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A GRAMMATICAL SKETCH OF BERIK

by
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Bachelor of Arts, University of Minnesota, 1966

A Thesis

Submitted to the Graduate Faculty

of the

University of North Dakota

in partial fulfillment of the requirements

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ABBREVIATIONS

acc	accompaniment suffix
ben	benefactive suffix
cond	conditional suffix
conj	conjunction
cont	continuous action suffix
Co-ord NP	Co-ordinate Noun Phrase
exc	exclamation
foe	focus suffix
fut	future
hort	hortative marker
Hort	Hortatory introducer
imp	imperative
Ind Obj	Indirect Object
inst	instrument suffix
loc	locational suffix
Loc	Locational tagmeme
Mar	Margin
MNP	Modified Noun Phrase
mod	modifier
neg	negative
NP	Noun Phrase
Nuc	Nucleus
obj	object marked suffix

Obj	Object
poss	possessive
pres	present
pro	pronoun
ques	question
rel	relational
sg	single
Subj	Subject
subord	subordinating suffix
Temp	Temporal tagmeme
TP	Temporal Phrase
VP	Verb Phrase
~	alternating with

CHAPTER I

INTRODUCTION

1.0. The objective of this thesis is to present a grammatical sketch of the Berik language, that is to say, to describe the different levels of the grammatical hierarchy of Berik beginning with the word level and going on to the levels of phrases, clauses, and sentences. The scope of this paper is thus limited to a description of these four levels.

Words are composed of simple and complex stems plus affixes. The complete analysis of these stems and affixes does not fall within the scope of this paper, though an initial attempt has been made in Chapter 2 to identify some affixes. Similarly, at the other end of the grammatical hierarchy, i.e. sentences, paragraphs, and discourse, further research is needed to make this grammatical sketch more complete. In other words, a sketch like this cannot be considered to be complete at all levels of the grammatical hierarchy, but there are levels in this sketch where this incompleteness is particularly apparent, namely below the word level and above the sentence level. Grimes has stated in relating the study of discourse to sentences that "certain factors are needed for the understanding of elements in sentences that are not available within those sentences themselves, but only elsewhere in the discourse" (Grimes 1975). The analysis set forth here, however, on Berik words, phrases, clauses, and sentences should

be helpful to others who are interested in the languages of the island of New Guinea.

1.1. The Berik language is spoken by about 1,000 people living in ten villages along the banks of the Tor River in Jayapura county, in the province of Irian Jaya (Western New Guinea) in Indonesia. Berik, the largest among the Upper Tor languages, is the "lingua franca" for smaller language groups in the area. The Upper Tor languages are a smaller sub-group of languages coordinate with other smaller sub-groups including Nimboran, Sentani, Demta, and Uria and one large sub-group, Tami, to form the North Papuan language group which in turn is a member of the Central New Guinea macro-phylum (Wurm 1971c). Cowan in his Grammar of the Sentani Language adds that Sentani belongs to a much larger supergroup of distantly related groups of languages which he has named the "North Papuan phylum." The exact nature of the relationships involved in this phylum, and the position of each group within it are, however, still very unclear (Cowan 1965).

These languages in still a broader system of classification are identified as being Non-Austronesian languages (or Papuan) in contrast to Austronesian¹ languages which are also found on the island of New Guinea. The only classifying distinction Barr and Barr make in their Index of Irian Jaya Languages (Barr and Barr 1978) is between Austronesian and Papuan languages. Berik is one of the Papuan languages.

¹The Austronesian languages stretch from Madagascar to Easter Island, and from Formosa, Cham, and Hawaii on the north to Indonesia, New Zealand, and Polynesia on the south (Dyen 1965).

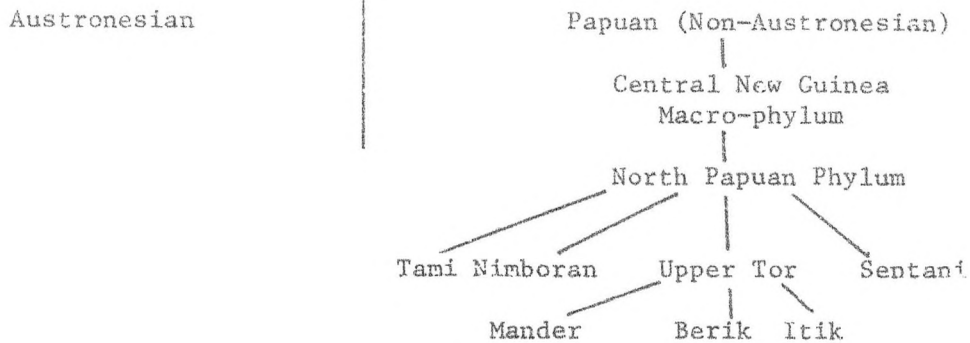


Chart 1. Language Classifications

1.2. The data for this analysis of the Berik language were collected under the auspices of the Summer Institute of Linguistics during 18 months of residence in the villages of Tenwer and Somanente on the Tor River between 1973 and 1979. The data includes about 1,000 expressions (clauses and sentences) taken from data books and cassette tape practice notebooks. In addition, 15 texts of varying lengths and totaling 30 typed pages have added about 300 additional expressions for analysis.

All expressions were recorded on 7-1/2" by 3-1/4" computer punch cards of the McBee Keysort system. Each card has 102 holes around its circumference. The data were filed by manually notching (with a computer card punch) various appropriate holes which represent specific data needing analysis. Desired examples were retrieved by spindling the cards with a computer card sorting needle. The appropriately notched cards would then fall from the sorting needle and be gathered for analysis. The information on the cards was then compared and analyzed as with any filing system. The reader is referred to Appendix A for more details regarding a punch card filing system.

1.3. The model used for this paper is the tagmemic model as developed by Kenneth L. Pike and others, and especially as presented most recently by Kenneth and Evelyn Pike in Grammatical Analysis, wherein they state that "human nature across language barriers is in some sense uniform" (Pike and Pike 1977), and this uniformity the tagmemic theory attempts to capture. Further,

the student is to see that language is not abstracted from life, but is merely one part of it, operating on principles necessary for all purposeful action. Here tagmemics differs from any theory which might prefer to treat a linguistic structure as if it were merely an abstract mathematical or logical system, rather than as a system of behavior comparable to systems of nonverbal behavior (Pike and Pike 1977).

In stating the basic notions of tagmemics, Pike says,

Central to tagmemics is the insistence on the possibility and necessity on both theoretical and practical levels, of keeping units as prime constructs in the theory and also to the internal linguistic structure of the speaker. Universal to the languages of the world, these units can be such only when high-level generalized conditions are met--a unit must have contrastive-identificational features, a range of variability, and distribution in class, sequence, and system (Brend 1974).

Using the three basic terms of features, variation, and distribution, and applying them to the analysis of Berik, for example, we discover that units with the feature that they cannot be further divided into "free" forms are defined as being words. Words, however, have a range of variability in that some never take affixes, others have optional affixes, and still others have obligatory affixes. Words are distributed in the grammatical hierarchy below the phrase level and are typical fillers of tagmemes in phrase structures.

Using the tagmemic model has allowed this writer to organize his field data into this grammatical sketch. The tagmemic concept of slot and class is used throughout the paper, and in some instances formulas

are given to clarify the constructions. Less attention, however, has been paid to the more recent tagmemic developments of role and cohesion as outlined in chapters 3 and 4 of Grammatical Analysis.

1.4. The sound system of Berik has been described in "A Preliminary Berik Phonology" by Westrum and Westrum, 1975. The Berik orthography used in this thesis is based upon that description. There are 16 consonants and 6 vowels. The consonant and vowel symbols are given here along with articulatory descriptions and illustrative words.

Consonant symbol	Articulatory description	Illustrative word
b	voiced, bilabial, stop	betef 'bamboo needle'
d	voiced, alveolar, stop	dum 'spatula'
f	voiceless, labio- dental, fricative	fas 'none'
g	voiced, velar, stop	gom 'chick'
j	voiced, alveopalatal, grooved, affricate	ju 'bird'
k	voiceless, velar, stop	koksa 'bud'
l	voiced, alveolar, lateral	tatal 'vein'
m	voiced, bilabial, nasal	mase 'nose'
n	voiced, alveolar, nasal	nin 'meat'
ng	voiced, velar, nasal	aiyang 'chicken'
p	voiceless, bilabial, stop	pasip 'boy's name'

r	voiced, alveolar, flap	jirar 'come'
s	voiceless, alveolar, grooved, fricative	son 'ashes'
t	voiceless, alveolar, stop	tokwa 'fire'
w	voiced, bilabial, semi-consonant	werem 'cough'
y	voiced, palatal, semi-consonant	aiyu 'basket'

Vowel symbol	Articulatory description	Illustrative word
i	voiced, high, close, front, unrounded, vocoid	fina 'stand'
e	voiced, high, open, front, unrounded vocoid	seseye 'black'
aa	voiced, low, close, front, unrounded, vocoid	aarem 'mouth'
a	voiced, low, open, central, unrounded, vocoid	ababara 'delicious'
u	voiced, high, close, back, rounded, vocoid	urum 'bow'
o	voiced, mid, close, back, rounded, vocoid	oso 'brother'

CHAPTER II

WORDS

2.0. Words are isolatable units which cannot be further divided into "free" forms. Word classes are distinguished from one another as follows: (1) those which never take affixes, (2) those which optionally occur with affixes, and (3) those which obligatorily occur with one or more affixes. Words belonging to class (1) above, those which never take affixes, constitute small closed subclasses. Words which occur with optional affixes or obligatory affixes tend to be large open subclasses. All Berik affixes occur as suffixes. Word classes are as follows.

2.1. Closed classes which never take suffixes.

2.1.1. Response words are often used as a simple reply to some former utterance.

ngga, sia	'yes'
wowo	'no'
fas	'none'
bar	'finished'
bai	'don't want'

2.1.2. Pseudo-imperatives compose a small class of words which are used by themselves when giving commands to others. These words are different from the inflected true imperative forms of the verbs 'come,'

etc., which can occur in the imperative construction on the sentence level. (See section 5.3.2.)

ao	'come'
aiyai	'watch out'
jesbaf	'don't'

2.1.3. Exclamatory words usually carry strong emotional meaning.

wa	'(amazement)'
nesek	'(pity)'

2.1.4. Interrogatives are used in forming questions. They may occur individually or in longer utterances. (See section 5.3.1.)

basa	'what'
Ai basa?	'What is this?'
nasa	'who'
Je nasa?	'Who is that?'
bafa	'why'
Je baf nunggiri?	'Why does he run?'
fomera	'how many'
Junu fomera?	'How many birds?'
fweru	'where'
Je fweru?	'Where is he?'
fonggalabar	'when'
Fonggalabar je fortiant?	'When did he arrive?'

2.1.5. Numerals one to four are single words. Numbers larger than four are composed of combinations of these four numerals and other words, and form numeral phrases. (See section 3.1.)

daanfena	'one'
naora	'two'
naoningna	'three' (two plus one)
naonaora	'four' (two plus two)

2.1.6. Manner Adverbs occur in the modifier slot of Verb Phrases, but unlike other modifiers are never inflected. (See section 3.9.2.)

mese	'also'
gamjon	'again'
enggam	'like this'
maa	'already'
gamerje	'not yet'
garap	'later'

2.1.7. Temporals generally refer to days or parts of a day and are monomorphemic. (Visual reference is sometimes given by gesturing to the position of the sun.)

namwer	'today, now'
gwidmir	'tomorrow'
ir	'yesterday'
jem	'day before or day after'
gwerem	'noon'
dafef	'afternoon'

2.1.8. Locationals function mainly to mark position.

afunup	'middle of'
sagap	'on'
burawer	'behind'

2.1.9. Conjunctions join two or more constructions together either on the Phrase or the Sentence level. Phrase level conjunctions are optional joiners in Coordinate Phrase constructions.

yo	'and'
Salmon yo Martinus	'Salmon and Martinus'
afa	'or'

Gwidmir Dular afa oso jemna ge tifi.
 tomorrow Bular or brother his pl go-fut
 'Tomorrow either Bular or his brother will go.'

Sentence level conjunctions join clauses together either in a coordinate or a subordinate relationship to form sentences. (See sections 3.4. and 5.4.)

ane	'and'
-----	-------

Aame is udanaburswana ane is gerna tane gitowai.
 you you pregnant and you give birth child male
 'You are pregnant and will give birth to a boy.'

ga	'and'
----	-------

Sa orotana ga asis bili.
 imp boil and you tell
 'Boil the water and tell me.'

jeuga 'but'

Niko kasian tombana jeuga Tuan ga fos telbili.
Niko peanuts eats but Mr. rel water drinks

'Niko eats peanuts, but Mr. drinks water.'

jebas 'because'

Ai as sinar, jebas asia wisiam bitolu.
I I cry because I coolness feel

'I cry because I am hungry.'

jengga 'then'

Twina nunggirbisir jengga jensiriber.
pig ran then snorted

'The pig ran then snorted.'

jamer 'until'

Ai sofsant jamer ai fosant aore.
I went until I arrived there

'I went until I arrived there.'

2.2. Open classes of words which optionally include suffixes.

2.2.1. Nouns occur on the phrase level as Nuclei of Noun Phrases and Coordinate Noun Phrases, as either Item or Possessor in the Possessive Phrase, and as Axis in the Location Phrase.

2.2.1.1. The suffixes with which nouns might occur are as follows:

a. -na

Nouns occurring as the Subject of a Berik sentence are usually affixed with the -na focus suffix. However, not all nouns as Subject take this inflection.

Banggena aiserem je tawefa tinibe.
squirrel-fox this it climb-fut tree-place

'This squirrel will climb up the tree.'

b. -s

Nouns occurring as the Object of a sentence are usually affixed with the -s object marked suffix.

fo

'water'

Ai fos telbi.
I water-obj drink

'I drink water.'

c. -ap and -wer

The locational suffixes -ap and -wer occur on nouns and indicate position or location.¹ If an action in a clause is towards the speaker, -ap is used. If an action is away from the speaker, -wer is used.

(See section 3.8.)

+Head	+ locational suffix
nouns	-ap (action towards) -wer (action away from)

¹Nouns and their locational suffixes must be distinguished from relators though orthographically they appear similar. (See section 3.8.1.)

Morphophonemic comments:

Here and elsewhere in this paper, if a noun ends in a vowel, the initial vowel of the suffix is deleted. If a noun ends in a nasal, the initial w of the locational suffix is deleted.

Je jinap jirar.
he house-loc comes

'He comes to the house.'

Je jinawer sofwena.
he house-loc goes

'He goes away from the house.'

In some cases, either of the locational suffixes are used, especially when the action of the sentence is not directional.

Oso imna sitap fitna.
younger sibling your outside-loc stands

'Your brother stands outside.'

Tuna sitawer fara.
stone outside-loc lies

'The stone lies outside (the box).'

d. -yan

The negative suffix -yan (see section 2.3.1.f.) can occur on nouns in Non-Transitive Clauses. In the following examples, it negates the whole sentence.

Ai taneyan.
I child-not

'I'm not a child.'

Je namwer bwernabaryan.
 he now sickness-neg

'He isn't sick now.'

e. -em

The instrument suffix -em occurs on nouns as instrument.

Korano atem difnan.
 chief canoe-inst came

'The chief came by canoe.'

Je twina ginam tana.
 he pig arrow-inst kill

'He killed the pig with an arrow.'

f. -far

The suffix -far occurs on nouns as comitative. (An allomorph
 -bar occurs with pronouns. (See section 2.2.2.6.c.)

Niko uwafar fonap ge tini.
 Niko father-acc water pl go

'Niko goes to the river with father.'

Niko jebar ge sofwa.
 Niko he-acc pl go

'Niko goes with him.'

Ji Koranofar ge nasonar.
 he chief-acc pl talk

'He talks with the chief.'

g. -bara

A relational suffix -bara occurs on nouns and indicates a special

form of accompanying relationship between a noun or pronoun and the noun to which it is attached, and carries the meaning 'to have.'

Aame ke yafintoibara?
you ques daughter-have

'Do you have a daughter?'

Gworabara fo tartarfer orotona.
cover-have water quickly boil

'The water boils quickly with a cover.'

h. -mena

The suffix -mena occurs on nouns as possessor.

Jina Koranomena unggwandusa.
house chief-poss big

'The chief's house is big.'

Tane uwamena maa sofwa.
child father-poss already go

'The father's child has already gone.'

If the noun as possessor precedes the Item it possesses, an allomorph -em occurs on the noun as possessor. In this occurrence, although possession is indicated on the possessor, location or accompaniment is also indicated on the Item possessed. (See section 3.7.)

Koranoem jinap
chief-poss house-in

'in the chief's house'

i. -f

A benefactive suffix -f occurs on nouns as benefactive or recipient.

Musa fenbit Minaf gobiten.
Moses bandage Mina-ben gave

'Moses gave the bandage to Mina.'

Ai bangkona Susterf eyembili.
I bench Sister-ben make

'I make a bench for Sister.'

Aame nanf eyembili?
you who-ben make

'You are making it for whom?'

2.2.2. Pronouns occur as the nucleus of the Pronoun Phrase, and in the Possessor slot in the Possessive Phrase. The basic form of Berik pronouns is indicated in the box below.

person	singular	plural
1	a(i)	ne
2	i	i + verb plural marking
3	je	je + verb plural marking

2.2.2.1. Subject pronouns

There are two sets of subject pronouns which differ in form according to the positions in which they occur. Either pronoun may be used singly or together, or with nouns or names. In the negative

construction co-occurrence of pronoun₁ and pronoun₂ is required. In some other cases, pronoun₂ does not occur. A further description of these pronouns is given in the description of Phrase structure in section 3.6.

Subject pronoun₁ is identical to the basic form of Berik pronouns with the exception of second person singular which has the form aame 'you' and not i. The second vowel of the first person singular pronoun is deleted when a suffix is added.

Subject pronoun₂ is the basic pronoun form plus the suffix -jam except for the third person singular which does not posit the basic form. Its form is merely jam 'he.'

<u>Subject pronoun₁</u>		<u>Subject pronoun₂</u>	
ai			'I'
aame		ijam	'you'
je		jam	'he/she/it'
ne		nejam	'we'
<u>Ai</u> I ₁	tonora. plant		'I plant.'
<u>Ajam</u> I ₂	tonora. plant		'I plant.'
<u>Ai</u> <u>ajam</u> I ₁ I ₂	tonoryan.		'I do not plant.'

When used with nouns or names, the pronoun follows the noun or name, and either one or both pronouns may occur.

Petrus je jam onap sofwa.
 Peter he₁ he₂ jungle-to go

'Peter goes to the jungle.'

Petrus je onap sofwa.
 Peter he₁ jungle-to go

'Peter goes to the jungle.'

Petrus jam onap sofwa.
 Peter he₂ jungle-to go

'Peter goes to the jungle.'

2.2.2.2. Other suffixes with which pronouns occur are as follows:

a. -s ~ -m

Pronouns occurring as the Object of a sentence are affixed with the -s ~ -m object marked suffix, seemingly in free alternation. Perhaps one set of object pronouns is used with one class of verbs and the other set with other classes of verbs. More information is needed to clarify this point.

Gwidmir wini as damtafa.
 tomorrow woman me see-fut

'Tomorrow the woman will see me.'

Niko am saptena.
 Niko me hit

'Niko hit me.'

b. -p

The suffix -p occurs on pronouns in the Adjunct¹ slot of Bitransitive clauses as benefactive.

Fi ap gobali. 'Give the salt to me.'
salt me give

c. -mena and -rem

There are two sets of possessive pronouns. They occur in the possessive slot in the Possessive Phrase. (See section 3.7.) Possessive pronoun₁ which takes the -mena suffix follows the possessed noun.

Jina amna aure. 'My house is over there.'
house my there

Possessive pronoun₂ which takes the -rem suffix precedes the possessed noun.

Ajam sofwa arem jinap. 'I go to my house.'
I₂ go my house

d. -nan

The suffix -nan occurs on pronouns in the Object slot of the Transitive clause as reflexive.

Ai anan safsafulu. 'I hit myself.'
I₁ myself hit

¹Adjunct here is used to include not only the traditional notion of Indirect Object, but also in a wider sense is used to include Instrument which occupies the same position in the clause. (See section 4.0.)

e. -bar

The suffix -bar occurs on pronouns as comitative.

Bular jebar fonap tini.
Bular he-acc river-to go

'Bular goes to the river with him.'

f. -yan

The negative suffix -yan when occurring with pronouns indicates negation. It usually occurs in short response statements.

Aiyan
I₁-neg

'Not I.'

g. -serem

The suffix -serem is often added to demonstratives (see below) to indicate "particular referent."

Jina aiserem Gijonmena.
house this

'This particular house is Gideon's.'

h. The first person singular pronoun ai 'this' and the third person singular pronoun je 'he' is identical to the demonstrative pronoun ai 'this,' and the third person singular pronoun je 'he' is identical to the demonstrative pronoun je 'that.'

2.2.3. Modifiers occur in one of several modifier slots in the Noun Phrase and the Verb Phrase. Modifiers are subclassified semantically into the following categories: color, shape, sensual perception, spatial, quantifiers, and a miscellaneous category.

2.2.3.1. Color

This list of six colors is exhaustive with all colors portraying syllable reduplication and vowel harmony.

sinsini	'white'
seseye	'black'
berbere	'red'
ikikini	'green'
bwelkatbwelkata	'yellow'
ibamibama	'blue'

The following lists are not exhaustive. Representative examples have been chosen.

2.2.3.2. Shape

unggwandusa	'large'
bastantotiya	'small'
bukona	'round'
ferfera	'flat'
bubwolna	'long'
tofora	'short'

2.2.3.3. Sensual Perception

karkara	'hot'
wisimi	'cold'
kelkelna	'hard'
nonona	'soft'
titini	'wet'
setera	'dry'

2.2.3.4. Spatial

giri	'deep, tall'
------	--------------

gwetmana	'near'
bijua	'far'
teten	'empty'
tenbisini	'full'

2.2.3.5. Quantifiers

Berik numbers do not belong to this class since they are basically non-inflectable, though they are sometimes used as modifiers. Things numbering more than three are usually referred to as many.

ane	'many'
seaafter	'all'
fas	'none'

2.2.3.6. Other Attributes

waakena	'good'
sasara	'happy'
baabeta	'strong'
bunar	'true'
samem	'slow'
taban	'finished'

The demonstrative and possessive pronouns are also modifiers and are discussed in Section 2.2.2.4. and 2.2.2.6.

2.2.3.7. Modifier Suffixes

The suffixes which might occur on modifiers are as follows:

a) -sus

An intensifier suffix -eus is added to most modifiers and carries the meaning of 'very.'

<u>berberesus</u> red-very	'very red'
<u>bukonasus</u> round-very	'very round'
<u>kalkelnasus</u> hard-very	'very hard'
<u>bijuasus</u> far-very	'very far'
<u>anesus</u> many-very	'very many'
<u>baabetasus</u> strong-very	'very strong'

The modifier may be reduplicated in order to indicate even greater intensity.

<u>waakenwaakena</u> good good	'very good'
<u>waakenwaakensus</u>	'very, very good'

g. -fer ~ -ber

The suffix -fer ~ -ber added to modifiers indicates verbal modification.

<u>waakenfer</u>	'well, carefully, etc.'
------------------	-------------------------

Susi lampunu waakenfer gworansona.
Susie lamp carefully place

'Susie places the lamp carefully.'

<u>bastantoifer</u>	'a little'
---------------------	------------

Je bastantoifer sarbena.
he a little hears

'He understands a little.'

bijuaber 'far'

Je bijuaber sofwa.
he far go

'He goes far.'

c. -yan

The negative suffix -yan occurs on modifiers and negates the description.

unggwandusayan 'not large'
large-neg

samemyan 'not slow'
slow-neg

2.3. Open classes of words which obligatorily occur with one or more suffixes.

2.3.1. Verbs are the most complex morphological component of the Berik language. Verbs occur as the nucleus of all Verb Phrases which in turn are the nucleus of the predicate slot in Transitive and Intransitive clauses. Morphemes occurring on the verb root as suffixes may mark number of subjects or objects, gender of objects, size of objects, distance of the speaker from the place of action, height of objects, the general time of day, tense and negation. To illustrate this complexity, the different forms of the Berik verb 'to give' are given in the following matrix. The first set of entries are Berik verb forms used to mean giving one or two or three large items to a male using the tenses of present, past, and future, and further specifying whether the item or items were given in sunlight or in darkness. The second set of entries show the same information with

the only exception that the large item or items were given to a female, not a male.

Entries for the Berik verb 'to give' (to a male)		Present	Past	Future
1 lg.	sunlight	gubana	golbanant	gubafa
	darkness	gubasa	gulbafant	gubafa
2 lg.	sunlight	terbena	terberent	terbefe
	darkness	terbese	terbefent	terbefe
3 lg.	sunlight	kitobana	kitulbanant	kitobafo
	darkness	kitobasa	kitulbafant	kitobafo

Entries for the Berik verb 'to give' (to a female)		Present	Past	Future
1 lg.	sunlight	gobali	gobalint	gobifi
	darkness	gobasi	gobafint	gobifi
2 lg.	sunlight	terbali	terbalint	terbifi
	darkness	terbese	terbefint	terbifi
3 lg.	sunlight	kitobali	kitulbilint	kitulbifi
	darkness	kitobasi	kitulbifint	kitulbifi

Still other matrices would be needed to illustrate all the above information for the verb 'to give' with the only change that a small item is given, not a large one. Other matrices would be needed to display all the above information and adding the variable that the giving was done at some distant place.

The Berik verb 'to tie' with many of its inflections is given below. The entries are glossed for tying one or two or three large items, close to the speech act location, using all three tenses, and also specifying whether the item or items were tied in sunlight or in darkness.

Entries for the Berik verb 'to tie'		Present	Past	Future
1 lg.	sunlight	fwirena	fwirenant	fwirena
	darkness	fwiresa	fwirenant	fwiresa
2 lg.	sunlight	faarena	faarefant	faarefa
	darkness	faaresa	faarenant	faaresa
3 lg.	sunlight	taferebilir	taferebilint	taferebifir
	darkness	taferebisir	taferebifint	taferebisir

Another matrix would be needed to illustrate all the above information for the verb 'to tie' with the only change that the tying is done at some distant place.

A further set of examples illustrates the dramatic changes that take place in many Berik verb roots by looking at some forms of the Berik verb 'to place.' The entries are those used to describe specifically placing one or two or three large items either in a low or in a high place and either close to or distant from the person as he relates the action.

Entries for the Berik verb 'to place'		Close	Distant
1 lg.	low	gwerantana	gwerantetfa
	high	gweransona	gweranswetna
2 lg.	low	tosontona	tosontetfa
	high	tosonsona	tosonswetna
3 lg.	low	bununtona	bununtetfa
	high	bununsona	bununswetna

Changes in the verb root, the addition of several suffixes, and the fusion of these morpheme markers all combine to make the problem of analysis complex. More research on verb morphology needs to be

completed. Study thus far, however, shows that the following items are marked on Berik verbs, mainly as suffixes. Entries have been chosen to demonstrate some degree of regularity.

2.3.1.1. Verbal suffixes

a. Number

The number of the subject or object in a sentence is usually marked in the verb by changes in suffixes or by the addition of a pluralizer: in transitive clauses, the number of the object is usually marked; in intransitive clauses, the number of the subject is marked.

Transitive verbs marked for number of the object include:

Subject	Object	Verb sg	Verb dual	Verb plural	
		damtana	damsona	damtabilir	'see'
		saptana	sofsona	saptabana	'hit'
		nasbana	nasona	nasbabilir	'tell'
		telbeser	telmisir	telbebesir	'drink'
		wirusur	wirososar	wirtababisir	'wash'

Intransitive verbs marked for number of the subject:

Subject	Verb sg	Verb dual	Verb plural	
	jirar	ge jirar	ge jarbibilir	'come'
	sofwa	ge sofwa	ge sofwabilir	'go'
	nasonar	ge nasonar	ge nasbawenar	'speak'
	fina	ge fina	ge fibali	'stand'

The pluralizer *ge* has not been written as a verb prefix because question words can occur between the word and the verb, and because there are no other prefixes in Berik. (See also section 3.9.)

Je ge baf jirar? 'Why did they come?'
3rd pl why come

Je ge bas jirar? 'What did they come for?'
3rd pl what come

b. Gender

The gender of the object of a sentence is marked on many verbs by changes in either the verb root or the suffix. Many Berik nouns have gender although it is overtly marked only in the verb. Things that fly are generally feminine, and things that crawl are masculine. An inanimate object such as a rock can take either marking.

Transitive verbs marked for gender of object by changes in the root:

Subject	Object	Verb masculine	Verb feminine	
		damtana	domera	'see'
		saptana	sofora	'hit'
		gerbana	gobali	'give'

Changes in the verb suffix:

sarbana	sarbali	'hear'
eyebana	eyebali	'make'
gwebana	gwebali	'do'

c. Distance

The suffix -tet is used with some verbs to indicate that the predication is some distance from the speech act location.

Subject	Object	Verb near	Verb far	
		disultana	disultetna	'fetch'
		gwerana	gwerantetna	'place'

Ai fos disultana. 'I fetch water.'
I water fetch

Je fos disultetna aure. 'He fetches water there.'
he water fetch-far there

d. Height

Relative height of an object in a clause in relation to the speaker's height is marked in some verbs.

Subject	Object	Verb low	Verb high	
		gerantona	geransona	'to place'
		tosontona	tosansona	'to place'

e. Tense

The tense of an event is marked by the verb final suffix. The suffix -nt indicates past tense, and the suffix -f indicates future.

Subject	Verb present	Verb past	Verb future	
	tini	tinint	tifi	'go'
	jirar	jirant	jifer	'come'
	tumili	tumilint	tumilfi	'eat'

In addition to tense, the general time of day is indicated on the present tense verb to distinguish early morning from noon and from evening.

Subject	Verb morning	Verb noon	Verb evening	
	telbeser	telbefer	telbener	'drink'

f. Desire and Negation

Desire and negation are also verb final suffixes. When the desire or negation suffix occurs, tense is not indicated.

Subject	Verb present	future	desire	negation	
	tini	tifi	tif	tiyen	'go'
	tumili	tumilfi	tumif	tumilyen	'eat'
	nuini	nuinfi	nuinf	nuinyen	'sit'

g. Continuous Action

The continuous action suffix *-yafefa* is added to a verb to denote action that is ongoing. Only one example of this has been inventoried in our research thus far.

<i>eyebabiyafefa</i>	'cook continuously' (from dawn to dusk)
Aame tumilgar <u><i>eyebabiyafefa</i></u> . you food cook-cont.	'You cook the food continuously.'

h. All of the above are inflectional affixes on Barik verbs. The following is a derivational suffix *-tena* which can be added to a modifier to form a verb.

waakina

'good'

waakintena

'make good'

Je angthane waakintena.
hə person good-make

'He healed the person.'

CHAPTER III

PHRASES

3.0. Phrase structures consist of at least one obligatory tagmeme with one or more marginal tagmemes whose fillers are typically words. Berik phrases are usually short. The Numeral Phrase and Temporal Phrase are phrase level tagmemes, that is phrase structures which constitute parts of other phrase structures. All other phrases manifest clause level tagmemes.

3.1. Numeral Phrase

The numerals one to four are simple words and have been described above. (See Section 2.1.5.) The numeral five in Berik is *tafna guri*, a two-word phrase meaning 'hand whole.' Numerals five and larger than five form Numeral Phrases consisting of some reference to one or more hands of a person or one or more feet plus any numeral one to four. The numeral six, therefore, is *tafna aafwer daanfena*, meaning 'hand other one.' Any reference to another hand or another foot implies the obligatory inclusion of the first hand or first foot. Berik numbers from five to twenty are as follows:

5 = <i>tafna guri</i>	'hand whole'
6 = <i>tafna aafwer daanfena</i>	'hand other one'
7 = <i>tafna aafwer naora</i>	'hand other two'
8 = <i>tafna aafwer naon'ngna</i>	'hand other three'
9 = <i>tafna aafwer naonaora</i>	'hand other four'

10 = tafna nao sama guri	'hand two both whole'
11 = tafna nao sama guri tufa daanfena	'hand two both whole foot one'
12 = tafna nao sama guri tufa naora	'hand two both whole foot two'
13 = tafna nao sama guri tufa naoningna	'hand two both whole foot three'
14 = tafna nao sama guri tufa naonaora	'hand two both whole foot four'
15 = tufa guri	'foot whole'
16 = tafna nao sama guri tufa aafwer daanfena	'hand two both whole foot other one'
17 = tafna nao sama guri tufa aafwer naora	'hand two both whole foot other two'
18 = tafna nao sama guri tufa aafwer naoningna	'hand two both whole foot other three'
19 = tafna nao sama guri tufa aafwer naonaora	'hand two both whole foot other four'
20 = tufa nao sama guri	'foot two both whole'

Perhaps because singular, dual, and plural are marked on Berik verbs, numerals are seldom used explicitly in stretches of speech. There is also non-uniformity among Beriks when eliciting numerals over ten. With the introduction of monetary units, uses of the calendar, and measurements in carpentry, Indonesian numbers are increasingly being used.

3.2. Temporal Phrase

The Temporal Phrase is used commonly to refer to some portion of the time of day. It consists of an obligatory nucleus filled by some reference to light or darkness and an obligatory margin filled by a reference to the intensity of sunlight.

TP = +Nuc: light or dark +Mar: intensity of sunlight

Nuc: darkness Mar: intensity

gwini biner 'early morning'
dark fading

Nuc: light Mar: intensity

gwere bolap 'high noon'
sun zenith

3.3. Noun Phrase

The Noun Phrase in Berik can be represented by the formula:

$$NP = +Nuc: \text{noun} \text{ } \bar{\text{Mar}}^1 (\text{Mar}^2: \text{modifier})^2$$

The chart below summarizes the occurrences of modifiers and other words and phrases of modification in the Noun Phrase. The Noun Phrase can fill the clause level slots of Subject, Object, Adjunct, Topic, and Comment. The Nucleus, filled by a noun can be modified by one or two modifiers.¹ Mar¹ is most commonly filled by a modifier. If there is a Mar² it is usually a quantifier (as modifier, see section 2.2.3.5.) or numeral.

+Nuc:	$\bar{\text{Mar}}^1$:	$\bar{\text{Mar}}^2$:
noun	modifier	modifier
Co-ord Noun Phrase	Temporal Phrase	numeral
	noun	Numeral Phrase
	Dependent Clause	

¹The Pronoun Phrase has not been included in the description of the Noun Phrase. In Berik sentences, it is very frequent to have one or two pronouns following a noun phrase and standing in an appositive (appositional) relationship to it. Further research is necessary to clarify this relationship.

Nuc: noun	twin pig	Mar: modifier	unggundusa large
			'large pig'
Nuc: noun	ir yesterday	Mar: Temporal Phrase	gwini biner darkness fading
			'yesterday morning'
Nuc: noun	twin pig	Mar: noun	tane child
			'baby pig'
Nuc: noun	ton stone	Mar: mod bukona round	
		Mar: quantifier ane many	
			'many round stones'

There has been no further attempt beyond what has been stated above to order the modifiers because they most often occur singly. If two or more words of modification are desired, usually two or more sentences are used.

Ai twina ane damtabilint. Twinajeserem je unggwandusa.
I pig many saw-pl-past pig-those they large

'I saw many pigs. Those pigs were large.'

If two or more modifiers occur, the stream of modifiers may be broken by the occurrence of the verb and/or a repetition of the Subject of the clause.

Nuc: Musa
Musa

Nuc: Niko
Niko

'Musa and Niko'

Nuc: Barabas
Barabas

conj: afa Nuc: Kristus
or Christ

'Barabas or Christ'

Comments:

The conjunction o 'and' is used infrequently, but when it does occur it is usually with only two nouns.

3.5. Accompaniment Phrase

The Accompaniment Phrase consists of one or more animate nouns plus an obligatory accompanier suffixed with the -far suffix. (See Section 2.2.1.1.f.) This phrase occurs in the clause level tagmemes of Subject and Topic.

Ai, Daud, Sekati, Piterfar twinsar.
I David Scotty Peter acc eat

'David, Scotty, Peter and I eat together.'

Musa gwolafar oncp sofwa.
Musa dog-acc jungle-to go

'Musa goes with his dog to the jungle.'

Korano gwolafar aare.
chief dog-acc here.

'The chief with his dog is here.'

3.6. Pronoun Phrase

As stated in the section on words, there are two sets of subject pronouns which may occur singly or together. (See Section 2.2.2.1.)

When used together, they form a Pronoun Phrase. The Pronoun Phrase, therefore, consists of two nuclei, one which is filled by a pronoun from subject pronoun set 1 and the other filled by a pronoun from subject pronoun set 2. The Pronoun Phrase can occur in all clause types. Below is given an expansion and abbreviation of a common sentence in order to show the occurrence and position of pronoun₁ and pronoun₂.

Single subject pronoun₁:

Ai mirunus tonora.	'I plant corn.'
I ₁ corn plant	

Single subject pronoun₂:

Ajam mirunus tonora.	'I plant corn.'
I ₂ corn plant	

Pronoun₁ and pronoun₂:

Ai ajam mirunu tonora.	'I plant corn.'
I ₁ I ₂ corn plant	

Permutation of pronoun₂:

Ai mirunu ajam tonora.	'I plant the corn.'
I ₁ corn I ₂ plant	

The Object may be omitted:

Ai ajam tonora.	'I plant.'
I ₁ I ₂ plant	

Co-occurrence of pronoun₁ and pronoun₂ is obligatory in a negative sentence.

Ai mirunu ajam tonoryan.	'I don't plant corn.'
I ₁ corn I ₂ plant-neg	

Co-occurrence is forbidden with some predicates as in the following example. Only pronoun₁ occurs with these predicates.

Ai simaltwora. 'I sing.'
I₁ sing

The data can be summarized in the chart below.

	Ai I ₁	ajam I ₂	mirunu corn	tonora. plant
Pronoun ₁ occurrence	x		x	x
Pronoun ₂ occurrence		x	x	x
Pronoun co-occurrence	x	x	x	x
Object omitted	x	x		x
Pronoun co-occurrence obligatory	x	x	x	x -yan not
Pronoun co-occurrence forbidden	x			'sing' class of verbs

Chart 2. Pronoun₁ Pronoun₂ occurrence

Both pronouns occur obligatorily when the clause in which they occur is negated. In Intransitive, Bi-Intransitive, and Non-Transitive clause types, the two pronouns always occur contiguously.

Je jam aolyan Somanentewer. 'He doesn't go to Somanente.'
he₁ he₂ go-not Somanente-to

In Transitive and Bitransitive clauses, however, the Object and Adjunct may occur between the two pronouns.

Je tafna jam wirsoyan. 'He doesn't wash his hands.'
he₁ hands he₂ wash-not

Ai bangkona Susterf ajam eyembini.
 I₁ bench sister-for I₂ make

'I make a bench for sister.'

In some cases, either pronoun₁ or pronoun₂ can occur following a noun to which it refers. When a noun occurs with a pronoun₁, the noun is always animate. When a noun occurs with a pronoun₂, the noun may be animate or inanimate. Co-occurrence of noun, pronoun₁, and pronoun₂ is possible, but rare.

Korano je onap sofwa. 'The Chief goes to the jungle.'
 Chief he₁ jungle-to goes

Gwili jam bosoka. 'The banana is unripe.'
 banana it₂ unripe

Matius je jam tainena. 'Matthew, he crawls.'
 Matthew he₁ he₂ crawls

3.7. Possessive Phrase

The Possessive Phrase can fill the clause level slots of Subject, Object, Adjunct, Topic, and Comment. It can take either of the following forms: a margin filled by an optional Item and a nucleus filled by an obligatory Possessor, or less frequently occurring, the form in which the sequence of tagmemes is an obligatory Possessor followed by an obligatory Item.

In the Item plus Possessor form, the obligatory Possessor is either a possessive pronoun₁ or a noun plus a possessive suffix. In this form, the Item is never suffixed.

± Item

+ Possessor

Noun	possessive pronoun ₁ noun + possessive suffix, -mena
------	--

Item: noun tane Possessor: possessive pro₁ imna
child your

'your child'

Item: noun celana Possessor: noun + poss Davidmena
pants David's

'David's pants'

The Item tagmeme is optional in context as in:

Je ke gwola imna? 'Is he your dog?'
he question dog your

Je ke _____ imna? 'Is he yours?'
he question your

In the second form, which is used to indicate location of accompaniment the obligatory Possessor is either a possessive pronoun₂ or a noun plus a possessive suffix. The noun as nucleus of a Noun Phrase, occurring as an obligatory Item in the Possessive Phrase, always bears locational or accompaniment suffixes.

+Possessor

+ Item

possessive pronoun ₂ noun + possessive suffix, -em	noun + loc/acc suffix
--	-----------------------

Possessor: poss pro₂ aarem Item: noun + loc jinap
my house-in

'in my house'

+ Axis	+ Relator	
	gwetmanap	'by'
	gwonap	'under'
	sagap	'on'
	ternap	'near'
	binisamer	'edge of'
	burawer	'behind'
	masnawer	'in front of'
	tamer	'over'

Tuna karton gwonap fariton. 'The stone lays under the box.'
 stone box under lays

Tuna karton burawer fara. 'The stone lays behind the box.'
 stone box behind lays

In one instance, the Location Phrase with Axis and Relator alternated with the noun and it's locational suffix.

Je titik sagap nuini. 'He sits on the floor.'
 he floor on sits

Je titikap jam taiafayan. 'He isn't lying on the floor.'
 he floor-on je lies-not

3.8.2. Modifiers + location word

The location word carries the usual locational suffixes -ap and -wer, and is preceded by one or more modifiers.

tantantane jam orgul tamanap
 children their play place

'the children's play area'

3.9. Verb Phrases

All Verb Phrases fill the Predicate tagmeme of clauses.

3.9.1. Basic Verb Phrase

The Basic Verb Phrase can be represented by the formula:

$$VP = \# \text{ modifier} + \langle \# \text{ pluralizer} + \text{ verb} \rangle$$

In other words, the Basic Verb Phrase consists of an optional margin filled by a modifier and an obligatory nucleus filled by an optional Pluralizer and an obligatory verb, always in that order. Modifiers occur with verbs in all clause types.

Margin:	mod	gamjon	Nucleus:	verb	jifar
		again			come

'come again'

Margin:	mod	samem	Nucleus:	pluralizer	ge +:	verb	nasonar
		slow		pl			speak

'speak slowly'

In rare cases, a locational may occur between the modifier and the verb. When it occurs there, it is not considered to be part of the verb phrase.

Kristin	<u>bunarsus</u>	tesap	<u>tiafna.</u>
Christine	true-very	sago	area go

'Christine truly went to the sago area.'

3.9.2. Imperative Verb Phrase

The Imperative Verb Phrase consists of an obligatory imperative marker *das* ~ *jas* (or their abbreviated forms, *sa* or *s'*) and an uninflected form of a transitive or intransitive verb. These true

imperatives, though uninflected, contrast with the pseudo-imperatives in that the true imperatives are part of the inflectional system whereas the pseudo-imperatives are not. (See section 2.1.2.)

Das armanul! 'Buy!'
imp buy

Sa armanul! 'Buy!'
imp buy

S'armanul! 'Buy!'
imp-buy

3.9.3. Cessative Aspectual Verb Phrase

The Cessative Aspectual Verb Phrase

The Cessative Aspectual Verb Phrase consists of a nucleus filled by any verb plus a margin filled by the cessative word, atikwona 'stop.' The suffix -ram occurs on both the verb and the cessative word and indicates that the clause in which it occurs is subordinate to the following clause in the sentence. (See Section 5.4.2.2.)

Korano aa'is nasonaram atikwonaram,
Chief he speak stop

'When the chief stopped speaking, . . . '

3.9.4. Incessative Action Verb Phrase

The Incessative Action Verb Phrase consists of a noun from a small class of nouns and an incessative action verb, gwebali. The incessative action verb can be inflected for all tenses.

Je warem gwebali. 'He coughs and coughs.'
he cough does continuously

Ai naaremem gwebali. 'I paddle and paddle.'
I paddle-with do continuously

3.9.5. Hortative Action Verb Phrase

The Hortative Action Verb Phrase consists of the hortative marker, gan, and any verb. The verb may be marked for either future or present tense.

Gan gastafe!
hort cut-future

'Let's cut.'

Gan toteni!
hort go out

'Let's go out.'

CHAPTER IV

CLAUSES

4.0. Clauses are units of predication. Berik clauses normally contain one predicate, except for cases in which one clause is embedded within another. Clauses most commonly fill the nuclei of sentences, but they can also occur as clause level constructions embedded within another clause. A clause consists of optional tagmemes of Time, Subject, Object, Adjunct, and Location, and an obligatory Predicate. Although the Subject is regarded as being an optional nuclear tagmeme, this means that it is not necessarily an overt Noun Phrase as Subject, but, in fact, is one that is understood. In a multi-clause sentence, for example, the Subject may be omitted, especially if it has been introduced in a previous clause. The occurrence of the Object and/or Adjunct with their respective verbs determines the transitivity of the clause as in other languages. In other words, within the clause, there is an important interrelationship between the Predicate and the other nuclear tagmemes. The tagmemes of Time and Location are marginal tagmemes since they are not directly related to the predicate, but are more commonly setting.

Each clause type then correlates the set of verbs which may occur within the Predicate with the number and kind of roles of its other nuclear tagmemes (Pike and Pike 1977). The roles are: actor, undergoer, and scope; the slots are subject, direct object, and adjunct.

The central meaning of the roles are: the actor is that which does the action of the verb; the undergoer is the item on which the actor acts; and the scope is the direction or goal toward or away from which the action is directed or an instrument used in performing the action.

If a clause has no actor, transitivity is irrelevant and the clause is referred to as Non-Transitive. It could also be referred to as Equative:

Gwili je bosoka.	'The banana is unripe.'
banana 3rd unripe	

If a clause has an actor, it is defined to be one of a set for which transitivity is relevant. For this set, then, the choice is between an undergoer and no undergoer. Those which have no undergoer are

Intransitive:

Minyak mes oroto.	'The oil already boils.'
oil already boils	

Those which have an optional undergoer are Transitive:

Mina tumilgar eyebali.	'Mina cooks food.'
Mina food cooks	

The final distinction is based upon those having a scope:

Bitransitive:

Ai buku jep gubanant.	'I gave him a book.'
I book 3rd-to give-past	

Bi-Intransitive (or Semi-transitive):

Maria tesap sofsant.	'Maria went to the sago place.'
Maria sago place go-past	

In many cases, locations or destinations would fall into the nuclear Adjunct slot of the clause as scope, especially when the location is in some way essential to the meaning of the Predicate. In these cases, the location is often directional.

Niko onap sofsant. 'Niko went to the jungle.'
 Niko jungle-to to-past

In other cases, locations or positions are marginal tagmemes of Location, especially when they are not essential and only weakly related at the most of the Predicate, and when they are not directional, but purely setting.

Niko twina tana onap. 'Niko killed the pig in the jungle.'
 Niko pig killed jungle

4.1. There are five clause types in Berik: Bitransitive, Transitive, Bi-Intransitive, Intransitive, and Non-Transitive (Equative). The chart below displays the tagmemes associated with the various clause types.¹ The Temporal and Locational tagmemes are

	Temp	Subj	Obj	Adjunct	Loc	Pred
Bitransitive	±	±	±	±	±	+
Transitive	±	±	±	-	±	+
Bi-Intransitive	±	±	-	±	±	+
Intransitive	±	±	-	-	±	+
Non-Transitive (Equative)	±	Topic				Comment

Chart 3. Clause types with associated tagmemes.

¹The traditional slot terms of Subject, Object, etc., have been used in the above Chart rather than the role terms of Actor, Undergoer, and scope.

marginal; the other tagmemes are nuclear. Temporals, though most often occurring as the first tagmeme of a clause, especially to indicate a new paragraph, may permute to other positions in the clause except following the Predicate. Locationals may precede or follow the Predicate.

4.1.1. Bitransitive Clause

The Subject, Object, Adjunct, and Predicate tagmemes are nuclear in the Bitransitive Clause and normally occur in that order. The Subject, Object, or Adjunct might not actually appear in the surface structure of the clause, but they would be understood in context. The Object tagmemes are cross referenced in the Predicate as suffixes on the verb. Clarifying the explanation of Objects and Adjuncts in the introductory paragraph, the Adjunct as scope may be a recipient or donator of a thing or action, a locational, or an instrument used in performing the action.

Temporal and Locational tagmemes are marginal in all clause types.

Mar: Temp	Nuc: Subj	Object	Adjunct	Predicate	Mar: Loc
Ir yesterday	ai I	buku book	jep him-to	gubanant gave	jinap. house-in

'Yesterday I gave the book to him in the house.'

Yoel mirunu Tuanf iribeyele.
Joel corn Mr.-for plants

'Joel plants corn for Mr.'

Je faawena jinap gelna.
he spear house-in places

'He places the spear in the house.'

Mar:	Temp	Nuc:	Subj	Object	Adjunct	Predicate	Mar:	Loc
Gamer			je	tini		tobalsiusint	twin	sagabe.
then			he	stock		threw	pig	back-on

'Then he threw the stick onto the pig's back.'

Ai	tesala	betefem	tebili.
I	leaves	needle-with	sew

'I sew leaves with the needle.'

Comments

The Adjunct may permute to follow the Predicate.

4.1.2. Transitive Clause

The optional Subject, Object, and obligatory Predicate tagmemes are nuclear in the Transitive clause. The Subject is omitted in an imperative.

Several features of the Object are marked in the Predicate. (See section 2.3.1.) The Object may permute to precede the Subject or in some rare instances to follow the Predicate.

Temporal and Locational tagmemes are marginal.

Mar:	Temp	Nuc:	(Obj) Subject	Object	Predicate	Mar:	Loc
Namwer			Mina	tumilgar	eyebali	dapurwer	
now			Mina	food	cooks	kitchen-in	

'Now Mina cooks food in the kitchen.'

Fos	disultena
water-you ₂	get

'Get water!'

Mar:	Temp	Nuc:	(Obj)	Subject	Object	Predicate	Mar:	Loc
				Tane child	je ginas he he arrow-he ₂			eyebana makes

'The child makes an arrow.'

				Tini ai stick I				goltesant. picked-up
--	--	--	--	--------------------	--	--	--	-------------------------

'I picked up the stick.'

4.1.3. Bi-Intransitive Clause

The optional Subject and Adjunct as scope and the obligatory Predicate tagmemes are nuclear in the Bi-Intransitive clause. Temporals and Locationals are marginal. As with the Bitransitive clause, the Adjunct may be a locational essential to the Predicate, or an instrument used in performing the action. The Adjunct always carries the locational or the instrumental suffix.

Mar:	Temp	Nuc:	Subj	Adjunct	Pred	Mar:	Loc
	Ir yesterday		Maria je	tesap sago place-to	sofsant. went		

'Yesterday Maria went to the sago place.'

				Amnip me-to	jirar! come		
--	--	--	--	----------------	----------------	--	--

'Come to me!'

			Tuna stone	karton mifip carton lip-at	falnutana. lays		
--	--	--	---------------	-------------------------------	--------------------	--	--

'The stone lies at the lip of the carton.'

Mar:	Temp	Nuc:	Subj	Adjunct	Pred	Mar:	Loc
			Aamke you-ques	stem canoe-by	difnar? come		

'Did you come by canoe?'

			Je she ₁	jam she ₂	nuini sits	kursinip. chair-on
--	--	--	------------------------	-------------------------	---------------	-----------------------

'She is sitting on the chair.'

			Tane child	jitamwer outside	aodna plays
--	--	--	---------------	---------------------	----------------

'The child plays outside.'

			Banggena squirrel		taosen tinibe. climbed tree-on
--	--	--	----------------------	--	-----------------------------------

'The squirrel climbed the tree.'

Comments

The Adjunct may permute to follow the Predicate. Most Predicates in this clause type are verbs of motion.

4.1.4. Intransitive Clause

The optional Subject and obligatory Predicate tagmemes are nuclear in the Intransitive clause. As in other clause types, Temporals and Locationals are marginal.

Mar:	Temporal	Nuc:	Subject	Predicate	Mar:	Locational
	Namwer now		wini je lady she	irwana. gets up		

'Now the lady gets up.'

Mar: Temporal	Nuc:	Subject	Predicate	Mar: Locational
---------------	------	---------	-----------	-----------------

Aro jem nuintana.
rain it sits

'It's raining. (Rain is falling.)'

Das iruwe!
imp get up

'Get up!'

Minyak mes oroto dapurwer.
oil already boils kitchen-in

'The oil is already boiling in the kitchen.'

Ai bastantoifer sarbana.
I little understand

'I understand a little.'

Tantantane seaafter jam ge taibinene.
children all they pl crawl

'All the children crawl.'

4.1.5. Non-Transitive (Equative) Clause

The obligatory Topic and obligatory Comment are nuclear tagmemes in the Non-Transitive (Equative) clause. (See comment below for exclamations.) Temporals, as in other clause types, are marginal. Unlike other clause types, Locationals may fill the nuclear Comment slot. Common fillers of the Topic and Comment slots are listed below.

+ Temporals	+ Topic	+ Comment
Temporals	Noun Phrase	Modifier
Temporal Phrase	Possessive Phrase	Numerals
	Question word	Response word
		Noun Phrase
		Location Phrase
		Possessive Phrase
		Question word
		Exclamations

Comments

Temporals may also follow either the Topic or the Comment. In exclamations (which are statistically few in number), the Topic may be omitted.

Typical examples of the Non-Transitive clause type follow.

Paulus aame	mankaya.
Paul you	mad

'Paul, you are mad.'

Ir	fena	barbarsus.
yesterday	clothes	finished-emp

'Yesterday the clothes were completely gone (sold out).'

Ne seaafter	mafnabara.
we all	breath-have

'We all have breath.'

Je namwer	bwarnabaryan.
he now	sickness-has-neg

'He isn't sick now.'

Gwili ue
banana it

bosoka.
unripe

'The banana is unripe.'

Gwolna je
dog it

nanmena?
whose

'Whose dog is it?'

Sandal amma
sandals my

tikar fensawer.
mat beside

'My sandals are beside the mat.'

Je
he

bwernabara namwer.
sickness-has now

'He is sick now.'

Nesek!

'That's pitiful!'

CHAPTER V

SENTENCES

5.0. Sentences are basic units of discourse. Berik sentences may be broadly classified as being either Independent or Dependent.

An Independent Sentence is one which includes one or more clauses, one of which is an independent clause. This independent clause is not tied by some tagmemic feature, as for example, a subordinating tagmeme, to a preceding sentence.

Ai twina tane tafam tebana.
I pig child hands-inst catch

'I catch the small pig with my hands.'

Dependent sentences are those involving single words, phrases, and dependent clauses and are tied by contextual information to a preceding utterance. A dependent clause in this analysis is defined as one which includes a subordinating tagmeme.

Ngga.
yes

'Yes.'

Fwera?
where

'Where?'

Jerem jinap.
his house-in

'In his house.'

Afwer fas.
others none

'The others are not.'

Aame baif is gwenaram, . . .
 you don't want you do

'If you don't want to do it, . . . '

It should be noted that this definition of dependent clauses and sentences differs from that used by other researchers in describing other Papuan languages. The structure of Berik does not exhibit medial and final verbs as described by Murane in Daga Grammar and Tipton in Nembi Discourse Structure. Berik has a very different grammatical structure from those languages and does not make the same distinctions between independent and dependent clauses and sentences as described by those researchers.

All sentences are marked with final falling intonation with varying degrees of pause between them when grouped into larger units of discourse. The remainder of this section will concentrate on the description of Independent Sentences.

5.1. Sentences are composed of marginal and nuclear tagmemes. Marginal tagmemes include introductory Exclamations, terms of Address (including personal names and kinship terms), and Hortatory Introducers.

Wa, fona jam orotona.
 Exc water it boil

'Oh, the water is boiling!'

Tane amna, esorol ajur gubana.
 child my advice I give

'My child, I give you advice.'

Ao, ne tumilgara gan eyebabi.
 Hort (come) we food hort. cook

'Come, let's cook the food.'

The nucleus of an Independent Sentence may be filled by any of the five Berik clause types.

5.2. Independent Sentences may be either Simple or Complex. If a sentence contains only one independent clause, it is a Simple Sentence. Simple Sentences may contain clauses embedded within them however, as the fillers of a phrase slot.

Wini fona aje gwidnirim juga am damtana.
 lady water she carry rel. w see

'The lady carrying water sees me.'

If a sentence contains more than one independent clause, which is in either a coordinate relationship with another independent clause or a subordinate relationship with a dependent clause, it is a Complex Sentence.

5.3. The role of any Independent Sentence nucleus may be that of an interrogative, an imperative, a hortative, or a statement. These four roles shall be discussed in relationship to the Simple Sentence, but their constructions may be used in the same manner with Complex Sentences. Complex Sentences will be discussed showing coordination, subordination, and the use of conjunctions.

5.3.1. Interrogative Sentences are identified by a question marker, ke, or an interrogative word occurring either sentence initially or following the subject. In Complex Sentences, neither the question marker nor the interrogative need be repeated in clauses following the initial clause. In rhetorical questions, the implied answer is always in the negative.

Maria je ke tesap sofsa?
 Maria she ques sago-to go

'Did Maria go to the sago place?'

Fonggalabar ne ge sofsa?
 when we pl go

'When shall we go?'

Aame ke twina im damtanan, ga im nunggirin?
 you ques pig you see-past and you run-past

'Did you see the pig, and then run?'

Je ke tosa?
 3rd ques know

'How can she know?'

5.3.2. Imperative Sentences are used to give commands. The imperative marker, das jas, occurs before any present tense transitive or intransitive imperative verb form. Other verbal suffixes (see Section 2.3.1.) do not occur on the verb in the imperative construction.

Thimbwat, das nuinte! 'Thimbwat, sit down!
 Thimbwat imp sit

The Correctional Imperative consists of two clauses: a negative statement followed by a positive imperative.

Nuinyen; das tate!
 sit-not imp lie down

'Don't sit; lie down!'

Denggam ti taiyan; nombe sgwidni!
 axe-with wood cut-not machete use

'Don't cut the wood with an axe; use a machete!'

In a Complex Sentence the imperative marker is not repeated in clauses following the initial clause.

Ama, das armanul tumilgara, ga is eyebabili!
 friend imp buy food and you cook

'My friend, buy the food and cook it!'

The single clause negative imperative is given by a negative imperative marker, ibsam 'don't,' plus any transitive or intransitive verb which carries a final suffix -ram.

Ibsam jiraram! 'Don't come!'
 neg-imp come

Ibsam gutaram! 'Don't scratch!'
 neg-imp scratch

5.3.3. Hortative Sentences are those which express advice or give suggestions or exhortations. The Hortative Sentence introducer, ao 'come,' precedes any clause containing the Hortative Action Phrase. (See Section 3.9.6.) In Complex Sentences the Hortative Sentence introducer occurs sentence initially and the hortative marker, gan, occurs before each verb.

Ao, gan nuinte.
 Hort (come) hort sit

'Come, let's sit.'

Ao, ne tumilgara gan eyebabi gan tesarabali.
 Hort (come) we food hort cook hort dance

'Come, let's cook the food and dance.'

5.3.4. Statements are all those sentences which are not of the preceding types, that is interrogative, imperative, or hortative.

Statements are by far the most numerous type of sentence, and as with the other sentence types, tend to be short.

There are few conjunctions in Berik so that normally complex English sentences are written as several Simple Sentences in Berik. The Simple Sentences are chronologically related so that the action included in the first sentence would occur logically before any action in the sentences which follow. However, if conjunctions occur or if a verbal suffix which marks the linking of clauses occurs, then the sentence is a Complex Sentence.

Example of a Complex Sentence:

Je Somanente aolna udarna ga¹ domolnutna.
 he Somanente go plane rel see

'He goes to Somanente (in order to) see the plane.'

Example of two Simple Sentences:

Je Somanente jem aolyan. Je udarna jem domolyan.
 he Somanente he go-neg he plane he see-neg.

'He doesn't go to Somanente. He doesn't see the plane.'

Further analysis of texts should give greater insights into this tendency towards shorter constructions. Chart 4 below summarizes the presentation of material regarding Complex Sentences in the paragraphs following it.

5.4. Complex Sentences are composed of two or more clauses of which at least one is an independent clause. These clauses are in either a coordinate relationship or a subordinate relationship in which

¹See section 5.4.1. regarding this particle.

Independent Sentences

Simple Sentences (used to illustrate roles)	Complex Sentences (used to illustrate coordination and subordination)	
a) interrogative	Coordinating relationship	Subordinating relationship
b) imperative		
c) hortative	a) joined by coord. conj.	a) joined by subord. conj or rel particle ga in non-initial clause positions
d) statement	b) joined by rel particle ga clause initially	b) joined by a subord suffix -ram
		ex. Conditional Sequential

Chart 4. Simple and Complex Sentences

one clause is subordinate to the other.¹ The clauses are always chronologically ordered with the action of the first clause preceding or co-occurring with the action of succeeding clauses. There is always tense agreement in the verbs of the clauses comprising the sentence. There is also role agreement so that, for example, both clauses have an imperative construction in a Complex Imperative Sentence. Likewise, all clauses have an interrogative construction in a Complex Interrogative Sentence. A question word occurring in an initial clause need not be repeated in succeeding clauses.

5.4.1. Those clauses which are in a coordinate relationship are joined to one another by a coordinate conjunction, ane 'and,' or more

¹Both the coordinate relationship and the subordinate relationship between clauses in sentences have been grouped together under the general term complex (as contrasting with simple) sentences, rather than using the more usual distinction of complex versus compound.

commonly by a relational particle, *ga*, occurring between the clauses. This relational particle occurs frequently in discourse and needs more analysis with respect to higher grammatical levels, i.e. paragraphs and discourse. A contrastive conjunction, *jeuga* 'but,' also joins two or more clauses together in a contrasting coordinate relationship.

Aame is udanaburewana ane is gerna tane gitowai.
 you you pregnant and you give birth child male

'You are pregnant and you will give birth to a boy.'

Ai jigara gartesan ga ai tisin jamer jinabo.
 I goods got and I walked until house-at

'I got the goods and I walked (until I arrived) at the house.'

Gwidmir Tuan gwili tegafar ga ai as tombafa.
 tomorrow Mr. bananas cut-cut and I I eat-cut

'Tomorrow Mr. will cut the bananas and I will eat them.'

Das orotana ga asi s'bili.
 imp boil and me imp-tell

'Boil (the water) and then tell me.'

Fonggalabar aame twina dantana ga im nunggiri?
 when you pig see then you run

'When you see the pig, then do you run?'

Niko kasian tombana, jeuga Tuan ga fos telbili.
 Niko peanuts eats but Mr. rel. water drinks

'Niko eats peanuts, but Mr. drinks water.'

5.4.2. Unlike the coordinate relationship in which two or more independent clauses are joined by coordinate conjunctions or the relational particle *ga*, clauses in a subordinate relationship consist of one independent clause and one or more dependent clauses.

5.4.2.1. The clauses may be joined together by subordinating conjunctions; *jengga* 'then,' *jebas* 'because'; or by the relational particle *ga* which occurs in various slots in the second clause, except clause initially, but always precedes the predicate. The subject of the second clause may be omitted if it is co-referential with the subject of the initial clause.

Wa, twina nunggirbisir, jengga jensiriber.
exc pig runs then snorts

'Oh, the pig runs, then (it) snorts.'

Ai as sinar, jebas asia wisiam bitolu.
I I cry because I coolness feel

'I cry because I am hungry.'

Ai siafras nasonar asis ga tawastona.
I wrongly speak you rel tell

'(When) I speak incorrectly, then you tell me.'

Je fomfowa artena, tesala gam tebili.
he how know leaves rel sew

'How does he know (how) to sew leaves (for roofing)?'

Je Somanente acina udarna ga domolnutna.
He Somanente goes plane rel see

'He goes to Somanente (in order to) see the plane.'

5.4.2.2. A subordinating relationship between two clauses may also be indicated by the presence of the subordinating suffix, *-ram*, on the verb of the initial clause in the Conditional and Sequential Sentences. In all the examples studied the two clauses are chronologically related with the action of the first clause occurring before the action of the second clause.

The Conditional Sentence is an example of this. The Conditional Sentence consists of two clauses; an initial dependent clause setting forth a condition, and a resultant independent clause.

Aame baif is gwenaram, ai isas saftana.
 you not want you do-subord I you hit

'If you don't want to do it, I'll hit you.'

Barsa is taabuntnorom, abgwona bastoifer is terbana.
 rice you get-subord me little you give

'If you get rice, give me a little.'

Aro jem nuinteraram, wat nejema tibeyen.
 rain it falls-subord palm stems we go-neg

'If it rains, we won't go for palm stems.'

Sequential Sentence examples:

Suster forteraram; Daud saptena.
 Sister come-subord David hit

'After Sister came she hit David.'

Ne ke nesne nuinteneraram ke nesne twinar?
 we ques we sit-subord ques we eat

'Shall we sit and eat?'

Aame ijes gurulum je futu.
 you it plant-subord it died

'What you planted died.'

Ao, jinas tabanswenaram ga nesne nuintana.
 come house finish-subord then we sit

'Come, let's finish the house and sit.'

Namwer wini je irwanaram ga gwinar.
today lady she gets up-subord then goes

'Today the lady gets up and goes away.'

5.4.2.3. The Causative Sentence consists of an initial transitive clause containing a Predicate word, taatwobana 'to cause or to force,' and a final "effect" clause. The understood subject of the final clause is the object of the initial clause, and the Predicate of the final clause carries an -f final suffix on the verb.

Je wina gam taatwilbini titik sapusof.
he wife rel forced floor sweep

'He forced his wife to sweep the floor.'

Je Mina gam taatwilbili nanaf sofweh.
he Mina rel forced vegetables go

'He forced Mina to go for vegetables.'

Korano anggwna jes taatwobana tis staarif.
chief man he forced wood chop

'The chief forced the man to chop wood.'

5.5. This chapter on Sentences has sought to describe the distinctions between Independent and Dependent Sentences, and also Simple and Complex Sentences. Simple Sentences were used to show the different roles a sentence might play, and Complex Sentences were used to demonstrate coordination and subordination. Several examples were used in each Section to show the most common constructions. Further research needs to be done in order to make these distinctions even clearer. Especially needful is an analysis of the relational particle, ga, and its further use in the sentence and on grammatical levels above the sentence.

APPENDICES

APPENDIX A

PUNCH CARD FILING

Language data can be filed on 7-1/2" by 3-1/4" computer punch cards. The cards of the McBee Keysort system (address: Automated Business Systems, Division of Litton Industries; Athens, Ohio 45701) have 102 round holes around the circumference of each card. Other systems have fewer holes per card and thus limit the amount of data that can be filed. Also, some systems use rectangular holes; it has been found that manual notching and sorting is easier when the cards have round holes. Data is filed by notching the cards with a computer card punch to notch (or open) appropriate holes on the cards. Data is retrieved by spindling the cards with a computer card sorting needle. The notched cards will fall from the sorting needle. Specific items needing consideration can then be compared and analyzed as with any filing system.

Procedure for Setting up a Punch Card Filing System

- I. Decide on the topic to be covered by the set of punch cards.
This writer has different sets of cards for phonology, dictionary, grammar (word through clause levels), and bibliography.
- II. Select 100 examples (words for phonology and dictionary, clauses for grammar, articles for bibliography) and write or

type one example on each card. At least 1/3 of the examples should be phonologically or grammatically complex to insure that the system will be able to handle all the data one will eventually wish to file. When making cards for multi-clause sentences, this writer suggests typing the cards with a carbon to save time. One clause on each card can then be underlined to indicate which clause is coded by the notching.

- III. Decide which items in each example will need to be compared or analyzed.
- IV. Make a trial MASTER card for the set of cards.
 - A. Paste two blank cards together. This double thickness gives added strength to the master and thus gives it longer life.
 - B. Choose holes, around the circumference of the card, to represent the items that will need analyzing. Retrieval is quickest if each item is coded with only one hole (Conrad 1972, calls this direct coding). However, several holes may be used and thus one can increase the capacity of the card. (Conrad labels this combination coding.) This system of filing is limited only by the ingenuity of the researcher!
 1. Use the middle of the two 7-1/2" sides for the most frequently occurring items. This enables the linguist to sort the cards in a more orderly manner.
 2. Group like items. For example, on a grammar card, put items dealing with clause level tagmemes together, word level items together, unknown particles together, etc.

3. It is recommended that the English translation of the items (the verb, in the case of the clause) be coded so that items can be retrieved through the English. When two holes are notched for each letter, only eight holes (instead of twenty-six) are needed for the English alphabet. Arranging the letters as shown in Arrangement 1 allows for easy alphabetization.

```

U U U U U U U U
  a g m r v y
    b h n s w z
      c i o t x
        c j p u
          e k q
            f l

```

Arrangement 1--Recommended

If letters are arranged as in the following example, alphabetizing the cards is very time consuming.

```

U U U U U U U U
  a b c d e f g
    h i j k l m
      n o p q r
        s t u v
          w x y
            z

```

Arrangement 2--NOT Recommended

In the first arrangement, spindling the first hole will give the researcher examples beginning with the letters a, b, c, d, e, and f. Taking those cards and then spindling the second hole will give all examples beginning with a. Spindling the third hole will give all examples beginning with b, and so on.

In the second arrangement, spindling the first hole will give the linguist the examples beginning with the letters a, h, n, s, w, and z. Taking those cards and then spindling the second hole will give the linguist examples beginning with a. But to retrieve examples beginning with b., the first set of cards must be set aside and the second hole of the rest of the cards must be spindled. One soon has a desk full of many piles of cards. This is not only time consuming, but confusing.

- C. Cut a rectangular hole in the center of the master card. This "window" allows the researcher to see and read the data he has written or typed on the card while notching the card.

V. Notch the 100 cards.

- A. Place the master card on top of one of the cards to be notched.
- B. Notch the items seen on the card--notch both the master and the card with the example. Assign new items to blank holes as the need arises. Note: The master will soon have most holes notched.
- C. Repeat A. and B. until all 100 cards are notched. When notching grammar cards it is recommended that the analyst first identify the items to be notched with a pencil notation. This will speed the notching process, insure that no items which should be notched are missed, and also lessen confusion later when analyzing.

VI. Evaluate your master card.

Spindle the various items coded on the master card. The examples of the item spindled will drop onto the desk (along with the master card). The other cards will hang from the sorting needle and can be easily removed and set aside. Keeping the cards near the desk top will allow them to drop onto the desk in a neat pile. If the cards hang loosely on the sorting needle--rather than packed tightly together--the desired examples will drop more quickly. Conrad advises:

Be sure the cards are not tightly packed together. One way of ensuring this is to hold the pack loosely on their edges with the left hand while inserting the needle with the right. After inserting the needle, swing it around 20-30 degrees in a horizontal plane, pinch the pack with the left hand, swing the needle back to original position, and then release your left hand grip on the pack. This will spread the cards out on the needle if done properly. Then lift the needle so that the notched cards will drop out.

Evaluate whether the items coded on the master are truly those needing analysis, are productive, are conveniently arranged, and are complete. Evaluation is best accomplished by actually doing a "mini-analysis"--that is, comparing and making notes on the examples of each item coded on the master card. It should be noted that only the examples of one item at a time should be examined. Notations should be made and then the cards should be returned to the set. Withholding cards from the set may cause the researcher to miss valuable examples of other items.

VII. Make a new master card. Rearrange the items, adding, deleting, recoding as was seen to be necessary during the testing.

VIII. Throw away the first trial master and the first 100 cards and begin again with number IV. It is useful to color code the edges of the cards---one color for each set of cards.

Advantages of Punch Card Filing

The following advantages are listed by Conard: (Notations enclosed in parenthesis are made by this author.)

1. Flexibility in maneuvering the cards into any desired order.
2. Speed for checking various hypotheses concerning complex interrelationships among various categories.
3. Speed in finding data and/or ordering a file.
4. Relative economy and simplicity of the equipment.
5. Utility for several types of analysis.
6. Elimination of the need for duplicate cards by coding a single entry in many different ways, thereby allowing a wide variety of information to be retrieved from one file. (Each word or clause needs to be written only once.)
7. Ability to retrieve much information without alphabetical ordering, and hence its relative immunity from accidents and children. (The upper left corner of the cards is cut on an angle allowing them to be restacked easily.)
8. Possibility of using relatively unskilled assistants for some of the fairly simple coding.
- (9. The cards could be used with a computer if one becomes available.)

The reader is further referred to Conrad, "Punch Card Filing" for a description of the equipment and more on coding, notching, sorting,

and disadvantages. This article may be found in the appendix of Language Learner's Field Guide by Healey. Bee, Day, Grimes, Pence, and Samarin have also written articles on Punch Card Filing.

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