.2.1. BenP[NomP^Ben]:

(1.15a) 'a:m tamɨči' NomP['ačamɨ-]
THEY DUBITATIVE-THEY-US US
Ben[-ka] 'amai k^{w}u:hanib.
DIRECTION HIM CALL-FUTURE
'They'll call him for us.'

(1.15b) 'ama' tamɨn NomP[nɨ:-] -i, 'ɨmɨi
HE DUB-HE-YOU-ME ME ACC YOU-ACC
k^{w}u:han- Ben[-ičun-] -ib.
CALL BENEFACTIVE FUTURE
'He'll call you for me.'

1.15.2.2. BenP[NomP^Ben^Ben]:

(1.15c) 'ama' bɨ, NomP['a:mɨ] Ben[pɨmɨka']
HE HE-THEM THEY-GEN TO-THEM
k^{w}u:han- Ben[-ičun].
CALL BENEFACTIVE
'He called them for them.'

1.16. NomP → Nom ([(Conj) Nom]*)

(< 1.2, 1.6, 1.8, 1.9, 1.12, 1.15, 1.19)

Nom = Nominal (1.17)
Conj = Conjunction (2.8)

1.16.0. The following examples illustrate the various combinations of Nominal-Phrase material.

1.16.1. NomP[Nom]:

(1.16a) Nom[hɨi:ñi'aç] k^{w}ɨnɨbɨ' qaç.
HUNTER QUOT-HE-PAST BE
'There was a hunter.'

1.16.2. NomP[Nom^Nom^Nom^Nom^Nom]:

(1.16b) Nom['ayɨ'] Nom['ana'], Nom['api:tam],
HER-MOTHER HER-FATHER HER-YOUNGER-SISTERS
Nom['apa:ham], Nom['aq^{w}o:ham] pɨmɨb
HER-OLDER-BROTHERS HER-OLDER-SISTERS AMONG-THEM
k^{w}ɨn piču:çu'.
QUOT ARRIVE-MOTION
'She arrived among her mother, father, younger sisters, older brothers, and older sisters.'

1.16.3. NomP[Nom^Conj^Nom]:

(1.16c) Nom['ama' wili] Conj[ami'] Nom['ama'
THAT WILLY AND THAT
Leonardo] mɨ' mi, waha'.
Leonardo THEY-PAST GO ALSO
'Willy and Leonardo went too.'

1.17. Nom → { (Intens)(DP) NP / #S# } (< 1.16)

Intens = Intensifier (2.4)

DP = Determiner-Phrase (1.21)

NP = Noun-Phrase (1.18)

1.17.0. The following examples illustrate the various combinations of Nominal material.

1.17.1. Nom[NP]:

(1.17a) 'ubiht mɨ' qaç NP[yua:qaiam] 'i:p.
LONG-AGO THEY-PAST BE CHEMEHUEVIS HERE
'There used to be Chemehuevis here.'

1.17.2. Nom[DP^NP]:

(1.17b) 'ibi' DP['ama'] NP[nɨpulin].
THIS THAT MY-DAUGHTER
'This is that daughter of mine.'

1.17.3. Nom[Intens^NP]:

(1.17c) Intens[hak^{w}up] NP[ni:htab$\dot{t}\varsigma$].
VERY OLD-WOMAN
'She's a very old woman.'

1.17.4. Nom[Intens^DP^NP]:

(1.17d) 'aya$\dot{t}$' k$^{w}\dot{t}$n ama' t$\dot{t}$i:t '$\dot{t}$:m'kin Intens[puyu]
THEN QUOT THAT DEVIL FINISH ALL
DP[ama-] -i NP[h^{w}ukaht-] -i.
THAT ACC DEER ACCUSATIVE
'Then that devil finished all of the deer.'

1.17.5. Nom[#S#]:

(1.17e) S[tςčiñam yua:qaiam$\dot{t}$-] -m mi qai:yka'.
YOUTHS CHEMEHUEVIS THEY GO TO-THE-HILLS
'Chemehuevi youths went into the hills.'

1.18. NP → (NomP)(#S#) N (< 1.17)

NomP = Nominal-Phrase (1.16)
N = Noun (2.1)

1.18.1. Any word (defined morphophonemically) which contains a Noun introduced by PS rule 1.18 is referred to as

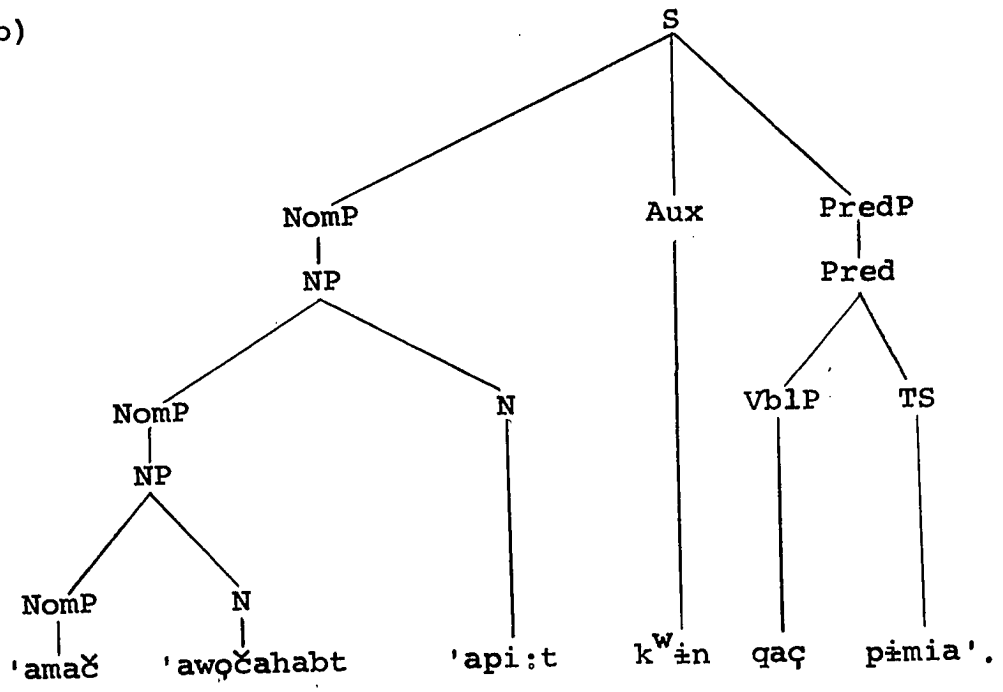
a "Noun stem." Further, the Noun introduced by the present phrase-structure rule is the "head" of the Nominal-Phrase which dominates it.

1.18.2. PS rule 1.18 introduces the possessor Nominal-Phrase, such that there is possible a left-branching possessive construction of indefinite depth. This is necessary in Serrano because of the nature of the strict subcategorization of Nouns (such that many Nouns are positively specified for the contextual feature [NomP...___]) and also because of the fact that there exists no Sentence-type to which the possessive construction can be related. For example, [nɨq^{w}ǫ:r] 'my older sister' cannot be related to some underlying Sentence of, say, the sort 'I have an older sister' (as Lees (1960:133) suggests can be done for similar constructions in English). The nearest Serrano equivalent to "I have an older sister" would be

(1.18a) nɨq^{w}ǫ:r qaç.
MY-OLDER-SISTER BE
'My older sister exists.'

in which [nɨq^{w}ǫ:r] is simply the subject Nominal-Phrase. An example of a Sentence with a possessive construction within a possessive construction is:

(1.18b)



HER HER-HUSBAND'S HIS-YOUNGER- QUOT DWELL WITH-HER
-SISTER
'Her husband's younger sister stayed with her.'

1.18.3.0. The following examples illustrate the combinations of Noun-Phrase material other than NP[NomP^N], as in (1.18b), and NP[N]. For examples of NP[N], see (1.17a, c, d).

1.18.3.1. NP[#S#^N]:

(1.18c) 'amai' pǫ:qt wi:sei't 'i:p 'ama' S[pay±ka' mi-]
NOW ROAD WIDE-ONE HERE THE AWAY GO-
N[-:'aç] S(continued)[ma:rai'ka'].
-ER TO-TWENTYNINE-PALMS

'Now, the road is wide here, the one that goes off to Twentynine Palms.'

1.18.3.2. NP[NomP^#S#^N]:

(1.18d) wi'wɨnai n NomP[nɨh^{w}u:n] 'a- S[-'umi'-]
WANT I MY-HEART'S ITS FORGET
N[-kç-] -i.
-ING ACCUSATIVE
'I want to forget.'

A note regarding (1.18d): in Serrano, forgetting is an action attributed to one's heart.

1.19. NumP → ({D / PreNum}) Num (< 1.6, 1.8, 1.20)

D = Determiner (2.2)
PreNum = Pre-Numeral (1.20)
Num = Numeral (2.9)

1.19.1. The only Determiner that is lexically permitted (2.2.3) to precede any Numeral is the Indeterminate Determiner #ha# 'wh-', and the only Numeral that can follow #ha# is the indefinite Numeral iñiki# (2.9.3), which has been found only in this combination, as in (1.19a).

(1.19a) D[h-] Num[-iñiki'] t hɨpɨyam pɨ
HOW-MANY DUB CHILDREN YOU-THEM
ya:nɨm.
HAVE
'How many children do you have?'

1.19.2.0. The following examples illustrate the other combinations of NumP material.

1.19.2.1. NumP[Num]:

(1.19b) nɨ:' n Num[waČah] hɨyɨyam ya:nɨm.
I I FOUR CHILDREN HAVE
'I have four children.'

1.19.2.2. NumP[PreNum^Num]:

(1.19c) ...ani nɨ' mamai:ha' nɨmai:ham wɨwɨham
AND I-PAST BEAR-CHILDREN MY-CHILDREN SEVERAL
PreNum[wahmąç pɨhpa'] Num[wǫh^{w}].
TEN ON-IT TWO
'...and I had my twelve children.'

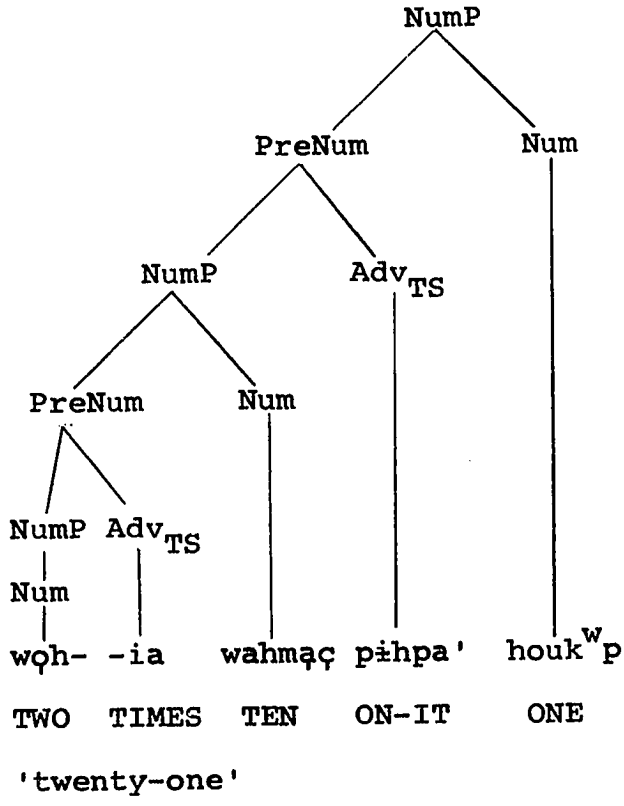
1.20. PreNum → NumP^Adv_{TS} (< 1.19)

NumP = Numeral-Phrase (1.19)

Adv_{TS} = Adverb of time-space (2.12)

No Numeral-Phrase more complex than (1.20a) was elic-

(1.20a)



ited, but it seems unreasonable to suppose that there are any grammatical constraints preventing the generation of an indefinitely recursive Numeral construction.

1.21. DP → (PreD)(D) D (< 1.17)

PreD = Pre-Determiner (2.3)

D = Determiner (2.2)

1.21.0. The following examples illustrate the different combinations of Determiner-Phrase material.

1.21.1. DP[D]:

(1.21a) D['i:m] ma:rɨŋa'iam , k^{w}ɨnɨmɨ' kim,
THESE MORONGOS QUOT-THEY-PAST COME
k^{w}i:mqnu'.
FROM-THE-NORTH
'These Morongos came from the north.'

1.21.2. DP[D^D]:

(1.21b) k^{w}ɨnɨ piču:çu' D[hai:-] -p D['i:-]
QUOT-THEY ARRIVE WHAT LOCATION THIS
-p qai:b.
LOCATION IN-THE-MOUNTAINS
'They arrived somewhere in the mountains.'

1.21.3. DP[PreD^D]:

(1.21c) nɨ:' n PreD[t] D[Xi:t-] -i ma:mɾ̥.

I I DUB SOMETHING ACC HEAR

'I hear something.'

1.21.4. DP[PreD^D^D]:

(1.21d) 'ama' k^{w}ɨn pɨ:na' PreD[tum] D[hai:-]

THAT QUOT THEIR-FATHER SOME WHAT

-p D['i:-] -p nɨm.

LOCATION THIS LOCATION WALK

'That father of theirs was gone off somewhere.'

2. LEXICAL RULES

2.0. In this section are given the rules whereby lexical categories are mapped into Complex Symbols (CS), subcategorization rules, and sample lexical entries.

A lexical entry is of the form (D,C), where D is a distinctive feature matrix and C is a complex symbol,

> the latter being a set of features of various sorts (syntactic and semantic features, features that specify which morphological or transformational processes apply to strings containing the items in question, features that exempt items from certain phonological rules, and so on). (Chomsky 1965:164)

In practice here, the phonological portion of the lexical entry is spelled out in alphabetic morphophonemic symbols and the semantic features are merely hinted at by an English gloss.

The specification of syntactic features involves the careful distinction between strict subcategorization rules and selectional rules.

> Rules...which analyze a symbol in terms of its categorial context, I shall henceforth call <u>strict subcategorization rules</u>. Rules...which analyze a symbol (generally a complex symbol) in terms of syntactic features of the frames in which it appears, I shall call <u>selectional rules</u>. The

latter express what are usually called "selectional restrictions" or "restrictions of cooccurrence." (Chomsky 1965:95; Chomsky's emphasis)

The specification of syntactic features is done in accordance with the following conventions:

(2.0a) (i) only positively specified strict subcategorization features and only negatively specified selectional features appear explicitly in lexical entries, the others being introduced by the auxiliary convention (ii) (Chomsky 1965:164)

(ii) if the lexical entry (D,C) is not provided with the feature specification [$\alpha\varphi\_\_\psi$] for the contextual feature [$\varphi\_\_\psi$] (where α = + in the case of a strict subcategorization feature and α = - in the case of a selectional feature), then assign it the specified feature [$-\alpha\varphi\_\_\psi$] (Chomsky 1965:165)

(2.0b) ...a base rule that analyzes the lexical category A into a complex symbol automatically includes the feature [+A] as one of the elements of this complex symbol...[and] each lexical entry automatically, by convention, contains the feature [-A] for every lexical category A, unless it is explicitly provided with the feature [+A]. (Chomsky 1965:110-111)

(2.0c) suppose that $([\alpha_1 F_1],\ldots, [\alpha_n F_n])$ is a maximal hierarchic sequence with respect to the grammar G, and that (D,C) is a lexical entry of G, where C contains $[\alpha_n F_n]$. Then C is extended automatically to C' containing C along with all of the specified features $[\alpha_i F_i]$, for each i, $1 \leq i < n$. (Chomsky 1965:165-166)

(2.0d) Let us say that the feature $[\alpha F]$ is <u>lexically determined</u> in the grammar G if there is a hierarchic sequence $([+K],\ldots, [\alpha F])$ with respect to G, where K is a lexical category (α = + or -). This is to say that if (D,C) is a lexical entry and C contains $[\alpha F]$, then (D,C) is necessarily a member of the lexical category K, with respect to this entry, and it is unnecessary (by virtue of convention [(2.0c)]) to list [+K] in C. (Chomsky 1965: 166; Chomsky's emphasis)

Here Chomsky's assumption is adopted

(2.0e) that the proper method for inserting lexical items is by a general rule that inserts the lexical entry (D,C) in a position ...Q... in a Phrase-marker (Q being a complex symbol developed by rewriting rules), where C is not distinct from Q in the technical sense of feature theory. (1965:164)

This general rule, being common to all grammars by convention, is not stated formally here.

2.1. N → CS (< 1.12, 1.13, 1.18)

2.1.0. Adopting the convention

(2.1a) that among the lexical categories, ...Noun is the one that is selectionally dominant in the sense that its feature composition is determined by a context-free subcategorization rule, its features being carried over by selectional rules to other lexical categories (Chomsky 1965:116; Chomsky's emphasis),

it becomes obvious that the category Noun (N) must be rewritten as CS before any other category is so rewritten, considering that the proper selectional constraints on members of other lexical categories are dependent on the prior specification of Noun features.

2.1.1. The category Noun (N) is introduced in the PS rules rewriting VP (1.12), AdjP (1.13), and NP (1.18). Thus, Nouns are strictly subcategorized with respect to the following contextual features:

(2.1b)

[__V]	(1.12d)
[NomP__V]	(1.12e)
*[__V^PunctP]	
*[NomP__V^PunctP]	

[__Adj]	(1.13b)
[__]	(1.17a, c, d)
[NomP__]	(1.18a, b)
[#S#__]	(1.18c)
[NomP^#S#__]	(1.18d)

There are no Nouns known to be positively specified for the contextual features preceded by asterisks (*) in (2.1b), such that no known Noun is verbalized by a Q-class Verb (1.12.2). (Equally, there are no Verbs known to be positively specified for contextual features involving [...N __PunctP]; see 2.15.1.)

The following are examples of Nouns specified with respect to the above strict subcategorization features (together with example numbers under each contextual feature where an illustrative example has been given).

(2.1c) #kǐ:# [+N, +[__V], +[__], +[NomP__], ...] 'house'
(1.12d) (1.8f) (1.8d)

#habə́+# [+N, +[NomP__V], +[__], +[NomP__], ...]
(1.12e)
'clothes, blanket'

#mi+tǻ+# [+N, +[__Adj], +[__], ...] 'tall one'
(1.13b)

#hukáh# [+N, +[__V], +[__], ...] 'deer'
(1.17d)

#qǫ́:ra# [+N, +[NomP__], ...] 'older sister'

(1.18a)

i'á# [+N, +[#S#__], ...] '-er (Agentive)'

(1.18c)

ikV+# [+N, +[NomP⌢#S#__], ...] '-ing'

(1.18d)

2.1.2. Serrano Nouns are subcategorized with respect to the syntactic features Multiple and Animate.

(2.1d) $+N \rightarrow \begin{bmatrix} \pm Multiple \\ \pm Animate \end{bmatrix}$

The following are examples of Nouns with features specified according to (2.1d).

(2.1e) i'á# [±Multiple, ±Animate, +[#S#__], ...] '-er (Agentive)'

#wa+hí'# [±Multiple, +Animate, +[__], ...] 'coyote'

#waqá:+# [±Multiple, -Animate, +[(NomP)__], ...] 'shoe'

#číl^{y}Vka# [+Multiple, +Animate, +[__], ...] 'small children'

#'añí:'iči'# [-Multiple, ±Animate, +[__], ...] 'little one'

#hu:nábV+# [-Multiple, +Animate, +[__], ...]

'badger'

#pá:# [-Multiple, -Animate, +[(NomP)__], ...]

'water'

Adverbial suffixes may be suffixed directly to [-Animate] Nouns, but when they occur after [+Animate] Nouns, there must be transformationally introduced intervening material, as in the following example:

(2.1f) N[wahi'-] -t pɨ- Adv_{TS}[-yɨka'] k^{w}ɨn

COYOTE GEN HIS DIRECTION QUOT

toqq^{w}pi'.

GAMBLE

'He gambled against the Coyote.'

Strangely enough, the words meaning 'horse' (#kabá:-yu'#, #wa'ú:+rabi'#) and the word meaning 'possessed animal, pet' (#a:čí+# ~ #'á:či+ta#) in contexts where it means 'horse', are [-Animate], inasmuch as they can take directly suffixed adverbial material, as below:

(2.1g) pɨ:'a:šta-ba' 'on their horses'

pɨ:'a:štam 'their horses'

kaba:yu'p 'on the horse, on horseback'

wa'u:rabi'p 'on the horse, on horseback'

2.1.3. All [+Animate] Nouns have the same sign for the syntactic feature Plural as they have for Multiple ([+Plural] = "plural", [-Plural] = "singular"). Further, all [+Animate] Nouns are subcategorized with respect to the feature Human. These observations can be stated as:

(2.1h) $\begin{bmatrix} \alpha\text{Multiple} \\ +\text{Animate} \end{bmatrix} \rightarrow \begin{bmatrix} \alpha\text{Plural} \\ \pm\text{Human} \end{bmatrix}$

Examples of such Nouns are the following:

(2.1i) #hukǻh# [±Plural, -Human, +[__], ...] 'deer'

#qǫ́:ra# [±Plural, +Human, +[NomP__], ...] 'older sister' (singular: (1.18a), plural: (1.16b))

#tǫčíña+# [±Plural, +Human, +[__], ...] 'youth, young man' (singular: (1.8h), plural: (1.17e))

The sign on the feature Human governs Determiner (2.2) selection, such that [+Human] Nouns cooccur with #hamí# 'who', and [-Human] Nouns cooccur with #hí:+# 'what'. This opposition is neutralized for plural Nouns so far as Determiner selection is concerned, such that the Determiner corresponding to both #hamí# and #hí:+# for plural Nouns is #hahí:+# 'who, what'. However, [+Plural] Nouns are marked for Human in anticipation that the sign for this feature will turn out to be relevant regardless of that for Plural

should detailed selectional rules for Verbs (2.15.2) be worked out.

Some Nouns are only [+Plural], as the following:

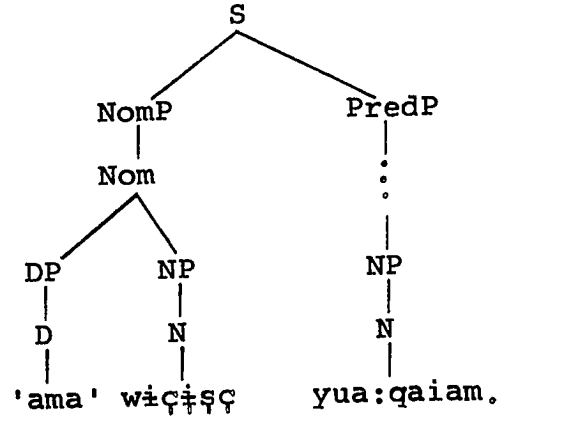
(2.1j) #'ąçə# [+Plural, -Human, +[(NomP)__], ...] 'head lice'

#čil^{y}Vka# [+Plural, +Human, +[__], ...] 'small children'

#yuhá:qah# [+Plural, +Human, +[__], ...] 'Chemehuevi'

Most words for nationalities or local groups of people, like #yuhá:qah# 'Chemehuevi', are [+Plural]. These are noteworthy in that they cooccur as predicate nominals with Nouns that are either plural, as in (1.17e), or singular, as in (2.1k).

(2.1k)



THAT MAN CHEMEHUEVI-PLURAL

'That man is a Chemehuevi.'

Among the other Nouns with the same behavior as #yuhá:qah# are #'alimá:n# 'German', #fransé:s# 'Frenchman', #kawí:-yah# 'Cahuilla', #kú:+pah# 'Cupeño', and names for the Serrano local groups: #má:+rəŋa'# 'Morongo', #mə+hihá:'an#, #'a+tǫ:'ábiha+ta#, #mamahí:+ta#. (The phonetic forms of the last four are cited in section 0.1.)

A number of [+Animate] Nouns are only [-Plural], as the following:

(2.1ℓ) #hu:nábV+# [-Plural, -Human, +[__], ...] 'badger'
#lalaba# [-Plural, -Human, +[__], ...] 'butterfly'

It is unknown how one would talk about more than one badger or butterfly.

2.1.4. Nouns that are [-Animate] but [+Multiple] are either singular or plural.

(2.1m) $\begin{bmatrix}+\text{Multiple}\\-\text{Animate}\end{bmatrix} \rightarrow \begin{bmatrix}+\text{Multiple}\\\pm\text{Plural}\end{bmatrix}$

Compare the following examples:

(2.1n) 'awa:qa' wisipɨ'q.
HIS-SHOE BE-POINTED(-RESULTATIVE)
'His shoe is pointed.'

(2.1o) 'awa:qa' wisis±'q.

HIS-SHOE BE-POINTED(-RESULTATIVE)

'His (one pair of) shoes are pointed.'

(2.1p) 'awa:qam wisis±'q.

HIS-SHOES BE-POINTED(-RESULTATIVE)

'His shoes (of more than one pair) are pointed.'

These Sentences involve the Noun

(2.1q) #wa:qá# [±Multiple, ±Plural, +[NomP__], ...] 'shoe'

and the Verb 'become point-shaped', which has the form #wisis# with [+Multiple] Noun subjects and #wisi+p# with [-Multiple] Noun subjects (see section 2.15.4).

Many [-Animate] Nouns are [±Multiple], but if [+Multiple], they are necessarily [+Plural]. This is noted as: [±Multiple, +Plural], as, for example,

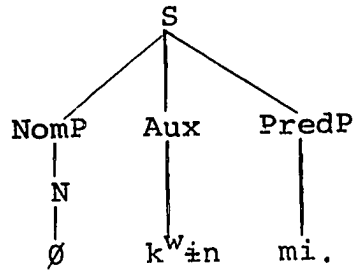
(2.1r) #wə́l^{y}a+# [±Multiple, +Plural, +[(NomP)__], ...]

'dish'

2.1.5. The PS rules make it clear that every Sentence contains at least one Noun. Yet a great number of Sentences contain no overt phonological representation of any Nomi-

nal-Phrase material. An example is:

(2.1s)

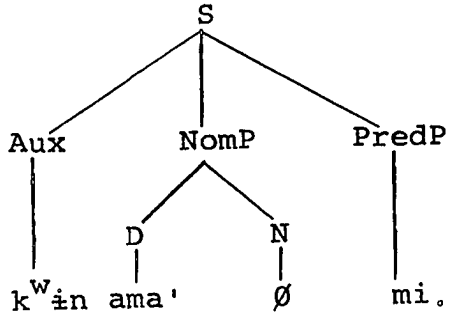


(PRONOUN) QUOT GO

'He went.'

Also very common are Sentences in which such overt phonological material representing the NomP as does occur does not include any representation of the Noun head of the NomP, as in (2.1t).

(2.1t)



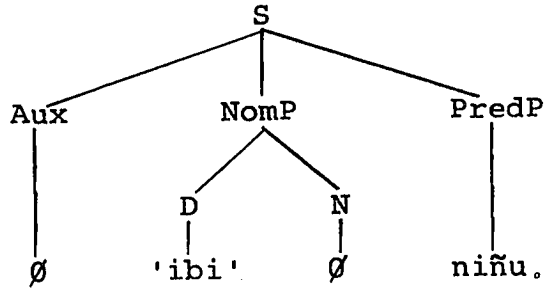
QUOT THAT (PRONOUN) GO

'He went.'

Sentences such as (2.1s) and (2.1t) are described as involving "Pronouns." Pronouns cannot be described as re-

sulting from the deletion of some lexical item or items they may refer to, inasmuch as the unrecoverable deletion of lexical items is specifically disallowed as a possible transformational operation (Chomsky 1965:132). However, Sentences of this sort are not at all aberrant or unusual. In fact, thus far in this presentation, more than eighty examples of Sentences involving Pronouns have been given, and it seems fair to suppose that in just about any sort of discourse most Sentences will involve Pronouns. Furthermore, pronominalization cannot be handled by reference to a prior or following linguistic context because of examples like (2.1u), where the reference of the Pronoun is known to

(2.1u)



(DIRECT) THIS (PRONOUN) MINE

'This is mine.'

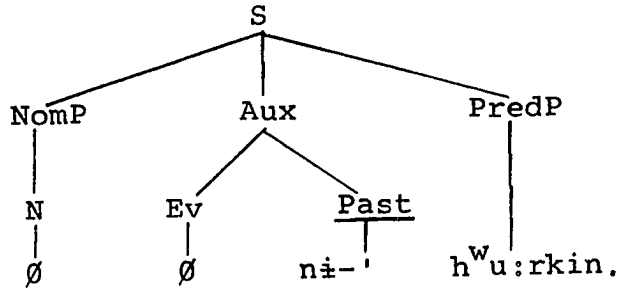
the listener wholly from the non-linguistic context of the Sentence.

Pronouns belong to the category Noun and are phonologically zero, that is, they have no associated phonological

material. Pronouns are subcategorized to a certain extent, but their meaning, other than that which is revealed by the agreement patterns determined by the nature of their subcategorization, is simply that the listener has enough information from the context, either linguistic or non-linguistic, to determine who or what the speaker intends.

The subcategory Pronoun includes the Nouns indicating the speaker and the addressee, that is, the first and second persons, where the "meaning" of these Pronouns is known only by knowing who is speaking and who is being addressed. Compare (2.1v) and (2.1w), in which the only difference be-

(2.1v)

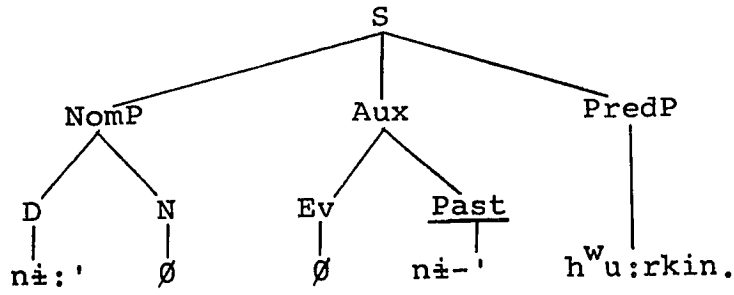


(PRONOUN) (DIRECT) I-PAST PEEK-IN

'I peeked in.'

tween the two is the presence or absence of the Determiner #nəhə́+# 'I' (see 2.2). It should be noted that the only difference in meaning between the two Sentences is that in (2.1w) there is more emphasis on the subject of the Sentence than in (2.1v).

(2.1w)



I (PRONOUN) (DIRECT) I-PAST PEEK-IN

'I peeked in.'

All Pronouns share the strict subcategorization feature +[__]. Thus, only Nouns having this feature are to be subcategorized with respect to the feature Pronoun. The feature [+Person] includes first and second person; third person is distinguished as [-Person]. Rule (2.1x) distinguishes Pronouns from non-pronouns, and (2.1y) and (2.1z) subcategorize the Pronouns.

(2.1x) $+[__] \rightarrow \pm$Pronoun

(2.1y) $\begin{bmatrix} +\text{Pronoun} \\ +\text{Human} \end{bmatrix} \rightarrow \pm$Person

(2.1z) $+$Person $\rightarrow \pm$1stPerson

The Pronouns are listed in (2.1aa). Note that no Pronoun has any associated phonological material.

(2.1aa)

[+1stPerson, +Plural] 'we'	(1.2c)
[+1stPerson, -Plural] 'I'	(2.1v-w)
[-1stPerson, +Plural] 'you plural'	(1.4g)
[-1stPerson, -Plural] 'you singular'	(1.19a)
[-Person, +Plural] 'they'	(1.15c)
[-Person, -Plural] 'he, she'	(2.1s-t)
[+Pronoun, -Human, +Plural] 'they'	(1.6h)
[+Pronoun, -Human, -Plural] 'it'	(1.3a)
[+Pronoun, +Multiple, +Plural] 'they'	(1.3c)
[+Pronoun, +Multiple, -Plural] 'it, they'	(1.11f)
[+Pronoun, -Multiple, -Animate] 'it'	(1.14a-b-c)

2.1.6. Another syntactic feature for Nouns is SgSuffix. Consider the following examples:

(2.1bb)

'a-ʂu:ŋ^{w}	'his-daughter'
'a-ʂu:ŋa-i	'his-daughter-Accusative'
'a-hi:ntu'a'	'his-wife'
'a-hi:ntua'-ç-i	'his-wife-Singular-Accusative'

These examples illustrate the fact that some possessed Nouns, that is, Nouns having the feature +[NomP__], have a Singular suffix added before a case ending, while others have the case ending added directly to the Noun (4.3). Rule (2.1cc) specifies this.

(2.1cc) +[NomP__] → ±SgSuffix

The Nouns of (2.1bb) will be listed in the lexicon as:

(2.1dd) #ʂu:ɳa# [±Plural, +Human, -SgSuffix, ...] 'man's daughter'

#hí:nV+tu'a# [±Plural, +Human, +SgSuffix, ...] 'wife'

2.1.7. Some non-possessed Nouns take the absolutive suffix ta#. This is identical in form to the singular suffix ta# but behaves quite differently. The absolutive suffix and the singular suffix do not cooccur, and the absolutive suffix can occur before the plural suffix mɨ# and before adverbial suffixes, in which positions the singular suffix cannot occur. Compare the following examples. (The corresponding possessed forms are included to demonstrate that ta# Absolutive is not part of the Noun #paqə́:+#.)

(2.1ee)

paqɨ:-t	'shirt'	nɨ-pa:qɨ'	'my shirt'
paqɨ:-ta-m	'shirts'	nɨ-pa:qɨ-m	'my shirts'
paqɨ:-ta-b	'on the shirt'	nɨ-pa:q-p	'on my shirt'
qaik^{w}-t	'rope'	nɨ-qaik^{w}	'my rope'
qaik^{w}u-m	'ropes'	nɨ-qaik^{w}u-m	'my ropes'
qaik^{w}-p	'on the rope'	nɨ-qaik^{w}-p	'on my rope'

The difference in the behavior of #paqə́:+# and #qahíku+# is accounted for by

(2.1ff) -Pronoun → ±Absolutive

which allows the following lexical specification for these two Nouns:

(2.1gg) #paqə́:+# [±Multiple, +Plural, +Absolutive, +SgSuffix, ...] 'shirt'
#qahíku+# [±Multiple, +Plural, -Absolutive, +SgSuffix, ...] 'rope'

2.1.8. Nominalizing suffixes are subcategorized with respect to whether their syntactic features must agree with those of the subject (1.2.3) of the embedded Sentence.

(2.1hh) +[#S#__] → ±Agree w/subject

See sections 3.2.3-4 for transformations and examples.

2.1.9. The features [+Location] and [+Direction] must be distinguished for a number of Nouns. The Direction suffix yəqá# is reduced to ká# after [+Location] Nouns (T6.17d). Examples of [+Location] Nouns are:

(2.1ii) #tukúhpa# 'up, sky'
#təhəbu# 'down, ground'
#yəhəbu# 'outside'

Other reductions with adverbial suffixes involve [+Direction] Nouns, an example of which is that the Direction suffix yəqá# is optionally deleted after [+Direction] Nouns (T6.17b). Examples of [+Direction] Nouns are:

(2.1jj) #k^{w}i:mVkə# 'north' #pəya:na# 'far'
#ṣəbənə# 'south' #waračа# 'low desert, Imperial Valley'
#təmənəmə# 'west'

The word for 'east', #'a+pu:#, has been observed only with the Direction suffix: ['apu:yka'] 'to the east', and consequently the word is not classified as [+Direction].

2.1.10. A few Nouns, as well as some Verbs, are marked as [+Reduce]. These lose their final syllable in certain contexts (T6.23a). Examples are:

(2.1kk) #kákə# 'paternal grandrelative' #pọhóga# 'road'
#ná'ana# 'father' #yə́ka# 'mother'

2.2. D → CS (< 1.19, 1.21)

2.2.1. The category Determiner (D) is introduced in the PS rules rewriting NumP (1.19) and DP (1.21). Thus, Determiners are strictly subcategorized with respect to the following contextual features:

(2.2a) [__NumP] (1.19a)

[__] (1.21a)

[D__] (1.21b)

[PreD__] (1.21c)

[PreD⌢D__] (1.21d)

[__D] (1.21b)

[PreD__D] (1.21d)

2.2.2. Determiners which have the selectional feature -[__[+Person]], that is, Determiners preceding other than Noun-Phrases whose Noun heads are first or second person Pronouns, are subcategorized as follows:

(2.2b) $\begin{bmatrix} +D \\ -[\_\_[+Person]] \end{bmatrix} \rightarrow$ ±Determinate

(2.2c) +Determinate → ±Proximate

2.2.3. All Determiners have various features filled in transformationally such that they agree in certain respects with the Noun heads of the Noun-Phrases they precede. Those having the selectional feature +[__[+Person]] have the appropriate features regarding person and number filled in; the other Determiners have the appropriate signs for the features Plural, Animate, and Human filled in (3.1.9).

2.3. PreD → CS (< 1.21)

2.3.1. The category Pre-Determiner (PreD) is introduced in the PS rule rewriting DP (1.21). Thus, Pre-Determiners are strictly subcategorized with respect to the following contextual features:

(2.3a) [__D] (1.21c)

[__D⌢D] (1.21d)

2.3.2. The following two Pre-Determiners have been identified.

(2.3b) #ta# [+PreD, +[__D], ...; +Ev, ...] Dubitative

#tumV# [+PreD, +[__D(D)], ...] 'some' (?)

#ta# seems to be identical with the Dubitative Evidential (1.4, 2.6.3) inasmuch as it appears before the Indeterminate Determiner, which is identical in at least one of its forms (#ha#) with the Inferential Evidential #ha# (2.6.3). Compare (1.4ℓ) and (1.21c). The meaning of #tumV# is difficult to identify; it sometimes seems translatable as 'some-', as in 'something', or 'somewhere', which meaning seems already to be given by the Indefinite Determiner, which it precedes; see (1.21b-d).

2.4. Intens → CS (< 1.6, 1.17)

2.4.1. The category Intensifier (Intens) is introduced in the PS rules rewriting Pred (1.6) and Nom (1.17). Thus, Intensifiers are strictly subcategorized with respect to the following contextual features:

(2.4a)

[__AdjP]	(1.6d)
[__VblP]	(1.6h)
[__Manner^VblP]	(1.6j)
[...TS__AdjP]	(1.6f)
[...TS__VblP]	(1.6ℓ)
[...TS__Manner^VblP]	(1.6m)
[__NP]	(1.17c)
[__DP^NP]	(1.17d)

2.4.2. The following are examples of Intensifiers, together with their positively specified contextual features.

(2.4b) #číkVtV# [+Intens, +[__(DP)NP], ...] 'all, only'

#hakup# [+Intens, +[(...TS)__AdjP], +[(...TS)__(Manner)VblP], +[__NP], ...] 'very'

#ki+ti:# [+Intens, +[(...TS)__AdjP], +[__VblP], +[__NP], ...] 'a little'

#mǫčə# [+Intens, +[(...TS)__(Manner)VblP], ...] 'again, any more'

#pata# [+Intens, +[__AdjP], +[__VblP], +[__NP], ...] 'such a, quite'

#puyu:# [+Intens, +[(...TS)__AdjP], +[(...TS)__(Manner)VblP], +[__(DP)NP], ...] 'all'

2.5. Asp → CS (< 1.3)

2.5.1. The category Aspect (Asp) is introduced in the PS rule rewriting Aux (1.3). Thus, the contextual feature +[__EvP] is common to all members of this category, and consequently will not be overtly specified in the list of features for any Aspect.

2.5.2. The Aspects are either suffixes attached to the Verb stem or else modifications of the Verb stem. There are six members of this category: Future, Going-to, Perfective, Completive, Imperative, and Unmarked.

2.5.3. As there are six members of this category, it is possible to subcategorize Aspect with respect to three syntactic features: A, B, and C. So far, no appropriate labels for these features have come to mind, so for the meantime, these arbitrary labels will be used.

(2.5a) +Asp → $\begin{bmatrix} \pm A \\ \pm B \end{bmatrix}$

(2.5b) +B → ±C

Rules (2.5a-b) subcategorize the Aspects, which are listed in (2.5c). Note that both Imperative and Future are selectionally restricted from cooccurring with the Past formative of the Evidential-Phrase.

(2.5c) ib# [+A, +C, -[__[...Past...]], ...] Future
[+A, -C, ...] Perfective
[+A, -B, -[__[...Past...]], ...] Imperative
gá# [-A, +C, ...] Going-to
i+# [-A, -C, ...] Completive
[-A, -B, ...] Unmarked

Aspects with the feature [+A] seem to have to do with events somewhat less immediate than those with [-A]; [+B] indicates the removal in time away from the point of common focus (as indicated by Evidential-Phrase material), while [-B] covers both events yet to happen, [+C], and events that happened prior to the point of common focus, [-C].

2.5.4. The Future is marked by the suffix ib#. Examples with this Aspect are: (0.3b), (1.3b), (1.4k), (1.4n), (1.7b), (1.14b), (1.15a-b).

2.5.5. The Perfective is marked by modifying the Verb stem in a variety of ways. Compare the following Perfective and Unmarked forms (where [i] found at the end of some Unmarked forms represents yə# Accusative case (1.11.1)):

(2.5d)

Perfective		Unmarked	
mɨmɨ'	'dead'	mɨmɨ'q	'die'
mɨɲɨ'	'swallowed'	mɨɲɨ'kin	'swallow'
rara:k^{w}	'having eaten'	ra:k^{w}	'eat (intr)'
tutuh^{w}tu'	'having danced'	tuh^{w}tu'	'dance'
q^{w}ǫ:q^{w}ǫ'	'dead, pl subj'	q^{w}ǫ'a-i	'die, pl subj'
mu:m	'having shot'	mu-i	'shoot'
ñi:ñ	'having done'	ñiha-i	'do'
čičɨ:kɨn	'having poked'	čikɨ:n	'poke'
k^{w}uk^{w}u:m	'gone to sleep'	k^{w}u:man	'sleep'

The reduplication marking the Perfective, as in several examples in (2.5d), should not be confused with the reduplications marking different Frequentatives (2.14). Reduplicative Frequentatives and the Perfective cannot cooccur (2.14.4).

2.5.6. The Imperative usually involves a modification of the end of the Verb stem, but quite often the Unmarked form of the Verb stem is not phonetically distinct from the Imperative form. Compare the following:

(2.5e) Imperative Unmarked

čia'	či'a-i	'pick up'
pia:'	pi:'	'throw'
wir	wiha-i	'put'
čaw	čawe-i	'gather'
ñia	ñiha-i	'do'
'ɨi	'ɨyɨ-i	'steal'
čurupk	čurupkin	'put in'
tɨ:'	tɨ:'	'roast'
mu:m	mu:m	'shoot multiple object'
yarukab	yarukab	'keep on cleaning'

Other examples involving the Imperative are (1.4b), (1.4d).

2.5.7. The Going-to Aspect seems to mark an assertion about a coming event. It is marked with the suffix gá#. Examples with this Aspect are: (1.3c), (1.4f), (1.11b), (1.12b), (1.14a).

2.5.8. The Completive marks an event as terminated before the point of common focus. It is marked by the suffix i+#. The following two examples show the contrast between Completive and Perfective:

(2.5f) 'ubia k^{w}u:man-i-t.

ALREADY SLEEP-COMPLETIVE-SINGULAR

'He already slept.'

(2.5g) 'añi:'či' 'ubia $k^{w}uk^{w}u:m$.

BABY ALREADY SLEEP-PERFECTIVE

'The baby has already gone to sleep.'

2.5.9. The Unmarked Aspect is, as its name is intended to suggest, the zero form, as in (1.3a) and in many other examples throughout. It is necessary to recognize this as a phonologically (and semantically?) zero member of this category, rather than as simply the absence of any Aspect, because of the nature of the selectional rules for the Evidentials (2.6), which are restricted as regards the sign for the Aspect features A and B, which serve to differentiate this Aspect.

2.6. Ev → CS (< 1.4)

2.6.1. The category Evidential (Ev) is introduced in the PS rule rewriting EvP (1.4). Thus, Evidentials are strictly subcategorized with respect to the following contextual features:

(2.6a) [__] (1.4k)

[#ta# __] (1.4ℓ)

[Ev__] (1.4m)

[Ev^#ta# __] (1.4n)

[__ Past]	(1.4o)
[#ta# __ Past]	(1.4p)
[Ev__ Past]	(1.4q)
[Ev^#ta# __ Past]	(1.4s)
[__Ev]	(1.4m)
[__ #ta#^Ev]	(1.4n)
[__Ev^Past]	(1.4q)
[__ #ta#^Ev^Past]	(1.4s)
[__ ?]	(1.4d)
*[#ta# __ ?]	
[Ev__ ?]	(1.4j)
*[Ev^#ta# __ ?]	
[__ Past^?]	(1.4e-h-i)
*[#ta# __ Past^?]	
[Ev__ Past^?]	(1.4r)
*[Ev^#ta# __ Past^?]	
[__Ev^?]	(1.4j)
*[__ #ta#^Ev^?]	
[__Ev^Past^?]	(1.4r)
*[__ #ta#^Ev^Past^?]	

There are no Evidentials positively specified for the contextual features preceded by asterisks (*) in (2.6a), such that the Dubitative #ta# in Questions is always lexically introduced; see 2.6.3.

2.6.2. Evidentials are selectionally restricted with respect to Aspect features (2.5). Also, the Volitative Evidential #na'a# seems to be restricted to cooccurring with first person plural subject.

2.6.3. The following is a list of the Evidentials so far identified, specified as fully as can be done at this time. (See 4.32 for the feature M.)

(2.6b) [+Ev, +[__(Past)], -[[Future]__], -M, ...] Direct

#ha# [+Ev, +[(Ev)#ta# __(Past)], -[[Imperative]... __], +M, ...] Inferential (Inf)

#k^{w}ə'ə# [+Ev, +[(Ev)(#ta#)__(?)], -[[-A]...__], -[[+B]...__], -M, ...] Potential 'can'

#k^{w}ənə# [+Ev, +[(Ev)(#ta#)__(Past)], -[[Imperative] ...__], +M, ...] Quotative (Quot)

#may# ~ #miha:# [+Ev, +[__(#ta#)(Ev)(Past)], -[[Future]__], -M, ...; +[__Ev], -M, ...] 'may'

#na'a# [+Ev, +[__], -[[+A]__], -[[+B]__], -[[-Animate] or [-Plural] or [-Human] or [-Pronoun] or [-Person] or [-1stPerson]⌢PredP⌢Asp__], -M, ...] Volitative

#pata# [+Ev, +[__(#ta#⌢Ev (Past))], +M, ...; +Intens, ...] Intensive

#qáy# [+Ev, +[__(#ta#)(Ev)(Past)], -[[Future]__], -M, ...; +[__Ev(Past)(?)], -M, ...] 'not'

#ta# [+Ev, +[(Ev)__(Past)?], -[[Imperative]...__], +M, ...; +[(Ev)__], -[[-A]...__], -[[-B]...__], -[[-C]...__], +M, ...; +PreD, ...] Dubitative (Dub)

Thus, #k^{w}ə'ə# Potential is selectionally restricted to cooccurring with Imperative Aspect, #na'a# Volitative with the Unmarked Aspect (2.5.3). #ta# Dubitative occurs only together with Future, or in Questions. #ta# Dubitative is also a Pre-Determiner (2.3.2) and #pata# Intensive is also an Intensifier (2.4b). #may# 'may' and #qa̋y# 'not' cooccur with Future only when positively specified for features involving [__Ev...]. The only Evidential that can cooccur with the Future Aspect without #ta# Dubitative, other than #ta# itself, is #k^{w}ənə# Quotative, as in (2.6c).

(2.6c) pɨmia' k^{w}ɨnɨ-č qaçib.
WITH-HIM QUOT-WE DWELL-FUTURE
'We would live with him (so we were told)'.

2.7. Interjection → CS (< 1.1)

2.7.1. The category Interjection is introduced in the first PS rule rewriting S (1.1). Thus, all Interjections are characterized by the contextual feature +[__]. Because this feature is common to all members of this category, it

will not be overtly specified in the list of features for any Interjection.

2.7.2. The following is a sample list of Interjections.

(2.7a) #'eya'# [+Interjection, ...] 'hey!'
#hami(:)na+ta# [+Interjection, ...] 'hello'
#ha:h# [+Interjection, ...] 'yeah, oh'
#now# [+Interjection, ...] 'no'
#wa+rə'# [+Interjection, ...; +Adv_S, ...] 'yes, indeed'

Note that #wa+rə'# is a member of the category Sentence Adverb (Adv_S) in addition to Interjection.

2.8. Conj → CS (< 1.1, 1.5, 1.16)

2.8.1. The category Conjunction (Conj) is introduced in the PS rules rewriting S (1.1), PredP (1.5), and NomP (1.16). Thus, Conjunctions are strictly subcategorized with respect to the following contextual features:

(2.8a) [...S#__S#...] (1.1a-b-c)
[...Pred__Pred...] (1.5b)
[...Nom__Nom...] (1.1d), (1.16c)

Because only Conjunctions have any positively specified contextual features of those listed in (2.8a), it is unnecessary to include the notation +Conj in the list of features for any Conjunction.

2.8.2. The following is a list of the Conjunctions so far identified.

(2.8b) #'ami'# [+[...S#__S#...], +[...Pred__Pred...], +[...Nom__Nom...], ...] 'and'

#'ani:# [+[...S#__S#...], +[...Pred__Pred...], ...; $+Adv_{TS}$, ...] 'and, and then, then'

#'ayahə́+# [+[...S#__S#...], +[...Pred__Pred...], ...; $+Adv_{S}$, ...] 'and then, then, because'

#ha:# [+[...S#__S#...], ...] 'or'

#yáŋaqə# [+[...S#__S#...], ...; $+Adv_{S}$, ...] 'but'

Note that #'ani:#, #'ayahə́+#, and #yáŋaqə# are members of other lexical categories in addition to Conjunction.

2.9. Num → CS (< 1.19)

2.9.1. The category Numeral (Num) is introduced in the PS rule rewriting NumP (1.19). Thus, Numerals are strictly subcategorized with respect to the following contextual features:

(2.9a)	[__]	(1.19b), (1.20a)
	[D__]	(1.19a)
	[PreNum__]	(1.19c), (1.20a)

2.9.2. Numerals are selectionally restricted with respect to multiplicity of subject, such that, for example, #həhúkup# 'one', when having the contextual feature +[__], cannot cooccur with [+Multiple] subjects, or #wǫh# 'two' with a [-Multiple] subject.

(The features [NomP[Nom...Nom]^PredP[...__...]] and [NomP[...[+Multiple]]^PredP[...__...]] are together referred to by the graphically simpler label [+Multiple] subject; the feature [NomP[Nom[...[-Multiple]]]^PredP[...__...]] is referred to as [-Multiple] subject.)

2.9.3. The following is a list, in "numerical" order, of the first four Serrano Numerals and also the indefinite Numeral iñiki#.

(2.9b) #həhúkup# [+Num, +[PreNum__], -[-Multiple] subject, ...; +[__], -[+Multiple] subject, ...] 'one'

#wǫh# [+Num, +[(PreNum)__], -[-Multiple] subject, ...] 'two'

#pa:+hi'# [+Num, +[(PreNum)__], -[-Multiple] subject, ...] 'three'

#wačah# [+Num, +[(PreNum)__], -[-Multiple] subject, ...] 'four'

iñikí# [+Num, +[D__], ...] 'how many, how much'

2.9.4. The words for 'hundred', #'a+hǫ́n'ka'# (Sarah Martin), #sye:ntú# (Louie Marcus), are not Numerals but Nouns (2.1), as demonstrated by the fact that Numerals preceding them are simple, that is, not in a Pre-Numeral (1.20) form.

(2.9c) houk^{w}p sie:ntu' (Louie Marcus)
'one hundred'

(2.9d) wǫh^{w} 'ah+ɲ'ka' (Sarah Martin)
'two hundred'

2.9.5. Whether the word for 'half', ['i:hk^{w}p], should be classified as a Numeral is unclear for lack of convincing examples. Whether fractions other than 'half' can be expressed in Serrano is unknown.

2.10. Ben → CS (< 1.15)

2.10.1. The category Benefactive (Ben) is introduced in the PS rule rewriting BenP (1.15). Thus, Benefactives are strictly subcategorized with respect to the following contextual features:

(2.10a) [NomP__] (1.15a-b)

[NomP__Ben] (1.15c)

"[NomP ⌢ Ben__] (1.15c)

2.10.2. There is no apparent meaning difference between the two members of this lexical category. The two Benefactives are strictly subcategorized as follows:

(2.10b) <u>ičuna#</u> [+Ben, +[NomP(Ben)__], ...] Benefactive suffix

<u>yəqá#</u> [+Ben, +[NomP__(Ben)], ...; $+Adv_{TS}$, ...] Direction suffix: 'for, to, toward'

The Benefactive suffix, <u>ičuna#</u>, is transformationally reordered to appear after the Verb-Phrase (3.1.4). The Direction suffix, <u>yəqá#</u>, is both a Benefactive and an Adverb of time-space (2.12).

2.11. $Adv_S \rightarrow CS$ (< 1.7)

2.11.1. The category Sentence Adverb (Adv_S) is introduced in the PS rule rewriting Adv (1.7). Thus, Sentence Adverbs are strictly subcategorized with respect to the following contextual features:

(2.11a) [__] (1.7a)

[__Adv$_{TS}$^#S#] (1.7b)

2.11.2. The following are examples of Sentence Adverbs, together with their positively specified contextual features.

(2.11b) #'ayahə́+# [+Adv$_S$, +[__(Adv$_{TS}$^#S#)], ...; +Conj, ...] 'because, then, and then'

#mí+tVkina# [+Adv$_S$, +[__], ...] 'it seems like'

#pəbey# [+Adv$_S$, +[__Adv$_{TS}$^#S#], ...] 'if'

#wa+ha'# [+Adv$_S$, +[__], ...] 'also, too'

#wa+rə'# [+Adv$_S$, +[__], ...; +Interjection, ...] 'indeed, yes'

#ya'aki'# [+Adv$_S$, +[__], ...] (echo question)

2.12. Adv$_{TS}$ → CS (< 1.7, 1.8, 1.20)

2.12.1. The category Adverb of time-space (Adv$_{TS}$) is introduced in the PS rules rewriting Adv (1.7), TS (1.8), and PreNum (1.20). Thus, Adverbs of time-space are strictly subcategorized with respect to the following contextual features.

(2.12a) [Adv$_S$__#S#] (1.7b)

[__] (1.8c)

[NomP__] (1.8d)

[NomP⌢yə# __] (1.8e)

[NumP__] (1.8f), (1.20a)

[#S#__] (1.8g)

2.12.2. Sample Adverbs of time-space are listed below.

(2.12b) #'áhku# [+Adv$_{TS}$, +[__], ...] 'here'

#'amahí+# [+Adv$_{TS}$, +[__], ...; +N, ...] 'now, present time; new one'

#'ibina# [+Adv$_{TS}$, +[__], ...] 'yesterday, in the recent past'

#'uba:'íma# [+Adv$_{TS}$, +[__], ...] 'in the morning, tomorrow'

#bV# [+Adv$_{TS}$, +[NomP__], -[[+Animate]__], ...] 'on'

i((ha):)# [+Adv$_{TS}$, +[NomP__], +[NumP__], -[[+Animate]__], ...] 'time(s)'

miha'a# [+Adv$_{TS}$, +[NomP(yə#)__], ...] 'together with'

nu'u# [+Adv$_{TS}$, +[NomP__], +[NumP__], ...] 'from'

pa(́)# [+Adv$_{TS}$, +[Adv$_{S}$__#S#], +[NomP__], +[NumP__], ...] Location suffix: 'at, in, on'

pa'anV# [+Adv$_{TS}$, +[NomP__], -[[-Pronoun]__], -[(Intens)NP__], -[[+Determinate]__], ...]

Time suffix: 'when'

wV# [+Adv$_{TS}$, +[#S#__], ...] 'when, while...-ing'

yəqá# [+Adv$_{TS}$, +[NomP__], +[NumP__], ...; +Ben, ...] Direction suffix: for, to, toward, against'

2.13. Adv$_{manner}$ → CS (< 1.9)

2.13.1. The category Adverb of manner (Adv$_{manner}$) is introduced in the PS rule rewriting Manner (1.9). Thus, Adverbs of manner are strictly subcategorized with respect to the following contextual features:

(2.13a) [__] (1.9a)

[NomP__] (1.9b)

[AdjP__] (1.9c)

[#S#__] (1.9d)

2.13.2. Sample Adverbs of manner are listed below.

(2.13b) #'əna:çə# [+Adv$_{manner}$, +[__], ...] 'nicely'

#hamina# [+Adv$_{manner}$, +[__], -Determinate, ...] 'how'

ikə́# [+Adv$_{manner}$, +[AdjP__], ...] '-ly'

nqV# [+Adv$_{manner}$, +[#S#__], ...] 'so doing'

nə# [+Adv$_{manner}$, +[NomP__], -[[+Animate]__], ...]
Instrumental case: 'with, using'

#wǫ+hạna# [+Adv$_{manner}$, +[NomP__], -[[-Animate]__], ...] 'both, together with'

"..." [+Adv$_{manner}$, +[...#S#__], ...] '"..."'

2.13.4. The last Adverb of manner listed above deserves special comment. Direct quotations in Serrano, as in (2.13c), are Manner adverbials. This is demonstrated by

(2.13c) "pa:kihac 'ani bɨ q^{w}ǫ:ɳ" qɨi k^{w}ɨn.
HAWK AND HE-THEM KILL SAY QUOT
'"It was the Hawk, and he killed them," he said.'

the question form, which is not 'What did he say?' as in English, but, literally, 'How did he say-it?' as in (2.13d).

(2.13d) Adv$_{manner}$[hamin] tabɨ' qɨi.
HOW DUB-HE-PAST SAY
'What did he say (verbatim: How did he say [it])?'

Indirect quotations, on the other hand, are independent Sentences, involving the Quotative Evidential. (2.13e) involves an indirect quotation within a direct quotation. (2.13f-g-h-i-j) represent the deep structure of (2.13e).

(2.13e) ...'ani k^{w}ɨn qɨi "ama' mi:ŋaht qɨi. k^{w}ɨnɨmɨnɨ

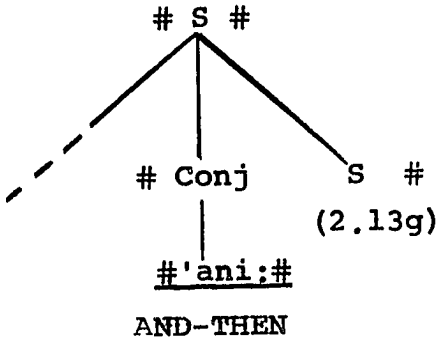
AND-THEN QUOT SAY THE GOPHER SAY QUOT-PLU-

ç tabib ki:č 'atiɨ'ab."

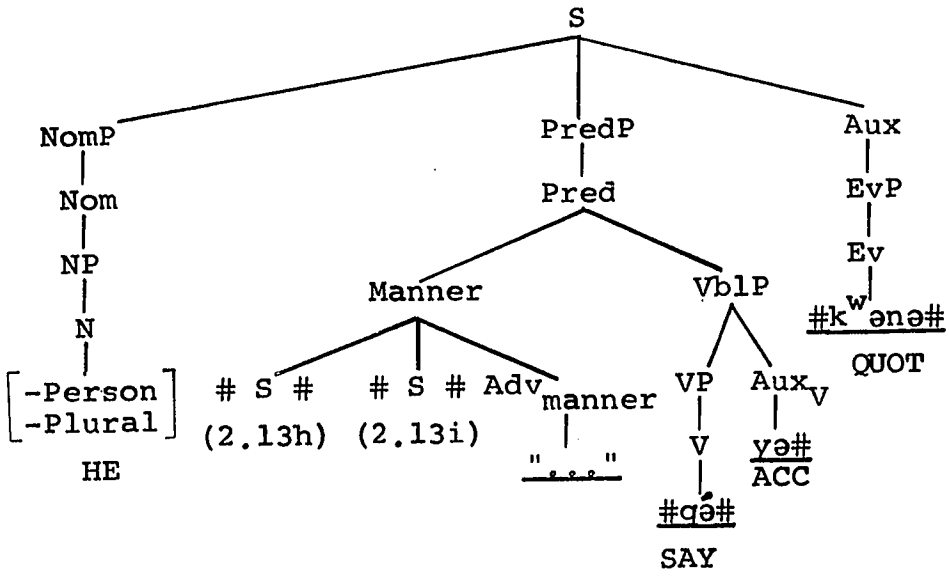
RAL-ME YOU PUT-FUTURE IN-THE-BIG-HOUSE

'...and then he said, "The Gopher said that you should put me in the Big House." (verbatim: ...and then he said, "The Gopher said [it]. You plural should put me in the Big House, it is said.")'

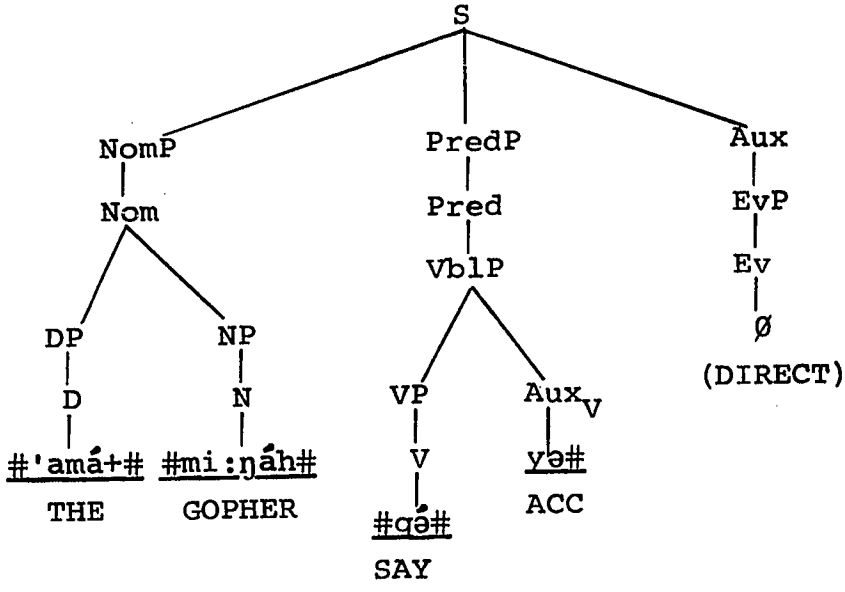
(2.13f)



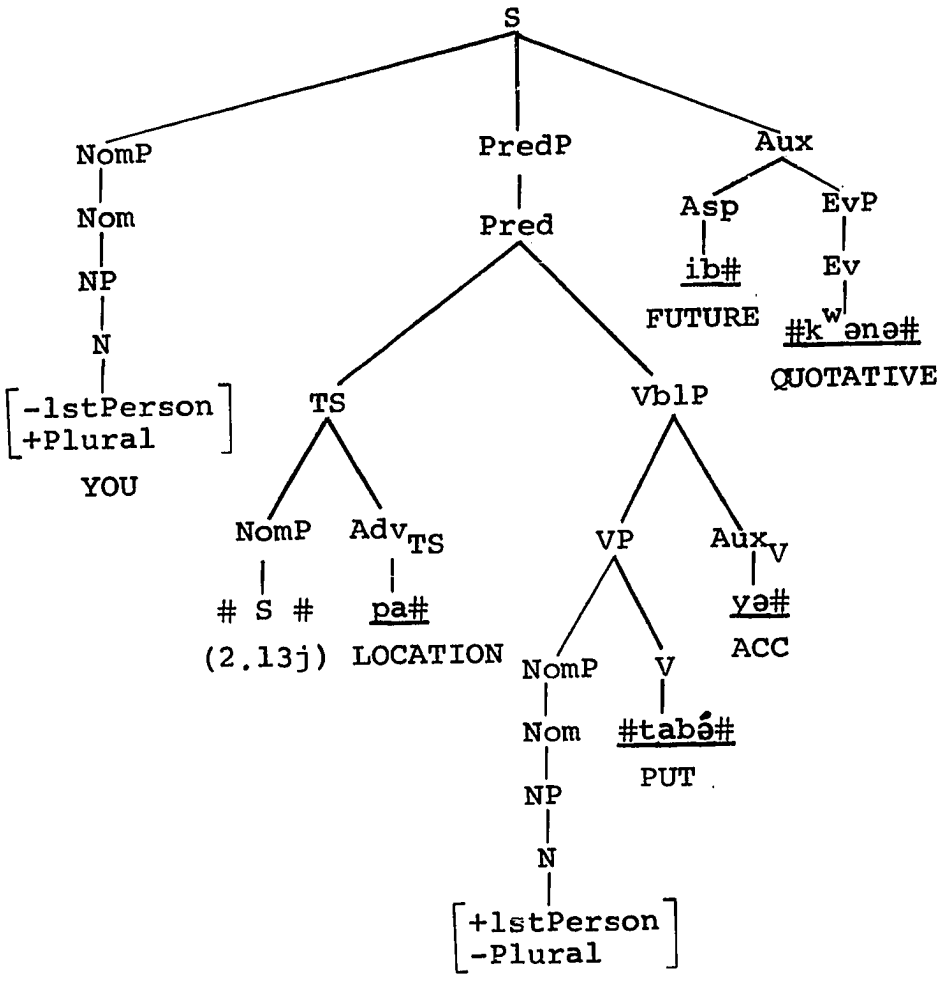
(2.13g)



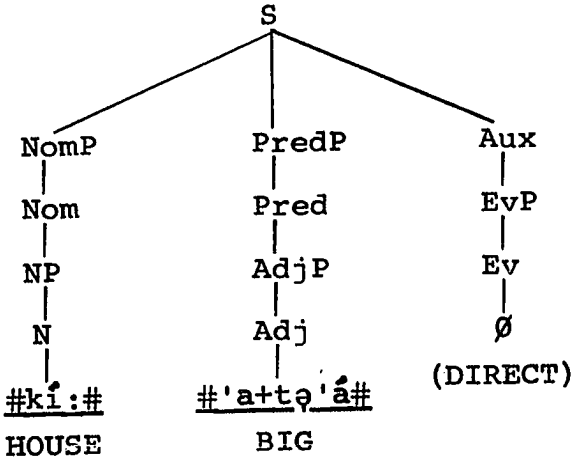
(2.13h)



(2.13i)



(2.13j)



2.14. Freq → CS (< 1.11)

2.14.1. The category Frequentative (Freq) is introduced in the PS rule rewriting Aux_V (1.11). Thus, Frequentatives should be strictly subcategorized with respect to the contextual features of (2.14a), but the occurrence of dif-

(2.14a) [__ yə#] (1.11f)

[__ çu'a#^yə#] (1.11g)

ferent Frequentatives has not been observed to have any dependency on the presence or absence of çu'a#, the Motion suffix, and so all Frequentatives are seen as having the same strict subcategorization specification, +[__(çu'a#) yə#]. This being the same for all Frequentatives, it is not overtly specified in the list of features for any Frequentative.

2.14.2. Frequentatives express chiefly the ideas of iteration and distribution in time or space. The differences among the various Frequentatives remain somewhat unclear, so it is assumed that, except where noted otherwise, there are as many lexically distinct Frequentatives as there are distinct phonological devices to realize them.

2.14.3. Most Frequentatives involve reduplication of part or all of the Verb, and all are transformationally reordered to precede the Verb.

2.14.4. The one Frequentative that does not involve reduplication is aba#, indicating iterative action or action distributed among multiple object, one at a time. This is the only Frequentative positively specified for the selectional feature [#S#^V__]; all other Frequentatives are negatively specified for this feature. The only Verb that can appear in #S#__ is the Causative suffix ina# (see 2.15.6). aba# suppletes not only ina# but also the Punctual suffix from the embedded Sentence which may precede ina#, as in the following examples.

(2.14b) ŋɨrɨr-qɨ-i bɨ'.
MOVE-PUNCT-ACC IT-PAST
'It moved.'

(2.14c) S[ŋɨrɨr-k-] V[-ina-] -i bɨ'.
MOVE-PUNCTUAL CAUSATIVE ACC HE-PAST
'He moved it.'

(2.14d) S[ŋɨrɨr-] V[-Ø-] Freq[-aba-] -i bɨ'.
MOVE ITERATIVE ACC HE-PAST
'He kept moving it.'

When the Verb of the embedded Sentence is of the shape #CVCV#, the form mV# is transformationally substituted for aba#, and the Verb ina# is not deleted, as in the following examples.

(2.14e) S[nɨb-k-] V[-ina-] -i mɨ.
BURY-PUNCTUAL CAUSATIVE ACC THEY-THEM
'They buried them.'

(2.14f) S[nɨbɨ-] Freq[-m-] V[-ina-] -i nɨ.
BURY ITERATIVE CAUSATIVE ACC I-THEM
'I was burying them (one at a time).'

2.14.5. Reduplicative Frequentatives and Perfective Aspect (2.5.5) do not cooccur. Thus the syntactic redundancy rule (2.14g).

(2.14g) -[#S#^V__] → -[__...[+A,-C]]

This observation makes clear the analysis of certain problem Verbs which appear always to be reduplicated. An example is #tuhtu'a# 'dance', the Perfective form of which is [tutuh^{w}tu'] (cited in (2.5d)). This demonstrates that the underlying form of 'dance' is indeed #tuhtu'a# and not *#tu'a#, which would be lexically restricted to cooccurring

with the Frequentative prefix #CVh. See section 2.15.5, however, for the exceptional Verb 'laugh'.

2.14.6.0. The phonological specification of some reduplicative Frequentatives seems fairly straightforward.

2.14.6.1. #CV+ reduplication indicates duration or distribution.

(2.14h) hihi n.
'I see it (durative).'
cp. tan hi:b.
'I'll see it (punctual).'

(2.14i) yaya'.
'He's running around.'
cp. ya'i.
'He runs.'

2.14.6.2. #CV́: reduplication indicates iteration or duration.

(2.14j) pi:bi'ai nɨ'.
'I was throwing things; I was hitting him with thrown objects.'

cp. pi:'ai nɨ'.

'I threw it (once); I hit him (once) with a thrown object.'

(2.14k) qa:qaqq.

'It's croaking.'

cp. qa:qq.

'It croaked (once).'

2.14.6.3. #CV̌h reduplication indicates iteration or repetition. The addition of this prefix makes the Verb become short.

(2.14ℓ) pihpč 'be arriving' cp. pičɨ-i 'arrive'

čahčçu' 'be singing' cp. ča:çu' 'sing'

2.4.7. Other Frequentatives are more difficult to state in neat formulas. One pattern involves the duplication of the Verb.

(2.14m) ya'ya'i n.

'I'm running around.'

cp. ya'i n.

'I run, am running.'

(2.14n) $h^{w}ą:ṇh^{w}ąṇq.$ 'He's jumping.'

cp. $h^{w}ą:ṇq.$ 'He jumped (once).'

(2.14o) tikaltikalq. 'Lightning flashes (repetitive).'

cp. tikalq. 'Lightning flashed (once).'

Another pattern of duplication involves some reduction in the length of the Verb.

(2.14p) $h^{w}ąčh^{w}ąčq$ 'be climbing around'

cp. $h^{w}ą:čq$ 'climb (punctual)'

(2.14q) čǫṇ'čǫṇ'q 'stand up (repetitive)'

cp. čǫṇu'q 'stand up (punctual)'

An Intensive form involves the reduplication of the initial CVC with added length.

(2.14r) ma:nmana'qçu'ai čɨmɨ'.

'We (finally!) came back.'

cp. mana'qçu'ai čɨmɨ'.

'We came back.'

(2.14s) $xa:l^{y}xal^{y}a'.$ 'He (really) tickled her.'

cp. $xal^{y}a'.$ 'He tickled her.'

2.15. V → CS (< 1.12, 1.13)

2.15.1. The category Verb (V) is introduced in the PS rules rewriting VP (1.12) and AdjP (1.13). Thus, Verbs are strictly subcategorized with respect to the following contextual features:

(2.15a)

[__]	(1.12a)
[NomP__]	(1.12b)
[NomP^NomP__]	(1.12c)
[N__]	(1.12d)
[NomP^N__]	(1.12e)
[AdjP__]	(1.12f)
*[NomP^AdjP__]	
[#S#__]	(1.12g)
[__PunctP]	(1.12h)
[NomP__PunctP]	(1.12i)
*[NomP^NomP__PunctP]	
*[N__PunctP]	
*[NomP^N__PunctP]	
[AdjP__PunctP]	(1.12j)
*[NomP^AdjP__PunctP]	
*[#S#__PunctP]	
[__Adj]	(1.13c)
[__PunctP^Adj]	(1.13d)

There are no Verbs known to be positively specified for the contextual features preceded by asterisks (*) in (2.14a).

2.15.2. Verbs are selectionally restricted as regards multiplicity of subject and object Nouns. (See 1.2.3 for "subject" and 1.12.1 for "object.") Verbs may well also be selectionally restricted as regards the features Animate and Human of subject and object Nouns, but there are no known examples where violations of constraints along these lines would have any worse consequences than tending to make Sentences difficult to construe. [±Multiple] subject are defined in section 2.9.2. Other terms are defined below.

(2.15b) [+Multiple] object:

$$[_{VP}[\left\{\begin{array}{c}\text{Nom...Nom}\\ \text{...[+Multiple]}\end{array}\right\}](\left\{\begin{array}{c}\text{N}\\ \text{AdjP}\end{array}\right\})\_\_]]$$

(2.15c) [-Multiple] object:

$$[_{VP}[_{Nom}[...[-\text{Multiple}]]](\left\{\begin{array}{c}\text{N}\\ \text{AdjP}\end{array}\right\})\_\_]]$$

(2.15d) [+Multiple] direct object:

$$[_{VP}[_{NomP}\hat{}_{NomP}[\left\{\begin{array}{c}\text{Nom...Nom}\\ \text{...[+Multiple]}\end{array}\right\}]\_\_]]$$

(2.15e) [-Multiple] direct object:

[VP[NomP^Nom[...[-Multiple]]__]]

(2.15f) [+Multiple] indirect object:

$$[VP[\left\{\begin{array}{c}\text{Nom...Nom}\\ \text{...[+Multiple]}\end{array}\right\}\ \text{NomP}\_\_]]$$

(2.15g) [-Multiple] indirect object:

[VP[Nom[...[-Multiple]]^NomP__]]

2.15.3. The Verbs 'die' and 'kill' are excellent illustrations of the fact that Verbs may be selectionally restricted with respect to [±Multiple] subject or object. These Verbs are listed in (2.15h). Note that of these four Verbs, only #məmə'# is unrestricted as to multiplicity.

(2.15h) #məmə'# [+V, +[__PunctP(Adj)], ...] 'die; be sick, hurt' (1.2c), (1.4c)

#məkana# [+V, +[NomP__], -[+Multiple] object, ...] 'kill' (1.12b)

#qǫ'a# [+V, +[__(Adj)], -[-Multiple] subject, ...] 'die; be sick, hurt' (1.4n)

#qǫ:na# [+V, +[NomP__], -[-Multiple] object, ...] 'kill' (2.13c)

2.15.4. Many Verbs which are selectionally restricted with respect to multiplicity of subject or object have phonologically similar complementary forms, as in the following list.

(2.15i) #čǫnú'u# [+V, +[__PunctP], -[+Multiple] subject, ...] 'stand, stop'

#čǫnǫ́nǫ# [+V, +[__PunctP], -[-Multiple] subject, ...] 'stand, stop'

#muhɨ# [+V, +[NomP__], -[+Multiple] object, ...] 'shoot, sting'

#mu:mə# [+V, +[NomP__], -[-Multiple] object, ...] 'shoot, sting'

#tə:'əwəna# [+V, +[NomP__], -[+Multiple] object, ...] 'count'

#tə:'əwəma# [+V, +[NomP__], -[-Multiple] object, ...] 'count'

#wisɨ́+pi# [+V, +[__PunctP], -[+Multiple] subject, ...] 'form a point' (2.1m)

#wisɨ́si# [+V, +[__PunctP], -[-Multiple] subject, ...] 'form points' (2.1n-o)

2.15.5. The Verbs 'laugh' seem to be unique in that one of these Verbs requires there to be some Frequentative, while the other is reduplicated in its underlying form,

such that however one chooses to say 'laugh' in Serrano, the Verb must appear reduplicated. There seem to be two different, but related, underlying forms for 'laugh'. These can be specified as in (2.15j).

(2.15j) #mámaqə# [+V, +[__], ...] 'laugh'
#máqə# [+V, +[__], -[+Multiple] object, -[__ [-Freq]], ...] 'laugh'

So far, no meaning differences between the two forms have been found. The following forms involving these two Verbs have been observed.

(2.15k) mamXɨi bɨ'. 'He was laughing.'
k^wɨnɨ mahmamX. 'They were laughing.'
k^wɨn mahmaq. 'He was laughing.'

[mahmamX] is #mámaqə# together with the #CV́h reduplicative Frequentative (2.14.6.3). An alternative analysis, instead of specifying #maqə#, would specify the longer form #mahmaqə#; but this would need, then, the specification of the selectional feature -[__[+Freq]].

2.15.6. The following is a sample list of Verbs:

(2.15ℓ) 'na# [+V, +[NomP^N__], -[[+Animate]__], ...]
Verbalizer (1.12e)

'na# [+V, +[AdjP__], ...] Stative verbalizer (1.12f)

#ču+ru+p# [+V, +[__PunctP], ...] 'enter' (1.12h)

(ha)p# [+V, +[AdjP__PunctP], ...] 'increase, quality becomes more intense' (1.12j)

h# [+V, +[AdjP__PunctP], ...] Stative verbalizer

#ha:ča# [+V, +[__PunctP], +[__Adj], ...] 'become sharp' (1.13c)

ina# ~ na# ~ ... [+V, +[#S#__], ...] Causative (1.12g)

#mą́qa# [+V, +[NomP^NomP__], ...] 'give' (1.12c)

#mihą́:# [+V, +[__], ...] 'go' (1.12a)

#nəbə# [+V, +[__PunctP], ...] 'become buried (2.14e-f)

#nəmə# [+V, +[__], ...] 'walk, be about' (1.2a)

#qə́# [+V, +[(NomP)__], ...] 'say' (1.4c), (2.13e)

#ra:k^{w}ə# [+V, +[__], ...; -Multiple, +[NomP__], -SgSuffix, ...] 'eat; food' (2.5d); (1.5a)

tu'a# [+V, +[N__], ...] Verbalizer (1.12d)

2.16. Adj → CS (< 1.13)

2.16.1. The category Adjective (Adj) is introduced in the PS rule rewriting AdjP (1.13). Thus, Adjectives are

strictly subcategorized with respect to the following contextual features:

(2.16a) [__] (1.13a)

[N__] (1.13b)

[V__] (1.13c)

[V^PunctP__] (1.13d)

2.16.2. Adjectives are subcategorized according to various criteria. Some Adjectives are reduplicated when they appear before certain Verbs, in particular, the Stative verbalizers 'na# and h# (2.15ℓ); other Adjectives are not reduplicated in these positions. Because the only Adjectives that are reduplicated share the contextual feature +[__], the rule can be stated in terms of that feature:

(2.16b) $\begin{bmatrix} +\text{Adj} \\ +[\_\_] \end{bmatrix} \rightarrow \pm\text{Redup}$

[+Redup] Adjectives are reduplicated according to the following patterns, depending on their underlying form. Adjectives consisting only of #CVCV# are reduplicated as in (2.16c).

(2.16c) $C_1V_1C_2V_2 \rightarrow C_1V_1C_2V_2{:}C_1V_1C_2V_2$

Longer Adjectives are reduplicated as in (2.16d).

(2.16d) $C_1V_1(:)C_2V_2(:)(C_3...) \rightarrow C_1V_1(:)C_2V_2:C_2V_2$

Illustrative examples, with the Stative verbalizing suffix 'na#, are:

(2.16e) Adj['ɨčɨ:-] V[-'na-] -i n.
COLD STATIVE ACC I
'I'm cold.'

(2.16f) Adj[yɨ'a:yɨ'a-] V[-'n] k^wɨn waha'.
BEAUTIFUL STATIVE QUOT ALSO
'It was beautiful too.'

(2.16g) Adj[yaru:ru-] V[-'na-] -i mɨ'.
CLEAN STATIVE ACC THEY-PAST
'They were clean.'

2.16.3. Some Adjectives have the selectional feature -[__[-V]], that is, they appear nowhere but in the context of a verbalizing suffix. Examples are:

(2.16h) #ra'u# [-Redup, -[__[-V]], ...] 'green, blue'

#ṣə+ri:# [+Redup, -[__[-V]], ...] 'red'

#ya+ruk# [+Redup, -[__[-V]], ...; +V, +[__PunctP], ...] 'clean; become clean' (2.16g)

#yə'a# [+Redup, -[__[-V]], ...] 'beautiful, pretty' (2.16f)

2.16.4. One Adjective is phonologically discontinuous, consisting of both a prefix and a suffix:

(2.16i) #'a+...í# [+Adj, +[V(PunctP)__], ...] Adjectivalizer (1.13d)

The prefix portion is transformationally reordered to precede the Verb. Examples of Verbs adjectivalized with this Adjective are:

(2.16j) ['amɨm'ki'] 'dead', as in (1.13d)
(< #məmə'# (2.15h))

['aq^{w}ǫ'i'] 'dead, plural subject'
(< #qǫ́'a# (2.15h))

['ahi:ki'] 'healed, well'
(< #hi:kə# 'breathe, get well')

2.16.5. The following is a sample list of Adjectives:

(2.16k) #'a'ǻyə# [-Redup(?), -[__[+V]], ...; +N, ...]
'good' (1.4j)

#'a+tə'ǻ# [-Redup(?), ...] 'big' (1.6f), (2.13j)

#'əčə:# [-Redup, ...] 'cold' (2.16e)

#'ə̨tə:# [-Redup, ...] 'hot' (1.6e)

#čibu'# [-Redup, ...; +N, ...] 'bitter' (1.13a)

#ruma# [+Redup, -[__[-V]], ...] 'dark' (1.12f)

:'i:# [+Adj, +[N__], +[V__], ...] Adjectivalizer
(1.6e), (1.13b-c)

3. THE TRANSFORMATIONAL CYCLE

3.0. The transformations of this section are applied in a cyclic fashion: transformations of section 3.1 are applied exclusively to Phrase-markers not containing #...#; the boundaries may then be removed by the embedding transformations of section 3.2, and then the output of section 3.2 is again cycled through the transformations of section 3.1. This process continues until there is no structure to which any transformation of either 3.1 or 3.2 applies.

An attempt has been made here to be completely explicit as to how the transformations restructure Phrase-markers. This attempt has unfortunately rendered many transformations very difficult to read.

In writing transformations here, the convention has been that the material to the left of the transformational double arrow (⇒), plus any conditions stated below the transformation, represents the Structural Index or Structural Description, and the difference between the stated Structural Index and the material found to the right of the double arrow represents the Structural Change.

3.1. Agreement transformations.

3.1.1. Insertion of Genitive case and possessive prefixes in the Noun-Phrase (cf. PS rule 1.18, examples (1.18b-d).

T3.1.1. NomP ⌢ N ⇒ NomP ⌢ Gen ⌢ # ⌢ [+Pos] ⌢ N

where both NomP and N are immediately dominated by NP

The introduction of the phonological boundary symbol # is a device to guarantee that [+Pos] is word-initial. This phonological boundary # should not be confused with the syntactic boundary #.

3.1.2. Introduction of Reflexive #taqa+# 'self'.

$$\text{T3.1.2.}\quad W[X] \frown Y \frown Z[A[B \frown \begin{bmatrix} +N \\ \alpha\text{Plural} \\ \beta\text{Person} \\ \gamma\text{1stPerson} \end{bmatrix}]] \frown C \Rightarrow$$

$$W[X] \frown Y \frown \# \frown \begin{bmatrix} +Pos \\ \alpha\text{Plural} \\ \beta\text{Person} \\ \gamma\text{1stPerson} \end{bmatrix} \frown \underline{\text{Reflexive}} \frown C$$

where W = NomP and is immediately dominated by S

Z = NomP not immediately dominated by S

A = internal structure of Z

A = X

C ≠ Genitive case (Gen)

Reflexive is phonologically specified as #taqa+# in section 5.7. The following examples illustrate the use of the Reflexive #taqa+# 'self'. In (3.1.2a-b) #taqa+# is substituted for the direct object (1.12.1). It has reflexive reference in (3.1.2a) and reciprocal reference in (3.1.2b). In (3.1.2c) #taqa+# occurs in a Time-Space adverbial.

(3.1.2a) nitaqan ʔikɨn̥ wiha:n.
MYSELF-I POKE THORN-INSTRUMENTAL
'I pricked myself with a thorn.'

(3.1.2b) k^{w}ɨnɨ pɨ:taX pi:ha'n.
QUOT-THEY THEMSELVES LOVE
'They loved each other.'

(3.1.2c) k^{w}ɨnɨmɨ' pɨ·taXaika 'ɨna:ç bɨra:bɨra'n.
QUOT-THEY-PAST TO-THEMSELVES NICELY BE-TALKING
'They talked together nicely.'

3.1.3. Substitution of ukə# for the Adverb of time-space miha'a# 'with' with Reflexive.

T3.1.3. $\begin{bmatrix}+\text{Pos}\\ \alpha\text{Feature}\end{bmatrix}$ ⌢ Reflexive ⌢ miha'a# ⇒ $\begin{bmatrix}+\text{AdvPos}\\ \alpha\text{Feature}\end{bmatrix}$ ⌢ ukə#

Examples are:

(3.1.3a) pɨnuk^{w} t yei:'b.
WITH-HIMSELF DUB TAKE-FUTURE
'He'll take it with him.'

(3.1.3b) noukɨn qaç.
BY-MYSELF-I BE
'I'm all alone.'

3.1.4. Benefactive-Phrase adjustments and the destruction of the Verb-Phrase node (cf. PS rule 1.15, (1.15a-b-c)).

T3.1.4. (BenP[NomP (yəqá#) (ičuna#)]) VP[X] ⇒

(NomP (Gen⌢yəqá#)) X (ičuna#)

The Nominal-Phrase dominated by BenP in the deep structure is now immediately dominated by VblP and participates in the subject-object agreement pattern specified in 3.1.11.

3.1.5. Insertion of Genitive case in the Time-Space adverbial (cf. PS rule 1.8).

T3.1.5a. TS[X⌢[+Animate]⌢Adv$_{TS}$] ⇒

TS[X⌢[+Animate]⌢Gen⌢Adv$_{TS}$]

Later, T3.1.6, adverbial possessive prefixes are introduced within the Time-Space adverbial. For an example of animate Noun⌢Genitive case within the Time-Space adverbial, see (2.1f). Contrast this with an inanimate Noun with an Adverb of time-space suffixed directly: #qahí:#⌢yəqá# [qai:yka'] 'to the hill(s)', as in (1.17e).

T3.1.5b. TS[X⌢N⌢Adv_{TS}] ⇒ TS[X⌢N (Gen) Adv_{TS}]

The option of including the Genitive case and adverbial possessive prefix (see 3.1.6) even for [-Animate] Nouns in adverbial constructions was a great help for the informant when the morphophonemic behavior of forms was difficult to recall. Consequently, early on during field work many forms were collected involving Genitive case which were subsequently collected with the Adverb suffixed directly to the Noun, as morphophonemic behavior of the Noun was recalled. Compare the following.

(3.1.5a) qą:q^wɤ pɨnu' (elicited June 26, 1963)
SAGE-GEN FROM-IT
'from the sage bush'

(3.1.5b) qą:q^wǫnu' (elicited July 23, 1963)
'from the sage bush'

3.1.6. Insertion of adverbial possessive prefixes before Adverbs of time-space.

T3.1.6. $\left\{ \begin{matrix} \underline{yə\#} \\ \underline{Gen} \end{matrix} \right\}[+Adv_{TS}] \Rightarrow \left\{ \begin{matrix} \underline{yə\#} \\ \underline{Gen} \end{matrix} \right\} \# \frown [+AdvPos] \frown [+Adv_{TS}]$

$\underline{yə\#}$ Accusative case

$\underline{Gen}$ = Genitive case

AdvPos = Adverbial possessive prefix

$\#$ is to guarantee that [+AdvPos] is word-initial. For examples, see (1.8e) for $\underline{yə\#} \frown \# \frown [+AdvPos] \frown [+Adv_{TS}]$, and (2.1f) or (3.1.5a) for $\underline{Gen} \frown \# \frown [+AdvPos] \frown [+Adv_{TS}]$. In all three examples the shape of the adverbial possessive prefix is [pɨ-]. Note that T3.1.6 applies equally to the Benefactive $\underline{yəqá\#}$ (as in (1.15c)) inasmuch as $\underline{yəqá\#}$ is both [+Ben] and $[+Adv_{TS}]$ (see (2.10b-12b) for this specification).

3.1.7. Genitive case in Manner adverbials (cf. PS rule 1.9).

T3.1.7a. $Manner[X \frown [+Animate] \frown Adv_{manner}] \Rightarrow$

$Manner[X \frown [+Animate] \frown \underline{Gen} \frown Adv_{manner}]$

The only Adverb of manner that is selectionally permitted

to appear in the environment specified in T3.1.7a so far identified is #wǫ+hąna# 'both, together with'. Of constructions involving Genitive case this one is unique in that the presence of Genitive case does not entail any possessive prefix. An example is:

(3.1.7a) 'anančui'bt wǫhąąam wɨn papia.
HER-LATE-FATHER-GEN BOTH-THEY LIE THERE
'Together with her late father they lay there (i.e., she and her late father both lay there).'

The syntax of #wǫ+hąna# is an especially confusing problem. The pattern is usually that of a pair of Nouns involved, here 'she' (a Pronoun, phonologically zero) and 'her late father', one is found with Genitive case, while both seem to be the subject or object. Sometimes, however, the Noun associated with #wǫ+hąna# is plural, in which case it follows #wǫ+hąna#. This is accounted for by T3.1.7b and is exemplified in (3.1.7b).

T3.1.7b. $\text{Manner}[X \frown [+\text{Plural}] \frown \underline{\text{Gen}} \frown \text{Adv}_{\text{manner}}] \Rightarrow$

$\text{Manner}[X \frown \text{Adv}_{\text{manner}} \frown [+\text{Plural}] \frown \underline{\text{Gen}}]$

(3.1.7b) 'amač wɨçɨṣç wǫhąą 'atɨ:yɨm nɨ hihiy.
THAT-GEN MAN'S BOTH HIS-WIVES-GEN I-THEM SEE
'I saw both of that man's wives.'

#wǫ+hąna# is suspiciously similar to the Numeral #wǫ+h# 'two' in both form and meaning, but so far no way to relate the two words syntactically in a principled way has been found.

3.1.8. Insertion of adverbial possessive prefix in Pre-Numerals (cf. PS rule 1.20).

T3.1.8. $Num \frown Adv_{TS} \Rightarrow Num \frown \# \frown [+AdvPos] \frown Adv_{TS}$

where $Adv_{TS} \neq$ i((ha):)# 'time(s)'

For an example, see (1.20a), where the adverbial possessive prefix is [pi-].

3.1.9. Determiner agreements (cf. PS rules 1.17, 1.21, and section 2.2.3).

T3.1.9. $[+D] \frown NP[X \frown \begin{bmatrix} +N \\ \alpha Plural \\ \beta Animate \\ \gamma Human \\ \delta Person \\ \epsilon 1stPerson \end{bmatrix}] \Rightarrow$

$$\begin{bmatrix} +D \\ \alpha Plural \\ \beta Animate \\ \gamma Human \\ \delta Person \\ \epsilon 1stPerson \end{bmatrix} \frown NP[X \frown \begin{bmatrix} +N \\ \alpha Plural \\ \beta Animate \\ \gamma Human \\ \delta Person \\ \epsilon 1stPerson \end{bmatrix}]$$

See sections 4.10 through 4.18 for more on Determiners.

3.1.10. Agreement of possessive prefixes and adverbial possessive prefixes.

T3.1.10. $\begin{bmatrix} +N \\ \alpha Plural \\ \beta Person \\ \gamma lstPerson \end{bmatrix} \frown \underline{Gen} \frown \# \frown [\begin{Bmatrix} +Pos \\ +AdvPos \end{Bmatrix}] \Rightarrow$

$$\begin{bmatrix} +N \\ \alpha Plural \\ \beta Person \\ \gamma lstPerson \end{bmatrix} \frown \underline{Gen} \frown \# \frown \begin{bmatrix} \begin{Bmatrix} +Pos \\ +AdvPos \end{Bmatrix} \\ \alpha Plural \\ \beta Person \\ \gamma lstPerson \end{bmatrix}$$

Thus, possessive prefixes and adverbial possessive prefixes agree with the preceding Noun regarding features of number and person. Most interestingly, however, there seems to be no transformation of the sort

(3.1.10a) *NomP[Nom...Nom] $\frown$ Gen $\frown$ # $\frown \begin{bmatrix} \begin{Bmatrix} +Pos \\ +AdvPos \end{Bmatrix} \\ \alpha Plural \end{bmatrix} \Rightarrow$

$$NomP[Nom...Nom] \frown \underline{Gen} \frown \# \frown \begin{bmatrix} \begin{Bmatrix} +Pos \\ +AdvPos \end{Bmatrix} \\ +Plural \end{bmatrix}$$

such that a compound Nominal-Phrase whose last Noun is singular cooccurs with a singular agreement pattern, as in:

(3.1.10b) 'ubiht±m '±y±i m±y±k
LONG-AGO-SHE-YOU STEAL-ACC YOUR-MOTHER-GEN

m±na'n p±nu'.
YOUR-FATHER-GEN FROM-HIM

'Long ago she stole you from your mother and father.'

3.1.11. Subject-object agreement pattern.

T3.1.11a. $\begin{bmatrix}\alpha\text{Plural}\\ \beta\text{Person}\\ \gamma\text{1stPerson}\end{bmatrix}$ ⌢ PredP ⌢ Aux[X (Past)(?)] ⇒

$\begin{bmatrix}\alpha\text{Plural}\\ \beta\text{Person}\\ \gamma\text{1stPerson}\end{bmatrix}$ ⌢ PredP ⌢ Aux[X ⌢ $\begin{bmatrix}+\text{Subject}\\ \alpha\text{Plural}\\ \beta\text{Person}\\ \gamma\text{1stPerson}\end{bmatrix}$ (Past)

(?)]

An example, with the subject marker (reordered by T6.25) indicated by Subject[...], is:

(3.1.11a) 'ačam qai Subject[č] m±mai·hi ya:n±m.
WE NOT WE YOUR-SON-ACC HAVE

'We don't have your son.'

T3.1.11b. NomP[Nom...Nom] ⌢ PredP ⌢ Aux[X ⌢ $\begin{bmatrix}+\text{Subject}\\ \alpha\text{Plural}\end{bmatrix}$ ⌢ Y] ⇒

$$\text{NomP[Nom...Nom]} \frown \text{PredP} \frown \text{Aux[X} \frown \begin{bmatrix} +\text{Subject} \\ +\text{Plural} \end{bmatrix} \frown \text{Y]}$$

An example with compound subject is:

(3.1.11b) niyɨ' nina' k^{w}ɨn- Subject[-ɨ] 'i:p
MY-MOTHER MY-FATHER QUOT THEY HERE

qaç.
DWELL

'My mother and father are said to live here.'

T3.1.11c. $\text{NomP[Nom...Nom[X} \frown \begin{bmatrix} \alpha\text{Person} \\ \beta\text{1stPerson} \end{bmatrix} \text{]} \frown \text{Y} \frown \text{[+Subject]}$

$$\Rightarrow \text{NomP[Nom...Nom[X} \frown \begin{bmatrix} \alpha\text{Person} \\ \beta\text{1stPerson} \end{bmatrix} \text{]} \frown \text{Y} \frown$$

$$\text{[+Subject]} \frown \begin{bmatrix} +\text{Segment} \\ +\text{Plural} \\ \alpha\text{Person} \\ \beta\text{1stPerson} \end{bmatrix}$$

where NomP is immediately dominated by VblP

An example with compound object is:

(3.1.11c) 'ubiht m- Object[-ɨ] q^{w}ǫ:ɳ nina'ni
LONG-AGO THEY THEM KILL MY-FATHER-ACC

nita:hi.
MY-UNCLE-ACCUSATIVE

'Long ago they killed my father and uncle.'

T3.1.11d. $\text{NomP}[X \frown \begin{bmatrix}\alpha\text{Plural}\\ \beta\text{Person}\\ \gamma\text{1stPerson}\end{bmatrix}] \frown Y \frown [+\text{Subject}]\,(\underline{\text{Past}})\,(\underline{?}) \Rightarrow$

$$\text{NomP}[X \frown \begin{bmatrix}\alpha\text{Plural}\\ \beta\text{Person}\\ \gamma\text{1stPerson}\end{bmatrix}] \frown Y \frown [+\text{Subject}] \frown \begin{bmatrix}+\text{Segment}\\ \alpha\text{Plural}\\ \beta\text{Person}\\ \gamma\text{1stPerson}\end{bmatrix}(\underline{\text{Past}})\,(\underline{?})$$

where NomP is immediately dominated by VblP

An example is:

(3.1.11d) nɨ'ayɨ' bɨ- Object[-n] nɨ:i hak^{w}up mɨmɨ'kin.
MY-HEAD IT ME ME-ACC VERY HURT
'My head is hurting me a great deal.'

T3.1.11e. $\text{NomP}[\left\{\begin{matrix}X \frown [+\text{Plural}]\\ \text{Nom...Nom}\end{matrix}\right\}] \frown Y \frown \begin{bmatrix}+\text{Segment}\\ -\text{Plural}\\ +\text{1stPerson}\end{bmatrix}(\underline{\text{Past}})\,(\underline{?})$

$$\Rightarrow \text{NomP}[\left\{\begin{matrix}X\ \ [+\text{Plural}]\\ \text{Nom...Nom}\end{matrix}\right\}] \frown Y \frown \begin{bmatrix}+\text{Segment}\\ -\text{Plural}\\ +\text{1stPerson}\end{bmatrix} \frown$$

$$\begin{bmatrix}\text{-Segment}\\ \text{+Plural}\end{bmatrix}\ (\underline{\text{Past}})\ (\underline{?})$$

where NomP is immediately dominated by VblP

The non-segmental plural marker is later (5.5) specified as length imposed on the preceding vowel. An example involving the additional plural object marker is:

(3.1.11e) yara:'kčunai bɨn- Object[-ɨ] .
MAKE-WHITE-BENEFACTIVE-ACC HE-ME THEM
'He made them white for me.'

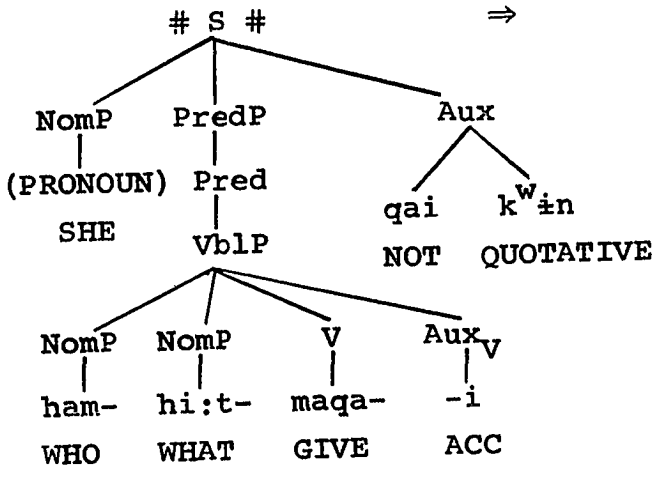
3.1.12. Spread of Accusative case, Genitive case, and adverbial suffixes. In the following transformations, Case = <u>yə#</u> (Accusative), <u>Gen</u> (Genitive), or Adv_{TS}.

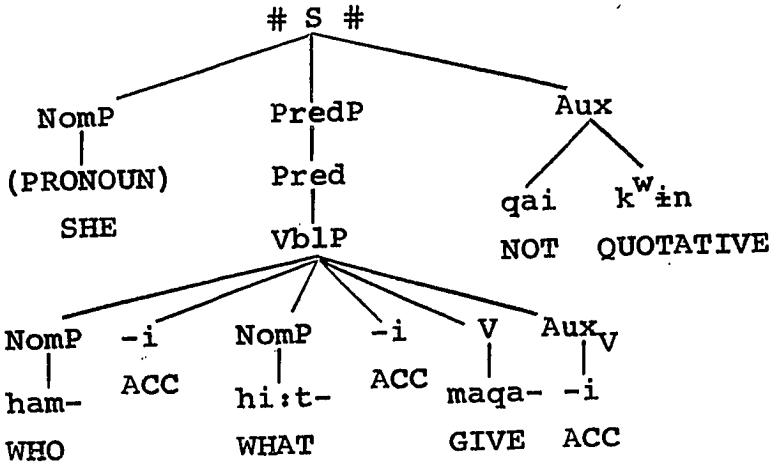
T3.1.12a. $VblP[X\ (NomP)^n\ Y \frown Aux_V[Z \frown \underline{yə\#}]] \Rightarrow$

$VblP[X\ (NomP \frown \underline{yə\#})^n\ Y \frown Aux_V[Z \frown \underline{yə\#}]]$

An example (identical with (1.11a)) is:

(3.1.12a)





qai kʷɨn hami hi:ti maqai.
NOT QUOT WHO-ACC WHAT-ACC GIVE-ACC
'She didn't give anybody anything.'

T3.1.12b. NomP[((Conj) Nom)^{n}]⌢Case ⇒

NomP[((Conj) Nom⌢Case)^{n}]

where both NomP and Case are immediately
dominated by the same node

For examples, where Case = yə#, see (3.1.11c); where Case = Gen, see (3.1.10b). There is no example where Case = Adv_{TS}.

T3.1.12c. Nom[X (DP) NP]⌢Case ⇒

Nom[X (DP⌢Case) NP⌢Case]

where Nom and Case are immediately
dominated by the same node

For examples, where Case = yə#, see (1.17d); where Case = Gen, see (1.18b); where Case = Adv_{TS}, see (1.21b).

T3.1.12d. DP[X (D) D]⌢Case ⇒ DP[X (D⌢Case) D⌢Case]

where DP and Case are immediately
dominated by the same node

For examples, where Case = Adv_{TS}, see (1.21b-d); where Case = yə#, see (3.1.12c) below. There is no example where Case = Gen.

(3.1.12c) mia tabɨ 'u:' 'amai yɨ:ça'ti
MAY DUB-HE-PAST MARRY THAT-ACC WHICH-ONE-ACC

DP[D[ham-] -i D[ib-] -i].
WHO ACC THIS ACC

'He may have married someone.'

3.1.13. Optional deletion of Accusative case with plural object.

T3.1.13. [+Plural] ⌢ <u>yə#</u> ⇒ [+Plural] (<u>yə#</u>)

It seems that the deletion allowed by this transformation does not take place when ambiguity would result. Compare (3.1.13a) with no Accusative case to mark the object and (3.1.13b) where without the Accusative case suffix the Sentence would be ambiguously either '...then they called the other people' or '...then the other people called them.'

(3.1.13a) ...ani k^{w}ɨnɨbɨ ta:qtam k^{w}u:han.
AND-THEN QUOT-HE-THEM PEOPLE CALL

'...and then he called the people.'

(3.1.13b) ...ayaɨ' k^{w}ɨnɨmɨ k^{w}u:han a:m h^{w}uwami
THEN QUOT-THEY-THEM CALL THEY OTHER-ACC

ta:qtami.
PEOPLE-ACC

'...then they called the other people.'

3.1.14. Deletion of Accusative case in Imperatives.

T3.1.14a. $\underline{yə\#} \frown \begin{bmatrix} +A \\ -B \end{bmatrix} \Rightarrow \begin{bmatrix} +A \\ -B \end{bmatrix}$

$\begin{bmatrix} +A \\ -B \end{bmatrix}$ = Imperative Aspect (2.5c)

An example is (1.14d), in which the Verb $\underline{\#k^{w}a'a\#}$ 'eat' occurs without $\underline{yə\#}$ Accusative case. With $\underline{yə\#}$, the Verb would have the form [$k^{w}a'i$].

T3.1.14b. $Pred[X \frown \underline{yə\#} \frown Y] \frown \begin{bmatrix} +A \\ -B \end{bmatrix} \frown Z \Rightarrow Pred[X \frown Y] \frown \begin{bmatrix} +A \\ -B \end{bmatrix} \frown Z$

where Z $\neq$ $\underline{\#qáy\#}$ 'not'

An example is (1.11c).

T3.1.14c. $Pred[X \frown \underline{yə\#} \frown Y] \frown \begin{bmatrix} +A \\ -B \end{bmatrix} \frown \underline{\#qáy\#} \Rightarrow$

$Pred[X\ (\underline{yə\#})\ Y] \frown \begin{bmatrix} +A \\ -B \end{bmatrix} \frown \underline{\#qáy\#}$

Two Sentences demonstrating the optional nature of the deletion of Accusative case in negative Imperatives occur in the following example.

(3.1.14a) "qai ç k^{w}a' 'amai mǫč. tam
NOT YOU EAT THAT-ACC AGAIN DUB-SHE-YOU
ra:k^{w}ɨnia'nib. qai ç k^{w}a' h^{w}ǫnčqą:hçič 'ama
FEED-FUTURE NOT YOU EAT FILTHY-STUFF THAT
'ani m maqai," qɨi k^{w}ɨn pɨyɨka'.
THEN SHE-YOU GIVE-ACC SAY-ACC QUOT TO-HIM
'"Don't eat that any more! She'll feed you. Don't eat that filthy stuff when she gives it to you!" she said to him.'

3.1.15. Deletion of Accusative case in nominalizations, adverbializations.

T3.1.15. Pred[X⌢<u>yə#</u>]⌢Y ⇒ X⌢Y

where Y = N or Adv_{TS}, and the phonological representation of Y does not begin with <u>#</u>

Thus, there is no Accusative case after the Verb in examples like (3.2.1c-k), (3.2.4b-c), (3.2.7a).

3.1.16. Introduction of the Verb <u>#ñíha:#</u> 'do' (cf. section 1.3, examples (1.3b-c)).

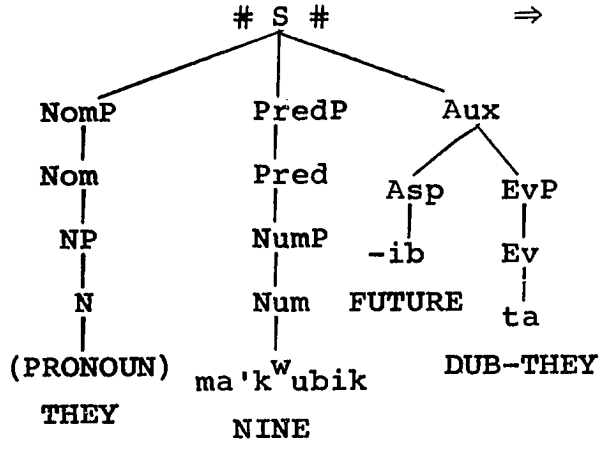
T3.1.16. Pred[$\left\{\begin{matrix} \text{NomP} \\ \text{NumP} \\ \text{X⌢AdjP} \end{matrix}\right\}$]⌢Y ⇒

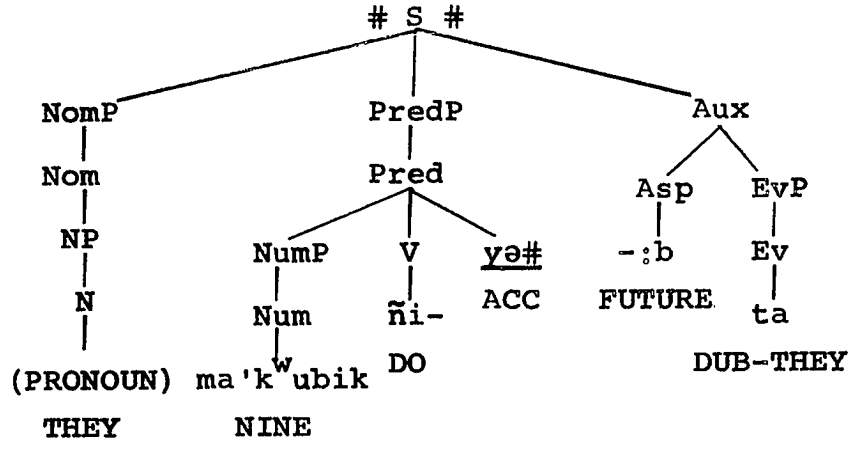
$$\text{Pred}[\left\{\begin{array}{c}\text{NomP}\\ \text{NumP}\\ \text{X}\frown\text{AdjP}\end{array}\right\} \text{V}[\#\underline{\tilde{n}\acute{i}ha:\#}]\frown\underline{y\text{ə}\#}]\frown\text{Y}$$

where Y is either an Adv_{TS}, as in (1.8g), or some member of the category Aspect whose phonological representation is non-null

An example is:

(3.1.16a)





ma'k^{w}ubik ta ñi:b.

'There will be nine of them.'

3.1.17. Deletion of ? in Sentences having question-words (cf. section 1.4.5.2).

T3.1.17. [-Determinate]⌢X⌢? ⇒ [-Determinate]⌢X

For an example, see (1.4h).

3.2. Embedding transformations.

3.2.1. Noun plus modifier from embedded Sentence (cf. PS rule 1.17, example (1.17e)).

T3.2.1a. $\text{Nom}[\#\text{S}[\text{NomP}[\text{X}]\frown\text{Pred}[\text{Y}\ (\underline{\text{yə\#}})]\frown\text{Aux}[\text{Z}\frown\begin{bmatrix}+\text{Subject}\\ \alpha\text{Plural}\end{bmatrix}]$

$\#] \Rightarrow \text{Nom}[\text{NP}[\text{Y}\frown\begin{bmatrix}+\text{Segment}\\ \alpha\text{Plural}\end{bmatrix}]\frown\text{X}]$

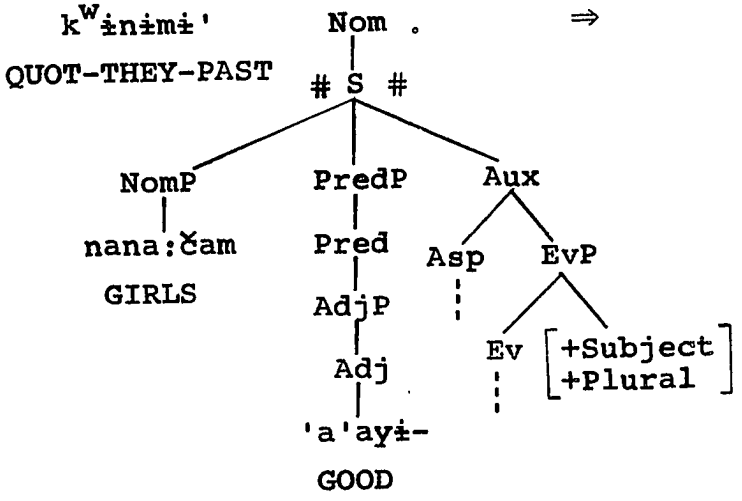
where Y ≠ NomP

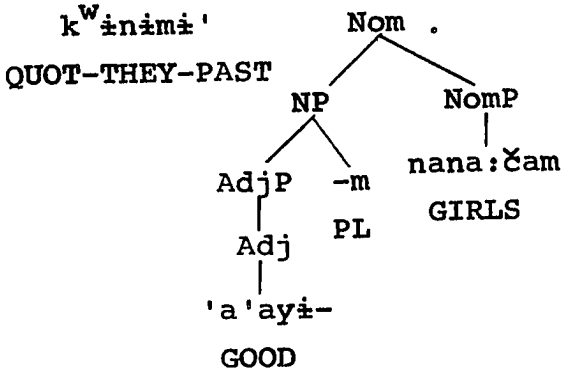
$\begin{bmatrix}+\text{Segment}\\ +\text{Plural}\end{bmatrix}$: <u>mɨ#</u> Plural suffix (5.2)

$\begin{bmatrix}+\text{Segment}\\ -\text{Plural}\end{bmatrix}$: <u>ta#</u> Singular suffix (5.2)

An example is:

(3.2.1a)





'They were good girls.'

T3.2.1a accounts for the agreement of the number affixes between Nouns and their modifiers from the Predicates of embedded Sentences, as in the following examples:

(3.2.1b) pay±ka' t±:buka 'a:p Adj['ati±'a-] -ç h^wukah-t
AWAY DOWNWARD THERE BIG SG DEER-SG

qaç.
BE

'Way down there is a big deer.'

(3.2.1c) 'a:p k^{w}ɨn ama' k^{w}u-t TS['ubia], V[ɨ:m'-]
THERE QUOT IT FIRE-SG ALREADY END

PunctP[-q-] -ç.
PUNCTUAL SINGULAR

'There it was an already-ended fire.'

(3.2.1d) ama TS['i:piu'-] -ç na:št k^{w}ɨn ča:çu'.
THE FROM-HERE SG GIRL QUOT SING

'The girl on this side sang.'

(For further clarification of (3.2.1d), see 3.2.2.)

If the modifier is a Noun, however, it has inherent number, that is, the sign for Plural is fixed, and although, for obvious semantic reasons, this sign is usually the same as the sign for Plural of the Noun modified, as in (3.2.1e-f), it is not necessarily so, as in (3.2.1g), where [yua:qaiam] 'Chemehuevis' (see 2.1.3) modifies [tǫčiñt] 'youth'.

(3.2.1e) N[nana:čam] N[houpɨ'iam] nɨ ya:nɨm 'i:p.
GIRLS LITTLE-CHILDREN I-THEM HAVE HERE

'I had the little girls [up] here.'

(3.2.1f) ...ani k^{w}ɨn ama' N[čičint] N['añi:'či]
AND-THEN QUOT THE BOY SMALL-ONE

'a:p miy.
THERE GO

'...and then the younger boy went there.'

(3.2.1g) 'ama' k^{w}ɨnɨbɨ' pɨ:čɨba' pičɨi
THE QUOT-HE-PAST WITH-THEM ARRIVE

N[yua:qaia-m] N[tǫčiñ-t].
CHEMEHUEVI-PLURAL YOUTH-SINGULAR

'The Chemehuevi youth came with them.'

The modification pattern illustrated in examples (3.2.1d-e-f) is accounted for by the following transformation.

T3.2.1b. Nom[#S[NomP[X]⌢Pred[Y]⌢Aux]#] ⇒ Nom[Y⌢X]

where Y ends in [+N]

The modifiers from both T3.2.1a and T3.2.1b are described as preceding the Nouns modified, even though in actually occurring Sentences there are about as many examples of following as of preceding modifiers. The preceding modifier is posited at this stage so that the agreement patterns can be read out of the Noun head of the construction, as, for example, in T3.1.4 or T3.1.11. Consider the modifying Noun #ñu:# 'possession', as in (3.2.1h-i):

(3.2.1h) pu:ñu paxa:' wi:'n.
THEIR-POSSESSION CEREMONIAL-CLOWN SHOUT
'Their ceremonial clown shouted.'

(3.2.1i) amai mɨčɨ' maqai čañui
THAT-ACC THEY-US GIVE-ACC OUR-POSSESSION-ACC
ŋɨçqati.
BEADS-ACC
'They gave us those beads of ours.'

It would be quite inconvenient to have to suppose that #ñu:# might have two different lexical specifications, one [+Human], as when it occurs in [pu:ñu paxa:'] 'their ceremonial clown', and the other [-Animate], as when it occurs in ['amai čañui ŋɨçqati] 'those beads of ours (Acc)', just when this difference in lexical specification is that between the Nouns modified by #ñu:#. Thus, a Noun⌢modifier construction, such as in (3.2.1f), is described as being a stylistic reordering of an underlying modifier⌢Noun. This possible stylistic reordering means there can be some ambiguities. Such an example is (3.2.1e), which is ambiguously a reordering of [houpɨ'iam nana:čam] 'little girls' (as it is treated in the gloss for the Sentence) or a non-reordered construction which would be glossed something like 'little girl children'.

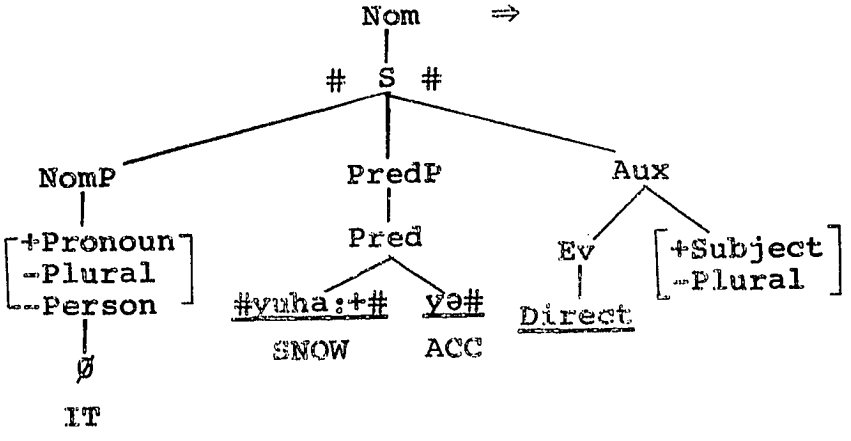
"Weather" Verbs, such as #yuha:+# 'snow', #wǫ:ŋa+#

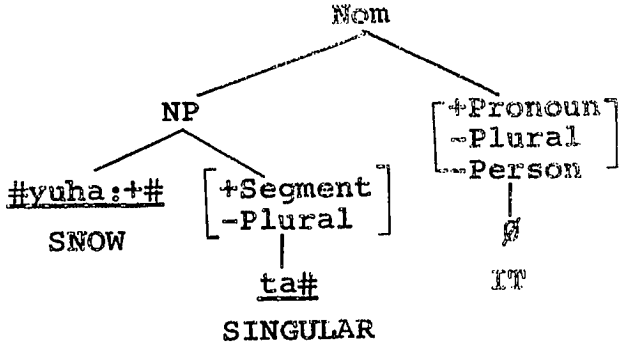
'rain', like their semantically corresponding forms in English, usually cooccur with non-plural, non-person pronominal subjects, as in (3.2.1j). The Nouns corresponding to

(3.2.1j) yui bɨ'.
SNOW-ACC IT-PAST
'It snowed.'

these Verbs, [yua:t] 'snow', [wǫ:ŋt] 'rain', can be accounted for by reference to T3.2.1a. For example:

(3.2.1k)





yua:t 'snow'

On the other hand, it may be that #yuha:+#, #wǫ:ŋa+# should be lexically specified as both [+V] and [+N].

3.2.2. Deletion of the Verb #qaçə# 'be' from Predicate embedded in Nominal.

T3.2.2. TS ⌢ #qaçə# ⇒ TS

where TS, #qaçə# are immediately dominated by NP

An example is:

(3.2.2a) NP[TS['i:piu'-] #qaçə# -ç] NomP['ama' na:št]
FROM-HERE BE SG THE GIRL

k^{w}ɨn ča·çu'. ⇒
QUOT SING

NP[TS['i:piu'-]-ç] NomP['ama' na:št] k^{w}ɨn ča:çu'.

ama 'i:piu'ç na:št k^{w}ɨn ča:çu'.
THE FROM-HERE-SG GIRL QUOT SING

'The girl on this side sang.'

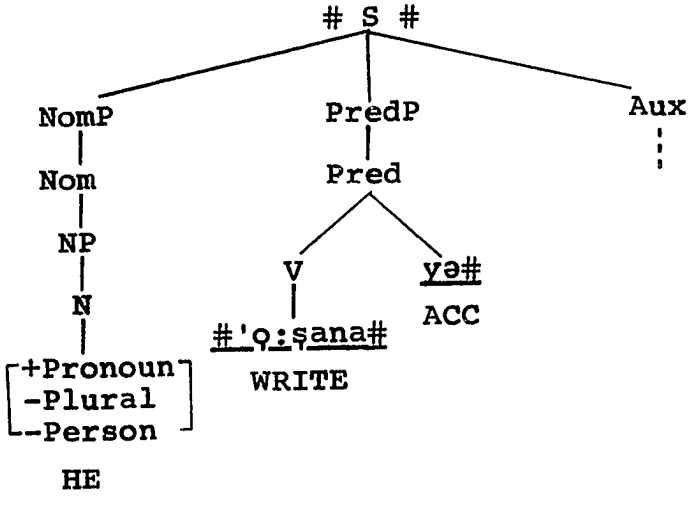
3.2.3. Nominalizations involving [-Agree w/subject] Nouns (cf. section 2.1.8).

T3.2.3. NP[#S[NomP[+Pronoun] ⌢ PredP[X] ⌢ Aux]# ⌢ $\begin{bmatrix}+N\\-\text{Agree w/subject}\end{bmatrix}$ ⇒ NP[X ⌢ $\begin{bmatrix}+N\\-\text{Agree w/subject}\end{bmatrix}$]

where each immediate constituent of PredP ends in [+V]

Examples (3.2.3b-c) involve the embedded Sentence (3.2.3a).

(3.2.3a)



'ǫ:ʂan.

'He writes.'

The Accusative case is deleted by T3.1.15; the singular suffix is added by T4.5.

(3.2.3b) #'ǫ:ʂana# ⌢ ih^{w}a'a+# ['ǫ:ʂan- ⌢ -ih^{w}a'- ⌢ -t]
WRITE INSTRUMENTAL SG NOMINAL

'writing implement (i.e., pen, pencil, etc.)'

(3.2.3c) #'ǫ:ʂana#⌢i# ['ǫ·ʂan-⌢-i-⌢ -ɛ̆]
WRITE RESULTATIVE SG
NOMINAL

'something written (i.e., book, letter, etc.)'

3.2.4. Nominalizations involving [+Agree w/subject] Nouns.

T3.2.4a. NP[#S[Nom[X⌢N[αFeature]]⌢PredP[Y]⌢Aux]#⌢
$N\left[\begin{matrix}\alpha\text{Feature} \\ \text{+Agree w/subject}\end{matrix}\right]$ ⇒

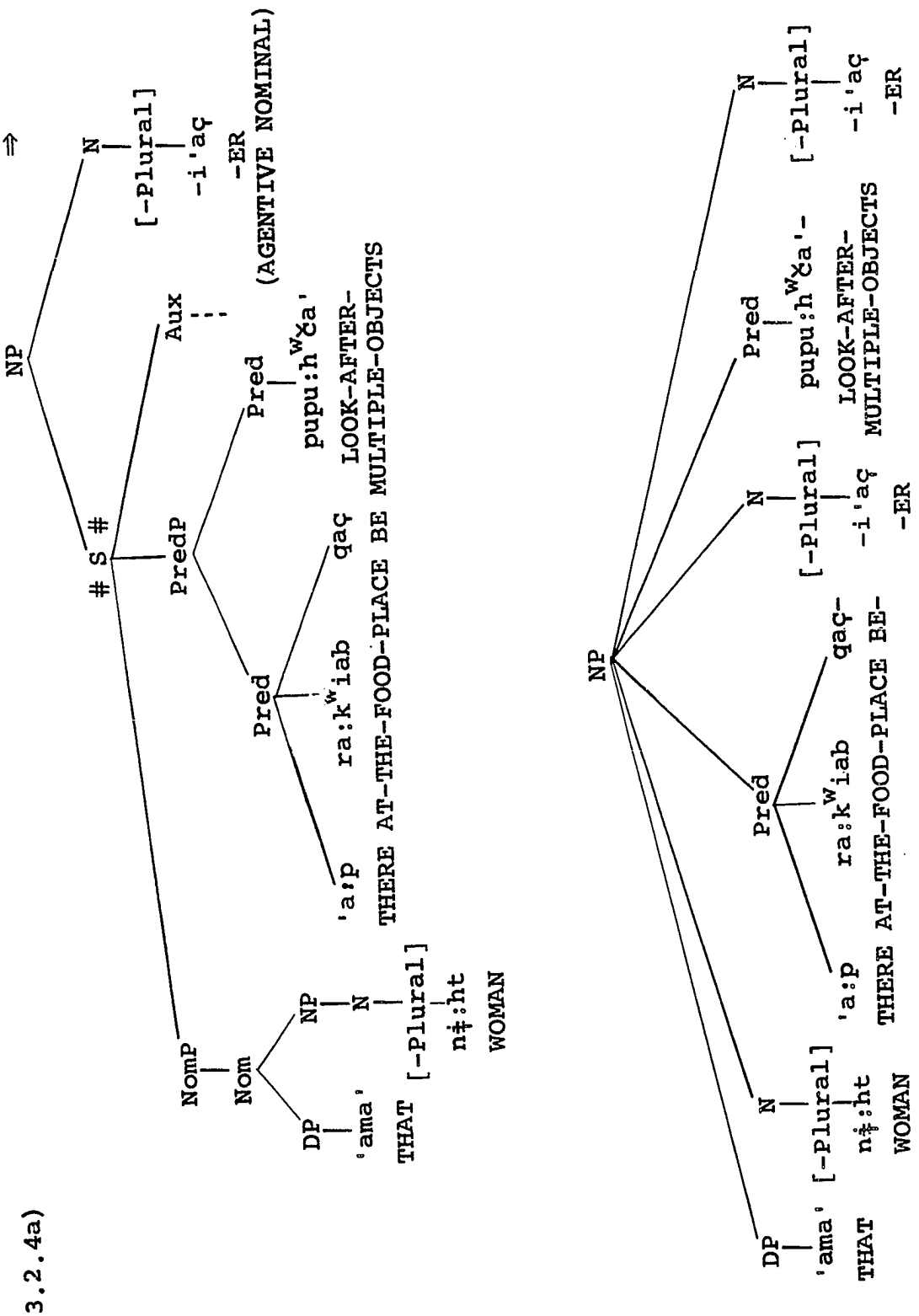
$NP[X⌢N[\alpha\text{Feature}]⌢Y⌢N\left[\begin{matrix}\alpha\text{Feature} \\ \text{+Agree w/subject}\end{matrix}\right]]$

where each immediate constituent of PredP
ends in [+V]

T3.2.4b. $NP[X\ (Pred)^{n}\ N] \Rightarrow NP[X\ (Pred⌢N)^{n}]$

T3.2.4b is more properly an agreement transformation, but it is included here rather than in section 3.1 for reasons of clarity. An example illustrative of T3.2.4a-b is:

(3.2.4a)



As in:

(3.2.4b) nɬ:ht 'ama 'a:p ra:k^{w}iab qaçi'aç
WOMAN THAT THERE AT-THE-FOOD-PLACE BE-ER

pupu:h^{w}ča'i'aç bɬnɬ' pičɬi ....
ONE-WHO-LOOKS-AFTER- SHE-ME-PAST ARRIVE
MULTIPLE-OBJECTS

'The dining room matron came to me ....'

3.2.5. Possessed nominalizations.

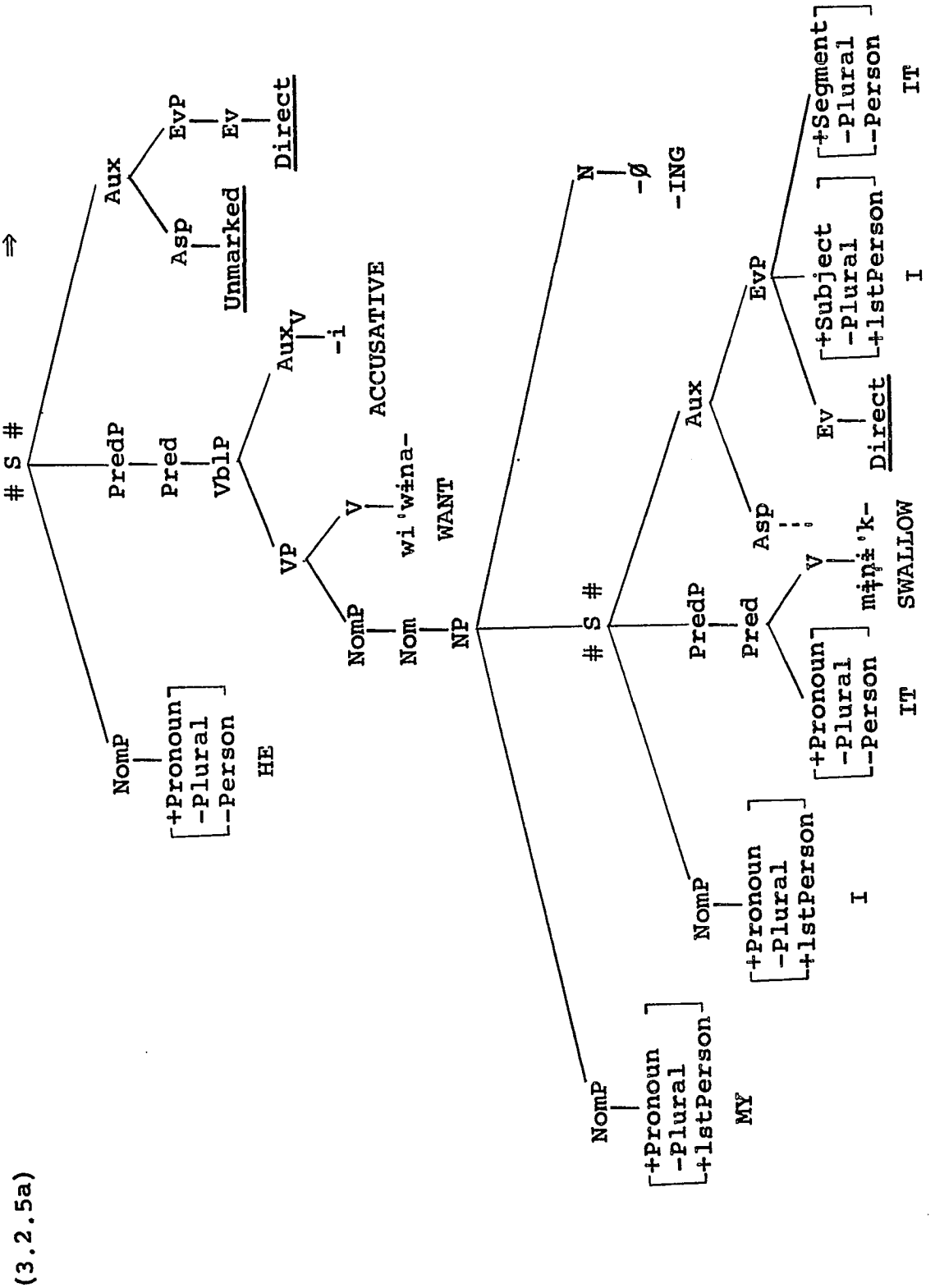
T3.2.5a. NomP[NP[NomP[X] ⌢ #S[NomP[X] ⌢ Pred[Y (AdjP) V ⌢ Z] ⌢
Aux[A ⌢ EvP[B ⌢ $\begin{bmatrix}+\text{Subject}\\ \alpha\text{Feature}\end{bmatrix}$ ⌢ C]]]# ⌢ N[+N]]] ⇒

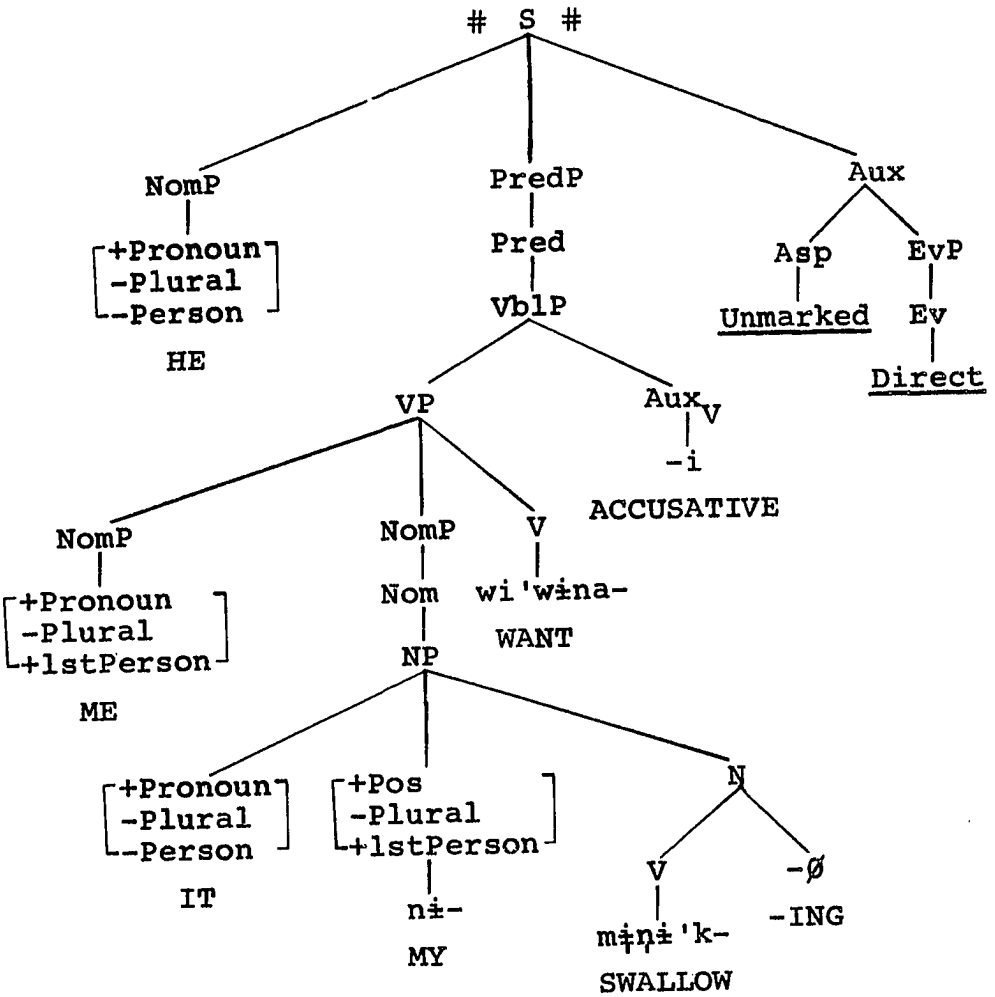
$$\left\{\begin{array}{l}\text{NomP[X]} \frown \text{NomP[NP[Y} \frown \begin{bmatrix}+\text{Pos}\\ \alpha\text{Feature}\end{bmatrix}\\ \text{NomP[NP[Y} \frown \text{NomP[X]}\end{array}\right\} \text{N[(AdjP) V} \frown$$

Z ⌢ [+N]]]]

where C is null or is $\begin{bmatrix}+\text{Segment}\\ -\text{Plural}\\ \left\{\begin{array}{l}-\text{Person}\\ -\text{1stPerson}\end{array}\right\}\end{bmatrix}$

The following examples illustrate each of the above possibilities.

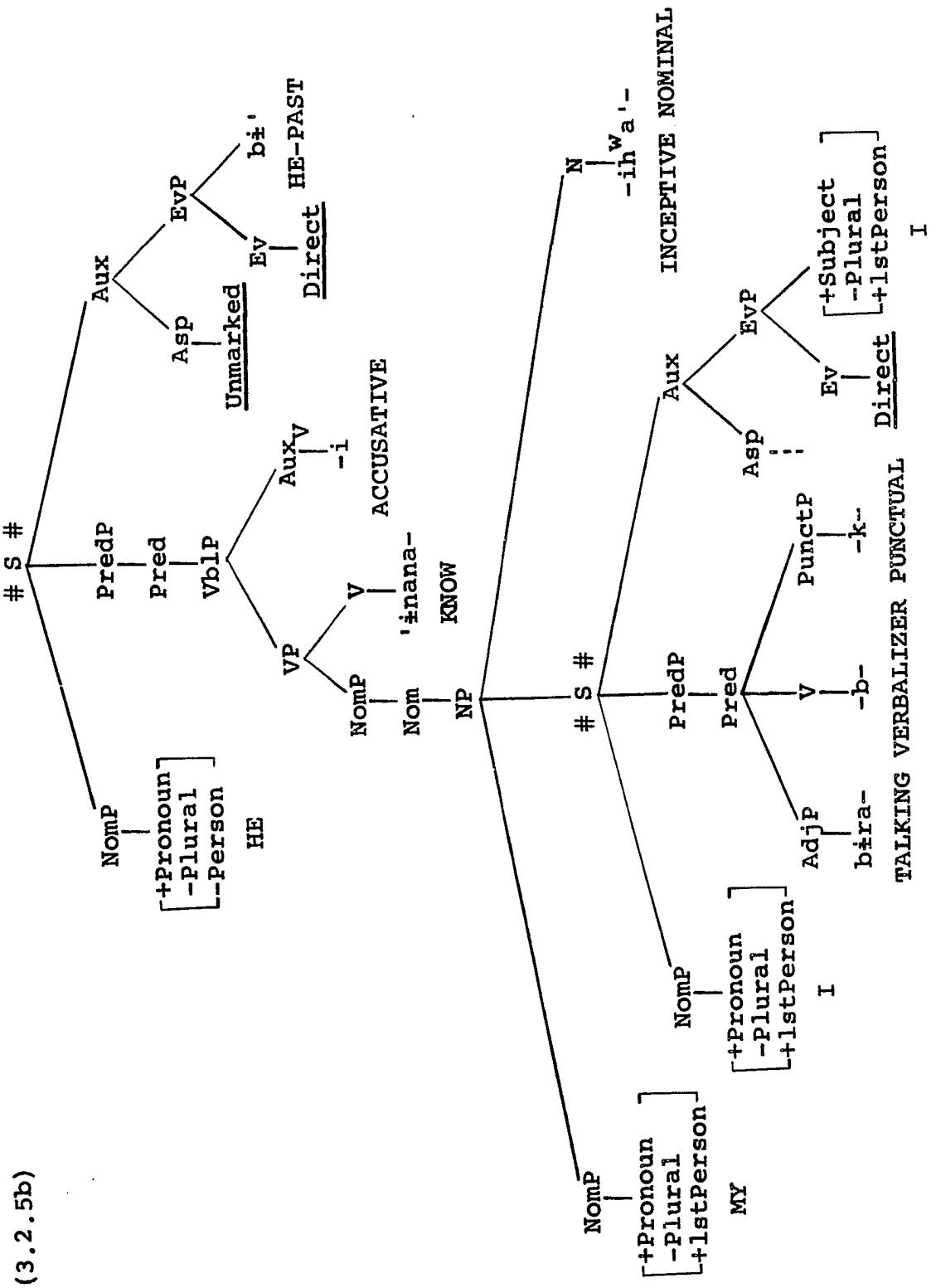


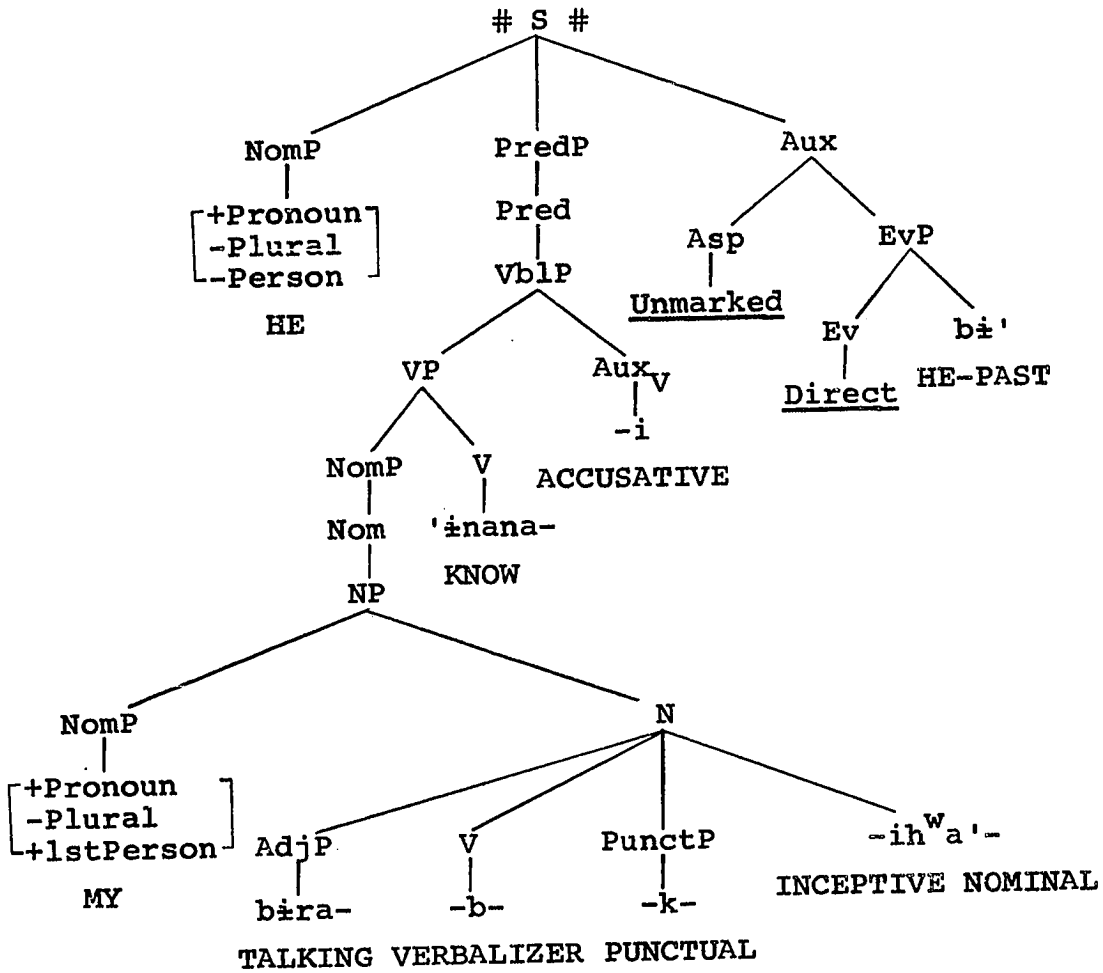


wi'winai bin nimiɲi'kçi.
WANT-ACC HE-ME MY-SWALLOWING-IT-ACC

'He wants me to swallow it (verbatim: he wants me my swallowing it).'

(3.2.5b)





'ɨnanai bɨ' nɨbɨrabkihʷa'çi.
KNOW-ACC HE-PAST MY-GOING-TO-TALK-ACC

'He knew I was going to talk.'

T3.2.5b. $$\text{NomP}[\text{NP}[\text{NomP}[X] \frown \#\text{S}[\text{NomP}[X] \frown \text{Pred}[Y\ (\text{AdjP})\ V \frown Z] \frown \text{Aux}[A \frown \text{EvP}[B \frown \begin{bmatrix}+\text{Subject}\\ \alpha\text{Feature}\end{bmatrix} \frown C]]] \# \frown \text{N}[+\text{N}]]] \Rightarrow$$

$$\left\{ \begin{array}{l} \text{NomP}[X] \frown \text{NomP}[\text{NP}[\begin{bmatrix}+\text{Subject}\\ \alpha\text{Feature}\end{bmatrix} \frown C \frown Y \frown \begin{bmatrix}+\text{Pos}\\ \alpha\text{Feature}\end{bmatrix}] \\ \text{NomP}[\text{NP}[\begin{bmatrix}+\text{Subject}\\ \alpha\text{Feature}\end{bmatrix} \frown C \frown Y \frown \text{NomP}[X] \end{array} \right\}$$

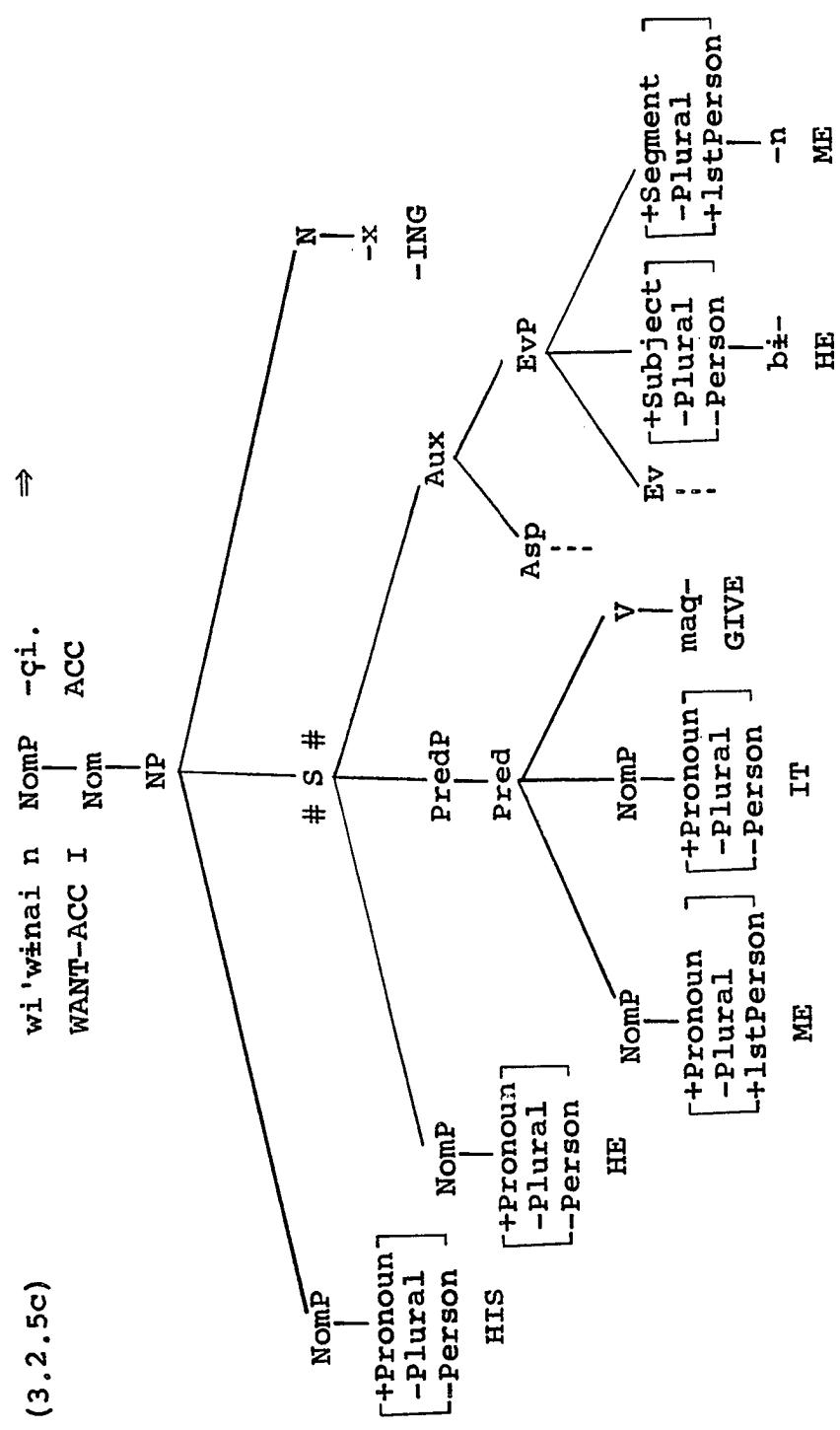
$$\text{N}[(\text{AdjP})\ V \frown Z \frown [+\text{N}]]]]$$

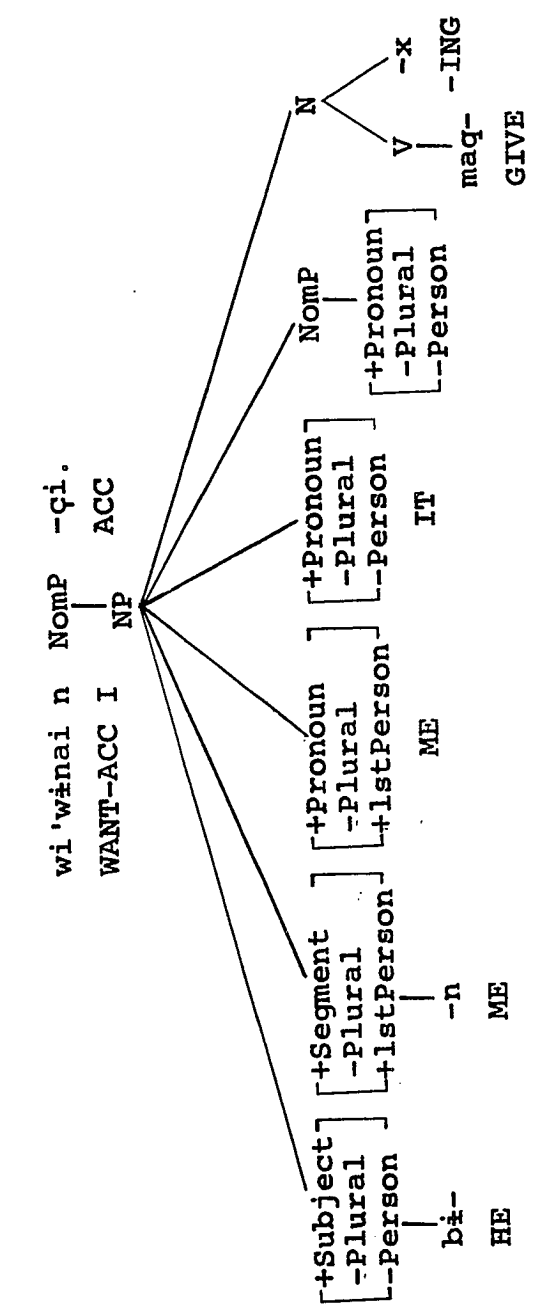
where C is non-null and does not contain

$$\underline{?} \text{ or only } \begin{bmatrix} -\text{Plural} \\ \left\{ \begin{array}{l} -\text{Person} \\ -\text{1stPerson} \end{array} \right\} \end{bmatrix}$$

Of the two possibilities to the right of the double arrow for T3.2.5b, there are no clear examples of the first, but both possibilities are posited to parallel those of T3.2.5a. The following is an example illustrating the second possibility above.

(3.2.5c)





wi'wɨnai n bɨn amaqxçi.
WANT-ACC I HE-ME HIS-GIVING-ACC

'I want him to give it to me.'

3.2.6. Time-Space adverbials involving embedded Sentences (cf. PS rule 1.8, example (1.8g)).

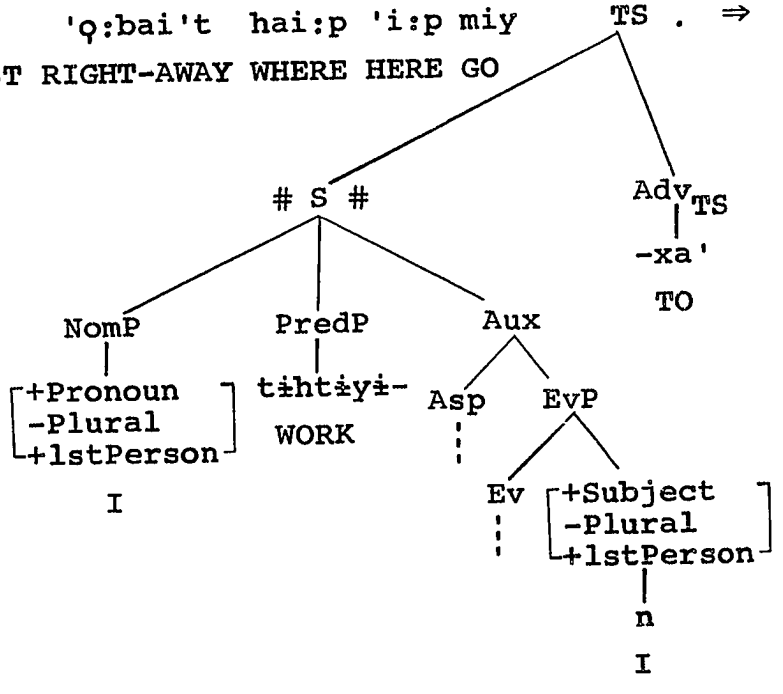
T3.2.6a. $\#S[X \frown Aux[Y \frown [+Subject] \frown Z]]\# \frown Adv_{TS} \Rightarrow$

$S[X \frown Adv_{TS}]$

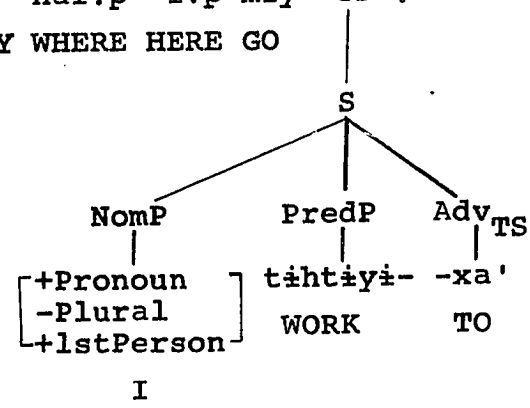
where Z is null or is $\left[\begin{array}{l} +Segment \\ -Plural \\ \left\{ \begin{array}{l} -Person \\ -1stPerson \end{array} \right\} \end{array} \right]$

An example is:

(3.2.6a) mia ni± 'ǫ:bai't hai:p 'i:p miy TS . ⇒
MAY I-PAST RIGHT-AWAY WHERE HERE GO



mia nɨ 'ǫ:bai't hai:p 'i:p miy TS .
MAY I-PAST RIGHT-AWAY WHERE HERE GO



mia nɨ 'ǫ:bai't hai:p 'i:p miy tɨhtɨyɨxa'.
MAY I-PAST RIGHT-AWAY WHERE HERE GO TO-WORK
'I presumably went somewhere right away to work.'

T3.2.6b. $\#S[X \frown Aux[Y \frown EvP[Z \frown [+Subject] \frown A]]]\# \frown Adv_{TS} \Rightarrow$

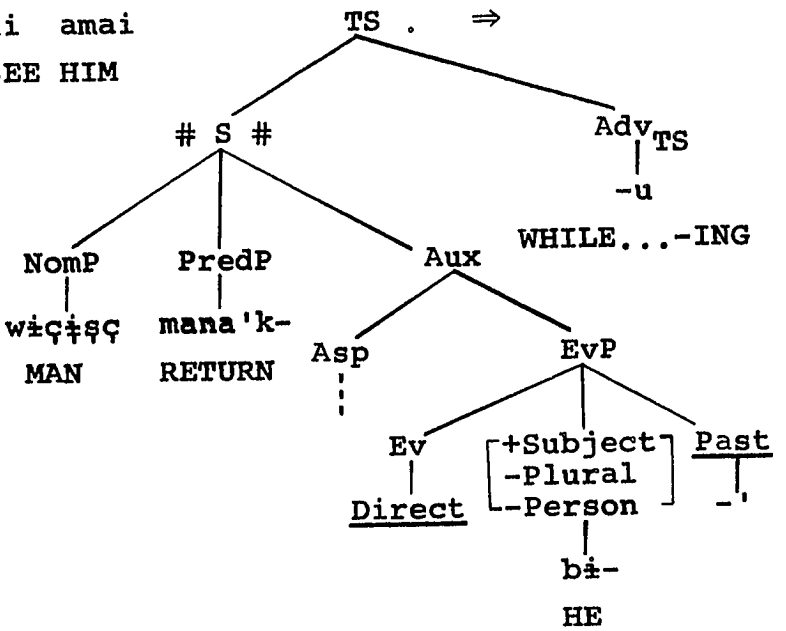
$S[X \frown Adv_{TS} \frown EvP[[+Subject] \frown A]]$

where A is non-null and does not contain ?

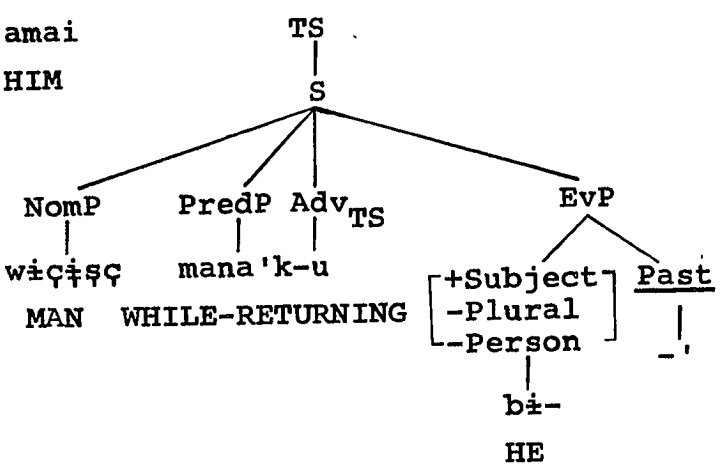
$$\text{or only } \begin{bmatrix} +\text{Segment} \\ -\text{Plural} \\ \begin{Bmatrix} -\text{Person} \\ -\text{1stPerson} \end{Bmatrix} \end{bmatrix}$$

An example is:

(3.2.6b) nɨ:' n hi amai
I I SEE HIM



nɨ:' n hi amai
I I SEE HIM



nɨ:' n hi amai wɨçɨʂç bɨ' mana'ku.
I I SEE HIM MAN HE-PAST WHILE-RETURNING

'While the man was going home I saw him.'

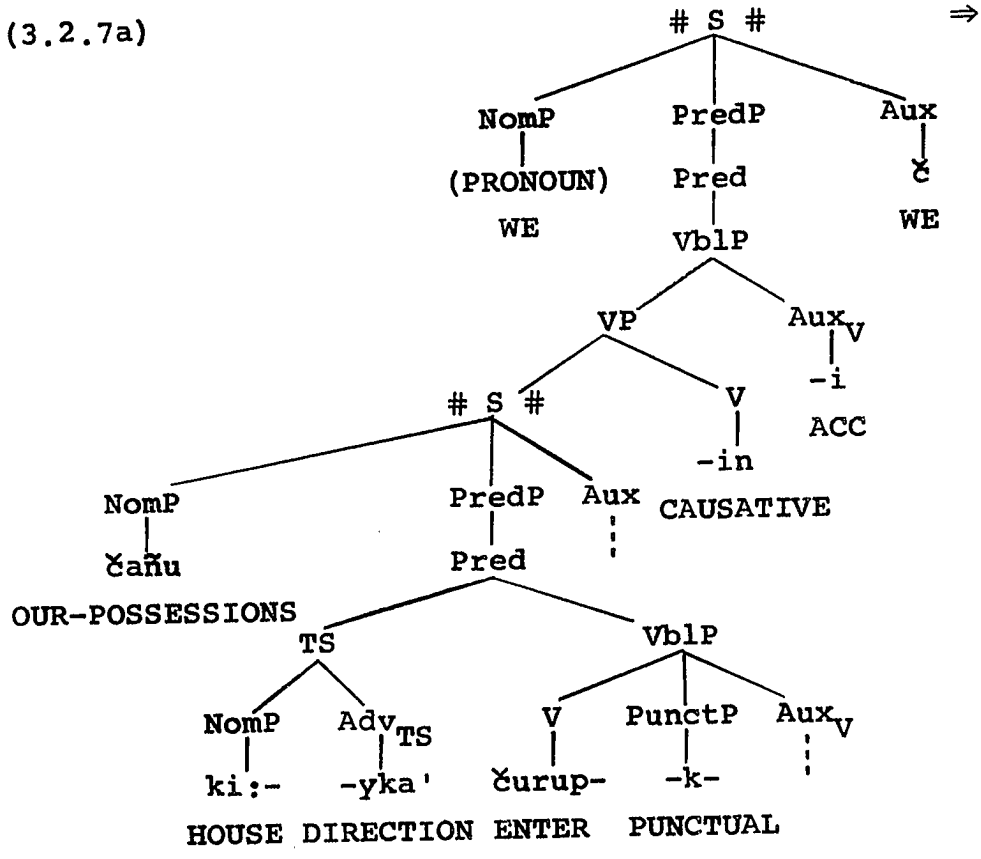
3.2.7. Verbalization of embedded Sentences: Causative (cf. PS rule 1.12, example (1.12g)).

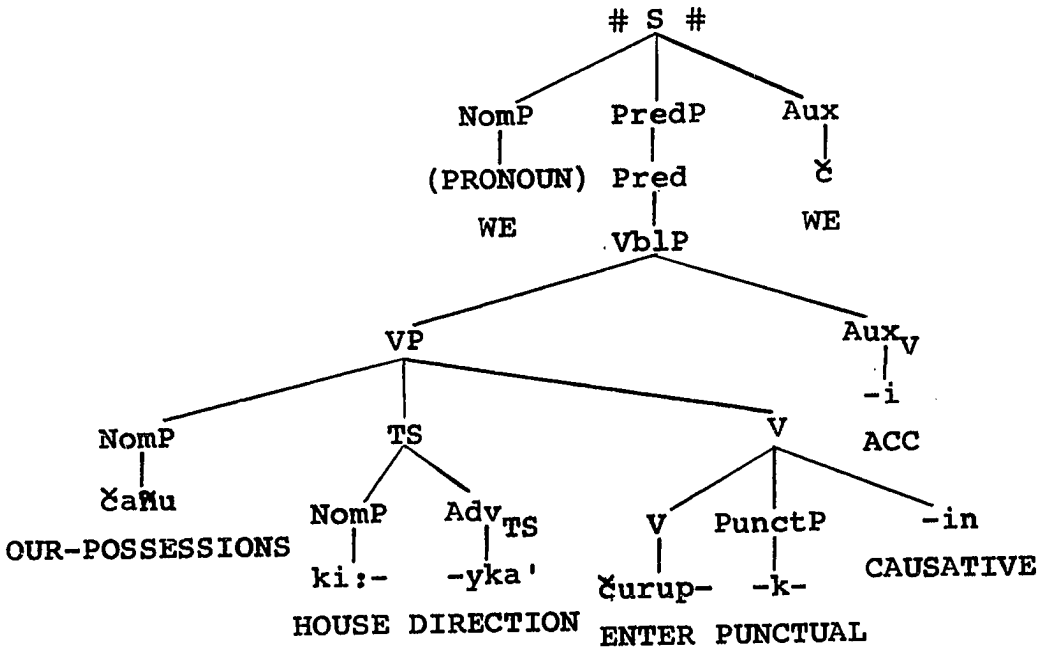
T3.2.7. VP[#S[X⌢VblP[(AdjP) V (PunctP)]⌢Y]#⌢V[Z]] ⇒

VP[X⌢ V[(AdjP) V (PunctP) Z]]

As a result of this transformation, the entire complex (AdjP) V (PunctP) Z, of which Z is the Causative suffix, is dominated by V; that is, the complex as a whole is a Verb stem in the matrix Sentence. An example is:

(3.2.7a)





čaŋui č ki:yka' čurupkin.
OUR-POSSESSIONS-ACC WE HOUSE-DIRECTION ENTER-CAUSATIVE
'We took our things in the house.'

3.2.8. Embedded Sentences in Manner adverbials: direct quotations.

T3.2.8. #S[X⌢Manner[Y⌢"..."]⌢Z]# ⇒

$$\left\{ \begin{array}{l} \#S[X⌢Z]\#⌢Manner[Y⌢"..."] \\ Manner[Y⌢"..."]⌢\#S[X⌢Z]\# \end{array} \right\}$$

This transformation accounts for the fact that direct quotations follow or precede the remainder of the Sentence

containing them, and that further, the material inside a direct quotation is not subject to any adjustments with regard to the structure of the Sentence in which it was originally embedded, and the structure of the Sentence associated with the direct quotation is unaffected by that of the direct quotation. Each of the possibilities specified above is illustrated by the following examples, found successively in a text.

(3.2.8a) 'ubia čɨmɨ' wiha:hq amai qai:či
ALREADY WE-PAST GO-AROUND THAT-ACC HILL-ACC
'ani n qɨi. "mitkinan mǫa:'ti
AND-THEN I SAY-ACC IT-SEEMS-LIKE-I SMOKE-ACC
$h^{w}uk^{w}um$."
SMELL
'We went around that hill and I said, "It seems like I smell smoke."'

(3.2.8b) "ibi 'ama'" qɨi bɨ'.
THIS IT SAY-ACC SHE-PAST
'"This is it," she said.'

An exception to this rule is found in the case of citation forms, as exemplified in the following example.

(3.2.8c) "'at̓wan bɨ' ama' John Thomas" qɨ̓i m
HIS-NAME IT-PAST THE SAY-ACC THEY

yaŋq 'ačam̓ič "ka:pa'" qɨ̓i.
BUT WE-WE SAY-ACC

'They say his name was John Thomas, but we called him "Ka:pa'" (verbatim: "His name was John Thomas," they say but we "Ka:pa'" sai(d)).'

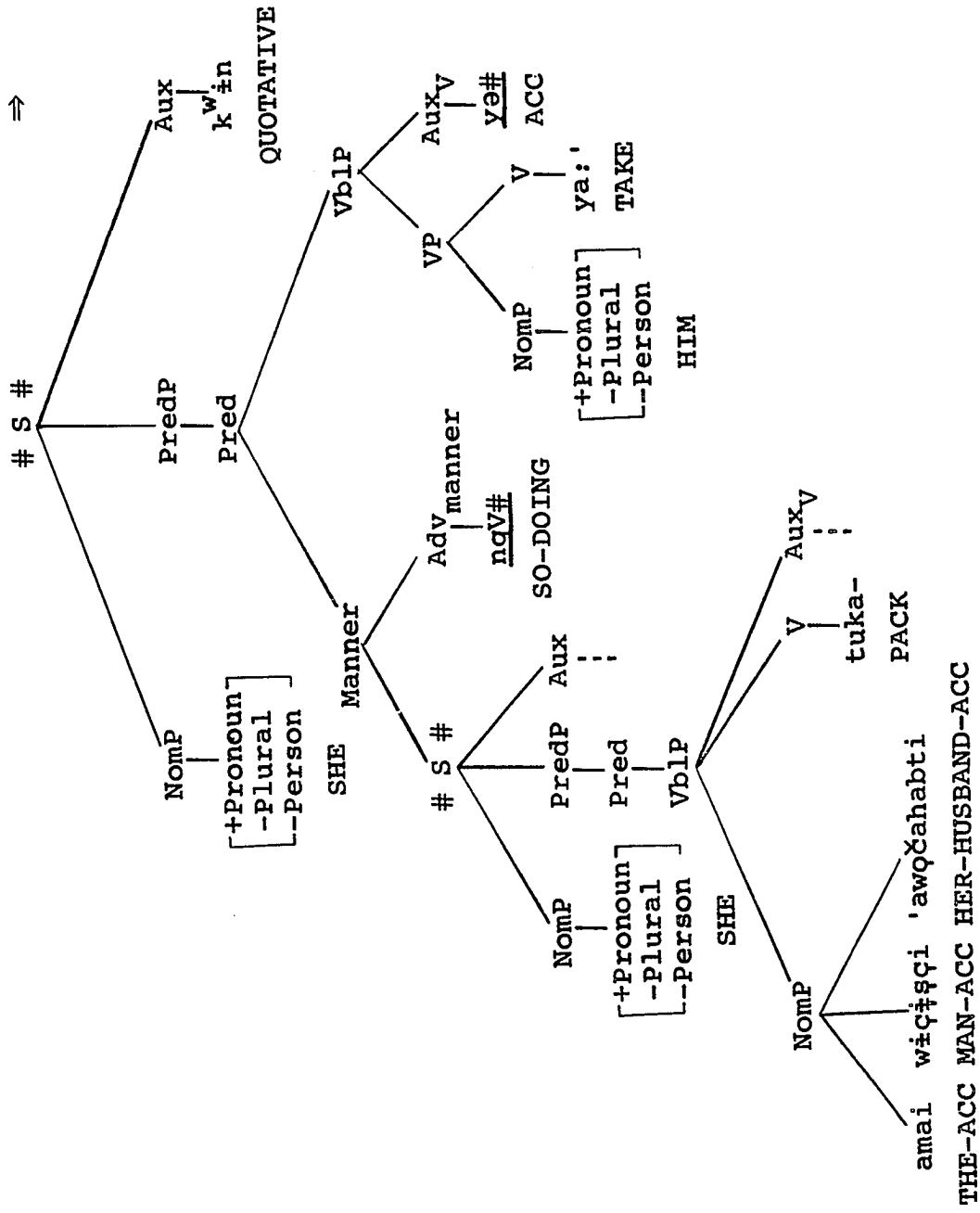
3.2.9. Other embedded Sentences in Manner adverbials.

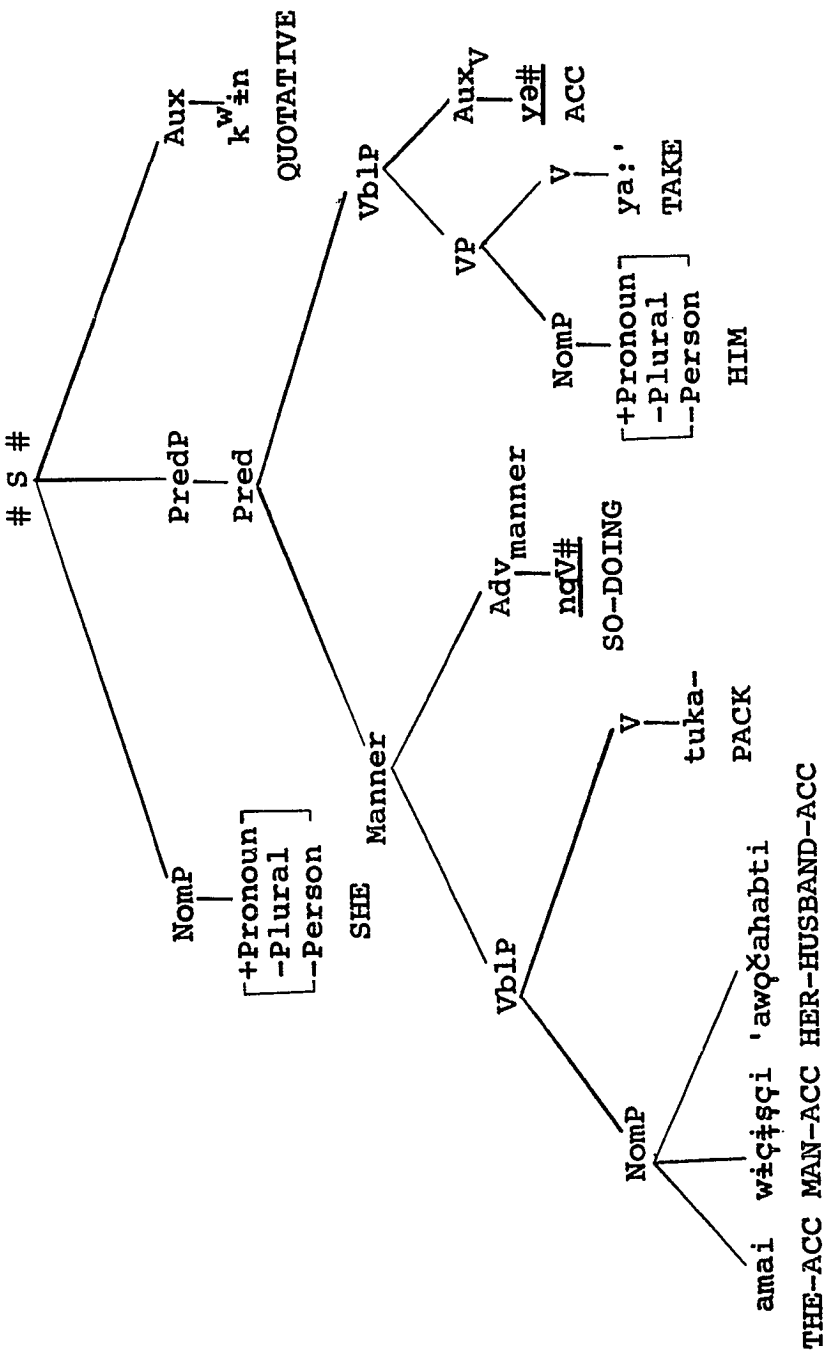
T3.2.9. #S[X⌢NomP[Y]⌢Z⌢Manner[#S[NomP[Y]⌢Pred[A⌢V⌢B]#⌢ngV#]⌢C]# ⇒

#S[X⌢NomP[Y]⌢Z⌢Manner[A⌢V⌢ngV#]⌢C]#

This transformation refers to the specific Adverb of manner ngV# 'so doing', inasmuch as this is the only Adverb of manner so far identified, other than "..." (3.2.8), which is positively specified for the contextual feature [#S#__] (see 2.13). An example illustrative of T3.2.9 is:

(3.2.9a)



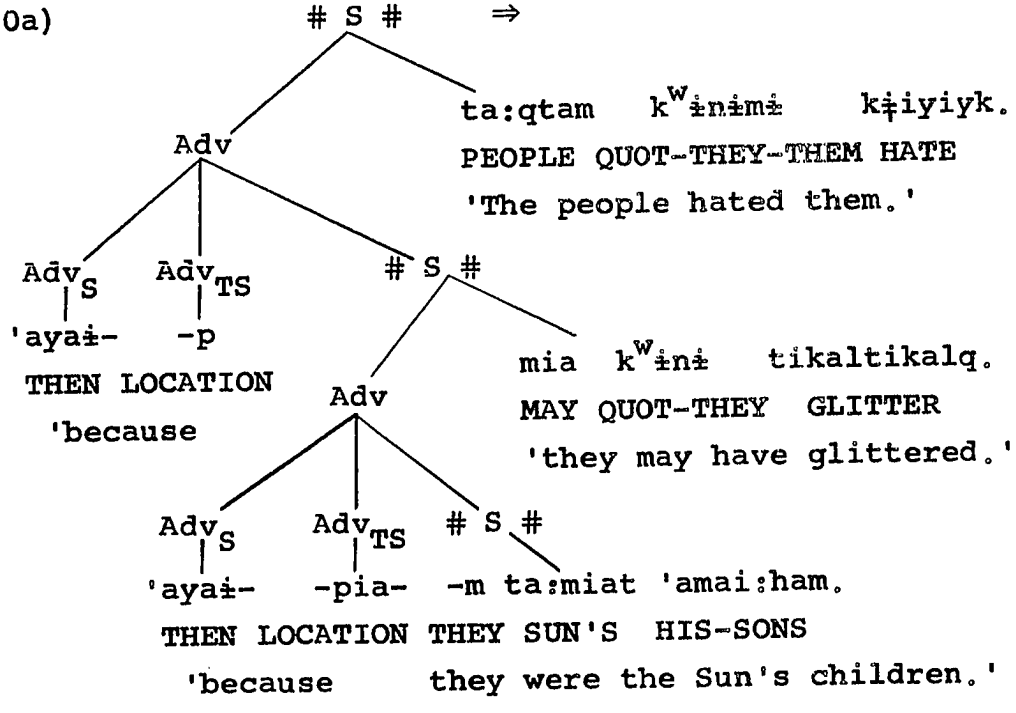


3.2.10. Embedded Sentences in Sentence adverbials (cf. PS rule 1.7, example (1.7b)).

T3.2.10. $S[Adv[X \frown \#S\#] \frown Y] \Rightarrow \left\{ \begin{array}{l} \#[X \frown S]\# \frown S[Y] \\ S[Y] \frown \#[X \frown S]\# \end{array} \right\}$

Thus, the internal structure of Sentence adverbials involving embedded Sentences and that of the remainder of the Sentence containing such a Sentence adverbial are mutually independent. For an example of the first possibility, namely, $\#[X \frown S]\# \frown S[Y]$, see (1.7b). Two instances of the second possibility, namely, $S[Y] \frown \#[X \frown S]\#$, occur in (3.2.10a), where one Sentence adverbial is embedded in the other.

(3.2.10a)



S[ta:qtam k^{w}ɨnɨmɨ kɬiyiyk], #['ayaɨp mia k^{w}ɨnɨ tikaltikalq]#, #['ayaɨpiam ta:miat 'amai:ham]#.

'The people hated them, maybe because they glittered, because they were the Sun's children.'

3.2.11. Deletion of identical structure in disjunctively coordinated Sentences: Constructions involving #ha:# 'or' (cf. section 1.1.2).

T3.2.11. $S[A \frown B \frown C]\# \frown \underset{OR}{\#ha:\#} \frown S[A \frown D \frown C]\# \Rightarrow$

$$A \frown B \frown \underset{OR}{\#ha:\#} \frown D \frown C$$

where the phonological representations of A, B, C, D all begin and end in #, and $B \neq D$.

An example is:

(3.2.11a) #S[S[mia t čičint]# ha S[mia t na:št]#]# ⇒
MAY DUB BOY OR MAY DUB GIRL

#S[mia t čičint ha na:št]#
MAY DUB BOY OR GIRL

'Maybe it's a boy or a girl.'

4. PRE-MORPHOLOGICAL ADJUSTMENTS

4.0. The transformations of this section, and of subsequent sections, apply to a Phrase-marker only if neither that Phrase-marker nor any symbol dominating that Phrase-marker is found in $X[Y^{\frown}\#\_\_\#^{\frown}Z]$, where $X \neq S$. This is to say, these transformations apply only after all embedding transformations (3.2) have been applied.

The agreements effected by the rules of section 3.1, as well as a few other factors, must be adjusted somewhat before non-lexically introduced material can be related to phonological form (section 5). The rules of the present section apply exclusively to specific syntactic formatives and features.

4.1. Deletion of [αPlural] of Nouns with adverbial or verbal suffixes.

4.1. $\begin{bmatrix} +N \\ \alpha Plural \end{bmatrix}^{\frown}X \Rightarrow [+N]^{\frown}X$

where X is the phonological representation of a $[+Adv_{TS}]$, a $[+Adv_{manner}]$, or a [+V], and X does not begin with #

For examples of Nouns with following Adverbs of time-space,

Adverbs of manner, and Verbs, showing the non-occurrence of number suffixes in that position, see (1.8a-b-d), (1.9b), (1.12d), (2.1g-ee).

4.2. Absolutive suffix (cf. section 2.1.7).

T4.2. $NP\left[\begin{matrix}+N\\+Absolutive\\(-Plural)\end{matrix}\right] \Rightarrow NP[[+N]\frown[+Absolutive]]$

[+Absolutive] = Absolutive suffix <u>ta#</u> (5.9)

4.3. Non-occurrence of singular suffix with [-SgSuffix] Nouns (cf. section 2.1.6).

T4.3. $\left[\begin{matrix}+N\\-Plural\\-SgSuffix\end{matrix}\right] \Rightarrow [+N]$

4.4. Plural suffix on Nouns and on [-A] Aspects.

T4.4a. $\left[\begin{matrix}+N\\+Plural\end{matrix}\right]$ ([+Absolutive]) $\Rightarrow$

$[+N]$ ([+Absolutive]) $\left[\begin{matrix}+Segment\\+Plural\end{matrix}\right]$

$\left[\begin{matrix}+Segment\\+Plural\end{matrix}\right]$ = Plural suffix <u>mi#</u> (5.2)

Examples are:

(4.4a) ta:q- -ta- -m 'people'
PERSON-ABSOLUTIVE-PLURAL

wɨçɬha-m 'men'
MAN-PLURAL

T4.4b. $Asp[[-A]]\ (Ev)^{n}\ \begin{bmatrix}+\text{Subject}\\+\text{Plural}\end{bmatrix} \Rightarrow$

$$Asp[[-A]\frown\begin{bmatrix}+\text{Segment}\\+\text{Plural}\end{bmatrix}]\ (Ev)^{n}\ \begin{bmatrix}+\text{Subject}\\+\text{Plural}\end{bmatrix}$$
$$\underline{\text{mɨ\#}}$$

Examples are:

(4.4b) k^{w}ɨnɨ h^{w}ukahti mɨkɳa-qa- -m.
QUOT-THEY DEER-ACC KILL-GOING-TO-PLURAL
'They're going to kill a deer.'

(4.4c) 'ubia m k^{w}u:man-i- -m.
ALREADY THEY SLEEP-COMPLETIVE-PLURAL
'They've already slept.'

4.5. Singular suffix with Nouns and with Completive Aspect.

T4.5a. $\begin{bmatrix}+\text{N}\\-\text{Plural}\end{bmatrix} \Rightarrow [+\text{N}]\frown\begin{bmatrix}+\text{Segment}\\-\text{Plural}\end{bmatrix}$

$$\begin{bmatrix}+\text{Segment}\\-\text{Plural}\end{bmatrix} = \text{Singular suffix } \underline{\text{ta\#}} \quad (5.2)$$

Examples are:

(4.5a) #wanə́+# ⌢ ta# [wan±t] 'river'

#məhá:# ⌢ ta# [m±a:ç] 'moon'

#hǫ́:mi# ⌢ ta# [h^{w}ǫ:mč] 'witch doctor'

T4.5b. $\text{Asp}\left[\begin{bmatrix}-\text{A}\\-\text{C}\end{bmatrix}\right]\ (\text{Ev})^{n}\ \begin{bmatrix}+\text{Subject}\\-\text{Plural}\end{bmatrix} \Rightarrow$

$$\text{Asp}\left[\begin{bmatrix}-\text{A}\\-\text{C}\end{bmatrix} \frown \begin{bmatrix}+\text{Segment}\\-\text{Plural}\end{bmatrix}\right]\ (\text{Ev})^{n}\ \begin{bmatrix}+\text{Subject}\\-\text{Plural}\end{bmatrix}$$

An example is:

(4.5b) 'ubia k^{w}u:man-i- -t
ALREADY SLEEP-COMPLETIVE-SINGULAR
'He has already slept.'

4.6. Deletion of the singular suffix.

T4.6. $\text{NP}[X \frown \begin{bmatrix}+\text{Segment}\\-\text{Plural}\end{bmatrix}] \frown Y \Rightarrow \text{NP}[X] \frown Y$

where Y ≠ yə# (Accusative) or Gen (Genitive), and X either begins with NomP

or ends with some phonological representation which ends in a consonant other than h

T4.5-6 provide for singular suffixes on non-plural Nouns except as provided in T4.1-2-3-4 and except for the non-case forms of possessed Nouns and Nouns which end in consonants other than h. Examples are:

(4.6a)	Non-case form	Accusative case form	
	#pá:# ⌢ ta#	#pá:# ⌢ ta# ⌢ yə#	
	pa:ç	pa:çi	'water'
	#təmə́+# ⌢ ta#	#təmə́+# ⌢ ta# ⌢ yə#	
	tɨmɨt	tɨmɨti	'rock'
	#wə́l^{y}a+# ⌢ ta#	#wə́l^{y}a+# ⌢ ta# ⌢ yə#	
	wel^{y}t	wel^{y}ti	'dish'
	#hukáh# ⌢ ta#	#hukáh# ⌢ ta# ⌢ yə#	
	h^{w}ukaht	h^{w}ukahti	'deer'
	#nə+ ⌢ #qahíku#	#nə+ ⌢ #qahíku# ⌢ ta# ⌢ yə#	
	nɨqaik^{w}	nɨqaik^{w}çi	'my rope'
	#kučí'#	#kučí'# ⌢ ta# ⌢ yə#	
	k^{w}uči'	k^{w}uči'ti	'dog'

Here may be the explanation of why, with few exceptions, vowel-final Spanish loanwords in Serrano acquire an added '. In this fashion they do not have any singular suffix except in case forms. Examples are:

(4.6b)	Spanish	Non-case form	Accusative case form	
	acha	'a:ča'	'a:ča'ti	'axe'
	durazno	rura:sna'	rura:sna'ti	'peach'
	la mesa	lame:sa'	lame:sa'ti	'table'

The exceptions include three words where the final vowel of the Spanish original is lost:

(4.6c)	Spanish	Serrano	
	domingo	dumi:ŋ	'Sunday'
	sábado	sa:bad	'Saturday'
	tijera	taxe:r	'scissors'

and [na:wt] 'dress' (< nagua) morphophonemically #ná:wa+#‿ta#. What seems to have happened in this case is rather involved. Probably the possessed form, [-na:wa'], was the one borrowed. This would be morphophonemically interpreted as #na:wá#, from which the non-possessed form #ná:wa+# was analogically created in accordance with the patterns specified in section 6.13.

4.7. Possessive prefixes on Nouns.

T4.7a. $\begin{bmatrix} +\text{Pos} \\ -\text{Plural} \\ +\text{Person} \end{bmatrix} \Rightarrow \begin{bmatrix} +\text{Segment} \\ -\text{Plural} \\ +\text{Person} \end{bmatrix}$

$$\begin{bmatrix}+\text{Segment}\\-\text{Plural}\\+\text{1stPerson}\end{bmatrix} : \underline{\text{nə\#}} \text{ 'my' (5.2)}$$

$$\begin{bmatrix}+\text{Segment}\\-\text{Plural}\\-\text{1stPerson}\end{bmatrix} : \underline{\text{mə\#}} \text{ 'your' (5.2)}$$

T4.7b. $\begin{bmatrix}+\text{Pos}\\-\text{Plural}\\-\text{Person}\end{bmatrix} \Rightarrow \begin{bmatrix}+\text{Segment}\\-\text{Proximate}\end{bmatrix}$

$$\begin{bmatrix}+\text{Segment}\\-\text{Proximate}\end{bmatrix} : \underline{\text{\#'a\#}} \text{ 'his, her, its' (5.2)}$$

T4.7c. $\begin{bmatrix}+\text{Pos}\\+\text{Plural}\\+\text{1stPerson}\end{bmatrix} \Rightarrow \begin{bmatrix}\{+\text{Det}\\+\text{Segment}\}\\+\text{Plural}\\+\text{1stPerson}\end{bmatrix}$

The first person plural possessive prefix is usually the [+Det] form, <u>čə#</u> (5.1), but one occurrence of the [+Segment] form, <u>č̓ə#</u> (5.2), was observed:

(4.7a) č̓ə̓kąbay̓əm' nu:man. (Louie Marcus)
OUR-KNIFE-ACC-YOU BREAK
'You broke our knives.'

T4.7d. $\begin{bmatrix}+\text{Pos}\\+\text{Plural}\\-\text{1stPerson}\end{bmatrix} \Rightarrow \begin{bmatrix}+\text{Det}\\-\text{1stPerson}\end{bmatrix} \frown \begin{bmatrix}-\text{Segment}\\+\text{Plural}\end{bmatrix}$

$$\begin{bmatrix}+\text{Det}\\-\text{1stPerson}\end{bmatrix} : \underline{\#\text{'}\text{ə}\#}\ \text{'you'}\ (5.1)$$

$$\begin{bmatrix}-\text{Segment}\\+\text{Plural}\end{bmatrix} : \underline{:\#}\ (5.5)$$

T4.7e. $\begin{bmatrix}+\text{Pos}\\+\text{Plural}\\-\text{Person}\end{bmatrix} \Rightarrow \begin{bmatrix}+\text{Segment}\\-\text{Person}\end{bmatrix} \frown \begin{bmatrix}-\text{Segment}\\+\text{Plural}\end{bmatrix}$

$\underline{:\#}$

$$\begin{bmatrix}+\text{Segment}\\-\text{Person}\end{bmatrix} : \underline{\#\text{p}\dot{\text{i}}\#}\ (5.2)$$

4.8. Merger of [+Person] adverbial possessive prefixes with corresponding Determiners.

T4.8. $\begin{bmatrix}+\text{AdvPos}\\+\text{Person}\end{bmatrix} \Rightarrow \begin{bmatrix}+\text{D}\\+\text{Person}\end{bmatrix}$

4.9. Third person adverbial possessive prefixes.

T4.9a. $\begin{bmatrix}+\text{AdvPos}\\+\text{Plural}\\-\text{Person}\end{bmatrix} \Rightarrow \begin{bmatrix}+\text{Segment}\\-\text{Person}\end{bmatrix} \frown \begin{bmatrix}+\text{Segment}\\+\text{Plural}\end{bmatrix}$

$\underline{\#\text{p}\dot{\text{i}}\#}$ $\underline{\text{m}\dot{\text{i}}\#}$

T4.9b. $\begin{bmatrix}+\text{AdvPos}\\-\text{Plural}\\-\text{Person}\end{bmatrix} \Rightarrow \begin{bmatrix}+\text{Segment}\\-\text{Person}\end{bmatrix}$

$\underline{\#\text{p}\dot{\text{i}}\#}$

4.10. Analysis of singular [+Person] Determiners.

T4.10a. $\begin{bmatrix}+D\\-Plural\\+1stPerson\end{bmatrix} \Rightarrow \underline{\#} \begin{bmatrix}+Segment\\-Plural\\+1stPerson\end{bmatrix} \frown \begin{bmatrix}+Det\\-Person\end{bmatrix}$

$\underline{n\partial\#}$

$\begin{bmatrix}+Det\\-Person\end{bmatrix} : \underline{hV+\#}$ (5.1)

The introduction of $\underline{\#}$ in T4.10a guarantees that $\underline{n\partial\#} \frown \underline{hV+\#}$ [nɨ:'] 'I' is preceded by a word boundary.

T4.10b. $\begin{bmatrix}+D\\-Plural\\-1stPerson\end{bmatrix} \Rightarrow \begin{bmatrix}+Det\\-1stPerson\end{bmatrix} \frown \begin{bmatrix}+Segment\\-Plural\\-1stPerson\end{bmatrix} \frown$

$\underline{\#'\partial\#}$ $\underline{m\partial\#}$

$\begin{bmatrix}+Det\\-Person\end{bmatrix}$

$\underline{hV+\#}$

$\underline{hV+\#}$ is later shifted to $\underline{i'\#}$ (T6.14) when not followed by Accusative or Adv_{TS}, giving ['ɨmi'] 'you singular'.

4.11. The second person plural Determiner object and adverbial forms.

T4.11. $\begin{bmatrix}+D\\+Plural\\-1stPerson\end{bmatrix}\left\{\begin{matrix}Adv_{TS}\\X \frown V\end{matrix}\right\} \Rightarrow$

$$\begin{bmatrix}+Det\\-1stPerson\end{bmatrix} \frown \begin{bmatrix}+Segment\\-Plural\\-1stPerson\end{bmatrix} \frown \begin{bmatrix}-Segment\\+Plural\end{bmatrix}\left\{\begin{matrix}Adv_{TS}\\X \frown V\end{matrix}\right\}$$

#'ə# mə# :#

where $\begin{bmatrix}+D\\+Plural\\-1stPerson\end{bmatrix} \frown X \frown V$ is dominated by Pred

Examples with Adv_{TS} are:

(4.11a) 'ɨmɨ:-mia' 'with you plural'
'ɨmɨ:-nu' 'from you plural'
'ɨmɨ:-ba' 'on you plural'

An example involving #'ə# ⌢ mə# ⌢ :# ['ɨmɨ] as object is:

(4.11b) 'ɨmɨ bɨči' $k^{w}u$:haničun.
YOU-PLURAL HE-US CALL-BENEFACTIVE
'He called you for us.'

4.12. The second person plural Determiner elsewhere.

T4.12. $\begin{bmatrix}+D\\+Plural\\-1stPerson\end{bmatrix} \Rightarrow$

$$\begin{bmatrix}+\text{Det}\\-\text{1stPerson}\end{bmatrix} \frown \begin{bmatrix}+\text{Det}\\-\text{Person}\end{bmatrix} \frown \begin{bmatrix}+\text{Segment}\\+\text{Plural}\end{bmatrix}$$

$$\underline{\#'\text{ə}\#} \qquad \underline{\text{hV+}\#} \qquad \underline{\text{mɨ}\#}$$

An example involving $\underline{\#'\text{ə}\#} \frown \underline{\text{hV+}\#} \frown \underline{\text{mɨ}\#}$ ['ɨːm] 'you plural' is:

(4.12a) 'ɨːm ta:qtam tam ç ŋɨrɨːkib.
YOU-PLURAL PEOPLE DUB-PLURAL YOU MOVE-FUTURE
'You Indians move!'

See 0.1 for the use of [ta:qtam] 'people' for 'Indians' and 4.25 for the use of the Future for plural commands.

4.13. The first person plural Determiner.

T4.13. $\begin{bmatrix}+\text{D}\\+\text{Plural}\\+\text{1stPerson}\end{bmatrix} \Rightarrow$

$$\begin{bmatrix}+\text{Segment}\\\pm\text{Proximate}\end{bmatrix} \frown \begin{bmatrix}+\text{Det}\\+\text{Plural}\\+\text{1stPerson}\end{bmatrix} \frown \begin{bmatrix}+\text{Segment}\\+\text{Plural}\end{bmatrix}$$

$$\underline{\check{\text{c}}\text{a}\#} \qquad \underline{\text{mɨ}\#}$$

$$\begin{bmatrix}+\text{Segment}\\+\text{Proximate}\end{bmatrix} : \underline{\#'\text{i}\#} \ (5.2)$$

$$\begin{bmatrix}+\text{Segment}\\-\text{Proximate}\end{bmatrix} : \underline{\#'\text{a}\#} \ (5.2)$$

The first person plural Determiner is the [-Proximate] ['ačam] in Sarah Martin's speech, but is the [+Proximate] ['ičam] in Louie Marcus's.

4.14. Plural suffix on plural -[__[+Person]] Determiners.

T4.14. $\begin{bmatrix} +D \\ -[\_\_[+Person]] \\ +Plural \end{bmatrix} \Rightarrow \begin{bmatrix} +D \\ -[\_\_[+Person]] \end{bmatrix} \frown \begin{bmatrix} +Segment \\ +Plural \end{bmatrix}$

$\underline{m \pm \#}$

Examples are:

(4.14a) $\begin{bmatrix} +D \\ -[\_\_[+Person]] \\ +Proximate \end{bmatrix}$: 'i:-m 'these'

$\begin{bmatrix} +D \\ -[\_\_[+Person]] \\ -Proximate \end{bmatrix}$: 'a:-m 'those, they'

$\begin{bmatrix} +D \\ -[\_\_[+Person]] \\ -Determinate \end{bmatrix}$: hai:-m 'who, what, someone, anyone, ...(plural)'

4.15. -[__[+Person]] Determiners with following Adverb of time-space or plural suffix.

T4.15. $\begin{bmatrix} +D \\ -[\_\_[+Person]] \\ (\alpha Plural) \\ \beta Feature \end{bmatrix} \left\{ \begin{bmatrix} +Segment \\ +Plural \end{bmatrix} \right\} \Rightarrow$

Adv_{TS}

$$\begin{bmatrix}+\text{Segment}\\ \beta\text{Feature}\end{bmatrix} \frown \begin{bmatrix}+\text{Det}\\ -\text{Person}\end{bmatrix} \left\{\begin{bmatrix}+\text{Segment}\\ +\text{Plural}\end{bmatrix}\right\}$$

$$\underline{\text{hV+\#}}$$

$$\begin{bmatrix}+\text{Segment}\\ +\text{Proximate}\end{bmatrix} : \underline{\#'i\#} \quad (5.2)$$

$$\begin{bmatrix}+\text{Segment}\\ -\text{Proximate}\end{bmatrix} : \underline{\#'a\#} \quad (5.2)$$

$$\begin{bmatrix}+\text{Segment}\\ -\text{Determinate}\end{bmatrix} : \underline{\#hahi\#} \quad (5.2)$$

By T4.15 the -[__[+Person]] Determiners with following Adverbs of time-space are identical with those occurring with plural suffixes. Examples illustrative of this include, for the [+Proximate] $\underline{\#'i\#} \frown \underline{hV+\#}$ ['i:-], (2.21a), (2.21b-d); for the [-Proximate] $\underline{\#'a\#} \frown \underline{hV+\#}$ ['a:-], (1.4n), (1.2b); for the [-Determinate] $\underline{\#hahi\#} \frown \underline{hV+\#}$ [hai:-], (1.4q), (1.4h).

4.16. Singular suffix on the indeterminate Determiner $\underline{\#hí:+\#}$ 'what'.

T4.16. $$\begin{bmatrix}+\text{D}\\ -\text{Determinate}\\ -\text{Plural}\\ \left\{\begin{matrix}-\text{Human}\\ -\text{Animate}\end{matrix}\right\}\end{bmatrix} \Rightarrow \begin{bmatrix}+\text{Det}\\ -\text{Determinate}\\ -\text{Human}\end{bmatrix} \begin{bmatrix}+\text{Segment}\\ -\text{Plural}\end{bmatrix}$$

$$\underline{\text{ta\#}}$$

$$\begin{bmatrix}+\text{Det}\\ -\text{Determinate}\\ -\text{Human}\end{bmatrix} : \underline{\#hí:+\#} \quad (5.1)$$

The following examples illustrate that #hí:+# cooccurs with both $\begin{bmatrix}+\text{Animate}\\-\text{Human}\end{bmatrix}$ and [-Animate] Nouns.

(4.16a) pɨbeipa' mɨmai:r, mɨña, mɨkąn, hi:ti,
IF YOUR-SON YOUR-RELATIVE KILL WHAT-ACC
h^{w}ukahti, h^{w}ui:'ti, amai ɨmi' qai m' k^{w}a'i.
DEER-ACC JACKRABBIT-ACC IT-ACC YOU NOT YOU EAT-ACC
'If your son, [or] your relative, killed something, [like] a deer [or] a jackrabbit, you didn't eat it.'

(4.16b) qai č hai:pa'n hi:ti pɨsei'ti k^{w}a'i.
NOT WE EVER WHAT-ACC SWEET-ACC EAT-ACC
'We never ate anything sweet.'

4.17. Singular suffix on Genitive case forms of -[__[+Person]] Determiners.

T4.17. $\begin{bmatrix}+\text{D}\\-[\_\_[+\text{Person}]]\\-\text{Plural}\\\alpha\text{Feature}\end{bmatrix}$ (Gen) ⇒

$\begin{bmatrix}+\text{Det}\\\alpha\text{Feature}\end{bmatrix}$ ($\begin{bmatrix}+\text{Segment}\\-\text{Plural}\end{bmatrix}$ ⌢ Gen)

ta#

$\begin{bmatrix}+\text{Det}\\+\text{Proximate}\end{bmatrix}$: #'ibi# (5.1)

$$\begin{bmatrix}+\text{Det}\\-\text{Proximate}\end{bmatrix} : \underline{\#\text{'ama}^{\vee}\#} \quad (5.1)$$

$$\begin{bmatrix}+\text{Det}\\-\text{Determinate}\\+\text{Human}\end{bmatrix} : \underline{\#\text{hami}\#} \quad (5.1)$$

Only with the Genitive case do the above Determiners have singular suffixes. (Stress is placed on the non-case forms below by T6.19.)

(4.17a)

Non-case form	Accusative case form	Genitive case form	
#'amá$^{\vee}$#	#'ama$^{\vee}$#⌢yə#	#'ama$^{\vee}$#⌢ta#⌢ɨ(́)#	
'ama'	'amai	'amaǰ(ɨ')	'that'
#'ibí#	#'ibi#⌢yə#	#'ibi#⌢ta#⌢ɨ(́)#	
'ibi'	'ibi(:)	'ibič(ɨ')	'this'
#hamí#	#hami#⌢yə#	#hami#⌢ta#⌢ɨ(́)#	
hami'	hami(:)	hamič(ɨ')	'who'

4.18. Merger of non-first person plural object markers.

T4.18. $$\begin{bmatrix}+\text{Segment}\\+\text{Plural}\\\begin{Bmatrix}-\text{Person}\\-\text{1stPerson}\end{Bmatrix}\end{bmatrix} \Rightarrow \begin{bmatrix}+\text{Segment}\\+\text{Plural}\end{bmatrix}$$

Second person plural object markers are not differentiated from third person plural markers. Note how the presence of the Determiners ['ɨmɨ] 'you plural' and ['a:mɨ-] 'them' alone serves to differentiate the following examples.

(4.18a) 'ɨmɨ nɨ hihi.
YOU-PL I-PL SEE
'I see you plural.'

(4.18b) 'a:mɨnɨ hihi.
THEM-I-PL SEE
'I see them.'

4.19. Merger of second and third person objects of first person subject.

T4.19. $\begin{bmatrix}+\text{Subject}\\+\text{Person}\end{bmatrix} \frown \begin{bmatrix}+\text{Segment}\\-\text{1stPerson}\end{bmatrix} \Rightarrow \begin{bmatrix}+\text{Subject}\\+\text{Person}\end{bmatrix} \frown \begin{bmatrix}+\text{Segment}\\-\text{Person}\end{bmatrix}$

The resulting non-person, non-plural object marker is in turn deleted, by T4.20.

4.20. Deletion of non-person, non-plural object marker.

T4.20. $[+\text{Subject}] \frown \begin{bmatrix}+\text{Segment}\\-\text{Person}\end{bmatrix} \Rightarrow [+\text{Subject}]$

This results in potential ambiguity, as in (4.20a).

(4.20a) tan (Ø) mɨɳɨ'kinib.
DUB-I YOU/IT SWALLOW-FUTURE
'I'll swallow you/it.'

Further, there is no morphological difference between third person singular object (or certain instances of second person singular object) and no object at all. Compare (1.4e) and (1.4h). The subject-object agreement marker in both cases is [-bɨ'], but in (1.4e) there is a third person singular object, [čičinti] 'boy (Acc)', while in (1.4h) there is no object.

4.21. The third person plural object marker form with second person subject.

T4.21. $\begin{bmatrix}+\text{Subject}\\-\text{1stPerson}\end{bmatrix} \frown \begin{bmatrix}+\text{Segment}\\+\text{Plural}\\-\text{Person}\end{bmatrix} \Rightarrow$

$$\begin{bmatrix}+\text{Subject}\\-\text{1stPerson}\end{bmatrix} \frown \begin{bmatrix}+\text{Segment}\\-\text{Person}\end{bmatrix} \frown \begin{bmatrix}+\text{Segment}\\+\text{Plural}\end{bmatrix}$$

$$\underline{\#pɨ\#} \qquad \underline{mɨ\#}$$

An example, with the second person plural subject marker restructured by T4.27a-b, is:

(4.21a) qai pɨmɨ ç ma:ç hi:ti.
NOT THEM-PLURAL YOU LISTEN WHAT-ACC
'You don't listen to anything they say (verbatim: you don't listen to them anything).'

4.22. Deletion of third person subject markers with second person singular object.

T4.22. $\begin{bmatrix}+\text{Subject}\\-\text{Person}\end{bmatrix} \frown \begin{bmatrix}+\text{Segment}\\-\text{1stPerson}\end{bmatrix} \Rightarrow \begin{bmatrix}+\text{Segment}\\-\text{1stPerson}\end{bmatrix}$

$\underline{\text{mə\#}}$

Third person singular or plural subject is unmarked when the object is second person singular. When the object is second person plural, third person subjects are distinguished, the second person plural object marker having been merged with the third person plural object marker by T4.18. The following examples illustrate the morphological ambiguity resulting from T4.22. In these examples, the proper gloss is determined by context.

(4.22a) ta- (Ø) -m k^{w}u:hanib.
DUB SHE YOU CALL-FUTURE
'She'll call you.'

(4.22b) ta- (Ø) -m ti‡hai ?
DUB THEY YOU TELL-ACC QUESTION
'Did they tell you?'

4.23. Deletion of third person singular subject marker.

T4.23. $\begin{bmatrix}+\text{Subject}\\-\text{Plural}\\-\text{Person}\end{bmatrix}$ (?) # ⇒ (?) #

Third person singular subject is unmarked in the absence of any following object marker and Past tense, as in (1.14j-k). Elsewhere, third person singular subject is marked by bi# (5.3).

4.24. First person singular object of second person singular subject.

T4.24. $\begin{bmatrix}+\text{Subject}\\-\text{Plural}\\-\text{1stPerson}\end{bmatrix} \frown \begin{bmatrix}+\text{Segment}\\-\text{Plural}\\+\text{1stPerson}\end{bmatrix}$ ⇒

$$\begin{bmatrix}+\text{Subject}\\-\text{Plural}\\-\text{1stPerson}\end{bmatrix} \frown \begin{bmatrix}+\text{Object}\\+\text{1stPerson}\end{bmatrix}$$

$$\begin{bmatrix}+\text{Object}\\+\text{1stPerson}\end{bmatrix} : \text{ɣi'\#} \quad (5.3)$$

4.25. Deletion of [αPlural] of subject in Imperatives.

T4.25. $\begin{bmatrix}+\text{A}\\-\text{B}\end{bmatrix} \frown \text{X} \frown \begin{bmatrix}+\text{Subject}\\\alpha\text{Plural}\\-\text{1stPerson}\end{bmatrix}$ ⇒ $\begin{bmatrix}+\text{A}\\-\text{B}\end{bmatrix} \frown \text{X} \frown \begin{bmatrix}+\text{Subject}\\-\text{1stPerson}\end{bmatrix}$

$$\begin{bmatrix}+\text{Object}\\-\text{1stPerson}\end{bmatrix} : \text{\#ɕə\#} \quad (5.3)$$

Number of second person subject is not distinguished with Imperative Aspect. The following examples apply equally to 'you singular' and 'you plural'.

(4.25a) pa:'.
'Drink!'

(4.25b) qai ç pa:'.
NOT YOU DRINK
'Don't drink!'

(4.25c) k^{w}ɨ' ç pɨ yǫ:'ǫ ?
POTENTIAL YOU THEM DRY-IMPERATIVE QUESTION
'Could you dry them?'

T4.22 results in potential ambiguity. Consequently, in making commands intended specifically for 'you plural' as opposed to 'you singular', the second person plural Future form is often used, as in:

(4.25d) qai tam ç pai:'b.
NOT DUB-PL YOU DRINK-FUTURE
'Don't drink (you plural)!/You plural won't drink.'

4.26. Optional deletion of second person subject marker with Direct Imperative.

T4.26. $\begin{bmatrix}+A\\-B\end{bmatrix} \frown \underline{\underline{\text{Direct}}} \frown \begin{bmatrix}+\text{Subject}\\-\text{1stPerson}\end{bmatrix} \Rightarrow$

$\begin{bmatrix}+A\\-B\end{bmatrix} \frown \underline{\underline{\text{Direct}}} \left(\begin{bmatrix}+\text{Subject}\\-\text{1stPerson}\end{bmatrix}\right)$

Compare (1.4b), in which the second person subject is marked by [ç], with:

(4.26a) čurupq Asp[Ø] Ev[Ø] Ø.
GO-IN-PUNCTUAL IMPERATIVE DIRECT YOU
'Go in!'

4.27. Second person plural subject marker adjustments.

T4.29a. $\begin{bmatrix}+\text{Subject}\\+\text{Plural}\\-\text{1stPerson}\end{bmatrix} \frown$ [+Segment] ([+Plural]) $\Rightarrow$

[+Segment] ([+Plural]) $\begin{bmatrix}+\text{Subject}\\+\text{Plural}\\-\text{1stPerson}\end{bmatrix}$

For an example, see (4.21a).

T4.27b. ([-Plural]) $\begin{bmatrix}+\text{Subject}\\+\text{Plural}\\-\text{1stPerson}\end{bmatrix} \Rightarrow$

$$\begin{bmatrix}+\text{Segment}\\+\text{Plural}\end{bmatrix}\ ([-\text{Plural}]\frown\begin{bmatrix}-\text{Segment}\\+\text{Plural}\end{bmatrix})\ \begin{bmatrix}+\text{Subject}\\-\text{1stPerson}\end{bmatrix}$$

$$\underline{\text{mɨ\#}} \qquad \underline{\text{:\#}} \qquad \underline{\text{\#ɽə\#}}$$

An example is:

(4.27a) # <u>#qáy#</u> # <u>mɨ#</u> <u>nə#</u> <u>:#</u> <u>#ɽə#</u> <u>#ma:ɽə#</u> #

qai mɨ--nɨ ɽ ma:ɽ .

NOT PLURAL-ME PLURAL YOU LISTEN

'You plural don't listen to me.'

(The boundary between <u>#qáy#</u> 'not' and <u>mɨ#</u> 'plural' is introduced in 6.1.)

4.28. First person plural object of third person subject.

T4.28. $\begin{bmatrix}+\text{Subject}\\-\text{Person}\end{bmatrix}\frown\begin{bmatrix}+\text{Segment}\\+\text{Plural}\\+\text{1stPerson}\end{bmatrix} \Rightarrow$

$$\begin{bmatrix}+\text{Subject}\\-\text{Person}\end{bmatrix}\frown\begin{bmatrix}+\text{Object}\\+\text{1stPerson}\end{bmatrix}$$

<u>čɨ'#</u>

For an example, see (1.15a).

4.29. First person plural subject with the Volitative Evidential <u>#na'a#</u> 'let's'.

T4.29. $\underline{\#na'a\#} \frown \begin{bmatrix} +Subject \\ +Plural \\ +1stPerson \end{bmatrix} \frown X \Rightarrow$

$$\underline{\#na'a\#} \left(\begin{bmatrix} +Subject \\ -1stPerson \end{bmatrix} \frown \begin{bmatrix} +Segment \\ +Plural \\ +1stPerson \end{bmatrix} \right) X$$

$\underline{\#ç\text{ɔ}\#}$ $\underline{\check{c}i\#}$

where X ≠ [+Plural]

The following pair of Sentences illustrates the optional nature of the subject-object marker with the Volitative Evidential.

(4.29a) na' pa:'. na' çič pa:'.
LET'S DRINK LET'S YOU-WE DRINK
'Let's drink!'

With plural object, the marker is the same as with other Evidentials: $\underline{\check{c}i\#} \frown \underline{mi\#} \frown \underline{:\#}$ [čimi], accounted for by T4.30a and T4.32c. An example is:

(4.29b) na' čimi xal^{y}a'.
LET'S WE-THEM TICKLE
'Let's tickle them!'

4.30. Other first person plural subject-object markers.

$$\text{T4.30a.}\quad \begin{bmatrix} \begin{Bmatrix} +\text{Subject} \\ +\text{Segment} \end{Bmatrix} \\ +\text{Plural} \\ +\text{1stPerson} \end{bmatrix} \frown X\ (\underline{\text{ʔ}}) \Rightarrow$$

$$\underset{\underline{\text{čɨ\#}}}{\begin{bmatrix} +\text{Segment} \\ +\text{Plural} \\ +\text{1stPerson} \end{bmatrix}} \frown \underset{\underline{\text{mɨ\#}}}{\begin{bmatrix} +\text{Segment} \\ +\text{Plural} \end{bmatrix}} \frown X\ (\underline{\text{ʔ}})$$

where X is non-null

For examples, see (1.4s), (1.10a), (4.29b).

$$\text{T4.30b.}\quad \begin{bmatrix} +\text{Subject} \\ +\text{Plural} \\ +\text{1stPerson} \end{bmatrix} \Rightarrow \underset{\underline{\text{čɨ\#}}}{\begin{bmatrix} +\text{Segment} \\ +\text{Plural} \\ +\text{1stPerson} \end{bmatrix}}$$

For examples, see (1.7c), (1.12i).

4.31. First person singular and third person plural subjects.

$$\text{T4.31a.}\quad \begin{bmatrix} +\text{Subject} \\ -\text{Plural} \\ +\text{1stPerson} \end{bmatrix} \Rightarrow \underset{\underline{\text{nə\#}}}{\begin{bmatrix} +\text{Segment} \\ -\text{Plural} \\ +\text{1stPerson} \end{bmatrix}}$$

For examples, see (0.3a), (1.6e-i).

T4.31b. $\begin{bmatrix}+\text{Subject}\\+\text{Plural}\\-\text{Person}\end{bmatrix} \Rightarrow \begin{bmatrix}+\text{Segment}\\+\text{Plural}\end{bmatrix}$

m̬#

For examples, see (1.6b-g-h-j-k-n).

4.32. Non-segmental plural marker after [+M] Evidentials. The arbitrary symbol M is chosen for the feature differentiating #ha# Inferential, #k^{w}ənə# Quotative, #pata# Intensive, and #ta# Dubitative, all of which are [+M], from the other Evidentials listed in (2.6b), which are [-M].

T4.32a. $[+M] \frown \begin{bmatrix}+\text{Segment}\\+\text{Plural}\\ \alpha F\end{bmatrix}$ (ʔ) # $\Rightarrow$ $[+M] \frown \begin{bmatrix}-\text{Segment}\\+\text{Plural}\\ \alpha F\end{bmatrix}$ (ʔ) #

where F is null

The non-segmental plural marker, symbolized :# (5.5), is length imposed on the preceding vowel, which length blocks the deletion of that vowel in word-final position (7.9), after which the vowel length itself is reduced (7.49). Examples of plural subjects with [+M] Evidentials are:

(4.32a) t Xa 'ɬnan atɬwani.
DUB INFERENTIAL-PLURAL KNOW HIS-NAME-ACCUSATIVE
'They must have known his name.'

(4.32b) k^{w}ɨnɨ 'a:p ra:k^{w}.
QUOTATIVE-PLURAL THERE EAT
'They ate there.'

(4.32c) ...yaŋq mitkin paça 'a'ayɨm.
BUT IT-SEEMS-LIKE INTENSIVE-PLURAL GOOD-ONES
'...but it seems like they're such good [people].'

(4.32d) ta ʂɨi:'b.
DUBITATIVE-PLURAL BLOOM-FUTURE
'They'll bloom.'

4.33. Non-segmental plural marker in other positions.

T4.33a. $[\text{-Person}] \frown \begin{bmatrix} \text{+Segment} \\ \text{+Plural} \end{bmatrix} \frown X \Rightarrow$

$$[\text{-Person}] \frown \begin{bmatrix} \text{-Segment} \\ \text{+Plural} \end{bmatrix} \frown X$$

$$\underline{:\#}$$

where X is not [+Plural]

An example is $\underline{\#pɨ\#} \frown \underline{:\#}$ [pɨ] 'them', as in:

(4.33a) k^{w}ɨ' ç pɨ 'iču'kčun.
CAN YOU THEM MAKE-BENEFACTIVE
'You could make it for them.'

T4.33b. $\begin{bmatrix}+\text{Segment}\\+\text{Plural}\\ \alpha F\end{bmatrix} \frown \begin{bmatrix}+\text{Segment}\\+\text{Plural}\end{bmatrix} \Rightarrow \begin{bmatrix}+\text{Segment}\\+\text{Plural}\\ \alpha F\end{bmatrix} \frown \begin{bmatrix}-\text{Segment}\\+\text{Plural}\end{bmatrix}$

$\underline{\text{m̩\#}}$ $\underline{\text{:\#}}$

where F is null

An example is $\underline{\#} \frown \underline{\text{č̩\#}} \frown \underline{\text{m̩\#}} \frown \underline{\text{:\#}}$ [č̩m̩] 'us-plural', as in:

(4.33b) qai č̩m̩ ç ma:ç.
NOT US-PLURAL YOU LISTEN
'You plural don't listen to us.'

4.34. Deletion of second person singular subject.

T4.34. $\begin{bmatrix}+\text{Subject}\\-\text{Plural}\\-\text{1stPerson}\end{bmatrix} \left\{ \begin{matrix} X \\ \underline{?} \end{matrix} \underline{(\text{Past})}\ \underline{(?)} \right\} \Rightarrow \left\{ \begin{matrix} X \\ \underline{?} \end{matrix} \underline{(\text{Past})}\ \underline{(?)} \right\}$

where X is non-null

The deletion of second person singular subject before marked object is illustrated by (4.34a). Compare this

(4.34a) ta- Ø -p̩ ti̩hib.
DUB (YOU) THEM TELL-FUTURE
'You'll tell them.'

with (4.34b), where the object is unmarked (cf. T4.20).

(4.34b) ta-m' ti‡hib.
DUB-YOU TELL-FUTURE
'You'll tell him.'

Possible ambiguity results from the deletion of the second person singular subject in non-past questions, as in (4.34c).

(4.34c) t‡:'ai t ?
ROAST-ACC DUB QUESTION
'Are you roasting it? / Is she roasting it?'

This ambiguity may be resolved by the inclusion of the appropriate Determiner, as in (4.34d-e).

(4.34d) t‡:'ai t ? '‡mi'.
ROAST-ACC DUB QUESTION YOU
'Are you roasting it?'

(4.34e) t‡:'ai t ? 'ama'.
ROAST-ACC DUB QUESTION SHE
'Is she roasting it?'

5. MORPHOLOGY

5.0. In this section phonological material is related to syntactic material introduced other than lexically. In this presentation, the symbol $\overset{m}{\rightarrow}$ is to be understood as meaning that the phonological material to the right is associated with the syntactic material to the left. A statement of this sort is referred to as a "morphological" rule.

Ideally, no phonological material would be introduced in the phrase-structure rules and all grammatical formatives would be associated with appropriate phonological representation in this section. For reasons of convenience, various phonological representations have been introduced in the PS rules, but for completeness, the following morphological rules should be included:

(5.0a) Dubitative $\overset{m}{\rightarrow}$ #ta# (< 1.4)

(5.0b) Question $\overset{m}{\rightarrow}$? (< 1.4)

(5.0c) Accusative $\overset{m}{\rightarrow}$ yə# (< 1.8, 1.11)

(5.0d) Motion $\overset{m}{\rightarrow}$ çu'a# (< 1.11)

(5.0e) Resultative $\overset{m}{\rightarrow}$ ɨ'ɨ# (< 1.14)

(5.0f) Punctual $\overset{m}{\rightarrow}$ qə# (< 1.14)

5.1. Phonological forms of Determiners (Det).

(5.1a) [+Det, +Plural, +1stPerson] $\overset{m}{\rightarrow}$ ǩa# 'we, us, our'

(5.1b) [+Det, -1stPerson] $\overset{m}{\rightarrow}$ #'ə# 'you, your'

(5.1c) [+Det, -Person] $\overset{m}{\rightarrow}$ hV+#

(5.1d) [+Det, +Proximate] $\overset{m}{\rightarrow}$ #'ibi# 'this'

(5.1e) [+Det, -Proximate] $\overset{m}{\rightarrow}$ #'amaˇ# 'that, he, she, it, ...'

(5.1f) [+Det, -Determinate, +Human] $\overset{m}{\rightarrow}$ #hami# 'who, someone, anyone'

(5.1g) [+Det, -Determinate, -Human] $\overset{m}{\rightarrow}$ #hí:+#

5.2. Phonological forms of "Segments."

(5.2a) [+Segment, +Plural, +1stPerson] $\overset{m}{\rightarrow}$ ǩɨ# 'we, us'

(5.2b) $\begin{bmatrix}+\text{Segment}\\-\text{Plural}\\+\text{1stPerson}\end{bmatrix} \overset{m}{\rightarrow}$ nə# 'I, me, my'

(5.2c) $\begin{bmatrix}+\text{Segment}\\-\text{Plural}\\-\text{1stPerson}\end{bmatrix} \overset{m}{\rightarrow}$ mə# 'you, your'

(5.2d) $\begin{bmatrix}+\text{Segment}\\+\text{Plural}\end{bmatrix} \overset{m}{\rightarrow}$ m$\dot{\text{i}}$# 'they, them, their, plural'

(5.2e) $\begin{bmatrix}+\text{Segment}\\-\text{Plural}\end{bmatrix} \overset{m}{\rightarrow}$ ta# 'singular'

(5.2f) $\begin{bmatrix}+\text{Segment}\\-\text{Person}\end{bmatrix} \overset{m}{\rightarrow}$ #p$\dot{\text{i}}$# 'him, his, them, their'

(5.2g) $\begin{bmatrix}+\text{Segment}\\+\text{Proximate}\end{bmatrix} \overset{m}{\rightarrow}$ #'i#

(5.2h) $\begin{bmatrix}+\text{Segment}\\-\text{Proximate}\end{bmatrix} \overset{m}{\rightarrow}$ #'a#

(5.2i) $\begin{bmatrix}+\text{Segment}\\-\text{Determinate}\end{bmatrix} \overset{m}{\rightarrow}$ #hahi#

5.3. Phonological forms of "Subjects."

(5.3a) $\begin{bmatrix}+\text{Subject}\\-\text{Plural}\\-\text{1stPerson}\end{bmatrix} \overset{m}{\rightarrow}$ m'#

(5.3b) $\begin{bmatrix}+\text{Subject}\\-\text{1stPerson}\end{bmatrix} \overset{m}{\rightarrow}$ #ɕə#

(5.3c) $\begin{bmatrix}+\text{Subject}\\-\text{Plural}\\-\text{Person}\end{bmatrix} \overset{m}{\rightarrow}$ bi#

The first person object marker.

(5.4a) $\begin{bmatrix}+\text{Object}\\+\text{1stPerson}\end{bmatrix} \overset{m}{\rightarrow}$ ɤi'#

5.5. The non-segmental plural marker.

(5.5a) $\begin{bmatrix}-\text{Segment}\\+\text{Plural}\end{bmatrix} \overset{m}{\rightarrow}$ |+Tense |#

The preceding vowel is made long (7.2). |+Tense |# is symbolized alphabetically as :#. (See 6.0 for the distinctive features of Serrano.)

5.6. Past tense.

(5.6a) Past $\overset{m}{\rightarrow}$ |+Stressed |#

The preceding vowel is stressed (7.3). |+Stressed |# is symbolized alphabetically as ´#. The phonetic result of (5.6a) is that when the subject-object marker involved ends in a short vowel, the Past tense form ends in that vowel

followed by a glottal stop (cf. rule 7.31 and many examples of Past tense throughout). If, however, the subject-object marker ends in a long vowel, that is, when its last part is $\begin{bmatrix}-\text{Segment}\\+\text{Plural}\end{bmatrix}$ (5.5a), then the Past:non-past opposition is neutralized (7.48). Also, when the last segment of the subject-object marker is not a vowel, as in the case of ǩi'# (5.4a) and m'# (5.3a), the Past:non-past opposition is neutralized as well (7.4).

5.7. Reflexive.

(5.7a) Reflexive $\overset{m}{\rightarrow}$ #táqa+#

The Reflexive #táqa+# is very similar in form to the Noun #tá:qa+# 'person', and the two words are probably related etymologically, but no way to relate them syntactically in the contemporary language has been found.

5.8. Genitive case.

(5.8a) Gen $\overset{m}{\rightarrow}$ ±(ˊ)#

(ˊ) is a notation indicating that the preceding vowel may or may not be stressed. An example is:

(5.8b) #'a# ⌢ #yəkə# ⌢ i(́)# ⌢ # ⌢ #'a# ⌢ #u:bá#
'a- ⌢ -yik (-i) 'o- ⌢ -u:ba'
HIS MOTHER'S HER EYE

'his mother's eye'

5.9. Absolutive suffix (cf. section 2.1.7).

(5.9a) [+Absolutive] $\overset{m}{\rightarrow}$ ta#

5.10. Some illustrative paradigms. Much of the output of sections 4 and 5 can be displayed in tabular form as follows.

5.10.1. The possessive prefixes.

(5.10a)

	-Plural	+Plural
+1stPerson	nə#	{ ǩa# / ǩi# }
-1stPerson	mə#	#'ə# ⌢ :#
-Person	#'a#	#pi# ⌢ :#

5.10.2. The adverbial possessive prefixes.

(5.10b)

	-Plural	+Plural
+1stPerson	nə# ⌢ hV+#	{ #'i# / #'a# } ǩa# ⌢ mi#
-1stPerson	#'ə# ⌢ mə# ⌢ hV+#	#'ə# ⌢ mə# ⌢ :#
-Person	#pi#*	#pi# ⌢ mi#

*#p±# 'him, her, it' is later (T6.2) adjusted to #p±#⌒na# before vowels.

5.10.3. The Determiners.

(5.10c)

	-Plural	+Plural
+1stPerson	nə#⌒hV+#	{#'i# / #'a#} ⌒a#⌒m±#
-1stPerson	#'ə#⌒mə#⌒hV+#*	#'ə#⌒hV+#⌒m±#
+Proximate	#'ibi#	#'i#⌒hV+#⌒m±#
-Proximate	#'amaˇ#	#'a#⌒hV+#⌒m±#
[-Determinate +Human]	#hami#	#hahi#⌒hV+#⌒m±#
[-Determinate -Human]	#hí:+#⌒ta#	

*#'ə#⌒mə#⌒hV+# 'you singular' is later (T6.14) adjusted to #'ə#⌒mə#⌒i'# when not followed by Accusative case or Adverb of time-space.

5.10.4. The subject-object agreement patterns. There are no [αlstPerson] objects of [αlstPerson] subjects because of the reflexivization transformation (T3.1.2).

5.10.4.1. In the case of first person subjects, second and third person object markers merge (T4.19).

(5.10d)

	I	we
you, him, no object	nə#	ǰi# (mi#)
you plural, them	nə#⌒:#	ǰi#⌒mi#⌒:#

5.10.4.2. Second person subjects.

(5.10e)

	you singular	you plural
me	ǰi'#	mi#⌒nə#⌒:#⌒#ɕə#
us	(*)	ǰi#⌒mi#⌒:#⌒#ɕə#
(him)	(#ɕə#) ~ m'#	mi#⌒#ɕə#
them	(#ɕə#) #pi#⌒:#	#pi#⌒mi#⌒:#⌒#ɕə#

*No clear example involving 'you singular-us' was collected.

5.10.4.3. Third person subjects.

(5.10f)

	he	they
me	bi#⌒nə#	mi#⌒nə#
me-them	bi#⌒nə#⌒:#	mi#⌒nə#⌒:#
us	bi#⌒ǰi'#	mi#⌒ǰi'#
you singular	mə#	mə#
you plural	mə#⌒:#	mə#⌒:#
(him)	(bi#)*	mi# ~ :#**
them	bi#⌒:#	mi#⌒:#

*bi# cooccurs with Past; otherwise 'he(-him)' is zero.

**:# cooccurs with [+M] Evidentials with no Past tense (4.32).

6. POST-MORPHOLOGICAL TRANSFORMATIONS

6.0. This section includes late restructurings and reorderings, including mention of stylistic reordering, and transformations whose effects are almost entirely phonological.

The boundary between the transformations of the present section and the phonological rules of section 7 is somewhat difficult to draw. This suggests there may be a useful distinction to be made between the base component (sections 1 and 2), which specifies deep structure, and all the remainder of the operations, including phonological rules, which map deep structure into surface form (sections 3 through 7).

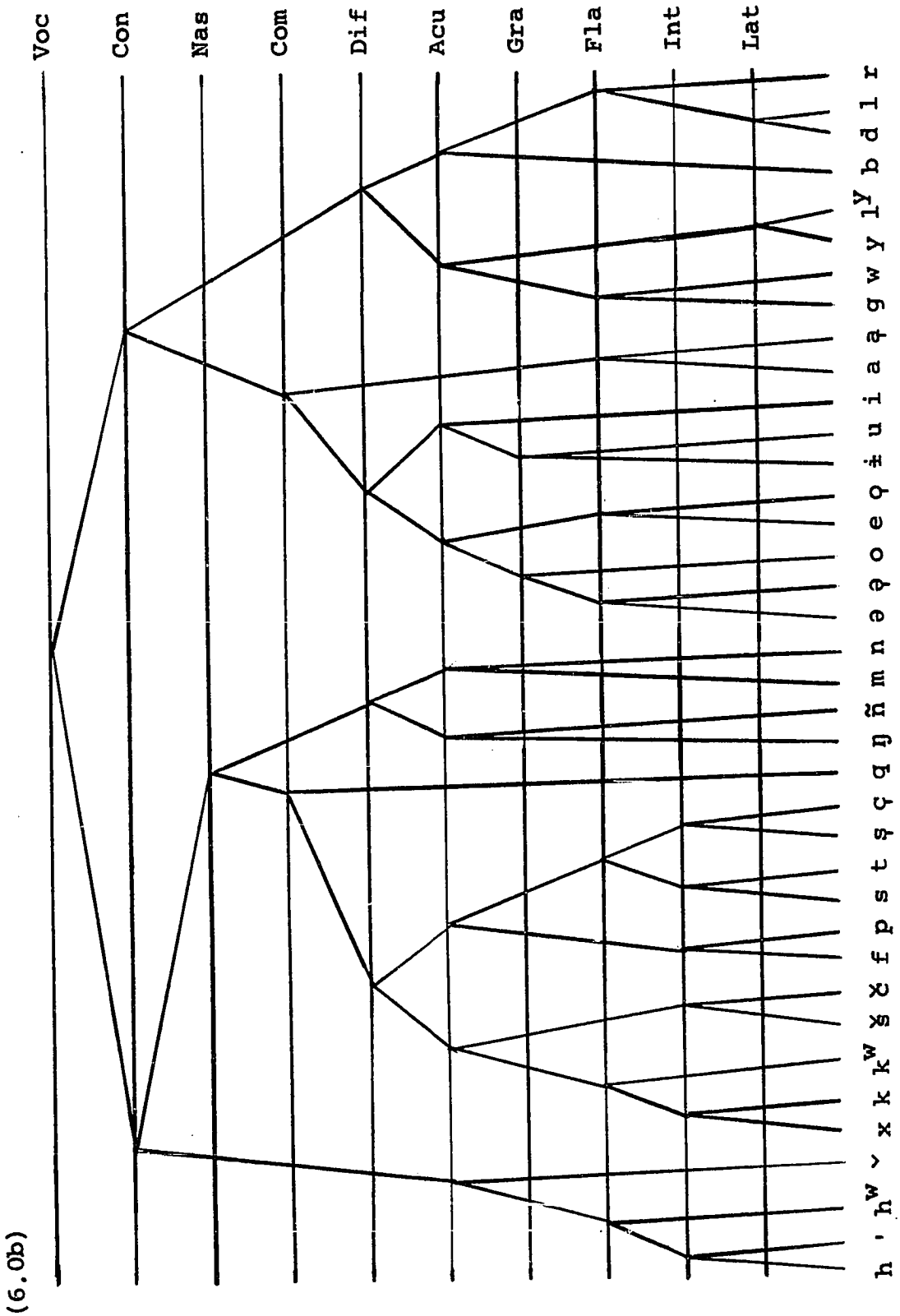
The rules of this section, as well as those of section 7, assume an underlying morphophonemic system represented by an alphabet consisting of the boundaries #, ±, and the segments defined by a distinctive feature scheme as specified first in the tree diagrams (6.0b-c) and then somewhat more fully (including a number of redundant specifications) in the tables (6.0d-e). No attempt is made here to distinguish between redundant and non-redundant features in the rules.

The following are abbreviations for distinctive features:

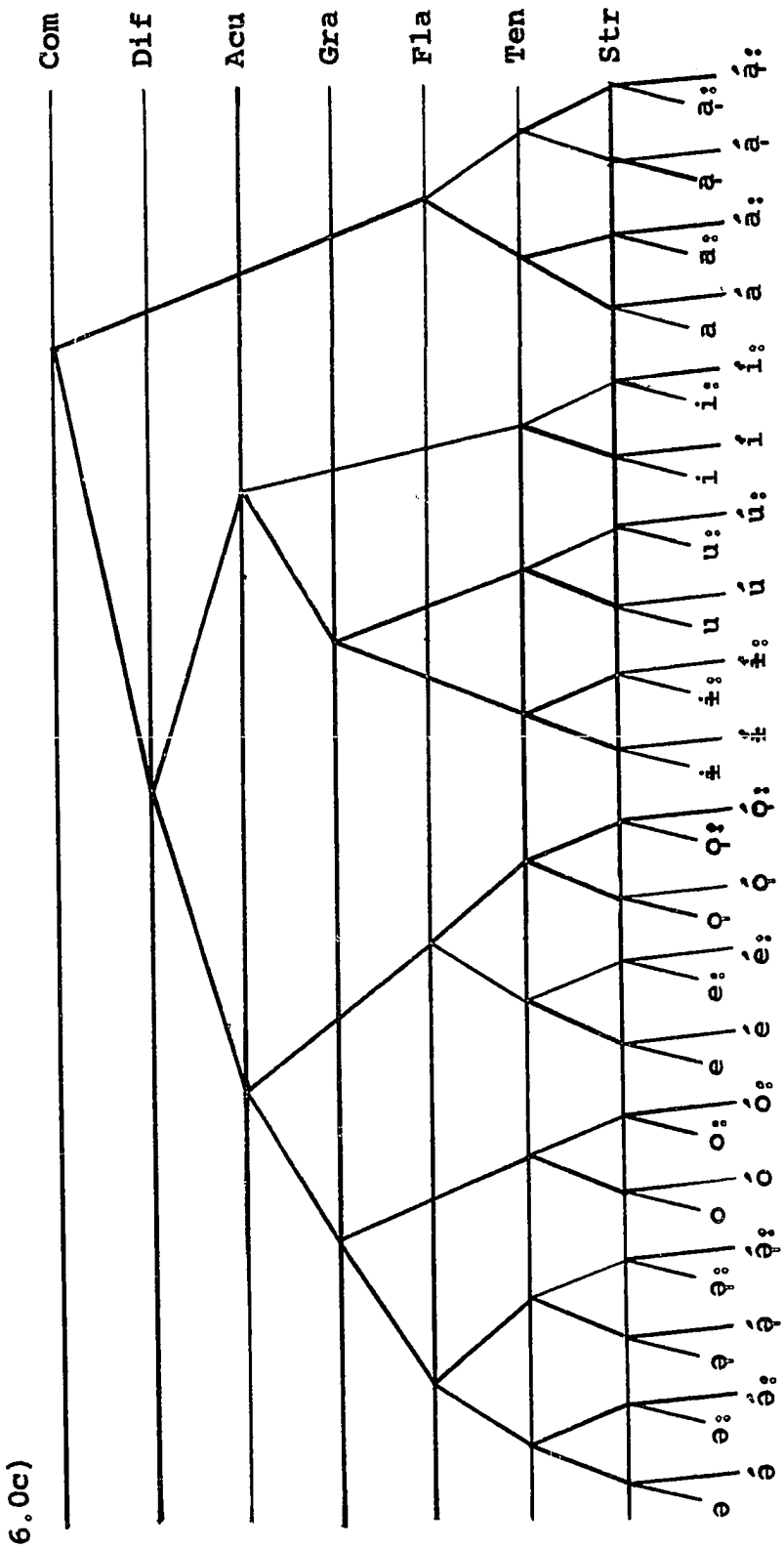
(6.0a)

Seg = Segment	Gra = Grave
Voc = Vocalic	Fla = Flat
Con = Consonantal	Int = Interrupted
Nas = Nasal	Lat = Lateral
Com = Compact	Ten = Tense
Dif = Diffuse	Str = Stressed
Acu = Acute	Fea = Feature

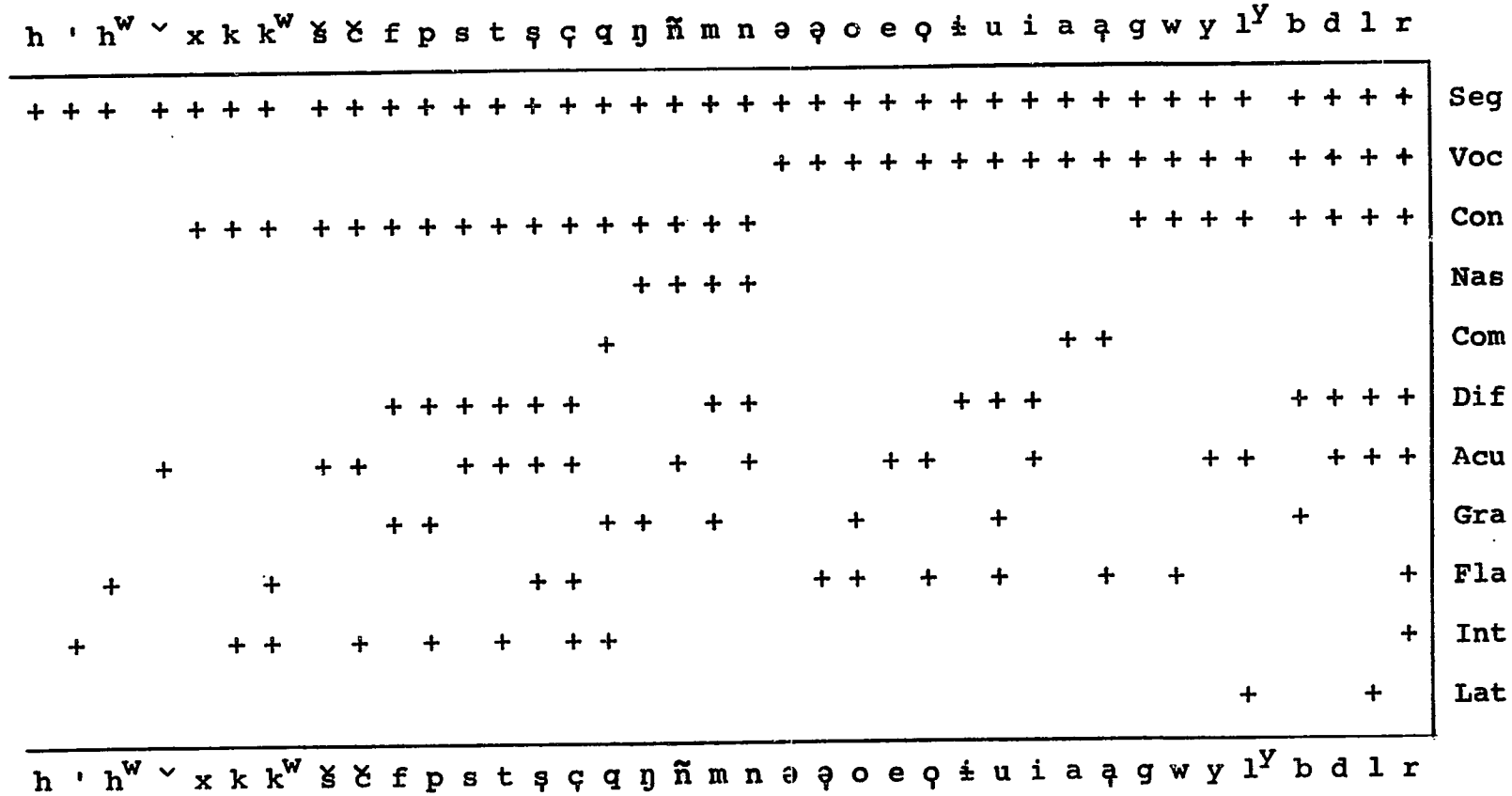
This presentation is unusual in distinguishing the feature Lateral, which differentiates l from d, and l^{y} from y. "Feature" is used to refer to all features of a segment not otherwise mentioned, as, for example, in T6.9.



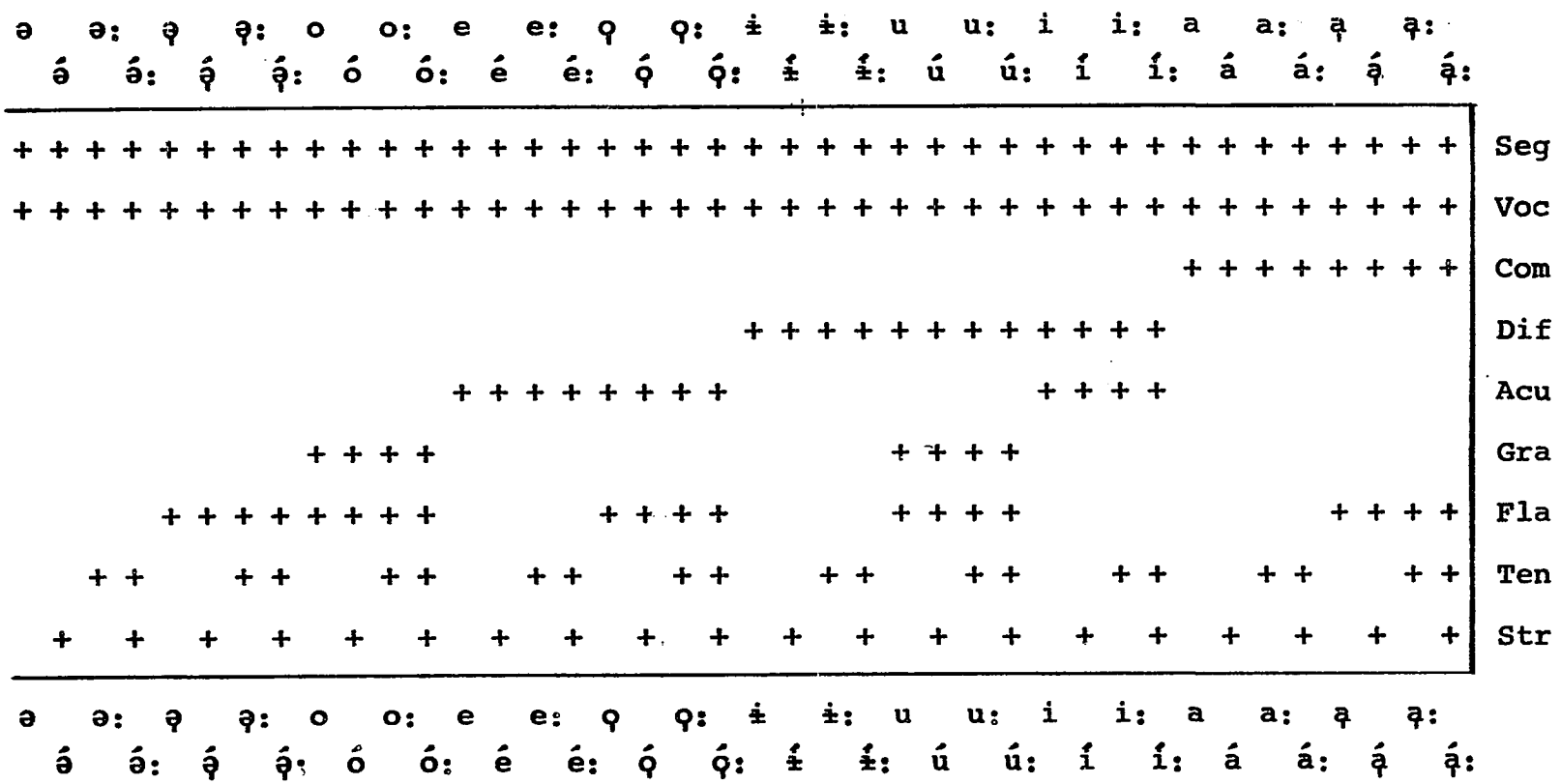
(6.0b)



(6.0d)



(6.0e)



6.1. Word boundary adjustments with subject-object markers.

T6.1a. [-M]⌢X ⇒ [-M] (#) X

where X is a non-null phonological representation which does not begin with # or ʔ

(For [±M] Evidentials, see 4.32.) T6.1a allows for the fact that certain subject-object markers may or may not be suffixed to preceding material. Compare ['ačam č], below, which has the # introduced by T6.1a, with the syntactically identical ['ačam±č] in (3.2.8c), which lacks the word boundary.

(6.1a) 'ačam Ø č harupq.
WE DIRECT WE GET-DOWN
'We got down.'

T6.1b. X⌢#⌢[+Segment] ⇒ X⌢[+Segment]

where X⌢# is the phonological representation of a [+M] Evidential

An example is:

(6.1b) $\underline{\#ta\#}\frown\ \underline{\#p\dot{\imath}\#}\frown\ \underline{:\#}\ \Rightarrow$

DUB $\begin{bmatrix}+\text{Segment}\\-\text{Person}\end{bmatrix}\ \begin{bmatrix}-\text{Segment}\\+\text{Plural}\end{bmatrix}$

$\underline{\#ta}\frown\ \underline{\#p\dot{\imath}\#}\frown\ \underline{:\#}$

DUB $\begin{bmatrix}+\text{Segment}\\-\text{Person}\end{bmatrix}\ \begin{bmatrix}-\text{Segment}\\+\text{Plural}\end{bmatrix}$

as in (4.33a).

6.2. Introduction of $\underline{na\#}$ in third person singular adverbial possessive prefix.

T6.2. $\begin{bmatrix}+\text{Segment}\\-\text{Person}\end{bmatrix}\frown\left|\begin{matrix}+\text{Voc}\\-\text{Con}\end{matrix}\right| \Rightarrow \begin{bmatrix}+\text{Segment}\\-\text{Person}\end{bmatrix}\frown\underline{na\#}\frown\left|\begin{matrix}+\text{Voc}\\-\text{Con}\end{matrix}\right|$

$\underline{\#p\dot{\imath}\#}$ $\underline{\#p\dot{\imath}\#}$

Examples (with the first person singular forms for comparison) are:

(6.2a) $\underline{\#p\dot{\imath}\#}\frown\underline{na\#}\frown\underline{uk\ə\#}$ p$\dot{\imath}$nuk^{w} 'alone by himself'

$\underline{\#n\ə\#}\frown\underline{hV+\#}\frown\underline{uk\ə\#}$ nouk^{w} 'alone by myself'

$\underline{\#p\dot{\imath}\#}\frown\underline{na\#}\frown\underline{V:na\#}$ p$\dot{\imath}$na:n 'like that'

$\underline{\#n\ə\#}\frown\underline{hV+\#}\frown\underline{V:na\#}$ n$\dot{\imath}$:n 'like me'

6.3. Past tense questions with second person singular subject.

T6.3. $\#\left|\begin{matrix}\underline{t}\\ +\text{Dif}\\ \alpha\text{Fea}\end{matrix}\right|\begin{matrix}\underline{a}\\ \beta\text{Fea}\end{matrix}\left|\#\frown\left[\begin{matrix}+\text{Subject}\\ -\text{Plural}\\ -\text{1stPerson}\end{matrix}\right]\frown\underline{\text{Past}}\frown\underline{?}\right. \Rightarrow$

DUBITATIVE — $\underline{m'\#}$

$\#\left|\begin{matrix}\underline{č}\\ -\text{Dif}\\ \alpha\text{Fea}\end{matrix}\right|\begin{matrix}\underline{a}\\ \beta\text{Fea}\end{matrix}\left|\#\frown\left[\begin{matrix}+\text{Subject}\\ -\text{Plural}\\ -\text{1stPerson}\end{matrix}\right]\frown\underline{?}\right.$

DUBITATIVE — $\underline{m'\#}$

In questions with second person singular subject, Past is absorbed into the Dubitative Evidential with modification of the initial t of #ta# to č, as in (6.3a). Note that t

(6.3a) 'ɨmi' ča-m' pa:'i ?
YOU DUB-PAST-YOU DRINK-ACC QUESTION
'Did you singular drink?

remains with plural subject, as in (6.3b), and with non-past, as in (6.3c).

(6.3b) 'ɨ:m ta-m çɨ-' pa:'i ?
YOU-PL DUB-PL YOU-PAST DRINK-ACC QUESTION
'Did you plural drink?

(6.3c) ta-m' pai:'b.
DUB-YOU DRINK-FUTURE
'You singular will drink.'

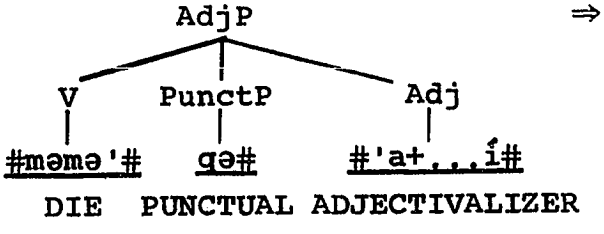
6.4. Discontinuous representations of lexical items.

T6.4. $X[Y \frown Z[\underline{A...B}]] \Rightarrow X[\underline{A} \frown Y \frown \underline{B}]$

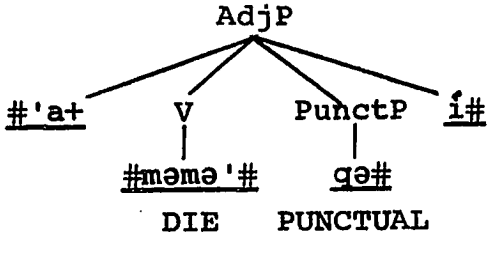
where A...B is the phonological representation of some member of the category Z, and Y and Z are both immediately dominated by X

Examples are:

(6.4a)



⇒

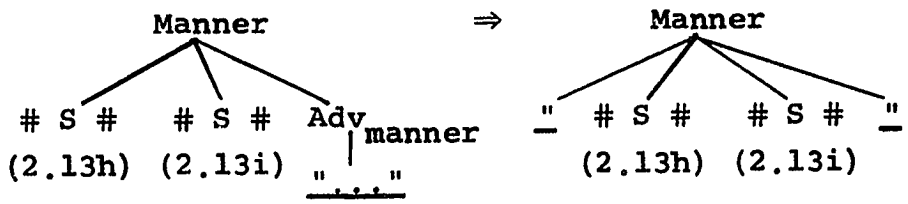


['amɨm'ki']

'dead'

(as in 1.13d)

(6.4b)



(as in (2.13d-e-g))

6.5. The incorporation of post-verbal material into the Verb stem and the destruction of the Verbal-Phrase and Verbal Auxiliary nodes.

T6.5. $VblP[X \frown V[Y \frown [+V]] \frown Z] \frown Aux_V[(Freq)\ A \frown \underline{yə\#}] \Rightarrow$

$$X \frown V[Y\ (Freq)\ [+V] \frown Z \frown A] \frown \underline{yə\#}$$

This material must be dominated by V for T6.6. For examples of Frequentatives found before Verbs, see 2.14.

6.6. The reordering of Accusative case and Aspect and the destruction of the Auxiliary and Predicate nodes.

T6.6a. $Pred[W \frown V[X] \frown \underline{yə\#}] \frown Aux[Asp[[+A] \frown Y] \frown Z] \Rightarrow$

$$W \frown V[X \frown Asp[[+A] \frown Y] \frown \underline{yə\#}$$

Future Aspect, which is [+A] (see section 2.5.3), must be

dominated by V for the operation of T6.26b-c; but qá# Going-to and i+# Completive, which are [-A], are not dominated by V, as is specified below.

T6.6b. Pred[X⌢yə#]⌢Aux[[-A]⌢Y] ⇒ X⌢[-A]⌢yə#⌢Y

An example is:

(6.6a) Pred[#miha:#⌢yə#]⌢Aux[qá#⌢Direct⌢#⌢nə#] ⇒
GO ACC GOING-TO I

#miha:#⌢qá#⌢yə#⌢Direct⌢#⌢nə#
GO GOING-TO ACC I

[mia:qai n] 'I'm going to go.'

6.7. Substitution of wəna# for ɨ'ɨ#⌢qə# (Resultative⌢Punctual) with the Verbs #čǫnu'# and #čǫnǫn# 'stand, stop'.

T6.7. $\left\{ \begin{matrix} \#čǫnu'\# \\ \#čǫnǫn\# \end{matrix} \right\}$ ɨ'ɨ#⌢qə# ⇒ $\left\{ \begin{matrix} \#čǫnu'\# \\ \#čǫnǫn\# \end{matrix} \right\}$ wəna#

Examples are:

(6.7a) 'ama' wɨçɨşç ka:pa' čǫnu'wɨn.
THAT MAN STAND-RESULTATIVE

'That man Ka:pa' was standing (there).'

(6.7b) 'a:pia č čɣɬǫɳwɨn.
THERE WE STAND-RESULTATIVE
'There we stood.'

6.8. Deletion of gə# Punctual and ina# Causative.

T6.8a. $\text{PunctP}[X \frown \underline{gə\#}]$ $(\underline{ina\#})$ $\begin{bmatrix}+A\\-C\end{bmatrix}$ $\Rightarrow$ $\text{PunctP}[X]$
PUNCTUAL CAUSATIVE PERFECTIVE

Examples are [mɨmɨ'] 'dead' and [mɨɳɨ'] 'swallowed', as in (2.5d).

Presumably the perfective forms of other than Q-class verbs should be accounted for at this point, but the patterns appear to be quite irregular and there are so few examples that the subject is abandoned with their mention in section 2.5.5.

T6.8b. $\underline{\#} \mid +\text{Seg} \mid (\underline{+}) \mid \begin{matrix}+\text{Voc}\\-\text{Con}\\-\text{Ten}\end{matrix} \mid +\text{Seg} \mid \begin{matrix}+\text{Voc}\\-\text{Con}\\-\text{Ten}\end{matrix} \mid \underline{\#} \frown \text{PunctP} \frown \underline{aba\#} \frown$
ITERATIVE

$\underline{ina\#}$ $\Rightarrow$
CAUSATIVE

$\underline{\#} \mid +\text{Seg} \mid (\underline{+}) \mid \begin{matrix}+\text{Voc}\\-\text{Con}\\-\text{Ten}\end{matrix} \mid +\text{Seg} \mid \begin{matrix}+\text{Voc}\\-\text{Con}\\-\text{Ten}\end{matrix} \mid \underline{\#} \frown \underline{mV\#} \frown$ $\underline{ina\#}$
ITERATIVE CAUSATIVE

T6.8c. $\underline{gə\#} \frown$ $\underline{aba\#} \frown$ $\underline{ina\#}$ $\Rightarrow$ $\underline{aba\#}$
PUNCTUAL ITERATIVE CAUSATIVE ITERATIVE

For discussion and examples for T6.8b-c, see 2.14.4.

6.9. Metathesis in Q-class Verbs (1.12.1) and the destruction of the Punctual-Phrase node (cf. section 1.14.1).

T6.9.

+Voc αTen +Str βFea	(+)C	+Voc -Ten -Str γFea	#⌢PunctP[X] ⇒

+Voc -Ten -Str βFea	+Voc αTen +Str γFea	(+)C#⌢X

Examples are:

(6.9a) #bí:+ru#⌢qə# ⇒ #biú:+r#⌢qə# [biu:rq] 'roll up'

#čǫ́:či#⌢qə# ⇒ #čǫí·č#⌢qə# [čǫi:čq] 'shrivel'

#pí+ti#⌢ɨ'ɨ#⌢qə# ⇒ #pií+t#⌢ɨ'ɨ#⌢qə# [pitɨ'q] 'it's full (Resultative)'

#qá+tu#⌢ɨ'ɨ#⌢qə# ⇒ #qaú+t#⌢ɨ'ɨ#⌢qə# [q^{w}outu'q] 'it's cut (Resultative)'

6.10. Deletion of the first of a pair of vowels in sequence with intervening #.

T6.10. $\left|\begin{matrix}+\text{Voc}\\-\text{Con}\\ \alpha\text{Str}\end{matrix}\right|\ \underline{(+)\#}\ \left|\begin{matrix}+\text{Voc}\\-\text{Con}\\ \beta\text{Str}\\ \gamma\text{Fea}\end{matrix}\right| \Rightarrow \left|\begin{matrix}+\text{Voc}\\-\text{Con}\\ \delta\text{Str}\\ \gamma\text{Fea}\end{matrix}\right|$

where if either α or β = +, then δ = +

Examples are:

(6.10a) #qə́#⌢ib#⌢yə# ⇒ #q⌢íb#⌢ yə# [kibi] 'say (Future)'
SAY FUTURE ACC SAY-FUTURE ACC

#mǫ́:'a+#⌢ib# ⇒ #mǫ́:'⌢ib# [mǫi:'b] 'smoke (Future)'
SMOKE FUTURE SMOKE FUTURE

6.11. Restructuring of possessive prefixes.

T6.11. NP[NomP⌢Gen⌢X⌢#⌢Y] ⇒ NP[NomP⌢Gen⌢X⌢±⌢Y]

where Y is dominated by N but X⌢# is not

Thus, the forms cited in (5.10a) are respecified as:

(6.11a)

	-Plural	+Plural
+1stPerson	nə+	{ ǩa+ / ǩi+ }
-1stPerson	mə+	#'ə#⌢:+
-Person	#'a+	#pi#⌢:+

such that there is no word boundary (##) between the possessive prefix and the following Noun, and yet the stem-initial consonant of the Noun remains unaffected by the various rules operating on postvocalic consonants.

6.12. Imperatives of Verbs of the shape #Ci $\left\{ \begin{matrix} ' \\ h \end{matrix} \right\}$ V#.

T6.12.

#	+Seg	+Voc -Con +Dif +Acu αTen	-Voc -Con	+Voc -Con βFea	# ⌢ [+A, -B] ⇒ IMPERATIVE

#	+Seg	+Voc -Con +Dif +Acu -Ten -Str	+Voc -Con βFea αTen +Str	-Voc -Con	#

Examples are:

(6.12a) #ǩi'a# ⌢ [+A, -B] ⇒ #ǩiá'# [ǩia'] 'pick it up!'

#pi:'a# ⌢ [+A, -B] ⇒ #piá:'# [pia:'] 'throw it!'

#ñíha:# ⌢ [+A, -B] ⇒ #ñiá:h# [ñia] 'do it!'

#hihɨ́# ⌢ [+A, -B] ⇒ #hiɨ́h# [hiɨ] 'look at it!'

6.13. Restructuring possessed Nouns. Possessed forms of Nouns seem best describable as derived from the non-possessed forms, rather than the other way around.

T6.13a. $X \frown \left|\begin{matrix}+\text{Voc}\\-\text{Con}\end{matrix}\right| \left\{\begin{matrix}\breve{\ }\\ \pm\end{matrix}\right\} \underline{\#} \frown Y \Rightarrow X \frown \left|\begin{matrix}+\text{Voc}\\-\text{Con}\end{matrix}\right| \frown \underline{\#} \frown Y$

where $X \frown \left|\begin{matrix}+\text{Voc}\\-\text{Con}\end{matrix}\right| \left\{\begin{matrix}\breve{\ }\\ \pm\end{matrix}\right\} \underline{\#}$ is the phonological representation of some [+N, +[NomP__], ...], and $Y \neq Adv_{TS}$

Examples are:

(6.13a) /#ṣá:wa+#⌢ta#⌢yə#/ ṣa:wt 'bread (Acc)' /#nə+⌢#ṣá:wa#⌢ta#⌢yə#/ niṣa:wc̣i 'my bread (Acc)'

/#ubá:ˇ#⌢ta#⌢yə#/ h^{w}uba:čˇi 'eye (Acc)' /#nə+⌢#ú:ba#⌢ta#⌢yə#/ nou:bc̣i 'my eye (Acc)'

Note that the following is an exception to the deletion of ˇ, inasmuch as the preceding segment is a consonant.

(6.13b) /#nə+⌢#pulinˇ#⌢ta#⌢yə#/ nɨpulinčˇi 'my (woman's) daughter (Acc)'

T6.13b. $NP[X \frown Y \frown \left|\begin{matrix}+\text{Ten}\\+\text{Str}\end{matrix}\right| \frown Z \frown \left|\begin{matrix}+\text{Voc}\\-\text{Con}\end{matrix}\right| \underline{\#}] \Rightarrow$

$$NP[X \frown Y \frown \left|\begin{matrix}+Ten\\-Str\end{matrix}\right| \frown Z \frown \left|\begin{matrix}+Voc\\-Con\\+Str\end{matrix}\right| \#]$$

where $Y \frown \left|\begin{matrix}+Ten\\+Str\end{matrix}\right| \frown Z \frown \left|\begin{matrix}+Voc\\-Con\end{matrix}\right| \#$ is the phonological representation of some [+N, +SgSuffix]

Examples are:

(6.13c)

#ṣá:wa+# ⌢ ta#	#nə+ ⌢ #ṣa:wá#
ṣa:wt 'bread'	niṣa:wa' 'my bread'
#čamaqá:na#	#nə+ ⌢ #ča:maqaná#
čamaqa:n 'think'	niča:mχana' 'my thought'
#nə+ ⌢ #hí:nV+tu'a# ⌢ ta# ⌢ yə#	#nə+ ⌢ #hi:nV+tu'á#
nɨhi:ntua'çi 'my wife (Acc)'	nɨhi:ntu'a' 'my wife'

T6.13c. $\#(|+Seg|)|-Ten|\frown X \frown |+Ten|\frown Y \Rightarrow$

$\#(|+Seg|)|+Ten|\frown X \frown |-Ten|\frown Y$

where $\#(|+Seg|)|-Ten|\frown X \frown |+Ten|\frown Y$ is the phonological representation of some [+N, +[NomP___]]

Examples are:

(6.13e) #paqá:+# ⌢ ta#
paqɨ:t 'shirt'

#nə+ ⌢ #pa:qá#
nɨpa:qɨ' 'my shirt'

#ubá:ˇ# ⌢ ta#
h^{w}uba:č 'eye'

#nə+ ⌢ #u:bá#
nou:ba' 'my eye'

#hǫrǫ:+pí'ibə# ⌢ ta#
h^{w}ǫrǫ:pi'bɨç
'deep basket'

#nə+ ⌢ #hǫ:rǫ+pí'ibə#
nɨh^{w}ǫ:h^{w}pi'b
'my deep basket'

T6.13d. NP[X ⌢ #(| +Seg |)| -Str |⌢ Y ⌢ | +Str |⌢ Z ⌢ A] ⇒

NP[X ⌢ #(| +Seg |)| +Str |⌢ Y ⌢ | -Str |⌢ Z ⌢ A]

where #(| +Seg |)| -Str |⌢ Y ⌢ | +Str |⌢ Z is the phonological representation of some [+N, +[NomP__]] and A is non-null

An example is:

(6.13f) #ubá:ˇ# ⌢ ta#
h^{w}uba:č 'eye'

#nə+ ⌢ #ú:baˇ# ⌢ pa#
nou:bp 'in my eye'

T6.13e. NP[NomP ⌢ Gen ⌢ X ⌢ # | +Seg | +Voc / -Con |⌢ Y] ⌢ Z ⇒

NP[NomP ⌢ Gen ⌢ X ⌢ # | +Seg | +Voc / -Con / +Str |⌢ Y] ⌢ Z

where $\underline{\#}\,|+\text{Seg}\,|\begin{matrix}+\text{Voc}\\-\text{Con}\end{matrix}|\frown Y$ is the phonological representation of some [+N, +[NomP __]], and Y does not contain |+Str|, and Z ≠ Case (in the sense of 3.1.12)

Examples are:

(6.13g) $\underline{\#nə+}\frown\underline{\#ku\#} \Rightarrow \underline{\#nə+}\frown\underline{\#kú\#}$ [nɨkʷu'] 'my fire'

$\underline{\#nə+}\frown\underline{\#ʂu:ŋa\#} \Rightarrow \underline{\#nə+}\frown\underline{\#ʂu:ŋa\#}$ [niʂu:ŋʷ] 'my (man's) daughter'

6.14. Adjustment of second person singular Determiner.

T6.14. $\begin{bmatrix}+\text{Segment}\\-\text{1stPerson}\end{bmatrix}\frown\begin{bmatrix}+\text{Det}\\-\text{Person}\end{bmatrix}\left\{\begin{matrix}\#\\\underline{\#}\end{matrix}\right\} \Rightarrow$

$\underline{mə\#}$ $\underline{hV+\#}$

$\begin{bmatrix}+\text{Segment}\\-\text{1stPerson}\end{bmatrix}\frown\underline{i'\#}\left\{\begin{matrix}\#\\\underline{\#}\end{matrix}\right\}$

An example including $\underline{\#'ə\#}\frown\underline{mə\#}\frown\underline{i'\#}$ ['ɨmi'] is (0.3b).

6.15. Reduplication. A number of lexical items (see section 2.14.6 for many examples) and also the morphologically introduced $\underline{hV+\#}$ (5.1c) are specified in terms of the symbols $\underline{C}$ and $\underline{V}$ rather than exclusively in terms of the alphabet or features described in section 6.0. Although the de-

tails have not yet been worked out, these symbols, C and V, are mapped into specific complexes of distinctive features by the rules of this section. Prefixed reduplication can be handled by a schema like T6.15a.

T6.15a. $\underline{\#CV(\acute{})(:)}(\left\{\begin{matrix}\pm \\ \underline{h}\end{matrix}\right\})\left|\begin{matrix}+\text{Seg} \\ \alpha\text{Fea}\end{matrix}\right|\left|\begin{matrix}+\text{Seg} \\ \beta\text{Fea}\end{matrix}\right| \Rightarrow$

$$\#\left|\begin{matrix}+\text{Seg} \\ \alpha\text{Fea}\end{matrix}\right|\left|\begin{matrix}+\text{Seg} \\ \beta\text{Fea} \\ (+\text{Str}) \\ (+\text{Ten})\end{matrix}\right|(\left\{\begin{matrix}\pm \\ \underline{h}\end{matrix}\right\})\left|\begin{matrix}+\text{Seg} \\ \alpha\text{Fea}\end{matrix}\right|\left|\begin{matrix}+\text{Seg} \\ \beta\text{Fea}\end{matrix}\right|$$

A number of examples are given in section 2.14.6. The forms of the non-person Determiner $\underline{hV+\#}$ (5.1c) as well as certain features of non-prefixed reduplications can be accounted for by T6.15b.

T6.15b. $\left|\begin{matrix}+\text{Voc} \\ -\text{Con} \\ \alpha\text{Fea}\end{matrix}\right|\frown X\frown\underline{V} \Rightarrow \left|\begin{matrix}+\text{Voc} \\ -\text{Con} \\ \alpha\text{Fea}\end{matrix}\right|\frown X\frown\left|\begin{matrix}+\text{Voc} \\ -\text{Con} \\ \alpha\text{Fea}\end{matrix}\right|$

where X does not contain $\left|\begin{matrix}+\text{Voc} \\ -\text{Con}\end{matrix}\right|$ or $\underline{\#\#}$

Examples are:

(6.15a) $\underline{\#'i\#}\frown\underline{hV+\#}\frown\underline{mi\#} \Rightarrow \underline{\#'i\#}\frown\underline{hi+\#}\frown\underline{mi\#}$ ['i:m] 'these'

$\underline{\#'a\#}\frown\underline{hV+\#}\frown\underline{pa\#} \Rightarrow \underline{\#'a\#}\frown\underline{ha+\#}\frown\underline{pa\#}$ ['a:p] 'there'

$\underline{\#nə\#}\frown\underline{hV+\#} \Rightarrow \underline{\#nə\#}\frown\underline{hə+\#}$ [ni:'] 'I'

However, most non-prefixed reduplications (cf. for example, 2.14.7, 2.16.2) are more confusing. Rather than spell out all the different kinds of reduplication patterns, they are simply assumed as input, at appropriate places, to the phonological rules (section 7).

The following illustrates how confusing non-prefixed reduplication patterns may be. [pi:bi'a-] 'be throwing', as in (2.14j), is based on #pi:'a# 'throw'. The prefixed reduplication involved here must be introduced before the rule whereby postvocalic p is changed to b (7.22). On the other hand, the reduplication involved in [yɨ'a:yɨ'a'n] ~ [yɨ'a:iyɨ'ai'n] 'be beautiful' (< #yə'a# 'beautiful') must be introduced at the same time as the rule whereby an anticipatory i is optionally introduced before y (7.62).

6.16. Optional deletion of first person singular subject marker with #mihá:#⌢gá#⌢yə# 'going to go'.

T6.16. #mihá:#⌢gá#⌢yə#⌢$\begin{bmatrix}+\text{Segment}\\-\text{Plural}\\+\text{1stPerson}\end{bmatrix}$⌢# ⇒
GO GOING-TO ACC
nə#

#mihá:#⌢gá#⌢yə# ($\begin{bmatrix}+\text{Segment}\\-\text{Plural}\\+\text{1stPerson}\end{bmatrix}$)#
GO GOING-TO ACC
nə#

Thus, the more common [mia:qa'] and the less common [mia:-qai n] both occur, both meaning 'I'm going to go', although [mia:qa'] equally well means 'he's going to go'. This transformation seems quite arbitrary, but in fact this deletion has been observed only with this particular Verb with this particular Aspect and it seems to involve only this particular subject marker.

6.17. Adv_{TS} suffix adjustments.

T6.17a. $X\frown\left|\begin{matrix}-Ten\\+Seg\\+Voc\\-Con\end{matrix}\right|\#\frown\underset{FROM}{nu'u\#} \Rightarrow$

$$X\frown\left|\begin{matrix}-Ten\\+Seg\end{matrix}\right|\#\frown\underset{FROM}{nu'u\#}$$

where $X\frown\left|\begin{matrix}-Ten\\+Seg\\+Voc\\-Con\end{matrix}\right|\#$ is the phonological representation of a [+Direction] Noun (cf. 2.1.9)

Examples are:

(6.17a) k^{w}i:mknu' 'from the north'
ṩɨbɨnnu' 'from the south'
tɨmɨṇɨmnu' 'from the west'
wahačnu' 'from the Valley'

Note that T6.17a does not apply to #pəya:na# 'far', giving [pɨya:nanu'] 'from far away' instead of *[pɨya:nnu'].

T6.17b. [+Direction]⌢yəqá# ⇒ [+Direction] (yəqá#)
DIRECTION DIRECTION

The presence of the Direction suffix is optional after Direction Nouns. The following example illustrates this.

(6.17b) nɨ:' tɨmɨnɨm(-ɨika') mia:qa'.
I WEST(-DIRECTION) GOING-TO-GO
'I'm going west(-wards).'

T6.17c. V⌢yəqá# ⇒ V⌢qá#
DIRECTION DIRECTION

An example is:

(6.17c) 'ubia pɨ:na' k^{w}ɨn čurupq ki:yka'
ALREADY THEIR-FATHER QUOT ENTER HOUSE-DIRECTION
V[mɨmɨ'-] -qa'.
DIE DIRECTION
'Their father had gone into the house to die.'

T6.17d. $\left\{\begin{matrix}[+\text{Location}]\\[+\text{Plural}]\end{matrix}\right\}$ | αFea | βFea | $\begin{matrix}+\text{Com}\\ \gamma\text{Fea}\end{matrix}$ | δFea | # ⇒
DIRECTION

$$\left\{\begin{matrix}[+\text{Location}]\\[+\text{Plural}]\end{matrix}\right\} \mid \underset{\gamma\text{Fea}}{\underline{k}} \mid \underset{\delta\text{Fea}}{\underline{\acute{a}}} \mid \underline{\#}$$

DIRECTION

Examples are:

(6.17d) #tukúhpa# ⌢ ká# [tuk^{w}uh^{w}paka'] 'upward'
#yəhəbu# ⌢ ká# [yɨ:buka'] '(to) outside'
#'a# ⌢ ča# ⌢ mɨ# ⌢ ká# ['ačamɨka'] 'to us'
#pɨ# ⌢ mɨ# ⌢ ká# [pɨmɨka'] 'to them'

T6.17e. X ⌢ yəqá# ⇒ X ⌢ yqá#
DIRECTION DIRECTION

where X is a phonological representation which ≠ #CV(+)#

For an example of yqá# [-yka'], see (6.17c). The following are examples with unreduced yəqá# [-yɨka'].

(6.17e) #pɨ# ⌢ yəqá# [pɨyɨka'] 'to him'
#pa+# ⌢ yəqá# [payɨka'] 'away (toward that one)'

T6.17f. [αDeterminate] ⌢ [+Det] ⌢ $\left|\begin{matrix}\underline{y}\\+\text{Seg}\\+\text{Acu}\\-\text{Fea}\end{matrix}\right| \left|\begin{matrix}\underline{q}\\-\text{Fla}\\+\text{Com}\\\beta\text{Fea}\end{matrix}\right| \underline{\acute{a}\#}$ ⇒

$$[\alpha\text{Determinate}] \frown [+\text{Det}] \frown \left| \begin{matrix} +\text{Seg} \\ +\text{Con} \\ +\text{Nas} \\ -\text{Fea} \end{matrix} \right| \begin{matrix} \underline{k^w} \\ +\text{Fla} \\ \beta\text{Fea} \end{matrix} \left| \underline{\acute{a}\#} \right.$$

Examples are:

(6.17f) $\begin{bmatrix} +\text{Determinate} \\ +\text{Proximate} \end{bmatrix}$: 'i:ŋk^{w}a' 'to here, this way'

$\begin{bmatrix} +\text{Determinate} \\ -\text{Proximate} \end{bmatrix}$: 'a:ŋk^{w}a' 'to there, that way'

[-Determinate] : hai:ŋk^{w}a' 'to where, which way'

T6.17g. [-Person] $\frown$ Location $\Rightarrow$

[-Person] $\frown$ | +Seg | $\frown$ Location

This transformation accounts for the following forms, where #pɨ# is $\begin{bmatrix} +\text{Segment} \\ -\text{Person} \end{bmatrix}$ and hə+# is $\begin{bmatrix} +\text{Det} \\ -\text{Person} \end{bmatrix}$.

(6.17g) #pɨ# $\frown$ h $\frown$ pá# [pɨhpa'] 'on him, her, it'
#'ə# $\frown$ mə# $\frown$ hə+# $\frown$ h $\frown$ pá# ['ɨmɨ:hpa'] 'on you sg'
$\frown$ nə# $\frown$ hə+# $\frown$ h $\frown$ pá# [nɨ:hpa'] 'on me'

Contrast the above examples with the plural forms:

(6.17h) #pɨ# $\frown$ mɨ# $\frown$ pá# [pɨmɨba'] 'on them'
#'ə# $\frown$ mə# $\frown$:# $\frown$ pá# ['ɨmɨ:ba'] 'on you plural'

#'a# ⌢ ča# ⌢ mɨ# ⌢ pá# ['ačamɨba'] 'on us'

T6.17h. [αDeterminate] ⌢ [+Segment] $\left\{ \begin{matrix} \underline{\text{pa(ˊ)\#}} \\ \text{LOCATION} \\ \underline{\text{nu'u\#}} \\ \text{FROM} \end{matrix} \right\}$ ⇒

[αDeterminate] ⌢ [+Segment] ⌢ p $\left\{ \begin{matrix} \underline{\text{(ia:\#)}} \\ \text{LOCATION} \\ \underline{\text{iu'u\#}} \\ \text{FROM} \end{matrix} \right\}$

Examples are:

(6.17i)	'i:p(ia)	'here'	'i:piu'	'from here'
	'a:p(ia)	'there'	'a:piu'	'from there'
	hai:p(ia)	'where'	hai:piu'	'from where'

T6.17i. [+N, +[#S#__]] ⌢ $\underset{\text{FROM}}{\underline{\text{nu'u\#}}}$ ⇒ [+N, +[#S#__]] ⌢ $\underset{\text{FROM}}{\underline{\text{biu'u\#}}}$

An example is [toǫq^{w}pi'biu'] 'from gambling', as in (1.8h).

6.18. Assimilation of the first person singular possessive prefix.

T6.18. #n ⌢ $\left| \begin{matrix} \underline{\text{ə}} \\ \text{+Seg} \\ \text{+Voc} \\ \text{-Fea} \end{matrix} \right|$ ⌢ $\underline{\text{+\#CV}}$ ⇒ #n ⌢ $\left| \begin{matrix} \underline{\text{i}} \\ \text{+Seg} \\ \text{+Voc} \\ \text{+Dif} \\ \text{+Acu} \\ \text{-Fea} \end{matrix} \right|$ ⌢ $\underline{\text{+\#CV}}$

where C is $\left|\begin{matrix}+\text{Con}\\+\text{Acu}\end{matrix}\right|$, but C ≠ ñ if V = u, and

C ≠ ṣ if V = i

Examples are:

(6.18a)

nitaq	'myself'	nile:ba'	'my coat'
niǩa:q	'my lower leg'	niñu	'my possession'
nisarte:nk	'my frying pan'	niṣa:wa'	'my bread'
niyɨ'	'my mother'	niṣɨ	'my flower'
nira:k^{w}	'my food'	niṣu:ŋ^{w}	'my (man's) daughter'
nina:wa'	'my dress'		

Compare these with the following, where ə remains (and is changed to [ɨ] by 7.40).

(6.18b)

nɨki	'my house'	nɨñihñia'	'what I do'
nɨqąb	'my ear'	nɨña:m	'my relatives'
nɨpah	'my paternal aunt'	nɨṣi	'my guts'

6.19. Final stress on word-final Determiners.

T6.19. $X\frown\left|\begin{matrix}+\text{Voc}\\-\text{Con}\end{matrix}\right|\left(\left\{\begin{matrix}\breve{}\\-\\+\end{matrix}\right\}\right)\#\left\{\begin{matrix}\#\\\#\end{matrix}\right\} \Rightarrow X\frown\left|\begin{matrix}+\text{Voc}\\-\text{Con}\\+\text{Str}\end{matrix}\right|\left(\left\{\begin{matrix}\breve{}\\-\\+\end{matrix}\right\}\right)\#\left\{\begin{matrix}\#\\\#\end{matrix}\right\}$

where $X\frown\left|\begin{matrix}+\text{Voc}\\-\text{Con}\end{matrix}\right|\left(\left\{\begin{matrix}\breve{}\\-\\+\end{matrix}\right\}\right)\#$ is the phonological representation of a Determiner (cf. section 5.1)

Examples are:

(6.19a) #⌢nə#⌢hə+# ⇒ #⌢nə#⌢hə́+# [nɨ:'] 'I'
#'ibi# ⇒ #'ibí# ['ibi'] 'this'
#'amaˇ# ⇒ #'amáˇ# ['ama'] 'that'
#hami# ⇒ #hamí# [hami'] 'who'

6.20. Deletion of Punctual suffix before suffixes beginning with g, k.

T6.20. $$\underset{\text{PUNCTUAL}}{\text{qə\#}\frown}\begin{vmatrix}+\text{Con}\\+\text{Int}\\-\text{Dif}\\-\text{Acu}\end{vmatrix} \Rightarrow \begin{vmatrix}+\text{Con}\\+\text{Int}\\-\text{Dif}\\-\text{Acu}\end{vmatrix}$$

Examples are:

(6.20a) #məmə'#⌢qə#⌢qá# ⇒ #məmə'#⌢qá# [mɨmɨ'qa']
DIE PUNCT GOING-TO DIE GOING-TO
'he's going to die'

#məmə'#⌢qə#⌢qá# ⇒ #məmə'#⌢qá# [mɨmɨ'qa']
DIE PUNCT DIRECTION DIE DIRECTION
'to die'

#čǫí:č#⌢qə#⌢ ka'# ⇒ #čǫí:č#⌢ka'#
SHRIVEL PUNCT RESULTATIVE NOMINAL SHRIVEL RESULTATIVE NOMINAL
[čǫi:čka'] 'shriveled thing'

For more on the second example above, see T6.17c and example (6.17c).

6.21. Deletion of case markers with Pronouns.

T6.21. [+Pronoun] $\left\{ \begin{matrix} \underline{\text{Gen}} \\ \underline{\text{yə\#}} \\ \text{Adv}_{\underline{\text{TS}}} \end{matrix} \right\}$ ⇒ [+Pronoun]

See 6.22 for further consequences of this deletion.

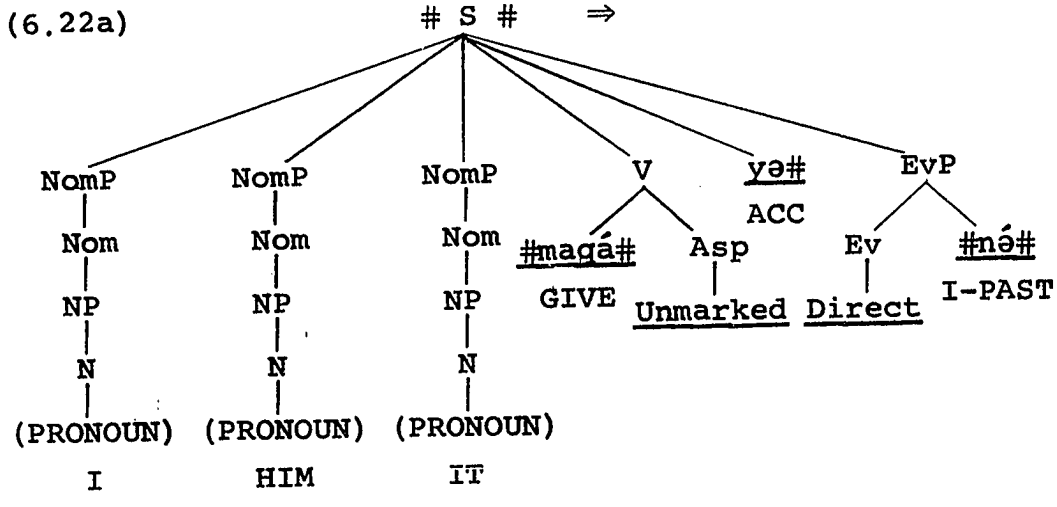
6.22. Simplification of Phrase-markers with phonologically null material.

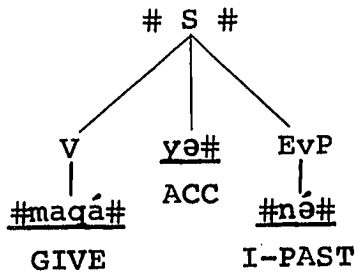
T6.22. A[B] ⇒ Ø

where B is phonologically null

The following example shows how dramatically Phrase-markers can be simplified by T6.22.

(6.22a)





[maqai nɨ'.] 'I gave it to him.'

6.23. Reduction of [+Reduce] lexical items. Various lexical items, examples of which are given in (6.23a), are specified as [+Reduce]. These have their phonological representations reduced one syllable in certain contexts by the present transformation.

T6.23a. $X \frown \left|\begin{matrix}\alpha\text{Voc} \\ \beta\text{Con}\end{matrix}\right| \left|\begin{matrix}+\text{Voc} \\ -\text{Con}\end{matrix}\right| \underline{\#} \frown \underline{\#} \Rightarrow X \frown \underline{\#} \frown \underline{\#}$

where $X \frown \left|\begin{matrix}\alpha\text{Voc} \\ \beta\text{Con}\end{matrix}\right| \left|\begin{matrix}+\text{Voc} \\ -\text{Con}\end{matrix}\right| \underline{\#}$ is the phonological representation of a lexical item that is specified as [+Reduce], and $\alpha = \beta$ or $\alpha = -$ and $\beta = +$

Examples are:

(6.23a) #ni+ ⌢ #yə́kə# ⇒ #ni+ ⌢ #yə́# [niyɨ'] 'my mother'
#ni+ ⌢ #ná'ana# ⇒ #ni+ ⌢ #ná'a# [nina'] 'my father'
#nə+ ⌢ #kákə# ⇒ #nə+ ⌢ #ká# [nɨka'] 'my paternal grandrelative'

#'a+⌢#pǫhǫ́ga# ⇒ #'a+⌢#pǫhǫ́# ['apǫ:']
'its road'

#čawəhə́# ⇒ #čawə# [čau] 'gather!'

#'ičí'#⌢ g⌢ ina# ⇒ #'ičí'#⌢g⌢i# ['iču'k]
MAKE PUNCTUAL CAUSATIVE 'make it!'

Compare the forms of (6.23a) with the longer forms below.

(6.23b) #ni+⌢#yə́kə#⌢yə# [niyɨki] 'my mother (Acc)'
#ni+⌢#ná'an⌢ɨ# [nina'n] 'my father's (Gen)'
#nə+⌢#kák⌢ɨ# [nɨkak]
'my paternal grandrelative's (Gen)'
#pǫhǫ́ga+#⌢ta# [pǫ:qt] 'road'
#čawəhə́#⌢yə# [čawe(:)i] 'he gathers'
#'ičí'#⌢g⌢ina#⌢yə# (which is reduced to
#'ičí'#⌢g⌢ina# by T6.26a) ['iču'kin]
'he makes'

ina# Causative is reduced to i# in other contexts as well.

T6.23b. ina#⌢X ⇒ i#⌢X
CAUSATIVE CAUSATIVE

where X ≠ Asp, yə# Accusative, [+N], Adv_{TS}

Examples are:

(6.23c) # #čɨ#mɨ́# #'ə́:m'g⌢i#⌢çu'a# #
WE-PAST END CAUS MOTION
[čɨmɨ 'ɨ:m'kiçu'.] 'We finished it.'

(6.23d) # #munaáng⌢i#⌢iǰuna#⌢ yə#⌢#nə# #
BOIL CAUS BENEFACTIVE ACC I

[munankǰunai n.] 'I'm boiling it for him.'

Examples in which ina# Causative remains unreduced are:

(6.23e) mi:ṣk-ina- -qa- -i n.
DAMPEN-CAUS-GOING-TO-ACC I

'I'm going to wet it.'

(6.23f) mi:sk-ina-i n.
DAMPEN-CAUS-ACC I

'I'm wetting it.'

(6.23g) wa:n'k-in- N[-i'aç] 'digger'
DIG-CAUS -ER

(6.23h) nɨ-wa:n'k-in- N[-ih^{w}a'] 'my digging tool'
MY-DIG-CAUS-INSTRUMENT

(6.23i) nɨ:' qai nɨ 'ahk^{w} 'i:ŋk^{w}a' kim wel^{y}am
I NOT I-PAST HERE THIS-WAY COME DISHES

yaruk^{w}k-ina- Adv$_{TS}$[-qa'].
CLEAN-CAUSATIVE TO

'I didn't come here to wash dishes.'

6.24. Stylistic reordering. It is at this point that stylistic reorderings are introduced. The transformations that apply after this point operate on already reordered material. No formalization is made here of the device which accomplishes the reordering other than to note some of the limitations on reordering.

It would seem that any kind of reordering of whole words is permitted within a constituent dominated by S, with the following restrictions:

(1) conjoined constituents remain next to each other and Conjunctions remain between the conjoined constituents;

(2) Sentence adverbial material remains together;

(3) if the adverbial involves [pɨbeipa'] 'if' or ['ayaɨp] 'because', that word is first in the adverbial;

(4) Manner adverbial constituent order is limited as specified in section 3.1.7;

(5) immediate constituents of Noun-Phrases remain in order, that is, possessor Nouns precede possessed Nouns, and Noun plus nominalization from T3.2.5a remains in order, such that (6.24a) is grammatical, while (6.24b) is not;

(6.24a) mɨa:ç ṣɨri:'nka'ti n hihiy.
MOON RED-ONE-ACC I SEE-ACC
'I see a red moon.'

(6.24b) *ṣɨri:'nka' mɨa:ṣi n hihiy.
RED-ONE MOON-ACC I SEE-ACC
'*I see a moon red.'

(6) the Evidential-Phrase material remains unaffected by stylistic reordering, and is reordered as specified in T6.25.

Some examples of possible reorderings are given in (0.3a). All twelve different orders of (0.3a) are based on the deep structure represented in (6.24c)(next page).

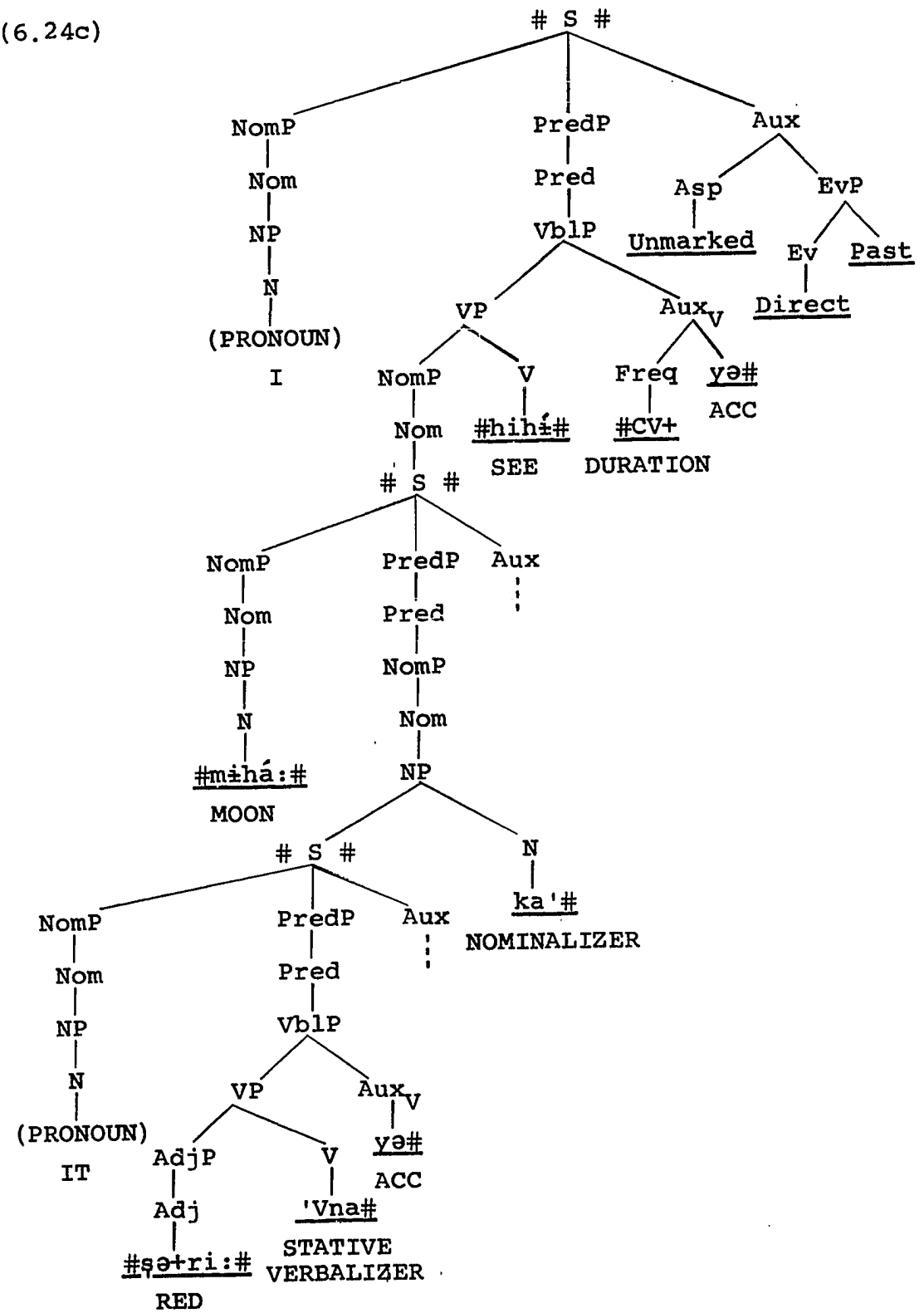
6.25. Reordering of Evidential-Phrase material (cf. section 1.4.1).

T6.25. # $(\text{Adv})^n$ X ⌢ Y ⌢ EvP[Z (?)] ⇒

$$\#\ (\text{Adv})^n \left\{ \begin{array}{l} \text{PM[Z]} \frown \text{X} \\ \text{X} \frown \text{PM[Z]} \end{array} \right\} \text{Y}\ (?)$$

where X is dominated by a single node or has a phonological representation which contains no instance of ##; the phonological representation of X ends in # and that of Y begins in # if Y is non-null; except that if the phonological representation of Z consists of no

(6.24c)



more than (#)| +Seg | +Seg, -Str, -Ten | #, then Z

cannot be Sentence-initial

PM = Person marker (This node is needed for T6.26.)

With regard to examples to illustrate the above transformation, see (1.4m-p-q) for Z⌢X⌢Y, (1.4k-ℓ-n-o-s) for X⌢Z⌢Y, (1.4d-j-r) for Z⌢X⌢Y⌢?, (1.4e-f-g-h-i) for X⌢Z⌢Y⌢?, (1.7b-c) for Adv⌢Z⌢X⌢Y, (1.6g) and (1.2b) for Adv⌢X⌢Z⌢Y, and (1.2c) for Adv⌢Adv⌢Adv⌢Adv⌢X⌢Z⌢Y.

The distribution of the Evidential-Phrase material as specified by T6.24 is the best known guide to syntactic surface structure in Serrano. Note that by T6.6a-b the Predicate node is destroyed, rendering (6.25a) ungrammatical, that is, unacceptable to the informant.

(6.25a) * wi:čɨ k^{w}a'i PM[nɨ'].
ACORN-MUSH-ACC EAT-ACC I-PAST
'I ate acorn mush.'

But 6.6a-b do not apply to Imperatives, yə# Accusative having been deleted earlier by T3.1.14a. Thus (6.25b) is grammatical, [k^{w}ut maqa-] being dominated by the single node, Pred.

(6.25b) k^{w}ut maqa- PM[-ǒi'].
FIRE GIVE YOU-ME
'Give me a match!'

6.26. Deletion of Accusative case after certain Verbs.

T6.26a. $V \frown Asp \frown \underset{ACC}{yə\#} \frown X \Rightarrow V \frown Asp \frown X$

where X ≠ PM (cf. T6.25)

For examples, see (4.4b-c), (4.5b). For examples of the non-deletion of Accusative when X = PM, see (1.4f), (1.14a). Note that this transformation applies only in the case of [-A] Aspects, because of the prior application of T6.6a.

T6.26b. $V[X] \frown yə\# \frown Y \Rightarrow V[X] \frown Y$

where Y ≠ PM and X is a phonological representation whose last segment is $\begin{vmatrix} +Voc \\ -Ten \\ -Str \end{vmatrix}$

but $X \neq \underline{\#} \begin{vmatrix} +Seg \\ +Voc \\ -Ten \end{vmatrix} \begin{vmatrix} \alpha Voc \\ \alpha Con \end{vmatrix} (\begin{vmatrix} +Seg \end{vmatrix}) \#$

Note that T6.26b applies when Future Aspect is involved, because of T6.6a.

The following are examples of Verbs with Accusative case deleted by T6.26b.

(6.26a) #kima# [kim] 'come' (1.4c)
#qaçə# [qaç] 'be, dwell' (1.4q)
#nəmə# [nɨm] 'walk about' (1.5a)
#ŋa:na# [ŋa:n] 'look for' (1.5a)
#pəə́n# ⌢ gə# [pɨnq] 'pass (Punctual)' (1.4o)
#'u:'a# ['u:'] 'take' (1.5b)
#ya:nəmə# [ya:nɨm] 'have' (1.7c)
#ku:ran ⌢ ičun ⌢ ib# [k^{W}u:haničunib] (1.15b)
'call (Benefactive-Future)'
#piči:# ⌢ çu'a# [piču:çu'] (1.16b)
'arrive (Motion)'

But note, for example, #kima# ⌢ yə# [kimai] 'come' with Accusative in (1.6ℓ) where it is followed by the Person marker [k^{W}ɨn] (Quotative-third person singular subject).

The following illustrate the exceptions to T6.26b. (6.26b) includes examples of the shape # $\left|\begin{matrix}+\text{Seg}\\ \alpha\text{Voc}\\ \alpha\text{Con}\end{matrix}\right|$ ⌢ $\left|\begin{matrix}+\text{Voc}\\ -\text{Ten}\end{matrix}\right|$ ($\left|\begin{matrix}+\text{Seg}\end{matrix}\right|$)#.

(6.26b) #muhɨ# ⌢ yə# [mui] 'shoot' (3.2.1j)
#k^{W}a'a# ⌢ yə# [k^{W}a'i] 'eat' (1.4g)
#hu'a# ⌢ yə# [h^{W}u'ai] 'burn'
#tabə# ⌢ yə# [tabɨi] 'place' (1.15b)
#'əyə# ⌢ yə# ['ɨyɨi] 'steal' (2.5e)
#wira# ⌢ yə# [wihai] 'put' (2.5e)
#q ⌢ íb# ⌢ yə# [kibi] 'say (Future)'

(6.26c) includes examples having stressed or long stem-final vowels.

(6.26c)	#maqá# ⌢ yə# [maqai] 'give'	(1.11a)
	#čawəhó# ⌢ yə# [čawe(:)i] 'gather'	
	#tuká# ⌢ yə# [tukai] 'pack, carry on back'	
	#qó# ⌢ yə# [qɨi] 'say'	(1.1d)
	#hi+ ⌢ #hihí# ⌢ yə# [hihi(y)] 'see'	(0.3a)
	#pičɨ:# ⌢ yə# [pičɨi] 'arrive'	(1.6n)
	#ñíha:# ⌢ yə# [ñihai] 'do'	(1.6k)
	#miha:# ⌢ yə# [mi(y)] 'go'	(1.4h)
	#yuha:# ⌢ yə# [yui] 'snow'	(3.2.1j)

Note that the last three examples above could equally well be included in (6.26b).

T6.26c. V[X] ⌢ yə# ⌢ Ev ⌢ Y ⇒ V[X] (yə#) Ev ⌢ Y

where X is as specified for T6.26b and Y does not contain ?

Thus, with a following Evidential, Accusative case is optionally deleted, as in the following examples.

(6.26d) ɨ:'b (-i) ta.
BLOOM-FUTURE (ACC) DUBITATIVE-THEY
'They'll bloom.'

(6.26e) piču:çu'(-ai) k^{w}ɨn.
ARRIVE-MOTION(ACC) QUOTATIVE
'He arrived.'

6.27. Deletion of plural suffix with Going-to Aspect (see T4.4b for the introduction of the plural suffix after [-A] Aspects).

T6.27. $\begin{bmatrix}-A\\+C\end{bmatrix}\frown\begin{bmatrix}+\text{Segment}\\+\text{Plural}\end{bmatrix}\frown\underline{\text{yə\#}} \Rightarrow \begin{bmatrix}-A\\+C\end{bmatrix}\frown\underline{\text{yə\#}}$

Under the first rule: qá# (GOING-TO), mɨ#, ACC. Under the result: qá# (GOING-TO), ACC.

An example is:

(6.27a) k^{w}a'-qa-i taš ? patai.
EAT-GOING-TO-ACC DUB-WE QUESTION THAT-ONE-ACC
'Are we going to eat it?'

6.28. Restructurings with Accusative case and the Adv_{TS} wV# 'while...-ing'.

T6.28a. $NP[X\frown\begin{vmatrix}\alpha Voc\\\alpha Con\end{vmatrix}\begin{vmatrix}-Con\\\beta Fea\end{vmatrix}\begin{vmatrix}\underline{\#}\end{vmatrix}]\frown\overset{\underline{y}}{\begin{vmatrix}+Con\\-Dif\\\gamma Fea\end{vmatrix}}\frown\underline{ə\#} \Rightarrow$

ACCUSATIVE

$NP[X\frown\begin{vmatrix}\alpha Voc\\\alpha Con\end{vmatrix}]\frown\overset{\underline{i}}{\begin{vmatrix}-Con\\+Dif\\\gamma Fea\end{vmatrix}}\frown\underline{ə\#}$

Examples are:

(6.28a) #nə+ ⌢ #pǫ:bǫ# ⌢ yə# ⇒ #nə+ ⌢ #pǫ:b ⌢ iə# [nɨpǫ:bi]
'my face (Acc)'

#nə+ ⌢ #ka+ha# ⌢ yə# ⇒ #nə+ ⌢ #ka+h ⌢ iə# [nɨkahi]
'my apron (Acc)'

For Louie Marcus's speech, it seems that α must = -. Compare his [čɨ‡kąbayɨ-] 'our knives (Acc)' in (4.7a) with Sarah Martin's

(6.28b) nɨkąbi n hihiy.
MY-KNIFE-ACC I SEE-ACC
'I see my knife.'

T6.28b. $X \frown \left|\begin{matrix}+\text{Voc}\\-\text{Con}\end{matrix}\right| \# \frown wV\# \Rightarrow X \frown wV\#$

where $X \frown \left|\begin{matrix}+\text{Voc}\\-\text{Con}\end{matrix}\right| \#$ is not the phonological representation of a [+V]

Examples are:

(6.28c) #ya'a# ⌢ çu'a# ⌢ wV# ⇒ #ya'a# ⌢ çu' ⌢ wV# [ya'çu'u]
RUN MOTION RUN MOTION
'while running along'

#manaá'# ⌢ gə# ⌢ wV# ⇒ #manaá'# ⌢ g ⌢ wV#
[mana'ku] 'while returning'

T6.28c. $V[X\frown\left|\begin{matrix}\underline{a}\\ +Voc\\ +Com\end{matrix}\right|\begin{matrix}\underline{'}\\ -Con\\ +Int\end{matrix}\left|\begin{matrix}\underline{a}\\ +Voc\\ +Com\end{matrix}\right|\underline{\#}]\frown\left|\begin{matrix}+Voc\\ +Con\end{matrix}\right| \Rightarrow$

$$V[X\frown\left|\begin{matrix}\underline{a}\\ +Voc\\ +Com\end{matrix}\right|\begin{matrix}\underline{'}\\ -Con\\ +Int\end{matrix}\left|\begin{matrix}\\ ]\\ \\ \end{matrix}\right|\frown\left|\begin{matrix}\\ +Voc\\ \\ \end{matrix}\right|$$

Examples are:

(6.28d) V[#ya'a#]⌢yə# ⇒ V[#ya']⌢yə# [ya'i] 'he runs'
V[#ya'a#]⌢wV# ⇒ V[#ya']⌢wV# [ya'u]
'while running'

Compare [ya'i] and [ya'u] with [h^wu'ai] 'burn' and [h^wu'au] 'while burning' to see that Verbs in non-a⌢'a# are unaffected by T6.28c.

T6.28d. $V[X\frown\left|\begin{matrix}+Voc\\ -Con\end{matrix}\right|\underline{\#}]\frown\left|\begin{matrix}+Voc\\ +Con\end{matrix}\right| \Rightarrow V[X\frown\left|\begin{matrix}+Voc\\ -Con\\ +Str\end{matrix}\right|\underline{\#}]\frown\left|\begin{matrix}+Voc\\ +Con\end{matrix}\right|$

(Stress earlier in the word is later deleted by 7.26.)

Examples are:

(6.28e) #yú:'a#⌢yə#⌢#mɨ# ⇒ #yú:'á#⌢yə#⌢#mɨ#
[yu:'ai m] 'they cry'
#kima#⌢wV# ⇒ #kimá#⌢wV# [kimau] 'while coming'
#ñíha:#⌢wV# ⇒ #ñíhá:#⌢wV# [ñia:w] 'while doing'

The difference between [ñia:w] 'while doing' and [ñihai] 'do (Acc)' (apparently from #ñíha:#⌢yə#) remains unexplained.

T6.28e. X⌢yə# ⇒ X⌢y#

where X contains no instance of ## and X is dominated by V or contains |+Str|

Only after stressless Noun stems and Determiners does Accusative case have its full form, as in (4.7a), (1.11b).

T6.28f. $\begin{vmatrix} +\text{Voc} \\ -\text{Con} \\ -\text{Ten} \\ -\text{Str} \end{vmatrix}$ #⌢y# ⇒ y#
ACC ACC

A final short unstressed vowel is deleted before y# Accusative case. Note that this transformation does not apply to the final vowel of a stressless stem because in that position Accusative case is not changed from yə# to y# by T6.28e. Examples illustrating T6.28f are:

(6.28f) #kí:#⌢ta#⌢y# ⇒ #kí:#⌢t⌢y# [ki:ǒi]
'house (Acc)'

#ni+⌢#yə́kə#⌢y# ⇒ #ni+⌢#yək⌢y# [niy±ki]
'my mother (Acc)'

Stressed vowels, long vowels, and final unstressed vowels of stressless stems are retained before Accusative case. Examples are:

(6.28g) #mihá:# ⌢ y# [mi(:)(y)] 'go'
#mihá:# ⌢ qá# ⌢ y# ⌢ #nə# [mia:qai n]
'I'm going to go'
#'ə́nanə́# ⌢ y# ⌢ #nə# ['ɨnanɨi n] 'I know it'
#'a+ ⌢ #ʂə́:# ⌢ y# ['aʂɨ(:)i] 'its flower (Acc)'
#'amaˇ# ⌢ yə# ['amai ~ 'amayɨ-] 'that (Acc)'
#ku+# ⌢ ta# ⌢ yə# [k^{w}utai ~ k^{w}utayɨ-] 'fire (Acc)'
#ni+ ⌢ #ʂu:ŋa# ⌢ yə# [niʂu:ŋai ~ niʂu:ŋayɨ-]
'my (man's) daughter (Acc)'

7. PHONOLOGY

7.0. The rules of this section operate entirely on the distinctive features and boundaries sketched out in section 6.0. The irregular use of the concatenation arc (⌢) is simply for reasons of clarity. The arc has no phonological value. The output of this section, except where noted to the contrary, is identical with the phonetic notation used throughout.

7.1. $(\underline{\#})^{n} \Rightarrow (\underline{\#})^{n-1}$

where n is an odd number

An example is:

(7.1a) ...#pá:#⌢t⌢i̯#⌢#⌢#'a+⌢#hó:bi:#⌢pa#... ⇒
WATER SG GEN ITS EDGE AT

...#pá:ti̯#⌢#'a+hó:bi:pa#...
[...pa:ç 'ahi̯:bi(:)b...] '...at the edge of the water...'

The # between i̯# Genitive case and #'a+ 'its' in the above example is introduced by T3.1.1.

7.2. $\begin{vmatrix} +\text{Voc} \\ -\text{Con} \\ \alpha\text{Ten} \end{vmatrix} \begin{vmatrix} +\text{Ten} \\ +\text{F} \end{vmatrix} \Rightarrow \begin{vmatrix} +\text{Voc} \\ -\text{Con} \\ +\text{Ten} \end{vmatrix}$

where F is null

An example is:

(7.2a) #k^{w}ənə‿:# ⇒ #k^{w}ənə:# [k^{w}ɨnɨ] 'Quotative-they'

7.3. $\begin{vmatrix} +\text{Voc} \\ -\text{Con} \\ \alpha\text{Str} \end{vmatrix} \begin{vmatrix} +\text{Str} \\ +\text{F} \end{vmatrix} \Rightarrow \begin{vmatrix} +\text{Voc} \\ -\text{Con} \\ +\text{Str} \end{vmatrix}$

where F is null

An example is:

(7.3a) #čɨmɨ‿ˊ# ⇒ #čɨmɨ́# [čɨmɨ'] 'we-past'

7.4. $\begin{vmatrix} +\text{Str} \\ +\text{F} \end{vmatrix} \Rightarrow \emptyset$

where F is null

An example is:

(7.4a) #m'‿ˊ# ⇒ #m'# [m'] 'you (it)(past)'

7.5. $X \left(\begin{vmatrix} -\text{Voc} \\ -\text{Con} \end{vmatrix}\right) \begin{vmatrix} +\text{Con} \\ +\text{Com} \end{vmatrix}\!\!\frown Y \Rightarrow X \left(\begin{vmatrix} -\text{Voc} \\ -\text{Con} \end{vmatrix}\right) \underline{\underline{\begin{vmatrix} +\text{Con} \\ -\text{Com} \end{vmatrix}}}\!\!\frown Y$ (q → k)

where either X or Y = $\left|\begin{array}{c}\text{+Voc}\\ \alpha\text{Con}\\ -\alpha\text{Dif}\\ \beta\text{Acu}\\ -\beta\text{Fla}\end{array}\right|$, i.e., u, i, w, y, l^y

Examples are:

(7.5a) #pəə́ŋq⌢ina# ⇒ #pəə́nkina# [pɨnkin]
'pass (Causative)'

#budi:dí̱h⌢qə# ⇒ #budi:dí̱hkə# [budi:dihk]
'whirl (Punctual)'

#ŋidií'⌢qə# ⇒ #ŋidií'kə# [ŋidi'k]
'touch (Punctual)'

#manaá'q⌢wV# ⇒ #manaá'kwV# [mana'ku]
'while returning'

#maá:y⌢qá# ⇒ #maá:ykáh# [ma:yka']
'he's going to come around'

#wiíl^y⌢qə# ⇒ #wiíl^ykə# [wil^{y}k]
'a line appears (Punctual)'

There is no example with u.

7.6. $\#\left|\begin{array}{c}\text{+Voc}\\ \text{-Con}\end{array}\right| \Rightarrow \#\left|\begin{array}{c}\underline{\text{h}}\\ \text{+Seg}\end{array}\right|\left|\begin{array}{c}\text{+Voc}\\ \text{-Con}\end{array}\right|$

The unique example is:

(7.6a) #uba:ˇta# ⇒ #huba:ˇta# [h^{w}uba:č] 'eye'

7.7. $\left|\begin{matrix}-\text{Voc}\\-\text{Dif}\\-\text{Acu}\end{matrix}\right|\left|\begin{matrix}+\text{Voc}\\-\text{Con}\\\alpha\text{Acu}\\-\alpha\text{Gra}\\+\text{Fla}\end{matrix}\right| \Rightarrow \left|\begin{matrix}-\text{Voc}\\-\text{Dif}\\-\text{Acu}\\+\text{Fla}\end{matrix}\right|\left|\begin{matrix}+\text{Voc}\\-\text{Con}\\\alpha\text{Acu}\\-\alpha\text{Gra}\\+\text{Fla}\end{matrix}\right|$

Rounding of vowels is anticipated in the preceding back consonant. Examples are:

(7.7a) #ŋuú+rkináy##nə́# ⇒ #ŋ^{w}uú+rkináy##nə́#
[ŋ^{w}urkinai nɨ'] 'I lassoed it'
#čil^{y}a:qo'# ⇒ #čil^{y}a:q^{w}o'# [čil^{y}a:q^{w}o']
'species of lizard'
#nə+qǫ́:ra# ⇒ #nə+q^{w}ǫ́:ra# [nɨq^{w}ǫ:r]
'my older sister'
#ku+ta# ⇒ #k^{w}u+ta# [k^{w}ut] 'fire'
#'áhku# ⇒ #'áhk^{w}u# ['ahk^{w}] 'here'
#k^{w}ihəxuma+ri'# ⇒ #k^{w}ihəx^{w}uma+ri'#
[k^{w}iɨx^{w}umari'] (a name)
#maqáhu+ta# ⇒ #maqáh^{w}u+ta# [maqah^{w}t] 'dove'

Note that back consonants are not rounded before w:

(7.7b) #wíhwi'ina# [wihwi'n] 'be shouting'
#manaá'kwV# [mana'ku] 'while returning'

The rounding of k and of h before o has not been indicated simply because the diacritic (^{w}) would suggest to the reader a considerably greater amount of lip rounding than is the case in this position. However, just because examples like #kó:či'# 'pig', #hohú:ŋana# 'be poor' are tran-

scribed [ko:ǐ'], [hou:ŋan] rather than [k^{w}o:ǐ'], [h^{w}ou:-ŋan] is not to say that the rounding of the o is not anticipated in the preceding k or h.

Observations of much the same sort apply to the glottal stop. For graphic convenience, ['^{w}] is not distinguished from ['], but again, this is not to say that ' is exempted from rule 7.7.

7.8. $\begin{vmatrix} +\text{Voc} \\ -\text{Con} \end{vmatrix} \begin{vmatrix} +\text{Voc} \\ +\text{Con} \\ +\text{Acu} \\ -\text{Fea} \end{vmatrix} \underline{\#\#} \begin{vmatrix} -\text{Voc} \\ -\text{Con} \end{vmatrix} \Rightarrow \begin{vmatrix} +\text{Voc} \\ -\text{Con} \end{vmatrix} \underline{\#\#} \begin{vmatrix} -\text{Voc} \\ -\text{Con} \end{vmatrix}$

Examples are:

(7.8a) #qáy# ⌢ #hahihi+pa# ⇒ #qá# ⌢ #hahihi+pa# [qa hai:p] 'nowhere'

#qáy# ⌢ #'a'áyə# ⇒ #qá# ⌢ #'a'áyə# [qa 'a'ai] 'not good, no good'

7.9. $\begin{vmatrix} +\text{Voc} \\ -\text{Con} \\ -\text{Ten} \\ -\text{Str} \end{vmatrix} \left(\left\{ \begin{matrix} \pm \\ \check{} \\ - \end{matrix} \right\}\right)\# \Rightarrow \#$

Final short unstressed vowels are deleted. Examples are:

(7.9a) #pá:ta# ⇒ #pa:t# [pa:ç] 'water'

#ni+yə́k±# ⇒ #ni+yə́k# [niy±k] 'my mother's (Gen)'

#'amaˇyə# ⇒ #'amaˇy# ['amai] 'that (Acc)'
#'a+mahí:raˇ# ⇒ #'amahí:r# ['amai:r] 'his son'
#mǫ́:'a+# ⇒ #mǫ́:'# [mǫ́:'] 'it's smokey'

7.10. $V[\# \mid +Seg \mid \begin{matrix}\alpha Fea\\ \beta Ten\\ \gamma Str\end{matrix} \mid +Seg \mid]\frown ? \Rightarrow$

$V[\# \mid +Seg \mid \begin{matrix}\alpha Fea\\ \beta Ten\\ \gamma Str\end{matrix} \mid +Seg \mid \alpha Fea \mid]\frown ?$

An example is:

(7.10a) #k^{w}ə'##ç##h^{w}ǫ'?# ⇒ #k^{w}ə'##ç##h^{w}ǫ'ǫ?#
CAN YOU SEW QUES
[k^{w}ɨ' ç h^{w}ǫ'ǫ ?] 'Can you sew?'

7.11. $\mid \begin{matrix}+Voc\\ -Con\end{matrix} \mid \frown X \frown \mid +Int \mid \frown ? \Rightarrow \mid \begin{matrix}+Voc\\ -Con\\ +Ten\end{matrix} \mid \frown X \frown \mid +Int \mid \frown ?$

where X contains no segment that is $\mid \begin{matrix}+Voc\\ -Con\end{matrix} \mid$

An example is:

(7.11a) # V[páhpa'] ⌢ Asp[i+t#] ⌢ Ev[#t] ⌢ ? # ⇒
DRINKING COMPLETIVE DUBITATIVE QUESTION
V[páhpa'] ⌢ Asp[i:+t#] ⌢ Ev[#t] ⌢ ?
[pahpa'i:t ?] 'Has he been drinking?'

7.12.

	t			č
-Con	-Voc	⇒	-Con	-Voc
+Acu	+Acu		+Acu	+Acu
	+Dif			-Dif
	+Int			+Int
	-Fla			-Fla

Examples are:

(7.12a) #kí:‿t# ⇒ #kí:č# [ki:č] 'house (singular)'
#habǫ́:‿t# ⇒ #habǫ́:č# [habǫ:č]
'sycamore (singular)'
#'amaˇ‿t# ⇒ #'amaˇč# ['amač]
'his (singular-genitive)'
#mahí:raˇ‿t# ⇒ #mahí:raˇč# [mai:hč]
'youngster (singular)'

7.13.

	t			ç
+Voc	-Voc	⇒	+Voc	-Voc
	+Dif			+Dif
	+Acu			+Acu
	-Fla			+Fla
	+Int			+Int

Examples are:

(7.13a) #qą́:‿t# ⇒ #qą́:ç# [qa:ç] 'rat (singular)'
#pá:‿t# ⇒ #pá:ç# [pa:ç] 'water (singular)'
#tú:‿t# ⇒ #tú:ç# [tu:ç] 'coal (singular)'
#hə́:‿t# ⇒ #hə́:ç# [hɨ:ç]
'a basket weed species (singular)'

$$7.14. \quad \overset{\acute{V}}{\begin{bmatrix}+\text{Str}\end{bmatrix}} \overset{h}{\begin{bmatrix}+\text{Seg}\\-\text{Fea}\end{bmatrix}} \begin{bmatrix}+\text{Nas}\end{bmatrix} \frown X \Rightarrow \overset{\acute{V}:}{\begin{bmatrix}+\text{Str}\\+\text{Ten}\end{bmatrix}} \begin{bmatrix}+\text{Nas}\end{bmatrix} \frown X$$

where X = $\underline{\#}$ or #

Examples are:

(7.14a) #h^{w}ukáhm# ⇒ #h^{w}uká:m# [h^{w}uka:m] 'deer (plural)'
#nə+nə̨́:hm# ⇒ #nə+nə̨́:m# [nɨnɨ̨:m] 'women'

$$7.15. \quad \begin{bmatrix}\alpha\text{Voc}\\\beta\text{Con}\end{bmatrix} \overset{m}{\begin{bmatrix}+\text{Nas}\\+\text{Dif}\\+\text{Gra}\end{bmatrix}} \frown X \Rightarrow \begin{bmatrix}\alpha\text{Voc}\\\beta\text{Con}\end{bmatrix} \overset{i}{\begin{bmatrix}+\text{Seg}\\+\text{Voc}\\+\text{Dif}\\+\text{Acu}\end{bmatrix}} \overset{a}{\begin{bmatrix}+\text{Seg}\\+\text{Voc}\\+\text{Com}\end{bmatrix}} \overset{m}{\begin{bmatrix}+\text{Nas}\\+\text{Dif}\\+\text{Gra}\end{bmatrix}} \frown X$$

where $\alpha = \beta$ or $\alpha = -$ and $\beta = +$, and X = $\underline{\#}$
or #

Examples are:

(7.15a) #ba+rí:l^{y}m# ⇒ #ba+rí:l^{y}iam# [bari:l^{y}am]
'barrels'

#pɨ:+pulinˇm# ⇒ #pɨ:+pulinˇiam# [pu:puliniam]
'their daughters'

#fransé:sm# ⇒ #fransé:siam# [franse:siam]
'the French'

#bá:ka'm# ⇒ #bá:ka'iam# [ba:ka'iam] 'cows'
#yuhá:qahm# ⇒ #yuhá:qahiam# [yua:qaiam]
'Chemehuevis'

7.16. $\left|\alpha\text{Ten}\ \left|\underline{(\pm)}\right|\begin{matrix}+\text{Voc}\\-\text{Con}\end{matrix}\right|\ \Rightarrow\ \left|-\text{Ten}\ \left|\begin{matrix}+\text{Voc}\\-\text{Con}\end{matrix}\right|\right.$

Examples are:

(7.16a) #pɨ:+‿u:bá# ⇒ #pɨu:bá# [pou:ba'] 'their eyes'
#'a+‿u:bá# ⇒ #'au:bá# ['ou:ba'] 'his eye'

7.17. $\left|\begin{matrix}+\text{Seg}\\+\text{Voc}\\\alpha\text{Com}\\\beta\text{Dif}\\-\text{Fea}\end{matrix}\ \left|\begin{matrix}+\text{Voc}\\+\text{Gra}\\+\text{Fla}\end{matrix}\right|\right.\ \underline{u}\ \Rightarrow\ \left|\begin{matrix}+\text{Seg}\\+\text{Voc}\\+\text{Gra}\\+\text{Fla}\\-\text{Fea}\end{matrix}\ \left|\begin{matrix}+\text{Voc}\\+\text{Gra}\\+\text{Fla}\end{matrix}\right|\right.\ \underline{o}\ \underline{u}$

Examples are:

(7.17a) #pɨ‿u:bá# ⇒ #pou:bá# [pou:ba'] 'their eyes'
#mə‿u:bá# ⇒ #mou:bá# [mou:ba'] 'your eye'
#'a‿u:bá# ⇒ #'ou:bá# ['ou:ba'] 'his eye'

7.18. $\left|\begin{matrix}+\text{Voc}\\-\text{Con}\\-\text{Gra}\\+\text{Fla}\end{matrix}\ \left|\begin{matrix}+\text{Nas}\\+\text{Dif}\\+\text{Acu}\end{matrix}\right|\right.\ \underline{n}\ \Rightarrow\ \left|\begin{matrix}+\text{Voc}\\-\text{Con}\\-\text{Gra}\\+\text{Fla}\end{matrix}\ \left|\begin{matrix}+\tilde{\text{N}}\text{as}\\+\text{Dif}\\+\text{Acu}\\+\text{Fla}\end{matrix}\right|\right.\ \underline{\underline{n}}$

n is made retroflex after retroflex vowels. An example is:

(7.18a) #tǫnạ:ná'ạn# ⇒ #tǫnạ:ná'ạn# [tǫnạ·nạ'n̩] 'be black'

Note that n remains unchanged after vowels that are retroflexed subsequent to this rule. An example is:

(7.18b) #pɨ:+nɑ:bǫ́# [pɨ:nɑ:bǫ'] 'their feet'

7.19.

	q				q ~ X		
+Voc -Con	+Con +Com +Int	-Ten	⇒	+Voc -Con	+Con +Com ±Int	-Ten	

In certain positions q seems to alternate freely with X. Examples are:

(7.19a) #qʷǫ:ɳaqá+t# ~ #qʷǫ:ɳaXá+t# [qʷǫ:ɳqat ~ qʷǫ:ɳXat] 'necklace'

#təhtəyəqá# ~ #təhtəyəXá# [tɨhtɨyɨka' ~ tɨhtɨyɨxa'] 'he's going to work'

#baá:qq# ~ #baá:Xq# [ba:qq ~ ba:Xq] 'it twists'

7.20.

V_1 (:) (´) '		V_2			
+Voc αTen βStr γFea	-Con +Int	+Voc -Ten -Str δFea	(±)	+Con	⇒

V_1	V_2 (:) (´) '		
+Voc -Ten -Str γFea	+Voc αTen βStr δFea	-Con +Int	+Con

Examples are:

(7.20a) #tá:'ǫču'# ⇒ #taǫ́:'ču'# [taǫ:'ču'] 'thunder'
#k^{w}á:'aç# ⇒ #k^{w}aá:'ç# [k^{w}a:'ç] 'buzzard'
#tú'a+t# ⇒ #tuá't# [tua't] 'flour'
#mǫ́:'a+yká# ⇒ #mǫá:'yká# [mǫa:i'ka'] 'to the smoke'
#tə́:'ib# ⇒ #təí:'b# [tɨi:'b] 'roast (Future)'
#h^{w}ú:'i+m# ⇒ #h^{w}ui:'m# [h^{w}ui:'m] 'jackrabbits'
#h^{w}ú:'up# ⇒ #h^{w}uú:'p# [h^{w}u:'p] 'on the star'
#pií+tɨ'ɨq# ⇒ #pií+tɨɨ'q# [pitɨ'q] 'it's full (Resultative)'

7.21.

V_1	V_1(:)(´)		V_1(:)(´)
αFea	αFea βTen γStr	⇒	αFea βTen γStr

Examples are:

(7.21a) #pií+tɨɨ'q# ⇒ #pí+tɨ'q# [pitɨ'q] 'it's full'
#k^{w}aá:'ç# ⇒ #k^{w}á:'ç# [k^{w}a:'ç] 'buzzard'

7.22.

	p		b
+Voc -Con -Gra	-Voc +Con +Dif +Gra (+Int)	⇒	+Voc +Con +Dif +Gra (-Int)

p is vocalized to b after any vowel except u (or o). The feature Interrupted is parenthesized to emphasize the fact that were it not for a few Spanish loanwords with f (e.g., [kafe:'] 'coffee'), the fact that p is a stop (and that b

is not) would not have to be distinguished. Examples are:

(7.22a) #pá:p# ⇒ #pá:b# [pa:b] 'on the water'
#pí:pi:'# ⇒ #pí:bi:'# [pi:bi'] 'throw things'

7.23.

u	p		u	p ~ b
+Voc	-Voc	⇒	+Voc	±Voc
-Con	+Con		-Con	+Con
+Gra	+Dif		+Gra	+Dif
	+Gra			+Gra
	(+Int)			(±Int)

The vocalization of p seems to be optional after u (and presumably also after o, but there is no example), as in the following:

(7.23a) #tú:p# ~ #tú:b# [tu:p ~ tu:b] 'on the coal'

7.24.

ˇ
+Seg
+Acu
-Fea

⇒ Ø

An example is:

(7.24a) #'oú:baˇp# ⇒ #'oú:bap# ['ou:bp] 'in his eye'

7.25.

						i	a		
+Con	##	+Nas	#	⇒	+Con	+Seg	+Seg	+Nas	#
						+Voc	+Voc		
						+Dif	+Com		
						+Acu			

An example is:

(7.25a) ...#'ayahə́+p###m##tá:miha+t##'a+mahí:ram# ⇒
BECAUSE THEY SUN'S HIS-SONS

...#'ayahə́+piam##tá:miha+t##'a+mahí:ram#
[...'aya+piam ta:miat 'amai:ham.]
'...because they were the Sun's children.'

7.26. $X \frown | +Str | \frown Y \frown | +Str | \frown Z \Rightarrow X \frown | -Str | \frown Y \frown | +Str | \frown Z$

where X begins with # or ‡ and Z ends with # or ‡ and Y does not contain ‡

An example is:

(7.26a) #tuk^{w}úhpaká# ⇒ #tuk^{w}uhpaká# [tuk^{w}uh^{w}paka'] 'upwards'

Compare (7.26a) with #tuk^{w}úhpaç# [tuk^{w}uh^{w}pç] 'sky'. Without the stress deletion specified in rule 7.26, 'upwards' would be *[tuk^{w}uh^{w}pka'].

7.27. $\begin{vmatrix} +Voc \\ -Con \\ -Ten \\ -Str \end{vmatrix} \begin{vmatrix} +Seg \\ -Fea \\ \underline{h} \end{vmatrix} \frown X \Rightarrow \begin{vmatrix} +Voc \\ -Con \\ -Ten \\ -Str \end{vmatrix} \frown X$

where X = $\begin{vmatrix} +Voc \\ -Con \end{vmatrix}$ or # or ‡

Examples are:

(7.27a) #ñiá:h# ⇒ #ñiá:# [ñia] 'do it!'
#wihí:č# ⇒ #wií:č# [wi:č] 'acorn mush'
#nəhə́+# ⇒ #nəə́+# [nɨ:'] 'I'
#'aha+p# ⇒ #'aa+p# ['a:p] 'there'
#'a+mahí:r# ⇒ #'a+maí:r# ['amai:r] 'his son'
#yuhá:qahiam# ⇒ #yuá:qaiam# [yua:qaiam] 'Chemehuevis'
#nə+'ǫhǫ́# ⇒ #nə+'ǫǫ́# [nɨ'ǫ:'] 'my bone'

With regard to evidence for intervocalic h in the underlying forms of the above, consider the possessed form of 'acorn mush', restructured by the transformations of section 6.13:

(7.27b) #nə+⌢wí:h⌢y# [nɨwi:hi] 'my acorn mush (Acc)'

For some reason, not yet understood, the Future form of #ñíha:# 'do' loses its intervocalic h: [ñi:b] (cf. #ñíha:⌢y# [ñihai] 'do').

7.28. $\left|\begin{matrix}\alpha\text{Ten}\\ \beta\text{Str}\end{matrix}\right|\left|(\pm)\right|\left|+\text{Seg}\right|\left|\begin{matrix}+\text{Voc}\\ -\text{Con}\\ -\text{Ten}\\ -\text{Str}\end{matrix}\right|\left|(\pm)\right|\left|\begin{matrix}-\text{Voc}\\ +\text{Con}\\ -\text{Nas}\end{matrix}\right| \Rightarrow$

$\left|\begin{matrix}\alpha\text{Ten}\\ \beta\text{Str}\end{matrix}\right|\left|(\pm)\right|\left|+\text{Seg}\right|\left|\begin{matrix}-\text{Voc}\\ +\text{Con}\\ -\text{Nas}\end{matrix}\right|$

where α or β = +

Examples are:

(7.28a) #nǽ:bə+t# ⇒ #nǽ:bt# [na:bt] 'prickly pear'
#pą́:čaXa+t# ⇒ #pą́:čXa+t# [pą:čXt] 'rifle'
#maqáh^{w}u+t# ⇒ #maqáh^{w}t# [maqah^{w}t] 'dove'
#wə́l^{y}a+t# ⇒ #wə́l^{y}t# [wel^{y}t] 'dish'
#ṣumá:na+t# ⇒ #ṣumá:nt# [ṣuma:nt]
'bow-and-arrow'
#h^{w}ǫ́:mič# ⇒ #h^{w}ǫ́:mč# [h^{w}ǫ:mč] 'witch doctor'
#ŋa:naqá# ⇒ #ŋa:nqá# [ŋa:nqa']
'he's going to look for it'
#pǫǫ́qa+t# ⇒ #pǫǫ́qt# [pǫ:qt] 'road'

7.29. $\left|\begin{matrix}\alpha\text{Ten}\\ \beta\text{Str}\end{matrix}\right|(\pm)|\ \text{+Seg}\ \left|\begin{matrix}\text{-Voc}\\ \text{+Con}\end{matrix}\right|\left|\begin{matrix}\text{+Voc}\\ \text{-Con}\\ \text{-Ten}\\ \text{-Str}\end{matrix}\right|(\pm)\left|\begin{matrix}\text{-Voc}\\ \text{+Con}\\ \text{-Nas}\end{matrix}\right|$ ⇒

$\left|\begin{matrix}\alpha\text{Ten}\\ \beta\text{Str}\end{matrix}\right|(\pm)|\ \text{+Seg}\ \left|\begin{matrix}\text{-Voc}\\ \text{+Con}\end{matrix}\right|\left|\begin{matrix}\text{-Voc}\\ \text{+Con}\\ \text{-Nas}\end{matrix}\right|$

where α or β = +

Examples are:

(7.29a) #pą́:čXa+t# ⇒ #pą́:čXt# [pa:čXt] 'rifle'
#yə'a:yə'áhkičun# ⇒ #yə'a:yə'áhkčun#
[yɨ'a:yɨ'ahkčun] 'he's making it pretty for him'

7.30. $\begin{vmatrix} +\text{Voc} \\ -\text{Con} \end{vmatrix} \begin{vmatrix} \underline{r} \\ +\text{Seg} \\ +\text{Voc} \\ +\text{Int} \\ \alpha\text{Fea} \end{vmatrix} \frown X \Rightarrow \begin{vmatrix} +\text{Voc} \\ -\text{Con} \end{vmatrix} \begin{vmatrix} \underline{h} \\ +\text{Seg} \\ -\text{Fea} \end{vmatrix} \frown X$

where $X \neq \underline{\#}$, $\begin{vmatrix} \underline{ʕ} \\ +\text{Voc} \\ -\text{Con} \\ +\text{Acu} \\ +\text{Fla} \end{vmatrix}$

Examples of r changing to h are:

(7.30a) #'a+maí:ram# ⇒ #'a+maí:ham# ['amai:ham]
'his sons'

#nə+h^{w}ʕ:rpi'b# ⇒ #nə+h^{w}ʕ:hpi'b# [nɨh^{w}ʕ:h^{w}pi'b]
'my deep basket'

Examples where r remains are:

(7.30b) #'a+maí:r# ['amai:r] 'his son'
#h^{w}ʕrʕ:+pí'bəç# [h^{w}ʕrʕ:pi'bɨç] 'deep basket'
#ru+rá:sna'# [rura:sna'] 'peach'

7.31. $\begin{vmatrix} -\text{Ten} \\ +\text{Str} \end{vmatrix} (\pm)\ X \frown Y \Rightarrow \begin{vmatrix} -\text{Ten} \\ +\text{Str} \end{vmatrix} \begin{vmatrix} \underline{'} \\ +\text{Seg} \\ +\text{Int} \end{vmatrix} \frown X \frown Y$

where X = # or $\underline{\#}$ and Y $\neq \underline{\#}$ $\begin{vmatrix} -\text{Voc} \\ -\text{Con} \end{vmatrix}$

Examples are:

(7.31a) #nəə́+# ⇒ #nəə́'# [nɨ:'] 'I'
#'amá# ⇒ #'amá'# ['ama'] 'that'
#məmə'qá# ⇒ #məmə'qá'# [mɨmɨ'qa']
'he's going to die'
#nə+'ǫǫ́# ⇒ #nə+'ǫǫ́'# [nɨ'ǫ·'] 'my bone'

The glottal stop is not introduced however, when the following word begins with ' or h. For examples, see (7.8a).

7.32.

V_1	V_1		V_1:
+Voc	+Voc	⇒	+Voc
αFea	αFea		+Ten
	βStr		αFea
			βStr

Examples are:

(7.32a) #čawəəqá'# ⇒ #čawə:qá'# [čawɨ:ka']
'he's going to gather'
#nəə́'# ⇒ #nə́:'# [nɨ:'] 'I'
#nə+'ǫǫ́'# ⇒ #nə+'ǫ́:'# [nɨ'ǫ:'] 'my bone'

7.33.

	ə				e	
+Con	+Seg	+Voc	⇒	+Con	+Seg	+Voc
-Dif	+Voc	αCon		-Dif	+Voc	αCon
-Acu	βTen	-αDif		-Acu	+Acu	-αDif
+Fla	γStr	+Acu		+Fla	βTen	+Acu
	-Fea				γStr	
					-Fea	

Examples are:

(7.33a) #wə́l^{y}a+m# ⇒ #wél^{y}a+m# [wel^{y}am] 'dishes'
#čawə́:y# ⇒ #čawé:y# [čawe(:)i] 'gather'
#ṣi:k^{w}éy##n# ⇒ #ṣi:k^{w}éy##n# [ṣi:k^{w}ei n]
'I'm skinning it'
#čawəíb# ⇒ #čaweíb# [čaweib] 'gather (Future)'

7.34.

	a	i	'
-Gra	+Seg +Voc +Com -Fea	+Voc -Con +Dif +Acu	-Con +Int

⇒

	e	i	'
-Gra	+Seg +Voc +Acu -Fea	+Voc -Con +Dif +Acu	-Con +Int

Examples are:

(7.34a) #k^{w}ai'b# ⇒ #k^{w}ei'b# [k^{w}ei'b] 'eat (Future)'
#yaí:'čun# ⇒ #yeí:'čun# [yei:'čun]
'take (Benefactive)'
#čaí'kçəç# ⇒ #čeí'kçəç# [čeikçɨç] 'pretty one'

The following examples illustrate the non-assimilation of a to a following i' when the preceding consonant is Grave.

(7.34b) #mabai'b# [mabai'b] 'rub (Future)'
#paí:'b# [pai:'b] 'drink (Future)'
#písqai'b# [pisqai'b] 'rot (Future)'

7.35.

i	'	k	⇒	i	k
+Voc	+Seg	+Seg		+Voc	+Seg
-Con	+Int	+Con		-Con	+Con
+Dif	-Fea	+Int		+Dif	+Int
+Acu		-Fea		+Acu	-Fea

Examples are:

(7.35a) #čeí'kɋəɋ# ⇒ #čeíkɋəɋ# [čeikɋ±ɋ] 'pretty one'
#nə+k^{w}eí'kɋy# ⇒ #nə+k^{w}eíkɋy# [nɨk^{w}eikɋi] 'my eating it'

7.36.

-Ten	+Voc	⌢X	⇒	-Ten	+Voc	⌢X
-Str	+Con			-Str	-Con	
	-Dif				+Dif	
	αAcu				αAcu	
	-αFla				-αGra	
					-αFla	

where X ≠ | +Voc / -Con |

Examples are:

(7.36a) #kí:čy# ⇒ #kí:či# [ki:či] 'house (Acc)'
#mɋa:'yká'# ⇒ #mɋa:'iká'# [mɋa·i'ka'] 'to the smoke'
#pa+tay# ⇒ #pa+tai# [patai] 'that one (Acc)'
#k^{w}a'w# ⇒ #k^{w}a'u# [k^{w}a'u] 'while eating'
#h^{w}u'aw# ⇒ #h^{w}u'au# [h^{w}u'au] 'while burning'

7.37.

$\underline{V}_1$	'	$\underline{V}_2$		
+Voc -Con	-Con +Int	+Voc -Con -Ten -Str	+Con	⇒

$\underline{V}_1$	$\underline{V}_2$	'	
+Voc -Con	+Voc -Con -Ten -Str	-Con +Int	+Con

Examples are:

(7.37a) #mǫa:'iká'# ⇒ #mǫa:i'ká'# [mǫa:i'ka'] 'to the smoke'

#ma:+ra'iká'# ⇒ #ma:+rai'ká'# [ma:rai'ka'] 'to Twentynine Palms'

7.38.

	a		⇒		e	
+Voc αCon -αDif +Acu	+Voc +Com -Fla	+Voc βCon -βDif +Acu		+Voc αCon -αDif +Acu	+Voc +Acu -Fla	+Voc βCon -βDif +Acu

Examples are:

(7.38a) #'ayai# ⇒ #'ayei# ['ayei] 'take multiple object'

#təi:+pia:yká'# ⇒ #təi:+pie:yká'# [tɨi:pie(:)yka'] 'to hell'

7.39. $X \frown \left|\begin{matrix}+\text{Seg}\end{matrix}\right| \left|\begin{matrix}+\text{Voc}\\-\text{Con}\\+\text{Dif}\\-\text{Acu}\\-\text{Gra}\\-\text{Fla}\end{matrix}\right| \left|\begin{matrix}(\pm)\end{matrix}\right| \left|\begin{matrix}+\text{Seg}\end{matrix}\right| \frown Y \Rightarrow$

$X \frown \left|\begin{matrix}+\text{Seg}\end{matrix}\right| \left|\begin{matrix}+\text{Voc}\\-\text{Con}\\+\text{Dif}\\-\text{Acu}\\\alpha\text{Gra}\\\beta\text{Fla}\end{matrix}\right| \left|\begin{matrix}(\pm)\end{matrix}\right| \left|\begin{matrix}+\text{Seg}\end{matrix}\right| \frown Y$

where X or Y = $\left|\begin{matrix}+\text{Voc}\\-\text{Con}\\\alpha\text{Gra}\\\beta\text{Fla}\end{matrix}\right|$ and neither X nor Y

$= \left|\begin{matrix}\underline{a}\\+\text{Voc}\\+\text{Com}\\-\text{Fla}\end{matrix}\right|$

Examples are:

(7.39a) #pɨ̱:+h^{w}u:n# ⇒ #pu:+h^{w}u:n# [pu:h^{w}u(:)n]
'their hearts'

#piˇɨ̱:ɋu'# ⇒ #piˇu:ɋu'# [piˇu:ɋu']
'arrive (Motion)'

#pɨ̱:+tɑ:mǫ́'# ⇒ #pɨ:+tɑ:mǫ́'# [pɨ:tɑ(:)mǫ']
'their knees'

#nə+q^{w}ǫ:hɨ́'# ⇒ #nə+q^{w}ǫ:hɨ́'# [nɨq^{w}ǫ:hɨ']
'my older sister's (Gen)'

Note the non-assimilation of ɨ̱ to the preceding u in the following example, where Y = a.

(7.39b) #mu±qá'# [mu±ka'] 'he's going to shoot'

7.40.

+Voc		⇒	+Voc	
-Con			-Con	
-Com			-Com	
-Dif			+Dif	
-Acu			-Acu	
-Gra			-Gra	

Examples are:

(7.40a) #təí:+t# ⇒ #t±í:+t# [t±i:t] 'devil'
#nǫ́:ht# ⇒ #n±́:ht# [n±:ht] 'woman'

7.41.

		g				k
+Voc	+Con		+Voc	+Con		
-Con	+Com	⇒	-Con	-Com		
+Dif			+Dif			

An example is:

(7.41a) #čaw±:gá'# ⇒ #čaw±:ká'# [čaw±:ka']
'he's going to gather'

Note that 7.41 does not apply to g following a possessive prefix, because of the intervening ±. An example is:

(7.41b) #n±+gąb# [n±qąb] 'my ear'

7.42. ± ⇒ Ø

7.43.

		i					
+Voc	+Voc	+Voc	⇒	+Voc	+Voc
+Con	-Con	-Con		+Con	-Con
-Dif	+Dif			-Dif	
+Acu	+Acu			+Acu	

Examples are:

(7.43a) #barí:l^{y}iam# ⇒ #barí:l^{y}am# [bari:l^{y}am] 'barrels'
#wiwíl^{y}ia'n# ⇒ #wiwíl^{y}a'n# [wiwil^{y}a'n] 'make lines'

7.44.

V_1	V_2					V_1		
+Voc	+Voc	+Voc	#	⇒	+Voc	+Voc	#
-Con	-Con	γCon			-Con	γCon	
αFea	βStr	-γDif			αFea	-γDif	
		+Acu			βStr	+Acu	
		-Fea				-Fea	

Examples are:

(7.44a) #hihiíy# ⇒ #hihíy# [hihi(y)] 'see'
#miá:y# ⇒ #míy# [mi(y)] 'go'
#muui# ⇒ #mui# [mui] 'shoot'

7.45.

V:	Y			V(:)	Y	
+Ten	+Seg	#	⇒	±Ten	+Seg	#
	+Voc				+Voc	
	+Con				+Con	
	+Acu				+Acu	
	-Fea				-Fea	

Examples are:

(7.45a) #nɨ́:y# ⇒ #nɨ́(:)y# [nɨ(:)i] 'me'
#čawé:y# ⇒ #čawé(:)y# [čawe(:)i] 'gather'
#nɨkí:y# ⇒ #nɨkí(:)y# [nɨki:y ~ nɨki(y)] 'my house (Acc)'
#'a'ǫ́:y# ⇒ #'a'ǫ́(:)y# ['a'ǫ(:)i] 'its bones (Acc)'

7.46.

	y				i	
αDif	+Seg	#	⇒	αDif	+Seg	#
βAcu	+Voc			βAcu	+Voc	
	+Con				-Con	
	-Dif				+Dif	
	+Acu				+Acu	
	-Fea				-Fea	

where if α = +, then β = -

An example is:

(7.46a) #čawé(:)y# ⇒ #čawé(:)i# [čawe(:)i] 'gather'

7.47.

	í	y			í	i ~ y	
	+Voc	+Seg	#	⇒	+Voc	+Seg	#
	-Con	+Voc			-Con	+Voc	
	+Dif	+Con			+Dif	αCon	
	+Acu	-Dif			+Acu	-αDif	
	-Ten	+Acu			-Ten	+Acu	
	+Str	-Fea			+Str	-Fea	

Examples are:

(7.47a) #míy# ~ #míi# [miy ~ mi(:)] 'go'
#nɨkíy# ~ #nɨkíi# [nɨkiy ~ nɨki(:)] 'my house (Acc)'

7.48. $|\alpha Str| \Rightarrow \emptyset$

7.49. $|+Ten|\underline{\#} \Rightarrow |-Ten|\underline{\#}$

Examples are:

(7.49a) #n̈ki:# ⇒ #n̈ki# [n̈ki] 'my house'
#niñu:# ⇒ #niñu# [niñu] 'my possession'
#'ubia:# ⇒ #'ubia# ['ubia] 'already'
#k^wn̈n̈:# ⇒ #k^wn̈n̈# [k^wn̈n̈] 'Quotative-they'

7.50.
$$\begin{array}{|c|c|}\hline \underline{V_1} & \underline{V_1} \\ +Voc & +Voc \\ -Con & -Con \\ \alpha Fea & \alpha Fea \\ \hline\end{array} \frown X \Rightarrow \begin{array}{|c|}\hline \underline{V_1(:)} \\ +Voc \\ -Con \\ \alpha Fea \\ \pm Ten \\ \hline\end{array} \frown X$$

where X = # or $\underline{\#}$

Examples are:

(7.50a) #n̈kii# ⇒ #n̈ki(:)# [n̈ki(:)] 'my house (Acc)'
#hamii# ⇒ #hami(:)# [hami(:)] 'whom (Acc)'

7.51.
$$\begin{array}{|c|c|}\hline \underline{\breve{c}} & \underline{t} \\ -Voc & -Voc \\ +Con & +Con \\ -Dif & +Dif \\ +Acu & +Acu \\ +Int & +Int \\ \hline\end{array} \Rightarrow \begin{array}{|c|c|}\hline \underline{\breve{s}} & \underline{t} \\ -Voc & -Voc \\ +Con & +Con \\ -Dif & +Dif \\ +Acu & +Acu \\ -Int & +Int \\ \hline\end{array}$$

An example is:

(7.51a) #nɨ'a:čtam# ⇒ #nɨ'a:štam# [nɨ'a:štam]
'my horses'

7.52.

q^w	ʕ	i:		x^w	ʕ	i:
+Con	+Voc	+Dif	⇒	+Con	+Voc	+Dif
+Com	+Acu	+Acu		+Com	+Acu	+Acu
+Int	+Fla	+Ten		-Int	+Fla	+Ten

Rule 7.52 affects only two known items:

(7.52a) #x^wǫi:ñiñi'# [x^wǫi:ñiñi'] 'dragonfly'
#tipą:'x^wǫi:ñi'# [tipą:'x^wǫi(:)ñi'] 'horned toad'

Rule 7.52 does not affect [q^wǫi'mɨ'q] 'cough', presumably because the i is short.

7.53.

V:		V:		V:	V(:)
+Ten	⌢X⌢	+Ten	⇒	+Ten	⌢X⌢	±Ten

where X does not contain ##

Examples are:

(7.53a) #pɨ:ki:b# ⇒ #pɨ:ki(:)b# [pɨ:ki(:)b]
'at their house'

#tɨi:pie:yka'# ⇒ #tɨi:pie(:)yka'#
[tɨi:pie(:)yka'] 'to hell'

7.54.

	h						
+Dif	+Seg	-Voc	⇒	+Dif	+Seg	-Voc
-Acu	-Fea	+Con		-Acu	+Con	+Con
-Gra		αDif		-Gra	αDif	αDif
αFla		+Acu		αFla	+Acu	+Acu
		αFla			αFla	αFla
		+Int				+Int

Examples are:

(7.54a) #wɨçɨhç# ⇒ #wɨçɨʂç# [wɨçɨʂç] 'man'
#čɨhčɨba'# ⇒ #čɨščɨba'# [čɨščɨba'] 'following'

7.55.

t	č		č
+Seg	-Dif	⇒	-Dif
+Con	+Acu		+Acu
+Dif	+Int		+Int
+Acu			
+Int			

An example is:

(7.55a) #'atuh^{w}tčɨnim# ⇒ #'atuh^{w}čɨnim# ['atuh^{w}čɨnim] 'older ones'

7.56.

C_1		C_1		(C_1)		C_1
+Con	##	+Con	⇒	+Con	##)	+Con
αFea		αFea		αFea		αFea

The deletion of one of two identical consonants across a word boundary is usually not indicated in the phonetic transcription. An example of this deletion is:

(7.56a) #h^{w}ukahti###m###mɨkaŋ# ⇒ #h^{w}ukahti###mɨkaŋ#
DEER-ACC THEY KILL

[h^{w}ukahti mɨkaŋ.] 'They killed a deer.'

7.57. $\left|\begin{array}{c}+\text{Voc}\\-\text{Con}\\ \alpha\text{Acu}\\ -\alpha\text{Gra}\\+\text{Fla}\end{array}\right|\begin{array}{c}-\text{Voc}\\-\text{Dif}\\-\text{Acu}\end{array}\Big|\frown X \Rightarrow \left|\begin{array}{c}+\text{Voc}\\-\text{Con}\\ \alpha\text{Acu}\\ -\alpha\text{Gra}\\+\text{Fla}\end{array}\right|\begin{array}{c}-\text{Voc}\\-\text{Dif}\\-\text{Acu}\\+\text{Fla}\end{array}\Big|\frown X$

where $X \neq \left|\begin{array}{c}+\text{Voc}\\-\text{Con}\end{array}\right|$

Examples are:

(7.57a) #wǫh# ⇒ #wǫh^{w}# [wǫh^{w}] 'two'
#tu:k# ⇒ #tu:k^{w}# [tu:k^{w}] 'at night'
#niṣu:ŋ# ⇒ #niṣu:ŋ^{w}# [niṣu:ŋ^{w}]
'my (man's) daughter'
#tuhtu'# ⇒ #tuh^{w}tu'# [tuh^{w}tu'] 'dance'

The symbol ['^{w}] is not used (cf. 7.7). An example with labialized glottal stops is:

(7.57b) ['u:'] (= ['^{w}u·'^{w}]) 'take'

7.58. $\#\left|\begin{array}{c}\underline{t}\\+\text{Con}\end{array}\right|\#\#\left|\begin{array}{c}\underline{h}\\+\text{Seg}\\-\text{Fea}\end{array}\right| \Rightarrow \#\left|\begin{array}{c}\underline{t}\\+\text{Con}\end{array}\right|\#\#\left|\begin{array}{c}\underline{X}\\+\text{Seg}\\+\text{Con}\\+\text{Com}\\-\text{Fea}\end{array}\right|$

Examples are:

(7.58a) #t# ⌢ #h# ⇒ #t##X# [t X] 'Dubitative ⌢ Inferential (Evidentials)' (see (1.4ℓ))

#t# ⌢ #hi:t# ⇒ #t##Xi:t# [t Xi:t] 'something' (see (1.21c))

7.59.

n		'		n	
+Nas +Dif +Acu	##	+Seg +Int ±Fla -Fea	⇒	+Nas +Dif +Acu	##

An example is:

(7.59a) #k^{w}ɨn##'iču'kin##'amai# ⇒ #k^{w}ɨn##iču'kin##amai#

QUOT MAKE THAT

[k^{w}ɨn iču'kin amai.] 'She made that.'

7.60.

	'			(')	
#	+Seg +Int ±Fla -Fea	⇒	#(	+Seg +Int ±Fla -Fea	)

Word-initial glottal stop is often not pronounced.

7.61. # ⇒ ∅

Word boundaries, in my experience, are inaudible. They are indicated in the phonetic transcription by spaces, as noted

in section 0.2, only for the convenience of the reader.

7.62. $\left|+\text{Seg}\ \left|\begin{matrix}+\text{Voc}\\+\text{Con}\\-\text{Dif}\\\alpha\text{Acu}\\-\alpha\text{Fla}\\-\text{Lat}\end{matrix}\right.\right. \Rightarrow \left|+\text{Seg}\ \right| \left(\left|\begin{matrix}+\text{Seg}\\+\text{Voc}\\+\text{Dif}\\\alpha\text{Acu}\\-\alpha\text{Gra}\\-\alpha\text{Fla}\end{matrix}\right.\right) \left|\begin{matrix}+\text{Voc}\\+\text{Con}\\-\text{Dif}\\\alpha\text{Acu}\\-\alpha\text{Fla}\\-\text{Lat}\end{matrix}\right|$

Examples are:

(7.62a) #hak^{w}up yu:'i'aç k^{w}ɨn# ⇒ #hak^{w}upiyu:'i'aç k^{w}ɨn#
VERY CRIER QUOT

[hak^{w}upiyu:'i'aç k^{w}ɨn.] 'He was quite a crybaby.'

(7.62b) #...'ani k^{w}ɨnɨ houk^{w}pi wia:n# ⇒
AND-THEN QUOT-PLURAL ONE-ACC SEND

#...'ani k^{w}ɨnɨ houk^{w}piuwia:n#

[...'ani k^{w}ɨnɨ houk^{w}piuwia:n.]

'...and then they sent one [man].'

7.63. $\underline{r}$ $\left|\begin{matrix}+\text{Voc}\\+\text{Con}\\+\text{Int}\end{matrix}\right| \Rightarrow \left|\begin{matrix}+\text{Voc}\\+\text{Con}\\\pm\text{Int}\end{matrix}\right|$

r is freely a tap or an apicoalveolar approximant. This difference is not indicated in the transcription.

7.64. #⌢|+Seg| ⇒ |+Seg|

7.65. # ⇒ .

An example illustrative of both 7.64 and 7.64 is:

(7.65a) #'ibi 'ayɨ:t# ⇒ 'ibi 'ayɨ:t.
THIS END

'This is the end.'

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APPENDIX: Summary of Phrase-Structure Rules.

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1.1. $S \rightarrow \left\{ \begin{array}{l} \text{Interjection} \\ S\ ([\#Conj \frown S\#]^*) \end{array} \right\}$ 11

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1.3. $Aux \rightarrow Asp \frown EvP$ 16

1.4. $EvP \rightarrow (Ev)(\underline{\#ta\#})\ Ev\ (\underline{Past})(\underline{?})$ 17

1.5. $PredP \rightarrow Pred\ ([(Conj)\ Pred]^*)$ 24

1.6. $Pred \rightarrow \left\{ ([TS]^*)(Intens) \left\{ \begin{array}{l} \text{NomP} \\ \text{NumP} \end{array} \right\} \left\{ \begin{array}{l} \text{AdjP} \\ (\text{Manner})\ \text{VblP} \end{array} \right\} \right\}$ 26

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