

SEMANTIC CLAUSE ANALYSIS IN FOCUS FOR LEARNING KAYAPÓ

By
Kathleen Jefferson

Associação Internacional de Lingüística SIL – Brasil
Anápolis – GO
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SECTION 1

INTRODUCTION

The purpose of this paper is to tie early language learning into current trends in linguistic theory. Frame drills are presented using the principle of "overlearning" to set the information in the student's mind. Although new vocabulary is necessarily used, the primary intent of the drills is to learn the kinds of clause types found in the Kayapó¹ language, and the types of surface structure verbs that go with them. An appendix will be found at the end of the frames, which provides concise definitions of terms used and how these terms relate to the surface structure of the language.

The student may wonder why a study of semantic clause analysis is needed or even desirable. We readily recognize in our own use of English that there is often more information in a given clause or sentence than is described by only looking at it in terms of nouns, verbs, etc. For example, 'I want some potatoes.' inherently implies that there is another actor in the sentence who would give, or sell, etc. the potatoes to me. Semantic clause analysis is, then, an attempt to bring out the significance of all of the information carried by the surface structure (in terms of nouns, verbs, etc.) of the language. The unit of study is the clause in which participants interact with each other according to the process described by the verb. A process indicates in what state or action the participants named in the clause are involved. The participants are animate or inanimate entities, which are involved in the process described by the verb. They are expressed in surface structure by nouns or noun phrases. The relationships between participants and processes are described by the roles of each participant.

Five major types of processes have been found in Kayapó,² and twenty types of roles. Different processes have diverse role combinations or role frames, which are inherently possible. See accompanying chart of role occurrence (pg. 18).

HOW TO USE THIS PAPER

It is recommended that the student arrange the material in some kind of a looseleaf notebook for ease of adding his own frames as he studies. The frames are representative of all of the processes found in the language, but no attempt has been made to be exhaustive.

For optimum benefit each participant should be changed in each of the frames. This has been done for the first five roles involving action processes (frames 1-17). Thereafter, the student is expected to make his own expansions.

Each frame is headed by the process, followed by the role which is in focus. Footnotes at the bottom of some frames clarify points that are not included in the more general English gloss on the right of each page. The frames are numbered consecutively. The order of the frames presents the processes and roles in terms of frequency of occurrence, starting with those most common.

For ease of reference, the appendix of definitions is set up in outline form with the five major processes appearing in the same order in which they appear in the frames. Sub-processes and roles are arranged alphabetically under the process where they are introduced.

FRAME 1

Process-- Action
Role-- Agent only

A

Ba muw 'I cry.'
ngõr sleep
mrã walk

A

Ba idjâpêx 'I work.'
1 2
idjàkre plant
iprõt run
ijàkjer yawn
2
idjàkur eat (habitually)

1-obligatory first person marker.

2-obligatory morphophonemic changes between two vowels.

FRAME 2

Process-- Action
Role-- Agent only

A

Ba muw

Ga
Kôkôti

#

Gu me

Ba me

Gar

Me

'I cry /cried.'
1

You

He (Kôkôti)

He

We (including the one spoken to)

We (excluding the one spoken to)

You (plural, small group)

They (everyone)

1-When the tense marker is either # or nê, the gloss can be either present or past.

FRAME 3

Process-- Action
Role-- Agent Patient

A P

Ba môp kaba
jât
kwÿr
tyrti

'I dig cará.'
yams
manioc
bananas

A

Ba krâtÿx ngre kaba

'I dig the turtle eggs.'

A P

Ba kà kaba

'I skinned the animal.'

A P

Ba karõ kaba

'I took the photograph.'

FRAME 4

Process-- Action
Role-- Agent Patient

A	P		
Ba	môp	kaba	'I dug cará'
Ga			You
Gwaj			We (including the one spoken to and a few others)
Gu	me		We (including the one spoken to and many others)
Ar			They (small group)
Me			They (large group, everyone)

FRAME 5

Process-- Action
Role-- Agent Patient

A	P		
Ba	môp	kaba	'I dug cará.'
		krẽ	ate
		kre	planted
		ga	baked (in an earth oven).'
		tu	carried (in a basket).'

FRAME 6

Process-- Action
Role-- Agent Patient Instrument

A	P	I	
Ba	#	kôo	kubĩ
		₁	₂
		katôko	with a rifle.'
		kruwo	with an arrow.'
		kopo	with a club.'
		kěno	with a rock.'
		kàxo	with a machete.'

1- The suffix o means 'with'.

2- In Kayapó, there are different surface forms for repetitive and non repetitive process. The repetitive form of this process is kupa. This form would be used with the following combinations: (singular agent, plural patient)
(plural agent, singular patient)
(singular agent, singular patient)
(the action is repeated)

FRAME 7

Process-- Action

Role-- Agent Patient Instrument

A P I
Ba # kàxo kubĩ
Ga
Kôkôti

Gar
Ga me
Me

'I killed it with a machete.'
'You
'Kôkôti (he)
'He
'You (plural, small group)
'You (plural, large group)
'They (everyone)

FRAME 8

Process-- Action

Role-- Agent Patient Instrument

A P I
Ba # kàxo kubĩ
 kaba
 karê
 kukà

'I killed it with a machete.'
 dug
 cleared
 cut

FRAME 9

Processes-- Action

Role-- Agent Patient Beneficiary

A B P
Ba amã môp kaba
 1 2
 jât
 kwÿr
 tyrti

'I dug carà for you.'
 yams
 manioc
 bananas

A B P
Ba amã krâtÿx ngre kaba

'I dug the turtle eggs for you.'

A B P
Ba amã kà kaba

'I skinned the animal for you.'

A B P
Ba amã karõ kaba

'I took the photograph for you.'

1- Obligatory person marker slot is filled here by a 'you'.

2- mã meaning 'to' or 'for'.

FRAME 10

Process-- Action

Role-- Agent Patient Beneficiary

A	B	P
Ba	amĩm	môp kaba
	¹	
	Kôkôtimã	
	kum	
	²	
	me kum	
	³	
	mekmã	
	³	
	ar imã	
	ar amã	

1- contraction of amĩ and u.

2- contraction of ku and mã.

3- Either of these are acceptable.

'I dug cará for myself.'

for Kôkôti.'

for him/her.'

for them.'

for them.'

for us (excluding the one
spoken to).'

for you (plural, small group).'

FRAME 11

Process-- Action

Role-- Agent Patient Beneficiary

A	B	P
Ba	Kôkôtimã	môp kaba
Ga		
Me		
Gu me		
Ba me		
Gar		

'I dig cará for Kôkôti.'

You

They

We (including the one spoken to)

We (excluding the one spoken to)

You (plural, small group)

FRAME 12

Process-- Action

Role-- Agent Patient Beneficiary

A	B	P
Ba	Kôkôtimã	môp kaba
		tu
		ga
		kre

'I dug cará for Kôkôti.'

carried

cooked

planted

FRAME 13

Process-- Action

Role-- Agent Patient Maleficiary

A	M		R		
Birbir	abê ₁	anhô ₂	mryo	akĩ	'Birbir stole your meat from you.'
			bàyo		corn
			karinhôo		tobacco
			kubêkào		clothing
			katôko		rifle
			angào		necklace

1- The maleficiary is made up of an obligatory person marker plus bê 'from'.

2- The possessed form of the second person 'you', is optional in this construction.

FRAME 14

Process-- Action

Role-- Agent Patient Maleficiary

A	M		P		
Birbir	abê		anhô	mryo	akĩ
	ibê				
	kutê				
	Kôkôtibê				
	bênjadjwýrbê				
					'Birbir stole your meat from you.'
					my meat from me.'
					his meat from him.'
					Kôkôti's meat from him.'
					the chief's meat from him.'

FRAME 15

Process-- Action

Role-- Agent Patient Maleficiary

A	M		P		
Birbir	abê	anhô	mryo	akĩ	'Birbir stole your meat from you.'
Ba					I
Me 'ô					Someone
Me					They

FRAME 16

Process-- Action

Role-- Agent Patient Maleficiary

A	M	P\	
Birbir	abê	anhõ	mryo akĩ
			o abdju
			o tẽ
			o ajkẽn

'Birbir stole your meat from you.'
hid
took
ruined

A	M	P\	
Birbir	abê	anhõ	mry krẽ
			mry by
			katõk kwỳr
			kubẽkà kadjô

'Birbir ate your meat from you.'
took your meat in his hand from you.'
broke your rifle from you.'
ripped your cloth/clothes from you.'

FRAME 17

Process-- Action

Role-- Agent Maleficiary

A	M
Ba	abê ngõr
	Birbirbê
	kubê
	abãmbê
	anãbê
	mebê
Birbir	ibê ngõr
#	
Ga	
Me	

'I fell asleep (against or from you).'
(against Birbir).'
(against him).'
(against your father).'
(against your mother).'
(against them).'

'Birbir fell asleep (against me).'
He
You
They

FRAME 18

Process-- Action

Role-- Agent Patient Locative

L	A	P
Bàkam	me'õ	ne kangã bĩ
1	3	
Kikrekam		
Krĩbê		
2		
Ngàbê		
Prykam		

'Someone killed the snake in the forest.'

in the house.'
in the village.'

in the men's house.'
in the trail.'

1- This word when unstressed means 'in' or 'on'.

2- When used with location words, bê carries the meaning of 'in'.

3- non-future tense marker.

FRAME 19

Process-- Action
Role-- Agent Range

Extent Range

A			R							
Tăm	ne	#	kanê	o	amykry	'He	was sick	all day.'		
1			àpênh				worked			
			bixjaêr				played			
A			R							
Tăm	ne	#	õt	o	akati	'He	slept	all night.'		
			tor				danced			
			kanê				was sick			
A		R								
Birbir	mũm	prõt		'Birbir					ran	far.'
	wăj								ran	
1- tăm 'this is the way it was'										

FRAME 20

Process-- Action
Role-- Agent Range

Quality Range

A			R	
Inā	ijā	keket	'Mother laughed at me.'	
	ajā		at you.'	
	'ā		at him.'	
	me 'ā		at them.'	
	bajā		at us.'	

FRAME 21

Process-- Action
Role-- Agent Result

A		Res.			
Ne	Birbir	nō	mrō	'Birbir cooked the food.'	
	#	1		She	
	anā			Your mother	
	ba			I	
	gar			You (plural, small group)	
	ne			They (everyone)	

1- Contraction of ne 'non-future tense' and ō 'food'

FRAME 22

Process-- Action

Role-- Agent Comitative

A Com.

Birbir	nã	ro'ã	ne	àpênh	'Birbir works together with her mother.'
		₁	₂		
		kanikwỳj			with her sister.'
		kra			with her child.'
		me			with them.'

1- ro'ã 'together with'

2- ne 'non-future tense marker'

FRAME 23

Process-- Action

Role-- Agent Comitative

A Com.

Ba	akôt	tě	'I go with you.'
	₁		
	Kôkôtikot		Kôkôti.'
	běnjadjwỳrkôt		the chief.'
	inãkôt		my mother.'
	mekôt		them.'

1- kôt 'with'

FRAME 24

Process-- Action

Role-- Agent Comitative Locative

A Com. L

Kôkôti	ar	ro'ã	ngôjmã	tě	'Kôkôti went to the water with him.'
			bàkam		forest
			kikremã		house
			purmã		field
			màtkà'ỳr		airplane

FRAME 25

Process-- Action

Role-- Source

Ikrākam tokry

Itikkam

Ikôkam

'My head hurts.'

stomach

back

Ipar miôpmiôp

Ipa miôpmiôp

'My foot itches.'

arm

FRAME 26

Process-- Action

Role-- Source Patient

S	P		
Arým ne kôk	pi'ôko	ajngrà	'The wind scattered the papers.'
	kadjàto		cotton.'
	kuběkào		clothes.'
	pi'ôo		leaves.'

FRAME 27

Process-- Action

Role-- Patient Range

Quality Range

P		R	
Djudjê	ne pãnh	20	'The bow is worth cr 20,00.'
	1		
Kruw			arrow
Kop			war club
Kàx			machete
Kuběkà			clothing
1- <u>pãnh</u> means 'trade', carries the idea here of 'to be worth'.			

FRAME 28

Process-- Locutionary

Role-- Speaker Addressee

Sp	Ad		
Nãm	#	Kôkôtimã	êx
1		2	
		imã	me.'
		nãmã	his mother.'
		bãmmã	his father.'
		běnjadjwỳrmã	the chief.'
1- <u>nãm</u> 'indeed'			
2- <u>mã</u> 'to'			

FRAME 29

Process-- Locutionary

Role-- Speaker Addressee Proposition

	Sp	Ad	Prop.	
Arỳm	nē	ba	# mry	'ã ku'uw
1				2
			bày	corn.'
			ngô	water.'
			tyrti	bananas.'
			tep	fish.'

1- arỳm 'already'

2- 'ã 'for'

FRAME 30

Process-- Mental Cognitive

Role-- Experiencer Proposition

Ex.	Prop.	
Kôkôti	kute	pi'ôk no'ôk
	1	2
		pumũnh
		kupip ka'ur
		djudjê nhipêx
		pry

'He knows how to read/write.'
(Kôkôti)

weave a mat.'
make a bow.'
the path.'

1- kute, when used with perceptual processes, renders them cognitive (ie. 'see' becomes 'know').

2- pumũnh 'to see or know'

FRAME 31

Process-- Mental

Desiderative Role-- Experiencer Proposition

Ex.	Prop.	
Imã	jàt	prãm
	motkiteru	
	mry	
	tyrti	
	bày	
	bày gogo	

'I want yams.'
a mosquito net.'
meat.'
bananas.'
corn.'
rice.'

FRAME 32

Process-- Mental
 Perceptual Role-- Experiencer Proposition

Ex. Prop.

Kôkôti ne me ngrer ma
 # kabên
 me karô
 # kubyt
 me àkjêr

'Kôkôti heard the singing.'
 the talk.'
 the spirits.'
 the howler monkey.'
 the yelling.'

FRAME 33

Process-- Attributive Relational
 Role-- Attribuant Attribute

Att. Attrib.

Kên ne ja
 Pur
 Pry
 Tônti
 Pidjÿ
 Tep

'This is a stone.'
 a field.'
 a path.'
 an armadillo.'
 medicine.'
 a fish.'

FRAME 34

Process-- Causative Relational
 Role-- Agent Attribute Patient

A	P	Att.
Ba ne ba	êdjào	kamrêk
	#	ipu
	#	kaprÿ

'I made the string red.'
 I filled it.'
 I emptied it.'

FRAME 35

Process-- Experiential Relational
 Role-- Experiencer State

Ex. St.

Ijajne	'I'm full.'
Ikangro	'I'm hot.'
Ikaprî	'I'm sad.'
Ingryk	'I'm angry.'
Imex	'I'm well.'

Ex. St.

Irerek	'I'm weak.'
Itÿx	'I'm strong.'
Ikatyk	'I'm tired.'
Ikatyk mex	'I'm exhausted.'
Idjom	

FRAME 36

Process-- Experiential Relational
Role-- Experiencer State

Ex. St.

Imã prām 'I'm hungry.'

1

Imã kry 'I'm cold.'

Ex. St.

Imã kôr 'I'm thirsty.'

Imã kînh 'I'm happy.'

Imã djukanga 'I'm lazy.'

1- There is a small class of processes that require the form of (personal pronoun plus mã 'to') in the Experiencer slot.

FRAME 37

Process-- Identificational Relational
Role-- Identified Identifier

Id'er Id'ed

Ibê Birbir

Kubê Kôkôti

běnjadjwỳr

mengrer djwỳnh

kukôj

'I am Birbir.'

'He is Kôkôti.'

the chief.'

the festival leader.'

the monkey.'

1

1- This usage occurs when referring to the masks worn in a festival dance.

FRAME 38

Process-- Locational Relational
Role-- Locative

L

Purkam jàt

1

Bàkam ngiadjy

Ngôkam tep

Pĩkam pidjô

'There are yams in the field.'

'There are deer in the forest.'

'There are fish in the water.'

'There is fruit in the tree.'

1- In this construction, the noun (i.e. jàt) becomes the process, since there is no verb to express 'existence' as such.

FRAME 39

Process-- Inchoative Relational
Role-- Attribute Patient

P Att.

Arỳm ne djwỳ kangro mō

bày ngrà mō

kamrêk mō

'The food is getting hot.'

'The corn corn is drying.'

'It is getting (almost) red.'

FRAME 40

Process-- Stative Relational
Role-- Attribute Patient

	P	Att.
Arỳm ne	djwỳ	kangro
	bày	ngrà
	#	kamrêk
	#	ipu
	#	kaprỳ

'The food is hot.'
corn is dry.'
It is red.'
It is full.'
It is empty.'

FRAME 41

Process-- Action Ambient
Role-- Ambient Attribute

Arỳm ne	na	rwyk	tỳx
	kôk	jabêr	tỳx

'It is raining hard.'
windy (very).'

FRAME 42

Process-- Inchoative Ambient
Role-- Ambient Attribute

	Am.	Att.
Arỳm ne	aringro	tỳx mỗ
	akati	# mỗ
	akamàt	# mỗ

'It is becoming sunny.'
becoming day.'
becoming night.'

FRAME 43

Process-- Stative Ambient
Role-- Ambient Attribute

	Am.	Att.
Arỳm ne	kàjkwa	rax
		punu-re
	aringro	tỳx
	akati	#
	akamàt	#

'It is clear.'
cloudy.'
sunny.'
day.'
night.'

SECTION 2

ABBREVIATIONS USED IN THIS PAPER

Add.	'Addressee'
A	'Agent'
Am.	'Ambient'
Attrib.	'Attribuand'
Att.	'Attribute'
B	'Beneficiary'
Com.	'Comitative'
Ex.	'Experiencer'
Id'ed	'Identified'
Id'er	'Identifier'
I	'Instrument'
L	'Locative'
M	'Maleficiary'
P	'Patient'
Prop.	'Proposition'
R	'Range'
Res.	'Result'
S	'Source'
Sp.	'Speaker'
St.	'State'

KAYAPÓ ROLE OCCURRENCE

PROCESSES	ROLES	Add.	A	Am.	Attrib.	Att.	B	Com.	Ex.	Id'ed	Id'er	I	L	M	P	Prop.	R	Res.	S	Sp.	St.
Mental	Locutionary	+	-	-	-	-	±	±	#	-	-	#	±	#	#	±	±	-	-	+	-
	Cognitive	-	-	-	-	-	#	#	+	-	-	#	-	#	#	+	#	-	-	-	-
	Desiderative	-	-	-	-	-	#	#	+	-	-	#	#	#	#	+	#	-	-	-	-
	Perceptual	-	-	-	-	-	#	#	+	-	-	#	#	#	#	+	#	-	-	-	-
	Attributive	-	-	-	+	+	#	-	-	-	-	#	-	#	#	-	#	-	-	-	-
	Causative	-	+	-	-	+	#	-	#	-	-	#	-	#	+	-	#	-	-	-	-
	Experiential	-	-	-	-	-	#	-	+	-	-	#	-	#	-	-	#	-	-	-	+
	Identificational	-	-	-	-	-	-	-	-	+	+	-	-	#	-	-	#	-	-	-	-
	Inchoative	-	-	-	-	+	-	-	-	-	-	#	-	#	+	-	#	-	-	-	-
	Locational	-	-	-	-	#	-	-	-	-	-	#	+	#	-	-	#	-	-	-	-
	Stative	-	-	-	-	+	-	-	-	-	-	#	#	#	+	-	#	-	-	-	-
	Action-am.	-	-	+	-	+	#	-	-	-	-	-	±	#	-	-	±	-	-	-	-
	Inchoative-am.	-	-	+	-	+	-	-	-	-	-	-	±	#	-	-	±	-	-	-	-
	Stative-am.	-	-	+	-	+	-	-	-	-	-	-	±	#	-	-	±	-	-	-	-

Key:

+ (required)

- (never occurs)

± (may occur)

(yet to be discovered)

DEFINITIONS

- 1.0 Action Process-- involves a particular activity or motion performed by the participants. They are realized in surface structure by verbs.
- 1.1 Agent Role-- an animate participant who initiates and performs the action specified by the verb. The agent role implies volition. It is realized in surface structure as the subject of the surface verb.
- 1.2 Beneficiary Role-- an animate participant, which benefits from the action specified by the verb. It is marked in surface structure by a noun or pronoun followed by mã 'for' or 'to'.
- 1.3 Comitative Role-- is the animate participant who co-operates with the agent in performing the action specified by the verb. It always combines with the agent role. It is realized in surface structure by a noun or pronoun followed by ro'ã 'with' when the participant is co-agent in performing the action, or by a noun or pronoun followed by kôṭ 'with' when the agent leads the co-agent in performing the specified action.
- 1.4 Instrument Role-- the inanimate object used by the agent to do the action specified by the verb. It is expressed in surface structure by a noun followed by o 'with'.
- 1.5 Locative Role-- is the entity specifying the location of the action specified by the verb. It is realized in surface structure by a noun followed by a locative particle kam or bê 'in'.
- 1.6 Maleficiary Role-- an animate participant, which is deprived by the action specified by the verb. It is marked in surface structure by a noun or pronoun followed by bê
- 1.7 Patient Role-- the entity affected or acted upon by the process specified by the verb. It is realized in surface structure as object of the surface verb.
- 1.8 Range Role-- the inanimate entity, which states or measures the quality or extent of the action specified by the verb. It is realized in surface structure as object.
- 1.9 Result Role-- a role, which does not exist at the beginning of the action, but is produced by the action. It is realized in surface structure as object.
- 1.10 Source Role-- an inanimate participant, which is the non-instigative cause of the action specified. It is realized in surface structure as subject of the surface verb.
- 2.0 Locutionary Process-- involves speech acts in which a participant (the speaker) speaks to another participant (the addressee). It is realized in surface structure as verbs such as 'call', 'ask' and 'speak'.
- 2.1 Addressee Role-- is the animate participant who is spoken to in the speech act specified by a locutionary verb. It is realized in surface structure as object.
- 2.2 Proposition Role-- is the report of the total content or meaning of a sentence, (eg. 'I asked him to give me coffee'). It may take the surface form of a statement of the full process

(above), or it may be contracted to a single noun phrase or noun (eg. simply 'I asked him for coffee').

- 2.3 Speaker Role-- is the human participant who performs the speech act specified by a locutionary verb. The speaker has the surface structure form of subject in the clause.
- 3.0 Mental Process-- involves a mental state of perception or experience on the part of an animate participant. This category includes three types of processes:
 - 3.1 Cognitive Mental Process-- involves the mind and its various functions. It is realized in surface structure by such verbs as 'think', 'know', 'decide' and 'remember'.
 - 3.2 Desiderative Mental Process-- involves the mind in its more specific function in relation to the emotions. It is realized in surface structure by such verbs as 'want', 'like', 'dislike', 'sad' and 'happy'.
 - 3.3 Perceptual Mental Process-- involves the mental state of perception. It is realized in surface structure by such verbs as 'see', 'hear' and 'touch'.
 - 3.3.1 Experiencer Role-- is the participant who experiences the mental or sensory state described by the verb. The experiencer is realized in surface structure as subject in the clause.
 - 3.3.2 Proposition Role-- (see 2.2)
- 4.0 Relational Process-- takes the form of a relation between two participating entities or between one participating entity and an attribute. These processes may be analyzed in terms of seven kinds of relations.
 - 4.1 Attributive Relational Process-- expresses the relationship between the participant and a quality attributed to him. The relation is one of class inclusion.
 - 4.1.1 Attribuand Role-- is the participant who is bearer of an attribute. It is expressed in surface structure by an animate or inanimate subject, or 'this'.
 - 4.1.2 Attribute Role-- is the quality, which describes a participant. It is expressed in surface structure by a noun or adjective.
 - 4.2 Causative Relational Process-- is that in which the participant in an agent role causes the participant in the patient role to acquire an attribute. In the surface form, the preposition "o" preceding the attribute indicates a causative process involving an agent.
 - 4.2.1 Agent Role-- (see 1.1)
 - 4.2.2 Attribute Role-- (see 4.1.2)
 - 4.2.3 Patient Role-- (see 1.7)

- 4.3 Experiential Relational Process-- expresses the relationship between an animate participant and a temporary sensory state.
- 4.3.1 Experiencer Role-- (see 3.3.1)
- 4.3.2 State Role-- is the non-inherent mental or sensory feeling experienced by the participant.
- 4.4 Identificational Relational Process-- expresses the relationship between the participant requiring identification and the reference by which the identification is made. The relation is one of identity.
- 4.4.1 Identified Role-- is the participant requiring identification and identified by means of reference to a set of identifying properties. It is realized in surface structure as subject.
- 4.4.2 Identifier Role-- is the participant or entity to which reference is made for a definite identification of the participant requiring identification. It has the surface structure form of bê.
- 4.5 Inchoative Relational Process-- expresses the process in which a participant is acquiring a temporary attribute. The surface form of the inchoative clause is derived from the surface form of the corresponding stative clause by adding the mō causativizer to the end of the stative clause.
- 4.5.1 Attribute Role-- (see 4.1.2)
- 4.5.2 Patient Role-- (see 1.7)
- 4.6 Locational Relational Process-- expresses the relationship between the participant and its location. It may have only one participant, which is realized in surface structure by a noun plus a locative particle.
- 4.6.1 Locative Role-- (see 1.5)
- 4.7 Stative Relational Process-- expresses a temporary relationship between a participant and an attribute.
- 4.7.1 Attribute Role-- (see 4.1.2)
- 4.7.2 Patient Role-- (see 1.7)
- 5.0 Ambient Role-- describes general meteorological conditions such as weather, night and day. They may be analyzed in terms of three kinds of processes, each of which may co-occur with the Range Role.
- 5.1 Ambient Action Process-- involves a particular meteorological activity performed by an ambient phenomenon in participant function. It is realized in surface structure as an ambient noun subject and one of two active verbs (ruw 'come down', and jabêr 'rock').

- 5.2 Ambient Inchoative Process-- describes a change of state of the weather to the ambient process in the clause. The surface form of the inchoative clause is derived from the surface form of the corresponding state or action clause by adding mõ to the end of the clause.
- 5.3 Ambient Stative Process-- expresses a temporary relationship between a meteorological phenomenon and an attribute.
- 5.3.1 Ambient Role-- is a meteorological phenomenon. It is realized in surface structure by an ambient noun as subject.
- 5.3.2 Attribute Role-- is the quality, which describes a participant or meteorological phenomenon. It is realized in surface structure by a small group of adjectives.

NOTES

1. The Kayapó speak a Jê language classified by Davis (1968) along with Apinayé as a member of the Northwest Jê subfamily. At the time this paper was written there were approximately 1500 people living in seven villages in southern Pará and northern Mato Grosso, Brazil. In Mekrãgnôti and the villages in Mato Grosso, the people are monolingual, with the exception of one or two men in each village who speak some Portuguese. In the other Kayapó villages, there is some degree of bilingualism, especially in Gorotire where even some of the women speak Portuguese, but Kayapó is still their mother tongue, spoken in the villages. In the Mekrãgnôti village there is still very little contact with the outside. The other villages have quite a lot of contact with Brazilian culture due to the highway, ranchers, and biweekly Brazilian Air Force flights.

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2. The orthography used in this article is based on a phonemic analysis. It is used as a practical orthography by the Kayapó, having been developed in accordance with the National Indian Foundation to correspond with the Luzo-Brazilian orthography. Symbols used are:

Consonants,	p t k ' b d g x dj m n nh ng w r j
Vowels,	i e ê a à o ô u y ÿ
Nasal Vowels,	ĩ ã õ ã õ ã ã

For a complete description of the phonemes see Stout and Thomson, 1974a.

BIBLIOGRAPHY

- Koopman, Linda, 1974. "Semantic Clause Analysis of Apinajé", Prepublication manuscript.
- Stout, Mickey and Ruth Thomson, 1974. "Fonêmica Txukuhamëi (Kayapo)", *Série Lingüística*, No. 3, Pp. 153-76.
- Thomson, Ruth and Mickey Stout, 1974. "Elementos Proposicionais em Orações Kayapó", *Série Lingüística*, No. 3, Pp. 35-67.