Apinayé Grammar

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CONTENTS

1.   Introduction.

The levels in the Apinaye grammatical hierachy to be discussed in this paper are as follows: Sentence, Clause, Phrase, Word, Stem, Morpheme. Phonologically determined Morpho-Phonemics will be written only within words.

1.1.   Sentence level.

1.1.1. Definition.

A sentence may be a single clause or a sequence of clauses, ± certain slots relevant only at sentence level. Any such sentence may constitute a complete utterance or fill a slot at some higher level.

1.1.2.   There are both simple and complex sentences.

1.1.2.1.   Complex sentences.

1.1.2.1.1.   Independent + Independent.

iñmʌ̃	pico	ŋõ + pa	kukrɛ̃	
me to	banana	give I	it-eat	"Give me a banana and I'll eat it."

1.1.2.1.2.   Independent + Dependent.

nã	pa	ɔmu	nɛ̃	ʔapro	
did	I	it-see	and	it-buy	"I saw it and bought it."

1.1.2.2.   Simple sentences.

1.1.2.2.1.   Independent clause.

nã	pa	pico	zapro	
did	I	banana	buy	"I bought a banana."

1.1.2.2.2.   Independent clause + certain sentence level spots such as address, quotation.

cʌ	nã	Sit	apumu	
query	did	Sit	you-see	"Did Sit see you?"

1.2.   Clause level.

1.2.1. Definition.

The clause is a unit filling a slot on the sentence level which has as its minimum either a Subject-Predicate, Subject-Complement, or Topic-Comment relationship.

1.2.2. There are two major types of clauses.

1.2.2.1. Predicative.

1.2.2.1.1. Predicative clauses are of two major types.

1.2.2.1.1.1. Temporal.

1.2.2.1.1.2. Habitual.

1.2.2.1.2. Temporal and Habitual clauses.

Both Temporal and Habitual are further sub-divided into Transitive and Intransitive type clauses.

1.2.2.1.3. Temporal clauses types are of three basic types.

1.2.2.1.3.1. Indicative.

1.2.2.1.3.2. Intentive.

1.2.2.1.3.3. Imperative.

1.2.2.2. Non-Predicative.

1.2.2.2.1. Equational.

1.2.2.2.2. Existential.

1.3. Phrase level.

The phrase is a potential sequence of two or more words, which function as a unit and fill a slot on the clause level. The two types of phrases are:

1.3.1. Noun phrases.

1.3.2. Verb phrases.

1.4. Word level.

A word consists of one or more stems ± affixes filling a slot in a phrase. There are four classes of words.

1.4.1. Noun Words.

1.4.2. Verb Words.

1.3.3. Descriptive Words.

1.4.4. Relational Words.

1.5. Stem level.

A stem consists of one or more morphemes, which form a unit with potential for affixation, filling a slot on the word level. There are four classes of stems:

1.5.1. Noun stems.

1.5.2. Verb stems.

1.5.3. Descriptive stems.

1.5.4. Relational stems.

1.6. Morpheme level.

Morphemes are minimal meaningful units. They are divided into three classes, each filling slots at different levels,

1.6.1. Functionals.

Functional morphemes fill slots on the clause level. They are phonologically free, but do not occur in isolation.

1.6.2. Affixes.

Affixes are morphemes which fill slots on the word level.

1.6.3. Roots.

Roots are morphemes which fill slots on the stem level. There are four classes of roots.

1.6.3.1. Noun roots.

1.6.3.2. Verb roots.

1.6.3.3. Descriptive roots.

1.6.3.4. Relational roots.

2. The hierarchical structure in detail.

2.1. Sentence level structure.

2.1.1. Definition.

A sentence may be a single clause or a sequence of clauses, ± certain slots relevant only at sentence level. Any such sentence may constitute a complete utterance or fill a slot at some higher level.

2.1.2. Internal structure.

2.1.2.1. Simple sentences consist of one independent clause.

nã   pa   ñɨ̃
did I   sit   "I sat."

2.1.2.2. Complex sentences consist of:

2.1.2.2.1. Independent + Independent clauses.

kɔt   iñne   ket   pa   ma   tẽ
fut. me-keep neg. I   away go   "If he doesn't keep me, I'll go."

N.B. n̰ɛ̃ clause "being" type marker, only occurs pause group final, therefore when the first clause in a complex sentence is a "being" type (+n̰ɛ̃) (the n̰ɛ̃ then would be pause group medial), the n̰ɛ̃ disappears. Any two independent clauses can be together in one sentence with the only change being the absence of this n̰ɛ̃.

2.1.2.2.2. Independent + Dependent, joined by connector n̰ɛ̃ or ñ̰ũm̰.

iñmʌ̃	ʔɔ	amɛ̃ckrut	nɛ̃	aŋõ	
me-to	with	two	and	it-give	"give me two"
					(lit. "two it and give it to me")

pa	mã	tɛ̃	nɛ̃	nõ	
I	away	go	and	lie	"I'm going and lie down."

N.B. As mentioned in 2.1.2.2.2., Being clause type n̰ɛ̃ also disappears when followed in the same sentence by a dependent clause. The n̰ɛ̃ left in this case is the connector "and", which only occurs pause group medial.

2.1.2.2.3. Independent clause + Sentence Level tagmeme.
2.1.2.2.3.1. Address tagmeme.
This slot always occurs initial in a sentence.

mʌ̃z	pa	kapɛ	kapõ	
mother	I	outdoors	sweep	"Mother, I'll sweep outdoors."

2.1.2.2.3.2. Response tagmeme.
This always occurs initial also.

ə	nã	pa	ra	ɔmu	
yes	did	I	already	it-see	"Yes, I've already seen it."

2.1.2.2.3.3. Question tagmeme.
This may be preceded by the Address slot.

2.1.2.2.3.3.1. Independent clause + question marker.

cʌ	nã	ka	ɔmu	
query	did	you	it-see	"Did you see it?"

mɔ	kacɨv	nã	ka	ʔapro	
why		did	you	it-buy	"Why did you buy it?"

2.1.2.2.3.3.2. Independent clause in which the Object slot is taken out of the clause and replaced initially with a question word.

       mɔ   nã   ka   ʔapro
       what did you it-buy   "What did you buy?"

2.1.2.2.3.4. Quotation tagmeme.

This is composed of a Relational$_1$ slot (filled by <u>kɅ̃m</u>) preceded by ± Tense ± Subject slots. The end of the quotation is usually followed by an "end quote" <u>nɛ̃</u>.

       nã   kɅ̃m   nã   pa   ra   ŋõr nɛ̃
       did to-her did I   already sleep   "He said, 'I've already slept.' "

This may be reduced by dropping the Tense and Relational slots, leaving Subject only.

       ka   nã   pa   ɔmu nɛ̃
       you did I   it-see   "You say, 'I saw it.'"

Or by dropping the Tense and Subject slots, leaving the Relational slot.

       kɅ̃m   nã   pa   nɨ̃ nɛ̃
       to her did I   sit   "Tell her, 'I've already sat.' "

2.1.2.2.3.5. Emphasis tagmeme.

A slot may be emphasized by taking it out of its normal place within a sentence and putting it at the beginning in an Emphasis slot. The slots, which may occur in the Emphasis slot, are: Subject, Object, Relational, and occasionally Aspect. Words in this slot are emphatically stressed, and there is a slight break before the rest of the sentence.

       kokoz   nã   pa   ɔmu
       monkey did I   it-see   "It was a <u>monkey</u> that I saw."

2.1.2.2.3.5.1. When the Subject in the Emphasis slot is a pronoun (<u>ka</u>, <u>pa</u>) the Subject is repeated in its normal place after the Tense slot.

       pa   nã   pa   ʔapro
       I   did I   it-buy   "I was the one who bought it."

2.1.2.2.3.5.2. When, in a Habitual clause type, the Subject or Object is in the Emphasis slot, certain obligatory slots must occur with it. The occurrence of the additional slots is conditioned by the alternate order (presence of Emphasis slot).

Relat.	Obj.	Pred.	
ictε	kaŋʌ	pumuñ	
I	paper	know	"I know paper."

Emp:	Obj.	Tense	Sub.	Relat.	Pred.	
	kaŋʌ	nã	pa	ictε	ɔmuñ	
	paper	do	I	I	know	"Paper is what I know."

Emp:	Sub.	Tense	Relat.	Obj.	Pred.	
	pa	nã	ictε	kaŋʌ	pumuñ	
	I	do	I	paper	know	"I am the one who knows paper."

2.2. The clause level structure.

2.2.1. Introduction.

2.2.1.1. Definition.

The clause is a unit filling a slot on the sentence level, which has as its minimum either a Subject-Predicate, Subject-Complement, or Topic-Comment relationship.

2.2.1.2. There are two main <u>independent</u> clause types: Predicative and Non-Predicative.

2.2.1.2.1. Predicative.

Predicative has as a minimum some type of predication. Predicative clauses are of two types.

2.2.1.2.1.1. Transitive

Transitive clauses, which have an obligatory object. This object may be manifested in one of three ways in any given clause:

2.2.1.2.1.1.1. In a separate object slot.

Tense	Subj.	Obj.	Pred.	
nã	pa	pico	zapro	
did	I	banana	buy	"I bought a banana."

2.2.1.2.1.1.2. As a person prefix object, bound to the verb in the Predicate slot.

Tense	Subj.	Obj.-Pred.	
nã	pa	a-pumu	
did	I	you-see	"I saw you."

2.2.1.2.1.1.3. In the verb itself, when the object is not specifically expressed.

Tense	Subj.	Pred.	
nã	pa	kuka	
did	I	it-roast	"I roasted it."

2.2.1.2.1.2. Intransitive

Intransitive clauses, which never take an object, and which usually repeat the subject as a person prefix on the verb. N.B. It should be noted at this point that in this language there is a difference between first and second person and third person on all levels. This will be explained as relevant.

N.B.B. Verb stems usually have two allomorphs. Allomorph 1 is used in Temporal clause types when the verb occurs slot final.

nã	pa	ʔapro	
did	I	it-buy	"I bought it."

Allomorph 2 is used slot medial, and in Habitual clause types.

nã	pa	ʔapror	ket	nẽ	
did	I	it-buy	neg.		"I didn't buy it."

ictɛ	ʔapror	
I	it-buy	"I buy it."

VS_1 will refer to verb stems with allomorph 1.

VS_2 will refer to verb stems with allomorph 2 of all verbs which have 2 allomorphs, and to allomorph 1 of the others.

2.2.1.2.2. Non-Predicative.

Non-Predicative clause types have as a minimum a Subject-Complement or Topic-Comment relationship. These, as the name states, carry no form of predication, differing in internal structure from the Predicative clause types mainly by the absence of a Predicate slot.

2.2.2. Description of clause types.

2.2.2.1. Predicative clause types are sub-divided into two main types.

2.2.2.1.1. Temporal clause types.

This type has the idea of a single action, completed in time. These are further divided into three classes;

2.2.2.1.1.1. Indicative.

2.2.2.1.1.2. Intentive - intention to carry out an action.

2.2.2.1.1.3. Imperative.

Each of the above sub-classes is further sub-divide into two sub classes:

action

being - this type has an obligatory n͉ɛ̃ clause marker, occurring final in the clause.

2.2.2.1.2. Habitual clause types.

This type carries the idea of a continual action, or something that always occurs,

2.2.2.2. Non-Predicate clause types.

These carry no form of predication. There are two types.

2.2.2.2.1. Equational.

2.2.2.2.2. Existential.

2.2.3. Formulas

2.2.3.1. Temporal Indicative

2.2.3.1.1. Two classes of Temporal Indicative clauses

2.2.3.1.1.1. Action Indicative. Formulas for this type are:

	TRANSITIVE				INTRANSITIVE		
1.	Tense	Subj.	Obj.	Pred.$_1$	Tense	Subj.	Pred.$_1$

nã   pa   pico   zapro   nã   pa   icprõt
did   I   banana   buy   did   I   I-run
"I bought a banana."   "I ran."

| 2. | Tense | Subj. | Relat.$_1$ | Obj. | Pred.$_1$ | Tense | Subj. | Relat.$_1$ | Pred.$_1$ |

nã   pa   kʌm   pico   ŋõ   nã   pa   kʌm   ickatɔ
did   I   to-him   banana   give   did   I   to-it   I-find
"I gave him a banana."   "I found it."

2.2.3.1.1.2. Being Indicative. Formulas for this type are:

| 1. | Tense | Subj. | Obj. | Pred.$_2$ | Tense | Subj. | Pred.$_2$ |

nã   pa   Sit   kamñĩc nɛ̃   nã   pa   iñŋrɨk nɛ̃
did   I   Sit   suspect   was   I   I-mad
"I suspected Sit."   "I was mad."

| 2. | Tense | Subj. | Relat.$_2$ | Obj. | Pred.$_2$ | Tense | Subj. | Relat.$_2$ | Pred.$_2$ |

nã   pa   iñmʌ̃   pico   cʌñ nɛ̃   nã   pa   iñmʌ̃   krɨ nɛ̃
do   I   me-to   bananas   like   am   I   me-to   cold
"I like bananas."   "I'm cold."

3.   Tense Subj. Obj.   Pred.$_1$

nã	pa	pico	zapror	ket nẽ
do	I	banana	buy	neg.

"I didn't buy the banana."

Tense Subj. Pred.$_1$

nã	pa	icprõt	ket nẽ
do	I	I-run	neg.

"I didn't run."

4.   Tense Subj. Relat.$_1$ Obj.   Pred.$_1$

nã	pa	kʌ̃m	pico	ñõr	ket nẽ
did	I	to-her	banana	give	neg.

"I didn't give her a banana."

Tense Subj. Relat.$_1$ Pred.$_1$

nã	pa	kʌ̃m	ickatɔr	ket nẽ
did	I	to-it	find	neg.

"I didn't find it."

2.2.3.1.2. Reduced Minimums.

These clauses may be reduced by dropping the Subject and/or Object slots.

2.2.3.1.2.1. Action.

TRANSITIVE

1.   Tense Pred.$_1$

nã	ʔapro
did	it-buy

"He bought it."

INTRANSITIVE

Tense Pred.$_1$

nã	ʔprõt
did	he-run

"He ran."

TRANSITIVE

2.   Tense Relat.$_1$ Pred$_1$

nã	kʌ̃m	kuŋõ
did	to-her	it-give

"He gave it to her."

INTRANSITIVE

Tense Relat.$_1$ Pred.$_1$

nã	kʌ̃m	katɔ
did	to-it	find

"He found it."

2.2.3.1.2.2. Being.

TRANSITIVE

1.   Tense Pred.$_2$

nã	ʔkamñĩc nẽ
did	her-suspect

"He suspected her."

INTRANSITIVE

Tense Pred.$_2$

nã	ŋrɨk nẽ
did	mad

"He's mad."

TRANSITIVE

2.   Tense Relat.$_2$ Pred.$_2$

nã	kʌ̃m	ʌñ nẽ
did	to-her	like

"She liked it."

INTRANSITIVE

Tense Relat.$_2$ Pred.$_2$

nã	kʌ̃m	krɨ nẽ
did	to-her	cold

"She was cold."

TRANSITIVE

3. Tense Pred.$_1$

nã   ʔapror ket nɛ̃
did   it-buy neg.
"He didn't buy it."

TRANSITIVE

4. Tense Relat.$_1$ Pred.$_1$

nã   kʌ̃m   õr ket nɛ̃
did   to-her give neg.
"He didn't give it to her."

INTRANSITIVE

Tense Pred.$_1$

nã   ʔprõt ket nɛ̃
did   he-run neg.
"He didn't run."

INTRANSITIVE

Tense Relat.$_1$ Pred.$_1$

nã   ʔʌ̃   karõ ʔket nɛ̃
did   on it   picture neg.
"He didn't order it."

2.2.3.2. Temporal Intentive clause types.

2.2.3.2.1. These are divided into two classes.

2.2.3.2.1.1. Action. Formulas are:

TRANSITIVE

1. Subj. Obj.   Pred.$_1$

pa   kuveñ pumu
I   bird   see
"I'm going to see the bird."

TRANSITIVE

2. Subj. Relat.$_1$ Obj. Pred.$_1$

pa   ʔɔ   apa kukõ
I   with it your arm rub
"I'm going to rub your arm with it."

INTRANSITIVE

Subj. Pred.$_1$

pa   icprõt
I   I-run
"I'm going to run."

INTRANSITIVE

Subj. Relat.$_1$ Pred.$_1$

pa   kʌ̃m   akiz
I   to-her   call
"I'm going to call her" "I call her."

2.2.3.2.1.2. Being. Formulas are:

TRANSITIVE

1. Subj. Obj.   Pred.$_1$

pa   kuveñ pumuñ ket nɛ̃
I   bird   see   neg.
"I'm not going to see the bird."

TRANSITIVE

2. Subj. Rela.$_1$ Obj.   Pred.$_1$

pa   kʌ̃m pico   ñõr   ket nɛ̃
I   to-her banana give   neg.
"I'm not going to give her a banana."

INTRANSITIVE

Subj. Pred.$_1$

pa   icprõt ket nɛ̃
I   I-run neg.
"I'm not going to run."

INTRANSITIVE

Subj. Relat.$_1$ Pred.$_1$

pa   kʌ̃m icʌkzer ket nɛ̃
I   to-her I-call neg.
"I'm not going to call her."

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N.B. It is possible that there are two more possibilities of formulas in both "temporal Intentive" above and also in "Temporal Imperative" below. Two possibilities in action and being both are probable, and need checking.

2.2.3.2.2. Reduced Minimums.
These clauses may be reduced by dropping the Object slot. (Transitive only)

2.2.3.2.2.1. Action clauses.

1.   Subj.   Pred.$_1$

pa   ɔmu
I   it-see
"I'm going to see it."

2.   Subj. Relat.$_1$ Pred.$_1$

pa   ʔɔ   kukõ
I   with it it-rub
"I'm going to rub it with it."

2.2.3.2.2.2. Being clauses.

1.   Subj. Pred.$_1$

pa   omuñ ket nɛ̃
I   it-see neg.
"I'm not going to see it."

2.   Subj. Relat.$_1$ Pred.$_1$

pa   kʌ̃m   õr   ket nɛ̃
I   to her   it-give neg.
"I'm not going to give it to him."

2.2.3.3. Temporal Imperative clause types.

2.2.3.3.1. There are two classes:

2.2.3.3.1.1. Action.

TRANSITIVE

1.   Obj.   Pred.$_1$

kaŋʌ   pumu
paper see
"Look at the paper."

INTRANSITIVE

Pred.$_1$

aprõt
aprõt
"Run!"

TRANSITIVE

2.   Relat.$_1$ Obj.   Pred.$_1$

kʌ̃m   pico   ŋõ
to-him banana give
"Give him a banana."

INTRANSITIVE

Relat.$_1$ Pred.$_1$

kʌ̃m   akiz
to-her   you-call
"Call her."

2.2.3.3.1.2. Being

TRANSITIVE

1.   Obj.   Pred.$_1$

pico   zapror ket nɛ̃
banana   buy neg.
"Don't buy a banana."

INTRANSITIVE

Pred.$_1$

aprõt ket nɛ̃
you-run neg.
"Don't run."

	TRANSITIVE				INTRANSITIVE		
2.	Relat.$_1$	Obj.	Pred.$_1$		Relat.$_1$	Pred.$_1$	

	TRANSITIVE				INTRANSITIVE	
2.	?ɔ	icpa	kukõ ket nẽ		kãm	scʌkzer ket nẽ
	with	my-arm	rub neg.		to-her	you-call neg.
	"Don't rub my arm with it."				"Don't call her."	

2.2.3.3.2. Reduced Minimums.

These clauses may be reduced by dropping the Object slot. (Transitive only)

2.2.3.3.2.1. Action.

1.	Pred.$_1$			Relat.$_1$	Pred.$_1$
	umĩ			kãm	aŋõ
	it bake			to her	it-give
	"Bake it."			"Give it to her."	

2.2.3.3.2.2. Being.

1.	Pred.$_1$			2.	Pred.$_1$	
	umĩr	ket nẽ			kãm	õr	ket nẽ
	it-bake	neg.			to-her	it-give	neg
	"Don't bake it."				"Don't give it to her."		

2.2.3.4. Expansions.

Temporal clause types may be expanded by adding an Aspect slot, which usually follows the Subject; a Number slot which may follow the Subject or precede the Object, Relational, or Predicate slot (precedes Aspect following Subject), a Directional slot which precedes the Predicate or Object, and up to two relational slots which normally precede the object.

Tense	Subj.	Number	Aspect	Relat.	Relat.	Obj.	Pred.
nã	pa	nẽ	ra	za?ʌ̃	ape	pico	zapro
did	I	pl.	already	today	you-from	banana	buy

"We've already bought a banana from you today."

2.2.3.5. Habitual clause types.

	TRANSITIVE				INTRANSITIVE		
1a.	Relat.$_2$	Obj.	Pred.$_1$	1b.	Relat.$_2$	Relat.$_1$	Pred.$_1$
	ictẽ	pico	zapror		ictɛ	?ɔ	ic peñ
	I	bananas	buy		I	with-it	I-work
	"I buy bananas."				"I work it."		

	TRANSITIVE					INTRANSITIVE

2.   Relat.$_2$ Relat.$_1$ Obj.   Pred.$_1$ 3.   Predicate$_2$

ictɛ   kʌ̃m   pico   ñõr   iñŋrɨk
I   to-them   bananas   give   I-mad
"I give them bananas."   "I'm mad."

	TRANSITIVE				INTRANSITIVE

4a.   Relat.$_2$ Obj.   Pred.$_2$ 4b.   Relat.$_2$ Pred.$_2$

iñmʌ̃   pico   cʌñ   iñmʌ̃   krɨ
me-to   bananas   like   me-to   cold
"I like bananas."   "I am cold."

2.2.3.5.1. Reduced Minimums.

Habitual clause types may be reduced by dropping the Object slot. (Transitive only)

1.   Relat.$_2$ Pred.$_1$ 2.   Relat.$_2$ Relat.$_1$ Pred.$_1$

ictɛ   ʔapror   ictɛ   kʌ̃m   õr
I   it-buy   I   to-her   it-give
"I buy it."   "I give it to her."

3.   Relat.$_2$ Pred.$_2$

iñmʌ̃   ʌñ
me-to   like
"I like it."

2.2.3.6. Non-Predicative Clause types.

2.2.3.6.1. Equational.

1.   Relat.$_2$ Compl.   2.   Subj.   Tense   Compl.

icpe   rɔp   pico   nã   za
I   dog   "That is a banana."
"I am a dog."

2.2.3.6.2. Existential

Relat.$_1$ Comment

icpur kʌ̃m   pʌ̃ɨ   "There is corn in my field."

2.2.4. Slot fillers

2.2.4.1. Tense slot is filled by time markers.

nã "non future" nã pa ʔapro
did I it-buy "I bought it."

kɔt "future" kɔt paz ʔapro
fut. I it-buy "I will buy it."

2.2.4.2. Subject slot is filled by:

2.2.4.2.1. Noun phrases.

Subj.	Tense	Obj.	Pred.		Subj.		Tense	Pred.
Sit	nã	pico	zapro		pico	rac	nã	tẽm
Sit	did	banana	it-bought		banana	big	did	fall
"Sit bought a banana."					"The big banana fell."			

2.2.4.2.2. Pronouns

pa "I" ka "you"

2.2.4.2.2.1. Person pronouns have two allomorphs.
2.2.4.2.2.1.1. Allomorph 1 occurs in non-future clauses.

nã pa ʔapro nã ka azarĩ
did I it-buy did you you-jump
"I bought it." "You jumped."

2.2.4.2.2.1.2. Allomorph 2 (+-z) occurs with future tense marker.

kɔt paz ɔmu kɔt kaz aprõt
fut. I it-see fut. you you-run
"I will see it." "You will run."

2.2.4.2.2.2. There are two classes of pronouns:
2.2.4.2.2.2.1. Person pronouns.

pa "I" ka "you"

When a person pronoun fills the Subject slot, it always follows the Tense slot.

2.2.4.2.2.2.2. Non-person pronouns.

za "this" mũz "that"

When non-person pronouns fill the Subject slot, the Subject may either precede or follow the Tense slot.

Subj.	Tense	Pred.
mũz	nã	tẽm
that	did	fall

"That fell."

Tense	Subj.	Pred.
nã	mũz	tẽm
did	that	fall

"That fell."

2.2.4.3. Aspect slots are filled by a series of aspect markers.

ra	"already"	ʌ̃m	"only"	tɛ	"vainly"
prɛ	"completive"	ʔãm	"just now"	ʔtɛ	"always"

nã	ka	ra	ɔmu
did	you	already	it-see

"You've already seen it."

2.2.4.4. Number slots are filled by dual and plural markers.

va	"dual"
mẽ	"plural"

Tense	Num.	Pred.
nã	va	ɔmu
did	2	it-see

"They two saw it."

2.2.4.5. Relational slots are filled by a series of relational markers ± a Noun Phrase. These are subdivided into three classes.

2.2.4.5.1. Location markers - either physical or temporal location.

ʔʌ̃	"on"	mər	"over"
ʔipɨ	"on top of"	mẽ	"along with"
ʔirop	"over"	pe	"on"
ʔɔ	"with, by means of"	ri	"with"
kamʌ̃	"inside"	rũm	"away from"
kʌ̃m	"in"	tar	"there"
kot	"with"	vər	"toward"
mʌ̃	"on"	zar	"here"

2.2.4.5.1.1. The ʔɔ and ʔʌ̃ markers above may occur in an intransitive clause type in a pseudo-transitive construction, the relator occurring with object-like logic.

Tense	Subj.	Pred.
nã	pa	amũcu
did	I	hide

"I hid."

Tense	Subj.	Relat.	Pred.
nã	pa	ʔɔ	amũcu
did	I	with it	hide

"I hid by means of it." (I hid it.)

2.2.4.5.2. Indirect Objects (Relational₁).

kᴧm   "for, to her, him"

kep   "from her, him"

Tense	Subj.	Relat.	Pred.
nã	pa	kᴧm	kuŋõ
did	I	to-him	it-give

"I gave it to him."

2.2.4.5.3. Semantic subject (Relational₂).

This relational repeats the Subject in this clause type. In another clause type (Habitual) the separate Subject slot doesn't occur, and the R_2 is semantically the subject.

kᴧm   "to him, her"

Tense	Subj.	Relat.₂	Obj.	Pred.
nã	pa	iñmᴧ	pico	cᴧñ nẽ
do	I	me-to	banana	like

"I like bananas."

2.2.4.6. Directional slots are filled by directionals.

mã   "away"

akupɨn   "returning"

Subj.	Direct.	Pred.
pa	mã	tẽ
I	away	go

"I'm going away."

2.2.4.7. Object slots are filled by Noun Phrases.

Tense	Subj	Obj.	Pred.
nã	pa	kuveñ	pumu
did	I	bird	see

"I saw the bird."

2.2.4.8. Predicate slot fillers.

2.2.4.8.1. Verb phrases. There are two classes.

2.2.4.8.1.1. Class 1 verbs may occur alone in Predicate slot of Action Clause type, and as Head of a Verb Phrase in the Being Clause type.

Tense	Subj.	Pred.
nã	pa	ʔapro
did	I	it-buy

"I bought it."

Tense	Subj.	Pred.
nã	ka	ʔapror ket nẽ
did	you	it-buy neg.

"You didn't buy it."

2.2.4.8.1.2. Class 2 verbs occur in the Predicate slot of a Being clause type.

Tense	Subj.	Obj.	Pred.	
nã	ka	Sit	kamnic nɛ̃	
did	you	Sit	suspect	"You suspected Sit."

2.2.4.8.2. In addition, certain verbs require the presence of an R_1 slot. This adds an obligatory Relational slot to the formula, as shown in 2.1.3.1.1.1., etc.

2.2.4.8.2.1. Transitive verbs requiring R_1 slot:

karõ   "to order" $(+ ?\tilde{\Lambda})$ kukõ   "to rub" $(+?ɔ)$ kuŋõ   "to give" $(+k\tilde{\Lambda}m)$

2.2.4.8.2.2. Intransitive verbs requiring R_1 slot:

$+ ?\tilde{\Lambda}:$	prʌ̃	"to do without"	$+ k\tilde{\Lambda}m:$	akiz	"to call"
$+?ɔ:$	ʌk	"to shake" (agitate)		?ikra	"to arrange"
	añĭpa	"to exchange"	$+ ri:$	pa	"to walk"
	ackɛ̃	"to show off"			

2.2.4.9. Complement slot is filled by a Noun Phrase or Pronoun

Relat.$_2$		Complement		
icpe	pico	zapror	cvəñ	
I	bananas	buy	always	"I am a banana buyer."

2.2.4.10. Comment slot if filled by a Noun Phrase

Topic		Comment	
icpur	kʌ̃m	pʌ̃ɨ	
my-field	in	corn	"There is corn in my field."

2.2.4.11. Connecting slots are filled by connectors.

nɛ̃   "and"

ñũm   "subject changer"

Tense	Subj.	Pred.	Connector	Pred.
nã	ka	òmu	nɛ̃	ñɨ̃
did	you	it-see	and	sit

"You saw it and sat down."

2.2.5. Dependent clauses

2.2.5.1. Any independent clause may be a dependent clause with certain obligatory modifications.

2.2.5.2. The obligatory zero allo-tagmas in the Dependent Clause type are: Subject, Tense, Aspect slots.

Tense	Subj.	Obj.	Pred.	Connector	Relat.$_1$	Obj.	Pred.
nã	pa	rɔp	pumu	nɛ̃	<u>kʌ̃m</u>	<u>ʔi</u>	<u>ŋõ</u>
did	I	dog	see	and	to-it	bone	give

"I saw the dog and gave it a bone." (Dependent clause underlined)

2.2.5.3. The reduced minimum of a Dependent clause is a Predicate slot.

Subj.	Directional	Pred.	Connect.	Pred.
pa	mã	tɛ̃	nɛ̃	<u>ʔapro</u>
I	away	go	and	it-buy

"I'm going away and buy it." (Dependent clause underlined)

2.3. Phrase level structure.

The phrase is a potential sequence of two or more words which function as a unit and fill a slot on the clause level. There are two kinds of phrases.

2.3.1. Noun phrases

Noun phrases occur in Subject and Object slots on the clause level. Noun phrase tagmemes are:

2.3.1.1. Head filled by noun

<u>pico</u>	nã	tɛ̃m
banana	did	fall

"The banana fell."

2.3.1.2. Modifier filled by noun + Head filled by noun

<u>rɔp</u>	<u>kra</u>	nã	muv
dog	child	is	cry

"The dog's child is crying."

2.3.1.3. Head filled by noun + Modifier filled by Descriptive

<u>pico</u>	<u>rac</u>	nã	tɛ̃m
banana	big	did	fall

"The big banana fell."

2.3.1.4. Modifier filled by Possessive + Head filled by Noun.

<u>iñõ</u>	<u>pico</u>	nã	tɛ̃m
my	banana	did	fall

"My banana fell."

2.3.1.5. Head filled by noun + Modifier filled by VS$_2$.

<u>pico</u>	<u>zapror</u>	nã	tẽm	
banana	bought	did	fall	"The bought banana fell."

2.3.1.6. A Noun Phrase may occur in a Relational slot, followed by some kind of relational morpheme.

nã	pa	<u>pico</u>	<u>zapror</u>	ɔ	ca		nã	<u>iñnʌ̃</u>	<u>pe</u>	ʔapro
am	I	banana	buying	with	stand		did	my-mother	from	it-buy

"I'm standing buying a banana."　　　　　"He bought it from my mother."

nã	<u>pĭ</u>	<u>tẽm</u>	<u>nĭpɨ</u>	ca	
did	tree	fallen	on	stand	"He stood on the fallen tree."

2.3.3. Verb phrases fill Predicate slots on the clause level. Verb phrase tagmemes are:
2.3.3.1. Head filled by verb.

nã	mã	<u>tẽ</u>	
did	away	go	"He went away."

2.3.3.2. Head filled by VS$_2$ + Modifier filled by modifier.

nã	pico	<u>zapror</u>	<u>kenʌ̃</u>	
did	banana	buy	really	"He really did buy a banana."

2.3.3.3. Head filled by VS2 + Modifier filled by Descriptive.

nã	<u>ɔmuñ</u>	<u>meñ nẽ</u>	
did	it-see	well	"He saw it well."

2.4.　Word Level structures.

A word consists of one or more stems ± affixes filling a slot on the phrase level. There are four classes of words.

2.4.1. Nouns.

Noun Words fill head slots on the phase level.

2.4.1.1. Internal construction.

Noun words are composed of the following:

2.4.1.1.1. Noun stems, composing Noun stem class 1.
2.4.1.1.1.1. Class 1 noun stems are alienably possessed.

pico	"banana"		kuveñ	"bird"		ʔaŋro	"pig"

2.4.1.1.2.   Noun stem + possessive prefix, composing Noun stem class 2.

2.4.1.1.2.1.   Class 2 noun stems are inalienably possessed.

iсpa	"my arm"	ʔakva	"his mouth"
apa	"your arm"	azakva	"your mouth"

N.G. There are some noun stems which may be either Class 1 or 2. If the word refers to an object which was made by the speaker, to <u>him</u> it is inalienable, but to another person it is alienable.

ickavʌ	"my basket" (I made it.)	iñõ kavʌ	"my basket" (I bought it.)

2.4.1.1.3.   Verb Stem$_2$ (VS$_2$).

acʌpeñ	"your work"	mər	"crying"

2.4.1.1.4.   Verb stem + nominalizers.

ʔapror cvən	"buyer"	(cvəñ - "er")
ʔipec cʌ	"making thing"	(cʌ - thing)

atɛ	ɔmuñ	cʌ	
you	it-know	thing	"your knowledge"

2.4.2.   Verbs.

Verb words fill head slots on the phrase level.

2.4.2.1.   Internal Construction.

2.4.2.1.1.   Verb stem.

2.4.2.1.1.1.   Transitive VS.

nã	<u>ʔapro</u>	"He bought it."	nã	<u>kuma</u> "He heard it."

2.4.2.1.1.2.   Intransitive VS

nã	<u>ʔarĩ</u>	"He jumped."	nã	<u>cva</u> "He bathed."

2.4.2.1.2.   Subject prefix + VS.

2.4.2.1.2.1.   Intransitive VS.

nã	ka	<u>aprõt</u>	
did	you	you-run	"You ran."

2.4.3. Descriptives.

Descriptive words fill Modifier slots in Noun and Verb phrases and occur as Head of Predicate slots in a "being" type Temporal Clause.

2.4.3.1. Internal construction.

2.4.3.1.1. Descriptive stem.

Tense	Subj.	Obj.		Pred.		Tense	Subj.	Relat.	Pred.
nã	pa	pico	<u>mɛc</u>	zapro		nã	pa	ʔɔ	mɛc nẽ
did	I	banana	good	buy		did	I		with it	good

"I bought a good banana."   "I made it good."

Tense	Subj	Predicate	
nã	pa	ʔapror	<u>mɛc</u> nẽ
did	I	it-buy	well

"I bought it well."

2.4.3.1.2. Descriptive stem + Person prefix

iñmɛc		atɨk
I-good		you-dirty
"I'm good."		"You're dirty."

2.4.4. Relationals

Relational words fill Relator slots ± Noun phrases on a clause level,

2.4.4.l. Internal Construction.

2.4.4.1.1. Relational stem

Tense	Relat.	Pred.	
nã	<u>ʔipɨ</u>	tẽm	"It fell on top of it."

2.4.4.1.2. Person prefix + Relational stem.

<u>ickutep</u>	ca	
me-wait	stand	"Wait for me."

2.5.   Stem level structure.

Stems are morphemes with potential affixation which fill slots on the word level. There are four classes of stems.

2.5.1. Noun stems.
2.5.1.1. Internal construction.
2.5.1.1.1. Simple stems - composed of 1 morpheme.

pico   "banana"

2.5.1.1.2. Compound stems - composed of 2 morphemes.

krʌ̃ʔɨ   pĩʔpɔ
seed-head   "comb" (of rooster)   wood-wide   "stool"

2.5.1.2. Noun stems are divided into two classes:
2.5.1.2.1. Class I - Alienable stems.

pico   "banana"

2.5.1.2.2 Class 2 - Inalienable stems, which occur with possessive prefix

icpa   "my arm"

2.5.2. Verb stems.
2.5.2.1. Internal construction.
2.5.2.1.1. Simple - 1 morpheme.

muv   "to cry"   ʔapro   "to buy"

2.5.2.1.2. Compound stems - composed of two morphemes.

pi kunɔr   "to be lost"

2.5.2.2. Verb Classes.

There are two classes of verb stems, classified according to the prefixes which occur with them.

2.5.2.2.1. Transitive verbs.

Transitive verb stems occur only with ± object prefixes.

icpumu
me-see   "Look at me."

2.5.2.2.2. Intransitive verbs.

Intransitive verb stems occur only with subject prefixes.

2.5.2.2.2.1. Intransitive stems which occur with person prefixes.

aprõt
you-run   "Run!"

2.5.2.2.2.2. Intransitive stems which occur with reflexive prefixes.

amnĩ-aʔtʌ
reflex-experiment   "experiment"

2.5.2.2.3   Transitive/Intransitive verbs.

There is in addition a limited number of stems, which may be either Transitive or Intransitive. In this set, VS_1 is Intransitive, VS_2 is Transitive.

TRANSITIVE - VS_2		INTRANSITIVE - VS_1
ñĩr	"sit"	ñɨ
tɔr	"fly"	tɔ
katɔr	"let out"	katɔ
cʌ̃m	"stand"	ca

2.5.3. Descriptive Stems.

rac	"large"	kamrek	"red"
mɛc	"good"	pɨci	"one"

2.5.4. Relational stems.

ʔʌ̃	"on"	ʔɔ	"with"
ʔipɨ	"on top of"	mər	"over"

2.6.   Morpheme level structure.

Morphemes are minimal meaningful units, divided into three classes which fill slots at different levels.

2.6.1. Morpheme classes.

2.6.1.1. Function Morphemes are items which fill slots on a clause level. They are phonologically free, but do not occur in isolation. The underlined morphemes below are function morphemes.

nã kʌ̃m kuŋõ   nã ʌ̃m mɛ̃ ɔmu
"He gave it to her."   "He only saw them."

2.6.2.1. Affixes are morphemes which fill slots on the word level. There are both prefixes and suffixes.

2.6.1.2.1. Prefixes are confined to person markers. 1st and 2nd person markers may occur on any class of word. 3rd person prefixes occur initially or are inherent within the stem.

ic-   i-   1st person   (i- before words beginning with c, ñ, z., ic- elsewhere)

a-   2rd person

iʔ   ʔ   3rd person   (iʔ- pause group initial before stops, ʔ- elsewhere)

apa   "your arm"   icpɨtĩ   "I'm heavy."   iʔpa   "his arm"

2.6.1.2.2. Suffixes are divided into two classes, those which occur with all classes of words, and those which occur only with verbs.

2.6.1.2.2.1. Suffixes which occur on all words are size suffixes.

picoti   "big banana"   (-ti -augmentative)

picorɛ   "little banana"   (-rɛ - Diminuative)

2.6.1.2.2.2. Suffixes which occur only on verb words are further sub-divided as to occurrence on VS$_1$ or VS$_2$ or Verb II.

2.6.1.2.2.2.1. Suffixes which occur only with VS$_1$.

mʌ̃n   "desiderative"   pa ɔmu mʌ̃n
                                                "I want to see it."

2.6.1.2.2.2.2. Suffixes which occur only with VS$_2$ and Verb Class II.

2.6.1.2.2.2.2.1. Nominalizer.

kuvɨ   nĩpeccʌ
fire   make thing   "fire making thing"

2.6.1.2.2.2.2.2. Clause type marker (Mark Being clause).

nã	pa	iñmʌ̃	pico	cʌñ	nɛ̃		
do	I	me-to	bananas	like			"I like bananas."

2.6.1.2.2.2.2.3. Modals.

ŋɨ	"stop"		aceeñi
ñĩ	"always"		you-lie-always
			"you habitually lie"

2.6.1.3. Roots are morphemes which fill slots on the stem level. There are four classes of roots.

2.6.1.3.1. Noun roots.

pĩ	"stick"

2.6.1.3.2. Verb roots.

muv	"to cry"

2.6.1.3.3. Descriptive roots.

rac	"big"

2.6.1.3.4. Relational roots.

kep	"from"		ʔipɨ	"on top of"

2.6.1.3.2. There is within and cutting thru the above classes a class of morphemes which change shape on a Morpho-Phonemic basis according to the following rules:

2.6.1.3.2.1. When two morphemes of this class meet, the 1st being an "explicit specifier" (either separate stem of prefix) relationship to the 2nd, the 2nd morpheme changes shape initially. This change may be the addition or change of the initial phoneme, or the drop or change of the initial syllable. The chart below shows each different type of possibility of change in each class. This change may occur between: Object and Predicate, Possessor and Head, Noun and Modifier, Noun and Relational. (The underscored words change shape initially)

		Phoneme change			Syllable change	
		+ ʔ / −	+ / −	ʔ ~ z	+ / −	~
Noun	f	ʔkra	ãm "chin"	ʔakva "mouth"		
	b	- kra "child"	Sit ñãm "Sit's chin"	Sit zakva "Sit's mouth"		
Descr.	f	ʔkamrek	ɔʔto "many"	ʔaka "white"		utĩ "heavy"
	b	- kamrek "red"	pico cɔʔto "banana many"	pico zaka "banana white"		pico pɨtĩ "banana heavy"
Relat.	f	ʔkutep	aʔ~ "wait"	ʔipɨ "on top of"	kuri "with"	
	b	- kutep "wait for"	Sit caʔʌ "Sit wait for"	Sit ñĩpɨ "Sit on top of"	Sit ri "Sit with"	
Verb	f	ʔkapa	ʌm "cook"	ʔapro "buy"	kuka "roast"	ɔmu "see"
	b	- kapa "remove"	ʔaroz cʌm "rice cook"	pico zapro "banana buy"	pico ka "banana roast"	pico pumu "banana see"

Key: f - free stems (specifier "it" is implicit in the stem)
 b - bound stems (specifier is explicitly named)

2.6.1.3.2.2. In addition to initial changes, there are a few words which, when they occur word finally, drop or change the final syllable. This class is very limited, so far only four words have been noted.

ʔõcpĩ	"to kill another one"	nɔpcʌ	"sore eye"
ʔõ	"another "	nɔ	"eye"
ŋockʌm	"in the creek"	məmñi	"whiner"
ŋo	"water"	mər	"cry" (VS$_2$)

2.6.1.3.3. There is also some phonologically determined Morpho-Phonemics which occurs when two consonants come together at a morpheme juncture. For complete write-up on this occurrence, see the following Linguistic Report of November 1960, Section I.

LINGUISTIC REPORT OF NOVEMBER 1960,
SECTION I.
BY PAT HAM

I. Morpho-Phonemics: Consonant + Consonant.

A. Compensatory Length.

When stops and nasals meet consonants or a glottal stop plus another consonant at the same point of articulation, and when 2 r's meet, the vowel immediately preceding these consonants is lengthened and the first of the 2 consonants drops out unless it is a nasal preceding a stop or a z. The nasal under these conditions is retained.

['ton]	+ [ndɨv]	= [to•'ndɨv]	"tatú novo"
[tɛp]	+ [mbɛc]	= [tɛ•'mbɛc]	"good fish"
['pur]	+ [rac]	= [pu•'rac]	"big field"
['peñ]	+ [cet]	= [pe•ñ'cet]	"burned ball"

Note: /k/ acts like a homo-organic consonant to all consonants except /r/ and /ʔ/, and freely fluctuates as a homo-organic consonant with /v/ and /z/.

['kok]	+ [pic]	= [ko•'pic]	"just wind"
['kok]	+ [mbɛc]	= [ko•'mbɛc]	"good wind"

Exceptions:

m + v = mv   [tɔm]   + [vər]   = [tɔm'vər]   "to the frickle"

t + r:

Vt + r = Vdr   ['krit]   + [rac]   = [krid'rac]   "big bug"

Ṽt + r = Ṽnr   ['prõt]   + [rac]   = [prõn'rac]   "big run"

n + r = nr   ['ton]   + [rac]   = [ton'rac]   "big armadillo"

B. Assimilation.

At different points of articulation:

1. Stop   + Nasal   = Nasal + Nasal

    [mboc]   + [ndɨv]   = [mboñ'ndɨv]   "new calf

2.   Stop   + Stop   = Vl. Stop + Vl. Stop
      [mboc]   + [bɨci]   = [mbocpɨ'ci]   "just one cow"

3.   Stop   + v/z/r   = Vd. Stop + v/z/r
      [mboc]   + [rac]   = [mboj'rac]   "big cow"

Exceptions:
      Ṽc + r = Ṽñr   [ictõc]   + [rac]   = [ictõñ'rac]   "my big sister"

Both consonants retaining original point of articulation.