A GRAMMAR OF RESÍGARO

Trevor R. Allin

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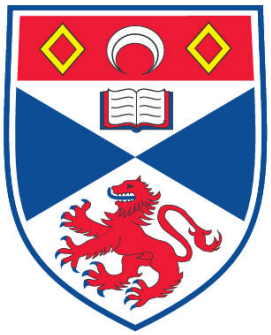

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A G R A M M A R

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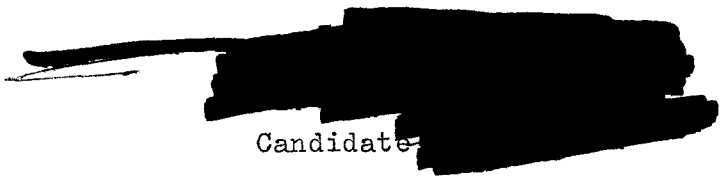
R E S Í G A R O

by

Trevor Reginald Allin

I declare that this thesis has been composed by me on the basis of work done by me in St. Andrews and Peru, and that it has not been accepted in any previous application for a higher degree. I was admitted under General Ordinance No. 12 in October 1970 and enrolled in May 1971 under the Ph.D. Resolution.



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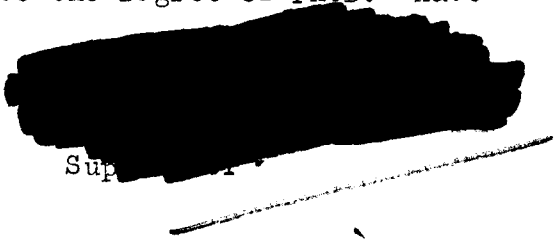

Sup

A GRAMMAR OF RESÍGARO

by

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A B S T R A C T

The thesis gives a description within the framework of tagmemic theory of Resígaro, a South American Indian language of the Huitoto group, spoken in the region between the Amazon and the Putumayo, in north-eastern Peru.

The Introduction reviews critically previous work on the language, and sets out modifications in tagmemic theory which it is claimed avoid circularity and repetition and improve the description. Principal among these is a strict separation of the three modes of Contrast, Variation and Distribution, and the use of multiplication to derive structures.

Part I of the thesis describes the first two levels of the Phonological Hierarchy -- Phoneme level and Syllable level.

Part II describes the grammatical hierarchy, in which the following levels are set up:

Root
Stem
Word
(Group)
(Piece)
Phrase
Clause
Sentence

(Group and Piece are sub-levels affecting only the Verb class.) Each level is described in a separate chapter, starting at the lowest level (Root). Each class (Verb, Noun, Pronoun, etc.) is described in turn at each level at which it has elements.

At Phrase level, Phrases are described as being either Endocentric or Axis-Relator. Endocentric Phrases (Verb, Noun, and Numeral) are described first.

At Clause level, the description of Clause structure is preceded by a description of Clause-level tagmemes -- first the

nuclear, and then the peripheral tagmemes. It is indicated that this simplifies the presentation of Clause structure.

Under Clause structure, the Declarative clause is described first, and other Clause classes are derived from this, viz.: Interrogative, Imperative, Nominalized and Relativized.

The description of the Contrast and Variation modes of Sentence level is followed by an analysis of the first section of a text.

Appendix I presents a lexicon of Resígaro in two parts: Part I is Resígaro-Spanish-English, and Part II is Spanish-Resígaro.

Appendix II presents a 376-word four-language comparative word list for Resígaro, Bora, Ocaina and Huitoto Muinane.

The thesis is concluded by a bibliography.

A C K N O W L E D G E M E N T S

I wish to acknowledge my indebtedness to the many people without whose co-operation and assistance this thesis and the research on which it is based would never have been completed. First, I owe an enormous debt to the British and Peruvian Branches of the Summer Institute of Linguistics, and especially to the following members: Wesley and Eva Thiesen and their children, who welcomed me as one of their own family, on my arrival in the Bora tribe; Ilo Leach, for helpful discussions on the Ocaina language, and many acts of kindness; Mary Ruth Wise, for guidance and encouragement in handling linguistic problems throughout my year in Peru; Stephen Levinsohn (Colombia Branch) for similar assistance after my return to the U.K. I am aware of having omitted many names, but the only adequate list would include the names of all those I met in both the British Branch -- for help in preparing for my trip and at all stages through to the duplication of the thesis -- and in the Peru Branch, for making my year there trouble-free and enjoyable. My profound thanks go to Pablo Andrade Ocagane, for his patience and good-humour in answering my incessant questions, and to his sisters and mother, for all their help. Needless to say, my deep gratitude is extended to my supervisor, Douglas Gifford, for his friendship, help, encouragement, and boundless enthusiasm for the project at all times.

CONTENTS

ABBREVIATIONS & SYMBOLS

1. Abbreviations

In the abbreviations that follow, capital letters are used to indicate tagmemes, levels, and major word classes, while lower case letters are used to indicate morphemes. Abbreviations indicating neither morphemes nor tagmemes or major word classes follow normal practice with regard to capitalisation or otherwise (e.g., Sp. for Spanish). Where no norm appears to exist, that form has been chosen which it is believed will be easiest to recognize (e.g., Orel for Object relativization).

A	Adjunct tagmeme
A-R phrase	Axis-relator phrase
adct	Adjunct Phrase marker
Adv	Adverb
Adv Emph	Adverbial Emphatic tagmeme
adv emph	adverbial emphatic morpheme
Aj	Adjective
AP	Adjunct Phrase
Att	Attributive tagmeme
aug	augmentative suffix
Aux	Auxiliary
aux ind	auxiliary indicator
B	Base
bas	basic filler of periph slot in $VG_{ii.i}$
Ben	Benefactive tagmeme
ben	benefactive marker
BP	Benefactive Phrase
C	any consonant
C.L.	complete list
Cl	Clause
cl	class
clsfr	classifier suffix
CO	Causative Object tagmeme
Conc	Concomitant tagmeme
Cond	Conditional tagmeme
CondP	Conditional Phrase
conn	connector
CP	Concomitant Phrase
cstv	causative
Ctv	Comparative tagmeme
CtvP	Comparative Phrase
D	Directional tagmeme
Dat	Dative tagmeme
dat	dative marker
DeclCl	Declarative Clause
Dem	Demonstrative
der	derivator
desid	desiderative clitic
dim	diminutive suffix
dir	directional marker
ditr	ditransitive
dl	dual
DO	Dative Object tagmeme
DOP	Dative Object Phrase
DP	Directional Phrase
dub	dubitative clitic
Emph	Emphatic tagmeme
emph	emphatic morpheme
excl	exclusive
extrap	moved by extraposition
f	feminine
frus	frustrative clitic
fut	future clitic
H	Head tagmeme
I	Instrument tagmeme
Ig	Interrogative tagmeme
ig	interrogative morpheme
IgCl	Interrogative Clause
ImpCl	Imperative Clause
imptv	imperative
incho	inchoative
incl	inclusive
incomp	incompletive clitic
instr	instrument marker
Int	Intensifier tagmeme
int	intensifier morpheme
intent	stated intention clitic
Inton	Intonation Contour
intr	intransitive
IP	Instrument Phrase
L	Locative tagmeme
Lim	Limiter tagmeme
LP	Locative Phrase
M	Modifier tagmeme
m	masculine
M.O.C.	may omit classifier

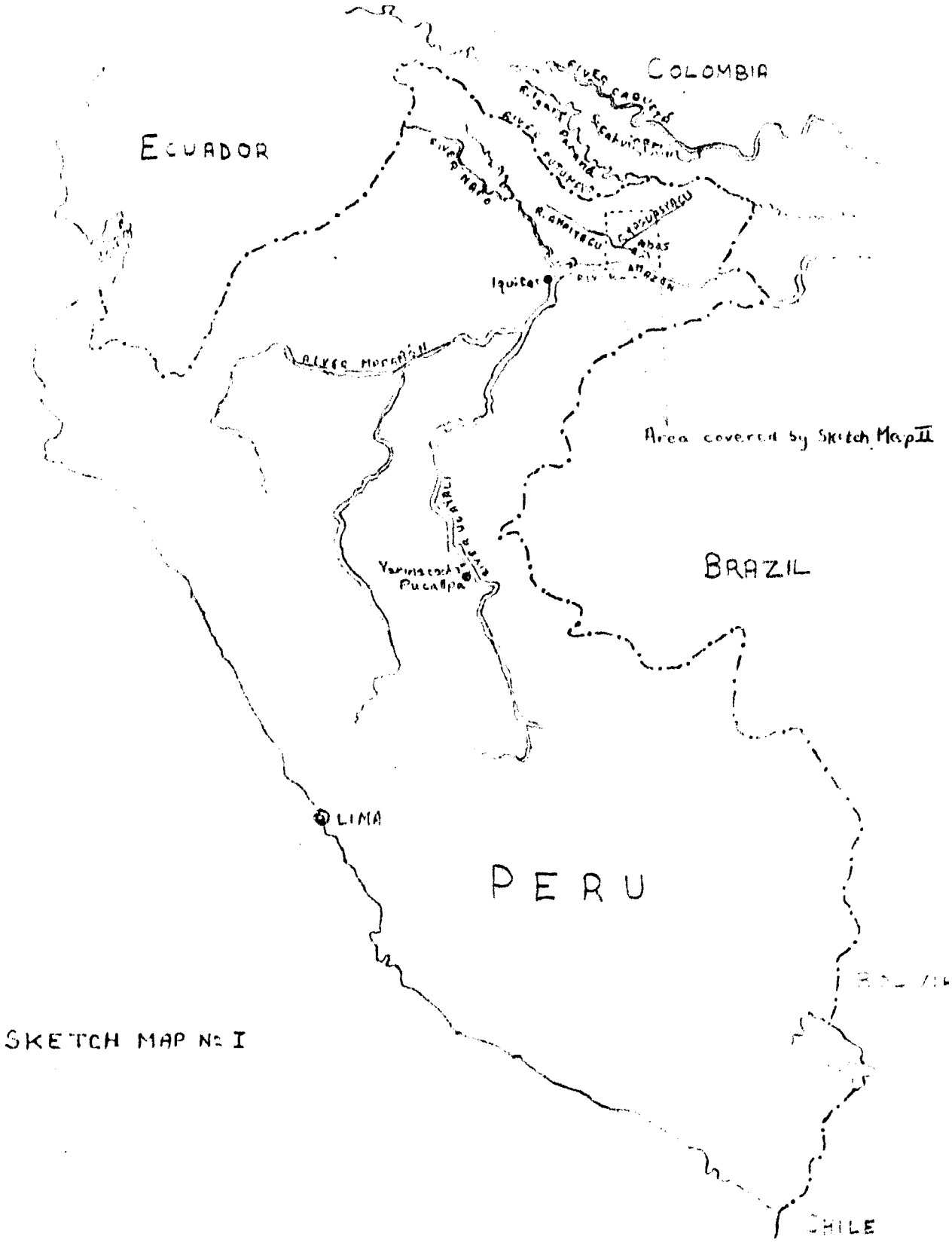
Neg	Negative tagmeme
nlzr	nominalizer
nmb	number suffix
Nn	Noun
Nom	nominalized
NomCl	Nominalized Clause
NP	Noun Phrase
Nuc	syllable nucleus
Num	Numeral
NumP	Numeral Phrase
O	Object tagmeme
Orel	Object relativization
P	Predicate tagmeme
Periph	Periphery
Phon	Phoneme
pl	plural
Pn	Pronoun
PP	Purposive Phrase
Ppsv	Purposive tagmeme
ppsv	purposive marker
priv	privative
prog	progressive clitic
PROP	proposition
px	prefix
Q	Quantifier tagmeme
QO	Quotative Object tagmeme
R	restricted
r	preceding tagmeme(s) may be repeated
rec past	recent past
recip	reciprocal
reflex	reflexive
RelCl	Relativized Clause
relr	relator
rem past	remote past
rep	reportative clitic
rest	restrictive suffix
Rt	Root
S	Subject tagmeme
s.o.	someone
sg	singular
Snt	Sentence
Sp.	Spanish
Srel	Subject relativization
St	Stem
sthg	something
sub-cl	sub-class
sx	suffix
Syll	Syllable
T	Temporal tagmeme
trans	transitive
tritr	tritransitive
V	any vowel
Vb	Verb
VbPce	Verb Piece
vd.	voiced
VG	Verb Group
vl.	voiceless
vl.asp.	voiceless aspirated
Voc	Vocative tagmeme
voc	vocative morpheme
VP	Verb Phrase
1st p.	first person
2nd p.	second person
3rd p.	third person

2. Symbols

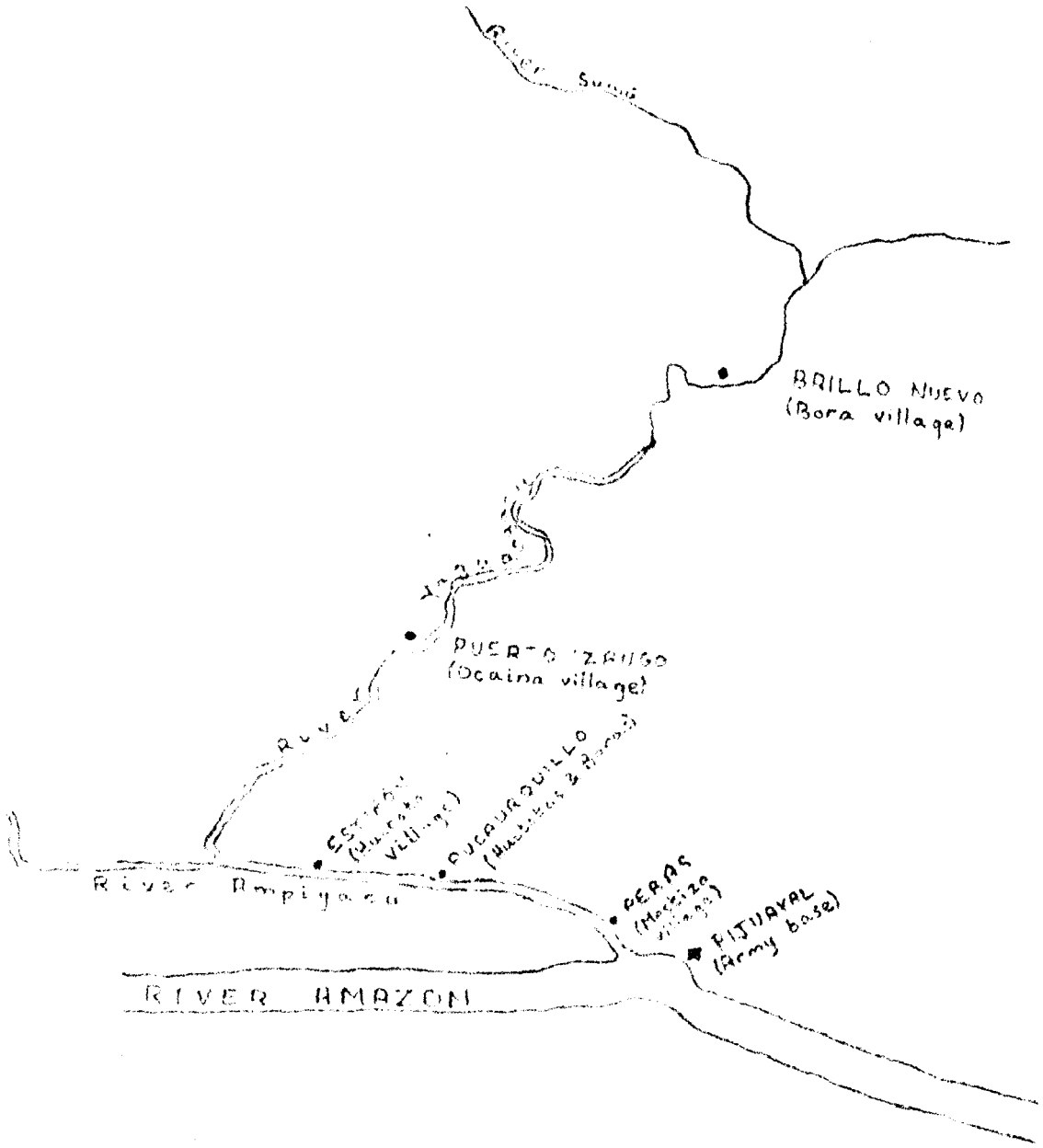
[ ]	phonetic brackets
/ /	phonemic brackets
( )	brackets in tagmemic formulae
{ } ( )	morphemic brackets
V́	high tone (its absence indicates low tone)
Ṽ	nasalization
~	varies with (allomorphs of a morpheme)
x ⟩ y	x becomes y
x ⟨ y	x is derived from y
x.y	syllable boundary between x and y
x:y	x is a slot; y is a class filling it
:	is filled by
=	consists of
+	obligatory
±	optional
−	obligatorily absent
/	or
+/±	obligatory or optional (depending on factors indicated)
±x ∓y	either x or y must occur, but not both
z=+x:y	z is a syntagmeme consisting of tagmeme x:y, which occurs obligatorily
∝	indicates a relation between two or more parts of a formula, specified under formula
x_1	distributional sub-class 1
x^1_i	structural type i

SOME RESÍGAROS

From left to right: Adelina, Rosa, and Pablo Andrade Ocagane, and Alicia Ocagane (their mother), with two of Adelina Andrade's children.



SKETCH MAP No I



SKETCH MAP Nº II

Volume I

0. INTRODUCTION

0.1. The language and the people.

Resígaro is spoken by a handful of people living on the banks of a northern affluent of the Amazon in north-eastern Peru. These remnants of the Resígaro tribe live amongst the Ocaina and the Bora in the villages of Puerto Isango and Brillo Nuevo, respectively, on the banks of the Yaguasyacu river, a tributary of the Ampiyacu, which flows into the Amazon at Pebas. The location of these villages in 1972[1] is indicated in sketch map II.

In 1915, Whiffen estimated that there were about 1,000 Resígaros between the Muenane, the Nonuya and the Boro (sic. -- for Bora), along the banks of the Japurá (= Caquetá), to the north of the Kahuinari (= Cahuinari) river, in Colombia (cf. sketch map I).

In 1971-72 I found four adult speakers (Alicia Ocagane and her two daughters, Adelina and Rosa, and son Pablo) and six children in Puerto Izango. The children had Resígaro mothers and Ocaina fathers. There were also some Ocaina speakers (e.g., the teacher, José Andrade) who said that they were Resígaros, but

[1] A letter dated 9th August 1974 from my main informant, Pablo Andrade Ocagane, indicates that the Puerto Isango community of some 200 Ocainas has relocated the village half-an-hour's journey (by canoe) downriver from the 1972 location. The Resígaro speakers in the community have moved along with the Ocainas.

no longer spoke the language.

In Brillo Nuevo I found one woman (Cecilia) of about fifty years old who was Resígara, but was married to a Bora, and had not spoken the language for years, except on occasional meetings with the Resígaros from Puerto Isango. There were also several other Bora speakers (e.g. Jihkyepa?) who said that they were Resígaros, but had lost their parents when children, and had been brought up by Boras. They now spoke no Resígaro, but understood some of it.

From a comparative study of published vocabularies and grammatical descriptions, it is obvious that Resígaro is related historically to Bora, though the two languages are not at all mutually intelligible. Inasmuch as others affirm that Bora is related to Ocaina and Huitoto, Resígaro must be related to these, too, although these latter two languages sound totally different from Resígaro, and very few cognates between Huitoto and Resígaro are to be found in a comparison of approximately 370 words based on the Rowe Standard Comparative Vocabulary (tropical forest area) and the Swadesh list. A far more extensive comparison was made between Ocaina and Resígaro, involving nearly 2,000 words (including those on the above-mentioned lists), and similarly few cognates were found.

Appendix II lists the Ocaina, Bora and Huitoto words from the Rowe and Swadesh lists, alongside the Resígaro, for compar-

ative purposes.

The present study provides conclusive evidence for the first time based on data gathered by a phonetically- and linguistically-trained investigator to confirm the place of Resígaro in the Arawakan family of languages, and this obviously has implications with regard to Bora, hitherto classified merely as "Huitotoan", along with Ocaina and Huitoto. The "Huitotoan" group is unclassified. If the relationship between Ocaina and Resígaro, and Huitoto and Resígaro, is viewed as confirmed -- which would appear to be the case, as indicated in Appendix II (though the relationship is more distant than with Bora) -- then these languages, too, are clearly to be classified as Arawakan.

0.2. Previous references to the Resígaros, and work on the language.

0.2.1. Casement and Hardenburg.

Two reports by "Consul" (later Sir Roger) Casement appear in Hardenburg's book of 1912. Casement had been sent to the Putumayo area to investigate reports of savage treatment of Indians employed to collect rubber for the Peruvian Amazon Company, which had a number of British shareholders.

Casement's first report (submitted in January 1911) refers to the "Ricigaros", Andokes and Boras as tribes of common origin with the Huitotos, "but wholly differing today in speech

from the Huitotos, as also from each other" (pp. 269-270).

The second report (submitted two months later) again refers to the same tribes, as well as to the Ocainas, and states that of the smaller tribes, "the Ricigaros and the Muinanes are frequently mentioned" (p. 290).

The Huitotos are said to have been, according to accounts, the largest tribe, possibly numbering 30,000 before the first "Colombian invasion of the Putumayo regions took place, ... about 1886" (pp. 290, 294). However, by the time of Casement's investigations, they amounted to "nothing like that figure" (p. 290).

Further references describe a "Recigiro [sic] Indian boy" who was in the service of whites and half-breeds, and who executed several Boras, in obedience to orders from his masters (pp. 319-320).

Hardenburg (1912), who paints a vivid picture of brutal savagery against the Indians by the whites, also refers to the "Recígaros", which he says is merely one of many "sub-tribes" (along with "the Maynanes, Aifugas, ... the Yabuyanos, etc.") of the Huitoto tribe.

> "Each of these sub-tribes has its own chief, called a capitán or tuchaua, and appears to be quite independent of the rest. A sub-tribe may vary in size from 25 to 500 individuals and often more." (p. 150)

This seems to contradict Casement's statement of the previous year (reproduced in the same book), and the next paragraph goes even further:

> "All these sub-tribes speak more or less the same language -- Huitoto, of which I give a few specimen words".

These words were gathered from "racionales" (p. 144), who, according to Casement, were so called "to distinguish them from the Indios" (emphasis mine). "Racionales" are described by Casement as "half-breeds mostly who can read and write" (p. 295).

Considering Hardenburg's naïveté in using these people as informants, especially when he recognized that not all of them had a full command of the language (p. 144), it is not surprising that he should go on to say:

> "It is a very simple language, with but little grammar, employing neither conjunctions nor articles" (p. 150).

This insight into the method of gathering language data is important, though it in this case refers to the Huitoto tribe, since it would appear that other travellers in the region during the first two or three decades of this century often used similar procedures.

0.2.2. Whiffen.

Whiffen's book of 1915 gives one the impression of being far less emotive and more factual in its approach than that of Hardenburg.

However, its main emphasis is anthropological, with a similar naïveté with regard to language questions:

> "To simplify transliteration, though at the sacrifice of the finer distinctions of the language, the orthographic system of the Royal Geographic Society has been used in this work.... It consists in giving to the vowels in native words their Italian significance, and to the consonants that which they have in the English language.
>
> "This system ordains that an approximation to the sound be aimed at only, as any system which attempted to represent the more delicate inflexions of sound and of accent would be so complicated that it would merely defeat itself" (p. 249 -- emphasis mine throughout).

It is a pity that Whiffen and the other writers who had contact with the tribes of the Putumayo-Amazon area were unfamiliar with the International Phonetic Alphabet, first published in Ös fonetik tîtcær in August 1888. Other comments by Whiffen make it abundantly clear that data gathered by such explorers must be regarded with a critical eye indeed:

> "The endeavour to reproduce the gutteral expressions of the Indian in Roman letters is rendered the more complex by the uncertainty of his utterance and the aural variations of his European interpreters. The same word phonetically transcribed by an Englishman, a German, a Frenchman, and a Spaniard bears little or no resenblance to a common inspiration. Each European observer conveys to his written word the error of his national idiosyncrasy of impression and pronunciation" (p. 248 -- emphasis mine).

Even though Whiffen gives few examples of language, and none of Resígaro, these comments are reproduced here in detail, since they help us to evaluate more accurately the data for Resígaro produced by Wavrin, who was active in the area only a few years after Whiffen (though his data was published much later, cf. 0.2.4., below).

Whiffen does, however, make frequent references to the "Resigero", who are listed in his index (p. 318), and he includes two photographs, one of ten Resígaro women, and another of eleven Resígaro women and girls (Plate XII, facing p. 78). He also lists the "Rochegero" under "Some Witoto Tribes of the Issa-Japora Watershed" (p. 297), though he elsewhere states that

> "The 'Maynanes,' 'Recegaros,' and 'Yabuyanos' mentioned by Hardenburg as Witoto 'sub-tribes or naciones', are not Witoto at all" (p. 62).

Concerning the languages of these and other groups, he says,

> "Tribes divided by the breadth of a narrow river speak languages that are mutually unintelligible. On the other hand, tribes distant by some hundreds of miles from each other possess a language with a common root, which is fundamentally different from those in use among the intervening peoples" (pp. 246-7).

These tribal migrations have continued since the time of Whiffen's explorations, influenced usually by the demands of white colonizers.

According to Whiffen,

> "of the thirteen languages tabulated ..., one of the most difficult, and the most gutteral, is the tongue spoken by the Resigero group of tribes" (p. 48).

Whiffen contests the claim that the Witotos were

> "'the largest and most important tribe,' as ... many other language-groups are decidedly more important in both the social and scientific scale" (p. 62).

He produces his own estimate of the size of the tribes, "based roughly on the number of houses and the extent of country", though he adds that

"these figures must be taken as very approximate, and probably overestimated in some cases" (p. 59).

The statistics are as follows:

Witoto group of tribes	15,000
Boro group	15,000
Dukaiya or Okaina group	2,000
Muenane group	2,000
Nonuya group	1,000
Resigero group	1,000
Andoke group	10,000
Menimehe group	15,000
Karahone group	25,000

An early indication of the decreasing size of these tribes is to be found in Whiffen's statement,

"The Boro and Resigero also intermarry -- at least cases of such marriages are known".

This, in spite of the fact that

"The Boro, Resigero and Okaina may not love each other, but they agree in their detestation of the Witoto" (pp. 60-61).

This detestation was shown by fighting and cannibalism:

"Most, if not all, of the Indians of the upper rivers are indisputably cannibals, especially the Boro, Andoke, and Resigero groups" (p. 120).

Whiffen also recounts the unusual case of a Resígaro chief who collected a band of warriors to punish those members of his own tribe who submitted to the whites, in order to deter others from submitting. He states that in one place he found 38 dead

Resígaros -- men, women, and children -- killed by this group (pp. 63-64).

0.2.3. Tessmann.

In his book published in 1930, Tessman states,

> "Über die Ressígaro ist nichts Näheres bekannt. Sie gehören kulturell sicher zu der Uitoto-Boragruppe und sprachlich vielleicht in der Nähe der Bora. ... Es ist ein kleiner Stamm zwischen den Okáina, Bora, Nonuya und Muinane" (p. 583).

Tessmann's map (facing p. 816) shows the Resígaro further south than in Whiffen, just reaching down as far as the banks of the Putumayo, apparently along the banks of the Igará-paraná.

0.2.4. Rivet and Wavrin.

The only published article containing original data on the Resígaro language is that by Rivet and Wavrin (Paris 1951). Rivet needs no introduction. Wavrin was a French marquis who explored the Amazon region in the twenties and subsequent years, and produced a series of travel books of a popular nature.[2]

None of these books refer to the Resígaro, though frequent references are made to

> "Les Boros [sic], les Huitotos, les Ocainas, les Andoques

[2] e.g. Moeurs et coutumes des indiens sauvages de l'Amérique du Sud, Payot, Paris, 1937;
A travers les forêts de l'Amazone du Pacifique à l'Atlantique, Payot, Paris (et Mayenne), 1943;
Les indiens sauvages de l'Amérique du Sud; vie sociale, Payot, Paris (et Poitiers), 1948;
L'Amazonie et ses indiens, Les éditions du Soleil levant, Namur (et Bruxelles), 1958.

et diverses tribus du bassin du Putumayo et du Caqueta" (e.g., 1948:43).

Information given is much the same as that found in other books referred to here. The presentation is according to subject matter, not tribe, and as there are no indices, references to specific tribes must be gleaned from the pages of the text.

However, on one trip (the date of which is not given), Wavrin obtained a list of Resígaro words and a few phrases (Rivet and Wavrin, 1951:204). No information is given on the source of this data, and the only references to the tribe or its location are summaries of the comments of other writers (Whiffen, Igualada, etc.).

It is unfortunate that Wavrin was not linguistically or phonetically trained, and languages occupy a very peripheral place in his writings, with only very occasional comments. It would regrettably appear that many of Whiffen's observations concerning the transcription of linguistic data apply in the case of Wavrin, as hinted at by the introductory comment "(ces) documents ... si insuffisants qu'ils soient ..." (p. 204), and as borne out by a study of the data given.

Within the limitations consequent on the data supplied, Rivet has produced an excellent article, demonstrating the appurtenance of Resígaro to the Arawak language block.

After a brief introduction, five pages are occupied by some

superficial comments on the grammar, which amount to intelligent guesses limited by the absence of texts (p. 206). The language data is contained in ten pages of vocabulary, which includes a small number of phrases. The article concludes with a 17-page comparative Resígaro-Arawakan vocabulary, which cites postulated cognates in 89 Arawakan languages. The map at the end is a simplification of that found in Whiffen (facing p. 58), thus showing the Resígaros in a location earlier than that indicated in Tessmann (1930), and far from that obtaining immediately prior to 1954 (data on files of Summer Institute of Linguistics, Peru Branch).

0.2.4.1. Grammar.

Rivet succeeds in identifying some allomorphs of the pronouns (p. 204), though in the plural the forms given are confused and have been cleverly identified on the basis of Rivet's acquaintance with other Arawakan languages. Pronouns following or contained within the predicate are not recognized, however.

e.g.

vocab. item 217: "petit, matso(o)tsə" for matshóó? tsú[3]
short he
"he is short"

vocab. item 67: "court, tətəpi-kə" for tuutuu pi-khú
cut you-do
"you cut"

vocab. item 238: "il prend, ekepi-kə" for eke? pi-khú
grasp you-do
"you grasp"

[3]Details of the transcription I am using for Resígaro are to be found in Part I, below.

Rivet errs in suggesting that the prefix wa- may be the "article déterminatif" or "le préfixe personnel ou possessif de la 3e personne du singulier" (p. 206), but scores with a third guess that it might be the 1st person plural personal or possessive prefix (it is both personal and possessive).

He identifies several errors in the data and glosses given (pp. 205, 207), but it is inevitable that he should miss many others, particularly in the section on the vocabulary.

Rivet observes "-ne-, -ni-" and says "l'on peut se demander si elles ne correspondent pas à un duratif" (p. 208). Here he is wrong, since this is the recent past clitic, which he unfortunately fails to observe, in consequence of the large number of phrases containing this clitic but glossed in the present (p. 207, etc.). He merely states,

> "Nos documents ne nous permettent pas de découvrir comment les Resigaro forment les différents temps de leurs verbes" (p. 207).

A final "-k, -kə, -khə, -ki" is tentatively related to the augmentative or superlative of some Arawakan languages (p. 208), and on the basis of a single word, a hypothetical morpheme "-tzani" is also identified as augmentative. Both of these are errors.

"-tzani" is not a separate morpheme in the word in question, since the morpheme breaks and gloss are not as indicated:

Rivet and Wavrin have

"keno-tzani, avare" for gi-notshánî
he-be-stingy "he is stingy"

"-kə" appears to correspond to khû, "to do" (cf. 4.1.2.2.1., below).

e.g. tsa-ne-kāhé-kə "il tousse" for tsa-nî ehe? khû
he rec cough do
past
"he coughed"

tətəpi-kə "court" ("short") is an error for

tuutuu pi-khû
cut you-do
"you cut"[4]

This may also be the case with "-khə", though the only example given is confused, since no part corresponds to the second person singular glossed (though "-nē(he)-" may be an allomorph of the third person plural aa-). The most probable origin of the phrase is given hereunder, and a comparison of the two forms exemplifies the problems encountered in checking the accuracy of the data given.

hanakaka(i)nē(he)-khə "tu blesses"

for anoógî kainée[?] i - khû[5]
tapir kill you - do "(You (pl)) Kill the tapir!"

---

[4]Presumably Wavrin gave Spanish "corto" ("short"), which can also mean "I cut", and in reply was given "you cut". The same Resígaro phrase, transcribed slightly differently -- tə(w)tə(w)pi-kə -- reappears later, inexplicably glossed as "nous vivons"

[5]The glottal in [ ] is present etically, but not normally indicated in the present description, since it is morphophonologically conditioned (cf. I.2.3.3.2., below).

In this example, the i is the imperative form of the second person non-singular marker. The object may be other than that given, for instance fanígí "our father", though this particular possibility is less probable than that given above.

Another possible source of the phrase given is

khákakávátsí na-khú
fight-recip they-do "They do battle, they fight"

"-ki" and "-k" may correspond to the Verb word Order 3 Directional suffix {-kí} "to come from" (cf. 3.1.2.4., below).

e.g. tsa-ni-kamã-ki "il s'enivre" for tsa-mí kamé-kí
he rec get- come-from
past drunk
"He has come from getting drunk"

no-mete-k "il mange" for no?mitekí
I-eat-come-from
"I come from eating"

It is inevitable that occasionally a final -k(i) should be erroneously interpreted as this same morpheme.
e.g. adr^^owē(he)-k(ě) "il vole" for adovígí "bird, he who flies"

In none of these cases is the postulated suffix identifiable with the augmentative, which in Resígaro is -kobú.

0.2.4.2. Resígaro Vocabulary.

The vocabulary contains 301 entries, listed according to the alphabetical order of the French glosses. These entries form the basis for Rivet's grammatical comments, discussed above.

As the examples already given indicate, the semantic errors and irregularities of transcription make identification of the forms given often difficult and occasionally impossible. The

transcription used is not specified, and appears to be of the "home-made" variety, as recommended in Whiffen. The inconsistencies are too numerous to list exhaustively, though amongst the most notorious are the following:-

a) <u>Different symbols are used to indicate the same sounds.</u>

e.g. i) "tz" and "θ" for <u>ts</u> -- even in the same word:-

hīθətzǒ "bois" for itsítsó "firewood"

ii) "dz", "dr^^", "r^^" and "r" for <u>d</u>[6]

"dz": w(h)ó-podzí "nombril" for ve?phódé "our navel"

"dr^^": üdr^^ühüki "fourmi curuinse" for hudúñgí "curuinse ant"

"r^^": hor^^onə "genou" for ho?dónaá "knee"

"r": kierawedžowi "rouge" for kedávíí?ǰoví "that which is red"

iii) VhV, V̄hV, VhV̄, V̄h, V, and V̄V̄ for <u>VV</u>

If the ¯ indicates a tone, whether high or low, there is nothing to indicate this. It may indicate a longer vowel, which would do away with the need for VV in Wavrin's transcription, unless three or four degrees of length are claimed.

"VhV": noho-tǒ "fille" for noótó "my daughter"

---

[6] Cecilia, who was my informant for a brief while in Brillo Nuevo, said [dr] where all my other informants said [d]. However, both she and they said that she did not speak Resígaro well, since she was separated from her people and spoke Bora all the time. Hence data from her is not included in the present description. It may be that she spoke a dialect of Resígaro and that Wavrin's informants came from the same group. This might explain some of the more consistent differences between his data and mine, though it does not account for the inconsistencies. In any case, it is clear that the language in both instances is the same one -- down to the people's name for their own group: Wavrin: r^^ā(h)panihīn for <u>daápeniíñí</u>. Further, my informants were aware that the Spanish name for them is "Resígaro".

"V̄hV": ew(h)ēhekí "étoile" for hivíigí "star"

"VhV̄": tomahātsi "coton" for tshomaátshí "cotton"

"V̄h": no(h)ǒ-dzā(h)nǐ́ "fils" for no?žaání "my son"

"V": hedr^^ǔ́ "sang" for iídú́ "blood"

"V̄": kēwé́ "fleur" for giiví "flower"

"V̄V̄": ēētsə̌ "nuage" for iítshú "cloud"

b) The same symbols are used to indicate different sounds.

e.g. i) "h" for h, ? and vowel length (cf. above) -- even in the same word:-

hahǐhǐ́ "ciel" for há?ihí "sky"

ii) "θ" for ts and t

For ts: hemī(hi)θí "herbe" for himiítsí "grass"

For t: hēhéθě "mouche" for heété "fly"

iii) "dz" (or "dž") for d, ǰ, and s

For d: w(h)é-podzí "nombril" for ve?phódé "our navel"

For ǰ: tadži(hi)ki "manioc" for kaǰíigí "yucca"

For s: dzāhodze "cinq" for sá?osí "five"[7]

c) The same word is written differently if it occurs more than once (except when copied under various headings, such as "chicha de banane", listed under "banane" and "chicha").

e.g. i) inā(a)r^^o "femelle", inahār^^ó "femme"

for iná́adó "woman, wife"

ii) hemī(hi)θí "herbe", himiitzi "riz"

for himiítsí "grass"

[7] cf. Bora [tsa?ohtsá?], "five".

iii) ēētsə̌ "nuage", hē(e)tsa "pluie"
for ifítshú "cloud"

iv) kihēkí, kihē(he)kí "lune"
for kefégí "noon"

It must be emphasized that only some of the inconsistencies are given above, and only a few examples in each case, since to treat this problem exhaustively would require reproducing almost the entire Rivet-Wavrin vocabulary.

In spite of these problems of form and meaning, a thorough check of this vocabulary has been made in comparison with the lexicon I have compiled (cf. Appendix I, below) and the grammatical description which forms the basis of this thesis. This has permitted the positive identification of 201 entries, though in 59 cases the gloss given is substantially or even totally wrong. See examples above, and the following:

i) fōghikə̌ "vent" for fóo gi-khú "he (it) blows"

ii) natsā(a)kə̌ "haricot" for natshaákú "peanut"

iii) ketsedžohiki "feu" for ketshejovígí "that which burns"

etc.

Of the remaining 100 items, in 72 cases the Resígaro given is so totally different from that which I have for the same or related glosses that one must assume that a different word was given, the exact meaning of which is not yet clear. In many of these cases, too, the gloss may be inaccurate, and this and the vagaries of the transcription may be hiding words which are known

but have not yet been recognized.

The 28 outstanding items are words for which I have no entry in my lexicon. Some of these words were elicited, but produced the reply that no such words existed (e.g. "bow [and arrow]", "more" -- though "more than" is attested --, "goodbye"). Others (such as "generous", "to accept", etc.) may be revealed by further research.

0.2.4.3. Resígaro-Arawakan Comparative Vocabulary.

This is detailed and thorough, clearly placing Resígaro in the Arawakan phylum, in spite of some false cognates, and the present data substantiates Rivet's claim in this regard.

The map has already been commented upon (cf. 0.2.4., above).

0.2.5. Kingsley Noble.

In his study published in 1965, Kingsley Noble includes Resígaro data taken from Rivet and Wavrin as part of his evidence concerning "Proto-Arawakan and its Descendents". He shows a score of cognates, and concludes that Resígaro is "Proto-Northern" (cf. his diagram on p. 108). No original data on Resígaro is produced, nor are any significant comments made, apart from the suggested classification.

0.2.6. Other Classifiers.

Most classifiers refer to each other, and to the early sources

(Hardenburg, Whiffen, Tessmann), and rarely is any new information produced.

The Handbook of South American Indians (1950 et. al.) reproduces most of the data seen elsewhere, and adds no new information as regards the Resígaro (cf. 3:750, 5:85, 404, 6:247). According to the Handbook (6:247), Ortíz (1942 -- not seen) refers to the "Resigaro" and doubts their relationship to the Huitotos.

Murdock (1951) lists the "Witoto" family as being in Colombia, and in a map on p. 14 shows an overlap into Peru. He comments,

> "This group includes the Andoke, Bora (Miranya), Coeruna, Muenane, Nonoya, Ocaina, Orejon, Resigero and Witoto (Uitoto) tribes, whose languages are tentatively assigned to a single linguistic stock, the Witotoan."

McQuown (1955:537) lists "Resigero", with the suggestion that it may be extinct, and the comment that its classification is doubtful.

Girard (1958) refers once to the "Resígaro" (p. 131), referring to Hardenburg (1912:150). He indicates that they came with other groups to the region of the Yahuasyacu (sic) "hará unos 40 años" (p. 53).

de Castellvi and Espinosa Perez (1958) classify "Rosíggaro" as Macro-Arawak, subclassification: Central, and refer to correspondence with Rivet, who informed them that

"El Marqués de Wavrin recogió en uno de sus viajes un vocabulario de este dialecto que, según nos informó el Prof. Rivet, se encuentra en su poder" (p. 247).

Tovar (1961:16.4) says that Igualada and de Castellví (1940 -- not seen) calculated about ten speakers of "Resígero" or "Resígaro" for the Amazon-Caquetá region. His map no. 3. shows "Resígero" at location 32, apparently on the Peruvian-Colombian border on the Putumayo.

0.3. The basis of the present description.

The data on which this description of Resígaro is based was gathered by the author in Peru between July 1971 and July 1972. Three months were spent in the Bora village of Brillo Nuevo and the Ocaina village of Puerto Isango.

0.3.1. Informants.

Data was initially gathered in Brillo Nuevo from Cecilia, but since other Resígaro speakers subsequently told me that she made mistakes when speaking, and she herself seemed to lack confidence in Resígaro, this data has not been included in the present study.

Thus, the present description is based on an analysis of various types of speech (and a small amount of writing) by four adult Resígaro speakers in Puerto Isango.

Alicia Ocagane, who was married to an Ocaina, never spoke any language other than Resígaro, which her husband had learnt

to understand. Likewise, she apparently understood Ocaina. In 1972 she was about fifty years old.

Her two daughters, Adelina and Rosa Andrade Ocagane, were bilingual in Resígaro and Ocaina, though they understood very little Spanish, and spoke even less. They both had Ocaina husbands, and in 1972 Adelina was 27 and Rosa, 23. Adelina had four children, and Rosa, two. Those children who were old enough to speak spoke some Resígaro, but most of the time they communicated in Ocaina.

Alicia's son, Pablo Andrade Ocagane, was the only one with a reasonably good knowledge of Spanish (by local standards). He had attended the bilingual school in the village, and had completed the five-year primary course, learning to read and write in Ocaina and Spanish. In 1972 he was 21 and was unmarried. He became my main informant in September 1971 and worked with me solidly until I left Peru in July 1972. He was always helpful and enthusiastic, and soon learnt to write his own language, using the alphabet I developed from my phonemic analysis of the language. In November 1971 he accompanied me to the Summer Institute of Linguistics' jungle base at Yarinacocha, near Pucallpa, on the Ucayali, where we worked on the language for the next eight-and-a-half months.

0.3.2. Corpus.

0.3.2.1. Legends.

In Puerto Isango, Adelina Andrade Ocagane told me twenty trad-

itional tales, all of which I tape-recorded.[8] I subsequently transcribed these stories and translated them roughly into Spanish, with Adelina's brother Pablo, who did a lot of the work. This formed 396½ quarto pages of text (handwritten), which were repeatedly referred to in the course of language analysis and write-up. Seven of these tales (accounting for about 40% of the total material) were subsequently studied in further detail, and part of one of them is included in II.9., below, with morpheme-by-morpheme and free translations and grammatical analysis.

0.3.2.2. Other Stories.

Alicia Ocagane spoke about the recent history of the tribe, telling of the sufferings and killings experienced under the whites. She also spoke of the animals of the forest, and sang some of the traditional fiesta songs. All this material was tape-recorded, transcribed, and translated, although the songs have not been referred to in the present analysis, since they would appear to represent an older form (and definitely a different style) of the language, which Pablo could not always fully

[8] Adelina has a slight speech defect which results in almost constant nasalization. S.I.L. member Miss Ilo Leach, who has worked in Adelina's village for many years, analyzing the Ocaina language, has noticed this in Adelina's speaking of Ocaina (in which nasalization is emic) (Personal communication). However, I do not suspect anything as serious as a cleft palate, since Adelina's pronunciation is otherwise problem-free, and she does not betray the sorts of impediments normal in cases of cleft palate. Perhaps the problem is in some way related to her control of her velum. None of the other informants had any such problems.

understand well enough to explain the meaning.

Rosa Andrade Ocagane was much less of a talker, though she did re-tell a few Bible stories she had heard from missionaries. These stories were recorded, written down, and translated.

0.3.2.3. Conversation and letters.

When Pablo was in Yarinacocha with me, he decided to write to his mother and sisters, in Resígaro. In Puerto Isango, the schoolteacher (himself a Resígaro) was able to read this letter to Alicia, Adelina, and Rosa, and he wrote down a reply from them in Resígaro. Pablo kindly let me have copies of these letters, having corrected the spelling errors in the letter written by the teacher. He also wrote on another occasion, and corrected two letters that I wrote in Resígaro.

In June 1972, S.I.L. member Ilo Leach visited Puerto Isango, and recorded messages in Resígaro from Pablo's mother and sisters, and conversation between them. I have a copy of this tape and a transcription and translation of its contents.

0.3.2.4. Lexicon.

As part of the research undertaken in Peru, a tri-lingual lexicon was compiled of all Resígaro words encountered, with Spanish and Ocaina equivalents. Approximately 2,000 entries were made. (The lexicon is included as Appendix I, with the Ocaina deleted,

and English glosses substituted.)

0.3.2.5. Other material.

When I was busy with other work, Pablo translated St. Mark's Gospel from the Ocaina, and completed this as far as the end of the fourth chapter. Subsequently, we checked this together, and translated it into Spanish.

All these above sources provided valuable insights into the language, and, supplemented by material elicited from Pablo, form the basis of the description which follows.

0.4. Theoretical framework of the present description.

The aim of the thesis is to provide a general description of the Resígaro language. Thus, the emphasis is not theoretical, and a model has been chosen which will, it is believed, facilitate the comparison of this language with others, particularly those which may prove to be related to it. The model referred to is tagmemics.

0.4.1. The Three Hierarchies.

Tagmemics views language as consisting of three independent but inter-locking hierarchies: phonological, grammatical, and lexical.

Each hierarchy consists of units at different levels, and a unit at any given level (except the lowest) consists normally of units from the level immediately below it, and functions (except in the case of the highest level) as an element in the level

immediately above it.

Thus, the phonological hierarchy has at its lowest level the phoneme, which is distributed in the syllable, at the next level in this hierarchy. This, in turn, may be distributed in a stress-group or phonological word, which is distributed in a yet higher-level phonological unit.

The grammatical hierarchy has as its minimum unit the tagmeme, which is distributed in a higher-level unit called a syntagmeme (Longacre 1964a:15n10).

A tagmeme is a slot-class correlative (Pike 1967:196, etc.) (= Longacre's "function-set correlation" (1965a:65n3)). That is to say, a slot (function) at a given level is filled (manifested) by a member of a class (set). That which functions as a tagmeme at one level may be a syntagmeme at a lower level. Thus, the concept of levels is fundamental to tagmemics.

The lexical hierarchy has as its minimal unit the "lexeme" (Longacre 1964b), which is distributed in higher-level lexical units, called "L-syntagmemes" by Longacre (1964b:20). The lexical hierarchy has not been developed in detail by tagmemicists, though Wise has suggested a possible approach in her 1968 Ph.D. thesis (written under Pike's supervision) (Wise 1971a).

0.4.2. The Three Modes.

In addition to the three hierarchies indicated above, Pike states

that language can be viewed as being "trimodally structured". By this, he indicates a convenient framework within which language units of any hierarchy can be viewed and described. The three modes are Contrast Mode, Variation Mode, and Distribution Mode (originally named Feature, Manifestation, and Distribution Modes, respectively, by Pike).[9]

Here is an example from the phonological hierarchy, phoneme level:-

From the point of view of the Contrast mode, each phoneme of any given language is described in terms of its contrastive-identificational phonetic features.

From the point of view of the Variation mode, the variant manifestations, or allophones, of each phoneme are described.

From the point of view of the Distribution mode, the distribution of each phoneme in units of the next level "up" in the phonological hierarchy (the syllable) is described.

The same descriptive procedure can be repeated at each level of the hierarchy.

It is of fundamental importance that Variation and Distribution modes be distinguished, a point which most tagmemicists seem to have failed to realize, if one is to judge from published

[9]These may be compared to Halliday's scales of abstraction, where Feature mode parallels Halliday's abstract, Manifestation mode parallels his concrete, and Distribution mode parallels his syntagmatic.

materials. Likewise, the importance of levels must be emphasized.

0.4.2.1. Structure and Distribution.

In handling constructions at any level, it is clear that they can be viewed from two points of view:

1) In terms of their internal structure

2) In terms of their ("external") distribution.

In the early formulation of the theory, Pike combined these two, by speaking of internal and external distribution, respectively. This led to inconsistencies of the sort to be seen in Pickett (1960):

> "CRITERIA OF CLASSIFICATION. Two criteria of classification have been applied to the data: external distribution and internal structure. Frequently the two give the same results."

-- but only as long as one remains at a very superficial level of analysis.

> "In other cases they result in different divisions, in which case distribution is made primary, with internal structure determining subgroupings or (in one case) hypergroupings not part of the primary division." (p. 18)

> "TYPES AND CLASSES. Use has already been made of the terms 'types' and 'classes' in reference to structures at each level. Types are emically contrastive structures. ... Classes of structures are, in general, more inclusive than types; i.e., they are groups of structure types which have some feature of distribution, internal composition [why this?] or meaning in common." (p. 19)

Thus, "contrastive structures" or "common features of internal composition" at one moment lead to the establishment of

types, and at another to the establishment of classes. And sometimes classes are primary, while on other occasions, types are primary.

But this leads to a contradiction with Pike's establishment of the three modes, as Crawford rightly pointed out (1963: 96, 179-180). So-called "internal distribution" (i.e., internal structure) is in fact part of the contrast (or feature) mode, with the details of variant forms described under the variation (or manifestation) mode. Pike subsequently (1967:460) accepted this modification.

External distribution, on the other hand, has no place in the variation mode, and should be described in the distribution mode (though it may also be referred to in the contrast mode -- so long as circularity is avoided -- since distribution may be a distinctive, contrastive feature of a unit.[10]

Nevertheless, other tagmemicists have continued to fail to

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[10] I view contrast mode as not being on a par with variation and distribution modes, since aspects of variation and distribution are in themselves contrastive and identificational.

Thus, contrast mode is merely a convenient bringing-together of some of the most salient characteristics of the other two modes. This means that it cannot do other than repeat information given in greater detail in the variation and distribution modes.

It may be argued that this mode is therefore superfluous to the description, as a separate section. However, it is retained in the present work as an introduction to each structure at each level, since it helps the reader to focus on the particular aspect of the language which is to be analysed.

distinguish structure and distribution, with resultant contradictions in their work. Thus, in his grammar of Lamani, where he ostensibly presents his material in terms of the three modes throughout, Trail first includes distribution under the contrast mode, then subclassifies units under the manifestation (i.e., variation) mode on the basis of structure and distribution, and so finally, under the distribution mode itself, is reduced to a mere repetition of what he has already said -- omitting the details, at that, even though they are more relevant here than anywhere else.

At Word level, for instance, he says:

> "Words are classified by their occurrence [i.e., distribution] in higher level structures, typically in phrases, and are sub-classified by their internal structure." (pp. 133-134)

In the Contrast mode, he includes distribution:-

> "5.1. Nouns.
> 5.1.1. Contrast. Nouns have the following distinguishing features: A. They fill the head slot in noun phrases or the locative or temporal slots on clause level..." (p. 134)

In the Variation (his "Manifestation") mode of the noun word he says:-

> "5.1.2. Nouns have been sub-divided on the basis of their external distribution and internal structure. These subdivisions and their manifestations are described in this section" (p. 134, emphasis mine).

Thus, on p. 139, Trail's description of the distribution mode of noun words is as follows (I quote the section in its entirety):-

> "5.1.3. Distribution. Nouns fill the head slot in noun phrases or the locative or temporal slot in clauses."

Much confusion can be avoided by distinguishing construct-

ion types and distribution classes, to use a valuable terminological distinction suggested by John Bendor-Samuel, though incorporated by him into a different theoretical framework (1963:61).[11]

To give an example from Resígaro:

Two types of noun stem are set up on the basis of (internal) structure, and one of these types has three variant sub-types, making four structurally different groups. Three sub-classes[12] are set up on the basis of distribution in units of the next level "up". Theoretically, at least, both types and all three sub-types can occur in two of the three sub-classes, with one type also occurring in the third sub-class. If we fail to distinguish between structure and distribution, and further use the same term -- "sub-classes" -- in both cases, as in Grail (and others), we have the possibility of nine"sub-classes" of

[11] Brend has made use of this terminology within the context of tagmemics (1968:19), but since her description only handles one level, it is not clear what the implications would be in terms of the entire hierarchy.

[12] The term "sub-classes", rather than "classes", is adopted to distinguish between subdivisions of the major sets of units throughout the language, and the sets themselves. The sets are termed "classes", and the subdivisions "sub-classes". An alternative solution, adopted by Pride (1965) is to use the term "hyperclass" for "set", as defined here, and "class" for subdivisions thereof (e.g., op.cit., p. 12). This conforms to Pike's earlier use of the prefix "hyper-" for sets of sets, yet since this terminology has now fallen somewhat into disuse, with the recognition of tagmemes at different levels, and the adoption of Longacre's "syntagmeme" to replace "hypertagmeme", the more generally-accepted terms "class" and "sub-class" are here preferred. The basic structural divisions of classes at any given level (e.g., of noun stems) are termed "types", and subdivisions of types are termed "sub-types".

noun stems. This contributes nothing to our understanding of the structure and distribution of noun stems in Resígaro, on the contrary only serving to confuse the picture.

0.4.3. Levels.

Fundamental to the distinction between Structure and Distribution is the concept of levels, since structures typically consist of units that are members of sub-classes at the level below, and distributional sub-classes typically occur in types at the next level up.

To illustrate, again, from Resígaro: at word level, two types and six sub-types of Noun word are set up on the basis of internal (structural) differences. Traditional tagmemic practice would have us trace back these six sub-types to root level. i.e., noun root sub-type i occurs in noun stem sub-type i, which occurs in noun word sub-type i, etc. This is a consequence of Pike's original formulation of the model, as stated by Pickett (1960:90):

> "... the original approach was specifically designed to cut 'vertically' through all such levels by a unit-within-unit approach."

However, this method introduces unnecessary complexity and redundancy throughout the description, by repeating the same information many times.

In terms of the Resígaro example given above, sub-classification according to word-level suffixes (which affect the struc-

ture of the word, and lead to the two types and six sub-types mentioned above) is relevant at word level, but if this is carried down to root level, along with the confusion of structure and distribution which led to nine "sub-classes" at stem level (also, by the same procedure, traced back to root level), then 54 "sub-classes" of Resígaro noun roots are theoretically possible -- and this without sub-classifying the words according to their co-occurrence with one or more of the 80-odd classifier suffixes, which would yield a theoretically-possible 4,320 noun root sub-classes, at least.

A prime example of the consequences of this technique is to be found in the ten grammatical descriptions produced by members of the Bolivian Branch of the Summer Institute of Linguistics, under the direction of Esther Matteson (Matteson, 1967a and b).

Thus, in the Eseejja Grammar by Shoemaker and Shoemaker (Vol. I, pp. 209-283) -- to take a random but typical case -- somewhat more than 60 verb phrase classes are set up (I:230) on the basis of the distribution of 13 different types of verb phrase in six clause types.

In the first place, the types and classes are confused, as in Trail.[13]

[13]There are not 60-odd verb phrase classes, but six, at most, and this may be reduceable to four -- Ditransitive, Transitive Intransitive and Stative, with a Quotative multiplication of

Secondly, the relevance of levels is not recognized. Thus, a page-and-a-half of formulae tell us that

"Vb [i.e., VP] 11a = + Nuc:Vb nuc 11a ....
Vb [i.e., VP] 13 = + Nuc:Vb nuc 13 ...."
etc. (pp. 231-2)[14]

This is followed through to verb nucleus level, where we learn that

"Vb nuc 11a = + H:vb 11 ....
Vb nuc 13 = + H:vb 13 ...."
etc.(pp. 237-8)

At word level, the formulae are repeated:

"vb 11 = + Base: vb stem 11 ....
vb 13 = + Base: vb stem 11 [sic] ...."
etc. (pp. 262-4)

The apparent "skewing" here and in other cases reinforces the fact that distinctions established at one level are not necessarily relevant at other levels. In the case in question, this leads to a progressive simplification of classes at lower levels. Thus,

"vb stem 11 = + Base: vb r 10 ...."
etc. (pp. 266-8)

The format is a barrier to comprehension. This is in part a consequence of the above faults. In the midst of so

Transitive and Intransitive classes to yield Quotative Transitive and Quotative Intransitive. All 13 types of verb phrase occur in the Ditransitive class, and similarly in the Transitive and Intransitive classes, while only Independent types occur in Quotative Transitive and Intransitive classes, and in the Stative class. The major part of this might be statable in terms of a restriction on the co-occurrence of Quotative and Dependent multiplications, which in turn leads to the question as to whether Quotative has been included in the right axis. However, it is not relevant to explore these possibilities here.

[14]Other information in the formulae but not relevant to the present discussion is omitted.

much repetition -- both by repeating details at all levels, and by failing to collapse formulae at any given level -- significant details are easily overlooked by the reader, and generalisations are ignored by the writers. This is the case with all the grammars in the two volumes of this publication.

It is clear that Matteson recognized all these problems. In the introduction to volume I she states,

> "... the Ignacio grammar demonstrates devices for separating distribution from composition [i.e., structural] classes, introducing the former at the first level on which they are relevant, rather than carrying them through various levels for which they have no significance as has sometimes been done because of their correlation or partial correlation to composition classes." (I:9)

She adds the comment that

> "such devices are not limited to use in the Ignacio grammar".

However, an examination of the "devices" by reference to the sections she mentions reveals that they amount to subdividing classes established higher up (and dubbed "super-tagmenes" -- cf. I:108), and designating the sub-divisions by a combination of capital letters and numbers. But this technique completely misses the point, failing to see the relation of construction types and distribution sub-classes to each other, and to specific levels of the grammatical hierarchy, and the relevance of the modal system to the whole problem.

The concept of levels, whose importance has been emphasized

by Longacre, avoids such unrealistic sub-classifications, by limiting the domain of sub-classification in any given case to the level (or levels) at which it is relevant,[15] while the concept of the three modes of contrast, variation and distribution as developed by Pike provides a clear framework within which construction types and distribution classes and sub-classes can be consistently handled.

There is an interlocking between levels, but it is between the distribution sub-classes of one level and the variation (or manifestation) types at the next level up, and not between the sub-classes of one level and the sub-classes of the next level. This may be clarified in the following diagram:-

Sentence level	types
	↑
	(sub-classes
Clause level	(types
	↑
	(sub-classes
Phrase level	(types
	↑
	(sub-classes
Word level	(types
	↑
	(sub-classes
Stem level	(types
	↑
Root level	sub-classes

i.e., sub-classes fit into types in the next level up, usually in the same class (noun stem sub-class distributed in noun word type, etc.) up to and including phrase level, from where

[15] A practice long accepted by tagmemicists in syntax, but ignored in morphology.

on up different sorts of relationships begin to appear (such as that between subject and predicate, etc.). Occasionally some sub-classes at a given level may be distributed in types of another class (as when the members of a sub-class of noun stems are distributed both in a type of noun word and a type of numeral word). Also, there may be level-skipping, recursiveness or backlooping, which is not included in the diagram. (The sub-levels of Group and Piece are also omitted, as they only affect one class in Resígaro.)

Thus, in this context, there are four relations that are not normally relevant, and one that is:-

i) the grouping into construction types at one level is not relevant to the grouping into construction types at any other level;

ii) the grouping into construction types is not relevant to the classification into distribution sub-classes at the same level or any other level except that immediately below it;

iii) the classification into distribution sub-classes at one level is not relevant to the classification into distribution sub-classes at any other level;

iv) the classification into distribution sub-classes is not relevant to the grouping into construction types at the same level or any other level except that immediately above it. (Points ii) and iv) ignore the possibility of level-skipping, etc., for simplicity of argument.)

The one significant relation is this:-

that between the classification into distribution sub-classes at one level and (typically) the grouping into construction types at the next level up.[16]

This does not deny the fact that the major classes that are set up normally follow through from phrase level down to root level. Thus, typically, a Noun Phrase has a noun word as its head, a noun word has a noun stem as its base, and a noun stem has a noun root as its base, etc. This following-through of the classification from one level to another reflects the fact that such a procedure is relevant to the data in question (and exceptions to the general pattern are indicated). When we say that sub-classes at a given level are distributed in types of the next level, we are not denying their distribution in units of a given class at the next level, since types are no more than structural variants of a class, at a given level. However, to relate the sub-classes of a given level to the sub-classes of the next (or any other) level is erroneous.

In consequence of the distinctions made above, in the following description construction types are presented under

[16] Halliday (1961:261) defines "class" in substantially the same way, when he says,

> "... a class is always defined with reference to the structure of the unit next above, and structure with reference to the classes of the unit next below. A class is not a grouping of members of a given unit which are alike in their own structure. In other words, by reference to the rank scale, classes are derived "from above" ... and not "from below"..." (Emphasis Halliday's.)

the variation mode for the major class and level in question (and are enumerated with Roman numerals), while distributional sub-classes are presented under the distribution mode for the class and level in question (and are enumerated with Arabic numerals). I have yet to see any other tagmemic description that follows this format, and yet it seems the only way to present the data without doing violence to the concept of modes. It seems to me that Pike laid open the way for the sort of treatment I suggest (or, even more than this, required it) in his development of modes. As Pickett says,

> "Pike's definition of a distribution class is the list of forms (potentially ranging from one morpheme to full sentences) which occur in any one tagmemic slot. Such a distribution class combines groups of very different internal structure." (1960:95, emphasis mine.)

0.4.4. Multiplication.

Thus far, two techniques for reducing the great tagmemics problem of repetition have been discussed: the distinction between variation and distribution modes, and the related concept of levels.

A third, and complementary, technique is that of matrix multiplication, which has been developed by Pike since about 1962 (Pike 1962, 1963, 1970). This combats the segmentation of earlier tagmemics which often obscured relations and led to avoidable repetition.

By means of multiplication of a matrix by a given factor,

new matrices can be derived (1962:226-229). Thus, for example, English passive sentences can be derived from active sentences. This development obviously owes a lot to the appearance of Transformational-Generative grammar in the late 50's.

In the present description, multiplication is used to derive Interrogative, Imperative, Nominalized and Relativized clauses from the basic Declarative clause.[17]

0.5. Scope.

In the present thesis, the bottom two levels of the phonological hierarchy are described (phoneme level and syllable level), as an introduction to the description of the grammatical hierarchy, which forms the main section of the thesis. A description of the tones and tonal morphophonemics of Resígaro is beyond the scope of the present description, though tones are indicated throughout.

The grammatical hierarchy is described from root to sentence, the levels being:

Root
Stem
Word
(Group)
(Piece)
Phrase

[17] cf. Longacre, 1965b.

Clause
Sentence

Group and Piece are best considered as "sub-levels", since they are only relevant to the description of the verb. Since the Sentence is the highest level analysed, its distribution is not given, though a sample text is analysed at the end of the grammar section.

As indicated above, the lexical hierarchy is the one on which least work has been done by tagmemicists. Longacre has pointed out the importance of separating the lexicon from the grammar:

> "Lexicon is a third mode [i.e., hierarchy] of linguistic structuring. It is sufficiently separate from grammar that the description of the interplay of item and context, of idiom formation, and of lexical strings ... is a study within itself. Attempts to incorporate the lexicon directly into the grammar will lead only to the oversimplification of the former or to the endless atomization of the latter" (1964a:8).

The size of the task is also recognized by him:

> "To describe a language exhaustively (a task as yet seriously attempted by no one), three volumes are needed: a phonological statement, a grammatical statement, and a highly sophisticated dictionary" (1964a:8).

A fulfillment of Longacre's requirement that the dictionary be "highly sophisticated" would be beyond the scope of the present work, since it would make the thesis overlong to go into the necessary detail with some 2,000 entries, and the alternative of presenting merely a sample lexicon such as that in Loos (1969), where only 73 items are handled, though

in considerable detail, or in the style of Katz and Fodor (1963:186) on the one word "bachelor", was considered unacceptable.[18]

Therefore, as in Trail, 1970, the complete lexicon compiled during the research project is included. This consists of the basic lexical units only, and in this description the whole section forms an appendix, for reference, and to form the basis of future analysis.

[18]The fact that Loos's thesis is cast in a Transformational format does not affect the relevance of this comparison, since to be valid, the tagmemic model would have to produce a dictionary of similar sophistication, and Loos's sample lexicon illustrates the sort of limitations such a requirement imposes on research projects in which analysis of the lexicon is not the major objective.

P A R T I :

P H O N O L O G I C A L

H I E R A R C H Y

In describing the three modes, above (section 0.4.2.), an example was given from the phonological hierarchy, phoneme level. This indicated that phoneme contrasts are described under the contrast mode, allophonic variation described under the variation mode, and distribution under the distribution mode.

However, while this presentation might be theoretically satisfying, in practical terms it is at least inconvenient, if not inappropriate, and tagmemicists have generally described the phonological hierarchy without reference to the three modes (e.g. Elson (ed.), 1967).

Even Kenneth Pike has not followed this presentation completely. In the article he co-authored with Rachel Saint in Studies in Ecuadorian Indian Languages: I (Elson (ed.), 1962), though the description is in terms of the three modes, a concession is made to convenience in that first consonants are described in terms of each of the three modes, and then vowels are described in the same way (cf. p. 2).

Other articles (by other authors) in the same publication reduce these six sections to five, by grouping consonants and vowels for distribution, though separating them for the other modes (see, for example, Borman (pp. 45-59).).

In the present description, it has been thought preferable to reduce this further to the original format of the three modes (i.e., in three sections), by changing slightly the components of each section.

Thus, on the phoneme level, for instance, contrast mode summarizes the contrastive-identificational features of phonemes in two matrices and a short statement (for suprasegmentals).

Detailed exemplification of the phonemes, justifying their establishment as separate units, is reserved for the variation mode. This is considered appropriate since the variant manifestations of the phonemic unit (an abstract entity) are the phonemes, just as the variant manifestations of the Noun Phrase, for instance (in the grammatical hierarchy), are different types of NP. Inherent in the establishment of different types -- in any hierarchy -- is their contrast with other types at the same level.

In this, the presentation of the phonology in this description parallels that of the grammar, where the contrast mode merely indicates briefly the contrastive characteristics of the levels and units in question <u>as a whole</u>, in justification of the establishment of that level (and, in the grammar, the particular class -- noun word versus verb word, etc.). It also has the advantage of permitting the allophones of a

phoneme to be described at the same time that the phoneme is described, instead of in a totally different section, as in the articles in Elson, 1962, referred to above.

Chapter 1

PHONEME LEVEL

The phoneme level is set up as the lowest level in the phonological hierarchy.[1] Phonemes are distributed in units of the next level of the phonological hierarchy, the syllable. Types of phoneme are set up on a structural basis -- i.e., according to certain phonetic characteristics. Classes of phoneme are set up on the basis of distribution in the syllable.[2]

1.1. Contrast.

The contrastive-identificational features of phonemes are best summarised in two matrices (one for contoids and the other for vocoids[3]) and a short statement (for suprasegmentals).

---

[1] The distinctive feature, referred to in I.1.2., below, might be considered as constituting a lower level than that of the phoneme. However, this approach is not adopted here, since the distinctive feature represents a greater degree of abstraction than the phoneme, and has no independent status apart from its co-occurrence with other distinctive features in the phoneme. This description takes as starting point the distinctive feature as the basis for separating phonemes.

[2] It is worthy of note that the three types of phoneme (Contoid, Vocoid, and Suprasegmental) are co-extensive with the three distribution classes (named Consonant, Vowel, and Tone). However, the sub-types of phoneme bear no noticeable correlation to the distribution of the members of each class, except in the few cases indicated in Part I, Chapter II, below.

[3] Pike's useful distinction between contoid/vocoid and consonant/vowel is retained, since the membership of the classes Consonant and Vowel is clearly dependent on distributional features, which cannot determine the establishment of types on the same level, as

		Labial	Alveolar	Palatal	Velar	Glottal
	vl.asp.	p^h [4]	t^h		k^h	
Plosives	vl.	p	t	t^y	k	?
	vd.	b	d	d^y	g	
	vl.asp.		ts^h	$\check{c}^h$		
Affricates	vl.		ts	$\check{c}$		
	vd.		dz	$\check{j}$		
	vl.	f	s	$\check{s}$		h
Fricatives	vd.	v		$\check{z}$		
	vl.	m̥	n̥	ñ̥		
Nasals	vd.	m	n	ñ		

Table 1.1. Contoid Matrix.

Outside the system: /r/, /x/ (cf. 1.2.1.5., below)

indicated in 0.4.2. and 0.4.3., above. The fact that in Resígaro the membership of the structural types of phoneme is co-extensive with that of the distributional classes should not be allowed to undermine this distinction, as otherwise one would end up with circularity. cf. K.L. Pike, 1943:

> "If the phonetician first delimits supposed articulatory classes by phonemic features, how can he then describe the phonemes with articulatory methods? Any such attempt presents a vicious circle of phonemics to phonetics to phonemics, with the phonetician starting at phonemics." (pp. 77-78) cf. also K.L. Pike, 1947:13bn-14an.

Contoids and vocoids are defined in phonetic terms. A vocoid is a sound in which the air escapes out of the mouth over the centre of the tongue, without pronounced or localized friction in the mouth. (cf. K.L. Pike, 1947:4b-5a; 1967:332) A contoid is any nonvocoid.

[4] /p^h/, /t^h/, etc. are for convenience subsequently written ph, th, etc.

	Front	Central	Back
High (spread)	i		u
Mid (spread/round)	e		o
Low (neutral)		a	

Table 1.2. Vocoid Matrix.

Suprasegmentals: High tone: ´

Low tone: (Absence of ´)

1.2. Variation.

Phonemes are grouped into types on the basis of certain characteristics of phonetic structure.

$Phon_{i}$ = All Contoids

$Phon_{ii}$ = All Vocoids

$Phon_{iii}$ = Suprasegmentals

In establishing the identity of phonemes, their contrastive nature is fundamental. Thus, each posited phoneme is contrasted with all other posited phonemes with which it might conceivably be in a non-contrastive relationship. This results in repeated application of the commutation test on pairs of phonemes differing by one distinctive feature at a time. Ideally, the words in which these phonemes appear in the examples given are identical at all other points (i.e., minimal pairs). When such a clear minimal pair is available, only one example

is given. When the pairs are only nearly minimal, if there may appear to be any doubt concerning the presence of an emic contrast, two or even three examples are given.

1.2.1. Phoneme type i: Contoids.

In Resígaro there are 30 contoid phonemes, which contrast in four ways as to type and five as to point of articulation, and also as to presence or absence of voicing and aspiration. In this description, the articulation type is taken as primary, resulting in four sub-types of phoneme type i:-

$Phon_{i.i}$ = Plosive

$Phon_{i.ii}$ = Affricate

$Phon_{i.iii}$ = Fricative

$Phon_{i.iv}$ = Nasal

In addition to these 30 contoid phonemes of four sub-types, there are also a fricative and a flap that are not part of the system.

1.2.1.1. Phoneme type i, sub-type i: Plosives.

There are three series of plosives -- voiced, voiceless, and voiceless aspirated -- at four points of articulation: labial[5], alveolar, palatal, and velar, with a hole in the slot

[5]The terms used to describe the points of articulation are not to be considered as descriptive, but rather, contrastive in terms of the system. Thus, "labial" refers to phonemes in which the main articulators are both lips, yet the title "bilabial" is unnecessary, since there are no labio-dental sounds in the language. Similarly, /ty/, /dy/, /ñ/ and /x̃/ are realized with the tongue further forward in the mouth than the other phonemes labelled "palatal", being in fact palatalized alveolars,

where a voiceless aspirated palatal might be expected. There is also a glottal stop.

1.2.1.1.1. /ph/ is an aspirated voiceless bilabial plosive. Its contrastive nature may be derived from the following minimal and near-minimal pairs:-

/ph/-/p/ phiigí "annatto tree" / piígí "anteater"

/ph/-/b/ pho?khoǒtsí "fan" / bo?otáhí "plate"

/ph/-/f/ phǒogikhú "he agitates" / fǒogikhú "he blows"

/ph/-/th/ hada?phoǒtsihú "song" / a?mithoǒtsihú "kitchen"

/ph/-/kh/ hada?phoǒtsigí "a singer (m)" / tho?khoǒtsií "pestle"

/ph/-/m̃/ nophú "I tread" / nom̃ú "I bite"

1.2.1.1.2. /p/ is an unaspirated voiceless bilabial plosive. Its contrastive nature may be derived from the opposition /ph/-/p/ (above), and from the following minimal and near-minimal pairs:-

/p/-/b/ po?vu "you are getting yourself wet"

/ bo?otáhí "plate"

/p/-/f/ pũni "your saliva" / fũneú "our lake"

pǒotsígú "frog" / fǒogikhú "he blows"

/p/-/t/ po?vu "you are getting yourself wet"

/ pito?vú "you take (sthg) out"

/p/-/k/ gipaánú "his house" / gikaání "his bitter yucca"

---

whereas /č/, /čh/, etc. are palatals. However, the contrast is again between purely alveolar phonemes and those in which a palatal position of the tongue plays an integral part. (cf. Bloch, 1950:91 fn 13)

pa?tú "to look" / ka?tadákó "(a species of bird)" (Sp.: chachalaca)

/p/-/ʉ/ pa?tóónagí "a watchman" / ʉa?paaká no?pí "Without winning, I go"

1.2.1.1.3. /b/ is a voiced bilabial plosive with optional onset of voice before the release, particularly in initial position or for emphasis. When realized, this results in the sound [ᵐb]. Its contrastive nature may be derived from the oppositions /ph/-/b/ and /p/-/b/ (above), and from the following minimal and near-minimal pairs:-

/b/-/v/ be?é "new" / ve?í "here"

/b/-/m/ boe?gikhú "he paddles" / moi?gikhú "he mixes (sthg)"

/b/-/d/ bo?otáhí "plate" / do?othé "that one (f)"

/b/-/g/ boto?dokhú "she sweeps" / go?dokhú "she puts a stick in the ground"

1.2.1.1.4. /th/ is an aspirated voiceless alveolar plosive. Its contrastive nature may be derived from the opposition /ph/-/th/ (above), and from the following minimal and near-minimal pairs:-

/th/-/t/ tho?khóótsií "pestle" / todokáakú "toad"

/th/-/d/ tho?khúmú "Muinani Huitotos" / do?kóʉó "she is dripping wet"

/th/-/ty/ thá?gižú "he sinks (in a canoe)" / tya?díío "grandfather"

/th/-/kh/ thiithí?ó "(a species of monkey)" (Sp.: sumileon-cito) / khíigí "maternal uncle"

/th/-/tsh/ gi?nóthó "he breaks (the shell of peanuts)"

/ gi?nótshó "he kills, hits (s.o.)"

/th/-/čh/ thóogikhú "he shakes (sthg)" / čhóogikhú "he spits"

/th/-/n̶/ gi?í thá?ǰú "this one (m) sinks (in a canoe)"

/ n̶a?pú "they win"

1.2.1.1.5. /t/ is an unaspirated voiceless alveolar plosive. Its contrastive nature may be derived from the oppositions /p/-/t/ and /th/-/t/ (above), and from the following minimal and near-minimal pairs:-

/t/-/d/ témooú "the sea" / deémú "tree bark"

/t/-/ty/ taáǰê "grandmother" / tya?díío "grandfather"

/t/-/k/ gífotápa "he is frightening (s.o.) / gífokápa "he is frightened [progressive]"

/t/-/ts/ gi?tú "he fasts" / gí?tsu "he scorns"

/t/-/č/ toogikhú "he breaks (sthg)" / čoo?gikhú "he kisses"

/t/-/n̶/ to?vú "to get, to obtain" / n̶ó?vu "I walk"

1.2.1.1.6. /d/ is a voiced alveolar plosive with optional onset of voice before release, particularly in initial position or for emphasis. When realized, this results in the sound [ⁿd]. The contrastive nature of this phoneme may be derived from the oppositions /b/-/d/, /th/-/d/ and /t/-/d/ (above), and from the following minimal and near-minimal pairs:-

/d/-/dy/ doová "(a type of almond)" / dyoonáú?é? "proud"

hudúúgí "curuhuinse ant" / dyuši "(a man's name)"

/d/-/g/ do?kú "he fells a tree" / go?khú "to put a stick in the ground"

/d/-/dz/ duugižú "he stays" / dzu?gižú "it shrinks"

/d/-/ǰ/ dá?nú "it (a tree) falls" / ǰá?nú "to keep vigil, to wait"

/d/-/n/ do?nitú "she eats" / no?nitú "I eat"

1.2.1.1.7. /ty/ is a voiceless palatalized alveolar plosive, in which the initial position of the tongue may be slightly retracted from the position for /t/. Its contrastive nature may be derived from the oppositions /th/-/ty/ and /t/-/ty/ (above), and from the following minimal and near-minimal pairs:-

/ty/-/dy/ tyugií?ó "parakeet" / dyuíšugú "wooden battens for flooring and walls"

tya?díío "grandfather" / gadya?nožú "I get angry"

/ty/-/č/ tya?díío "grandfather" / čačhí "charcoal"

tyo?tyú? "pretty" / čoo?khú "to kiss"

/ty/-/ts/ tyó?otyóbú "butterfly" / tsó?vó "(an animal something like a dog)" (Sp.: comadreja)

tya?díío "grandfather" / tsa?í "armadillo"

/ty/-/ñ/ tya?díío "grandfather" / maáñáwú "silence"

tyoédé "small woodpecker"/ ñeke? tsó "she gets better, stronger"

These last two pairs are not completely satisfactory, and an argument (admittedly, a rather improbable one) could be brought for environmental conditioning here. Even without such an argument, it might be claimed that the lack of examples of contrast

in identical environments is sufficient reason to justify the uniting of the two phones in one phoneme, perhaps with some such rule as the following:

/TY/ (the hypothesized phoneme) is realized

a) as [ty] in the context of another alveolar stop in the next syllable; and

b) as [ñ] in the context of a nasal in a contiguous syllable, or a velar stop in the next syllable.

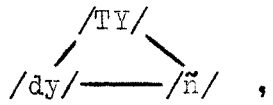
This rather dubious rule does not, however, account for such cases as tyo?tyũ? "pretty" or tyugiĩ?ỏ "parakeet" (part (a)), nor does it account for cases such as ñe?j̃ũ "to make a hole" (part (b)). It would, perhaps, be possible to redefine the rule in such a way that these and other cases would be taken care of, but such expansion of the rule could only be made at the cost of further loss of credibility.

Lest an appeal to credibility and probability is considered insufficient reason for opposing the union of these two phones in one phoneme, the following additional reasons are given:

1. The lack of clear minimal pairs for /ty/ and /ñ/ would appear to be non-significant and merely a reflection of the low frequency of occurrence of these two phones, and the limits to the amount of data gathered and analyzed to date.

2. The voiced counterparts (/dy/ and /ñ/) of these phones

are clearly separated, and to unite the latter would thus destroy the two-way pattern of oppositions (voiceless/voiced and nasal/oral), giving



where the distinctive feature between /dy/ and /ñ/ is nasality, while that between these two and /TY/ is voice and, depending on the allophone, presence or absence of nasality. The set of oppositions is seen much more clearly if the two allophones of the proposed phoneme are set up in a matrix with the phonemes /dy/ and /ñ/:

	- Nasality	+ Nasality
- Voice	[ty]	[n̈]
+ Voice	/dy/	/ñ/

Such a matrix lends strong weight to the interpretation of [ty] and [n̈] as two separate phonemes, /ty/ and /n̈/.

3. This matrix could be expanded by taking into account the labial and alveolar positions, where the same set of distinctive features is clearly emic (cf. examples in the relevant sections of this chapter). It is here claimed that [ty] and [n̈] demonstrate the same emic set of contrasts in palatal position.

This argument, which owes a lot to Pike's premiss "sound systems have a tendency toward phonetic symmetry" (1947:59b, 116-121), has in recent years received added support from another direction, namely the concept of markedness in generative

phonology as developed by Chomsky and Halle (1968), which in turn stems from Prague School phonology and the subsequent theory of binarism proposed by Jakobson.[6]

According to Postal (1968:178), if a marked value of a feature occurs, the unmarked value must also occur. Taking [+ Voice] as the marked value of plosives in Resígaro[7], in which /b/, /d/, /dy/ and /g/ are thus marked, and /p/, /t/ and /k/ are attested[8], the presence of marked /dy/ implies an unmarked /ty/.

The argument for the nasal /ñ/ is less strong, since while the presence of a marked value implies the presence of the unmarked value too, the converse is not the case. In the case of nasals, the Naturalness Condition (Postal, op.cit., pp. 80-81) would presumably require that the marked value for nasals be [- Voice]. (This also follows from Chomsky and Halle, op.cit., p. 413 and p. 405, (XV).) In Resígaro, /m̃/ and /ñ/ are thus marked, and unmarked /m/ and /n/ (implied by the presence of the marked nasals) are indeed attested. Unmarked /ñ/ is also attested, though from this alone the presence of marked /ñ/ cannot be inferred. However, since marked nasals do occur at other points of articulation,

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[6] cf. Jakobson and Halle, 1956, especially pp. 29-32, where their 12 binary oppositions are listed and described, and pp. 44-49, where the establishment of this "dichotomous scale" is defended.

[7] cf. Chomsky and Halle, 1968:413.

[8] We here ignore, as irrelevant to the present argument, the series /ph/, /th/, /kh/, which would have $\begin{matrix}[-\text{ Voice}]\\[+\text{ Aspn.}]\end{matrix}$.

this would strengthen the argument for the presence of a marked palatal nasal /ñ/.

4. Finally, though the only difference between /ty/ and /ñ/ is one of the position of the velum, the oral/nasal distinction is generally accepted as being sufficient to prevent the union of consonant phones under the criterion of phonetic similarity, unless the structure of the phonemic system of the language as a whole would justify such a union. The contrary is the case concerning the structure of the phonemic system in Resígaro, as has been demonstrated in 1-3, above, where it is seen that nasality is a distinctive feature of the language. On this point, Lounsbury says,

> "It is generally assumed that the allophones of a phoneme are in some sense equivalent stimuli. They are defined so that they share the same distinctive features (features that function as cues for differential responses in the given language) and differ from one another only by nondistinctive features (those which do not function as cues)." (1963:569)

1.2.1.1.8. /dy/ is a voiced palatalized alveolar plosive in which the initial position of the tongue may be slightly retracted from the position for /d/. No early onset of voice such as would produce [^{n}dy] has been observed (possibly because of the infrequency of occurrence of this phoneme). The contrastive nature of /dy/ may be derived from the oppositions /d/-/dy/ and /ty/-/dy/ (above), and from the following minimal and near-minimal pairs:-

/dy/-/ǰ/ dyoomáú?é? "proud" / ǰoódú "parrot"

gadya?gižú "he gets angry" / ǰakádé "field"

/dy/-/dz/ dyuíšikó "(a species of palm tree)" (Sp.: huasaí)
/ dzu?gikhú "he shrinks (it)"

gadya?gižú "he gets angry" / dzaagikhú "he throws water on the fire"

/dy/-/ñ/ dyoonáú?é? "proud" / ño?huu? tsú "it is smooth"

gadya?gižú "he gets angry" / ñaa?ñé "their thing"

1.2.1.1.9. /kh/ is an aspirated voiceless velar plosive. Its contrastive nature may be derived from the oppositions /ph/-/kh/ and /th/-/kh/ (above), and from the following minimal and near-minimal pairs:-

/kh/-/k/ nokhú "I make, I do" / nokú "I cook"

/kh/-/g/ khíigí "maternal uncle" / giiví "flower"

/kh/-/č/ khé?akhé? "later" / čhé?ke?é "maraca"

khíigí "maternal uncle" / čhiípó "its outside"

1.2.1.1.10. /k/ is an unaspirated voiceless velar plosive. Its contrastive nature may be derived from the oppositions /kh/-/k/, /p/-/k/ and /t/-/k/ (above), and from the following minimal and near-minimal pairs:-

/k/-/g/ kaǰíigí "yucca" / gaǰugihí "(a man's name)"

kuuhuí "walking stick" / guupižú "you meet"

/k/-/č/ koo?pá?tú "to abhor" / čoo?khoótsí "a kiss"

kaǰíigí "yucca" / čačhíkaá "to become charcoal"

1.2.1.1.11. /g/ is a voiced velar plosive with optional onset

of voice before the release, particularly in initial position or for emphasis. When realized, this results in the sound [ᵑg]. The contrastive nature of this phoneme may be derived from the oppositions /b/-/g/, /d/-/g/, /kh/-/g/ and /k/-/g/ (above), and from the following near-minimal pair:-

/g/-/ǰ/ godoɓhí "Boras" / ǰodoo?fígú "waterfall"

1.2.1.1.12. /?/ is a glottal stop. Its contrastive nature may be derived from its opposition to the other voiceless plosive phonemes, the voiceless glottal fricative, and zero, as shown in the following minimal and near-minimal pairs:-

/?/-/p/ gi?í "this one (m)" / gipígí "his anteater"

/?/-/t/ do?othɓ "that one (f)" / dotɓkhɓ "her (species of fruit)" (Sp.: shapaja)

/?/-/k/ do?ɓ "this one (f)" / dokɓo "towards her"

/?/-/h/ do?ɓ "this one (f)" / dohɓ "for her" (benefactive)

/?/-/Ø/ tsemú "he requests" / tsɓ?mú "he hears"

1.2.1.2. Phoneme type i, sub-type ii: Affricates.

There are three series of affricates -- voiced, voiceless, and voiceless aspirated -- in two points of articulation, alveolar and palatal.

1.2.1.2.1. /tsh/ is an aspirated voiceless alveolar affricate. Its contrastive nature may be derived from the opposition /th/-/tsh/ (above), and from the following minimal and near-minimal pairs:-

/tsh/-/ts/ ítshú "smoke" / ítsú "to let go, to release"

/tsh/-/dz/ tshóédokhú "she scoops out" / dzoodožú "she takes a quick dip (in the water)"(i.e., "she goes into the water, and comes out again quickly")

/tsh/-/čh/ tshíipí "tail" / čhiípó "its outside"

tshonaátshí "cotton" / čhónî "sister" (vocative)

/tsh/-/s/ tshá?thoonú "glue" / sá?oohú "one (tin, pot, etc.)"

1.2.1.2.2. /ts/ is an unaspirated voiceless alveolar affricate. Its contrastive nature may be derived from the oppositions /t/-/ts/, /ty/-/ts/ and /tsh/-/ts/ (above), and from the following minimal and near-minimal pairs:-

/ts/-/dz/ tsaagižú "he shouts for joy" / dzaagikhú "he throws water on the fire"

/ts/-/č/ tsóó?vigikhú "he sharpens (sthg)" / čoo?vágikhú "he will kiss (s.o.)"

/ts/-/s/ tsa?í "armadillo" / sa?í "one (bunch of fruit)"

1.2.1.2.3. /dz/ is a voiced alveolar affricate. No early onset of voice such as would produce [^{n}dz] has been observed. The contrastive nature of this phoneme may be derived from the oppositions /d/-/dz/, /dy/-/dz/, /tsh/-/dz/ and /ts/-/dz/ (above), and from the following near-minimal pairs:-

/dz/-/ǰ/ dzaakhotú "to cause to throw water on the fire" / ǰaákovégí "life"

dzeeǰé "to get out" / ǰeévî "wolf"

1.2.1.2.4. /čh/ is an aspirated voiceless palatal affricate.

Its contrastive nature may be derived from the oppositions /th/-/čh/, /kh/-/čh/ and /tsh/-/čh/ (above), and from the following minimal and near-minimal pairs:-

/čh/-/č/ čhǒogikhú "he spits" / čoo?gikhú "he kisses"

/čh/-/ǰ/ čhakǒ?khú "to chew" / ǰakádé "field"

ñoñočhí "my neck" / nonoǰíhí "my beard"

/čh/-/š/ čhǒogikhú "he spits" / šoogikhú "he pours water"

1.2.1.2.5. /č/ is an unaspirated voiceless palatal affricate. Its contrastive nature may be derived from the oppositions /t/-/č/, /ty/-/č/, /k/-/č/ and /čh/-/č/ (above), and from the following minimal and near-minimal pairs:-

/č/-/ǰ/ čačhí "charcoal" / ǰakádé "field"

čoo?dokhú "she kisses" / ǰodoo?fígú "waterfall"

/č/-/š/ čoo?gikhú "he kisses" / šoogikhú "he pours water"

čačhí "charcoal" / šaaǰú "to disperse"

1.2.1.2.6. /ǰ/ is a voiced palatal affricate, in which no early onset of voice prior to release has been observed. Its contrastive nature may be derived from the oppositions /d/-/ǰ/, /dy/-/ǰ/, /g/-/ǰ/, /čh/-/ǰ/ and /č/-/ǰ/ (above), and from the following near-minimal pairs:-

/ǰ/-/ž/ nǒ?ǰo "I escape" / nǒ?žo "I dig"

giǰogi?khoǒnahí "his spade" / ižo "ghost, spirit"

1.2.1.3. Phoneme type i, sub-type iii: Fricatives.

There are two series of fricatives -- voiceless and voiced --

in four points of articulation -- labial, alveolar, palatal and glottal -- with holes in the slots where voiced alveolar and voiced glottal fricatives might be expected.

1.2.1.3.1. /f/ is a voiceless bilabial fricative. Its contrastive nature may be derived from the oppositions /ph/-/f/ and /p/-/f/ (above), and from the following near-minimal pairs:-

/f/-/v/ fio?gikhʉ́ "he whistles" / viogikhʉ́ "he mixes (sthg)"

fɨ́inokhʉ́ "I push" / vɨ́ɨ́ši?ógʉ́ "rapids"

/f/-/m̥/ fépohɨ́ "our land" / m̥epókó "piranha"

1.2.1.3.2. /v/ is a voiced bilabial fricative. Its contrastive nature may be derived from the oppositions /b/-/v/ and /f/-/v/ (above), and from the following near-minimal pair:-

/v/-/m/ vatsóogɨ́ "turkey buzzard" / matshaákʉ́ "peanut"

It has two allophones:

[β], occurring before /i/ and /e/

[w], occurring elsewhere

e.g. i) [β]:-

Before /i/: nonó?aavɨ́ [nɔnɔ́ʔa:βɨ́] "my lip"

" /e/: vedéemʉ́ [βɛdɛ́ʔmɯ̃́] "clothing"

ii) [w]:-

Before /a/: vatsóogɨ́ [watsɔ́ʔgɨ́] "turkey buzzard"

" /o/: vonéné [wɔnɛ́nɛ́] "our teeth"

" /u/: nodo?phaavʉ́ [nɔdɔʔpʰa:wɯ́] "I work"

/v/ cannot be viewed as a vocoid merely functioning as a con-

sonant, because of its major contoidal allophone [β].

1.2.1.3.3. /s/ is a voiceless[9] alveolar fricative. Its contrastive nature may be derived from the oppositions /tsh/-/s/ and /ts/-/s/ (above), and from the following near-minimal pairs:-

/s/-/š/ soo?gikhú "he sucks" / šoogikhú "he pours water"
sabo?gikhú "he sinks (sthg)" / šakoo?gí?ó "banana"

1.2.1.3.4. /š/ is a voiceless palatal fricative. Its contrastive nature may be derived from the oppositions /čh/-/š/, /č/-/š/ and /s/-/š/ (above), and from the following near-minimal pairs:-

/š/-/ž/ gišakoo?gí?ó "his banana" / gižaákovégí "his life"
tsa gišotú "he makes him eat meat" / ižo "ghost, spirit"

/š/ has a series of palatalized allophones with varying degrees of palatalization, which occur in free variation with the non-palatalized variant. The palatalization tends to be especially pronounced before /a/, and to a lesser extent before /o/ and /u/, in that order. Weak palatalization of /š/ is occasionally heard before /e/, but palatalization is rarely heard before /i/, with the exception of [ʃʲi?tʲu] (/ší?tyu/) "gorilla", where the strong palatalization is probably due to the influence of the palatal plosive in the next syllable. Examples of palatal-

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[9]Though /s/ is opposed to no voiced fricative at the same point of articulation, since there is a hole in the pattern at the point where /z/ would be expected, voicelessness is considered as emic in terms of the system as a whole, even though it is not contrastive in this limited context. (cf. discussion under 1.2.1.1.7., above.)

ized allophones of /š/ follow, the presentation commencing with the cases of strongest palatalization and progressing through to the cases of weakest palatalization:-

Before /a/: /šakoo?gí?í/ [ʃʲakɔ:?gɨ?í] "a bunch of bananas"

" /o/: /šóhó/ [ʃʲɔ́hó] "turkey"

" /u/: /šuukhoótsihú/ [ʃʲɯ:kʰɔ́ʔtsɨhɯ́] "advice"

(" /e/: /šéedó/ [ʃɛ́ʔdó] "mother-in-law")

(" /i/: /šíinée/ [ʃɨ́ʔnéʔ] "dawn"

But, with /ty/ in the next syllable:

/ší?tyu/ [ʃʲɨ?tʲɯ] "gorilla")

1.2.1.3.5. /ž/ is a voiced palatal fricative in which the degree of friction varies freely from very pronounced to very light. In a frequently-occurring allophone, friction is totally absent, and the phoneme is realized as [j].[10] The informant is completely unaware of this fluctuation, and readily produces and accepts all allophones in all contexts, even when the same morpheme is pronounced several times in succession, sometimes with the same allophone and sometimes with a different one.

The contrastive nature of this phoneme may be derived from the oppositions /ǰ/-/ž/ and /š/-/ž/ (above).

[10] cf. Walton and Walton, "Phonemes of [Bora] Muinane" (1967: 41). The variation that they cite for [ž] and [j] is from one idiolect to another.
Leach (1969:164) indicates that in Ocaina the phoneme /y/ has allophones ranging from [ž] to [j].

/ž/ cannot be viewed as a vocoid merely functioning as a consonant, because of its frequently-occurring allophones with friction.

1.2.1.3.6. /h/ is a voiceless[11] glottal fricative. Its contrastive nature may be derived from the opposition /?/-/h/ (above), and from its opposition to zero in the following minimal pair:-

/h/-/Ø/ haagižú "it sinks" / aagižú "he is surprised"

1.2.1.4. Phoneme type i, sub-type iv: Nasals.

There are two series of nasals -- voiceless and voiced -- in three points of articulation: labial, alveolar, and palatal.

1.2.1.4.1. /m̥/ is a voiceless bilabial nasal with slight final onset of voice. Its contrastive nature may be derived from the oppositions /ph/-/m̥/, /p/-/m̥/ and /f/-/m̥/ (above), and from the following minimal and near-minimal pairs:-

/m̥/-/n̥/ nom̥ú "I bite" / non̥ú "I sleep"

/m̥/-/m/ m̥otú "to try (taste) (sthg)" / m̥opú "I answer"

/ m̥odá?pú "I sing"

/m̥/-/ñ̥/ m̥é?konf? "dull" / ñ̥e?kotú "to cause to press"

1.2.1.4.2. /m/ is a voiced bilabial nasal. Its contrastive nature may be derived from the oppositions /b/-/m/, /v/-/m/ and /m̥/-/m/ (above), and from the following minimal and near-

[11] cf. footnote 9 to 1.2.1.3.3., above.

minimal pairs:-

/m/-/n/ maǽpǘ "bee" / naǽpǘ "spotted cavy"

/m/-/ñ/ maa?mǘ "cassava bread" / ñaa?ñɛ́ "their thing"

1.2.1.4.3. /ɲ/ is a voiceless alveolar nasal with slight final onset of voice. Its contrastive nature may be derived from the oppositions /th/-/ɲ/, /t/-/ɲ/ and /m̥/-/ɲ/ (above), and from the following minimal and near-minimal pairs:-

/ɲ/-/n/ ɲɔ́?vu "I walk" / no?vu "I am wet"

/ɲ/-/ñ/ ɲɛ́?kɔ́ "they run" / ñe?khǘ "to press"

1.2.1.4.4. /n/ is a voiced alveolar nasal. Its contrastive nature may be derived from the oppositions /d/-/n/, /m/-/n/ and /ɲ/-/n/ (above), and from the following near-minimal pairs:-

/n/-/ñ/ nǐí?ɔ́ "married woman" / ñii?šɔ́gǘ "nightingale"

nonǰíhí "my beard" / ñoñočhí "my neck"

1.2.1.4.5. /ñ̥/ is a voiceless palatal nasal with slight final onset of voice. Its contrastive nature may be derived from the oppositions /ty/-/ñ̥/ (cf. discussion under 1.2.1.1.7., above), /m̥/-/ñ̥/ and /ɲ/-/ñ̥/ (above), and from the following near-minimal pair:-

/ñ̥/-/ñ/ maáñ̥áɲǘ "silence" / maañá?o "iguana"

1.2.1.4.5. /ñ/ is a voiced palatal nasal. Its contrastive nature may be derived from the oppositions /dy/-/ñ/, /m/-/ñ/, /n/-/ñ/ and /ñ̥/-/ñ/ (above).

1.2.1.5. Outside the System.[12]

1.2.1.5.1. /r/ is a voiced alveolar flap which has been attested in only three forms:-

i) a person's name: /mi?irêhi/

ii) the onomatopoeic imitation of a bird song: /vara?varâ?/

iii) the modification of a Spanish word not yet fully incorporated into the language: /bibriaa/ from the Spanish Biblia, "Bible".

1.2.1.5.2. /x/ is a voiceless velar fricative, contrasting with the voiceless glottal fricative /h/, which occurs throughout the language. /x/ occurs only in the morpheme /xuu-/, constituent in the noun /xuukhoδtsí/ "Sunday" and the verb /xuuǰú/ "to rest" -- both of these words apparently coined recently to handle terms introduced by missionaries.[13]

1.2.2. Phoneme type ii: Vocoids.

There are five vocoid phonemes in Resígaro, distinguished by

[12] All the data so far available leads to the conclusion that /r/ and /x/ fall outside the phonological system of Resígaro. However, it could be argued that /x/ fills the "hole" at the voiceless velar fricative position, and perhaps even that /r/ has evolved from a voiced alveolar fricative (another "hole"), although this is less convincing, and /r/ is at the present time not at all fricative. For the reasons given in 1.2.1.5.1. and 1.2.1.5.2., /r/ and /x/ are at present considered to be marginal, and outside the system.

[13] It is interesting to note that there are both glottal and velar voiceless fricatives in Ocaina, the language of my informant's father, which he also speaks fluently. However, the Resígaro words for "Sunday" and "to rest" are not direct loans from Ocaina, in which the words are jayδδvuxña and jayoovu, respectively. (cf. Agnew and Pike, 1957, and Leach, 1969.

three degrees of opening -- high, mid, and low -- and three areas of articulation -- front, central, and back. Three vocoids are pronounced with spread lips, one with rounded lips, and one with neutral lips. The vocoids are described with reference to the system of cardinal vowels developed and recorded by Daniel Jones (cf. 1960:31-39 and Cardinal Vowels (n.d.).), and adopted by the International Phonetic Association (cf. 1949:4-7). The vocoids are not sufficiently numerous or varied in form to merit the establishment of types of vocoid.

1.2.2.1. /i/ is a high front vocoid pronounced with spread lips. Its contrastive nature may be derived from the following minimal and near-minimal pairs:-

/i/-/e/ pí́gí[14] "anteater" / pé́gí "yucca flour"

/i/-/u/ nấapí "underneath" / naấpú "spotted cavy"

/i/ has two allophones: [i], a slightly lowered and retracted close front spread vocoid similar to Cardinal Vowel 1;

[ɪ], a somewhat raised and retracted half-close front spread vocoid between Cardinal Vowel 2 and Cardinal Vowel 1.

[i] occurs word-finally, and [ɪ] occurs elsewhere.

e.g. /pí?mí/ [pɪ́?mí] "hummingbird"

/adovíimí/ [adɔvɪ́ːmí] "birds"

1.2.2.2. /e/ is a mid front vocoid pronounced with spread lips.

[14]For the interpretation of long vocoids as sequences of two short vocoids, cf. section 1.2.2.6., below.

Its contrastive nature may be derived from the opposition /i/-/e/ (above), and from the following minimal pairs:-

/e/-/a/ meegí "cassava" / maagí "(a species of fruit)"

/e/-/o/ noné "my tooth" / nonó "my mouth"

/e/ has two major allophones: [e], a slightly lowered half-close front spread vocoid similar to Cardinal Vowel 2;

[ɛ], which is lower (close to Cardinal Vowel 3).

[e] occurs word-finally, and [ɛ] occurs elsewhere.

e.g. /hefíí?/ [hɛfíí?] "white"

/vonéné/ [wɔnɛ́né] "our teeth"

1.2.2.3. /a/ is a low central vocoid pronounced with neutral lips, with allophones ranging freely from slightly raised open to half-open position (I.P.A. [ɐ]). The contrastive nature of this phoneme may be derived from the opposition /e/-/a/ (above), and from the following minimal pair:-

/a/-/o/ tha?gižú "it sinks" / tho?gižú "he arrives"

1.2.2.4. /o/ is a mid back vocoid pronounced with rounded lips. Its contrastive nature may be derived from the oppositions /e/-/o/ and /a/-/o/ (above), and from the following minimal pair:-

/o/-/u/ niíkó "no" / niíkú "fruit"

/o/ has two major allophones: [ɔ], a slightly raised half-open back rounded vocoid similar to Cardinal Vowel 6;

[o], a half-close back rounded

vocoid similar to Cardinal Vowel 7.

[o] occurs word-finally, and [ɔ] occurs elsewhere.

e.g. /onáʔkó/ [ɔnáʔkó] "snake"

1.2.2.5. /u/ is a high back vocoid pronounced with spread lips. Its contrastive nature may be derived from the oppositions /i/-/u/ and /o/-/u/ (above). /u/ has two major allophones:-

[ɯ], a slightly lowered and fronted close back spread vocoid similar to Cardinal Vowel 16;

[ɨ], a slightly lowered version of Cardinal Vowel 17.

[ɨ] occurs when the preceding syllable contains an /i/. [ɯ] occurs elsewhere.

e.g. /siiʔú/ [sɨːʔɨ́] "others"

/sooʔkhú/ [sɔːʔk^{h}ɯ́] "to suck"

1.2.2.6. These five short vocoids are matched by another five vocoids with identical tongue positions and lip shapes that are approximately twice as long as those described above (that is, are two moras[15] long). These long vocoids are interpreted as a sequence of two identical short vocoids, as they parallel sequences of unlike (short) vocoids found in the language.[16]

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[15] To handle differences of vocoid length, it is useful to adopt the term mora, which is defined as "usually comprising a short vowel or half a long vowel" (K.L. Pike, 1947:144a). Vocoids (and syllables) can then be described as being one, two, or more, moras long (cf. I.2.2., below, and Bearth 1971:45), and the same term proves useful in the description of tone (cf. I.1.2.3., below).

[16] cf. Bearth: "Les noyaux syllabiques composés de deux voyelles

The interpretation of long vocoids as sequences of two short vocoids is also supported by the tone patterning of the language, as only high and low level tones occur on short (or single) vocoids, while gliding tones may occur on sequences of two unlike vocoids and on long vocoids. Thus, to interpret long vocoids as sequences of two short vocoids simplifies the analysis and description of tones, and makes this more consistent.[17]

In consequence of this interpretation, the etically long vocoids are handled together with other vocoid sequences under Syllable structure, in I.2.2., below.

1.2.2.7. The above vocoids occasionally have nasalized allophones when occurring in the context of a nasal contoid.
e.g. /tẽmooú/ [tɛ́mɔ̃ːʷ́] or [tɛ́mɔːʷ́] "sea"
This nasality is not emic, and the informant is unable to distinguish any differences when morphemes are repeatedly pronounced, sometimes with nasalized vocoids, and sometimes with non-nasalized vocoids. Moreover, his pronunciation of vocoids

différentes entrent dans les mêmes combinaisons, soit avec des éléments prosodiques, soit avec des segments voisins dans la chaîne, que les noyaux syllabiques unis et longs. Il faut conclure de ce parallélisme que les voyelles longues ... constituent une succession de deux phonèmes vocaliques identiques." (1971:38)

[17] Pike adopted a similar solution for handling Mixteco long vowels and gliding tones: "Mixteco long vowels must be regarded as constituting two basic units of length since (1) every long vowel carries two tonemes; (2) no short vowel carries two tonemes; (3) the long vowels are paralleled by clusters of diverse vowels, each vowel having its own toneme; ..." (1948:79, fn 3)

in the context of nasal contoids fluctuates freely between nasalized and non-nasalized, even when repeating the same morpheme several times.

1.2.3. Phoneme type iii: Suprasegmentals.

There are two contrastive pitch levels in Resígaro, which are referred to as high and low tone. The emic nature of this opposition may be derived from the following minimal pairs:-

gi?í "this one (m)" / gí?í "meat, flesh"

nonõ "my mouth" / nõnõ "I spear (a fish)"

Glides only occur on sequences of two vocoids, and are handled as sequences of high + low or low + high tone (cf. 1.3.3., below), and in consequence the system is one of register, not contour, tones.[18]

1.3. Distribution.

Phonemes are distributed in the syllable. Classes of phoneme are set up on the basis of this distribution.

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[18] cf. Pike, 1948:59: "In general, a pure register system is one in which one-mora tonemes are level; a pure contour system contains one-mora gliding tonemes."
i.e., the unit of pitch placement is one mora long, as in Bearth (1971:52): "La définition de la more implique qu'un monème à deux voyelles comporte deux points de substitutions tonales."

Thiesen and Thiesen (personal communication, and MS Phonemes of Bora, Walton and Walton (1967), and Leach (1969) all adopt a similar solution in handling Bora, (Bora) Muinane, and Ocaina, respectively.

1.3.1. Class 1, "Consonants".

This consists of all type i phonemes (i.e., all contoids), which are distributed in onset and coda of the syllable. The members of this distribution class are called "Consonants". Class 1 is sub-divided into two sub-classes.

Sub-class 1.

This consists of all consonants, which may occur initially in the syllable (in the onset).

e.g. fa "we" (1st p. pl. (incl))

kɛ́ "hand"

gi.ʔí[19] "this one (m)"

Sub-class 2.

This consists of /ʔ/, which, in addition to its possibility of occurrence initially in the syllable, may also occur finally in the syllable (in the coda).

e.g. mi.po.ká? "thus, so"

1.3.2. Class 2, "Vowels".

This consists of all type ii phonemes (i.e., all vocoids), which are distributed in the nucleus of the syllable. The members of this distribution class are called "Vowels".

e.g. a.dú "to fly"

1.3.3. Class 3, "Tones".

This consists of the type iii phonemes (i.e., the two supraseg-

[19] The full-stop indicates syllable division (cf. 2.2.3.1., below).

mental phonemes). The members of this distribution class are called "Tones". They occur on the vowel or vowels in the nucleus of the syllable. One tone phoneme occurs on each vowel, if two vowels are present in a syllable. These may be identical (both high or both low), or one may be high and the other low, resulting in a phonetically rising or falling glide. Such glides may not occur on a single-mora syllable (i.e., on one (short) vowel), and hence are interpreted as high + low or low + high (cf. 1.2.3., above). The following examples illustrate some possible tone sequences:-

foogikhû "he makes a fire" / fóogikhû "he blows"

peegi "sparrow-hawk" / peégí "starch"

nâagí "friend (m)" / naágí "anger"

Chapter 2

SYLLABLE LEVEL

The syllable level is set up as a level of the phonological hierarchy above the phoneme and below the phonological word. The syllable may be described as

> "the smallest unit of recurrent phonemic sequences" (Haugen, 1956:126).

2.1. Contrast.

In Resígaro, the syllable has the following contrastive-identificational features:-

i) It has an obligatory nucleus consisting of one or two members of phoneme class 2 (vowels).

ii) It has an optional onset and coda, each consisting of one member of phoneme class 1 (consonants).

2.2. Variation.

$$\text{Syll} = \pm \text{Onset: } C_{1.1} + \text{Nuc: } (V \pm V) \pm \text{Coda: } C_{1.2}$$ [1]

This yields eight syllable types. To facilitate the description and comparison of these types, it is convenient to consider the two different vocalic nuclei possible as basic, and to describe the consonantal onset and coda as modifications of these basic types.

i.e. $\text{Syll}_{i} = \pm \text{Onset: } C_{1.1} + \text{Nuc: } V \pm \text{Coda: } C_{1.2}$

$\text{Syll}_{ii} = \pm \text{Onset: } C_{1.1} + \text{Nuc: } V_1V_2$ [2] $\pm \text{Coda: } C_{1.2}$

---

[1] Numerals refer to sub-classes of consonants which may occur in the positions indicated.

[2] In the case of vowels, sub-script numerals merely serve to distinguish the two vowels in the nucleus

2.2.1. Syllable type i: $\pm$Onset:$C_{1.1}$ +Nuc:V $\pm$Coda:$C_{1.2}$

There are four sub-types of syllable type i:-

$Syll_{i.i}$ = + Nuc: V

$Syll_{i.ii}$ = + Onset: C + Nuc: V

$Syll_{i.iii}$ = + Nuc: V + Coda: C

$Syll_{i.iv}$ = + Onset: C + Nuc: V + Coda: C

Examples of the sub-types of syllable type i are to be found in table 2.1., which follows the comments on each of the sub-types. In the discussion that follows, syllables are referred to in terms of their fillers only, for ease of comparison with the examples given.

2.2.1.1. Syllable type i, sub-type i: /V/.

All vowels may occur in this sub-type.

2.2.1.2. Syllable type i, sub-type ii: /CV/.

All vowels may occur in this sub-type. All consonants may occur in this sub-type, but /?/ and /ž/ may not occur when the syllable is word-initial.

2.2.1.3. Syllable type i, sub-type iii: /VC/.

All vowels except /u/ are attested in this sub-type. Only /?/ may close syllables in Resígaro.

2.2.1.4. Syllable type i, sub-type iv: /CVC/.

All vowels may occur in this sub-type. As stated above, only /?/ may close the syllable. The non-occurrence of a few con-

sonants before some vowels would not appear to be significant (cf. discussion of this in notes on Table 2.1., below).

Examples of Syllable Type i, Sub-types i-iv.

Sub-types / Nucleus	Sub-type i: /V/	Sub-type ii: /CV/	Sub-type iii: /VC/	Sub-type iv: /CVC/
i	ɬ.nɨ́[1] "wife"	gɨ́.ʔɨ́[2] "meat"	i?.pɨ́ "to go"	pi?.pɨ́ "you go"
e	e.pɯ́ "rainbow"	kɛ́ "hand"	ɛ́?.ǰo "to flee"	pe?.phɔ́.dɛ́ "your navel"
a	a.pɔ́ "to be awake"	ka.da.tɯ́ "hen"	a?.ni.tɯ́ "to eat"	da?.nɑ́ "beside him"
o	o.čhɨ́ "(a species of plant)" (Sp. daledalẹ)	no.nɔ́ "my mouth"	o?.do.nɑ́ "to fish with poison"	go?.khɯ́ "to put a stick in the ground"
u	ɯ́.ni "saliva"	pɯ́.ni "your saliva"	---	ka.šɔ́.va?.-nɯ́? "pretty"

Table No. 2.1.

1. Syllables being exemplified are underlined.

2. The table gives an example of each sub-type for each of the five vowels (except /u/ in sub-type iii, which is not attested). In the case of sub-types ii and iv, the choice of initial consonant in the examples is non-significant. The vowels are given this priority over the consonants since they fill the nucleus of the syllable, while the consonants fill the margins (onset and coda). However, it is appropriate to signal certain non-occurrences of sequences of consonants and

vowels. In some cases, such non-occurrences may be significant, while in others this would appear not to be the case.

A summary of the possible sequences of consonant plus vowel may be seen in Table 2.2. This is based on an examination of all syllables beginning with CV-, regardless of whether this is followed by a further vowel and/or a consonant.

	i	e	a	o	u		i	e	a	o	u
ph	+	+	+	+	+	č̆h	+	+	+	+	-
p	+	+	+	+	-	č̆	-	-	+	+	-
b	-	+	+	+	+	j̆	+	+	+	+	+
th	+	-	+	+	-	f	+	+	+	+	+
t	+	+	+	+	+	v	+	+	+	+	-
d	-	+	+	+	+	s	+	-	+	+	+
ty	-	-	+	+	+	š̆	+	+	+	+	+
dy	-	-	+	+	+	ž̆	-	-	+	+	+
kh	+	+	+	+	+	h	+	+	+	+	+
k	+	+	+	+	+	m̆	-	+	+	+	-
g	+	-	+	+	+	m	+	+	+	+	+
?	+	+	+	+	+	n̆	+	+	+	+	+
tsh	+	+	+	+	+	n	+	+	+	+	+
ts	+	+	+	+	+	ñ̆	-	+	+	-	-
dz	-	+	+	+	+	ñ	+	+	+	+	+

Table No. 2.2. Possible sequences of consonant and vowel in syllables with initial CV-.

It will be noted that 15 of the 30 consonants occur before all vowels, and a further three before all vowels except /u/. This non-occurrence appears to be non-significant,

and merely a reflection on the lower frequency of occurrence of the latter phoneme.

Likewise, the non-occurrence of /b/, /d/, /dz/ and /m̃/ before /i/, and of /th/, /g/ and /s/ before /e/, appear unsystematic and non-significant, in the light of the occurrence of other members of the same sets (voiced plosives, voiced affricates, etc.) in these positions, and thus these sequences might be expected if the corpus were expanded.

/m̃/ is the only consonant not attested before /o/, which is again clearly non-significant. This phoneme is not attested before /i/, either, and it might be questioned whether this is significant, though the occurrence of /ñ/ before /i/ would appear to undermine such a suggestion.

/ty/, /dy/, /č/ and /ž/ do not occur before /i/ or /e/, and this would appear to be the only potentially-significant co-occurrence restriction in CV sequences in Resígaro. It should be noted, however, that palatal /čh/, /ǰ/ and /š/ all occur before /i/ and /e/ (as does /ñ/, while /m̃/ is only attested before /e/, to date). Thus undermines the possibility that the non-occurrence of sequences with /č/ and /ž/ might be significant, particularly since both phonemes are of quite infrequent occurrence.

But the non-occurrence of /ty/ and /dy/ before /i/ and /e/ may be significant. These two phonemes appear to be al-

most marginal to the phonemic system of Resígaro, and are an incomplete set within the plosive series, lacking an aspirated member. They are, furthermore, of very infrequent occurrence.

2.2.2. Syllable type ii: $\pm$Onset:$C_{1.1}$ +Nuc:V_1V_2 $\pm$Coda:$C_{1.2}$

There are four sub-types of syllable type ii:-

$Syll_{ii.i}$ = + Nuc: V_1V_2

$Syll_{ii.ii}$ = + Onset: C + Nuc: V_1V_2

$Syll_{ii.iii}$ = + Nuc: V_1V_2 + Coda: C

$Syll_{ii.iv}$ = + Onset: C + Nuc: V_1V_2 + Coda: C

Examples of the sub-types of syllable type ii are to be found in Tables 2.4. and 2.5., which follow the comments on each of the sub-types. In the discussion that follows, syllables are referred to in terms of their fillers only, for ease of comparison with the examples given.

First, it is appropriate to look at the possible sequences of vowels in syllable type ii.

2.2.2.0. Vowel Sequences in Syllable type ii.

There are the following restrictions on the vowels which may co-occur within one syllable in Resígaro:-

1. For any vowel in V_1 position, the same vowel may occur in V_2 position (i.e., an etic long vocoid is realized). The vast majority of vowel sequences are of this nature.

2. For each of the vowels occurring in V_1 position, the follow-

ing vowels are attested in V_2 position (in addition to sequences of the same vowel, already referred to above):-
/i/ + /o/, /u/; /e/ + /i/, /u/; /a/ + /i/, /e/, /u/; /o/ + /i/, /e/; /u/ + /i/, /a/.

This is a total of 11 sequences of different vowels within the same syllable, i.e., eleven different diphthongs. A further two sequences of different vowels are attested (/i/ + /e/ and /o/ + /u/), although these do not occur in the same syllable (cf. section 2.2.3., below). If we add to these 13 possibilities the five sequences of the same vowel referred to in (1), above, we have a total of 18 vowel sequences in Resígaro, of which 16 may occur in the same syllable. These co-occurrences are shown in the following matrix, in which bracketed values refer to the two sequences which are not attested in the same syllable.

V_1 \ V_2	i	e	a	o	u
i	+	(+)	-	+	+
e	+	+	-	-	+
a	+	+	+	-	+
o	+	+	-	+	(+)
u	+	-	+	-	+

Table No. 2.3. Attested Vowel Sequences.

This table shows that three vowels (/i/, /e/ and /o/) do not occur before /a/, and three (/e/, /a/ and /u/) do not occur before /o/. Further, /u/ does not occur before /e/. There

would appear to be no significant pattern in these non-occurrances, except that high vowels /i/, /u/ are not followed by mid vowels /e/, /o/ (except for /io/, and mid vowels are not followed by the low vowel /a/.[3]

2.2.2.1. Syllable type ii, sub-type i: /V_1V_2/.

a) When V_1 is the same as V_2: all five vowel sequences described in paragraph (1) of the preceding section may occur in this sub-type.

b) When V_1 is not the same as V_2: the only diphthong attested in this sub-type is /ai/, which occurs in two words (cf. Table 2.5., below).

2.2.2.2. Syllable type ii, sub-type ii: /CV_1V_2/.

a) When V_1 is the same as V_2: all five vowel sequences described in paragraph (1), above, may occur in this sub-type. Also, all consonants are attested for initial position, except /b/, /č/ and /ñ/ (cf. discussion of Table 2.2., above).

b) When V_1 is not the same as V_2: of the eleven diphthongs attested, nine occur in this sub-type. Since there are so few words containing diphthongs in Resígaro, there are consequently few consonants attested for initial position before

---

[3] All other two-place combinations of high, mid and low vowels do occur (with a few exceptions):-
high + high: ii, iu, ui, uu
high + low: ua (but *ia)
mid + mid: ee, oo, oe (but *eo)
mid + high: ei, eu, oi (but ou not in same syllable)
low + low: aa
low + mid: ae (but *ao)
low + high: ai, au

them, though examples are to be found of plosives, affricates, fricatives and nasals, and of voiced, voiceless, and voiceless aspirated consonants, though not all the combinatory possibilities are attested.

2.2.2.3. Syllable type ii, sub-type iii: /V_1V_2C/.

a) When V_1 is the same as V_2: vowel sequences /ii/, /ee/ and /aa/ occur in this sub-type. Only /?/ occurs syllable-finally in Resígaro, as stated above.

b) When V_1 is not the same as V_2: no diphthongs are attested in this sub-type in Resígaro. This demonstrates the relative infrequency of occurrence of this syllable-type, and the relative infrequency of occurrence of diphthongs.

2.2.2.4. Syllable type ii, sub-type iv: /CV_1V_2C/.

a) When V_1 is the same as V_2: all five vowel sequences may occur in this sub-type. The following eleven consonants are not attested for the Onset position: /b/, /dy/, /kh/, /?/, /th/, /dz/, /čh/, /ǰ/, /f/, /ž/ and /m̄/. This apparently haphazard selection of consonants represents no systematic pattern, and would appear to be merely a reflection on the lower frequency of occurrence of syllable type ii, sub-type iv, as compared with syllable type ii, sub-type ii. /b/ is the only consonant which occurs in neither syllable type, but then it is a consonant of very infrequent occurrence.

As stated above, Coda position can be filled only by /?/.

b) When V_1 is not the same as V_2: of the eleven diphthongs

attested in Resígaro, five occur in this sub-type. These include the two (/ae/ and /oe/) which do not occur in syllable type ii, sub-type ii. Again, very few consonants are attested in the Onset position, owing to the combination of the infrequency of occurrence of this syllable type and the infrequent occurrence of diphthongs. Up to the present time, only /k/, /f/, /s/ and /ʉ/ have been observed in this position before diphthongs. As always, only /?/ can occur in the Coda position.

Examples of Syllable type ii, Sub-types i-iv.

Sub-types / Nucleus	Sub-type i: /VV/	Sub-type ii: /CVV/	Sub-type iii: /VVC/	Sub-type iv: /CVVC/
ii	íi.ní "dog"	ǰíi.gí "husband"	ii?.ñé "possession"	pii?.šá.ké "your intestines"
ee	eé.né "thunder"	ǰeé.ví "wolf"	ee?.phi.khú "to fish with hook & line"	pee?.phí.gú "your fishing hook"
aa	aá.me "mother"	kaá.dé "roof"	aá?.pe "father"	haa?.ní "to bury"
oo	oo "already"	póo.tsí.gú "frog"	-----	ha?.moo? "to be hot"
uu	sá.uu.?é[4] "one (rope)"	šuu.khú "to prevent"	-----	a.ʉe.púú? "many"

Table No. 2.4. Syllables Containing Sequences of Like Vowels.

[See page 85 for syllables containing diphthongs.]

[4] cf. 2.2.3., below, on rules of syllable division.

Nucleus \ Sub-type	i: /VV/	ii: /CVV/	iii:/VVC/[1]	iv:/CVVC/
i + o	----	vio.khú "to mix (e.g. food)"	----	fio?.khú "to whistle"
+ u	----	aa.tshíu "chili"	----	----
e + i	----	tsei.nɔ́? "long"	----	----
+ u	----	kaá.dɔ́u.na "to froth (a river)"	----	seu?.khú "to cut"
a + i	ai.ǰá.nú? "near"[2]	nai.koo.gí.gí "herbal healer"	----	----
+ e	----	----	----	kɔ́o.nae? "what will it be?"
+ u	----	boo.ǰáú "anklebone"	----	----
o + i	----	ñoi.khú "to rub, polish"	----	moi?.khú "to stir"
+ e	----	----	----	soe?.khú "to scratch"
u + i	----	háa.ku.dúí "(a species of bird)"[3]	----	----
+ a	----	tua.ǰú "to jump"	----	----

Table No. 2.5. Syllables Containing Diphthongs.

1. No diphthongs are attested in this sub-type. The column is retained in the table to emphasize this fact.

2. The only other diphthong in this sub-type is ai.tsa.bɔ́?, an introducer for reported speech.

3. Sp.: montete

2.2.3. Rules of Syllable Division.

The example sá.uu.?6 "one (rope)" in Table 2.4. raises the question as to how the first syllable division was arrived at. The following rules permit an unequivocal determination of the position of syllable boundaries in otherwise doubtful cases.

2.2.3.1. Rule 1.

This rule recognizes the basic syllable pattern of Resígaro as being CV. Closed syllables and syllables consisting only of a vowel or vowels are less frequent in a dictionary count. Only /?/ can close a syllable, but it can also occur syllable-initially. Thus, given a sequence

CV?V

(where, in this case, C = any consonant other than /?/), the syllable boundary occurs before the /?/:

CV.?V ,

just as would be the case with a non-suspicious sequence

CVCV

(again, where C = any consonant other than /?/). In other words, /?/ is only assigned to syllable-final position if it is followed by zero (a word-boundary), or by another consonant.

In consequence, a closed syllable cannot be followed within the same word by a syllable with an initial vowel, since in such a case the syllable boundary occurs before the /?/, which is assigned to the following syllable.

i.e. (±C±V+V+?) + (+V±V±C) ==⇒ ±C±V+V.+?+V±V±C

The placing of a syllable boundary in a sequence

±C+V+V±V±C

is dependent on the following rules:-

2.2.3.2. Rule 2.

In any sequence of two vowels, if the vowels are identical, they belong to the same syllable.

e.g. naa.pí "night"

náa.pí "underneath"

naá.pú "spotted cavy"

2.2.3.3. Rule 3.

In any sequence of two vowels, if the vowels are not identical, the sequence represents one syllable (a diphthong) or two syllables, in accordance with the following rules (which are based on perceived acoustic impressions):

3a. If both vowels have the same tone, or the sequence is of a high followed by a low, they represent one etic (and emic) syllable.

e.g. ñoi.khú "to rub, polish"

boo.ǰáú "anklebone"

aa.tshíu "chili"

3b. If the tone of the first vowel is low and that of the

second vowel is high, the sequence represents two etic (and emic) syllables.

e.g. tɛ́.tyo.í "island"

paa.ga.ú "spider"

vɛ́.ɨi.ú "our eye"[5]

Note also the sequences /i/ + /e/ and /o/ + /u/, which have only been attested as members of two contiguous syllables:-

he.ʔo.pi.é? "before, previous"

no.vá.fo.ú "my heart"

It is important to note that rule 3 is based on an observation of the etic syllables in the language, and does not result in the establishment of an artificial emic syllable of different extension than the observed etic syllable. (i.e., the "rules" are descriptive of what does happen, not prescriptive (with a view to establishing a certain interpretation).)[6]

Words of the type exemplified under Rule 2 and Rule 3a, above, contain vowel clusters. i.e., a vowel cluster is defined as a sequence of vowels occurring in the same syllable. Words

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[5]Note Wavrin's transcription of "lake" (p.215) and "our eye" (p.217): "lake" (hú.ne.ú) : (h)ə(ü)nɛ̄hə̌
"our eye" (vɛ́.ɨi.ú) : wa-tnɨ̌hə (sic - t is error by Wavrin) Both cases clearly indicate that he perceived three syllables in each word.

[6]This effect of a high tone on syllable boundaries may be explicable on phonetic and physiological grounds, in that high tone is generally produced more energetically than low tone. i.e., stress and high tone co-occur, the former being one of the aspects of the manifestation of the latter (though not a very pronounced aspect). Thus, when a high tone is produced after a low tone, it is inevitable that an extra "pulse" be realized and observed.

of the type exemplified under Rule 3b, above, contain vowel sequences which are not clusters, since they occur in different syllables.

2.2.3.4. Rule 4.

In any sequence of three vowels, two contiguous vowels must be identical and the remaining vowel must be different.[7] The syllable boundary occurs between the two like vowels and the different vowel.

e.g. aa.í "yes"

hi.po.ŋá.uu.?ó "rope, string"

2.2.3.5. Rule 5.

This rule handles an exception to Rule 4, namely

hiíí?o "this (horn)"

This Rule has two parts:

5a. No syllable nucleus is longer than two vowels long. (This restriction is based on observed phonetic form, not on theoretical considerations.)

5b. A sequence of two like vowels with the same tone has priority over a sequence of two like vowels with different tone, in determining syllable boundaries. (The comment in the previous paragraph applies equally here, too.)

Thus, this word has three (emic and etic) syllables:-

[7]Two exceptions to this rule are discussed under Rule 5.

hi.fi.?o[8]

2.3. Distribution.

The syllable is distributed in the phonological word. This is not analyzed in the present description, and in consequence, details of distribution cannot be given. However, possible sequences of two syllables in phonological words of two or more syllables are described.

2.3.1. Permitted Sequences of Syllables.

Given eight types of syllable, any sequence of two syllables theoretically yields 64 possible combinations. Of these, 16 are excluded by the first of the rules of syllable division (cf. 2.2.3.1., above).

Of the 48 remaining possible combinations of syllable types, a further 15 are not attested (cf. Table 2.6., below).

Four of these (matrix cells 20, 24, 56 and 64) may be accounted for by pointing out that a sequence of two closed syllables is extremely rare (especially a sequence in which one

[8]There is one exception to Rule 4 that is not covered by Rule 5, and this is the word hĩhuuu "pigeon, dove", in which all the vowels after the first syllable have the same tone and are etically one syllable. However, my informant recognized this as an unusual word (by laughing when I asked him to say it). It is clearly of onomatopoeic origin, and is thus defined as being not necessarily subject to the rules of syllable structure, the same as certain imitative sounds which do not, however, have the status of words, and which have been heard in some texts, particularly in traditional fiesta songs.

of the syllables has the structure CVVC).

Empty cells 3, 5 and 7 (V + (V±V±C)) reflect the fact that syllable type i, sub-type i (V) only occurs initially, when (with only one exception) it is followed by a consonant-initial syllable, or finally (as in 2.2.3.3.b, above).

Empty cell 35 (VV + VC) likewise reflects the fact that syllable type ii, sub-type i (VV) occurs only word-initially, or medially, before a consonant-initial syllable (with one exception, indicated in cell 33).

No sequences of four vowels have been attested in Resígaro[9], which accounts for empty cells 37, 39, 45 and 47 ((C)VV + VV(C)).

Syllable type ii, sub-type iii (VVC) only occurs word-initially, which accounts for empty cell 15, as well as cells 7, 39, and 47 (whose non-occurrence has also been explained on other grounds).

Empty cell 43 (CVV + VC) is apparently a reflection on the infrequent occurrence of syllable type i, sub-type iii (VC) in positions other than word-initial, and empty cell 40 a reflect-

[9]Such sequences are attested in Bora, where they consist of two sequences of two like vowels. cf. Thiesen, MS, Phonemes of Bora. Long vowel sequences are a characteristic of more distantly- related Huitoto Muinane. cf. Minor, 1956.

ion on the infrequent occurrence of syllable type ii, sub-type iv (CVVC).

A matrix showing the possible sequences of syllable types between any two syllables is now presented. This is followed by a list giving examples of each cell showing a positive value.

1st \ 2nd	V	CV	VC	CVC	VV	CVV	VVC	CVVC
V	1 +	2 +	3 -	4 +	5 -	6 +	7 -	8 +
CV	9 +	10 +	11 +	12 +	13 +	14 +	15 -	16 +
VC	17 x	18 +	19 x	20 -	21 x	22 +	23 x	24 -
CVC	25 x	26 +	27 x	28 +	29 x	30 +	31 x	32 +
VV	33 +	34 +	35 -	36 +	37 -	38 +	39 -	40 -
CVV	41 +	42 +	43 -	44 +	45 -	46 +	47 -	48 +
VVC	49 x	50 +	51 x	52 +	53 x	54 +	55 x	56 -
CVVC	57 x	58 +	59 x	60 +	61 x	62 +	63 x	64 -

Table 2.6. Attested Sequences of Syllable Types

Key:- + = "realized" - = "unrealized" x = "not possible"

Numbers refer to examples below.

1. a.í "that one"
2. ǵ.ni "saliva"
3. --
4. á.no?.tǘ "to cause a tree to fall"
5. --
6. a.vǽa.na.í "stick"

7. --

8. a.ɲii? "to be healthy"

9. tɛ́.tyo.í "island"

10. no.nɛ́ "my tooth"

11. he.ʔo.pi.ɛ́? "before"

12. i.po.gí? "green"

13. e.píi.pí.uu.ʔɔ́ "liana cord"

14. ka.nií.de.ú "sweet potato"

15. --

16. a.ɲe.pʉ́ʉ́? "many"

17. x

18. a?.ná.pú "to warm oneself"

19. x

20. --

21. x

22. a?.náa.pí "arm"

23. x

24. --

25. x

26. i.dɛ́?.vá "thus"

27. x

28. í.nɔ́?.ko? "lazy"

29. x

30. tho?.khoɔ́.tsií "pestle"

31. x

32. ha?.moo? "to be hot"

33. aa.í "yes"

34. aɛ́.me "mother"

35. --

36. (tsɛ́) ií.tɛ́?.pe.gi.khʉ́ "he helped (him)"

37. --

38. ii.vií "horn"

39. --

40. --

41. tya?.díí.o "grandfather"

42. a.náa.dɔ́ "macaw"

43. --

44. tsei.nɔ́? "long"

45. --

46. hee.náa.gí "paternal uncle"

47. --

48. i.náa.vi?.žaɛ́.pee? "to get better, to recover"

49. x

50. aɛ́?.pe "father"

51. x

52. ee?.phí?.pe.gi.khʉ́ "he fished"

53. x

54. ii?.šáʉ́ "belly"

55. x

56. --

57. x

58. kio?.kho.thoɔ́ "limit"

59. x

60. (tsá) na.to.vâá?.gi?.pe "they got (it)"
61. x
62. haa?.phaa.vú "to comb oneself"
63. x
64. --

2.3.2. Consonant Clusters.

If we apply to consonants the definition of "cluster" given for vowels (cf. 2.2.3.3., above), the following definition of a consonant cluster results:

> A consonant cluster is defined as a sequence of consonants occurring contiguously in the same syllable.

It follows from this definition and the description of syllable types given above that there are no consonant clusters in Resígaro. However, there are consonant sequences, which occur over a boundary between two syllables. Since /?/ is the only consonant that can close a syllable, the only sequences are of this phoneme followed by any other consonant except itself and /ph/ /th/, /čh/, /č/ and /ñ/. The non-occurrence of these latter five consonants would appear to be non-significant, and they might be expected to occur if the corpus were further expanded.

2.3.3. Higher-level Sequences.

Two other fundamental and recurring changes involving sequences of units higher up the phonological hierarchy must be referred to, since they affect the phonological form of structures in Resígaro. Both may be viewed as consequent on the concatenation of phonological words.

2.3.3.1. /u/ > /a/.

A word-final /u/ always becomes /a/ before another word in the

same utterance (a phonological phrase).

e.g. tsodá?pą́ gi-neé
she-sings him-with "She sings with him"

(But final /u/ does not usually change before a suffix.)

2.3.3.2. /?/ .

When a word with a final vowel is followed by a word with an initial vowel in the same utterance, a glottal stop is interposed. Since this may be considered as a feature of juncture belonging to neither of the words in question, and since this rule is absolutely regular, with no exceptions, the glottal is not indicated in examples from the language in this thesis (except when they are written in phonetic, not phonemic, script).

e.g. /ɲé a?nitú/ is [ɲé + ? + a?nitú] "I eat"
I eat

P A R T I I :

G R A M M A T I C A L

H I E R A R C H Y

Chapter 1

ROOT LEVEL

The root is set up as the lowest level of the grammatical hierarchy. Roots are divided into classes on the basis of their distribution in stems of different classes. Thus, verb roots are typically distributed in verb stems, noun roots in noun stems, etc. Sub-classes of each major class are set up on the basis of distribution within types of, normally, the next level in the same class. Thus, verb root sub-class 1 is distributed in verb stem type i, etc. (The concept of the relation between sub-classes at one level and types at the next level up is discussed in detail in section 0.4.2.1. of the Introduction, above.)

1.1. Verb Root.

1.1.1. Contrast.

Verb roots (VbRt) have the following contrastive-identificational features:-

i) They have no internal grammatical structure.

ii) They fill the Base slot in verb stems.

1.1.2. Variation.

Verb roots consist of a single morpheme.

e.g. i?pí "to go"

a?nitú "to eat"

khú "to do"

ífú "to fear"

ni?tsu "to boil" (intransitive)

1.1.3. Distribution.

The members of the class of verb roots are distributed in the Base slot in the verb stem. Sub-classes of verb roots are set up on the basis of distribution in different types of verb stem.

1.1.3.1. Sub-class 1.

These verb roots occur only in verb stem type i, "Simple".

e.g. a?mitú "to eat"

1.1.3.2. Sub-class 2.

These verb roots occur in verb stem type i, "Simple", and type ii, "Complex".

e.g. apó "to be awake"

ífú "to fear"

ínú "to sleep"

1.1.3.3. Sub-class 3.

These verb roots occur in verb stem type ii only.

e.g. tsa?vu- root of tsa?vootú "to make safe a firearm"

hetsamu- " " hetsamotú "to ask a question"

1.2. Noun Root.

1.2.1. Contrast.

Noun roots (NnRt) have the following contrastive-identificational features:-

i) They have no internal grammatical structure.

ii) They fill the Base slot in noun stems.

1.2.2. Variation.

Noun roots consist of a single morpheme.

e.g. -kɛ́[1] "hand"

va?a-[2] "machete" (root)

maápú "bees"

atsáa "men"

1.2.3. Distribution.

The members of the class of noun roots are distributed in the Base slot in the noun stem. Since all members share the same distributional possibilities, no sub-classes are set up.

1.3. Pronoun Root.

1.3.1. Contrast.

Pronoun roots (PnRt) have the following contrastive-identificational features:-

i) They have no internal structure.

ii) They fill the Base slot in pronoun stems.

---

[1] A hyphen precedes -kɛ́, "hand", since, in common with all body parts, and certain other words, it must be possessed. All words of this type are indicated by a preceding hyphen in the lexicon. The form that this possession takes is indicated at Phrase level -- cf. 6.1.2.2., below.

[2] A hyphen follows va?a-, "machete" (root), since, in common with a large number of other noun roots in Resígaro, it must bear a classifier suffix. All roots of this type are indicated by a following hyphen, and are described at Word level -- cf. 3.2.2., below.

1.3.2. Variation.

There are eight pronoun roots, each of which consists of a single morpheme:-

ȵó	First person singular	
phú	Second " "	
tsú	Third " "	-- masculine
tsó	" " "	-- feminine
fú	First person non-singular	-- inclusive
muu-	" " "	-- exclusive
hú) i-)	Second " "	
ȵú	Third " "	

For the second person non-singular, i- is used in the imperative, and hú is used elsewhere.

1.3.3. Distribution.

The members of the class of pronoun roots are distributed in the Base slot in the pronoun stem. Sub-classes of pronoun roots are set up on the basis of distribution in different types of pronoun stem:-

1.3.3.1. Sub-class 1.

This consists of the following pronoun roots, which are distributed in pronoun stem type i:

ȵó 1st p. sg.	fú 1st p. non-sg., incl.
phú 2nd p. sg.	i- 2nd p. non-sg., imptv.
tsú 3rd p. sg., m.	ȵú 3rd p. non-sg.
tsó 3rd p. sg., f.	

1.3.3.2. Sub-class 2.

This consists of the following pronoun roots, which are distributed in pronoun stem type ii:

tsú[3]	3rd p. sg., m.	muu-	1st p. non-sg., excl.
tsó	3rd p. sg., f.	hú	2nd p. non-sg.
fú	1st p. non-sg., incl.	ʉ́	3rd p. non-sg.

1.3.3.3. Sub-class 3.

This consists of the following pronoun roots, which are distributed in pronoun stem type iii:

fú	1st p. non-sg., incl.	ʉ́	3rd p. non-sg.
hú	2nd p. non-sg.		

1.4. Adjective Root.

1.4.1. Contrast.

Adjective roots (AjRt) have the following contrastive-identificational features:-

i) They have no internal grammatical structure.

ii) They fill the Base slot in adjective stems.

1.4.2. Variation.

Adjective roots consist of a single morpheme.

---

[3]The membership of these sub-classes is not exclusive; some pronoun roots occur in more than one sub-class. If mutually-exclusive sub-classes were set up, five sub-classes would be required:
Sub-cl 1: ʉ́, phú, i- in PnSt i
Sub-cl 2: muu- in PnSt ii
Sub-cl 3: tsú, tsó in PnSt i and ii
Sub-cl 4: hú in PnSt ii and iii
Sub-cl 5: fú, ʉ́ in PnSt i, ii and iii
This procedure is not adopted here, since it adds to complexity without revealing anything of structural importance.

e.g. aaii- "healthy"

ño?hu- "soft"

ooǰa- "small"

1.4.3. Distribution.

The members of the class of adjective roots are distributed in the Base slot in the adjective stem and in the Base slot in noun stem type ii, sub-types ii and iii. Since all members share the same distributional possibilities, no sub-classes are set up.

1.5. Adverb Root.

1.5.1. Contrast.

Adverb roots (AdvRt) have the following contrastive-identificational features:-

i) They have no internal grammatical structure.

ii) They level-skip, filling the Base slot in adverb words.

1.5.2. Variation.

Adverb roots consist of a single morpheme.

e.g. kapí- "quickly"

kenee?ǰá- "slowly"

1.5.3. Distribution.

The members of the class of adverb roots level-skip, being distributed in the Base slot in the adverb word. Since all members share the same distributional possibilities, no sub-classes are set up.

1.6. Demonstrative Root.

1.6.1. Contrast.

Demonstrative roots (DemRt) have the following contrastive-identificational features:-

i) They have no internal grammatical structure.

ii) They level-skip, filling the Base slot in demonstrative words.

1.6.2. Variation.

There are two demonstrative roots, each of which consists of a single morpheme.

hí- "this"

hɛ́?e- "that"

1.6.3. Distribution.

The members of the class of demonstrative roots level-skip, being distributed in the Base slot in the demonstrative word. Since both members share the same distributional possibilities, no sub-classes are set up.

1.7. Numeral Root.

1.7.1. Contrast.

Numeral roots (NumRt) have the following contrastive-identificational features:-

i) They have no internal grammatical structure.

ii) They level-skip, filling the Base slot in numeral words.[4]

---

[4] In following a purely structural approach in the presentation

1.7.2. Variation.

There are two numeral roots, each of which consists of a single morpheme:-

sá- "one"

ni- "two"

1.7.3. Distribution.

The members of the class of numeral roots level-skip, being distributed in the Base slot in the numeral word. Since both members share the same distributional possibilities, no subclasses are set up.

of this data, the numerals (as all other entities) are described a step at a time, progressing from one level to the next. Should it be desired to see all the numerals at a glance (for comparative purposes, etc.), these will be found in the appendices. Numerals 1-10 are listed in numerical order in Appendix II (entries 180-189), and may also be found (along with all other numerals) listed in alphabetical order for Resígaro and Spanish in Appendix I.

Chapter 2

STEM LEVEL

The stem is set up as a level of construction above the root and below the word. Stems are divided into classes on the basis of their distribution in word classes. Thus, verb stems are typically distributed in verb words, noun stems in noun words, etc. Types are set up within each class, on the basis of internal structure. Sub-classes of each major class are set up on the basis of distribution within types of, normally, word level classes.

2.1. Verb Stem.

2.1.1. Contrast.

Verb stems (VbSt) have the following contrastive-identificational features:-

i) Their Base is typically filled by a verb root.

ii) Complex verb stems are formed by verbal derivators.

2.1.2. Variation.

Verb stems are grouped into types on the basis of internal structure.

2.1.2.1. Verb Stem Type i, "Simple".

$VbSt_i = + B{:}VbRt_{1/2}$

e.g. a?mitú "to eat"

íffú "to fear"

ímú "to sleep"

2.1.2.2. Verb Stem Type ii, "Complex".[1]

$VbSt_{ii}$ = + B: $VbRt_{2/3}$ + derivator: cstv/incho/rest

There are three sub-types of verb stem type ii.

2.1.2.2.1. Sub-type i, Causative.

The derivator is added in accordance with the following rule:-

...CV(V) > ...Cð(ð) + -tú[2]

Many complex verb stems are derived from verb roots by this derivator, and the effect is to change an intransitive into a transitive.

e.g. íffú "to fear" > ífotú "to frighten"

apó "to be awake" > aphotú "to awaken (s.o.)"

This example illustrates the occasional increase in voicing lag that occurs when the causative is added to some verb roots or stems. (cf. 3.3.2.1.1., below, especially fn 61)

ha?pu "to cross (a river)" > ha?potú "to save (from danger)"

i?tu "to fast" > i?totú "to wean (s.o.)"

mi?tsu "to boil (intrans)" > mi?tsotú "to boil (sthg)"

a?mu "to burn oneself (accidentally)" > a?motu "to burn (sthg)"

---

[1]The small amount of derivation at verb stem level is a consequence of the large-scale derivation at Group level (cf. Chapter 4, below). As explained there, this derivation cannot be handled at Word level or lower, due to the lack of internal cohesion of the resultant units.

[2]Here, absence of a tone mark indicates that tone may be high or low, ` indicates that it is (or becomes) low, and ´ indicates that it is high.

2.1.2.2.2. Sub-type ii, Inchoative.

The derivator is added in accordance with the following rule:-

...CV(V) > ...CV̀(V̀) + -kaá

Verb stems using this derivator are nowhere near as numerous as those using the causative derivator.

e.g. ífú "to fear" > ífakaá "to become frightened, to repent"

apó "to be awake" > apokaá "to wake up (intrans)"

ímú "to sleep" > ímakaá "to go to sleep"

In a few cases, -kaá varies freely with -:ká on a verb root.

e.g. ímakaá ~ ímaaká "to go to sleep"

2.1.2.2.3. Sub-type iii, Restrictive.

This derivator is added in accordance with the following rule:-

...CV(V) > ...CV̀(V̀) + -nú

A few verb stems use this derivator (but cf. 2.1.2.2.4., below).

e.g. a?vénó "to burn a field" > a?vénonú "to burn superficially"

(?)vano "to enter (a house)" > (?)vanonú "to visit"

In both these cases, the root n is voiced before suffixation, though postulated examples in section 2.1.2.2.4. indicate that other final-syllable consonants in the root are not voiced.

2.1.2.2.4. "Fossilized" Derivations.

There are some apparently complex verb stems containing verb roots which are no longer used except with one of the derivators. There is obviously a danger of identifying as a derivator occurrences of -tú, -kaá or -aí which are no more than the final syllable of a simple stem consisting of a verb root

only -- a single morpheme. The following are some of the verb stems which may be analyzable as verb root + derivator.

Possibly containing causative derivator:-

tsootú "to annoy"

Possibly containing restrictive derivator:-

a?naⁿú "to squeeze out"

i?kaⁿú "to vomit"

i?toⁿú "to be standing up"

hekoⁿú "to harvest yucca"

kapaⁿú "to throw, to cast"

o?doⁿú "to fish with barbasco poison"

Reduplicated Roots.

Another type of verb stem which might be claimed to be complex is that containing a reduplicated verb root. However, this is no longer productive at this level,[3] and the postulated root is not evidenced in a non-reduplicated form. So such rare cases as are observed are interpreted as simple verb roots.

e.g. dé?edé?é "to nod one's head (when sleepy)"

2.1.3. Distribution.

The members of the class of verb stems are distributed in the Base slot in the verb word. Since all members share the same

[3] In some cases, the Basic or other constituent of the peripheral slot in the complex verb group, or in the case of a simple verb group, the entire verb group, is repeated to emphasize the gradual nature of an action, but this is in the first case at another level, and secondly is not reduplication in the strict (i.e., morphological) sense of the word. cf. 4.1.2.3., below.

distributional possibilities, no sub-classes are set up.

2.2. Noun Stem.

2.2.1. Contrast.

Noun stems (NnSt) have the following contrastive-identificational features:-

i) Their Base slot is typically filled by a noun root.

ii) Complex noun stems are formed from members of other classes by nominal derivators.

2.2.2. Variation.

Noun stems are grouped into types on the basis of internal structure.

2.2.2.1. Noun Stem Type i, "Simple".

$NnSt_i$ = + B:NnRt

e.g. -henáká "ear"

anoógí "tapir"

ofíiná "yams"

2.2.2.2. Noun Stem Type ii, "Complex".

Complex noun stems consist of a Verb Group, a component of a Verb Group, an adjective, or a relator, plus a nominalizer. Three sub-types are established.

2.2.2.2.1. Sub-type i, "Concrete Nominalization".

$NnSt_{ii.i}$ = + B:VG + $Nlzr_i$: -ʔtsí

This type of nominalization forms nouns that refer primarily

to concrete objects.

All types and sub-types of Verb Group may occur.

The derivatory rules are the following:-

i) A final-syllable voiceless stop becomes aspirated, and a voiced nasal becomes voiceless.[4]

ii) Final i, e and o do not change. Final u becomes o.

iii) -ɬtsí is added to the resultant form.

e.g.

1) Illustrating i) and iii), above:

hipú	"to wash"	> hiphoótsigú "soap"
tsa?tú	"to carry a weight"	> tsa?thoótsí "a weight"
pí?ko	"to throw away"	> pi?khoótsigí "one who throws away"
va?nú	"to command"	> va?ɴoótsihú "law"

2) Illustrating ii) and iii), above:

(?)neɴí	"to play"	> ne?ɴiítsí "a toy"
kone	"to sell"	> koneétsí "merchandise"
ínó	"to harpoon, spear"	> noótsigú[6] "a lance, an arrow"
a?nitú	"to eat"	> a?nithoótsí "food, a meal"

In all the above examples, the filler of the Base slot has been a Type i Verb Group. There follow examples of Type

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[4]This demonstrates the operation of the movement of Voice Onset Timing in the opposite direction to that described in section 3.3.2.1., below. i.e., increasing the lag in this case.

[5]There is no final a, except where this is derived morphophonemically from u.

[6]The initial i is deleted here, and also in
ínú "to sleep" > noótsihú "a bed",
but is retained in the following two cases (apparently because of the following glottal):
i?dú "to drink" > i?doótsipí "a drink"
i?tshá(ká) "to sit down" > i?tshoótsigú "a seat, a bench"

ii (sub-types i and ii) Verb Groups in the Base slot:

$VG_{ii.i}$:

tho? khú "to grind" > tho?khoótsií "a pestle"

$VG_{ii.ii}$:

hoonî i?votú "to freeze" > hoonî?i?vothoótsî[7] "ice"

When a type ii sub-type i noun is possessed (cf. 6.1.2.2., below), -ítsí > -ínú.

e.g. fio?khoótsí "a whistle" > nofio?khoónú "my whistle" (referring in both cases to the concrete object (Sp. silbato)).

2.2.2.2.2. Sub-type ii, "Abstract Nominalization".

$NnSt_{ii.ii}$ = +B:$VG_{i/ii.i}$/AjRt +$Nlzr_{ii}$: $\begin{pmatrix} \sim ?ká \sim \\ -káa \end{pmatrix}$ - $\begin{pmatrix} -tsí \sim \\ -mí \end{pmatrix}$

This type of nominalization forms nouns that refer primarily to events or qualities.

The derivatory rules are the following:-

i) B:VG_i/AjRt : $Nlzr_{ii}$: ~?ká-tsí

ii) B:$VG_{ii.i}$: $Nlzr_{ii}$: -káa - tsí/mí

-tsí/mí indicates that the two forms vary freely here.

e.g. 1) With Base filled by VG_i.

ímú "to sleep" > ímaakátsí "sleepiness"

emú "to bite" > emaakátsí "a bite"

[7] When a word ending in a vowel is followed by one beginning with a vowel, the juncture feature glottal stop occurs (cf. I.2.3.3.2., above). The nominalization is viewed as operating on the whole VG to produce what is grammatically one noun stem (even if it may be possible to view this as not being a single phonemic unit). It is therefore convenient to write this without a break, and hence it becomes necessary to indicate the glottal stop.

2) With Base filled by Adjective Root.

ka?mu- "fermented" > ka?maakátsí "something fermented"

ke?pí- "satisfied" > ke?piikátsí "satisfaction"

3) With Base filled by $VG_{ii.i}$.

fio? khú "to whistle" > fio?khákáatsí) / fio?khákáamí) "a whistle" (the noise -- Sp. silbido)

šoónéʔjú "to tell lies" > šoónéʔjákáatsí) / šoónéʔjákáamí) "a lie" (the action of telling a lie[8])

2.2.2.2.3. Sub-type iii, "Agent Nominalization".

$NnSt_{ii.iii}$ = +B:AjRt/bas/relrR + $Nlzr_{iii}$: -minágí

"bas" is the basic filler of the peripheral slot in $VG_{ii.i}$.

"relrR" is the relator in the Axis-Relator Locative Phrase, sub-type iii: -a?ná, "beside" (cf. 6.2.10.2.2.iii, below).

This type of nominalization forms nouns that express a characteristic attribute of a person.

e.g. 1) With Base filled by Adjective Root.

íno "lazy" > íṉóminágí[9] "a lazy person"

2) With Base filled by basic filler of VG periphery.

haámá khú "to steal" > haámáminágí "a thief"

3) With Base filled by relator.

-a?ná "beside" > a?náminágí "servant"

---

[8]Contrast with the noun šoóhú "a lie" (the false word itself -- cf. -hú in description of classifiers, in 3.2.2.2.1., below).

[9]This case demonstrates an increase in voicing lag for the nasal in the root, as for sub-type i, above, though the same does not happen with the n in the next example, nor with the n in the following one.

2.2.2.2.4. Postulated Reduplicated Forms.

It may appear that there is another sub-type of complex noun stem, in which there is reduplication. However, such forms would have to be derived from a hypothetical base form, since the reduplicated forms are not reducible to non-reduplicated elements occurring elsewhere. Furthermore, the reduplication observed in nouns is highly irregular, and, most important, is no longer productive. Thus, these apparently reduplicated forms are viewed as simple, non-reduplicated stems. Some examples are:-

tɛ́?etɛ́bú "mushroom"

todetɛ́odɛ́ "(a type of dance)"

thiithí?ɛ́ "(a species of monkey)" (Sp.: sumileoncito)

tyɛ́?otyɛ́bú "butterfly"

tshɛ́?tshepi "(a species of bird)"

tshii?tshí?ɛ́ "cricket"

2.2.3. Distribution.

The members of the class of noun stems are distributed in the Base slot in the noun word, in numeral word type ii, and in adjective stem type iii. Sub-classes of noun stems are set up on the basis of this distribution.

2.2.3.1. Sub-class 1.

These noun stems occur in noun word type i, "simple". They are further sub-divided according to their occurrence in sub-types of this type:-

Sub-class 1.1. This consists of noun stems that are basically plural.

e.g. maǰpú "bees"

hada?phoǰtsí "songs"

Sub-class 1.2. This consists of noun stems that refer to uncountables.

e.g. hoonî "water"

pá "all"

2.2.3.2. Sub-class 2.

These noun stems occur in noun word type ii, "complex". They are further sub-divided according to their occurrence in sub-types of this type:-

Sub-class 2.1. This consists of noun stems referring to people.

e.g. ke?vîikágí "chieftain"

phaigí "old man"

Sub-class 2.2. This consists of noun stems referring to non-human animates.

e.g. maañá?o "iguana"

hivîigí "star" (sic)

oná?kó "snake"

Sub-class 2.3. This consists of noun stems referring to body parts.

e.g. -hitákó "nose"

-ɨigí "forehead"

Sub-class 2.4. This consists of all noun stems not yet accounted for.

e.g. va?a- "machete"

po?tsáává "centre"

2.2.3.3. Sub-class 3.

This consists of two noun stems which, in addition to their distribution in the noun word, also occur in numeral word type ii:

po?tsáává "centre"

pá[10] "all"

2.2.3.4. Sub-class 4.

This consists of those noun stems which, in addition to their distribution in the noun word, also occur in adjective stem type iii.

e.g. eníítsí "bot-fly larva"

2.3. Pronoun Stem.

2.3.1. Contrast.

Pronoun stems (PnSt) have the following contrastive-identificational features:-

i) Their Base slot is filled by a pronoun root.

ii) Complex pronoun stems are formed by pronominal derivators.

---

[10] pá is clearly a noun stem in Resígaro, even though the English gloss "all" is not. It may occur with various classifiers.

e.g. pá-kooní
all village "all the villages"

pá-pekó
all day "all the days"

pá-?osí-ku-ná
all hand dl rest "all two hands" (i.e., "both hands" -- used to signify the number "ten")

2.3.2. Variation.

Three types of pronoun stem are set up on the basis of internal structure:-

$PnSt_{i}$ = +B:$PnRt_{1}$

$PnSt_{ii}$ = +B:$PnRt_{2}$ +Der: -?V̀ ± Specifier: -thé

$PnSt_{iii}$ = +B:$PnRt_{3}$ +Der: -musi/-mupi

2.3.2.1. Pronoun Stem Type i, "Basic".

Type i pronoun stems consist of a pronoun root, sub-class 1, only:-

ꞑó First person singular

phú Second " "

tsú Third " " -- masculine

tsó " " " -- feminine

fú First person non-singular, inclusive

i Second " " imperative

ꞑú Third " "

In all pronoun stems ending in u, this becomes a in all contexts except clause-finally (cf. I.2.3.3.1., above).

2.3.2.2. Pronoun Stem Type ii, "Deictic".

Type ii pronoun stems consist of a pronoun root, sub-class 2, + a derivator, ± a specifier. They indicate deixis.

The pronoun root is assimilated to the derivator in accordance with the morphophonemic processes described at word level (3.3.2.1.), since it is at that level that such assimilation is

most widespread. This results in the following changes:

3rd p. sg., m. tsú > gi-

3rd p. sg., f. tsó > do-

3rd p. non-sg. ʁú > na-

1st p. non-sg., excl. muu-) do not change, in accordance with
) the same assimilation rules (ex-
2nd p. non-sg. hú-) cept that the u of hu becomes a)

1st p. non-sg., incl. fú exceptionally does not change before the derivator, except that the u becomes a, as indicated above (though in all other contexts it assimilates in accordance with the rules indicated in 3.3.2.1., below).

The vowel of the derivator has the same quality as that of the preceding assimilated pronoun root, but is always short, yielding the following forms:-

3rd p. sg., m. gi-ʔí "this one" (m)

3rd p. sg., f. do-ʔó "this one" (f)

1st p. non-sg., incl. fa-ʔá "we" (inclusive)

1st p. non-sg., excl. muu-ʔá[11] "we" (exclusive)

2nd p. non-sg. ha-ʔá "you"

3rd p. non-sg. na-ʔá "they"

The specifier -thé "distant" may be added to the above forms, when this is semantically meaningful. In practice, this restricts its occurrence to third person pronouns:-

---

[11] The base form of this is presumably *muu-ʔú, but since a final u always becomes a before another word (but not normally before a suffix), and since this pronoun is nowhere attested finally, the only form observed is muuʔá.

gi?ithé "that one" (m)

do?othé "that one" (f)

na?athé "they (distant)"

2.3.2.3. Pronoun Stem Type iii, "Dual".

Type iii pronoun stems consist of a pronoun root, sub-class 3, + one of the dual markers: -musi "masculine dual"

-mupi "feminine dual"

The assimilated form of the pronoun root occurs, except (as in type ii, above) in the case of 1st person non-singular, inclusive, fa-.

famusi "we (incl) two" (m)	famupi "we (incl) two" (f)
hamusi "you two" (m)	hamupi "you two" (f)
namusi "they two" (m)	namupi "they two" (f)

2.3.3. Distribution.

The members of the class of pronoun stems are distributed in the Base slot in the pronoun word. Sub-classes of pronoun stem are set up on the basis of this distribution.

2.3.3.1. Sub-class 1.

This consists of all type i pronoun stems, which occur in pronounnoun word type i.

2.3.3.2. Sub-class 2.

This consists of all type ii and type iii pronoun stems, which occur in pronoun word type ii.

2.4. Adjective Stem.

2.4.1. Contrast.

Adjective Stems (AjSt) have the following contrastive-identificational features:-

i) Their Base is typically filled by an adjective root.

ii) Further types of adjective stem are derived from the basic form by morphophonemic processes principally involving addition and deletion of geminate vowels and glottal stops.

2.4.2. Variation.

Three[12] types of adjective stem are set up on the basis of internal structure.

$AjSt_i$ = + B:AjRt "Basic"

$AjSt_{ii}$ = + B:AjRt + der_i "Derived i"

$AjSt_{iii}$ = + B:AjRt/$NnSt_4$ + der_{ii} "Derived ii"

where der_i and der_{ii} stand for two different derivatory processes.

2.4.2.1. Adjective Stem Type i, "Basic".

Type i adjective stems consist of an adjective root only.

e.g. aaii- "healthy"

ha?mo?- "hot"

kaašo- "good"

---

[12] There is also evidence which suggests that some adjectives are derived from verbs, though this is rare and would appear to be no longer active. An example of such a fossilized form is predicative adjective ponuu? "to be embarrassed, shy" (glossed in Spanish by informant as dar vergüenza) and verb poni "to be ashamed, embarrassed" (glossed in Spanish as avergonzarse).

The resultant form attributes a quality to a noun.[13]

e.g. aɨiigí atsáagí ... "The healthy man ..."
healthy man

kaašogí ǰaáná ... "The good child ..."
good child

ooǰagí aɨoógí ... "The small tapir..."
small tapir

(In each of these examples, the final syllable of the adjective is the classifier -- cf. 3.4.2.1., below.)

2.4.2.2. Adjective Stem Type ii: "Derived i".

Type ii adjective stems consist of an adjective root modified in accordance with the following morphophonemic rules:-

i) If not already long, the vowel of the final syllable is lengthened.

e.g. ha?mo?- "hot" > ha?moo? "(to be) hot"

ka?mu- "fermented" > ka?muu? "(to be) fermented"

This has the effect of shortening the length of any long vowel previously in any other syllable of the adjective root.[14]

e.g. kaašo- "good" > kašoo? "(to be) good"

ooǰa- "small" > oǰaa? "(to be) small"

ii) A glottal stop is added finally, if one is not already present.

e.g. aɨii- "healthy" > aɨii? "(to be) healthy"

ño?hu- "soft" > ño?huu? "(to be) soft"

---

[13]This is related to distribution, and at word level, but examples are given at this stage, as the best way of indicating the semantic differences which form an inherent part of each type of adjective stem.

[14]This could also be described in terms of a shift of vowel length, though such an approach would not account for the lengthening of vowels in stems where the root contained no long (or geminate) vowels, hence the preference for viewing this as a two-stage process.

The resultant form predicates a state concerning the person/thing thus qualified.

e.g. anii? tsú "He is healthy"
healthy he

kašoo? tsó "She is good"
good she

2.4.2.3. Adjective Stem Type iii: 'Derived ii".

Type iii adjective stems consist of an adjective root or a noun stem[15] modified in accordance with the following morphophonemic rules[16]:-

i) Any long vowel in the filler of the Base slot is shortened.

e.g. anii- "healthy" > ani "(to become) healthy"

ooǰa- "small" > oǰa "(to become) small"

enítsí "bot-fly larva"
> enítsí "(to become) worm-infested"

ii) If the filler of the Base slot contains two glottals, the first of these is deleted:-

e.g. ha?mo?- "hot" > hamo? "(to become) hot"

(If the filler only contains one glottal, this is not deleted.

---

[15] It would be possible to establish two sub-types here, but this is not done, since so few cases of adjective stems derived from noun stems are attested, and since the same morphophonemic rules apply as with adjective roots. Such a procedure would merely complicate the presentation. We thus follow Pike's criterion (cf. 1967:472) of requiring two structural differences before establishing different types. Derivation from adjective root and noun stem is shown in the following description.

[16] In some cases certain vowel changes also occur, but these changes are as yet unpredictable and analysis of them must await the obtaining of further data.
e.g. phe?di?- "fat" > phede? "(to become) fat"
ñe?ki?- "strong" > ñeke? "(to become) strong"

e.g. ka?mu "fermented" : ka?mú "(to become) fermented"

ño?hu- "soft" : ño?hu "(to become) soft")

The resultant form predicates a process concerning the person/thing thus qualified.

e.g. aɨi tsú "He gets (becomes) healthy"
healthy he

enítsí tsó "She gets worms" (i.e.,"becomes infected
gets-worms she with intestinal worms")

ka?ma tsú "It ferments"
ferments it

2.4.3. Distribution.

The members of the class of adjective stems are distributed in the Base slot in the adjective word, in the Base slot in the adverb word, and in the Peripheral slot in the verb group. Sub-classes of adjective stems are set up on the basis of this distribution.

2.4.3.1. Sub-class 1.

This consists of type i[17] adjective stems, which occur in adjective word type i, "Attributive".

e.g. kaašo "good"

aiǰánú? "near"

2.4.3.2. Sub-class 2.

This consists of type ii adjective stems, which occur in adjective word type ii, "Predicative I", and in the adverb word.

---

[17] Types and sub-classes of adjective stem are almost completely co-extensive -- a consequence of the fact that the structural differences that lead to the establishment of different types bring about semantic changes which affect the distribution.

e.g. ka?nuu? "(to be) fermented"

aiǰánuu? "(to be) near"

anepuu? "(to be) a lot"

kašoo? "(to be) good"

2.4.3.3. Sub-class 3.

This consists of type iii adjective stems, which occur in adjective word type iii, "Predicative ii".

e.g. kašó? "(to become) good"

aiǰánú? "to draw near"

2.4.3.4. Sub-class 4.

This consists of adjective stems (of all three types) which, in addition to their distribution in types of the adjective word (indicated in sub-classes 1-3), also occur in the periphery slot in verb group type ii, sub-type i.

e.g. ooǰa "small"

ani "(to become) healthy"

(For further details, cf. verb group, section 4.1.2.2.1., below.)

Chapter 3

WORD LEVEL

The word is set up as a level of construction above the stem and below the phrase. Words are divided into classes on the basis of their distribution in phrase level tagmemes (except in the case of the verb word, which is distributed in the sub-level, Group). Types are set up within each class on the basis of internal structure. Sub-classes of word classes are set up on the basis of distribution in types of phrase (or the group, in the case of the verb) and, occasionally, in other structures.

3.1. Verb Word.

3.1.1. Contrast.

Verb words (Vb) have the following contrastive-identificational features:-

i) Their Base is typically filled by a verb stem.

ii) They co-occur with reflexive/reciprocal, causative/inchoative, directional, and progressive suffixes.

iii) Their basic (i.e., declarative) form is subject to modification by the imperative mood.

3.1.2. Variation.

Formula:-

Vb = ±px:Pn/priv +B:VbSt(± sx 1(: reflex/recip ±sx 2: cstv/incho ±sx 3: dir ±sx 4: prog

The use of ∝ in this formula obviates the need to establish two types of verb word, according to whether or not suffixes of order 1 may be added to the stem. Initially, it may appear that this is dependent on transitivity -- order 1 suffixes being applicable only to transitive verbs. However, they cannot be applied to all transitive verbs. (For instance, not at all with verbs such as i?kanú "to vomit", hée?nú "to roast", and very improbable with such verbs as a?nitú "to eat".) Likewise, there are some intransitive verbs to which they are applied. (For instance, o?do "to work"[1], *ne?nitotu- stem of "to suffer"[2].)

Thus, the restriction of application of order 1 suffixes appears to be more a lexical (and in consequence, semantic) one than a structural one, and is therefore considered not adequate for the establishment of different types of verb word -- especially since all suffixes of orders 2-4 may be added in almost all cases (subject to restrictions indicated in the relevant sections, below).

Imperative is not indicated in the above formula, since it consists of both segmental and suprasegmental elements. The forula thus indicates the declarative form of the verb only.

---

[1] In Resígaro this verb is clearly intransitive, though it may be made transitive by addition of the causative suffix. cf. 3.1.2.3., below.

[2] This verb is not attested without the reflexive suffix.

3.1.2.1. Prefixes.

Pronouns and the privative prefix are assimilated to the verb stem in accordance with the rules given in 3.3.2.1., below. There, three types of verb (and noun and relator) are set up on the basis of this assimilation. However, these are morphophonological, and not grammatical, types, and therefore are not relevant here.

e.g. Stem: hɛ́ɛ́ʔnú "to roast"

nɛ́ɛ́ʔnú "I roast"

phɛ́ɛ́ʔmú "you roast" (singular)

nɛ́ɛ́ʔnákaá ...[3] "without roasting ..."

Stem: aʔmitú "to eat"

noʔmitú "I eat"

paʔmitú "you eat"

maʔmitákaá ... "without eating ..."

Stem: manú "to call"

nomanú "I call"

pimanú "you call"

mamanákaá ... "without calling ..."

Special Case.

The verb kemú "to say" loses its initial syllable when assimilated to a pronoun or privative prefix:

Hoaa kemú ... "John says ..."

gimú ... "he says ..."

---

[3] The inchoative suffix must co-occur with the privative in this construction. For details, cf. Verb Piece type ii, sub-type ii (section 5.1.2.2.2., below).

3.1.2.2. Suffix Order 1: reflexive/reciprocal.

The addition of these suffixes has an effect on the distribution of the verb at clause level. When either of them is added to a transitive verb, it occurs in an intransitive, instead of a transitive, clause. i.e., the verb is "demoted" one step on the transitivity scale. However, transitivity is not considered a relevant structural feature at word level, for the following reasons:-

i) All verbs are fed through all levels, and at verb word level distributional sub-classes are set up on the basis of occurrence in different types of Verb Group, where degree of transitivity is not relevant.

ii) Likewise, Verb Groups are divided into distributional sub-classes on the basis of their occurrence in different types of Verb Piece, where, again, transitivity is not a relevant feature.

iii) The Verb Piece is distributed in the Verb Phrase, again not on the basis of transitivity, and it is only in establishing different sub-classes of the Verb Phrase according to occurrence in different clause types that transitivity is relevant.

This follows from the strict separation of structural types and distributional classes and sub-classes, and the demarcation of levels, established in the introduction, and avoids endless repetition throughout the levels, and other problems indicated in that discussion.

-phaavú and -kakávú are probably both analyzable into two morphemes -- -phaa-vú and -kaká-vú -- since -vú is occasionally omitted in -phaavú. However, the function of the postulated morpheme -vú is not clear.[4]

3.1.3.3.1. Reflexive: -phaavú.

e.g. haa?phaavú "to comb oneself" < haa? "to comb (s.o.)"

hipáphaavú "to wash oneself" < hipú "to wash (s.o., sthg.)"

Often, the verb stem is rarely, or never, attested without the reflexive suffix, and in these cases, the inflection has virtually established a new word in which there is little or no awareness of the original form.

e.g. hoka?phaavú "to get dressed, to get into (a canoe, etc.)"

< ho?ku "to bite" (of insects)

In spite of this, -phaavú is not considered as a stem-level derivational suffix, for the following reasons:-

i) It is actively used at word level.

ii) It is not closely bound to the verb stem, and is in fact the most mobile of verb suffixes, occurring sometimes after temporal and imperative clitics and the auxiliary indicator in verb piece type ii, sub-type i (cf. 3.1.2.6.1.2.2.(ix), and 5.1.2.2.1.). It also occasionally occurs after the Order 2 suffix inchoative, and the Order 3 directional suffixes (cf. 3.1.2.4., below).

e.g. mepáakáphaavú no?pí "Without washing myself I go"

---

[4] cf. omission of the final syllable of tó?vú, "to obtain", in 4.1.2.2.

ɲokaa?káphaavú no?pí "Dressing myself, I go"

3.1.2.2.2. Reciprocal: -kakávú.[5]

e.g. ɲaa?kakávú "they comb each other's hair"

< haa? "to comb"

(cf. ɲaa?phaavú "they comb their (own) hair")

ɲepákakávú "they wash one another" < hipú "to wash"

(cf. ɲepáphaavú "they wash themselves")

nanovígipíkakávú "they speak to each other"

< novígipí "to speak"

When the reciprocal is added to the verb khú "to do", this is usually replaced by (ii)ǰú "to be". (The (ii) is except on rare occasions omitted.)

e.g. (i) aɲoógí kainée na-khú
tapir die they-do "They kill the tapir"

But kainée neežá - kakávú
die they-be recip "They kill one another"

Contrast kainée neežú
die they-be "They die"

(ii) ɲó phede? na-khú
me greet they-do "They greet me"

But phede? neežá - kakávú
greet they-be recip "They greet one another"

As the above examples demonstrate, a restriction consequent on the use of the reciprocal suffix is the limitation of the subject to the plural -- another semantic restriction

[5] When the reciprocal has been added, the verb is often distributed in a clause containing the concomitant phrase. cf. 6.2.5.2.1., below. See also comments on the clause at the beginning of this section.

with inevitable (but not language-specific and therefore not significant) structural consequences.

3.1.2.3. Suffix Order 2: Causative/Inchoative.

These suffixes have also been described as derivators at stem level, in the formation of complex stems. This does not preclude their functioning as inflectional suffixes at word level, and in fact both suffixes may occur on complex verb stems consisting of a verb root + either derivator.[6]

With causative derivator at stem level.

e.g. mi?tsotú "to boil (sthg)"

i) + causative verb word suffix:

tshonáva tsó hoonî mi?tsototú
her-mother her water boil-cs-cs

[6]This analysis does not deny the validity of other methods of handling this sort of problem, such as in a non level-oriented approach (e.g., the ordering of "higher predicates" in various types of generative semantics, as in Franz, 1971:Chap 4, Landerman & Franz, 1972:123-194). The present description has the advantage of clarifying the different function of the same suffix at different grammatical levels, as in the following example:-

tsa-mí ąa ífotá - kakávotú
he-rec them fear-cs recip-cs
past
rt deriv
VbSt: frighten Sx 1 Sx 2
Vb

"He made them frighten one another"

Here the causative suffix has functioned as a derivator at stem level, boosting an intransitive verb root (ífú, "to fear") to a transitive stem ("to frighten"). It has then functioned as an inflectional suffix at word level, boosting a transitive stem to a ditransitive verb. Only one object tagmeme is present in the clause, since the reciprocal suffix denotes the verb one step on the transitivity scale, as indicated in 3.-1.2.2., above.

"Her mother makes her boil the water"

ii) + inchoative verb word suffix:

tsǒ hoonǐ mi?tsotáká
she water boil-cs-incho "She begins to boil the water"

With inchoative derivator at stem level.

e.g. ífaká "to become frightened, to repent"

i) + causative verb word suffix:

tsá tsǒ ífakootú
he her become-cs "He makes her become frightened"
frightened

ii) + inchoative verb word suffix:

gífakákaá - mí
he-repent-incho-rec "He began to repent" (Lit.: "He
past began to become frightened")

Causative and inchoative suffixes modify stems to which they are added in exactly the same way as at stem level (cf. 2.1.2.2.1. and 2.1.2.2.2., above).

3.1.2.3.1. Causative: -tú.

e.g. tshonáva dotsáatǒ núúhigá do-khotú
her-mother her-brother shelter she-do-cs

"Her mother makes her shelter her brother"

When the causative is added to the verb (ii) ǰú "to be", this is obligatorily replaced by khú, "to do".[7]

e.g. mitshá-mí gi-ǰú
get-up rec he-be "He got up"
past

Becomes

tsa-mí mitshá gi-khotú
him-rec get-up he-do-cs "He made him get up"
past

[7]Contrast the opposite (and optional) effect of the reciprocal suffix -- cf. 3.1.2.2.2., above.

3.1.2.3.2. Inchoative: -kaǻ.

e.g. vakhǻ giž̌ǻ-kaǻ
ill he-be-incho "He becomes ill"

(cf. vakhǻ gižú "He is ill")

gi?tǫ́nǻ - kaǻ
he-standing - incho "He stands up"

(cf. gi?tǫ́nú "He is standing")

The inchoative is occasionally optionally followed by -nú, the meaning of which is unclear.

e.g. gi?tǫ́nǻkaǻnú "He stands up"

For discussion of -nú, cf. 3.1.2.5.1., below.

Order 1 suffix -phaavú sometimes moves right, to occur after the inchoative suffix.

e.g. nopákaǻ-phaavú no?pí
I-wash-incho-reflex I-go "Washing myself, I go"

cf. 3.1.2.2.1. (ii), above.

3.1.2.4. Suffix Order 3. Directional.

There are two verbal[8] directional suffixes:

-keé "to go to"

{-kí} "to come from"

They are added in accordance with the following rules:-

i) Any verb stem final vowel other than /i/ is changed to /e/. /i/ does not change.[9]

ii) -keé or {-kí} is added to the resultant form.

---

[8]To avoid confusion with directional phrase relators -kǫ́o "to" and -khǫ́ "from". cf. 6.2.9.2., below.

[9]cf. Directional Imperative, 3.1.2.6.2.1., rule (xi), below, and verb group type ii, sub-type i, 5.1.2.2.1.

iii) {-kí} -kí ~ -kɛ́

-kí occurs after /e/

-kɛ́ " " /i/

Directionals are not added to directional verbs or to verbal constructions indicating direction (e.g., Verb Piece type ii.i; verbs with imperative directional suffixes -- cf. 3.1.2.6.2., rule (x), below).

3.1.2.4.1. -keɛ́ "to go to"

e.g. no?mitekeɛ́ "I go to eat" < a?mitú

nokhonikeɛ́ "I go to laugh" < khoni

boto? dokhekeɛ́ "She goes to sweep" < boto? khú

tua gižekeɛ́ "He goes to jump" < tua ǰú

gi-manáa vate?keɛ́ "We go to know (meet) him" < manáa tɛ́?

noke?keɛ́ "I go to open"

Additional changes with -phaavú.

Following some verb stems, the vowels of both syllables of this Order 1 suffix may change to /e/, or only the vowel of the last syllable, as indicated by rule (i), above.

e.g. nodo?phaavɛ́-keɛ́ / nodo?pheevɛ́-keɛ́ "I go to work" < odo?phaavú

No meaning difference is obvious, though the change of vowel in the first syllable may indicate the presence of motion in the working, as well as in the going to it.

Also, this Order 1 suffix may sometimes be permutated to

a position following the directional, in which case, the vowel change occurs in the stem, and not the suffix.

e.g. nopápheevékeé
nopékeéphaavú } "I go to wash myself" < hipáphaavú

(In this particular case the change of all vowels in -phaavú when preceding the directional would appear to be obligatory.)[10]

In some cases, -phaavú cannot follow the directional, and the vowels of the first syllable do not change.

e.g. noo?phaavékeé "I go to comb my hair" < haa?phaavú

noka?phaavékeé "I go to enter (a house, a canoe); I go to dress" < hoka?phaavú

The use of this directional suffix results in a meaning which parallels that obtained by verbal piece type ii.i with the verb i?pí "to go".

e.g. a?miténe no?pí "I go to eat"

cf. section 5.1.2.2.1., below.

3.1.2.4.2. {-kí} "to come from".

e.g. no?mitekí "I come from eating"

nokhonikéé "I come from laughing"

[10] A clarification of the possible differences of meaning here must await further research. My informant assured me that both forms were "the same", but this may merely reflect the difficulty he would have in expressing such fine distinctions in Spanish. It may be that the first form means "I wash myself -- go to do", while the second may be "I go to wash -- reflexive"

vatapǫ́nikɛ́ "We come from dreaming" < tapǫ́ni "to dream"

boto? dokhekí "She comes from sweeping"

no-nąągí-neɛ́ ǰi? gižekí "He comes from meeting my-brother-with with my brother"

< ǰi? ǰú "to meet"

No additional rules appear to apply in the case of -phaavú, before this directional marker (yet it is attested in less cases than -keɛ́, and it is thus possible that further data might reveal similar changes).

e.g. nodo?phaavekí "I come from working"

ąoka?phaavekí "I come from dressing, from entering"

But after tǫ́?, -kí is aspirated:

e.g. gi-manąa no-te?khí "I come from knowing him (meeting him for the first time)"

This would appear to be irregular. It is not due to the preceding glottal, as indicated by a?ko, "to open":

noke?kí "I come from opening".

The following example illustrates the use of a directional after the Order 2 causative suffix:-

nošǫ́tekí "I go to cause to eat meat" (i.e., "I go to feed (the children, etc.) with meat")

< šú "to eat meat"

The use of this suffix results in a meaning which closely approximates to that obtained by the Adjunct Phrase with the

verb tsá?(nu) "to come".

e.g. no?mitákaá notsá? "I come from eating"

However, this latter structure may also be glossed as "Eating, I come", or "After eating, I come". cf. 6.2.8.2. (iii-iv), below.[11]

3.1.2.5. Suffix Order 4. Progressive.

Progressive aspect is indicated by verbal suffix -pa. (Contrast the tense markers, which are clitics, and principally do not go on the verb -- cf. 7.2.1.2.6., below.)

e.g. gínápa "He is sleeping" (cf. gínú "He sleeps"

kainée gižápa "He is dying" (cf. kainéení oo gižú "He has already died")

3.1.2.5.1. -nú.

The progressive is optionally followed by -nú, the meaning of which is not clear, though it is probably to be identified with the -nú occurring after inchoative in final position, as indicated in 3.1.2.3.2., above.

e.g. ginápanú "He is sleeping"

If the inchoative is non-final, -nú does not occur, unless -pa is final:-

[11] Though -keé parallels verb piece ii.i with i?pí in meaning, and (-kí) closely approximates to Adjunct Phrase with tsá?(nu), these latter two constructions should not be taken to be parallel. In the former the verb is not marked for person and is dependent on an auxiliary verb; in the latter the verb is marked for person, typically has the inchoative marker, and fills the Axis slot of an Axis-Relator phrase. cf. relevant sections for further details (references as above).

gi?tsakaá-ní "He sat down"

gi?tsakaá-ní-pa-nú "He was in the process of sitting down"

(Here the temporal clitic -ní precedes the progressive suffix.)

This -nú may be related to the syllable occurring at the end of the verbs i?pí "to go" and tsá? "to come" when they are dependent or in the negative imperative, but which is otherwise always omitted.with i?pí and only rarely included with tsá?.[12]

e.g. (i) a?miténe no?pí
eat aux I-go "I go to eat"
ind
VbPce ii.i

Contrast:

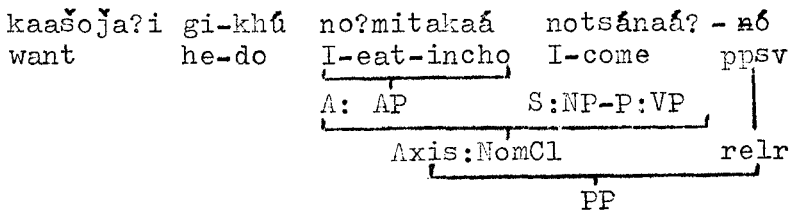
kaašoǰa?i gi-khú a?miténe no?pí - naá - nó
want he-do eat aux I-go ppsv
ind
P:VP:VbPce ii.i
Axis:NomCl relr
Purposive Phrase

"He wants me to go to eat"

(ii) no?mitákaá notsá?
I-eat - incho I-come "I come from eating"
Adjunct Phrase

Contrast:

[12] In this connection, it may be questioned whether the generally-omitted -ní of aa?ní "to give" is related. The answers to these questions must await further research.



"He wants me to come from eating"

In both examples, the vowel of -nú becomes a before suffixation, and this is lengthened and a glide added by nominalization. In the second example, the stem glottal also moves right one syllable before suffixation.

\+ + +

The above verb word suffixes may be followed by a number of clitics -- reportative, frustrative, desiderative/stated intention, temporal and dubitative/incompletive -- but since these are not specifically verbal suffixes, but may occur on other clause-level tagmemes (and do when such are present), details are given in the description of the clause, in 7.2.1.2.6., below. One example is included here:

da?mitá - tsa - pa? - má - ?pe
he-eat report frus desid remote past

"It is said that he wanted to eat (but he didn't eat)"

3.1.2.6. Imperative Mood.

This is not a suffix order, but a different mood (preceding paragraphs describe the declarative). The imperative in Resígaro is very rich, and its various forms are marked by both segmental and suprasegmental features, as indicated in the

description which follows.

The imperative applies to verb words marked for the second person -- singular, dual, or plural -- only, and only in the present. It may be affirmative or negative. There are two types of imperative: basic imperative, and directional imperative.

3.1.2.6.1. Basic Imperative.

3.1.2.6.1.1. Affirmative.

(i) Singular.

Rule i. The normal second person singular pronoun phú precedes the verb stem, to which it is obligatorily assimilated.

Rule ii. If the penultimate and antepenultimate syllables of the stem consist of a single vowel each, and have low tone, this becomes high.

e.g. pá?mítú "drink!(sg.[13])" (cf. pa?mitú "you drink")

pí?pí "go!" (cf. pi?pí "you go")

If the verb stem consists of a single syllable, the imperative is homophonous with the assimilated form of the desclarative.

e.g. boto? pikhú "sweep!" (cf. boto? pikhú / phá boto? khú) "you sweep")

ee?phi pikhú "fish!" (cf. ee?phi pikhú / phá ee?phi khú) "you fish")

pišú "eat meat!" (cf. pišú / phá šú) "you eat meat")

[13]Not repeated in succeeding glosses, since all examples in this section are of the singular, as indicated by the paragraph heading.

Rule iii. The underlying initial ii of the copulative verb, which is deleted (with very rare exceptions) in the declarative, is retained in the imperative.

e.g. tua piižú "jump!" (cf. $\left.\begin{matrix}\text{tua pižú}\\ \text{phá tua jú}\end{matrix}\right\}$ "you jump")

Rule iv. In hipú "to wash" and mitú "to smoke (food -- as a preservative process)", i > íi :-

phíípú "wash!" (cf. $\left.\begin{matrix}\text{phipú}\\ \text{phá hipú}\end{matrix}\right\}$ "you wash")

phíípáphaavú "wash yourself!" (cf. $\left.\begin{matrix}\text{phipáphaavú}\\ \text{phá hipáphaavú}\end{matrix}\right\}$ "you wash yourself")

pimíítú "smoke (it)!" (cf. $\left.\begin{matrix}\text{pimitú}\\ \text{phá mitú}\end{matrix}\right\}$ "you smoke (it)"

(ii) Dual.

Rule v. The second-person non-singular (i.e., dual and plural) imperative pronoun i- precedes the verb stem, to which it is obligatorily assimilated. (This results in i > ø before h- and V- initial verbs.)

Rule vi. Dual marker -musi (m) or -mupi (f) is added to the end of the verb (which results in the usual change of final u to a, and movement one syllable to the right of any glottal stop closing the penultimate syllable in the verb).

Rule ii, above (tone change), also applies in the dual.

e.g. á?mítámusi "eat! (dl[14]) (cf. hamusi a?mitú "you (dl) eat")

[14]Not repeated in succeeding glosses, since all examples in this section are in the dual, as indicated by the paragraph heading. To facilitate comparisons, the masculine dual marker is given in all examples in this section. The feminine dual marker could equally-well occur in all cases.

í?pímusi "go!" (cf. hamusi i?pí "you go")

hadápá?musi "sing!" (cf. " hadá?pú "you sing")

išámusi "eat meat!" (cf. " šú "you eat meat")

boto? ikhámusi "sweep!" (cf. " boto? khú "you sweep")

ee?phi ikhámusi "fish!" (cf. " ee?phi khú "you fish")

Rules iii and iv, above, apply also in the dual.

e.g. (Rule iii)

tua iižámusi "jump!" (cf. hamusi tua ǰú "you jump")

(Rule iv)

hípámusi "wash!" (cf. " hipú "you wash")

It is noted that -musi/-mupi cannot precede the reflexive:-

hípáphaavámusi "wash yourselves!" (cf. hamusi hipáphaavú "you wash yourselves")

(iii) Plural.

Rules ii-v, above, apply. No suffix is added. Thus, when i > ø, the plural imperative may be homophonous with the unaffixed form of the verb, or differentiated from it only by tome.

e.g. á?mítú "eat! (pl[15])" (cf. a?mitú "to eat", ha?á a?mitú "you (pl) eat")

í?pí "go!" (cf. i?pí "to go", ha?á i?pí "you go")

hádá?pú "sing!" (cf. hadá?pú "to sing", ha?á hadá?pú "you sing")

[15]Not repeated in succeeding glosses, since all examples in the second person in this section are of the plural, as indicated by the paragraph heading.

[There is no p. 142.]

išú "eat meat!" (cf. ha?á šú "you eat meat")

boto? ikhú "sweep!" (cf. " boto? khú "you sweep")

ee?phi ikhú "fish!" (cf. " ee?phi khú "you fish")

tua iižú "jump!" (cf. " tua žú "you jump")

hiípú "wash!" (cf. " hipú "you wash")

hiípáphaavú "wash yourselves!" (cf. ha?á hipáphaavú "you wash yourselves.")

3.1.2.6.1.2. Negative.

The negative imperative may be derived from the affirmative imperative, above, by addition of the negative imperative clitic {-ma?u} (which changes a final u to a, and moves one syllable to the right any glottal stop closing the penultimate syllable).

3.1.2.6.1.2.1. Allomorphs of the Negative Imperative Clitic.

{-ma?u}[16] : -ma?u ~ -má ~ -má?

a) -ma?u

This occurs immediately following khú or (ii)žú.[17] Thus, it does not occur in the dual, since the verb is then suffixed.

e.g.	Singular	Plural
"Don't sweep!"	boto? pikhúma?u	boto? ikhúma?u
"Don't jump!"	tua piižúma?u	tua iižúma?u

[16] This clitic may also be used to indicate the desiderative, subject to the limitations indicated in 7.2.1.2.6.3.1., below.

[17] And on all verbs with imperative directionals -- cf. 3.1.2.-6.2.2., below.

b) -má

This occurs non-finally on the verb, or on the basic or other filler of the peripheral slot in the complex verb group.[18]

e.g.	Singular	Dual	Plural
"Don't work!"	podo?máphaavú	odo?máphaavámusi	odo?máphaavú
"Don't sweep!"	boto?má pikhú	boto?má ikhámusi	boto?má ikhú[19]
"Don't jump!"	tuamá piižú	tuamá iižámusi	tuamá iižú[20]

c) -má?

This occurs elsewhere i.e., finally on all verbs[21] except khú and (ii)jú, and after -musi/-mupi on these verbs.

e.g.	Singular	Dual	Plural
"Don't eat!"	pá?mitámá?	á?mitámusimá?	á?mitámá?
"Don't go!"	pi?pínamá?	i?pínamusimá?	i?pínamá?[22]
"Don't toast!"	pikávó?má?	ikávó?musimá?	ikávó?má?
"Don't sweep!"	---	boto? ikhámusimá?	---
"Don't jump!"	---	tua iižámusimá?	---

In the last two examples, the dual forms are variants of those exemplified under -má.

3.1.2.6.1.2.2. Application of {-ma?u} to verbs.

The above remarks concerning the allomorphs of {-ma?u} serve

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[18] Or on the head verb of a complex verb piece, when an imperative directional is present -- cf. 3.1.2.6.2.2., below.

[19] The singular and plural forms here are variants of those exemplified under -ma?u.

[20] Footnote 19 applies.

[21] Except when these contain imperative directionals -- cf. 3.1.2.6.2.2., below.

[22] For presence of -na (< -nú), cf. section 3.1.2.5.1., above.

simultaneously to illustrate the negative imperative of singular, dual and plural of most verbs, and only a few additional comments are necessary.

Rule vii. The negative imperative marker -mǻ? is added finally to the imperative of all verbs except khú and (ii)jú, to which -ma?u is added, except in the dual after -musi/-mupi, when -mǻ? is added. See examples in a) and c), above.

Rule viii. When khú and (ii)jú form part of a complex verb group, the negative imperative may be marked as indicated in rule vii, or by adding -mǻ? to the basic or other filler of the peripheral slot. See examples in b), above.

Rule ix. The negative imperative marker precedes the reflexive suffix. The form used is -mǻ. See examples in b), above.

3.1.2.6.2. Directional Imperative.

As with other verbal directional markers in Resígaro, direction to or from may be indicated in the directional imperative, i.e., "go and ..." or "come and ..."

3.1.2.6.2.1. Affirmative.

Person and number are marked as indicated for "Basic Imperative", in 3.1.2.6.1. In addition, the following rules apply:

Rule x. The directional imperative may not be applied to directional verbs or other verbs with non-imperative verbal directional suffixes.[23]

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[23] cf. 3.1.2.4., rule iv, above.

Rule xi. Any verb stem final vowel other than i becomes e. i does not change.[24]

Rule xii. Verb stem final vowel is lengthened.

Rule xiii. -?kú "come and ..." or -ní "go and ..." is added to the resultant form of the verb stem in singular and plural.

Rule xiv. -ní is omitted when its occurrence after the verb stem would make it non-final (i.e., in the dual or when the verb bears the reflexive suffix).

Rule xv. -?kú may be omitted in the dual only, when ambiguity with "go and ..." will not result,[25] except with khú and (ii)ǰú, when it is always included.

e.g. "Come and ..."

	Singular	Dual	Plural
"... eat!"	pa?mítee?kú[26]	a?mítee(?ká)musi	a?mítee?kú
"... sing!"	phadápee?kú	hadápee?(?ká)musi[27]	hadápee?kú
"... eat meat!"	pišee?kú	išee(?ká)musi	išee?kú
"... play!" (< (?)menú, "to play")			
	pi?menii?kú	i?menii(?ká)musi	i?menii?kú
"... sweep!"	boto? pikhee?kú	boto? ikhee?kámusi	boto? ikhee?kú

[24] cf. verb word suffix Order 3, "Directional", in 3.1.2.4., rule i, above, and verb piece, section 5.1.2.2.1.(i), below.

[25] The omission of -ní, and occasionally of -?kú, in the dual, while the verb stem final vowel remains long, accounts for the establishment of rule xii instead of interpreting the imperative directionals as being *-:ní and *-:?kú.

[26] Tonal change is due to tonal morphophonemics. cf. comment in Introduction, section 0.5., on scope.

[27] The stem glottal of hadá?pú moves right one syllable before suffixation and is assimilated to the glottal of -?kú, when this occurs. Two glottals are not pronounced in the dual when -?kú is included; the repetition of the glottal in the transcription of the example merely shows that when the whole of -?kú is deleted, a glottal remains, namely that of the stem.

"... jump!" tua pižee?kú tua ižee?kámusi tua ižee?kú[28]

"... work!" podee?káphaavú[29] odee?(?ká)phaavámusi[30]
odee?káphaavú

e.g. "Go and ..."

	Singular	Dual	Plural
"... eat!"	pa?míteení	a?míteemusi	a?míteení
"... sing!"	phadápee?ní[31]	hadápee?musi	hadápee?ní
"... eat meat!"	pišeení	išeemusi	išeení
"... play!"	pi?meniiní	i?meniimusi	i?meniiní
"... sweep!"	boto? pikheení	boto? ikheemusi	boto? ikheení
"... jump!"	tua pižeení	tua ižeemusi	tua ižeení
"... work!"	podee?phaavú[32]	odee?phaavámusi	odee?phaavú

3.1.2.6.2.2. Negative.

The negative directional imperative may be derived from the affirmative directional imperative, above, by addition of the negative imperative clitic {-ma?u}, as in 3.1.2.6.1.2., above. However, the distribution of allomorphs of this clitic is slightly different from that indicated there, and conforms to the following rules:

a) -ma?u

This occurs finally on all verbs containing an imperative

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[28] The sequence ii becomes i before the ee in the following syllable.

[29] Vowel change and suffixation affect stem only, as indicated in rules xii and xiii.

[30] Footnote 27, above, applies equally here.

[31] Glottal belongs to stem. cf. footnote 27, above.

[32] cf. rule xiv, above, on omission of -ní.

directional.

e.g. "Don't come and ..."

	Singular	Dual	Plural
"... eat!"	pa?míteе?káma?u	a?míteе(?ká)musima?u	a?míteе?káma?u
"... eat meat!"	pišee?káma?u	išee(?ká)musima?u	išee?káma?u
"... sweep!"	boto? pikhee?káma?u	boto? ikhee?kámusima?u	boto? ikhee?káma?u
"... jump!"	tua pižee?káma?u	tua ižee?kámusima?u	tua ižee?káma?u
"... work!"	podee?káphaaváma?u	odee?(?ká)phaavámusima?u	odee?káphaaváma?u

"Don't go and ..."

"... eat!"	pa?míteema?u[33]	a?míteemusima?u	a?míteema?u
"... eat meat!"	pišeema?u	išeemusima?u	išeema?u
"... sweep!"	boto? pikheema?u	boto? ikheemusima?u	boto? ikheema?u
"... jump!"	tua pižeema?u	tua ižeemusima?u	tua ižeema?u
"... work!"	podee?phaaváma?u	odee?phaavámusima?u	odee?phaaváma?u

b) -má

This occurs elsewhere, in the alternative forms of some verbs that are possible in some cases, as in the following examples:-

"Don't come and ..."

"... sweep!"	boto?má pikhee?kú	boto?má ikhee?kámusi	boto?má ikhee?kú

[33] cf. rule xiv, above, on omission of -ní when it would occur non-finally.

"Don't go and ..."

"... sweep!" boto?má pikheení boto?má ikheemusi
boto?má ikheení

"... work!" podee?máphaavú --- ---

The paradigm is incomplete, since not all possibilities are realized. Instead of dual and plural of negative directional imperatives, it is preferred to use the complex verb piece, with the negative imperative on the auxiliary verb, as in 3.1.2.6.1.2.2., above.

e.g. odé?ɐephaavú i?pínamusimá? "Don't you (dl) go and work!"

tua ǰéɐe itsána?má? "Don't you (pl) come and jump!"

As an alternative to indicating the negative imperative on the auxiliary verb, it may be added to the verb in the Head slot of the complex verb piece:-

odé?ɐephaavámá i?pí "Don't you (pl) go and work!"

boto? khéɐemá itsána?musi "Don't you (dl) come and sweep!"

For further details of the verb piece, cf. 5.1.2.2.1., below.

3.1.3. Distribution.

The members of the class of verb words are distributed in the nucleus slot of the verb group. Sub-classes of verbs are set up on the basis of this distribution.

Sub-class 1.

This sub-class has nine members, which occur in verb group types i and ii:

khú "to do, to make"

(ii) ǰú "to be"

tó?(vú) "to obtain"

i?tónú "to be standing up"

aa?ní "to give"

pí?ko "to throw away"

a?pithootú "to cause to bathe"

i?votú "to cause to dry"

hẽnotú "to cause to be the same"

Sub-class 2.

This sub-class consists of all other verbs. These occur in verb group type i only.

e.g. a?mitú "to eat"

i?pí "to go"

3.2. Noun Word.

3.2.1. Contrast.

Noun words (Nn) have the following contrastive-identificational features:-

i) Their Base slot is filled by a noun stem.

ii) They typically co-occur with classifier, augmentative/diminutive, number and restrictive nominal suffixes.

3.2.2. Variation.

Nouns are grouped into two types, according to whether or not they may bear Order 1 (classifier) and Order 3 (number) suffixes.

3.2.2.1. Noun Type i, "Simple".

Nn_i = +B:$NnSt_1$ ±sx 2:aug/dim ±sx 4: rest

i.e., classifiers and number suffixes do not occur.

Two sub-types are distinguished:-

3.2.2.1.1. Sub-type i, "Plural".

This consists of noun stems which in their basic form are plural (sub-class 1.1).

e.g. apánú "leaves"

na?í "worms"

atsáa "men"

Number suffixes may be added to these nouns if they are first singularized by addition of the appropriate classifier suffix. But then the resultant forms are considered to be different words, belonging to the appropriate sub-type of type ii nouns. (There appears to be a semantic difference between basically-plural nouns, and those forms which result from the addition of a classifier and then the plural number suffix, in that the former is a generic term, while the latter tends to be used with more specific numbers.[34]

3.2.2.1.2. Sub-type ii, "Uncountables".

This consists of noun stems that refer to uncountables (noun stem sub-class 1.2.).

e.g. peégí "starch"

hoonî "water"

Occurrence with Order 2 and Order 4 suffixes:

e.g. apáná-kobu
leaves aug "big leaves"

[34]Levinsohn informs me that this is also the case in Huitoto Minica, on which Minor has gathered data.

na?i - ǰǻ?
worms dim "little worms"

maápa-ǰǻ?- ná
bees dim rest "only little bees"

3.2.2.2. Noun Type ii, "Complex".

Nn_{ii} = +B:$NnSt_2$ ±sx 1: clsfr ±sx 2: aug/dim ±sx 3: nmb ±sx 4: rest

Four sub-types of noun type ii are established on the basis of co-occurrence with different allomorphs of the number suffixes. Since suffixes of Orders 1, 2 and 4 may occur with all these sub-types, they are described without reference to the sub-types, which are described in the presentation of the Order 3 suffix (number).

3.2.2.2.1. Suffix Order 1: Classifier.

Classifiers indicate the shape or other inherent characteristics of anything that may be referred to by a noun in Resígaro. Most classifiers may be added to a wide range of noun stems, modifying the meaning accordingly. Some classifiers, however, have a very narrow distribution, only being attested with one or two noun stems, which may not themselves occur with other classifiers. When the complete list of noun stems which may bear a given classifier is presented, this is indicated by the abbreviation (C.L.) -- "Complete list". The complete list does not include all adjectives, numerals and demonstratives which may also bear the classifiers when in concord with a noun. Nor does it necessarily include nouns such as pá "all", sí "other", which may bear all classifiers. It

is also possible that further data might reveal that some lists indicated as complete were not, although probably nearly so.

When the use of a classifier is widespread, the letters "(C.L.)" are absent, and further examples will be discovered in the lexicon, and throughout the thesis.

Sometimes a classifier may be optionally omitted from a stem, in which case the abbreviation (M.O.C.) -- "May Omit Classifier" -- appears after the example in question. This applies only to the singular form, since the classifier must appear in the dual and plural (except in the case of "arm", cf. -?aapí, below).

As indicated above, classifiers also have the effect of singularizing any noun stem which in its basic form is plural. They may be followed by dual and plural number suffixes, as indicated in 3.2.2.2.3., below.

Where possible, the form of the noun with the classifier is contrasted with the form without it (if the classifier may be omitted), or with a form with another classifier. In a few cases where the noun may not occur without the classifier, and this only occurs on the one noun, the morpheme-break between the stem and the suffix is determined by reference to a numeral or other word bearing the same classifier suffix.

-bábú "that which belongs to something"[35] (C.L.)

-hii?pú "foot" : hii?pabábú "sock, stocking"

-híveú "head" : hívebábú "pillow"

-bahú "uninhabited part of the jungle" (C.L.)

tébahú "uninhabited part of the jungle"

híbahú "this uninhabited part of the jungle"

-bú i) "made of liana cord"

e.g. haméakabú "hammock" (M.O.C.)

kamo?bú "basket made from liana cord" (M.O.C.)

ii) "a felled tree"

e.g. haéja?é "trunk of the huacrapona (= yaripa) tree, standing"

: haéjabú "(ditto), cut down"

ta?aká?é "trunk of the Annona muricata tree, standing"

: ta?akábú "fruit of the same tree, cut down"

-dó "female"[36] (C.L.)

náagí "brother (of br.)" : náadó "sister (of sis.)"

-gaa?žó "raft, floating thing"

e.g. avéana?é "tree trunk" : avéanagaa?žó "raft"

-gahú "above" (C.L.)

íniú "eye" : íŋigahú "eyebrow"

tégahú "hill"

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[35] From informant's gloss, pertenece a tal cosa.

[36] This is only attested with the one word given, in contrast to -píjé, below, which has a wide distribution. cf. form of pronoun for 3rd person singular, feminine.

-gí "human, male, and all non-human animates"

e.g. atsáa "men" : atsáagí "man"

phaipíǰé "old woman": phaigí "old man"

anoógí "tapir"

-gú "long and flat"

e.g. -ké "hand" : -kégú "finger"

-hii?pú "foot" : -hii?págú "toe"

boe?khoótsígú "paddle, oar" (M.O.C.)

va?agú "machete"

-hí "round and flat"

e.g. kopáagí?aamí "paper money" (usually una libra, i.e. 10 soles)

: kopáagihí "a coin" (usually 1 sol)

haádú "land turtles": haádahí "land turtle"

bo?otáhí "a plate"

hípohí "land, earth"[37]

-hú i) "long and flat -- horizontal"

e.g. ímú "to sleep" : moótsihú "bed"

pagiaú "to spread out a blanket"

: pagianoótsihú "a blanket"

panítsíhú "a house" (M.O.C.)

ǰíǰaagí "big" (of people) : ǰíǰaahú "width"

---

[37] This gives an interesting insight into Resígaro beliefs concerning the shape of the earth. Note also the insight into their cosmology given by application of the animate classifier to the word for "star": hivíigí.

ii) "speech"

e.g. -nó "mouth" : nóhú "language, word"
noótsihú "word"
hada?phoótsí "songs" : hada?phoótsihú "song"
šoónę́ jú "to deceive": šoóhú "a lie"
ókóniigí "a fire" : ókóniigihú "rifle" ("a voice of fire, or a fire that speaks")

-hugí "path" (C.L.)
aǰápóhugí "a path" (M.O.C.)
sáhugí "one (path)"

-í "stick-like"

e.g. aváana?é "tree trunk": aváanaí "a stick"
na?í "worms" : na?ií "a worm"
tho? khú "to grind" : tho?khoótsií "a pestle"
-kaavaí "shin"

-íí?o "long and oval-shaped" (C.L.)
-henákó "ear" : -henákoíí?o "horn"

-ǰíhú "dust"

e.g. ókóniigí "a fire" : ókóniigiǰíhú "ash"
hípohí "earth" : hípoǰíhú "dust"
iítshímú "sugar cane": iítshiǰíhú "granulated sugar"

-ǰii?ó "stringy"

e.g. híve?ásí "crown of the head": híve?ǰii?ó "long hair"
ponaáma?é "trunk of the hungurahui palm tree"
: ponaámáǰii?ó "tocuma" (the

heart of the trunk, which is eaten -- Sp. chonta)

-kaa?dó "watering-place" (C.L.)

i?dú "to drink" : i?dákaa?dó "watering-place" (where wild animals drink)

-kó "a thick stick" (C.L.)

iítshijíhú "granulated sugar" : iítshikó "wild sugar cane"

-koomí "village" (C.L.)

panítsí "house" : panitsímúkoomí "a village, a hamlet"

sákoomí "one (village)"

-koo?ú "broom" (C.L.)

boto? khú "to sweep" : boto?khoótsíkoo?ú "a broom"

panoaoótsíkoo?ú "a broom"

-kuba "leg" (C.L.)

-íphí "thigh" : -íphíkuba "leg"

-hii?pú "foot" : -hii?pákuba "leg"

-mi "canoe" (C.L.)

hiítámi "a canoe" (M.O.C.)

sámi "one (canoe)"

-míí?o "skin (-like)"

e.g. -henákó "ear" : samíí?o "one (ear)"

eémú "skin, hide" : eémamíí?o "skin, hide" (M.O.C.)

-mokí "dead"

e.g. atsáagí "man" : atsáamokí "dead man"

-mú "tube-like"

e.g. iítshiǰíhú "granulated sugar" : iítshímú "sugar cane"
vaánamú "bamboo"
samú "one (drum, etc.)"

-paahí "hollow"

e.g. híve?ásí "crown of the head" : híve?paahí "skull"

-paǰí "field" (C.L.)
ǰakádépaǰí "field" (M.O.C.)
sápaǰí "one (field)"

-pákó "honey" (C.L.)
íímu?ó "beehive, honeycomb" : íímu?opákó "honey"

-pási "ring"

e.g. -henákó "ear" : henákopási "earring"
-ké "hand" : képási "ring (on hand)"
-ínií "eye" : ínipási "spectacles"

-pekó "day"

e.g. pápekó "every day, always"
hípekó "last night"
sípekó "the day after tomorrow" (Lit., "the other day")

-pí "liquid" (countable)

e.g. šakoo?gí?ó "a banana": šakoo?gípí "a drink made from bananas"

i?dú "to drink" : i?doótsipí "a drink" (M.O.C.)

ɨɲiú "eye" : ɨɲipí "a tear" ([t^hɹə])

-píǰé "human female"

e.g. phaigí "old man" : phaipíǰé "old woman"

heevé?i khú "to study": heevé?ikhótsopíǰé "a female student"

-tu?á "foot" (C.L.)

-hii?pátu?á "foot" (M.O.C.)

sítu?á "the other (foot)"

sátu?á "one (foot)"

-tsi?aa?dó "shoe" (C.L.)

-hii?pú "foot" : hii?pátsi?aa?dó "shoe"

-ú "spherical"

e.g. ɨɲipási "spectacles" : -ɨɲiú "eye"

-váfó "interior, stomach" : -váfóú "heart"

offínú "yams" : offínáú "yam"

Any stem-final glottal is deleted before addition of this classifier.

e.g. -híve?paahí "skull" : híveú "head"

-uu?á "a part of" (C.L.)

maa?nú "cassava" : maa?máuu?á "a piece of cassava"

-uu?ó "rope-like"

e.g. e-ípí "liana" : epíipíuu?ó "liana cord"

komáákáuu?ó "vein"

-vuudú "log"

e.g. avǽana?é "tree trunk" : avǽanavuudú "a log"

ókóniigí "fire" : ókóniigívuudú "a burning piece of wood"

-?aamí "leaf-like"

e.g. apánú "leaves" : apáná?aamí "a leaf"

kopáagihí "a coin"(usually 1 sol) : kopáagí?aamí "paper money" (usu. una libra)

té?aamí "book, notebook"

-?aanú "liquid" (uncountable)

e.g. -i?nímú "nipple" : i?ní?aanú "milk"

nanáaná?ó "pineapple" : nanáaná?aanú "pineapple juice"

-?aapí "arm" (C.L.)

This suffix is not added to the noun for arm (-a?náapí), probably to avoid the repetition of syllables that would result, but to certain numbers, demonstratives, etc., referring to the arm, and to nouns referring to things that are arm-like in shape.

e.g. sá?aapí "one (arm, etc.)"

-vánı́ "back" : -vánı́?aapí "backbone, spinal column"

-?aaví "side of"

e.g. teé?í "a river" : teé?í?aaví "river bank"

-nó "mouth" : -nó?aaví "lip"

-ínıú "eye" : -ínı?aaví "eyelashes"

-?abaú "shoulder" (C.L.)

-váakó?abaú "shoulder" (M.O.C.)

sá?abaú "one shoulder"

-?ápo "short cut" (C.L.)

teé?í "river" : teé?i?ápo "short cut overland avoiding a bend in the river"

-?ási "central place"

e.g. híve?ǰii?ó "long hair" : híve?ási "the crown of the head" (The initial glottal of the classifier fuses with the final glottal of the stem)

anoógí "tapir" : anoógí?ási "central place in the jungle where the tapirs gather"

-?é "trunk of a tree"

e.g. avâanaí "stick" : avâana?é "tree trunk"

pipíigíú "fruit of the Guilelma palm" : pipíigí?é "trunk of the Guilelma palm"

-?éhú "hole in the ground"

e.g. hooní "water" : hooni?éhú "a well"

té?ehú "a pot-hole"

-?eté "flower"

e.g. tshomaátshí?eté "cotton (on the plant)" (M.O.C.)

giiví?eté "flower" (M.O.C.)

-?í "bunch"

e.g. šakoo?gí?ó "a banana" : šakoo?gí?í "a bunch of bananas"

pipíigíú "fruit of the Guilelma palm" : pipíigí?í "a bunch of Guilelma fruit"

-?iikó "a new shoot"

e.g. nanáaná?ó "a pineapple" : nanáaná?iikó "a new shoot on a pineapple plant"

sá?iikó "one (new shoot)"

-?íǰó "earthenware container for liquid"

e.g. itsaa?ni?íǰó "earthenware pitcher, pot"

taasa?íǰó "cup" (from Sp. taza "cup")

sa?íǰó "one (cup, pot)"

-?ípi "machine" (C.L.)

konóogí "rubber" : konóogi?ípi "sewing machine"

-?ó "longish and oval-shaped"

e.g. šakoo?gí?í "a bunch of bananas"

: šakoo?gí?ó "a banana"

čhé?keú "round-shaped maraca" : čhé?ke?ó "oval-shaped maraca"

veéká?ó "maize, corn"

-?oohú i) "metal or tin container"

e.g. vatshoótsí?oohú "tin pot or pan"

sá?oohú "one (tin pot or pan)"

ii) "a room"

e.g. vadóva khú "to carry on a business"

: vadóvá?oohú "a shop"

hiponú "to tie up, to take prisoner" : hiponoótsí?oohú "a prison"

-?ootsí "lungs"

e.g. -váfóú "heart" : -váfó?ootsí "lungs"

-ó?kótáapí "throat (outside)" : -ó?kótáapí?ootsí "gills (of a fish)"

-?osí "hand" (C.L.)

-kó?osí "hand" (M.O.C.)

sá?osí "one (hand)" (= "five")

-?úmí "face" (C.L.)

maání "tar" : maání?úmí "a mask"

sa?úmí "one (face, mask)"

3.2.2.2.2. Suffix Order 2: Augmentative/Diminutive.

-kobu "augmentative"; -ǰá? "diminutive"

e.g. ǰaánú "child": ǰaáná-kobu "big child"; ǰaána-ǰá? "little child"

keé?šé "cow": keé?šé-kobu "big cow"; keé?še-ǰá? "little cow"

-íphí-kuba "leg": -íphí-kuba-kobu "big leg"; -íphí-kuba-ǰá? "little leg"
NnSt clsfr NnSt sx 1 sx 2 NnSt sx 1 sx 2

va?a-gú "machete": va?a-gá-kobu "big machete"; va?a-ga-ǰá? "knife"
NnSt clsfr NnSt sx 1 sx 2 NnSt sx 1 sx 2

3.2.2.2.3. Suffix Order 3: Number.

Co-occurrence with different allomorphs of the number suffixes requires the establishment of four sub-types of noun type ii, as indicated in the following table:

Noun sub-type	Dual	Plural
ii.i "Human" m	-musi	-nɛ́
ii.i "Human" f	-mupi[38]	-nɛ́
ii.ii "Non-human animate"	-musi	-mu
ii.iii "Body parts"	{-kʊ́}	{-nɛ́}
ii.iv. "Classifier nouns"	{-kʊ́}	{-hí}

Table 3.1. Co-occurrence of allomorphs of Number Suffixes with Noun sub-types.

The names assigned to the sub-types of noun words are merely convenient notional titles corresponding to the major number of members of each sub-type. They do not determine the membership of each sub-type, which is dependent on structural grounds (cf. Lyons, 1968:318).

Sub-type iv ("Classifier nouns") consists of all nouns (except atsáagí "man", náagí "brother (of brother)" and náadɔ́ "sister (of sister)") bearing a classifier, and therefore includes some nouns referring to people, to non-human animates, and to body parts. If the classifier may be omitted without affecting the meaning, these nouns may form the dual and plural

[38]The dual forms -musi and -mupi may be analyzable into -mu- "non-singular" (identifiable with plural -mu) and -si "masculine dual", -pi "feminine dual", and this -pi may be identifiable with -pí̌jɛ́ "feminine classifier", though the relation between -si and -gí "masculine human and non-human animate classifier" is not clear. Since such an analysis is not particularly revealing (and also implies analysis of -pí̌jɛ́ as -pí- "feminine" + -ǰɛ́ "??"), it is not adopted here. However, such postulated forms may correspond to clearly identifiable morphemes in related languages. I believe Thiesen does identify similar morphemes in Bora (in his MS on Bora Morphology).

with the appropriate number suffixes corresponding to sub-types i, ii and iii. Thus, phai-pí̌jé "old woman" may omit the classifier and form the dual with -mupi: phaimupi, or may retain the classifier and form the dual with (-kú): phaipí̌jeekú. It has only one plural form -- phaipí̌jéhí --, since phainé would be homophonous with the masculine plural without the classifier (from phaigí "old man").

3.2.2.2.3.1. Noun Type ii, Sub-type i, "Human".

The Base slot is filled by a noun stem of sub-class 2.1. Suffixation is in accordance with the following rules:-

1) Dual: add -musi (masc) / -mupi (fem)

2) Plural: Stem ...VVCV(V) > ...V́CV̀(V̀) + -né[39]

e.g.	Singular	Dual	Plural
"brother (of brother)"	náagí	náagímusi[40]	náginé
"chieftain"	ke?víikágí	ke?víikámusi	ke?víkané

If the stem is a vocative, the changes of tone and vowel length indicated in rule 2), above, do not occur.

e.g.	Singular	Dual	Plural
"father" (of son or daughter)[41]	aá?pe	aá?pemusi	aá?penė́
"brother" (of brother)	múubé	múubémusi	múubenė́[42]

[39] In these rules, the sign + is used to mean merely "add".

[40] Exceptionally, the classifier -gí is retained with this word, as indicated above. The following word shows it deleted.

[41] Or "son" (of father or mother). Terms of address between parent and offspring of the same sex are used reciprocally. (Wesley Thiesen informs me of a similar usage among the Boras.)

[42] Stem-final tone lowered in accordance with general tonal morphophonemics.

3.2.2.2.3.2. Noun Type ii, Sub-type ii, "Non-human animate".

The Base slot is filled by a noun stem of sub-class 2.2.

Suffixation is in accordance with the following rules:-

1) Dual: Stem ...CV(V)?CV > ...CV(V)CV? + -musi

2) Plural: Stem ...CV(V)(?)CV[43] > ...CV̀(?)CV́ + -mu

e.g.	Singular	Dual	Plural
"hummingbird"	pí?mí	pí?mímusi	pi?mímu
"tapir"	anoógí	anoógímusi	anogímu
"iguana"	maañá?o	maañá?omusi	maaña?ómu

3.2.2.2.3.3. Noun Type ii, Sub-type iii, "Body Parts".

The Base slot is filled by a noun stem of sub-class 2.3.

Only those nouns referring to body parts and not bearing a classifier form the dual and plural with the allomorphs described here.

Suffixation is in accordance with the following rules:-

1) Dual: Stem + -kú ~ -?kú

2) Plural: Stem + -né ~ -?né

-kú/-?kú and -né/-?né vary morphophonemically, choice of allomorph being dependent on the preceding noun stem. Dual and

[43] In these and the following rules, the absence of a tone mark on the symbol V indicates that the tone may be high or low, V́ indicates that the tone must be high, and V̀ indicates that the tone must be low.

Likewise, C has its normal meaning ("any consonant"), except that if ? closes the penultimate syllable of the stem, the C that occurs initially in the final syllable can only be one of those consonants attested after ? (cf. Part I, section 2.3.2., above). If ? does not occur here, the C in the final syllable may be any consonant, including ?.

plural forms of nouns are therefore indicated where possible in the lexicon (Appendix I).

e.g.	Singular	Dual	Plural
"face"	-ʁigí	-ʁigíkú	-ʁigíné
"nose"	-hitákó	-hitákookú	-hitákoonέ

3.2.2.2.3.4. Noun Type ii, Sub-type iv, "Classifier Nouns".

The Base is filled by any noun stem to which a classifier has been added (with the exceptions indicated above) (i.e., stem sub-class 2.4). This includes nouns referring to animates, both human and non-human, and to body parts, as well as all other nouns that can be dualized and pluralized. It is therefore the largest sub-type of nouns, including more than half of the nouns in the language.

Suffixation is in accordance with the following rules:-

1) Dual: Stem ...CV? > ...CV + ˊkú ~ ˋ?kú

2) Plural: Stem ...CV? > ...CV + ˊhí ~ ˋ?hí

ˊkú/ˋ?kú and ˊhí/ˋ?hí vary morphophonemically, choice of allomorph being dependent on the preceding noun stem. Dual and plural forms of nouns are therefore indicated where possible in the lexicon (Appendix I).

e.g.	Singular	Dual	Plural
"chieftain"[44]	ke?víkágí	ke?víkágiikú	ke?víkágiihí
"bee"[45]	maápagí	maápagiikú	maápagiihí

[44] Human animate with classifier. cf. examples for type i, above.

[45] Non-human animate with classifier.

	Singular	Dual	Plural
"toe"[46]	-hii?pá́gú́	-hii?pá́gaakú́	-hii?pá́gaahí́
"knife"	va?agaǰá?	va?agaǰaakú́[47]	va?agaǰaahí́
"cup"	taasa?íǰó	taasa?iǰókú́[48]	taasa?iǰóhí́

3.2.2.2.4. Suffix Order 4: Restrictive.

-nú - -ná "restrictive"

The two forms vary freely.

e.g. i) ǰaáná - ǰ a a k u - ná
NnSt$_{2.1}$ sx 2-sx 3 sx 4 "only two little children"

ii) keé?šé - musi - ná
NnSt$_{2.2}$ sx 3 sx 4 "only two cows"

iii) -hii?pa - ná
NnSt$_{2.3}$ sx 4 "only a foot"

iv) va?a - gá - ǰ a a k u - ná
NnSt$_{2.4}$ sx 1 sx 2-sx 3 sx 4 "only two knives"

3.2.3. Distribution.

The members of the class of noun words are distributed in the Head slot of Noun Phrases, and in the Vocative tagmeme slot at Clause level. Sub-classes are set up on the basis of this distribution.

3.2.3.1. Sub-class 1, "Temporal".

This consists of all nouns referring to time, which are dist-

[46] Body part with classifier.

[47] This illustrates presence of suffix orders one (classifier), two (diminutive) and three (number).

[48] The tone of the antepenultimate syllable here becomes low, since sequences of three high tones do not occur (except in very rare cases).

ributed in NP type ii.

e.g. nokǒtsá nǒokǒ teé?í-kǒo no?pí
yesterday afternoon river-to I-go
NP_{ii} "Yesterday afternoon I went to the river"

(NP_{ii} -- cf. 6.1.2.2.2., below)

3.2.3.2. Sub-class 2, "Vocative".

This consists of all nouns of address, which level-skip and are distributed in the Vocative slot at Clause level.

e.g. čhómí, vée pítsá?
sister here you-come
$V:Nn_2$ "Sister, come here"

(Vocative tagmeme -- cf. 7.1.2.12., below)

3.2.3.3. Sub-class 3.

This consists of all nouns not accounted for above, i.e., the vast majority of nouns in the language. These are distributed in the Head slot in NP type i. Different lexical categories of sub-class 3 nouns are established, according to whether or not these nouns may co-occur with the Limiter tagmeme in NP_i, and, if so, whether that occurrence is optional or obligatory.

3.2.3.3.1. Category 1, "+ Limiter".

This category consists of four groups of nouns: kinship terms, body parts, nouns referring to things conceptualized as parts of a whole, and nouns that undergo certain changes (apart from those caused by assimilation) when possessed.

3.2.3.3.1.1. Kinship terms.

All kinship terms of reference (i.e., not vocatives) are included in this category.

e.g. Hoaa náagí "John's brother"

phanígí "your father" (< pha hanígí[49])

3.2.3.3.1.2. Body Parts.

All nouns referring to body parts are included in this category. Here, the term is used to determine the membership of the set, and not as in section 3.2.2.2.3., above. Thus, uncountables such as -iidú "blood" and nouns formed by derivation with classifiers, but which nevertheless refer to body parts (or components), such as-hii?págú "toe", are included here.

e.g. giidú "his blood" (< tsá iidú)

ãoo?págú "my toe" (< ãó hii?págú)

3.2.3.3.1.3. "Parts of Wholes".

It is difficult to find an appropriate cover term for this group of nouns obligatorily possessed (or marked for deixis). These nouns refer to objects conceptualized as parts of a whole. The following examples clarify the meaning of this term.

e.g. daápú "residue, crumbs" (< tsá aápú, Lit. "its residue")

č‿iivú "centre" (< tsá hiivú, Lit. "its centre")

č‿ímíú "seed" (< tsá hímíú, Lit. "its seed")

gipáginó "nest" (< tsá páginó, Lit. "its nest, cover")

[49]For assimilation of pronouns, cf. 3.3.2., below.

3.2.3.3.1.4. Radical-changing Nouns.

This group consists of the "possessed" allomorph of those nouns that change either

i) a derivational suffix

or, ii) the stem itself

or that iii) add a morpheme

when possessed, but not when marked by deixis.

3.2.3.3.1.4.i. Change of Derivational Suffix.

The nouns in this section are those that include in their derivation a complex noun stem, sub-type i ("Concrete Nominalization"), consisting of a nominalized verb group, as described at stem level in II.2.2.2.2.1., above.

When these nouns are possessed, nominalizer -ʲtsí > -ʲnú (in which the u becomes a before further suffixes).

e.g. a?mithoótsí "food, a meal" ; do?mithoónú "her food, meal"

boe?khoótsígú "paddle" ; piboe?khoónágú "your paddle"

There are a very few exceptions:

a) tho?khoótsigú "mortar, bowl i n which yucca is ground"

This remains unchanged when possessed.

b) tho?khoónagú "pestle for grinding yucca"

ka?foonagú "small wooden board used when making cassava bread"

These remain unchanged, regardless whether or not possessed (perhaps in the first case to avoid homophony, and in the second by analogy to it).

c) -ʲtsí > -ʲku

This change has only been observed for the following two nouns:

i?kaananíitsí "vomit"[50] > gi?kaananíku "his vomit"

koneétsí "merchandise" > gikoneéku "his merchandise"

3.2.3.3.1.4.ii. Stem Change.

Two types of stem change are distinguished:

3.2.3.3.1.4.ii.i. Vowel length movement.

In the case of a few nouns with initial h and a long vowel in the first syllable, the length moves to the second syllable when the noun is possessed.

e.g. hiibí?é "coca" > č͡ibii?é "his coca"

hiítú "canoe" > č͡itáa "his canoe"

But not all h-initial nouns with a long vowel in the first syllable change:-

e.g. hiivú "centre" > č͡iivú "(its) centre"

Thus, conditioning here appears to be lexical.

3.2.3.3.1.4.ii.ii. A special case.

The possessed form of paníitsí "house" is -paánú. It is conceivable that this represents no more than a special case of change of derivational suffix, -ɨtsí ~ -ɨnú, with the Base of the noun stem involved being *pa-, a verb in a verb group, as described in 2.2.2.2.1., above, the only irregularity being the addition of the syllable *-ni- in the non-possessed form.

However, no verb group *pa has been attested, nor has

[50] Note irregular derivation from i?kaanú "to vomit", with -níi- (< *-ni-). cf. 3.2.3.3.1.4.ii.ii, below.

a morpheme *-ni- been observed in type ii sub-type i noun stems, with the exception of the irregular i?kaananítsí, "vomit", where the morpheme is retained in the possessed form (and where -ːtsí > -ːku -- cf. above).

In the light of this, it seems best to consider that {panítsí} is an irregular word in which the allomorph -paánú must co-occur with the Limiter tagmeme in the NP.

3.2.3.3.1.4.iii. Addition of a morpheme.

The small number of nouns that comprise this section add the morpheme {-ːʔdé}[51] when possessed. The form with this additional morpheme must co-occur with the Limiter tagmeme in the NP. The following rules and examples clarify the variant manifestations of this morpheme.

1. If the stem has no long vowel, the suffix lengthens the vowel before it:

va?agaǰáʔ "knife" > giva?aadégaǰáʔ "his knife"

kone? "bracelet" > dokonee?dené "her bracelets"

2. If the stem has a long vowel, there is no addition of vowel length, but the existing vowel length moves right one syllable (except as indicated subsequently):

iteevi?é "aguaje" > gi?teviidé?é "his aguaje"

avâanaí "stick" > da?vânaa?teí "his stick"

hee?ña "a type of cassava" > no?ñaadé "my cassava"

[51] Written thus since nowhere are all elements of the posited morpheme seen together. The numerous allomorphs are best seen in the examples that follow.

This rule does not apply in the following two cases:

i) if the long vowel is in the last syllable of the stem:

amoogí "a fish" > no?moodé "my fish"

poo?gí "frying-pan" > dopoo?dé "her frying-pan"

ii) if the long vowel is followed by a glottal in the stem:

ee?phígú "fishing hook" > dee?phídegú "his fishing hook"

3. If the stem has a glottal, this causes the deletion of the suffix glottal:

ee?phígú "fishing hook" > dee?phídègú "his fishing hook"

poo?gí "frying-pan" > dopoo?dé "her frying-pan"

va?agaǰá? "knife" > giva?aadégaǰá? "his knife"

But if the stem does not have a glottal, one is added to the end of the first syllable of the stem:

amoogí "a fish" > no?moodé "my fish"

iteevi?ó "aguaje" > no?teviidé?ó "my aguaje"

(In iteevi?ó, the glottal is in the classifier suffix, not the stem.)

avâanaí "a stick" is slightly different, with a second glottal immediately before the added morpheme, in which the d is devoiced: da?vânaa?teí "his stick"

ókóniigí "fire" also has an extra glottal, but the rest of the added morpheme is not present, and the long vowel in the stem is shortened; dó?kóni? "his/her fire"

4. Classifiers and other word level nominal suffixes go after the additional morpheme, and are often deleted:

i) Noninal suffixes included:

ee?phígú "fishing hook"	>	dee?phídegú "his fishing hook"
iteevi?o "aguaje"	>	gi?teviidé?é "his aguaje"
aváanaí "stick"	>	da?vánaa?teí "his stick"
va?a-ga-ǰá? "knife"	>	giva?aadé-ga-ǰá? "his knife" (shows sx orders 1 and 2)
kone? "bracelet"	>	dokonee?dené "her bracelets" (shows sx order 3)

ii) Noninal suffixes deleted:

amoogí "fish"	>	da?moodé "his fish"
pee?gí "frying-pan"	>	dopee?dé "her frying-pan"
ókóniigí "fire"	>	dé?kóni? "his/her fire"

3.2.3.3.2. Category 2, "- Limiter".

This category consists of the basic, non-possessed allomorphs of all "radical-changing" nouns (those with a special form when possessed -- cf. Category 1, above, fourth group (3.2.-3.3.1.4.)).

e.g. a?mithoétsí "food, a meal"

koneétsí "merchandise"

hiítú "canoe"

paniítsí "house"

va?agaǰá? "knife"

3.2.3.3.3. Category 3, "± Limiter".

This consists of all sub-class 3 nouns not accounted for in Categories 1 and 2 above, i.e., most sub-class 3 nouns.

e.g. phaigí "old man"

onáʔkó "snake"

ǰodooʔfígú "waterfall"

(For NP type i, cf. 6.1.2.2.1., below.)

3.3. Pronoun Word.

3.3.1. Contrast.

Pronoun words (Pn) have the following contrastive-identificational features:-

i) Their Base is filled by a pronoun stem.

ii) They are typically assimilated to a following noun, verb, or relator, in accordance with a series of morphophonemic processes.

3.3.2. Variation.

Pronouns are grouped into types, according to whether or not they are affected by assimilation at word level.[52]

3.3.2.1. Type i.

This consists of sub-class 1 pronoun stems, viz:

ʁó 1st person singular

phú 2nd " "

tsú 3rd " " - masculine

tsó " " " - feminine

---

[52]This qualification is included, since those very pronouns which are not affected by assimilation at word level are the ones which consist of a pronoun root + derivator at stem level, where the root has been subject to the same assimilatory processes in the context of the following derivator as those which are described here as occurring at word level in the context of a noun, verb, or relator.

fú 1st person non-singular, inclusive

i 2nd " " imperative

ʁú 3rd " "

With the exception of i, these are optionally assimilated to a following noun, verb, or relator (or, at stem level, (in all cases except the first two and the imperative pronoun) to a pronoun stem derivator).[53]

i "2nd person non-singular, imperative" is obligatorily assimilated to a following verb.[54] This assimilation is different from that of all the other pronouns, since this pronoun consists only of a vowel, without a preceding consonant, and since this pronoun also only occurs with a verb, and then only in the imperative. The assimilation is simply as follows:

i > Ø before h- or V-initial verbs;

i does not change elsewhere.

e.g. šú "to eat meat" : išú "eat meat!" (pl)

ee?phi khú "to fish": ee?phi ikhú "fish!" (pl)

---

[53] 1st person non-singular exclusive, muu- and 2nd person non-singular hu- are also assimilated to a pronoun stem derivator at stem level, but not to following nouns, verbs, or relators at word level. Apart from the usual change of u to a in the case of hu-, their assimilated form is the same as their non-assimilated form, since in assimilated voiceless consonants become voiced, and m is already voiced, while there is no voiced counterpart to h in Resígaro. (cf. 2.3.2.2., above)

[54] The verbal piece auxiliary indicator ʁa- "Privative" is also obligatorily assimilated to a following verb, but in accordance with the processes described for pronouns other than i. Examples are given below, in footnotes.

hadá?pú "to sing" : hádá?pú "sing!"(pl)

i?pí "to go" : í?pí "go!" (pl)

(cf. 3.1.2.6.1.1.(ii),(iii), above.)

Pronouns that are assimilated are normally functioning as Subject at clause level.

e.g. no?mitú
I-eat "I eat"
S:NP-P:VP

However, there are at least two cases where assimilation may occur between a pronoun functioning as Object at clause level, and the following filler of the periphery slot in the verb group:

i) no-manáa gi-tó?
me know he-get "He knows me"
O:NP S:NP-P:VP

ii) noótó gi-khú
me-help he-do "He helps me"
O:NP - S:NP-P:VP

(cf. Verb Group, 4.1.2.2.1., and Clause, 7.2.1.2.3.1.1., below.)

3.3.2.1.1. Major Changes.

For all pronouns except i, assimilation affects the vowel and consonant of the pronoun, and the first syllable of the following word or relator. It may best be described by dividing both pronouns and following words/relators into three phonological groups. These groups are not structural types in the usual sense, as a type of a given class at a given

level, since they cut across classes and levels, but are merely convenient groupings of pronouns and following words/relators, based on phonological characteristics and morpho-phonemic considerations.

The form of vowel assimilation is dependent on the pronoun group involved (with some limitations in the case of Consonant-initial following words/relators). The form of consonant assimilation is dependent on the group of the following word/relator.

Pronoun Groups.

The three pronoun groups are:-

Pron. Group I : "$\underset{o}{K}o$" = ʁó, tsó

" " II : "$\underset{o}{K}a_1$" = phú, tsú

" " III : "$\underset{o}{K}a_2$" = fú, ʁú[55]

Following Word/relator Groups.

The three groups of following word/relator are:-

		Noun	Verb	Relator
Following word/rel Group I:				
h-initial	e.g.	-henákó "ear"	ha?pú "to cross"	-hipóo "under"
Following word/rel Group II:				
V-initial	e.g.	-ii?šáú "belly"	a?nitú "to eat"	-a?ná "beside"

[55] Verbal Piece auxiliary indicator ʁa- may also be considered to belong to this group.

Following word/rel Group III:

C-initial[56] e.g. -vánɨ "back" tshɔ́ní "to see" -kɔ́o "to(wards)"

The intersections of the three pronoun groups with the three word/relator groups yield nine types of assimilation, which are summarized in the following matrix, and explained in the subsequent paragraphs.

Word/rel Groups / Pron. Groups	I: h-initial	II: V-initial	III: C-initial
I: $\underset{o}{K}$o (nɔ́, tsɔ́)	$\underset{o}{K}$o	Ko	Ko
II: $\underset{o}{K}a_1$ (phú, tsú)	$\underset{o}{K}$V	KV	Ki
III: $\underset{o}{K}a_2$ (fú, nú)	$\underset{o}{K}$V (ex i)	KV (ex i)	Ka

Table 3.2. Matrix showing realizations of co-occurrence between pronouns and following words/relators.

Notes:

1. If the following word/relator is from Groups I or II, the pronoun is fused with the first syllable of that word/relator, and the first two columns of the matrix indicate the form of the resulting syllable.

[56] In this context, this is to be understood as meaning "consonant-other-than-h initial". The abbreviation will be used for convenience throughout this section.

2. If the following word/relator is from Group III, the assimilated form of the pronoun precedes the unmodified first syllable of that word/relator. The third column of the matrix indicates the form of the pronoun when assimilated.

3. $\underset{o}{K}$ = (n)[57] (ph) (f) (TS) and TS = /č/ before /i/ and /u/ and /ts/ elsewhere

4. K = (n)[58] (p) (v) (D) and D = /g/ before /i/ and /u/ and /d/ elsewhere

5. /o/, /i/ and /a/ have their usual values.

6. V = any vowel, the vowel chosen in any given case being that of the first syllable of the following word or relator.

The normal effect on the consonant of the pronoun assimilated to a word or relator is to voice the voiceless consonant of that pronoun (except when the word/rel begins with an h). But there is one exception to this: aspirated /ph/ loses its aspiration. For this reason, the symbols $\underset{o}{K}$ and K have been used, instead of $\underset{o}{C}$ and C.

The apparently assymetric behaviour of /ph/, the only aspirated consonant in this set, is of particular interest. It initially appears to be the one exception to all the rules proposed, but further investigation reveals that this is not

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[57] m, from VbPce aux ind ma-, also belongs to this set.

[58] m, from VbPce aux ind ma-, also belongs to this set.

the case. On the contrary, its behaviour demonstrates the operation of completely systematic rules and confirms the value of the concept of Voice-Onset Timing, as developed by Lisker & Abramson (1964), as a phonological parameter operating in a language.

In their study of initial stops in several languages, Lisker & Abramson demonstrated that the production of voiced, voiceless, and voiceless aspirated stops can be described by reference to the relation between the time of release of the stop and the voice onset time (VOT). For voiced stops in the languages they studied, they found that voice onset may precede release ("voicing lead") by from approximately 140 milliseconds to approximately 30 milliseconds, depending on the language and certain other factors. For voiceless stops, voice onset may follow release ("voicing lag") by from 4 to 34 milliseconds, depending on the same factors. Likewise, for voiceless aspirated stops, there may be a voicing lag of from 59 to 98 milliseconds. Thus, aspiration and voice are seen as not different types of phonetic features, but varying degrees of the same feature (VOT).[59]

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[59]Kim has claimed (1970) that, for Korean, at least, the presence or absence of aspiration is in fact due to the degree of opening of the glottis at the time of release, and the resultant differences of "time it takes for the open glottis to close for the vibration of the following vowel"(p. 109):

> "What is controlled by the laryngeal muscles in the case of aspiration is not the timing of the glottal

In an article in 1972, Roberts extends the concept of Voice Onset Timing to the parameter of nasality, introducing the concept of Nasal Onset Timing (NOT), with implications with regard to other features. Roberts emphasises that the value of the concept of Feature Onset Timing is in a large measure dependent on its usability in field situations for perceptual, as opposed to purely instrumental, studies, and the Resígaro data under discussion illustrates this point.

When a pronoun is assimilated to a following word or relator (except one beginning with /h/), a voiceless consonant in the pronoun becomes voiced, and voiceless aspirated /ph/ loses its aspiration. Both these processes represent the operation of the same phonetic change: a decrease in voicing lag.

It is significant that not only does the present data provide morphophonemic substantiation for Lisker & Abramson's contention with regard to initial stops, but extends the val-

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closing (Lisker & Abramson's view) but the size of the glottal opening (my view)." (p. 112)

However, this point is of relatively minor importance to the understanding of the relationship between voice and aspiration, as Lisker and Abramson point out (1971:770): aspiration is in either case dependent on VOT, regardless of the physiological manner of controlling this -- either by delaying the command to vibrate the vocal cords, or by not delaying this command, but by widening the glottal opening to cause a delay in accomplishing it.

idity of VOT with reference to all consonant types within the Resígaro system -- stop (ph), affricate (ts), fricative (f), and nasal (m)[60] -- both in initial and non-initial position.[61]

The decrease in voicing lag would be expected to change /ts/ to /dz/, however, this is slightly modified, being realized as /d/. This may be attributable to the extremely infrequent occurrence of the phoneme /dz/.

/ts/ and /d/ are further affected before a close vowel (/i/ or /u/), as indicated above, becoming /č/ and /g/, respectively.

Full details of assimilation are now given, with examples.

3.3.2.1.1.1. Pronoun Group I (mó, tsó).

.1. With Word/relator Group I (/h/-initial).

$\underset{o}{K}o$ + hV(V)... > $\underset{o}{K}o$(o)...

.2. With Word/relator Group II (V-initial).

$\underset{o}{K}o$ + V(V)... > Ko(o)...

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[60] And /m/ in the VbPce aux ind.

[61] cf. also examples of movement of VOT in the opposite direction -- increasing lag -- in noun derivation at stem level (section 2.2.2.2.1., above). Likewise, /n/ in the final syllable of i?pí(ná) is devoiced before addition of the causative.
e.g. tsa-mí gi?píṇotú
him-rec he-go-cstv
past "He made him go"
(cf. causative, 2.1.2.2.1., above.)

.3. With Word/relator Group III (C-initial).

$\underset{o}{K}o$ + CV(V)... > KoCV(V)...

Examples.

Word/rel Group:	I: hV(V)...	II: V(V)...	III: CV(V)...
Noun:	-henáḱó "ear"	-ii?šáú "belly"	-váⁿí "back"
ⁿó (1st p.sg.)	ⁿonáḱó "my ear"	noo?šáú "my belly"	nováⁿí "my back"
tsó (3rd p.sg.,f.)	tsonáḱó "her ear"	doo?šáú "her belly"	dováⁿí "her back"
Verb:	ha?pú "to cross"	a?mitú "to eat"	tshéní "to see"
ⁿó (1st p.sg.)	ⁿo?pú "I cross"	no?mitú "I eat"	notshéní "I see"
tsó (3rd p.sg.,f.)	tso?pú "she crosses"	do?mitú "she eats"	dotshéní "she sees"
Relator:	-hipóo "under"	-a?ná "beside"	-kóo "to(wards)"
ⁿó (1st p.sg.)	ⁿopóo "under me"	no?ná "beside me"	nokóo "to me"
tsó (3rd p.sg.,f.)	tsopóo "under her"	do?ná "beside her"	dokóo "to her"

3.3.2.1.1.2. Pronoun Group II (phú, tsú).

.1. With Word/relator Group I (/h/-initial).

$\underset{o}{K}a_1$ + hV(V)... > $\underset{o}{K}$V(V)...

.2. With Word/relator Group II (V-initial).

$\underset{o}{K}a_1$ + V(V)... > KV(V)...

.3. With Word/relator Group III (C-initial).

$\underset{o}{K}a_1$ + CV(V)... > KiCV(V)...

Examples.

Word/rel Group:	I: hV(V)...	II: V(V)...	III: CV(V)...
Noun:	-henáḱó "ear"	-ii?šáú "belly"	-váⁿí "back"
phú (2nd p.sg.)	phenáḱó "your ear"	pii?šáú "your belly"	piváⁿí "your back"
tsú (3rd p.sg.,m.)	tsenáḱó "his ear"	gii?šáú "his belly"	giváⁿí "his back"
Verb:	ha?pú "to cross"	a?mitú "to eat"	tshéní "to see"
phú (2nd p.sg.)	pha?pú "you cross"	pa?mitú "you eat"	pitshéní "you see"
tsú (3rd p.sg.,m.)	tsa?pú "he crosses"	da?mitú "he eats"	gitshéní "he sees"
Relator:	-hipóo "under"	-a?ná "beside"	-kóo "to(wards)"
phú (2nd p.sg.)	phipóo "under you"	pa?ná "beside you"	pikóo "to you"
tsú (3rd p.sg., m.)	čipóo "under him"	da?ná "beside him"	gikóo "to him"

Further examples show (TS) realized as /č/ and (D) as /g/ before /u/:

tsú + hutooba?žó? "Banisterium" > čutooba?žó? "his Banisterium"

tsú + úni "saliva" > gúni "his saliva"

3.3.2.1.1.3. Pronoun Group III (fú, nú).[62]

.1. With Word/relator Group I (/h/-initial).

$$\underset{o}{K}a_2 + hV_1(V_1)... > \underset{o}{K}V_2(V_2)...$$

where $V_2 = V_1$, except when V_1 is /i/, when V_2 is /e/.

[62] Verb piece aux ind ⁿa- is subject to the same changes as the members of this group, except when otherwise indicated below.

.2. With Word/relator Group II (V-initial).

$\underset{o}{K}a_2 \quad + \quad V_1(V_1)\ldots \quad > \quad KV_2(V_2)\ldots$

where $V_2 = V_1$, except when V_1 is /i/, when V_2 is /e/.[63]

.3. With Word/relator Group III (C-initial).

$\underset{o}{K}a_2 \quad + \quad CV(V)\ldots \quad > \quad KaCV(V)\ldots$

Examples.

Word/rel Group:	I: hV(V)...	II: V(V)...	III: CV(V)...
Noun:[64]	-henákó "ear"	-ii?šáú "belly"	-ván̶í "back"
fú (1st p. non-sg.incl)	fenákooné "our ears"	vee?šáuuhí "our bellies"	vaván̶iiné "our backs"
n̶ú (3rd p. non-sg.)	n̶enákooné "their ears"	nee?šáuuhí "their bellies"	naván̶iiné "their backs"
Verb:[65]	ha?pú "to cross"	a?mitú "to eat"	tshéní "to see"
fú (1st p. non-sg.incl)	fa?pú "we cross"	va?mitú "we eat"	vatshéní "we see"
n̶ú (3rd p. non-sg.)	n̶a?pú "they cross"	na?mitú "they eat"	natshéní "they see"
Relator:	-hipóo "under"	-a?ná "beside"	-kóo "to(wards)"
fú (1st p. non-sg.incl.)	fepóo "under us"	va?ná "beside us"	vakóo "to us"
n̶ú (3rd p. non-sg.)	n̶epóo "under them"	na?ná "beside them"	nakóo "to them"

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[63] When preceding a Group II (i.e., V-initial) verb beginning with an /i/, m̶a- becomes ma- (unlike fú and n̶ú, which become ve- and ne-, respectively). However, when preceding a Group I (h-initial) verb with an /i/ in the first syllable, m̶a- follows the same rule as fú and n̶ú, and becomes m̶e-.

[64] Since the nouns in these examples are body parts, when the pronoun is plural, the nouns, too, must normally be plural.

[65] Here are some examples of the Verb Piece auxiliary indicator

Here are further examples, showing fú and ɱú as fe- and ɱe- when assimilated to Group I words in which the vowel of the first syllable is /i/, and as ve- and ne- when assimilated to Group II words in which the initial vowel is /i/:

Group I Verb:[66] hipú "to wash"

fú (1st p.non-sg.incl.) fepú "we wash"

ɱú (3rd p. non-sg.) ɱepú "they wash"

Group II Verb:[67] ímú "to sleep"

fú (1st p.non-sg.incl.) vémú "we sleep"

ɱú (3rd p. non-sg.) némú "they sleep"

3.3.2.1.2. Additional Changes.

In addition to the above changes when pronouns are assimilated, three further changes occurring when there is assimilation may be specified. They are dependent on certain features of the following word.[68]

3.3.2.1.2.1. Following Words with /ñ/.

If a Group II (i.e., Vowel-initial) noun[69] has both an initial /i/ and a palatal, /ñ/, at the beginning of the next syll-

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ɱa- prefixed to the same verbs:

ɱa?packá	ma?mitakáá	matshénikaá
"without crossing ..."	"without eating..."	"without seeing ..."

[66] With VbPce aux ind ɱa- : ɱepáaka... "without washing ..."

[67] With VbPce aux ind ɱa- : mámaaká ... "without sleeping ..."

[68] i.e., the following noun or verb. No cases of following relators having the structures that undergo these changes have been attested.

[69] No verbs with /ñ/ in the relevant syllable have been attested.

able, this has the effect of palatalizing the /n/ (but no other consonant) in the pronoun. It is significant that the regressive assimilation effect of /ñ/ is the only case where reference to a word syllable other than the first is relevant.

e.g.	Unassimilated form	Assimilated form	
i) -iñočhí "neck"			
nó	nó iñočhí	ñoñočhí	"my neck"
nú	ná iñočhíné	ñeñočhíné	"their necks"
ii) ii?ñé "thing"			
nó	nó ii?ñé	ñoo?ñé	"my thing, mine"
nú	ná ii?ñé	ñee?ñé	"their thing, theirs"

Groups I and III nouns with a palatal /ñ/ in the first or second syllable do not have this effect on the pronoun:

Group I: hee?ñá "(a type of cassava)"			
nó	nó hee?ñá	no?ñaade[70]	"my cassava"
nú	ná hee?ñá	ne?ñaade	"their cassava"
Group III:			
i) ñii?šógú "nightingale"			
nó	nó ñii?šógú	noñii?šógú	"my nightingale"
nú	ná ñii?šógú	nañii?šógú	"their nightingale"
ii) tíñeenebú "(a type of trap used for catching animals)"			

[70] This also demonstrates the addition of {-:?dé} to the noun, with movement of vowel length to the next syllable (and omission of the suffix glottal in the context of the stem glottal). cf. 3.2.3.3.1.4.iii, above.

nó	nó tíñeenebú	notíñeenebú	"my trap"
nú	ná tíñeenebú	natíñeenebú	"their trap"

3.3.2.1.2.2. /ǰ/-initial Words.

When pronouns are assimilated to words with an initial /ǰ/, the following additional change occurs:-

/ǰ/ > /ž/ if the /ǰ/ is followed by /a/ or /u/

e.g. (i) /ǰa.../

ǰá?nú "to wait"	nó ǰá?nú	nožá?nú	"I wait"
ǰaánú "child"	tsó ǰaánú	dožaánú	"her child"

(ii) /ǰu.../

aa ǰú "to be surprised"

ná aa ǰú	aa nažú	"they are surprised"

mitshá ǰú "to get up"

fá mitshá ǰú	mitshá važú	"we get up"

Contrast:

(i) /ǰi.../

ǰíigí "husband"	tsó ǰíigí	doǰíigí	"her husband"

(ii) /ǰe.../

ǰeévʔí "wolf"	phá ǰeévʔí	piǰeévʔí	"your wolf"

(iii) /ǰo.../

ǰó?nó "giant armadillo"

tsá ǰó?nó	giǰó?nó	"his giant armadillo"

3.3.2.1.2.3. /?/-Addition.

If a two-syllable Group III (Consonant-initial) verb of the structure CV́CV́ does not have a /?/ as one of its consonants, a /?/ is added initially when a pronoun is assimilated to the

verb.

e.g.

(i) pɛ̂ɲɔ́ "to swallow" tsɔ́ pɛ̂ɲɔ́ do?pɛ̂ɲɔ́ "she swallows"

(ii) mɛ̂ɲí "to play" ɲá mɛ̂ɲí na?mɛ̂ɲí "they play"

Fourteen verbs (and their derivatives) have been attested to fulfil all these requirements in Resígaro (but no nouns have). They are listed in the lexicon in the normal way, but a /?/ in parenthesis is placed initially to indicate this change. The /?/ is ignored for filing purposes.

There are three exceptions to this rule:-

i) tshɛ̂ní "to see"

e.g. fá tshɛ̂ní vatshɛ̂ní "we see"

Contrast tsɛ́ɲɔ́ "to bump into something"

e.g. fá tsɛ́ɲɔ́ va?tsɛ́ɲɔ́ "we bump into something"

ii) kâní "to cry"

e.g. ɲɔ́ kâní nokâní "I cry"

iii) mɔ́khɔ́ "to cut wood"

This is the most significant, as it forms a minimal pair with (?)mɔ́khɔ́ "to smell (intrans)"

e.g. tsá mɔ́khɔ́ gimɔ́khɔ́ "he cuts wood"

Contrast tsá mɔ́khɔ́[71] gi?mɔ́khɔ́ "he smells" (intrans)

Nevertheless, the definition CV̂CV̂ is retained, since in all other cases it includes all verbs that add /?/ and excludes

[71]This and the form above it are homophonous.

all those that do not.

3.3.2.2. Type ii.

This consists of sub-class 2 pronoun stems, which are not assimilated to following words or relators, nor modified in any way.

e.g. gi?í "this one (m)"

hamupi "you two (f)"

3.3.3. Distribution.

The members of the class of pronoun words are distributed in the Head slot in NP type iii.

e.g. ná a?mitú

they eat

H:Pn

S:NP$_{iii}$ P:VP

"They eat"

This NP type is part of NP distributional sub-class 2, the distribution of which is indicated in 6.1.2.3.2., below. Members of this NP sub-class may occur in clause-level slots, as in the above example, or recursively in the Limiter slot in NP type i.

e.g. ná hanígí

their father

Lim:NP$_{iii}$ H:Nn

NP$_{i}$

"their father"

(cf. 6.1.2.2.1.2., below)

If assimilation occurs, the two tagmemes involved (S and P, or Lim and H, in the above examples) are still considered

to be present, although in their phonemic realization they are fused, and sometimes it may not be possible to indicate the boundary:

ma?mitú — S:NP-P:VP "they eat"

naníɡí — Lim:NP-H:Nn "their father"

3.4. Adjective Word.

3.4.1. Contrast.

Adjectives (Aj) have the following contrastive-identificational features:-

i) Their Base is filled by an adjective stem.

ii) They co-occur with nominal and verbal word-level suffixes.

3.4.2. Variation.

Three types of adjective are set up on the basis of internal structure:-

Aj_{i} = +B:AjSt$_{1}$ +Nn sx 1:clsfr ±Nn sx 2:aug/dim ±Nn sx 3:nmb ±Nn sx 4:rest "Attributive"[72]

Aj_{ii} = +B:AjSt$_{2}$ "Predicative i"

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[72] Types are set up on the basis of structural differences, as indicated in the formulae, but since these types are co-extensive with the sub-classes of the adjective word set up on the basis of distribution, it is convenient to refer to these types by the titles chosen to describe the distribution.
This partial co-extensiveness of structural types and distributional sub-classes is a consequence of the fact that the structural variations signal semantic differences, which inevitably affect distribution. (This was also noted at stem level for the adjective.)

Aj_{iii} = +B:$AjSt_3$ ±Vb sx 2: incho

3.4.2.1. Adjective Type i, "Attributive".

Nominal suffixes 1-4 may be added to the filler of the Base slot in adjective type i, as indicated in the above formula. An Order 1 classifier suffix must occur. Choice of suffixes is dependent on the noun in the Head slot of the NP in which the type i adjective occurs.

e.g. i) ǰiǰaa-gí ǰaánú
big sx 1 child "the big child"

ǰiǰaa-ú vííši?o-ú "the big rock"

ǰiǰaa - ga - ǰ a a h í va?a - ga - ǰ a a h í
big sx 1 sx 2-sx 3 machete sx 1 sx 2-sx 3
"the big knives"

ii) ño?ha-?aamí apáná-?aamí
soft sx 1 leaf sx 1 "the soft leaf"

ño?ha-ú hímí - ú
soft sx 1 seed sx 1 "the soft seed"

(For further details, cf. description of NP, section 6.1.2.-2.1.4., below.)

3.4.2.2. Adjective Type ii, "Predicative i".

The filler of the Base slot in adjective type ii may not be suffixed.

e.g. aaii? tsó
healthy she "she is healthy"

gi?í ño?huu?
this soft "this one is soft"

3.4.2.3. Adjective Type iii, "Predicative ii".

The verb word order 2 suffix "inchoative" may be added to

the filler of the Base slot in adjective type iii, to emphasize the gradual or progressive nature of the process in question.[73]

e.g. ani - kaá tsú
healthy incho he "he is getting well"

gi?í ño?há - kaá
this soft - incho "this one is (gradually) becoming soft"

3.4.3. Distribution.

The members of the class of adjective words are distributed in Noun Phrase type i, in Predicate type i (sub-type i), in the Axis slot of Concomitant Phrase type i, and in the Modifier slot in the Verb Phrase. Sub-classes are set up on the basis of this distribution.

3.4.3.1. Sub-class 1, "Attributive".

This consists of type i adjectives, which occur in the Attributive slot in NP type i and in the Axis slot in Concomitant Phrase type i.

e.g. i) In the Attributive slot in NP type i:-

oojagí amoógí
small tapir "the small tapir"
Att:Aj H:Nn
NP_i (For further details, cf. 6.1.2.2.1., below.)

ii) In the Axis slot in CP type i:-

kai - née
death with
Axis:Aj relr "dead"
CP_i (cf. 6.2.5.2.1., below.)

[73] cf. 2.1.2.2.2. (VbSt) and 3.1.2.3.2. (Verb word), above.

3.4.3.2. Sub-class 2, "Predicative".

This consists of types ii and iii adjectives, which occur in Predicate type i, sub-type i.

e.g. i) ño?huu? tsú
soft it "It is soft"
$P_{i.i}$:Aj_2 (type ii)

ii) ño?hakaá tsú
soft-incho it "It is getting soft"
$P_{i.i}$:Aj_2 (type iii)

(For Predicate type i, sub-type i, cf. 7.1.1.1.1.1., below.)

3.4.3.3. Sub-class 3, "Modificatory".

This sub-class has so far been observed to have only one member. This is the type i adjective ooǰa- "small", which, in addition to its distribution in sub-class 1, as indicated above, also occurs in the Modifier slot in the Verb Phrase.

e.g. ooǰaǰá? do?vápa-mí oo
little he-swim rec int
past
M:Aj_3 H:VbPce Int
VP
"He certainly swam little"

(cf. 6.1.1.2., below.)

3.5. Adverb Word.

3.5.1. Contrast.

Adverbs (Adv) have the following contrastive-identificational features:-

i) Their Base is filled by a level-skipping adverb root, or by an adjective stem, sub-class 2.

ii) They co-occur with the adverbial suffix {-kuu?}.

3.5.2. Variation.

Adv = +B:AdvRt/AjSt$_2$ ±Emph: {-kuu?}

The structure of the Adverb word is not sufficiently varied to merit the establishment of different types (for comment on Pike's criteria for establishing different types, cf. footnote 15 to II.2.4.2.3., above). Examples below indicate whether the filler of the Base slot is an adverb root or an adjective stem.[74]

The form and distribution of the allomorphs of the filler of the Adverbial Emphatic slot are as follows:

{-kuu?} "Adverbial Emphatic"

-kuu? ~ -ka

The glottal is deleted when the emphatic is affixed to a filler of the Base slot containing a glottal.

The second vowel is deleted when the emphatic is affixed to a filler of the Base slot containing a geminate vowel sequence.

The resultant form *-ku is subject to the general morphophonemic rule which changes u to a, since the adverb does

[74]The Concomitant Phrase may have an adverbial function when its axis slot is filled by a Nominalized Clause.

e.g. gi-naa?ka-neé - mí gi-vitsáú
he angry with rec he shout
past
Axis:NomCl relr
CP$_i$
"He shouted angrily"

(For CP, cf. 6.2.5.2.1., below.)

not occur utterance-finally.

e.g. With Base filled by Adverb Root:-

i) kapí dé?ǰo
fast he-runs "he runs fast"

kapíkuu? dé?ǰo
fast-emph he-runs "he runs very fast"

ii) kenee?ǰá da?mitú
slowly he-eats "he eats slowly"

kenee?ǰaka da?mitú
slowly-emph he-eats "he eats very slowly"

With Base filled by Adjective Stem$_2$:-

i) anepuu? dé?ǰo
a_lot he-runs "He runs a lot" (i.e., often)

anepuu?ka dé?ǰo
a_lot-emph he-runs "He runs very much" (i.e., very often)

ii) kašoo? dodo?phaavú
good he-works "He works well"

kašoo?ka dodo?phaavú
good-emph he-works "He works very well"

3.5.3. Distribution.

The members of the class of Adverb words are distributed in the Modifier slot in the Verb Phrase.

e.g. anepuu? gímú
a_lot he-sleeps "He sleeps a lot"
M:Adv H:VbPce
(S:NP-)P:VP

(For further details, cf. 6.1.2., below.)

3.6. Demonstrative Word.

3.6.1. Contrast.

Demonstrative words (Dem) have the following contrastive-identificational features:-

i) Their Base is filled by a level-skipping demonstrative root.

ii) They co-occur with nominal word-level suffixes.

3.6.2. Variation.

Dem = +B:DemRt +sx1:clsfr ±sx2:aug/dim ±sx3:nmb ±sx4:rest

Demonstratives must bear the classifier suffix corresponding to the noun to which they refer. They also bear any other nominal suffixes found on the noun.

e.g. hí / hə́?e) - gá va?a - gú
this / that) sx1 machete sx1 "this/that machete"

hí / hə́?e) - ga - ǰá? va?a - ga - ǰá?
this / that) sx1 sx2 (dim) machete sx1 sx2
"this/that knife"

hí / hə́?e) - gá - ǰaakú va?a - gá - ǰaakú
this / that) sx1 sx2-sx3 machete sx1 sx2-sx3
"these/those two knives"

hí / hə́?e) - gá - ǰaaku - ná va?a - gá - ǰaaku - ná
this / that) sx1 sx2-sx3 sx4 machete sx1 sx2-sx3 sx4
"only these/those two knives"

hí - gí pí?mi
this sx1 hummingbird "this hummingbird"

hə́?e - gí - mu - ná ano - gí - mu - ná
that sx1 sx3 sx4 tapir sx1 sx3 sx4
"Only those tapirs"

3.6.3. Distribution.

The members of the class of demonstrative words are distributed in NP type i, where they occur in the Limiter slot.

e.g. hé?emí hiítfi
that canoe
Lim:Dem H:Nn
NP_i "that canoe"

(On NP_i, cf. 6.2.1., below.)

3.7. Numeral Word.

3.7.1. Contrast.

Numerals (Num) have the following contrastive-identificational features:-

i) Their Base is filled by a level-skipping numeral root, or by a noun stem, sub-class 3.

ii) They co-occur with nominal suffixes.

3.7.2. Variation.

Composite formula:-

Num = +B:NumRt/$NnSt_3$ +sx 1: clsfr ±sx 2: aug/dim ±sx 3: nmb ±sx 4: rest

With numbers "one" and "two", the choice of classifier to fill suffix order 1 slot is dependent on the noun referred to (cf. 3.2.2.2.1., above). Here, the "finger" classifier is given, as this is used by the Resígaros when counting without reference to a specific object, since counting is derived from an activity carried out on the fingers and toes. There is no choice of classifier with any other numeral, but when

"one" or "two" occurs in a Numeral Phrase, the choice of classifier for these components is still dependent on the noun referred to.

The following examples permit contrast with the forms of the numerals given in the subsequent description:-

sá - mi	hiítú	
one clsfr	canoe	"one canoe"
sa - ?é[75]	avâana?é	
one clsfr	tree-trunk	"one tree trunk"
mi - m i i k ú	hiítâmiikú	
two clsfr-dl	canoe-clsfr-dl	"two canoes"
mi - ? e e k ú	avâana - ? e e k ú	
two clsfr - dl	tree - clsfr-dl	"two tree trunks"

The Order 2 (augmentative/diminutive) suffixes do not form an inherent part of any numeral, but must be added to "one" and "two", wherever these occur, if the noun referred to bears one of them.

e.g. sá - ?e - ǰá?	avâana - ?e - ǰá?	
one clsfr dim tree	clsfr dim	"one little tree trunk"
mi - mi - kobaakú?	sá - mi - kobá?	hiítá - mi - kobaahí
two clsfr aug - dl	one clsfr aug	canoe clsfr aug-pl
		"three big canoes"

Two types of numeral word are set up on the basis of internal structure.

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[75] The basic high tone of sá- becomes low before the following high tone.

3.7.2.1. Numeral Type i.

Num_i = +B:NumRt +sx 1:clsfr -/+sx 3:dl

In this type, the Order 3 dual suffix occurs with the numeral "two" only.

This type consists of the following four numerals:-

i) sa - gú — "one"

one	"finger"	
B:NumRt	sx 1:clsfr	
Num_i		

ii) sa - ?osí — "five"

one	"hand"	
B:NumRt	sx 1:clsfr	
Num_i		

iii) sa - gí — "twenty" (Lit.: "one (man)", i.e., two hands and two feet)

one	(animate)	
B:NumRt	sx 1:clsfr	
Num_i		

iv) mi - g a a k ú — "two"

two	"finger"	dl	
B:NumRt	sx 1	sx 3	
Num_i			

3.7.2.2. Numeral Type ii.

Num_{ii} = $+B:NnSt_3$ +sx 1:clsfr +sx 3:nmb -/+sx 4:rest

In this type, the Order 4 suffix occurs with the numeral "ten" only.

This type consists of the following two numerals:-

i) po?tsáavá - g a a h í — "four" (Lit.: "centre finger", i.e., forefinger[76])

centre	"finger"	- pl	
B: $NnSt_3$	sx 1	sx 3	
Num_{ii}			

[76] In Resígaro, "one" is the little finger of the left hand,

ii) pá - ?osí - k u - ná

all "hand" dual rest

B: NnSt$_3$ sx 1 sx 3 sx 4

Num$_{ii}$

"ten" (Lit.: "all two hands", i.e., both hands)

3.7.3. Distribution.

The members of the class of numeral words are distributed in the Numeral Phrase. Sub-classes are set up on the basis of this distribution.

3.7.3.1. Sub-class 1.

This consists of all the above numerals, which are distributed in Numeral Phrase type i.

3.7.3.2. Sub-class 2.

This consists of the numerals sagú, "one", and migaakú, "two", which are also distributed in Numeral Phrase type ii.

(For further details, cf. 6.1.3.2., below.)

"two" is the ring finger, "three" is the index finger, and "four" is the forefinger. "Five" is the hand. "Six" is the little finger of the other hand, etc. -- cf. 6.1.3.2.2.2., below.

Chapter 4

GROUP LEVEL

The Group is set up as a level of construction above the Word and below the Piece, for describing certain structures in the Verb hierarchy. Strictly speaking, it may be termed a sub-level, since it is not relevant to the other classes.

Types are set up within the Group on the basis of internal structure, and sub-classes are set up on the basis of distribution in the Verb Piece and in other structures.

4.1. Verb Group.

4.1.1. Contrast.

The Verb Group (VG) has the following contrastive-identificational features:-

i) Its Head is filled by a verb word.

ii) In its complex form, the periphery is filled by a Basic filler (cf. below), an adjective stem, a Noun Phrase, a Concomitant Phrase, an Instrument Phrase, or a relator.

4.1.2. Variation.

Two types of Verb Group are set up on the basis of internal structure.

VG_i = +H:$Vb_{1/2}$

VG_{ii} = +Periph:Basic/AjSt/NP_2/CP_2/IP/relr +H:Vb_1

When the filler of the Peripheral slot is an NP, this does not have a greater expansion than ±Lim:Pn +H:Nn, and if the Limiter tagmeme occurs, assimilation between the two is obligatory. The pronoun does not necessarily refer to the same extra-linguistic entity as the Clause-level Subject of the verb in the Predicate.

In a dictionary check that produced 392 different verb groups, the numbers corresponding to each type and sub-type were as follows:-

Type i: 239

Type ii: 153

being, Sub-type i: 148

with khú : 101

with ǰú : 45

with tó? : 2

Sub-type ii: 5

4.1.2.1. Verb Group Type i, "Simple".

All verbs occur in Verb Group type i.

e.g. khú "to make, to do"

ǰú[1] "to be"

a?mitú "to eat"

[1] In the imperative, ǰú becomes iižú. cf. 3.1.2.6.1.1.(i), above.

4.1.2.2. Verb Group Type ii, "Complex".

Two sub-types are set up on the basis of structural differences of a finer degree of delicacy than those separating types i and ii.

4.1.2.2.1. Sub-type i.

This has the form indicated in the formula above, with the following two restrictions:

i. In the Peripheral slot, the Instrument Phrase does not occur.

ii. In the Head slot, only the following sub-class 1 verbs occur: khú "to make, to do"

ǰú "to be"

tó?(vú) "to obtain"

Verb Groups formed with khú, "to make, to do", refer to transitive actions, whereas those formed with ǰú, "to be", refer to intransitive actions, or to some states. However, this is not a structural or distributional difference at this level, and so separate types or sub-classes are not established.

Examples.

[See next page]

Head / Periph.	khú	ǰú
Basic	fǒo khú "to blow"	fǒo ǰú "to swell up"
NP_2	gi-veni khú its-pay make "to recompense"	gi-nǐíkǎ ǰú its-fruit be "to grow (of fruit)"
	núúhigá khú shelter do "to shelter (s.o.)"	núúhigá ǰú shelter be "to take shelter"
$AjSt_4$	ani khú "to heal (s.o.)"	ani ǰú "to heal oneself, to get better"
	ooǰa khú small make "to make smaller, to shrink (tr)"	ooǰa ǰú small be "to become smaller, to shrink (intr)"
CP_2	kainêe khú dead make "to kill"	kainêe ǰú dead be "to die"
relr	hivê? khú in front make "to go in front of, to guide"	--- (No cases observed)

Table 4.1.: Verb Group ii.i. (khú/ǰú).

tó?(vú) appears to be no longer productive, being attested in only two Verb Groups:

manáa tó?[2] "to know"

kavíi tó? "to hunt, to pursue, to pay attention to"

manáa and kavíi are both Basic fillers.

[2]The -vú is always omitted unless the verb is suffixed. cf. 3.1.2.2.

manáa tó? is one of only two Verb Groups (the other being iítɛ khú, "to help") which always require an Object, even when the reciprocal suffix is added to the verb (this causes deletion of the Object with all other verbs -- cf. 3.1.2.2., above). Furthermore, the Object is in the majority of cases a pronoun, which must be assimilated to the filler of the Periphery slot (cf. assimilation, 3.3.2.1., above, and examples of an assimilated dummy Object with extraposition in 7.2.1.2.3.1.1., below).

e.g. na - manáa na - tóva?-kakávú
them know they get recip "They know each other"

4.1.2.2.2. Sub-type ii.

This has the form indicated in the formula at the beginning of the section, with the following two restrictions:

i. In the Peripheral slot, only the NP and the IP have been observed to occur.

ii. Only a few verbs (those indicated in examples below) may fill the Head slot, and then only in conjunction with the specified fillers of the Peripheral slot.

In some cases, the pronoun in the NP must refer to the Subject of the clause; in other cases, it may not. The restriction would appear to be semantic. Note the two possibilities:

1. Cross-reference between Subject of Clause and pronoun in NP in Peripheral slot of VG required:-

(i) -váfó hênotú "to think, to meditate"

e.g. no-vǎfǒ nǒnotǔ "I think"

(< -vǎfǒ, "interior, inside"; hǒnotǔ "to make the same")

(ii) -ho?dǒnaǔgí i?tǒnǔ "to kneel"

e.g. no?dǒnaǔ- gí no?tǒnǔ
my-knee with I-stand
Axis: NP relr
Periph: IP H:Vb
VG ii.ii "I kneel"

2. Cross-reference between Subject of Clause and pronoun in NP in Peripheral slot of VG not possible:-

(i) -híveǔ a?pithootǔ "to baptize"

e.g. číveǔ no?pithootǔ
his-head I-bathe-cstv "I baptize him"

(ii) -vení aa?ní "to buy, to pay"

Note that in this case the only pronoun observed in the NP is that for the third person singular masculine.[3]

e.g. gi-vení noo?ní
its-pay I-give "I buy it"[4]

The Verb Group -híveǔ pí?ko "to cut hair" has only been attested with different referents,

e.g. číveǔ do-pí?ko
his-head she-throws_away "She cuts his hair"

though presumably in the case of a person cutting his own hair, the pronouns would be co-referential (and the reflex-

[3] If the occasion were to arise in which one would wish to say "I bought you, her, etc.", one may assume that other person markers could occur.

[4] NB parallel between this and the sub-type i VG givení khǔ, "to recompense". The meaning of givení aa?ní is more specific, referring to giving of money or other goods to purchase something.

ive suffix would be added to the verb).

NP without pronoun:-

hooní i?votú "to freeze"

e.g. hooní fa?votú
water us-dry-cstv "It freezes"

On use of first person plural, inclusive in meteorological expressions, cf. footnote 17 to section 7.2.1.2.1., below.

No other cases of Verb Groups of type ii, sub-type ii have been attested, and this is a very little used structure.

4.1.2.3. Repetition of the Verb Group.

Repetition may be used to emphasize the gradual or progressive nature of an action. In the case of the Simple Verb Group, the entire Group may be repeated. In the case of the Complex Verb Group, only the filler of the Peripheral slot is repeated.

i) The Simple Verb Group.

e.g. dotsá?nu dotsá?nu "She continues coming"

gii?šú gii?šú "He gradually went up"

gi?pí gi?pí "He returned" (Lit.: "He went, he went")

ii) The Complex Verb Group.

e.g. ñe? ñe? nakhú "They pressed"

phá tuu tuu nokhátsí... "(I) cutting you in pieces..."

nagi nagi gižú "He becomes angry"

tsaa tsaa nežú "They shouted out"

4.1.3. Distribution.

The members of the class of Verb Groups are distributed in the Verb Piece and in Noun Stem type ii. Sub-classes of Verb Groups are set up on the basis of this distribution.

4.1.3.1. Sub-class 1.

This sub-class has three members, which may occur in the Head and Auxiliary slots of either type of Verb Piece.

i?pí "to go"

tsá?nu "to come"

khú "to do"

4.1.3.2. Sub-class 2.

This sub-class consists of all other Verb Groups, which may occur in all the contexts indicated for sub-class 1 except the Auxiliary slot in Verb Piece type ii, sub-type i.

e.g. a?mitú "to eat"

go? khú "to make a hole"

kainée ǰú "to die"

4.1.3.3. Sub-class 3.

This sub-class consists of those Verb Groups which, in addition to the above distribution, are also distributed in the Base slot of Noun Stem type ii.

e.g. a?mitú "to eat" tho? khú "to grind"

(?)támó "to cover" hooní i?votú "to freeze"

i?kanú "to vomit"

(On Noun Stem type ii, cf. 2.2.2.2., above.)

Chapter 5

PIECE LEVEL

The Piece is set up as a level of construction above the Group and below the Phrase, for describing certain structures in the Verb hierarchy. Strictly speaking, it may be termed a sub-level (like the Group), since it is not relevant to other classes.

Types are set up within the Piece on the basis of internal structure. It is not necessary to set up sub-classes at Piece level.

5.1. Verb Piece.

5.1.1. Contrast.

The Verb Piece (VbPce) has the following contrastive-identificational features:-

i) It consists of a Head and (in type ii) an Auxiliary, both of which are filled by Verb Groups.

ii) When the Auxiliary occurs, the filler of the Head slot is marked with an auxiliary indicator.

5.1.2. Variation.

The Verb Piece may be simple or complex, and different types are established accordingly.

$VbPce_{i}$ = H:VG

$VbPce_{ii}$ (Composite formula)

= ±aux ind +H:VG ∓aux ind +Aux:VG

5.1.2.1. Verb Piece Type i, "Simple".

This consists of a sub-class 1 or 2 Verb Group only.

e.g. a?mitú "to eat"

khú "to do"

jú "to be"

kainée khú "to kill"

kainée jú "to die"

5.1.2.2. Verb Piece Type ii, "Complex".

Two sub-types of complex Verb Piece are established.

5.1.2.2.1. Sub-type i, "Positive Action".

$VbPce_{ii.i}$ = +H:$VG_{1/2}$ +aux ind:∝{-ne / -?ké} +Aux:∝VG_{1}

where ∝ reads: -ne occurs with i?pí and tsá?(nu)

-?ké " " khú

The Verb Group filling the Head slot is modified in accordance with the following rules:-

i) Any final vowel except /i/ becomes /e/. /i/ remains unchanged.[1]

---

[1] cf. 3.1.2.4.(i) and 3.1.2.6.2.1.(xi), above.
The only exception to this rule is the verb group te?khí "to fetch", where final /i/ becomes /e/:
te?khéne no?pí "I go to fetch"
te?khéeké nokhú "I used to fetch"

ii) -ne "directional", or -ʔkɛ́ "habitual" is added to the subsequent form.

The appropriate verb is selected to fill the Auxiliary slot. This verb is marked for person in the normal way -- either with a separate Clause level Subject tagmeme, or an assimilated pronoun. In the examples that follow, to keep the structures as simple as possible, an assimilated pronoun is shown, and to facilitate comparisons, all examples are given in the first person singular. However, these constructions may of course occur with any person.

e.g. Hoaa a?mitɛ́ne i?pí
John eat-dir goes "John goes to eat"

novígipíne do-tsá?
to_talk-dir she-comes "She comes to speak"

(a?mitɛ́ "to eat")

a?mitɛ́ne no?pí "I go to eat"

" notsá? "I come " "

a?mitɛ́kɛ́ nokhɛ́ "I used " "

(novígipí "to speak")

novígipíne no?pí "I go to speak"

" notsá? "I come " " "

novígipíkɛ́ nokhɛ́ "I used " " "

((?)mɛ́ní "to play")

mɛ́?níne no?pí "I go to play"

" notsá? "I come " " "

mɛ́?níkɛ́ nokhɛ́ "I used " " "

(kainɛ́e khɛ́ "to kill")

kainɛ́e khɛ́ɛ́e no?pí "I go to kill"

" " notsá? "I come " " "

" khɛ́ekɛ́ nokhɛ́ "I used " " "

(nɛ́ɛ́higá ǰɛ́ "to take shelter")

nɛ́ɛ́higá ǰɛ́ɛ́e no?pí "I go to take shelter"

" " notsá? "I come " " " "

" ǰɛ́ekɛ́ nokhɛ́ "I used " " " "

In the case of Verb Groups containing a verb to which the reflexive suffix has been added, this usually follows the directional marker, but precedes the habitual marker, with a concomitant shortening of /aa/ to /a/ in the latter case.

e.g. (hipáphaavɛ́ "to wash oneself"

odo?phaavɛ́ "to work")

hipɛ́ɛ́ephaavɛ́ / ode?ɛ́ephaavɛ́ } { no?pí "I go / notsá? "I come } { to wash myself" / to work"

hipáphavɛ́ekɛ́ / odo?phavɛ́ekɛ́ } nokhɛ́ "I used to { wash myself" / work"

5.1.2.2.2. Sub-type ii, "Negative Action".

$VbPce_{ii.ii}$ = +aux ind:{ɛ́a-} +H:$VG_{1/2}$ +Aux:$VG_{1/2}$

The Head slot in this sub-type of Verb Piece is filled by a Verb Group whose Head is filled by a verb to which the inchoative suffix has been added, in accordance with the description in 3.1.2.3., above.

The auxiliary indicator in this case precedes the verb. It is the privative {ma-}, which is obligatorily assimilated to the verb in accordance with the rules stated in 3.3.2.1. for pronouns.[2]

The Auxiliary slot may be filled by any Verb Group (subject to normal semantic limitations).

Examples.

ma?mitákaá no?pí "Without eating I go"

manovígipíkaá notsá? "Without speaking I come"

kainée makhákaá no-miaápaví "Without killing I hunt"

núúhigá mežákaá nómú[3] "Without taking shelter I sleep"

This construction may also be used to convey negative temporal sequence. Thus, ma?mitákaá no?pitú may mean "Without eating I have a bath", or "Before eating, I have a bath". Similar glosses could be given for the examples above.

This is particularly clear when the clitic -khé?, "Incompletive" is added to the verb after the inchoative.

---

[2] Since assimilation is obligatory, the choice of base form is dependent on purely theoretical considerations. That form is chosen which permits the privative to be viewed as subject to the same rules as those governing pronoun assimilation, since the various forms parallel those attested for pronouns in the same environments.

[3] me- occurs here where ma- would be expected, due to the underlying initial ii- occurring with ǰú, but deleted in all but a few cases, as indicated elsewhere. Here /ii/ becomes /i/ in the proximity of /aa/, and this /i/ is assimilated to {ma-} in accordance with the normal rules.

e.g. anepuu? ee?phi ma - khá - kaâ-khê? - mí niì kašoo?
much fish priv do incho-incomp rec not well
past

no?mitú
I-eat

"Before catching a lot of fish, I did not eat well"

This example also illustrates the Auxiliary verb in the negative.[4]

5.1.3. Distribution.

The members of the class of Verb Pieces are distributed in the Verb Phrase. Since all Verb Pieces equally share the same distributional possibilities, it is not necessary to establish sub-classes.

[4]For another way of expressing negative temporal sequences (i.e., "before"), cf. Dative Object Phrase, section 6.2.1.2., footnote 9, below. For positive temporal sequences ("after"), cf. 6.2.8.2. (Adjunct Phrase) and 6.2.9.2.1. (Directional Phrase), below.

Chapter 6

PHRASE LEVEL

The Phrase is set up as a level of construction above the Word[1] and below the Clause. "Phrase" is defined as a sequence or potential sequence of words which functions as a unit, as in Pickett:

> "By 'potential sequences' I mean a sequence of words or a single word which is potentially expandable to a unit of two or more words by addition of optional modifiers. Traditionally, phrases have been assumed to be composed of more than one word. [Here she refers to Bloomfield, 1933:178.] In descriptions with the tagmemic model, however, conciseness and simplicity of statement are gained by considering phrase to include those single words which are potentially expandable to full phrases.... In addition to providing conciseness, such a description also more accurately reveals the structural relationships, since when the single noun which is potentially head of a phrase occurs in the Subject slot, it is not a different kind of unit but a representative of the phrase unit." (1960:33)

Phrases are divided into classes on the basis of their distribution in Clause-level slots. Some classes of phrase are endocentric (consisting of a Head plus or minus various modifiers), while others are exocentric (consisting of an Axis and a relator). The endocentric phrases are described first, and then the Axis-Relator phrases.

Types are set up within most classes on the basis of

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[1]The Verb Phrase is a special case, coming as it does above the sub-level Piece in the verb hierarchy.

internal structure. Sub-classes of some phrase classes are set up on the basis of distribution in Clause level slots and in other structures.

6.1. Endocentric Phrases.

6.1.1. Verb Phrase.

6.1.1.1. Contrast.

The Verb Phrase (VP) has the following contrastive-identificational features:-

i) Its Head is filled by a Verb Piece.

ii) Its Modifier slot is filled by an Adverb or an Adjective.

6.1.1.2. Variation.

VP = ±Int:oo ±M:Adv/Aj_3 +H:VbPce ±Int:oo

It is not necessary to set up different types of VP, since the only variation at Phrase level is the presence or absence of the Modifier and Intensifier tagmemes, which are in consequence regarded as optional.

Modifier.

The following examples show the Modifier present, since ample examples of the unmodified Head tagmeme are to be found in section 5.1.2., on the Verb Piece, and the Modifier could in any case be omitted in any of the examples given here. Examples show the Modifier slot filled by and Adverb and by an Adjective.

With Modifier slot filled by an Adverb:-

i) Isabeel[2] kenee?ǰá é?ǰo
Isabel slowly runs
M:Adv H:VbPce
VP
"Isabel runs slowly"

ii) Peedró kenee?ǰáka odo?phaavú
Pedro slowly-emph works
M:Adv H:VbPce
VP
"Peter works very slowly"

With Modifier slot filled by an Adjective:-

When the Modifier slot is filled by a sub-class 3 Adjective, this may have the usual adjective suffixes (i.e., the nominal suffixes, which are also added to attributive adjectives to indicate concord between the adjective and the noun it qualifies). However, the Order 1 suffix -- the classifier -- is obligatorily absent, since the choice of classifier is dependent on the noun which the adjective qualifies when occurring in the NP, and in the VP there is no noun present. The Order 3 suffix -- number -- is similarly absent.

Only ooǰa- "small, little" has been observed in this slot, with the nominal Order 2 suffix -ǰá? (diminutive).

e.g. Hoaa ooǰaǰá? é?ǰó
Juan little runs
M: Aj H:VbPce
VP
"John runs little" (i.e., infrequently)

[2]Spanish names do not necessarily conform to the phonology of the language.

For emphasis, the nominal Order 4 suffix -nǘ (restrictive) is used.

e.g. Hoaa ooǰaǰá?-nǘ é?ǰo
Juan little-rest runs
M:Aj H:VbPce
VP
"John runs very little" (i.e., very infrequently)

Intensifier.

The Intensifier tagmeme may occur initially or finally, or both initially and finally. It usually only occurs when the VP refers to an action in the past.

e.g. Hoaa-mí oo i?pí (oo)
John rec int go int
past
Int H:VbPce Int
VP
"John has already gone"

6.1.1.3. Distribution.

The Verb Phrase functions as Predicate within the Clause. Different sub-classes of VP are set up on the basis of their function in different types of Predicate.

6.1.1.3.1. Sub-class 1, "Intransitive".

The members of this sub-class occur in type ii Predicate, "Intransitive".

e.g. Peedró ímǘ
Pedro sleeps "Peter sleeps"
P_{ii}:VP_1

na?á odo?phaavǘ
they work "they work"
P_{ii}:VP_1

For further details, cf. 7.2.1.2.2., below.

These VP's may also occur in type iii Predicate, "Transitive", if the verb in the VP has the causative suffix. cf. 7.2.1.2.3., below.

6.1.1.3.2. Sub-class 2, "Transitive".

The members of this sub-class occur in type iii Predicate, "Transitive".

e.g. tsa-mí anoógí kainée khú
he rec past tapir kill — $P_{iii}:VP_2$ "He killed the tapir"

tsó maa?má emú
she cassava bites — $P_{iii}:VP_2$ "She bites the cassava"

For further details, cf. 7.2.1.2.3., below.

These VP's may also occur in type iv Predicate, "Ditransitive, if the verb in the VP has the causative suffix. cf. 7.2.1.2.4., below.

6.1.1.3.3. Sub-class 3, "Ditransitive".

This sub-class has one member, which occurs in type iv Predicate, "Ditransitive".

e.g. no-mí ókóniigihú gi-ké aa?ní
I rec past rifle him Dat give — $P_{iv}:VP_3$ "I gave the rifle to him"

For further details, cf. 7.2.1.2.4., below.

aa?ní may also occur in type v Predicate, "Tritransitive", when it has the causative suffix. cf. 7.2.1.2.5., below.

6.1.2. Noun Phrase.

6.1.2.1. Contrast.

The Noun Phrase (NP) has the following contrastive-identificational features:-

i) Its Head tagmeme slot is filled by a noun, a pronoun, a name, or a relative clause.

ii) Other tagmemes which may occur are: Limiter, Quantifier, Attributive and Modifier.

iii) The order of its constituent tagmemes is relatively fixed, except for the few possible permutations detailed in section 6.1.2.2.1.5., below.

iv) There is concord in NP type i between the Head tagmeme and other constituent tagmemes, and details of this are given below.

6.1.2.2. Variation.

Four types of NP are set up on the basis of internal structure:

NP_i = +/-/$\pm\alpha$ Lim:NP_2/Dem $\pm$Q:NumP/Ig α $\pm$Att:Aj_1 +H:Nn_3 α $\pm$M:RelCl

where α reads: when filler of H slot is from Category 1, Limiter is obligatory; when filler of H slot is from Category 2, or when filler of Q slot is an Interrogative, Limiter is obligatorily absent; when filler of H slot is from Category 3, Limiter is optional.

The tie bar indicates concord.

NP_{ii} = $\pm$Lim:Nn_1 $\pm$Q:NumP +H:Nn_1

NP_{iii} = +H:RelCl/Pn

NP_{iv} = +H:name $\pm$M:RelCl

6.1.2.2.1. Noun Phrase Type i.

The structure of this Noun Phrase type is as indicated in the formula in the preceding paragraph. There is concord with regard to all nominal suffixes (classifier, augmentative/diminutive, number and restrictive) within the NP between the Head and the Limiter (when filled by a Demonstrative), the Quantifier (when filled by a Numeral Phrase), and the Attributive.

In describing the variant manifestations of this Noun Phrase type, each constituent tagmeme is described in turn, in order to clarify which fillers may occur in each slot.

6.1.2.2.1.1. Head Tagmeme.

The occurrence of this tagmeme represents the minimal expansion of NP type i.

e.g. anoógí "tapir"

phaipíjé "old woman"

6.1.2.2.1.2. Limiter Tagmeme.

i) Occurrence of the Limiter tagmeme.

The Limiter tagmeme occurs either optionally or obligatorily, or is obligatorily absent, depending on the filler of the Head tagmeme slot:

$H{:}Nn_{3.1}$: + Lim

$H{:}Nn_{3.2}$: - Lim

$H{:}Nn_{3.3}$: ± Lim

e.g. i) + Lim

fa?mithoónú "our food"

phaigí hitáa "the old man's canoe"
old-man canoe
Lim H

ginígí "his face"

čiivú "its centre"

ii) - Lim

a?mithoótsí "food"

hiítú "canoe"

iii) ± Lim

va?agú "machete"

anoógí "tapir"

naikoogígí "shaman"

ii) Fillers of Limiter tagmeme slot.

The Limiter tagmeme may be manifested by an embedded Noun Phrase sub-class 2, or by a demonstrative. The NP indicates possession[3]; demonstratives normally indicate deixis (cf. below).

a) Noun Phrase, sub-class 2.

All types and sub-types of NP occurring in distributional sub-class 2 of the NP may occur.

i) Type iii.i: Relative Clause.

e.g. ee?phíkhovígí paánú
fish - Srel house
H:RelCl
Lim:NP iii.i H:Nn "The one who fishes' house"

[3]Changes in the form of the noun filling the Head slot when possessed are indicated in 3.2.3., above.

ii) Type iii.ii: Pronoun.

e.g. nó paánú
my house
H:Pn
Lim:NP$_{iii.ii}$ H:Nn "my house"[4]

nó hanígí
my father "my father"

In cases such as these, if no other tagmemes occur between the Limiter tagmeme and the Head tagmeme, assimilation usually occurs between the fillers of the two slots, as described in section 3.3.2.1., above.

e.g. nopaánú "my house"

nonígí "my father"

In this construction, the type ii pronoun gi?í/gi?ithé may function as a demonstrative, in addition to its normal use as a deictic possessive adjective. (This is talking in terms of traditional grammar; structurally, and tagmemically, it is always a pronoun. cf. footnote 4 hereunder.) Thus, for example, gi?í haádahí may mean "this one's land turtle" (i.e., "his land turtle"), or "this land turtle". Such ambiguity does not occur when the Head tagmeme slot in the NP is filled by a noun having a different form when possessed, as in the following examples:

gi?í panítsí "this house"

gi?í paánú "this one's house"

gi?ithé boe?khóótsigú "that paddle"

gi?ithé boe?khónagú "that one's paddle"

[4]Thus, in traditional terms, the pronoun here functions as a possessive adjective, and not just a personal pronoun, as elsewhere.

iii) Type iv: name.

This is of minimal expansion, and the Modifier tagmeme does not occur.

e.g. Hosé paánú
José house
H: name
Lim:NP$_{iv}$ H:Nn "José's house"

iv) Type i.

The form of the NP occurring in the Limiter slot is normally quite restricted, usually consisting of a Head only, or of a Head and a Limiter.

a) Head only.

e.g. phaigí paánú
old-man house
H:Nn
Lim:NP$_i$ H:Nn "The old man's house"

b) Limiter and Head.

e.g. higí phaigí paánú
this old-man house
Lim:Dem H:Nn "this old man's house"
Lim: NP$_i$ H:Nn
NP$_i$

If the embedded Limiter slot contains an NP consisting of a pronoun, this is assimilated to the noun in the Head slot of the same NP.

e.g. ɑ o n í g í paánú
my - father house
H:Pn
Lim: NP$_{iii}$ · H:Nn "my father's house"
Lim: NP$_i$ H:Nn
NP$_i$

Multiple embedding (e.g., "my father's house's roof's thatch") has not been observed in normal speech nor texts.

b) Demonstratives.

The occurrence of a demonstrative filler of the Limiter tagmeme slot indicates deixis.

e.g. hímí híítú
this canoe "this canoe"
Lim:Dem H:Nn

hêʔeʔaamí têʔaamí
that book "that book"
Lim:Dem H:Nn

iii) Concord in the Limiter tagmeme.

There is concord of all nominal suffixes between the filler of the Head tagmeme slot and demonstratives.

e.g. hí-m i i h í híítá-m i i h í
this sx 1-sx 3 canoe sx 1- sx 3 "these canoes"

hêʔe-gá-ǰaakú-ná vaʔa-gá-ǰaakú-ná
that sx 1 sx 2-sx 3 sx 4 machete sx 1 sx 2-sx 3 sx 4
"only those two knives"

6.1.2.2.1.3. Quantifier Tagmeme.

The Quantifier tagmeme slot is filled by a Numeral Phrase or by an Interrogative. There is concord of all numeral suffixes between the filler of the H tagmeme slot and the filler of the Numeral Phrase, affecting those numbers which may be modified (i.e., "one" and "two", and all Numeral Phrases of which these are components, viz., those that form 3, 6, 7, 8, 11, 13, 16, 17 and 18).

e.g. i) With Numeral Phrase filler of Q slot.

sá - ga - ǰá? va?a - ga - ǰá?
one sx 1 sx 2 machete sx 1 sx 2 "one knife"
Q:NumP H:Nn

sá?osí hiítá - m i ih'í
five canoe sx 1-sx 3 "five canoes"

ii) With Interrogative filler of the Q slot.

Either of the Group 6 Interrogatives hê?e anepuu? or hidê? anepuu? may occur (cf. 7.2.2.1.2.2., below, on Interrogative).

e.g. hidê? anepuu? va?agaǰaahí
how - many knives
Q:Ig H:Nn "How many knives?"

6.1.2.2.1.4. Attributive Tagmeme.

The Attributive tagmeme slot is filled by a sub-class 1 Adjective. There is concord of all nominal suffixes between the filler of the Head tagmeme slot and the filler of the Attributive tagmeme slot.

e.g. ǰiǰaa-gá - ǰ a a k u - ná va?a - gá - ǰ a a k u - ná
big sx 1 sx 2-sx 3 sx 4 machete sx 1 sx 2-sx 3 sx 4
Att:Aj_1 H: Nn
"only two big knives"

(For the Adjective, cf. 3.4.2., above.)

6.1.2.2.1.5. Modifier Tagmeme.

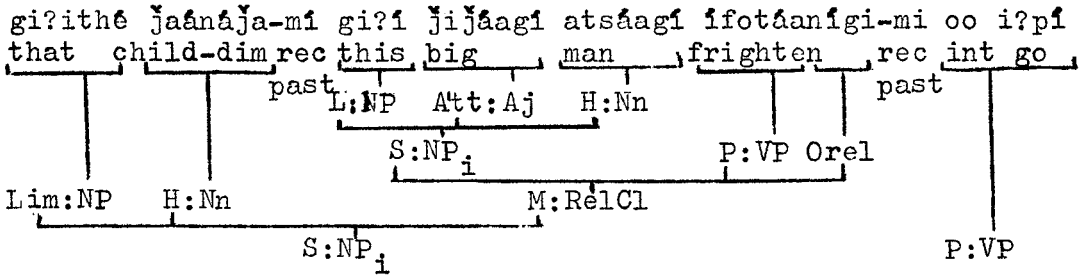
The Modifier tagmeme slot is filled by a relativized clause.

e.g. atsáagí-mí gífotáa - nígi - mí oo i?pí
man rec he-frighten-Orel rec int go
past past
H:Nn M:RelCl
NP
"The man he had frightened went away"

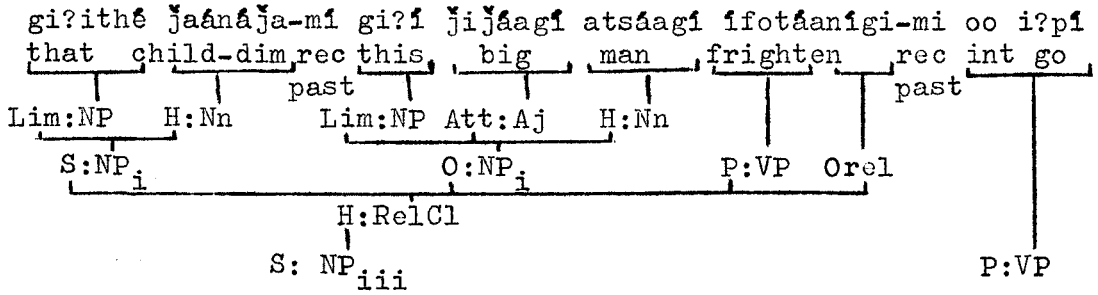
The Modifier tagmeme usually occurs after the Head tagmeme in the NP, although it may be permutated to the initial position in the NP, if ambiguity might otherwise result. For instance,

gi?ithé ǰaánáǰa-mí gi?í ǰijáagí atsáagí ífotáanígi-mí oo i?pí
that child-dim rec this big man frighten-Orel | int go
past rec
past

could be understood as "That little child that this big man frightened went away" or as "This big man that that little child frightened went away" -- not as improbable an interpretation as may be imagined, since Pablo pointed out this ambiguity, unprompted. In Resígaro -- though not in English -- the whole of the underlined section in each case is a relativised clause. The meaning depends on the structures of the matrix and embedded clauses: (NB, here L = Lim)



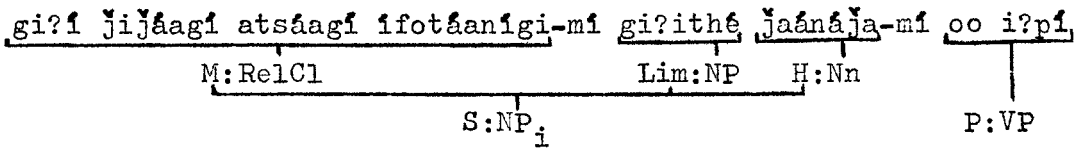
"That little child that this big man frightened went away"



"(That little child frightened this big man)[-rel] went away"

i.e., "This big man that that little child frightened went away"

If the second meaning is that desired, the structure and form indicated are appropriate (though this may be simplified, at Clause level, by extraposition). If the first meaning is that desired, ambiguity may be avoided by permutating the enitre Modifier tagmeme to initial position:



The above description and examples refer to relativized clauses having a restrictive (i.e., identificational) function. In Resígaro, relativized clauses may also have a non-restrictive (i.e., merely informative) function. In these cases, the following changes occur in the NP:

i) The relativized clause in question is preceded and followed by a pause.

ii) The entire structure has a distinctive intonation.[5] The contour rises immediately preceding each pause.

e.g. atsáagi-mí --- gífotáanígi-mí --- oo i?pí
man rec he-frighten-| rec past int go
past Orel

"The man, whom he had frightened, went away"

6.1.2.2.1.6. Co-occurrence of Tagmemes in NP Type i.

+Lim +H is probably the most frequent sequence of tagmemes

[5]Though a description of the intonation is beyond the scope of the present thesis, rudimentary details are given in this case, since in this structure intonation is one of the prominent distinguishing features.

in NP type i, followed in frequency by +Att +H and +Lim +Att +H. Q tagmeme occurs very infrequently, no doubt because most counting in Resígaro is in terms of "one", "two", or "several"[6], and this can be handled at word level by suffixes. M may occur in all the above sequences, though maximal expansion is quite rare.

[6]Though the number system extends to twenty.

6.1.2.2.2. Noun Phrase Type ii, "Temporal".

NP_{ii} = ±Lim:Nn_1 ±Q:NumP +H:Nn_1

e.g. aápaaná jakáde-kóo no?pí
tomorrow field-to I-go
H:Nn_1
NP_{ii}
"Tomorrow I am going to the field"

nokótsá naapí?é? sí-koomí-kóo gi?pí
yesterday morning other village to he-go
Lim:Nn_1 H:Nn_1
NP_{ii}
"Yesterday morning he went to the other village"

po?tsáávágaahí he?kóka no-náagí minápaví
four days my-brother hunt
Q:NumP H:Nn_1
NP_{ii}
"My brother has been hunting for four days"

6.1.2.2.3. Noun Phrase Type iii.

NP_{iii} = +H:RelCl/Pn

i) Relativized Clause.

The relativized clause occurring in this NP type always has a restrictive (i.e., identificatory) function.

e.g. gífotáanígi-mí oo i?pí
he-frightened-Orel-rec int go
past
H:RelCl
NP_{iii}
"The one he frightened went away"

ii) Pronoun.

e.g. nó a?mitʉ́
I eat
H: Pn "I eat"
NP_{iii}

This pronoun may assimilate with a following verb, as indicated in 3.3.2., above.

e.g. no?mitʉ́ "I eat"

But, grammatically, a separate NP is still considered to be present, even though on the phonological plane it is partly fused with the filler of the following tagmemic slot.

6.1.2.2.4. Noun Phrase Type iv.

NP_{iv} = +H:name ±M:RelCl

e.g. Hoaa - mí oo i?pí
Juan rec int go "John went away"
past
H:name
NP_{iv}

The relativized clause occurring in the M slot in this NP type always has a non-restrictive (i.e., merely informative) function (with attendant pauses and intonation contour).

e.g. Hoaa-mí --- Manoel ífotáanígi - mí --- oó i?pí
Juan rec Manuel frighten rec int go
past past
H:name
S:NP_{iv} P:VP Orel
H:name M:RelCl
NP_{iv}
"John, whom Manuel frightened, went away"

6.1.2.3. Distribution.

The members of the class of Noun Phrases are distributed in Clause and Phrase level slots. Two sub-classes of NP's are

set up on the basis of this distribution.

6.1.2.3.1. Sub-class 1, "Temporal".

This consists of all type ii Noun Phrases, which are distributed in the Temporal slot in the Clause, and in the axis slot in LP type ii, sub-type v.

e.g. aápaaná sí - koomí - kóo ne?pí
tomorrow other-village-to they-go
T:NP_1 "Tomorrow they go to the other village"

(cf. 6.2.10., below, on LP.)

6.1.2.3.2. Sub-class 2.

All other NP types can be grouped in one sub-class. These Noun Phrases have quite a wide distribution, but since they all equally share the same distributional possibilities, it is not necessary to establish further sub-classes.

They may occur back-looped in the Peripheral slot in Verb Group type ii, sub-type i. (cf. 4.1.2.2.1., above.)

e.g. núúhigá khú
shelter do
H:Nn
Periph:NP_2 H:Vb "to give shelter to s.o."
$VG_{ii.i}$

They may occur recursively in the Limiter slot of NP type i (cf. 6.1.2.2.1.2., above), and in the Axis slot of Axis-Relator phrases.

e.g. Hoaa - mí gi?ithé jaánajá - neé a?mitú
Juan rec past that child-dim with eat
Lim:NP H:Nn
Axis:NP_2 relr
CP_i

"John ate with that little child"

(For further examples, cf. section 6.2., below.)

They may also occur in the following Clause-level tagmemes: Subject, Object, Causative Object, and Predicate$_{i,ii}$.

e.g. Hoaa Manoel tshéní
Juan Manuel see "John sees Manuel"
S:NP$_{iv}$ O:NP$_{iv}$

Further examples are to be found in the preceding description of the NP, and in the description of the Clause, below.

6.1.3. Numeral Phrase.

6.1.3.1. Contrast.

The Numeral Phrase (NumP) has the following contrastive-identificational features:-

i) It may have a single Head tagmeme, or two Head tagmemes.

ii) These Head tagmemes are filled by numerals or by back-looped Numeral or Directional Phrases.

6.1.3.2. Variation.

Numeral Phrases are either simple or complex, and separate types are established on the basis of this difference.

6.1.3.2.1. Numeral Phrase Type i, "Simple".

NumP$_i$ = +H:Num$_1$

This consists of all sub-class 1 numeral words.

e.g. sagú "one"

po?tsáávágaahí "four"

6.1.3.2.2. Numeral Phrase Type ii, "Complex".

Composite formula:-

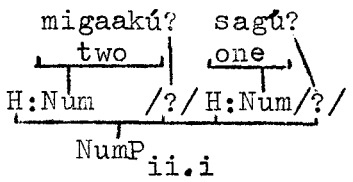
$NumP_{ii}$ = +H:Num_2/DP_1 +H:Num_2/$NumP_{ii.i}$

Three sub-types are set up on the basis of structural differences of a finer degree of delicacy than those separating types i and ii.

6.1.3.2.2.1. Sub-type i.

$NumP_{ii.i}$ = +H:Num ("two") + /?/ +H:Num ("one") + /?/

This sub-type has only one member:-



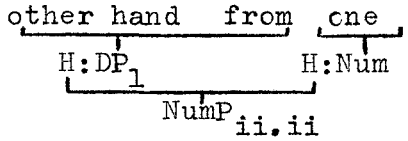
"three"

6.1.3.2.2.2. Sub-type ii.

$NumP_{ii.ii}$ = +H:DP_1 +H:Num

Three variants of DP_1 occur. Each is combined with the numerals for "one", "two" and "four", to create other numbers, and fee?pá-khó, "from our foot", is in addition combined with the numeral for "five", as indicated below.

a) sí - ?osí - khó sagú



"six" (Lit., "from the other hand one"[7])

sí - ?osí - khó migaakú
other hand from two

"seven" (Lit., "from the other hand two")

[7]Numbers 6-9 are counted on the right hand, starting with the little finger.

sí - ?osí - khó po?tsáávágaahí "nine" (Lit., "from the other-hand from four other hand, four")

b) fee?pá - khó sagú
our-foot from one
H:DP$_1$ H:Num
NumP$_{ii.ii}$ "eleven" (Lit., "from our foot, one"[8])

fee?pá - khó migaakú "twelve" (Lit., "from our foot, two")
our-foot from two

fee?pá - khó po?tsáávágaahí "fourteen" (Lit., "from our foot, four")
our-foot from four

fee?pá - khó sá-?osí "fifteen" (Lit., "from our foot, five")
our-foot from five

c) sí - tu?á - khó sagú
other-foot from one
H:DP$_1$ H:Num
NumP$_{ii.ii}$ "sixteen" (Lit., "from the other foot, one")

sí - tu?á - khó migaakú "seventeen" (Lit., "from the other foot, two")
other-foot from two

sí - tu?á - khó po?tsáávágaahí "nineteen" (Lit., "from the other foot, four")
other-foot from four

6.1.3.2.2.3. Sub-type iii.

NumP$_{ii.iii}$ = +H:DP$_1$ +H:NumP$_{ii.i}$

As in sub-type ii, the three variants of DP$_1$ occur. Each is combined with migaakú? sagú?, "three", to form the numbers for "eight", "thirteen" and "eighteen", respectively.

[8] Numbers 11-15 are counted on the left foot, starting with the little toe.

a) sí - ?osí - khó migaakú? sagú?
other-hand-from two /?/ one /?/
H:DP$_1$ H:NumP$_{ii.i}$
NumP$_{ii.iii}$
"eight" (Lit., "from the other hand, three")

b) fee?pá - khó migaakú? sagú?
our-foot from t h r e e
"thirteen" (Lit., "from our foot, three")

c) sí - tu?á - khó migaakú? sagú?
other-foot from t h r e e
"eighteen" (Lit., "from the other foot, three")

6.1.3.3. Distribution.

The Numeral Phrase is distributed back-looped in the Quantifier slot in NP typesi. and ii.

e.g. gi?í migaakú? sagú? va?agaahí
this t h r e e machetes
Lim: NP Q:NumP H:Nn
NP$_i$
"These three machetes"

(cf. NP, 6.1.2.2., above.)

6.2. Axis-Relator Phrases.

6.2.1. Dative Object Phrase.

6.2.1.1. Contrast.

The Dative Object Phrase (DOP) has the following contrastive-identificational features:-

i) Its axis tagmeme slot is filled by a recursive NP$_2$, by a back-looped clause, which has been nominalized (cf. 7.2.-2.3.), or by an interrogative.

ii) Its relator tagmeme slot is filled by -ké, "dative marker"

iii) The relator is phonologically bound to the last con-

stituent of the axis.

6.2.1.2. Variation.

DOP = +Axis:NP_2/ig/NomCl +relr: -ké "dative marker"

With NP filler of Axis slot:

i) gi?ithé ǰijáagí ǰaána - ké - mí maa?má doo?ní
that big child dat rec past cassava she-give

Axis:NP_2 relr

DOP

"She gave cassava to that big child"

ii) Isabeel-mí Hoaa náagi - ké iteevi?é aa?ní
Isabel rec past Juan brother dat aguaje give

Axis:NP_2 relr

DOP

"Isabel gave an aguaje fruit to John's brother"

With Interrogative filler of Axis slot:

kéení - ké - vá hamáaká doo?ní
whom dat fut hammock she-give

Axis:ig relr

DOP

"To whom will she give the hammock?"

With Nominalized Clause filler of Axis slot:

i) anepuu? nodo?phaavaa - ké, nií maa?tsá né
much I-work dat not tired I

Axis:NomCl relr

DOP

"Although I work a lot, I am not tired"

ii) píméa - ké nodo?phaaví
you-sleep dat I-work

Axis:NomCl relr

DOP

"While you sleep, I work"

From the above examples, it would appear that -ké is used with substantial differences of meaning when the axis slot of the Dative Object Phrase is filled with a nominalized

clause from when it is filled with an NP_2 or an interrogative, and, moreover, there is a possible difference of semantic relation between the clause-level tagmemes which the DOP manifests in each of the NomCl examples given, and the Predicate of the relevant clause. This difference of semantic relation may be indicated by the terms Concessive and Concurrent, respectively, and it gives rise to the possibility of viewing the relator in each case as representing two or even three homophonous but different morphemes: -kẻ, "Dative"; -kế, "Concessive"; and -kế, "Concurrent".

However, this suggestion is rejected for the following reasons:

i) The clause occurring in the axis slot is clearly nominalized in accordance with the pattern evidenced in other, non-ambiguous, contexts in the language, and thus has a relationship to the relator parallel to that of the NP's and interrogatives occurring in this slot.

ii) Almost all other axis-relator phrases in the language are unequivocally attested with NP and nominalized clause fillers of the axis slot, and this lends weight to the interpretation of doubtful cases in accordance with the established pattern. The existence of one or two cases which are of doubtful or ambiguous interpretation is not considered sufficient reason for establishing a separate pattern type --

one in which some A-R phrases only have an NP filler, while some others only have a nominalized clause filler -- especially when the relators are the same in each case.

iii) Though meaning is not rejected as a criterion in tagmemics (contrast Harris, 1951, for example), and is in fact always tacitly present in the recognition of differences, from morpheme level on up, it is not considered adequate for the establishment of different grammatical categories or types unless it co-occurs with at least one (Pike, 1967:471) or two (Longacre 1964a:18) formal differences.

iv) It may be that the apparently different meanings of -ké are no more than a consequence of our interpreting Resígaro in the light of English and Spanish structures, or, if such differences are taken to represent semantic differences in Resígaro, they may best be viewed as a consequence of the different contexts in which the DOP occurs, at clause level. It is to be expected that the relation of the Dative or Dative Object tagmeme to the Predicate tagmeme will vary with different fillers of the Predicate slot, and according to other similarities and differences between the nominalized and the matrix clause, such as when one is affirmative and the other negative, as in the first NomCl example, above.[9] Whether a relationship is inter-

[9]If the NomCl is negative, the DOP can be used to convey a negative temporal sequence. e.g. [Continued next page]

preted as concessive or not is in any case dependent on the expectations of the hearer, and though these may be reflected in different glosses, they are, in the final analysis, beyond the realm of the linguistic description.

All this is, in any case, a clause level variation, thus not affecting the establishment of types at phrase level. For this reason, it is also considered as not relevant to this level that when the Axis slot is filled by an NP or an interrogative, the filler of the Predicate slot at Clause level must be aa?nɨ́, whereas when the filler of the axis slot is a NomCl, there is no such restriction.

6.2.1.3. Distribution.

The Dative Object Phrase is distributed in the clause, where it fills the Dative Object and Dative slots. Two sub-classes of DOP are established on the basis of this distribution:

6.2.1.3.1. Sub-class 1.

This consists of all Dative Object Phrases with an NP_2 or an interrogative in the axis slot. The members of this sub-class are distributed in the Dative Object slot at clause

---

e.g. nɨ́-mɨ́-khɛ́? aá?pe ee?phi khaa-kɛ́-mɨ́ nɨ́ kašoo?
not rec incomp my-father fish do dat rec not well
past past
va?mitɨ́
Axis:NomCl relr we-eat
DOP

"As yet my father didn't fish, we didn't eat well"
i.e., "Before my father fished, we didn't eat well"

Verb Piece ii.ii may also be used to convey "before". cf. 5.1.2.2.2., above. (cf. 6.2.8.2. and 6.2.9.2.1. for "after" temporal sequences.)

level (cf. 7.1.1.6., below).

e.g. i) gi - kɛ́ - mí šakoo?gí?ɔ́ noo?ní
him dat rec banana I-give
Axis:NP$_2$relr past
DO: DOP$_1$
"I gave the banana to him"

ii) kɛ́enɨ́ - kɛ́ - mí ɔ́kɔ́niigihú daa?ní
whom dat rec shotgun he-give
Axis: ig relr past
DO: DOP$_1$
"To whom did he give the shotgun?"

6.2.1.3.2. Sub-class 2.

This consists of all Dative Object Phrases with a Nominalized Clause in the axis slot. The members of this sub-class are distributed in the Dative slot at clause level (cf. 7.1.2.1., below).

e.g. dɔ́maa - kɛ́ - mí iteevi?ɔ́ gi-khú
she-sleep dat rec aguaje he-eat
Axis:NomCl relr past
Dat:DOP$_2$
"While she slept, he ate aguaje fruit"

6.2.2. Purposive Phrase.

6.2.2.1. Contrast.

The Purposive Phrase (PP) has the following contrastive-identificational features:

i) Its axis tagmeme slot is filled by a recursive NP$_2$, by a back-looped clause which has been nominalized, or by an interrogative.

ii) Its relator tagmeme slot is filled by {-nɔ́}, "purposive marker".

iii) The relator is phonologically bound to the last con-

stituent of the axis.

6.2.2.2. Variation.

PP = +Axis:NP_2/ig/NomCl +relr: {-nó} "purposive marker"

-nó ~ -hó

-hó occurs with pronouns

-nó occurs elsewhere

With NP filler of Axis slot:

i) gi?ithé ǰijáagí ǰaána - nó - mí domú "vée pi-tsá?"
that big child ppsv rec she-say here you-come past
Axis:NP_2 relr
PP
"She said to that big child, 'Come here'."

ii) gi - hó[10] - mí domú "vée pi-tsá?"
him ppsv rec she-say here you-come past
Axis:NP_2 relr
PP
"She said to him, 'Come here'."

With Interrogative filler of Axis slot:

kéhee - nó - mí pimú kamovii? nó
whom ppsv rec you-say drunk I
Axis:ig relr past
PP
"To whom did you say I was drunk?"

With Nominalized Clause filler of Axis slot:

i) ve?e gi-tsá? ináadó gi-minaá - nó
here he-come woman he-seek ppsv
Axis: NomCl relr
PP
"He comes here to seek a wife"

[10]The pronoun is assimilated to the relator, which in this case exceptionally has the same effect as a C-(other-than-h-)initial word or relator. cf. 3.3.2.1., above.

ii) kaašoǰa?i gi-khú do?mitaá-nó
want he-do she-eat ppsv
Axis:NomCl relr
PP
"He wants her to eat"

It may be argued that the above examples allow for different interpretations of the relation indicated by {-nó} when the axis slot is filled by a Nominalized Clause, from when it is filled by an NP or an interrogative.[11] However, these apparent differences of meaning may merely result from our giving too much weight to the structure of the English (and Spanish) glosses, when viewing Resígaro. It is certainly possible to gloss the first two examples above acceptably as "She said for that big child [to hear] ..." and "She said for him [to hear] ...", respectively, and this obviously corresponds more closely to the Resígaro view of the relationships involved.

A second and apparently correlated difference may be noted: when the axis slot is filled by an NP or an interrogative, the resultant PP occurs in a clause in which the Predicate may only be filled by kemú, "to say"; when the axis slot is filled by a Nominalized Clause, no such restriction is present. From this it may be argued whether it would not be preferable to establish two different types

[11] There is a further difference of meaning -- whatever the filler of the axis slot -- when the PP fills the Predicate slot. cf. 6.2.2.3., and 7.1.1.1., below.

of PP -- or even two totally different phrases, each with different (but homophonous) relators - {-nó}.

However, this suggestion is rejected for the reasons given in 6.2.1.2., above, when discussing a similar situation with regard to the Dative Object Phrase.

As regards the apparent distributional difference, while it is recognized that distributional differences often correlate with structural differences, it has been clearly established that in this description distributional differences are nowhere allowed to dictate typological divisions, which must be solidly based on structural differences relevant at the level in question (cf. 0.4.3.). Thus it is considered that insufficient evidence exists here for establishing different phrases, or even two types of PP.

6.2.2.3. Distribution.

The Purposive Phrase is distributed in the Clause, where it fills the Purposive slot[12] or the Predicate slot. Two subclasses are established on the basis of this distribution:

6.2.2.3.1. Sub-class 1.

This consists of all Purposive Phrases with an NP or inter-

[12]The clause level tagmeme Purposive may occur more than once in a clause, with the same or different types of filler of the axis slot in the PP in each case -- cf. 7.2.1.2.3., section 2, Peripheral Tagmemes, below.

rogative in the axis slot. The members of this sub-class are distributed in Purposive tagmeme type i (which only occurs when the Predicate slot in the clause is filled by a VP containing kemú "to say, to tell"), and in the Predicate slot in non-transitive clauses.

e.g. In type i Purposive tagmeme:

nonáva - nó - mí gimú "no?dá-ma?u"
my-mother ppsv rec he-say I-drink-desid
Axis: NP_2 relr past
$Ppsv_i:PP_1$
"He said to my mother, 'I want to drink'."

(For type i Purposive, cf. 7.1.2.2.1., below.)

In the Predicate:

i) kéhee - nó hiítú
who ppsv canoe
Axis:ig relr
P:PP_1 S:NP
"Who (has) a canoe?"

ii) hiítá gi - hó
canoe him ppsv
Axis:NP_2 relr
S:NP P:PP_1
"He (has) a canoe"

(For non-transitive Predicates, cf. section 7.1.1.1.1., below, especially sub-type iii.)

6.2.2.3.2. Sub-class 2.

This consists of all Purposive Phrases with a Nominalized Clause in the axis slot. The members of this sub-class are distributed in Purposive tagmeme type ii (which has no occurrence restriction such as that for type i).

e.g. no?mitaá - nó no?pí
I-eat ppsv I-go "I am going in order to eat"
Axis: NomCl relr
$Ppsv_{ii}:PP_2$

(For type ii Purposive, cf. 7.1.2.2.2., below.)

6.2.3. Benefactive Phrase.

6.2.3.1. Contrast.

The Benefactive Phrase (BP) has the following contrastive-identificational features:-

i) Its axis tagmeme slot is filled by a recursive NP_2, a back-looped clause, which has been nominalized, or an interrogative.

ii) Its relator tagmeme slot is filled by -pokâ?, "benefactive marker".

iii) The relator is phonologically bound to the last constituent of the axis.

6.2.3.2. Variation.

BP = +Axis:NP_2/ig/NomCl +relr: -pokâ? "benefactive marker"

With NP filler of Axis slot:

i) gi?ithê ǰijǎagí ǰaánâ-pokâ?-mí a?mithoótsí do-khú
that big child ben rec past meal she-make
Axis: NP_2 relr
BP
"She made a meal for (because of) that big child"

ii) do-tsâatê-pokâ? tsodâ?pû
her-brother ben she-sings
Axis: NP_2 relr
BP
"She sings for (because of) her brother"

With Interrogative filler of Axis slot:

kêhee-pokâ?-mí a?mithoótsí do-khú
whom ben rec past meal she-make
Axis:ig relr
BP
"For whom did she make the meal?"

<u>With Nominalized Clause filler of Axis slot:</u>

i) ve?e gi-tsâ? inâadô giminaâ - pokâ?
here he-come wife he-seek ben
Axis: NomCl relr
BP

"He comes here <u>because</u> <u>he</u> <u>seeks</u> <u>a</u> <u>wife</u>"

ii) nonîgî anepuu? ee?phi khaâ-pokâ?, kaŝoo? va?mitû
my-father much fish do ben well we-eat
Axis:NomCl relr
BP

"<u>Because</u> <u>my</u> <u>father</u> <u>catches</u> <u>a</u> <u>lot</u> <u>of</u> <u>fish</u>, we eat well"

As the above examples show, when the axis slot of the BP is filled by a NomCl, the meaning conveyed by this and the Predicate in the Matrix clause is one of <u>Cause-Effect</u>. Any apparent difference in meaning when the axis is filled by an NP or an interrogative is not doubt at least partly due to the forms of the English glosses, and in any case there is not sufficient structural difference between the forms with different fillers of the axis slot to justify the establishment of different phrases, and it is clear that in the language no emic contrast is felt.

<u>6.2.3.3. Distribution.</u>

The Benefactive Phrase is distributed in the Clause, where it fills the Benefactive slot.

e.g. no-novîgipiî-pokâ? gîmû
I - speak ben he-sleep
Axis: NomCl relr
Ben:BP

"<u>Because</u> <u>I</u> <u>speak</u>, he sleeps"

6.2.4. Instrument Phrase.

6.2.4.1. Contrast.

The Instrument Phrase (IP) has the following contrastive-identificational features:-

i) Its axis tagmeme slot is filled by a recursive NP_2, by a back-looped clause which has been nominalized, or by an interrogative.

ii) Its relator tagmeme slot is filled by -gí, "instrument marker".

iii) The relator is phonologically bound to the last constituent of the axis.

6.2.4.2. Variation.

IP = +Axis:NP_2/ig/NomCl +relr: -gí "instrument marker"

With NP filler of axis slot:

i) gi?ithé jijáagú va?aga - gí - mí onáʔko kainée gi-khú
that big machete instr rec snake dead he-make
past
Axis:NP_2 relr
IP
"He killed the snake with that big machete"

ii) Isabeel-mí Hoaa hitáa - gí i?pí
Isabel rec Juan canoe instr go
past Axis:NP_2 relr
IP
"Isabel went in (i.e., by means of) John's canoe"

With Interrogative filler of Axis slot:

kóhee - gí - mí aváanavuudú gimókhó
what instr rec log he-cut
past
Axis:ig relr
IP
"With what did he cut the log?"

With Nominalized Clause filler of Axis slot:

IP's with nominalized clauses in the axis slot are quite infrequent, though the following has been attested:-

gižaánú do?mótshoó - gí - mí ke?vígí nagínagí do-khotú
his-child she-hit instr rec chief angry she-do-cstv
Axis:NomCl relr past
IP
"By hitting his child she made the chief angry"

6.2.4.3. Distribution.

The Instrument Phrase is distributed in the Clause, where it fills the Instrument slot.

e.g. maa?má kio? do-khú va?agaǰá - gí
cassava cut she-do knife instr
Axis:NP_2 relr
I:IP
"She cuts the cassava with a knife"

For further details, cf. Clause level, esp. 7.1.2.4.

The Instrument Phrase is also distributed in Verb Group type ii, sub-type ii. (cf. 4.1.2.2.2.)

6.2.5. Concomitant Phrase.

6.2.5.1. Contrast.

The Concomitant Phrase (CP) has the following contrastive-identificational features:-

i) Its axis tagmeme slot is filled by a recursive NP_2, by a backlooped clause which has been nominalized, by an adjective, or by an interrogative.

ii) Its relator tagmeme slot is filled by {-neé}, "with", {-ma?}, "without", or -kápo?, "alone".

iii) The relator is phonologically bound to the last constituent of the axis.

6.2.5.2. Variation.

Three types[13] of Concomitant Phrase are set up on the basis of internal structure:-

CP_i = +Axis:NP_2/NomCl/Aj_1/ig +relr: {-neé}, "with"

CP_{ii} = +Axis:NP_2/NomCl +relr: {-ma?}, "without"

CP_{iii} = +Axis:NP_2 +relr: -kápo?, "alone"

6.2.5.2.1. Concomitant Phrase Type i: {-neé}.

The structure of this phrase type is as indicated in the formula in the preceding paragraph.

{-neé} : -neé ~ -né

-né occurs after nouns and interrogatives ending in ...VV.

-neé occurs elsewhere.

With NP filler of Axis slot:

i) gi?ithé ǰiǰáagí ǰaáná - neé - mí do-tsá?
that big child with rec she-come
Axis:NP_2 relr past
CP_i "She came with that big child"

[13] The only difference between these three types -- that of filler of the relator slot, and consequent change of meaning and use -- is considered adequate for the establishment of three separate types within the Class of Concomitant Phrases (though not adequate for the establishment of different phrase classes, for which at least two structural differences would be required), since it leads to greater clarity in the description.

ii) atsáagí-?pe amoógí - neé pata?-kakávú
man rem tapir with look - recip
past
Axis: NP_2 relr
CP_i
"The man and the tapir looked at each other"

iii) In the example that follows, the NP_2 in the axis slot of the CP contains a subject-relativized clause as one of its constituents (cf. 6.1.2.2.1.5., above, on the Modifier tagmeme, and 7.2.2.4., below, on relativization).

ǰaána-mí gi - kéí tóóǰoví - neé ve?e tsá?nu
child rec his-fore- wounded-Srel with here come
past arm
Lim:NP H:Nn M:RelCl
Axis:NP_i relr
CP_i
"The child with the arm which is wounded came here"

iv) At the other extreme, the NP_2 may be of minimal expansion:

šoó - né
falsehood with
Axis:NP_2 relr
CP_i
"lying"

With Nominalized Clause filler of Axis slot:

i) pó?manú? tsadá?pá[14] - néé - mí dodo?phaavú
loudly he-sing with rec he-work
past
Axis:NomCl relr
CP_i
"Singing loudly he worked"

ii) gi-vitsónaá - ká[15] - neé - mí kio? na-khú
he-shout incho with rec cut they-do
past
Axis:NomCl relr
CP_i
"He beginning to shout, they cut (him)"

[14] -paá > -pá before -neé, to avoid two continguous syllables with sequences of two vowels.

[15] Previous footnote also applies here.

With Adjective filler of Axis slot:

Of all the Axis-Relator phrases, adjectives are only attested in the Axis slot of CP_i.

e.g. kai néé[16]
death with "dead"
Axis:Aj_1 relr
CP_1

With Interrogative filler of Axis slot:

kéhee - né - mí da?mitú
whom with rec he-eat "With whom did he eat?"
Axis:ig relr past
CP_i

6.2.5.2.2. Concomitant Phrase Type ii: {-ma?}.[17]

The structure of this phrase type is as indicated in the formula in 6.2.5.2., above.

{-ma?} : -ma? ~ -ma

-ma? occurs finally in the phrase

-ma occurs elsewhere.

With NP filler of Axis slot:

i) jaáná - ma? - mí do - tsá?
child without rec she-come
Axis:NP_2 relr past "She came without the child"
CP_{ii}

---

[16] In this case the rising tone of -néé becomes a falling tone.

[17] Compare with Negative Imperative {-ma?u} in 3.1.2.6.1.2.1., above, and desiderative clitic {-ma?u} in 7.2.1.2.6.3.1., below. Note also the privative {ma-} in 5.1.2.2.2., above.

ii) gi-náagí - ma? - mí dodo?phaavú
his-brother-without rec he-work
past
Axis:NP$_2$ relr "He worked without his brother"
CP_{ii}

With Nominalized Clause filler of Axis slot:

i) nófú no?mitaá - ma?
I-fear I-eat
Axis:NomCl relr "I am afraid to eat"
CP_{ii}

ii) do?vápaá - ma? dófú
she-swim she-fear
Axis:NomCl relr "She is afraid to swim"
CP_{ii}

Once again, there is an apparent difference in the meaning of the relator, depending on whether the filler of the axis slot is an NP or a NomCl, and earlier comments are relevant (cf. 6.2.1.2., 6.2.2.2.). The difference is not as great as at first appears, the meaning being in both cases basically "negative".

6.2.5.2.3. Concomitant Phrase Type iii: -kápo?.

The structure of this phrase type is as indicated in the formula in 6.2.5.2., above. To date, no cases of a nominalized clause filling the axis slot have been attested.

i) gi-kápo? gi-paáná-kóo gi?pí
he-alone his-house-to he-go
Axis:NP$_2$ relr "Alone he goes to his house"
CP_{iii}

ii) gi - náagí - kápo? tsú
his-brother-alone he

Axis:NP_2 relr

CP_{iii}

"His brother, he (is) alone"

6.2.5.3. Distribution.

The Concomitant Phrase is distributed in the Clause, where it fills the Concomitant or the Predicate slot, and in Verb Group type ii. Two sub-classes are set up on the basis of this distribution.

6.2.5.3.1. Sub-class 1.

This consists of all type ii CP's with a nominalized clause in the axis slot. The members of this sub-class are distributed in Concomitant tagmeme type i (which only occurs when the Predicate slot in the clause is filled by a VP containing íʔú, "to fear").

e.g. dóʔú gi - neé do?pínaá - ma?
she-fear him with she-go

Axis:NomCl relr

$Conc_i$:CP_1

"She is afraid to go with him"

6.2.5.3.2. Sub-class 2.

This consists of all other CP's, which are distributed in Concomitant tagmeme type ii (which has no co-occurrence restriction such as that applying in the case of type i), in the Predicate, and in $VG_{ii.i}$.

In the Concomitant slot (type ii):

e.g. Ñekañekaágí-musi o?donéne i?pí giíné - neé
Ñekañekaágí-dual to-fish go his-wife with

Axis:NP$_2$ relr
Conc$_{ii}$:CP$_2$

"Ñekañekaágí went fishing with his wife"

(For further details, cf. 7.2.1.2.2.2. and 7.2.1.2.3.2., below.)

In the Predicate slot (type i):

e.g. do-náadé - neé tsé
her-sister with she

Axis: NP$_2$ relr
P$_i$:CP$_2$

"She (is) with her sister"

(For further details, cf. 7.1.1.1.1.3.(i), below.)

In the Periphery slot in Verb Group ii.i:

Only type i CP has been observed in this construction.

e.g. taa - neé ǰú
calm with be

Axis:Aj relr
Periph:CP$_2$ H:Vb$_1$
VG$_{ii.i}$

"to faint"

(For further details, cf. 4.1.2.2.1., above.)

6.2.6. Comparative Phrase.

6.2.6.1. Contrast.

The Comparative Phrase (CtvP) has the following contrastive-identificational features:-

i) Its axis tagmeme slot is filled by a recursive NP$_2$ or by a back-looped clause which has been nominalized.

ii) Its relator tagmeme slot is filled by -ve?nǐi, "more

than", or -pee? "like, same as".

iii) The relator is phonologically bound to the last constituent of the axis.

6.2.6.2. Variation.

Two types[18] of Comparative Phrase are set up on the basis of internal structure:-

$CtvP_i$ = +Axis:NP_2/NomCl +relr: -ve?ʉ́i "more than"

$CtvP_{ii}$ = +Axis:NP_2/NomCl +relr: -pee? "same as, like"

6.2.6.2.1. Comparative Phrase Type i: -ve?ʉ́i.

The structure of this phrase type is as indicated in the formula in the preceding paragraph.

With NP filler of the Axis slot:

i) gi?ithé ǰiǰáagí ǰaáná - ve?ʉ́i dé?ǰo
that big child more-than he-runs
Axis: NP_2 relr
$CtvP_i$
"He runs more than that big child"

ii) pi - ve?ʉ́i tseinóó? tsú
you more-than tall he
Axis:NP_2 relr
$CtvP_i$
"He (is) taller than you"

With Nominalized Clause filler of Axis slot:

i) do?mitaá - ve?ʉ́i da?mitú
she-eat more-than he-eat
Axis:NomCl relr
$CtvP_i$
"He eats more (i.e., more often) than she eats"

[18] cf. footnote 13 to section 6.2.5.2., above, on establishment of separate types.

ii) kapí čí?vu dǒǰoo? - ve?nǽi
quickly he-walk she-run more-than
Axis:NomCl relr
CtvP$_i$ "He walks more quickly than she runs"

6.2.6.2.2. Comparative Phrase Type ii:[19] -pee?.[20]

The structure of this phrase type is as indicated in 6.2.6.2., above.

With NP filler of Axis slot:

i) anevíidǒ - pee? na-ke?ǰǒ
wild-boars like they-become
Axis:NP$_2$ relr
CtvP$_{ii}$ "They become like wild boars"

ii) iteevi?ɛ́ - pee? gi-ke?ǰo
aguaje-tree like he-become
Axis:NP$_2$ relr
CtvP$_{ii}$ "He becomes like an aguaje tree"

With Nominalized Clause filler of Axis slot:

i) do?mitaá-pee? da?mitú
she-eat like he-eat
Axis:NomCl relr
CtvP$_{ii}$ "He eats like she eats"

---

[19] This type of Comparative Phrase is to be distinguished from the comparative clause (not a separate type) occurring when the Predicate is filled by hiivá? (a predicative adjective).
e.g. kedávíí? aatyádá?aamí hiivá?-mí tsú
red tree-leaves like rec past he
"He was like the red leaves of the aatyádá tree" (cf. Lexicon)

[20] -?ɛ́? has also been observed, with apparently the same meaning as -pee?.
e.g. hámáaka-?ɛ́?
hammock like "like a hammock"
However, this is of very rare occurrence.

ii) kapáadó vitsónaá-pee? phadá?pú
choro cry-out like you-sing
Axis:NomCl relr
CtvP$_{ii}$
"You sing like the choro monkey calls"

6.2.6.3. Distribution.

The Comparative Phrase is distributed in the Clause, where it fills the Comparative slot.

e.g. no-jíigí - ve?náí dodo?phaavú
my-husband more-than he-work
Axis:NP$_2$ relr
Ctv:CtvP
"He works more than my husband"

6.2.7. Conditional Phrase.

6.2.7.1. Contrast.

The Conditional Phrase (CondP) has the following contrastive-identificational features:-

i) Its axis tagmeme slot is filled by a recursive NP$_2$ or by a back-looped clause which has been nominalized.

ii) Its relator tagmeme slot is filled by -tshí, "conditional marker".

iii) The relator is phonologically bound to the last constituent of the axis.

6.2.7.2. Variation.

CondP = +Axis:NP$_2$/NomCl +relr: -tshí "conditional marker"

With NP filler of Axis slot:

This is attested far less frequently than NomCl fillers of the axis slot in Conditional Phrases. The following ex-

ample has been noted:

xuukhoótsi - tshí - vá nií nodo?phaavú
Sunday if fut not they-work
Axis: NP2 relr
CondP

"If it is Sunday they won't work"

With Nominalized Clause filler of Axis slot:

i) anepuu? aá?pe ee?phi khá - tshí - vá, kašoo? va?mitú
much father fish do if fut well we-eat
Axis:NomCl relr
CondP

"If my father catches a lot of fish, we shall eat well"

ii) nií fa?va-tshí - vá no?pí
not rain if fut I-go
Axis:NomCl relr
CondP

"If it does not rain, I will go"

It will be recognized that the above are examples of "simple" conditionals. Contrary-to-fact conditionals also occur, though these do not form a separate type of conditional phrase, as the differences are to be found at clause level -- though they are for convenience listed hereunder, with examples.

i) "Simple" Conditional Phrases may be and frequently are followed by the clitic -vá, "future".

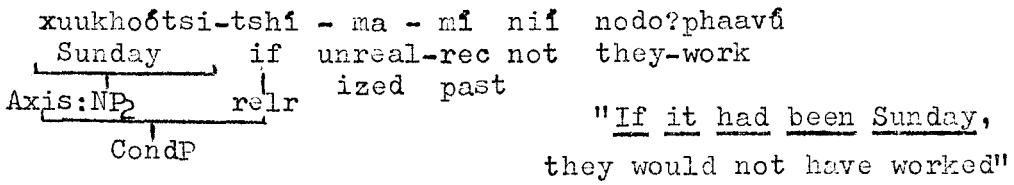
ii) Contrary-to-fact conditionals, however, have to be followed by the clitic {-ma?} "unrealized"[21], which becomes -ma before the following clitic. -na in turn may be followed by one of the clitics -mí "recent past" or -?pe

[21] cf. 6.2.5.2.2., above, where it is generally glossed as "without". (Type ii Concomitant Phrase)

"remote past". The clitic -vá "future" may not occur here (a logical, rather than a purely linguistic, restriction).

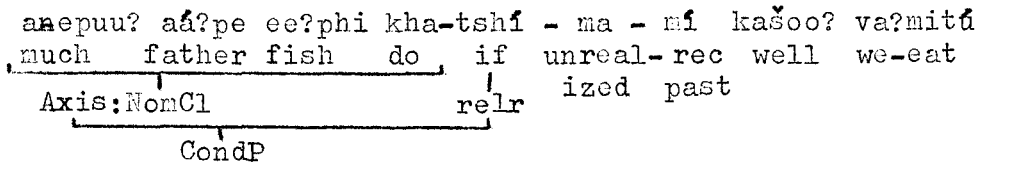
Examples of contrary-to-fact conditionals:-

i) With NP filler of Axis slot:



"If it had been Sunday, they would not have worked"

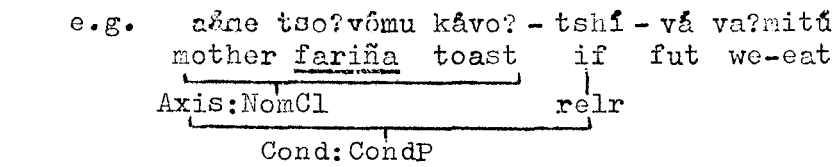
ii) With Nominalized Clause filler of Axis slot:



"If my father had caught a lot of fish, we would have eaten well"

6.2.7.3. Distribution.

The Conditional Phrase is distributed in the Clause, where it fills the Conditional slot.



"If mother toasts the fariña (grated manioc), we will eat"

6.2.8. Adjunct Phrase.

6.2.8.1. Contrast.

The Adjunct Phrase (AP) has the following contrastive-identificational features:-

i) Its axis tagmeme slot is filled by a back-looped clause

which has been nominalized.

ii) The verb in the Predicate slot in the nominalized clause typically bears the inchoative suffix (cf. 3.1.2.3.2., above).

iii) The relator tagmeme slot is typically filled by -tsí, "Adjunct Phrase marker".[22]

iv) The relator is phonologically bound to the last constituent of the axis.

6.2.8.2. Variation.

AP = +Axis:NomClR ±relr: -tsí "Adjunct Phrase marker"

The restriction on the nominalized clause is that the verb manifesting its Predicate obligatorily bears the inchoative marker when the relator is omitted, and typically bears it when the relator is present.

The relator or the inchoative is on occasion omitted, but at least one of these must occur, and in the vast majority of cases, both do.

e.g. i) papókaá - tsí foo pi - khú
waking-up adct fire you-make
Axis: NomCl relr
AP
"Waking up, make a fire!"[23]

ii) do-tsatá?-kaá[24] - ø do?pí
she-carry-incho she-go
Axis: NomCl relr
AP
"Beginning to carry (it), she went"

---

[22] Lack of aspiration here distinguishes this relator from the Conditional marker, 6.2.7.1., above.

[23] This gloss is parallel to some that may be obtained for Resígaro clauses containing a Concomitant Phrase whose axis

iii) no?mitáka- - tsí no?pí
I-eat-incho adct I-go "Eating, I go"
Axis:NomCl relr OR "After eating, I go"
AP

A more specific way of expressing the temporal relation implied in the second gloss, above, is to be found in the Directional Phrase construction, in 6.2.9.2.1., below.

iv) no?mitáka- - Ø no-tsá?
I-eat-incho I-come "Eating, I come"
Axis:NomCl relr OR "After eating, I come"
AP OR "I come from eating"

No difference is found between the use of this construction with the verb tsá?(nu) in the Predicate slot of the matrix clause and the use of the verbal suffix -kí (cf. 3.1.2.4.2.).

6.2.8.3. Distribution.

The Adjunct Phrase is distributed in the Clause, where it fills the Adjunct slot.

e.g. phaa? - mí oo hamo? gi-khá-tsí gi-khú
inter- rec int heat he-do adct he-eat
sent past
Axis:NomCl relr
A:AP

---

slot is filled by a NomCl and with -ncé as relator. However, the Resígaro structure is clearly distinct, as indicated throughout this section and in section 6.2.5.2.1., above.

[24] Since nominalization reduplicates the final vowel of the verb, but the addition of a suffix with a reduplicated vowel (Inchoative) causes deletion of a geminate vowel in one of the two syllables involved (generally the first), the nominalized and non-nominalized forms become homophonous. However, unambiguous forms occur when the Inchoative is omitted, and this permits interpretation of homophonous forms.

"Then heating (it), he ate (it)"

On inter-sentential relator phaa? (here glossed "then"), cf. 7.2.1.2.6.1., below.

The Adjunct Phrase is also distributed recursively in the axis slot of the Directional Phrase. For further details, cf. 6.2.9.2.1., below.

6.2.9. Directional Phrase.

6.2.9.1. Contrast.

The Directional Phrase (DP) has the following contrastive-identificational features:-

i) Its axis tagmeme slot is filled by a recursive NP_2, by a recursive Adjunct Phrase in which the axis slot is filled by a nominalized clause, by a back-looped clause which has been nominalized, or by an interrogative.

ii) Its relator tagmeme slot is filled by -khó "from", -kóo "to" or -gikhé "out of".

iii) The relator is phonologically bound to the last constituent of the axis.

6.2.9.2. Variation.

Three types[25] of Directional Phrase are set up on the basis of internal structure:-

DP_1 = +Axis:NP_2/AP/NomCl/ig +relr: -khó "from"[26]

---

[25] cf. footnote 13 to section 6.2.5.2., above on justification for establishment of types.

[26] These phrase-level directional relators must be distinguished

DP_{ii} = +Axis:NP_2/ig +relr: -kǒo "to"

DP_{iii} = +Axis:NP_2/ig +relr: -gikhǒ "out of"

6.2.9.2.1. Directional Phrase Type i: -khǒ.

The structure of this phrase type is as indicated in the formula in the preceding paragraph.

With NP filler of Axis slot:

i) gi?ithǒ ǰijǎagí ǰaána - khǒ - mí do?pí
that big child from rec she-go
past
Axis: NP_2 relr
DP_i
"She went from that big child"

ii) ǰakǎde - khǒ no-tsǎ?
field from I-come
Axis: NP_2 relr
DP_i
"I come from the field"

With AP filler of Axis slot:

i) no?mitaǎ - tsí - mi - khǒ ʁopítǔ
I-eat adct rec from I-go-to-bed
past
Axis:NomCl relr
Axis: AP relr
DP_i
"After eating, I go to bed"[27]

ii) mitshǎ gižaǎ - tsí - mi - khǒ da?pitǔ
get-up he-be adct rec from he-bathe
past
Axis:NomCl relr
Axis:AP relr
DP_i
"After getting up, he has a bath"

from the word-level directional verbal suffixes (Order 3), -keǒ "to go to" and -kí "to come from". cf. 3.1.2.4.,above.

[27]When an AP or a NomCl fills the axis slot in DP type i, the resultant form carries a temporal, rather than a directional, meaning. However, the same cover term is retained, for structural reasons.

With Nominalized Clause filler of Axis slot:

e.g. gi-pedo?-ʁaáˀ[28] - khó ñeke? tsá
he-lick rest from get-better he
Axis:NomCl relr
DP$_i$
"From (after) licking (it), he got better"

With Interrogative filler of Axis slot:

e.g. heʁéé - khó gi-tsá?
where from he-come
Axis: ig relr
DP$_i$
"Where does he come from?"

6.2.9.2.2. Directional Phrase Type ii: -kóo.

The structure of this phrase type is as indicated in 6.2.9.2., above.

With NP filler of Axis slot:

i) gi?ithé ǰiǰáagí ǰaána-kóo - mí do?pí
that big child to rec she-go past
Axis: NP$_2$ relr
DP$_{ii}$
"She went to that big child"

ii) ǰakáde - kóo no-tsá?
field to I - come
Axis: NP$_2$ relr
DP$_{ii}$
"I come to the field"

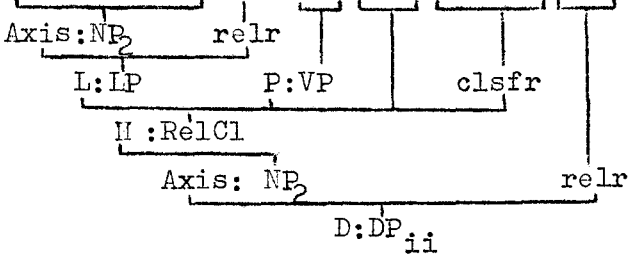
The lack of a nominalized clause filler of the axis slot for type ii Directional Phrases may be attributable to the availability of the complex Verb Piece (sub-type i) construction to convey relations of the type exemplified by "I go to eat" (cf. 5.1.2.2.1.), and the availability of the

[28] -ʁaáˀ < -ʁú "restrictive" (cf. 3.2.2.2.4.) The occurrence of this nominal suffix here confirms that the embedded clause is considered as truly nominalized.

Purposive Phrase for "I go in order to eat" (cf. 6.2.2.), or -- more fundamentally -- it may be because -kǒo (unlike -khǒ) is not used in a temporal sense.

A relativized clause may occur in the NP in the axis slot of the DP.

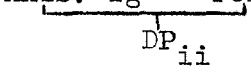
e.g. gi?pí teé?í?aavǐ - ná ǰo - ví - koomi - kǒo
he-go river-bank on is-Srel village-to



"He goes to the village which is on the river bank"

With Interrogative filler of Axis slot:

e.g. heⁿéé - kǒo - mí ǰaáná tsonápí
where to rec child she-take
past



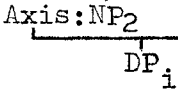
"Where did she take the child to?"

6.2.9.2.3. Directional Phrase Type iii: -gikhé.

The structure of this phrase type is as indicated in 6.2.9.2., above.

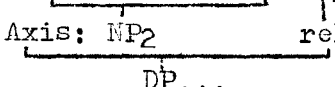
With NP filler of Axis slot:

i) teé?í - gikhé fitsǒ? nožǎ
river out of withdraw I-be



"I come out of the river"

ii) ha?á váfoonǎ - gikhé ha?á matshívaa?náhaahí maméⁿi i-khú
your inside out of your sins abandon you-do



"Out of your hearts abandon your sins!"

With Interrogative filler of Axis slot:

e.g. hé?ee - gikhé - mí oovú ha?vanú
where(near) out of rec howler fall
past monkey
Axis: ig relr
DP iii
"Where did the howler monkey fall out of?"

6.2.9.3. Distribution.

The Directional Phrase is distributed in the Clause and in the Numeral Phrase. Sub-classes of DP are set up on the basis of this distribution.

6.2.9.3.1. Sub-class 1.

This consists of three DP's:

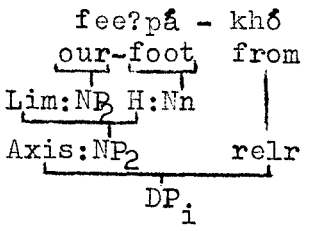
sí[29] - ?osí - khó
other hand from
B:NnSt Sx 1:clsfr
H:Nn
Axis:NP2 relr
DP i
"from the other hand"

sí - tu?á - khó
other- foot from
Axis: NP2 relr
DP i
"from the other foot"

[29] sí- is clearly a noun stem in Resígaro, even though the English gloss "other" is not. It also occurs elsewhere, with the appropriate classifier in each case.

e.g. sí - koomí
other village "the other village"
B:NnSt Sx 1:clsfr

sí - pekó
other-day "the other day" (i.e., "the day after tomorrow")
B:NnSt Sx 1:clsfr



"from our foot"

These are distributed in Numeral Phrase type ii, sub-types ii and iii(cf. 6.1.3.2.2., above).

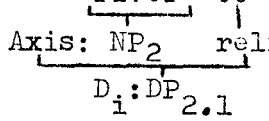
6.2.9.3.2. Sub-class 2.

This consists of all other Directional Phrases, which are distributed in the Clause, where they fill the Directional slot. Two sub-groups are established on the basis of this distribution.

6.2.9.3.2.1. Sub-class 2.1.

This consists of all sub-class 2 Directional Phrases with an NP or an interrogative in the axis slot. The members of this sub-class group are distributed in Directional tagmeme type i (which only occurs when the Predicate slot in the clause is filled by a verb of motion).

e.g. teé?í - kóo do-tsá?
river to she come



"She comes to the river"

6.2.9.3.2.2. Sub-class 2.2.

This consists of all sub-class 2 Directional Phrases with a NomCl or AP in the axis slot. The members of this sub-class group are distributed in Directional tagmeme type ii (which has no co-occurrence restriction such as that in the case of type i).

e.g. gi?daá - khó kamá - kaá tsú
he-drink from drunk incho he
Axis:NomCl relr
D_{ii}:$DP_{2.2}$

"From drinking, he got drunk"

6.2.10. Locative Phrase.

6.2.10.1. Contrast.

The Locative Phrase (LP) has the following contrastive-identificational features:-

i) It may consist of an Axis-Relator phrase, or of a locative word or an interrogative, alone. When consisting of the former, it has the following additional features:

ii) Its axis tagmeme slot is filled by a recursive NP_2 or by a back-looped clause which has been nominalized.

iii) Its relator tagmeme slot is filled by one of the following clitics:-

i) -hií(±pó) "on, above"
ii) -náapí "under"
iii) -a?nú "beside"
iv) -ípe "in front of"[30]
v) -gí "in"
vi) -nú "in"[31]
vii) -gikó "inside"

iv) The relator is phonologically bound to the last constituent of the axis.

---

[30] -hivé? also occurs on a few occasions, with the meaning "in front of". (cf. Verb Group ii.i -- 4.1.2.2.1.

[31] For the difference between this and the preceding relator, see examples below. It may be that -gí is basically used in clauses indicating motion, whereas -nú is basically used in clauses indicating states. -nú may thus be better rendered as "at".

6.2.10.2. Variation.

Two types of LP are set up on the basis of internal structure:-

LP_i = +H:loc word/interrogative

LP_{ii} = +Axis:$\propto$ NP_2/NomCl +relr: $\propto$ {One of the set of Locative relators}

$\propto$ reads: the choice of NP or NomCl is dependent on the choice of locative relator. cf. 6.2.10.2.2., below.

6.2.10.2.1. Locative Phrase Type i.

The structure of this phrase type is as indicated in the formula in the preceding paragraph.

i) Locative filler.

e.g. ve?e gi-tsá?
here he-come "He comes here"

H: loc
LP_i

neeí tsú
there he "He (is) there"

H:loc
LP_i

ii) Interrogative filler.

e.g. heéé tsú
where he "Where (is) he?"

H: ig
LP_i

6.2.10.2.2. Locative Phrase Type ii.

The structure of this phrase type is as indicated in the formula in 6.2.10.2., above. Cases of nominalized clauses filling the axis slot have only been observed to co-occur

with the relator -gikǫ́. (cf. section (vii), below.) Thus, all other relators are illustrated only with NP fillers of the axis slot.

Following the convention established in 6.2.5.2., above, seven sub-types of LP_{ii} are set up, each sub-type corresponding to a different filler of the relator slot. It is considered unnecessary to give two examples in every case, if the meaning and form is sufficiently clear with one.

i) Sub-type i: -hiį́(±pǫ́), "on, above".

i) gi?ithé ǰiǰáahú pagiʁoǫ́tsihá - hiį́ tsǫ́
that big blanket on she
Axis:NP_2 relr
$LP_{ii.i}$
"She (is) on that big blanket"

ii) kǫ́?pįidá paniįtsį́ - hiį́(pǫ́)
bird house above
Axis:NP_2 relr
$LP_{ii.i}$
"The bird (is) above the house"

ii) Sub-type ii: -náapį́, "under".

pagiʁoǫ́tsihá-náapį́ tsǫ́
blanket under she
Axis: NP_2 relr
$LP_{ii.ii}$
"She (is) under the blanket"

iii) Sub-type iii: -a?nú, "beside".[32]

[32]There are two other forms which are occasionally glossed as "behind". However, structural analysis indicates that these are in fact examples of sub-types v and vi of Loc-

paníítsí - a?ná tsó
house beside she "She (is) beside the house"
Axis:NP_2 relr
$LP_{ii.iii}$

iv) Sub-type iv: -íne, "in front of".[33]

paníítsi - íne tsó
house in_front_of she "She (is) in front of the house"
Axis:NP_2 relr
$LP_{ii.iv}$

v) Sub-type v: -gí,[34] "in".

tsa-mí tẽbahú - gí kanáʀú
he rec past jungle in get-lost "He got lost in the jungle"
Axis:NP_2 relr
$LP_{ii.v}$

"Beside"

As indicated in sub-type iii, above, this relator may follow a noun bearing the classifier -?aaví, "side, edge", when the resultant meaning is "beside".

e.g. teé?í-?aaví - gí ʀó?vu
river-side in I-walk "I walk beside the river"
Axis: NP_2 relr OR: "I walk on the riverside"
$LP_{ii.v}$

"Temporal" use

-gí may combine with an NP_1 consisting of temporal nouns, with a temporal meaning.

---

ative Phrase type ii, and relevant examples are to be found in the appropriate sections.

[33]There is no separate relator for "behind". This is indicated in a structure using -nú. cf. sub-type vi, below.

[34]This relator is homophonous with the Instrument marker -- cf. 6.2.4., above.

e.g. aámé - ?pe kainée ǰú apáapí kámiiká - gí
my-mother rem dead be other year(dl) in
past
Axis: NP_1 relr
$LP_{ii.v}$

"My mother died in the other year" (i.e., "last year")

vi) Sub-type vi: -nú, "in, at".

This relator has a more widespread meaning and use than the preceding relator, as the following examples make clear.

pó?kónoomá - ná tsó
doorway in she
Axis: NP_2 relr
$LP_{ii.vi}$

"She (is) in the doorway"

As indicated in (iii) and (iv), above, this relator may indicate other locative relations, when co-occurring with certain items in the NP in the axis slot.[35]

"Beside"

e.g. teé?í-?aaví - ná té - koomí
river-side in that-village
Axis: NP_2 relr
$LP_{ii.vi}$

"Beside the river (on the river-bank) (is) that village"

In this case there is no obvious difference between the use of -nú and the use of -gí, illustrated in the previous sub-type.

"Behind"

e.g. paníítsí-váai-ná tsó
house back in she
Axis: NP_2 relr
$LP_{ii.vi}$

"She (is) behind (in back of) the house"

[35] It is not -nú that means "beside" or "behind", but the combination of -nú with other elements that gives these meanings.

As well as its use in obviously locative phrases (as in the above examples), this locative marker is also used in phrases which are not glossed as locatives in Spanish or English, though they refer to situations which are conceptualized as containing a locative relation in Resígaro.

e.g. vakhájakáatsí gi - ná
sickness him in
Axis:NP$_2$ relr
LP$_{ii.vi}$

"(There is) sickness in him" (i.e., "He is sick")

tapoógí Hoaa - ná
sleepiness Juan in
Axis: NP$_2$ relr
LP$_{ii.vi}$

"John is sleepy"

vii) Sub-type vii: -gikó, "inside".[36]

Though "in" is occasionally the best English gloss, the difference between this relator and the preceding two, and the appropriateness of the gloss "inside", is clearly seen in the examples which follow. With this relator, both the NP and the Nominalized Clause may occur in the axis slot of the Locative Phrase.

With NP filler of Axis slot:

i) teé?í - gikó tsó
river in she
Axis:NP$_2$ relr
LP$_{ii.vii}$

"She (is) in the river" (i.e., in the water, not on it)

[36] It may be that -gikó is derived from -gí, though *-kó is not attested elsewhere.

ii) panítsí-gikó tsó
house inside she — "She (is) inside the house"

Axis: NP_2 relr

$LP_{ii.vii}$

iii) hiítá-gikó tsó
canoe in she — "She (is) in the canoe"

Axis: NP_2 relr

$LP_{ii.vii}$

iv) hamáaká-gikó tsó
hammock in she — "She (is) in the hammock"

Axis: NP_2 relr

$LP_{ii.vii}$

In all the above cases, -gikó is clearly a Locative relator. The following example raises the question whether it also occurs (or a homophonous relator occurs) in a Directional phrase.

e.g. teé?í - gikó nóka?phaavú
river in I-enter — "I enter (go into) the water"

Axis: NP_2 relr

LP or DP ?

However, this appears to be no more than a consequence of the English gloss "I go into the water", overcome in the alternative gloss, "I enter the water". This is closer to the informant's Spanish gloss, "Entro en el agua". In both cases (and in the Resígaro) the phrase indicates the location in which the speaker entered. The different English gloss in this case is merely a consequence of the presence of a motion verb in the Predicate of the clause in which this LP occurs.

With Nominalized Clause filler of Axis slot:

e.g. Isabeel-mí Maanoel tshéní maa?má da?mitáa-gikó
Isabel rec Manuel see cassava he-eat in
past
Axis:NomCl relr
LP ii.vii

"Isabel saw Manuel when he ate (the whole time he was eating) cassava"

This construction is used to refer to two co-extensive, as opposed to concurrent, events. This latter is conveyed (as was indicated in 6.2.1.2., above) by the Dative Object Phrase:

Isabeel-mí Maanoel tshéní maa?má da?mitáa-ké
Isabel rec Manuel see cassava he-eat dat
past
Axis: NomCl relr
DOP

"Isabel saw Manuel while he was eating cassava"

The difference between the two is that in the first case (co-extensive -- LP), Isabel saw the whole process from the beginning, whereas in the second, the DOP fills a function similar to the Imperfect tense of verbs in several languages of Latin origin -- setting the scene, against which an action occurs -- i.e., in the latter case, Isabel did not necessarily see the whole process. (cf. other examples in 6.2.1.2., above.

At this point it is also appropriate to indicate the difference between the above two constructions and the nominalized clause functioning as Object:

Isabeel-mí Maanoel tshéní maa?má da?mitáa
Isabel rec Manuel see cassava he-eat
past
S:NP_2 DummyO:NP_2 P:VP Extrap O:NomCl

"Isabel saw Manuel eat cassava"

Here, no temporal relation is specified at all. (For extraposition, cf. 7.2.1.2.3., below.)

6.2.10.3. Distribution.

The Locative Phrase is distributed in the Clause, where it may fill the Predicate slot in non-transitive clauses, or the Locative slot in other clause types. Since all LP's (of both structural types) may occur in either clause-level tagmeme (subject to possible semantic restrictions), distribution sub-classes are not established.

In Locative slot.

e.g. Peedró ímú haméaká-gikó
Peter sleep hammock in
Axis:NP_2 relr
L:LP

"Peter sleeps in the hammock"

In Predicate slot.

e.g. Peedró haméaká - gikó
Peter hammock in
Axis:NP_2 relr
P:LP

"Peter (is) in the hammock"