

1 Phonology and morphology

1. 1 Introduction

Kumam is a language in the southern Lwo group of Western Nilotic, a branch of the Nilotic languages, which form a large group among the members of the Nilo-Saharan phylum (Greenberg 1966). Though Nilo-Saharan is not comprehensively studied, the Nilotic languages are relatively well researched. The few works regarding the Nilotic languages published so far are, however, not sufficient to understand even the outlines of the languages. In order to fill the gap, phonological and morphological descriptions of Kumam are given in the following section. Moreover, Section 2 and Section 3 include detailed information about the syntax and also rich information about the pragmatics especially with regard to interaction between syntax and pragmatics.

Kumam is spoken in almost the whole central part of Uganda. It is spoken in the Kaberamaido, the Soroti, the Serere and the Kyoga districts, to be accurate. The number of speakers is given as 112,629 in *Ethnologue* (Gordon 2005). Geographically Kumam borders on Lango in the northwest and borders on Teso in the east. With regard to grammar and lexicon Kumam is most closely related to Lango, and a little more distantly to Acoli. In addition it has some features in common with Luo, which is a language of the southern Lwo group spoken in Kenya.

Genetically and structurally Kumam can be clearly differentiated from Teso, a member of Eastern Nilotic. Nevertheless Kumam has a lot of lexical entries common in Eastern Nilotic languages. There are some assertions that Kumam people originally spoke a variety of Eastern Nilotic. Since moving to their present domicile, they have shifted their language to a form of Western Nilotic. However, lexical forms of Kumam common in Eastern Nilotic languages are likely to have been recently borrowed from Teso due to close contact continuing still today.

Kumam, Lango and Teso speakers are called as a whole 'Atekerin' by the neighboring ethnic groups in spite of linguistic inconsistency. The name Kumam is said to be related to 'Kumama', a term used by Karimojong speakers for referring to whole groups of Kumam, Lango and Teso speakers. Moreover the name Kumam is regarded as originating from 'Akum' with which Lango speakers refer both to themselves and Teso speakers as a whole. The term Lango can be also found in the names of geographical varieties of Lotuxo, which is spoken in the Sudan.

There is no published work on Kumam. We have neither a dictionary nor a grammar of the language. This is the first grammar to be published. There are some descriptive works on Western Nilotic, especially on languages of the southern Lwo group. The recent and most useful work is Noonan (1992), which contains a grammar and a small vocabulary of Lango. Noonan (1992) adapts an autosegmental analysis to manifest the tonal system of Lango. In this grammar the autosegmental theory is adapted as well, but the approach leads us to quite different results from Noonan (1992). The reason is that my understanding differs from Noonan (1992) as to citation forms. While Noonan (1992) offers us interesting information about the syntax, it does not include

enough information about the pragmatics. This grammar of Kumam includes the syntax and the pragmatics of Kumam.

Other earlier and useful works are Crazzolara (1955) and Tucker (1993). The latter was compiled by C. A. Creider from data collected early by A. N. Tucker. Both of them offer us rich information about the phonology and the morphology of Acooli and Luo, respectively. However, they made no attempt at systematic description of tones prior to the development of the autosegmental approach. Relatively recent descriptive works are Heusing (2004) and Storch (2005). Both of them offer comprehensive information about the morphology of southern Lwo and Western Nilotic, respectively, though the descriptions of tones are not explanatory.

The data on which this grammar based were collected in field works conducted from 1999 to 2012, supported by the Japanese Ministry of Education, Cultures, Sports, Science and Technology. My consultant was always patient with troublesome works. She always made clear judgments based on her excellent linguistic instinct. To her I express my deepest gratitude. In addition, I would like to thank Mr. Merit Ronald Kabugo and Ms. Sylvia Nahayo in Makerere University, and all my colleagues of the Research Institute for Languages and Cultures of Asia and Africa.

1. 2 Phonology

In the following sections I offer some phonological and morpho-syntactical descriptions that are prerequisite for discussing Kumam grammar.

1. 2. 1 Consonants

Kumam's consonantal system is relatively simple. The following inventory of consonant phonemes is posited for Kumam.

(1)	bilabials	alveolars	palatals	velars
voiceless stops	p	t	c	k
voiced stops	b	d	j	g
fricative		(s)		
lateral		l		
trill		r		
nasals	m	n	ɲ	ŋ
semi-vowels	w		y	
(2) apar	'mat made from papyrus reeds'			
abár	'wealth'			
tút	'pus'			
dúd	'end'			

cɔŋ	‘knee’
jɔ	‘person’
kíc	‘honey-bee’
gi	‘thing’
lác	‘urine’
rac	‘bad’
mán(L)	‘this’
nán	‘now’
nó	‘what’
ŋec	‘back of body’
wic	‘head’
yo	‘path’
alós	‘flour’

Fricatives are observed only in borrowed words.

Geminated consonants are observed in forms derived via morphological processes. For instance, when nouns ending in a consonant are followed by the personal possessive pronominal suffix *-ná* ‘my’, the alveolar nasal /n/ of the suffix is assimilated to the preceding consonant and forms a geminated consonant with the preceding one (e.g. *way* ‘eye’ + *-ná* ‘my’ → *wayŋá*¹ ‘my eye’, *del* ‘skin’ + *-ná* → *dellá* ‘my skin’).

The semi-vowels /w/ and /y/ may constitute nuclei of syllables as glides with the following vowels. The semi-vowels /w/ and /y/ are involved in the inventory of consonantal phonemes, because they sometimes may fill an onset position of syllables (e.g. *way* ‘eye’, *yo* ‘path’).

1. 2. 2 Vowels

Kumam has ten vowel phonemes. The following inventory is posited for Kumam.

(1)	[−ATR]		[+ATR]	
	front	back	front	back
high	ɪ	ʊ	i	u
mid	ɛ	ɔ	e	o
low		a		ɑ

¹ /ŋŋ/ is phonetically pronounced [ŋg]. When a preceding noun ends in a vowel, the alveolar nasal /n/ of the suffix is not assimilated to the preceding consonant and does not make geminated consonants with the preceding one (cf. *bunduku* + *ná* → *bunduku-ná* ‘my gun’).

(2) ka	‘after’
ka	‘place’
ɛ	‘ax’
lé(L)	‘animal’
ɪc	‘stomach’
ít	‘ear’
bør	‘wound’
bur	‘hole’
dóg	‘mouth’
dok	‘cattle’

The ten vowels are divided into two sets with regard to vowel harmony. For convenience, the vowels, /ɪ, ɛ, a, ɔ, ʊ/ are referred to as [-ATR], and the vowels /i, e, ɑ, o, u/ are referred to as [+ATR] according to Stewart’s terminology (Stewart 1967, Jakobson 1978). Tucker and Bryan (1966) refer to [+ATR] vowels as ‘close’ and ‘hollow’, while they refer to [-ATR] vowels as ‘open’ and ‘hard’ in their description of the Nilotic vowel system. Tucker (1958) refers to [+ATR] vowels as ‘breathy’ or ‘hollow’ and to [-ATR] vowels as ‘hard’ or ‘creaky’ in his discussion of Lango morpho-phonemics. My impression is that Kumam [-ATR] vowels sound clear, while [+ATR] vowels are of a darkish tone color.

The basic rule of vowel harmony is that a word consists of syllables whose nuclei contain vowels of the same value regarding the [ATR] category. Moreover, [+ATR] vowels control vowel harmony in words. Vowels change the value of [ATR] category by harmonizing with the following vowels.

Personal possessive pronominal suffixes control vowel harmony. For instance, the 2nd person singular possessive pronominal suffix *-ni* ‘your’ contains a [+ATR] vowel. When the personal possessive pronominal suffix *-ni* ‘your’ is attached to nouns consisting of syllables with a [-ATR] vowel, the [-ATR] vowels of the nouns change their value from [-] to [+] in harmony with the value of [ATR] of the following vowel (e.g. *léb* ‘tongue’ + *-ni* → *lééb-i* ‘your tongue’)². The vowel harmony rule is not applied to clitics. For instance, when the 1st person singular subject clitic *a=* ‘I’ is attached to verbal stems, the vowel of the clitic does not change its [ATR] value even if the verbal stems contain [+ATR] vowels (e.g. *a= + tēdo* → *a=tédó* ‘I cook’). As the definition, clitics are those elements that are attached to stems but are not subject to vowel harmony.

Vowel harmony is limited to only one syllable positioned just before a syllable containing [+ATR] vowel in regressive assimilation. Some personal pronominal object suffixes contain [+ATR] vowels. When the suffixes containing [+ATR] vowels are attached to verb stems, the vowel of the syllable

² The stem vowel is lengthened in compensation for the loss of the alveolar nasal of the possessive suffix.

positioned just before the suffixes changes its [ATR] value from [-] to [+] (e.g. $\text{ɔ}=\eta\text{ɔ}l-$ + $-i \rightarrow \text{ɔ}=\eta\text{ol}-i$ ‘He cut you’, $\text{ɔ}=\text{jwajwat}-$ + $-i \rightarrow \text{ɔ}=\text{jwajwat}-i$ ‘He hit you repeatedly’).

Some personal pronominal object suffixes contain [-ATR] vowels. The suffixes containing [-ATR] vowels are not harmonized with verb stems in the vowel harmony, which is of regressive assimilation. When the suffixes containing [-ATR] vowels are attached to verb stems containing [+ATR] vowels, the vowels of the suffixes do not change the [ATR] value from [-] to [+] (e.g. $\text{ɔ}=\text{ted}-$ + $\acute{a} \rightarrow \text{ɔ}=\text{ted}-\acute{a}$ ‘He cooked for me’).

Phonetically long vowels occur under some conditions. However, Kumam vowels have no distinctive opposition of length. It is not necessary to transcribe vowel length in the lexicon.

Phonologically distinctive long vowels occur only in forms which are derived through morpho-syntactic processes. For instance, when the transitive infinitive suffix $-n\text{ɔ}$ is attached to verb stems, vowels of the verb stems are lengthened in compensation for the loss of the consonant (e.g. $\text{ted}-$ ‘cook’ + $-n\text{ɔ} \rightarrow *ted-d\text{ɔ} \rightarrow teed\text{ɔ}$ ‘to cook’, $\text{cam}-$ ‘eat’ + $-n\text{ɔ} \rightarrow *camm\text{ɔ} \rightarrow caam\text{ɔ}$ ‘to eat’). The alveolar nasal of the transitive infinitive suffix $-n\text{ɔ}$ is assimilated to the preceding consonant with regard to both manner and point of articulation. The stem vowel is lengthened in compensation for the loss of one of the geminated consonants. Vowel length has syntactic functions in Kumam. Consequently, vowel length is transcribed only for indicating syntactic functions in this grammar.

Noonan (1992) formalizes the vowel sandhi rule in Lango as follows: under certain conditions, the final vowel of a word coalesces with the initial vowel of the following word. When coalescence occurs, the final vowel of the preceding word is deleted and the initial vowel of the following word assumes the [ATR] value of the deleted vowel (Noonan 1992: 36).

Phonetic vowel coalescence occurs in rapid speech also in Kumam. When a word ending in a vowel is followed by a word beginning with a vowel, the final vowel of the preceding word may coalesce with the initial vowel of the following word in rapid speech. Under certain conditions the final vowel of the preceding word is deleted. The preserved vowel of the following word assumes the [ATR] value of the deleted vowel. The vowel coalescence is formalized as follows. As far as tonal phenomena are concerned, the tonemes which are associated primarily with the deleted vowels are preserved even if the vowels are deleted in accordance with the vowel sandhi rules.

$$(3) [\cdot \cdot \cdot V] \# [V \cdot \cdot \cdot] \rightarrow [\cdot \cdot \cdot \emptyset \# V \cdot \cdot \cdot]$$

[αATR]		[αATR]
1	2	2

(4) $\acute{a}\eta\acute{o}$ a=ték → [$\acute{a}\eta\acute{a}!\acute{t}\acute{e}k$]

I 1SG=strong
‘I am strong.’

When the final vowel /ɔ/ of the noun *dákó* ‘woman’ is deleted, [−ATR] value of the vowel is preserved even though the following word *a-gér* ‘fierce’ contains [+ATR] vowels in (5). When the final vowel /a/ of the negative particle *líká* ‘not’ is deleted, [−ATR] value of the vowel is preserved even though the following word *i=té!dó* ‘you cooked’ begins with a [+ATR] vowel /i/ in (6).

(5) *dákó a-gér* → [dáká!gér]
 woman ATT-fierce
 ‘fierce woman’

(6) *líká i=té!d-ó cáam* → [líkí!té!dó !cám]³
 NEG 2SG=PERF:cook-TR food
 ‘You did not cook food.’

The vowel sandhi rules are applied to unstressed vowels only. When a word ending in a vowel is followed by a word beginning with a vowel, if the vowels are stressed, vowel coalescence does not take place between them. For instance, when the preposition *ɪ* ‘at, in, to’ is followed by the noun *ɔt* ‘house’, the vowel of the preposition is not deleted because both the vowel of the preposition *ɪ* ‘at, in, to’ and that of the noun *ɔt* ‘house’ are stressed.

(7) *ɪ-ɔt* → *[ɔt]
 at-house
 ‘at house’

There are some morphemes to which vowel sandhi rules are not applied. For instance, vowel sandhi rules are not applied to vowels of pronominal object suffixes. The vowel of the 3rd person plural object suffix *-gi* is not deleted before the following vowel.

(8) *ε=né!nó-!gí óbai* → *[εné!nó!góbai]
 3SG=PERF:see-3PL dawn
 ‘He saw them at dawn.’

There is a phonological boundary between topics and the following constituents which obstructs the application of vowel sandhi rules. For example, vowel sandhi rules are not applied between the topicalized noun *ɔpɔ* ‘Opio’ and the following constituents.

³ Tones are discussed later in chapter 3.

- (9) opio , $\text{a=dí!pó} \rightarrow *[\text{opíadí!pó}]$
 Opio, 1SG=PERF:hit
 ‘Opio, I hit.’

Vowel sandhi may also take place on morpho-phonological level. When a morpheme ending in a vowel is followed by a morpheme beginning with a vowel in morphological derivation, the preceding vowel is deleted under certain conditions. The preserved vowel of the following morpheme adopts the [ATR] value of the deleted one.

- (10) $\cdot \cdot \cdot \text{V} - \text{V} \cdot \cdot \cdot \rightarrow \cdot \cdot \cdot \phi - \text{V} \cdot \cdot \cdot$
 $\begin{array}{ccc} [\alpha\text{ATR}] & & [\alpha\text{ATR}] \\ 1 & 2 & 2 \end{array}$

For instance, when middle forms are derived by attaching the middle suffix *-ééré(L)* to verbal transitive stems, the vowel of the transitive formative suffix *-ɔ/-o* is deleted according to the vowel sandhi rule⁴. When a vowel is deleted in accordance with the vowel sandhi rule, the toneme primarily associated with the deleted vowel is preserved. Verbal stems bear a high toneme and the transitive formative suffix *-ɔ/-o* bears a low toneme in underlying representations. The middle suffix *-ééré(L)* bears a high, a high and a low toneme in a sequence. When the middle suffix *-ééré(L)* is attached to verbal transitive stems, the rightmost low toneme becomes a floating low toneme⁵.

- (11) H L HHL H (L) H H (L)
 | / /
 ted-ɔ-erɛ → tél'd-ééré
 cook-TR-MID ‘to be cooked’

1. 2. 3 Syllable canon

The syllable canon of Kumam can be described by the following formula:

- (1) (C) (G) V (C)
 C = consonant
 G = glide
 V = vowel

⁴ The value of [ATR] category of the transitive formative suffix is harmonized with that of the following suffixes. When no suffix is attached to verb stems, it is harmonized with that of verb stems.

⁵ See detail tonal analysis in chapter 3.

Kumam has syllables ending with a vowel in final position of the core. Kumam has syllables without a consonant at the onset in word initial position, word middle position and word final position. Words like *yo* ‘path’ and *lé(L)* ‘animal’ end with a vowel in final position of the core. Words like *in(L)* ‘you’ and *i(L)* ‘war’ have no consonant at the onset position in word initial position. Words like *e.ú.la* ‘dancing ornament’ have no consonant at the onset position in word middle position. Words like *ɪ.ç.ɔ* ‘man’ have no consonant at the onset position in word final position.

(2) <i>tyɛn</i>	‘leg’
<i>lak</i>	‘tooth’
<i>yo</i>	‘path’
<i>lé(L)</i>	‘animal’
<i>in(L)</i>	‘you’
<i>i(L)</i>	‘war’
<i>e.ú.la</i>	‘dancing ornament’
<i>ɪ.ç.ɔ</i>	‘man’

Glides may follow any consonant except for fricatives. The glide /y/ is relatively restricted in distribution. Glides do not occur after vowels. Glides form a nucleus of a syllable with the following vowel. Syllables constitute a tone bearing unit. Glides themselves do not constitute a tone bearing unit⁶.

(3) <i>bwom</i>	‘wing’
<i>twol</i>	‘snake’
<i>dwók</i>	‘answer’
<i>cwar</i>	‘husband’
<i>kwon</i>	‘porridge’
<i>ɲwɛn</i>	‘ant’
<i>lwár</i>	‘gray hair’
<i>rwət</i>	‘chief’
(4) <i>pyɛr</i>	‘back of waist’
<i>dyaŋ</i>	‘cow’
<i>myɛl</i>	‘dance’
<i>lyɛc</i>	‘elephant’

⁶ Cf. Section 1. 3.

1. 3 Tone

Kumam is a tone language, exhibiting a low tone, a high tone, a falling tone, a rising tone, a downstep high tone and a double downstep high tone, which contrast on a phonetic level. However, a low toneme and a high toneme are posited in underlying representations. There are a few tone sandhi rules which have the effect of altering the underlying tonal representation of a word in particular environments. In addition to the language specific tone sandhi rules, Kumam follows the general tonal principles of assigning tonemes to tone bearing units, which are proposed in autosegmental theories.

1. 3. 1 Inventory of tones

Phonetically there are four level tones in Kumam. They are referred to as a low tone, a high tone, a downstep high tone and a double downstep high tone. A high tone is transcribed with an acute accent on vowels, because tone bearing units (hereafter, TBU) consist of syllables, and because only vowels always form syllable nuclei in Kumam. There is no syllabic consonant in the language. A low tone is transcribed without any mark on vowels. There are two contour tones, a falling and a rising tone. A falling tone is transcribed with a circumflex on vowels. A rising tone is transcribed with a wedge on vowels. In addition, Kumam has a downstep high tone and a double downstep high tone. A downstep high tone is transcribed with an acute accent on vowels preceded by an astonishing mark before the syllables whose nuclei the vowels form. A double downstep high tone is transcribed with an acute accent on vowels preceded by double astonishing marks before the syllables whose nuclei the vowels form.

The followings are the significant tonal distinctions on the phonetic level in Kumam:

(1) Tone	Transcription	Abbreviation	Musical step
low	[a]	l	do
high	[á]	h	fa
falling	[â]	f	fa-do
rising	[ã]	r	do-fa
downstep high	[!á]	ds	mi
double downstep high	[!!á]	dds	re

Since high tones may be actually pronounced lower than the preceding low tones as a result of intonational phenomenon of downdrift, it is impossible to express phonic height of tones in an absolute scale of musical steps. However, rough description of phonic height in a scale of musical steps assists to draw an approximate image of tones, especially of a double downstep high tone.

(2) cak	‘milk’	l	do
jɔ	‘person, pl.’	l	do
ib	‘tail’	l	do
(3) dóg	‘mouth’	h	fa
úm	‘nose’	h	fa
dwán	‘throat’	h	fa
(4) bakô/bakó	‘wife’s brother’	l f/l h	do fa-do/do fa
sandú!kú rác	‘The box is bad.’	l h ds f	do fa mi fa-do
(5) nĕn	‘Look!’	r	do-fa
(6) bundú!kú	‘gun’	l h ds	do fa mi
nĕn é!úla	‘Look at the dancing ornament!’	l h ds l	do fa mi do
(7) a=né!!n-é	‘I saw her/him.’	l h dds	do fa re

The syllables are pronounced with a low tone in (2). The syllables are pronounced with a high tone in (3). The noun *bakô/bakó* ‘wife’s brother’ has two free variants, one of which is pronounced with a falling tone in the final syllable and the other is pronounced with a high tone in the final syllable. A high tone appears mostly in the environment where a falling tone is expected to appear in Kumam. A falling tone appears in phonologically limited environments, which are not well manifested. A rising tone is of limited distribution. A rising tone occurs exclusively in subjunctive or imperative mood in (5). A downstep high tone is viewed not only as a product of the tone sandhi rules but also as a surface representation of lexical tonal pattern in (6). The downstep high tone in examples like *é!úla* ‘dancing ornament’ is a product of the tone sandhi rules, and the downstep high tone in words like *bundú!kú* ‘gun’ is a surface representation of lexical tonal pattern. A double downstep high tone is viewed as a surface representation of lexical tonal pattern in (7).

1. 3. 2 Tonemes in underlying representations

Two tonemes, a high toneme and a low toneme, are posited in underlying representations. This supposition results in six tones in surface representations listed in the previous section. Underlying tonemes are transcribed by large capitals, H for a high toneme and L for a low toneme. When a low toneme is assigned to a TBU, the TBU is phonetically pronounced with a low tone in (1). When a high toneme is assigned to a TBU, the TBU is phonetically pronounced with a high tone in (2).

In order to make clarify the relation between the underlying representations and the surface representations, we make use of the autosegmental tone analysis. The TBU connected to an underlying low toneme with an association line is pronounced with a surface low tone in (1). The TBU connected to an underlying high toneme with an association line is pronounced with a surface high tone in (2).

When a TBU associated with a high toneme is preceded by a floating low toneme, the TBU is phonetically pronounced with a downstep high tone. A downstep high tone appears after another high toneme in (7).

When the TBU connected to an underlying high toneme with an association line is preceded by a floating low toneme, it is pronounced with a downstep high tone. A downstep high tone appears only after another high toneme. Floating tonemes are transcribed by large capitals in brackets.

$$(7) H(L)H \rightarrow [h!h] \quad LH(L)H \quad L \quad H(L)H$$

$$\quad \quad \quad \quad \quad \quad \quad \quad \quad \quad | \quad | \quad /$$

$$\text{sanduku} \quad \rightarrow \quad \text{sandú!kú} \quad \text{'box'}$$

If a TBU associated with a high toneme is preceded by a sequence of a floating low toneme, a floating high toneme and a floating low toneme, then the TBU is phonetically pronounced with a double downstep high tone in (8).

If the TBU connected to an underlying high toneme with an association line is preceded by a sequence of a floating low toneme, a floating high toneme and a floating low toneme, then it is pronounced with a double downstep high tone. A double downstep high tone appears after another high toneme.

$$(8) H(L)(H)(L)H \rightarrow [h!!h] \quad LH(L)(H)(L)H \quad L \quad H(L)(H)(L)H$$

$$\quad \quad \quad \quad \quad \quad \quad \quad \quad \quad | \quad | \quad /$$

$$a=n\epsilon n-\epsilon \quad \rightarrow \quad a=n\acute{e}!!n-\acute{e}$$

Underlying tonemes are assigned to TBUs according to the general tonal principles. The general tonal principles are the following: 1) Tonemes are assigned to TBUs from left to right. 2) Association lines do not cross each other. 3) High tonemes are preferable for being assigned to TBUs. The derivations from (1) to (8) follow the general tonal principles.

1. 3. 3 High spread and 'Floating high assignment'

Kumam has a few language specific tone sandhi rules which have an effect of altering an underlying tonal representation of a phonological unit in particular environments. The language specific tone sandhi rules are called High spread and 'Floating high assignment'.

First we discuss High spread. When a word bearing a low toneme in the leftmost position follows a word bearing a high toneme in the rightmost position, the high toneme in the rightmost position of the preceding phonological unit spreads over the boundary to the following phonological unit. The simple formalization in (1) shows that the rightmost high toneme of the preceding

phonological unit is copied to the leftmost position of the following phonological unit. To clarify the relation between tonemes and TBUs in High spread, we make use of conventions in autosegmental theories. The rightmost high toneme of the preceding phonological unit is assigned not only to the rightmost TBU of it but also to the leftmost TBU of the following phonological unit in (2).

(1) High spread

· · · H# #L · · · → · · · H# #HL · · ·

(2) LHH L

LHH L

| | | \ |

abuke waŋ → abúké wâŋ ‘eyelash’

The noun *abuke* ‘eyelash’ has a lexical tonal pattern LHH. Tonemes are assigned to TBUs from left to right in compliance with the general tonal principles. When the noun *abuke* ‘eyelash’ is pronounced separately, the rightmost high toneme is assigned to the rightmost TBU of *abuke* ‘eyelash’. The rightmost TBU is pronounced with a high tone at the surface level in (3). The noun *waŋ* ‘eye’ has a low toneme in lexicon. When the noun *waŋ* ‘eye’ is pronounced separately, an underlying low toneme is assigned to the TBU of *waŋ* ‘eye’. The TBU is pronounced with a low tone at the surface level in (4).

(3) LHH

LHH

| | |

abuke → abúké ‘eyelash’

(4) L

L

|

waŋ → waŋ ‘eye’

When the noun *abuke* ‘eyelash’ is followed by the noun *waŋ* ‘eye’, High spread takes place between the phonological units. The high toneme in the rightmost position of *abuke* ‘eyelash’ is assigned not only to the rightmost TBU of it but also to the leftmost TBU of *waŋ* ‘eye’ according to High spread rule. In addition, all lexical tonemes are preserved within a phonological unit during tonal derivation. Consequently the TBU of *waŋ* ‘eye’ is connected to a high toneme and a low toneme sequentially with association lines. The TBU of *waŋ* ‘eye’ is pronounced with a falling tone at the surface level in (2).

A TBU associated with a high toneme and a low toneme in a sequence is pronounced with a falling tone in particular environments. For instance, when a high toneme is copied to a

monosyllabic word bearing a low toneme assigned primarily by High spread rule, a TBU of the word is pronounced with a falling tone. The TBU of *way* ‘eye’ in (2) satisfies the environment where falling tones appear.

Next we discuss ‘Floating high assignment’. When a phonological unit bearing a floating high toneme in the rightmost position is followed by a phonological unit beginning with a low toneme, the floating high toneme is not assigned to the rightmost TBU of the preceding phonological unit, but to the leftmost TBU of the following phonological unit.

The phonological unit *cogo* ‘bone’ has a lexical tonal pattern LLH. When it is uttered in citation, the phonological unit *cogo* ‘bone’ is pronounced with a high tone in the rightmost TBU in (6). The rightmost TBU is connected to a low toneme and a high toneme in a sequence and is usually pronounced with a high tone. The phonological unit *rac* ‘bad’ bears a lexical low toneme. When the phonological unit *cogo* ‘bone’ is followed by the adjective *rac* ‘bad’, the rightmost high toneme of the phonological unit *cogo* ‘bone’ is not assigned to the rightmost TBU of it, but to the leftmost TBU of the following phonological unit *rac* ‘bad’ in (5). A high and a low toneme are connected to the TBU of the phonological unit *rac* ‘bad’ with association lines. The TBU of the phonological unit *rac* ‘bad’ is pronounced with a falling tone, because it satisfies the environment where a falling tone appears.

(5) LLH L LL HL
 | | \ |
 cogo *rac* → *cogo* *râc*
 bone *bad* ‘The bone is bad.’

(6) LLH LLH
 | | /
 cogo → *cogó* ‘bone’

(7) L L
 |
 rac → *rac* ‘bad’

A floating high toneme is assigned to a TBU beyond a boundary of phonological units. ‘Floating high assignment’ violates the principle that all lexical tonemes are assigned to TBUs within a phonological unit during tonal derivation. We will discuss the derivation of floating tonemes and the definition of phonological units in the following section.

1. 3. 4 Floating tonemes and phonological units

Floating low tonemes are mostly generated in application of tone sandhi rules. For instance, the

personal possessive pronominal suffix *-ná* ‘my’ is endowed with an underlying high toneme. The noun *waŋ* ‘eye’ bears a low toneme in lexicon. So the phonological unit *waŋ-ŋá* ‘my eye’ has a lexical tonal pattern LH. The noun *abuke* ‘eyelash’ has a lexical tonal pattern LHH. When the nouns *abuke* ‘eyelash’ is followed by the noun *waŋ* ‘eye’, High spread takes place between those two nouns. The rightmost high toneme of *abuke* ‘eyelash’ is assigned not only to the rightmost TBU of *abuke* ‘eyelash’, but also to the leftmost TBU of *waŋ-ŋá* ‘my eye’ according to High spread rule. Tonemes are assigned to TBUs from left to right in compliance with the general tonal principles. The second low toneme from right end and the rightmost high toneme are left to be assigned to the rightmost TBU in the phonological unit *waŋ-ŋá* ‘my eye’. The rightmost high toneme is chosen to be assigned to the rightmost TBU in compliance with one of the general tonal principles that high tonemes are preferable to be assigned to TBUs. The second low toneme from right end in *waŋ-ŋá* ‘my eye’ is not assigned to any TBU, because the rightmost high toneme is associated with the rightmost TBU of *waŋ-ŋá* ‘my eye’ to which the second low toneme is expected to be assigned. Consequently the low toneme becomes a floating toneme in (1). The rightmost TBU associated with a high toneme is pronounced with a downstep high tone because it is preceded by a floating low toneme.

(1) LHH LH LH H (L) H
 | | | \ /
 abuke waŋ-ŋa → abúké wá!ŋá⁷ ‘my eyelash’ (High spread)

The nominal form *waŋ-ŋá* ‘my eye’ consists of a nominal stem and a 1st person singular possessive pronominal suffix and constitutes a phonological unit as a whole. All categorical forms, which consist of stems, clitics and affixes, constitute a phonological unit. Namely, nominal forms, verbal forms, adjectival forms, adverbial forms, prepositions, conjunctions and particles constitute phonological units. All lexical tonemes are preserved within a phonological unit during tonal derivation.

For instance, the noun *abuke* ‘eyelash’ constitutes a phonological unit. The nominal form *waŋ-ŋa* ‘my eye’, which consists of the noun *waŋ* ‘eye’ and the 1st person singular possessive pronominal suffix *-na* ‘my’, constitutes a phonological unit. The lexical tones, LHH, of the noun *abuke* ‘eyelash’ are assigned to TBUs within the phonological unit. The lexical tones, LH, in *waŋ-ŋa* ‘my eye’, are assigned to TBUs within the phonological unit, because all lexical tonemes are preserved within a phonological unit during tonal derivation in (1).

As pointed above, a falling tone appears only in limited environments. When a preceding high

⁷ ŋŋ → ŋ: rhythm adjustment.

toneme is copied to a following monosyllabic phonological unit, which bears a lexical low toneme assigned primarily, the monosyllabic phonological unit is pronounced with a falling tone. If the monosyllabic phonological unit is pronounced with a high tone because a TBU connected to a high toneme and a low toneme in sequence is usually pronounced with a high tone, the lexical meaning of the phonological unit may not be stable. It is not transparent that the phonological unit bears a low toneme in lexicon. However, if the monosyllabic phonological unit is pronounced with a falling tone, it is transparent that the phonological unit bears a low toneme primarily in lexicon.

Floating tonemes sometimes appear in processes of tonal derivation without application of tone sandhi rules. The word *sanduku* ‘box’ is specified to bear the tonal pattern LHLH in lexicon. Tonemes are assigned to TBUs from left to right according to the general tonal principles. Moreover, one of the general tonal principles prescribes that high tonemes are preferable for being assigned to TBUs. The rightmost high toneme is chosen to be assigned to the rightmost TBU. Consequently the second low toneme from right end loses a TBU to be assigned and becomes a floating low toneme. The rightmost TBU associated with a high toneme is pronounced with a downstep high tone since it is preceded by a floating low toneme in (2).

In (4) the rightmost high toneme in the preceding phonological unit *sanduku* ‘box’ is assigned to the TBU of the following phonological unit *rac* ‘bad’ over the boundary of the phonological units. The assignment of tonemes to TBUs in (4) follows the general tonal principle that tonemes are assigned to TBUs from left to right, but violates the proposed principle that all lexical tonemes are preserved within a phonological unit during tonal derivation. This is the reason why the inappropriate surface representation is derived in (4). On the other hand, the tonal derivation in (3) follows the general tonal principles and also satisfies the proposed principle that all tonemes are preserved within a phonological unit during tonal derivation. Even if it is followed by a phonological unit *rac* ‘bad’, the rightmost high toneme of the preceding phonological unit *sanduku* ‘box’ must be assigned to the rightmost TBU of it in order that all lexical tonemes can be preserved within the phonological unit. Since the rightmost high toneme of the phonological unit *sanduku* ‘box’ is assigned to the rightmost TBU, the second low toneme from right end loses a TBU to be assigned and becomes a floating low toneme. The rightmost TBU associated with a high toneme is pronounced with a downstep high tone after a floating low toneme. The concept of phonological unit explains why the noun *sanduku* ‘box’ is pronounced with a downstep high tone in the rightmost TBU even if it is followed by another phonological unit beginning with a low toneme.

Nouns constitute phonological units. The tonal derivations in (2) and (3) follow the principle that all lexical tonemes are preserved within a phonological unit during tonal derivation.

- (2) LHLH L H(L) H
 | | /
 sanduku → sandú!kú 'box'
- (3) LHLH L L H(L)H L
 | | ^|
 sanduku rac → sandú!kú râc
 box bad 'The box is bad.'
- (4) LHLH L L HL HL
 | | | \|
 sanduku rac → *sandúku râc
 box bad 'The box is bad.'

In order to derive well-formed surface representations, lexical tonal patterns should be preserved within phonological units. All underlying tonemes which are specified for a phonological unit must be assigned to TBUs within a phonological unit. However, there is an exception to the proposed principle.

The exception to the principle proposed here is 'Floating high assignment'. Floating high tonemes violate the principle. A floating high toneme of a preceding phonological unit is assigned to a TBU of a following phonological unit beyond the boundary of phonological units, when the following phonological unit begins with a low toneme. We already discussed the phenomenon that floating high tonemes are assigned to TBUs beyond boundaries of phonological units, which we call 'Floating high assignment'. Now we discuss 'Floating high assignment' from the viewpoint of phonological units.

Floating high tonemes appear in limited phonological environments. For instance, the verbal form *nen* 'Look!' is specified to bear a lexical tonal pattern LH in imperative. The rightmost high toneme is a floating high toneme. Tonemes are assigned to TBUs from left to right in compliance with the general tonal principles. If the imperative form *nen* 'Look!' is uttered in citation, it is pronounced with a rising tone in (6). When the imperative form *nen* 'Look!' is followed by a phonological unit beginning with a low toneme, 'Floating high assignment' takes place between these two phonological units. The rightmost high toneme of the verb *nen* 'Look!' is not assigned to the rightmost TBU of it, but to the leftmost TBU of the following phonological unit. The rightmost TBU of the verb is pronounced with a low tone in (5).

In order to clarify the relation between the underlying and surface representations, autosegmental analysis is adopted. The rightmost high toneme of the verb *nen* 'Look!' is assigned to the leftmost TBU of the following phonological unit *abuke* 'eyelash' according to 'Floating high assignment' in (5). Tonemes are assigned to TBUs from left to right in the following phonological unit *abuke*

‘eyelash’. Since a phonological unit maintains all lexical tonemes during derivation, the second high toneme from right end and the rightmost high toneme are assigned to the second TBU from right end and the rightmost TBU of the phonological unit *abuke* ‘eyelash’ in compliance with one of the general tonal principles that high tonemes are preferable for being assigned to TBUs. The third low toneme from right end loses a TBU to be assigned and becomes a floating low toneme. The second TBU from right end of the phonological unit *abuke* ‘eyelash’ is pronounced with a downstep high tone since it is preceded by a floating low toneme in (5). The word *waj* ‘eye’ is pronounced with a falling tone in limited environments which were already discussed.

If floating high tonemes follow the principle that all lexical tonemes are preserved within a phonological unit during tonal derivation, all the lexical tonemes LH of the imperative form of verb *nen* ‘Look!’ are assigned to a TBU within the phonological unit. When tonemes are assigned to TBUs from left to right within the phonological unit, the TBU associated with a low toneme and a high toneme in a sequence is pronounced with a rising tone. When imperative forms of verbs are not followed by other words, the TBU is pronounced with a rising tone in (6). However, the surface representation in (7) is not well-formed. Floating high tonemes do not follow the principle that all tonemes are preserved within a phonological unit during tonal derivation. Only floating high tonemes can be assigned to TBUs of the following phonological units over boundaries of phonological units.

(5) LH LHH L		L(H) (L) H H L	
		\ / / \	
nen abuke waj	→	nen á!búké wâŋ	(‘Floating high assignment’ & High spread)
look eyelash		‘Look eyelash!’	
(6) LH		L (H)	
		/	
nen	→	něŋ ‘Look!’	
(7) LH LHH L		L(H)(L)H H L	
		^ \	
nen abuke waj	→	*něŋ á!búké wâŋ	(High spread & High spread)
look eyelash		‘Look eyelash!’	

The phonological unit *cogo* ‘bone’ bears a tonal pattern LLH in lexicon. When it is uttered in citation, the phonological unit *cogo* ‘bone’ is pronounced with a high tone in the rightmost TBU in (8). However, when it is followed by a phonological unit beginning with a low toneme, ‘Floating high assignment’ takes place between these two phonological units. The rightmost TBU of the preceding phonological unit *cogo* ‘bone’ is pronounced with a low tone, and besides, the following

phonological unit *rac* ‘bad’ is pronounced with a falling tone in (9). The rightmost high toneme of the preceding phonological unit *cogo* ‘bone’ is not assigned to the rightmost TBU of it, but to the leftmost TBU of the following phonological unit *rac* ‘bad’.

(8) LLH			LL (H)	
			/	
	cogo	→	cogó	‘bone’
(9) LLH	L		LL (H) L	
			\	
	cogo	rac	→	cogo rãc
	bone	bad		‘bone is bad’
				(‘Floating high assignment’)

If floating high tonemes follow the principle that all lexical tonemes are preserved within a phonological unit, all the lexical tonemes LLH of the noun *cogo* ‘bone’ are assigned to two TBUs within the phonological unit. When tonemes are assigned to TBUs from left to right within the phonological unit, the rightmost TBU is associated with a low toneme and a high toneme in a sequence. The rightmost TBU must be pronounced with a high tone. The surface representation in (10) is not well-formed. Consequently floating high tonemes do not follow the principle that all lexical tonemes are preserved within a phonological unit during tonal derivation.

(10) LLH	L		LL (H) L	
			/ \	
	cogo	rac	→	*cogó rãc
				(High spread)

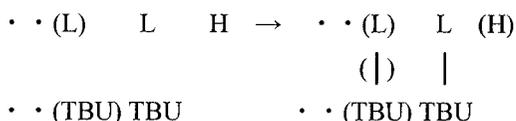
The verbal complex $\text{ɔ}=\text{nɛn}-a$ ‘he saw me’, which consists of a 3rd person singular subject clitic $\text{ɔ}=\text{}$, a verbal stem *nɛn* and a 1st person singular object suffix *-a*, constitutes a phonological unit as a whole. The phonological unit bears a lexical tonal pattern LLLH.

(11) LLLH			L LL(H)	
			/	
	$\text{ɔ}=\text{nɛn}-a$	→	$\text{ɔ}=\text{nɛn}-á$	
	3S/P=PERF:see-1SG		‘He saw me.’	
(12) LLLH	LLH		L LL(H)(L)(L)H	
			\ /	
	$\text{ɔ}=\text{nɛn}-a$	joro	→	$\text{ɔ}=\text{nɛn}-a$ jó!ró
	3S/P=PERF:see-1SG	yesterday		‘He saw me yesterday.’

Floating high tonemes appear in limited environments. Floating high tonemes appear in phonological units which bear an extra toneme in lexicon more than the number of TBUs constituting phonological units. Moreover, only if the extra toneme is a high toneme and the other tonemes preceding the extra toneme are low tonemes, then the extra toneme becomes a floating high toneme. For instance, the phonological unit *cogo* ‘bone’ consists of two TBUs and bears a lexical tonal pattern LLH. The extra high toneme is preceded by low tonemes. The phonological unit *cogo* ‘bone’ fits the above-mentioned environments where floating high tonemes appear.

The derivation of floating high tonemes is formalized as follows:

(13) Floating high toneme derivation



If a high toneme loses a TBU to be assigned after tonemes are assigned to TBUs from left to right, and if it is preceded only by low tonemes, then the extra high toneme becomes a floating high toneme. Floating high tonemes are subject to ‘Floating high assignment’. Otherwise, floating high tonemes follow the general tonal principles and the proposed principle that all lexical tonemes are preserved within a phonological unit during tonal derivation.

The phonological unit *cogo* ‘bone’ fits the environments where a floating high toneme occurs. The rightmost high toneme of the phonological unit is preceded only by low tonemes, and the phonological unit has one extra toneme more than the number of TBUs. Consequently, after the low tonemes are assigned to TBUs, the rightmost high toneme loses a TBU to be assigned and becomes a floating high toneme.

The floating high toneme is assigned to the rightmost TBU when the phonological unit is uttered in citation, because all tonemes are preserved within a phonological unit during tonal derivation. The rightmost TBU which is associated with a low toneme and a floating high toneme is pronounced with a surface high tone in (13).

The floating high toneme is subject to ‘Floating high assignment’ rule. The floating high toneme is assigned to the leftmost TBU of the following phonological unit, when followed by another phonological unit beginning with a low toneme in (14).

The floating high toneme is not assigned to the rightmost TBU of *cogo* ‘bone’ but to the leftmost TBU of *-ná* ‘my’. The TBU of *-ná* ‘my’ bears primarily a high toneme. The TBU associated with two high tonemes is pronounced with a high tone in (16).

- (14) LLH LL (H)
 | |/
 cogó → cogó 'bone'
- (15) LLHL LL (H) L
 | | \ |
 cogó rac → cogó rãc ('Floating high assignment')
 bone bad 'bone is bad.'
- (16) LLHH LL (H) H
 | | |/
 cogó-na → cogó-ná
 bone-my 'my bone'

According to 'Floating high toneme derivation', if it bears a lexical tonal pattern LH, a phonological unit consisting of one TBU has a floating high toneme in the rightmost position. If it bears a lexical tonal pattern LLH, a phonological unit consisting of two TBUs has a floating high toneme in the rightmost position. If it bears a lexical tonal pattern LLLH, a phonological unit consisting of three TBUs has a floating high toneme in the rightmost position as follows.

(17) Number of TBUs	Tonal pattern	Phonological unit
1 syllable	LH	ín 'you'
		nén 'Look!'
2 syllables	LLH	cogó 'bone'
		rãmó 'blood'
3 syllables	LLLH	ɔ=nɛn-á 'he saw me.'
		arĩbá 'wedding'

The 2nd person singular independent pronoun *ín* 'you' consists of one TBU and bears a lexical tonal pattern LH. The independent pronoun *ín* 'you' satisfies the environments where floating high tonemes appear. When tonemes are assigned to TBUs from left to right, the rightmost high toneme loses a TBU to be assigned and becomes a floating high toneme. The floating high toneme is subject to 'Floating high assignment' rule in (18). When the independent pronoun *ín* 'you' is uttered in citation, tonemes are assigned to TBUs from left to right in compliance with the general tonal principles and the proposed principle that all lexical tonemes are preserved within a phonological unit in tonal derivation. The rightmost TBU is associated with a low toneme and a floating high toneme, and is pronounced with a high tone in (19).

(18) LH LHL H L(H)(L)H H (L)H
 | \ | | |
 in i=téd-o cam → in í=!tédó !cám ('Floating high assignment')
 2SG 2SG=IMP:cook-TR food 'You cook food.'

(19) LH L(H)
 |/
 in → ín 'you' ('Floating high toneme derivation')

The noun *cogo* 'bone' satisfies the environments where floating high tonemes appear. The tonal processes of the noun are already discussed in (14), (15) and (16).

(20) LLH L LL(H)L
 | | \ |
 cogo rac → cogo rãc
 bone bad 'bone is bad.'

The verbal complex ɔ=nɛk-a 'he killed me' constitutes a phonological unit, and besides, it satisfies the environments where floating high tonemes appear. The verbal complex consists of three TBUs and bears a lexical tonal pattern LLLH. After tonemes are assigned to TBUs from left to right, the rightmost high toneme loses a TBU to be assigned and becomes a floating high toneme. The floating high toneme is assigned to the leftmost TBU of the following phonological unit *ɲoró* 'yesterday' according to 'Floating high assignment' in (21). When the verbal complex is uttered in citation, the rightmost floating high toneme is assigned to the rightmost TBU in compliance with the proposed principle that all lexical tonemes are preserved within a phonological unit during tonal derivation. The rightmost TBU associated with a low toneme and a floating high toneme is pronounced with a surface high tone in (22).

(21) LLLH LLH LL L(H)(L)(L)H
 | | | \ /
 ɔ=nɛk-a ɲoro → ɔ=nɛk-a ɲó!ró ('Floating high assignment')
 3S/P=PERF:kill-me yesterday 'He killed me yesterday.'

(22) LLLH L LL(H)
 | | |/
 ɔ=nɛk-a → ɔ=nɛk-á
 3S/P=PERF:kill-1SG 'He killed me.'

1. 3. 5 Downstep and double downstep

We have already seen examples of downstep. We will add some examples of downstep in verbal morphology. When a phonological unit beginning with a high toneme follows a verbal complex in imperfect aspect, the leftmost TBU of it is pronounced with a downstep high tone in (1).

(1) LHHL	H		L H	H (L) H	
		→			
a=tedo	cam		a=téd-ó	!cám	
1SG=IMPERF:cook-TR	food				
‘I cook food.’					

In order that a TBU associated with a high toneme can be pronounced with a downstep high tone, it must be preceded by a floating low toneme. The verbal complex *a=tedo* ‘I cook’ in imperfect aspect is pronounced with a sequence of a low, a high and a high tones in the surface representation. A lexical tonal pattern LHHL is minimum and enough for the underlying representation of the verbal complex to be pronounced with a sequence of a low, a high and a high tone in the surface representation and to bear a floating low toneme in the rightmost position of the underlying representation.

(2) LHLHL	H		L H(L)H(L)	H	
		→			
a=tedo	cam		a=té!dó	!cám	
1SG=PERF:cook	food				
‘I cooked food.’					

Even if a phonological unit beginning with a high toneme follows a verbal complex in perfect aspect, the leftmost TBU of it is pronounced with a downstep high tone in (2). Consequently the verbal complex *a=tedo* ‘I cooked’ in perfect aspect also has a floating low toneme in the rightmost position. The verbal complex *a=tedo* ‘I cooked’ in perfect aspect is pronounced with a sequence of a low, a high and a downstep high tones in the surface representation. A lexical tonal pattern LHLHL is minimum and enough for the underlying representation of the verbal complex to be pronounced with a sequence of a low, a high and a downstep high tone in the surface representation and to bear a floating low toneme in the rightmost position in the underlying representation.

The transitive formative suffix *-ɔ/-o* is common to verbal complexes in imperfect and perfect aspect. The transitive formative suffix *-ɔ/-o* bears a lexical low toneme. The simple verb stem *ted-* ‘cook’ is common to both of the verbal complexes. Simple verbal stems bear a lexical high toneme

Vowel sandhi occurs also on morpho-phonological level. The tonemes which are primarily assigned to the deleted vowels are preserved in vowel sandhi, even though vowels are deleted. When the 1st person singular object suffix *-a* is attached to the transitive formative suffix *-o/-o*, the vowel *o* of the transitive formative suffix is deleted according to vowel sandhi rules.

The verbal complex $\varepsilon=n\acute{e}k-a$ ‘he killed me’ constitutes a phonological unit. All tonemes including the low toneme which is primarily associated with the transitive formative suffix *-o* are preserved within the phonological unit during tonal process. When tonemes are assigned to TBUs from left to right, the fourth low, the third high, the second low tonemes from right end and the rightmost high toneme are left to be assigned to the rightmost TBU. The rightmost high toneme is chosen to be assigned to the rightmost TBU in order that all tonemes can be maintained within the phonological unit. The tonemes preceding the high toneme which is assigned to the rightmost TBU lose TBUs to be assigned and become floating tonemes. Consequently a floating low toneme, a floating high toneme and a floating low toneme precede the high toneme in the rightmost position. The rightmost TBU is pronounced with a double downstep high tone, because it is preceded by a sequence of a floating low, a floating high and a floating low tonemes. The tonal derivation in (47) conforms to the principle that all lexical tonemes are preserved within a phonological unit during tonal derivation.

Double downstep high tones auditorily sound as low as low tones. However, double downstep high tones retain phonological characteristics of high tonemes, because double downstep high tones originate from high tonemes that are lowered by the preceding floating tonemes. Double downstep high tones phonologically behave as high tonemes in the same way as downstep high tones do. After double downstep high tones, TBUs associated primarily with a low toneme are pronounced with a high tone. Namely double downstep high tones cause High spread.

The rightmost TBU of the verbal complex $\varepsilon=n\acute{e}k-a$ ‘He killed me’ is pronounced with a double downstep high tone. The leftmost TBU of the following adverb *nakanaka* ‘repeatedly’ is pronounced with a high tone according to High spread. The high toneme associated with the rightmost TBU of the verbal complex is copied to the leftmost TBU of the following word *nakanaka* ‘repeatedly’.

(4) LHLHLH	LLLL		L H(L)(H)(L)H	L L L L
			/ \	
$\varepsilon=n\acute{e}k-o-a$	<i>nakanaka</i>	→	$\varepsilon=n\acute{e}!!k-\acute{a}$	<i>nákanaka</i>
3SG=PERF:kill-TR-1SG	repeatedly			
‘He killed me repeatedly.’				

While the rightmost TBU of a verbal complex is pronounced with a double downstep high tone in

perfect aspect in (4), the rightmost TBU of a verbal complex is pronounced with a downstep high tone in imperfect aspect in (5).

The 3rd person singular subject clitic $\varepsilon=$ bears a lexical tonal pattern LH. The imperfect aspect is expressed without any morpheme. Simple verbal stems always bear a lexical high toneme in indicatives. The transitive formative suffix $-o$ bears a lexical low toneme. The 1st person singular object suffix $-a$ bears a lexical high toneme. The verbal complex constitutes a phonological unit, in which all tonemes are preserved during tonal derivation.

When tonemes are assigned to TBUs from left to right, the third high, the second low tonemes from right end and the rightmost high toneme are left to be assigned to the rightmost TBU. The rightmost high toneme is chosen to be assigned to the rightmost TBU in order that all tonemes are preserved within the phonological unit. The third high and the second low tonemes from right end lose TBUs to be assigned and become floating tonemes. The rightmost TBU is pronounced with a downstep high tone because it is preceded by a sequence of a floating high and a floating low toneme in (5).

(5) LHH LH L H(H)(L)H
 | | /
 $\varepsilon=n\varepsilon k-o-a$ \rightarrow $\varepsilon=n\varepsilon!k-\acute{a}$
 3SG=IMPERF:kill-TR-1SG
 ‘He kills me.’

The distinction of verbal complexes between perfect and imperfect aspect is made only by tone. When verbal complexes contain an object suffix, the rightmost TBU of the verbal complex is pronounced with a double downstep high tone in perfect aspect and with a downstep high tone in imperfect aspect. The fact indicates that a downstep high tone and a double downstep high tone contrast in Kumam.

1. 3. 6 Syntactic functions of tone

As discussed in section 3.6, tone has a syntactic function to make distinction between imperfect and perfect aspect in Kumam. Perfect aspect is marked with a suprasegmental morpheme, a low toneme, in the position preceding tonemes of verbal stems. Imperfect aspect is marked without any morpheme.

Tone also has a syntactic function to make distinction between a direct and an indirect speech construction.

The sentence (1) shows an indirect speech construction in which it is not the woman but the speaker who cooks. The sentence (2) is a direct speech construction in which it is the woman who

There is another syntactic function of tone. There is a suprasegmental boundary after a topicalized NP. Topicalized noun phrases are located in sentence initial position. There is a suprasegmental boundary after a topicalized noun phrase, which blocks the application of tone sandhi rules.

The noun phrase *cam* ‘food’ is topicalized and left-located in sentence initial position in (6). The noun *cam* ‘food’ bears a high toneme in lexicon. The high toneme of the noun *cam* ‘food’ is assigned only to the TBU of it.

(5) LH LHHL H L(H)(L) H H (L) H
 | \ | | |
 in i=téd-o cam → in í=!téd-ó !cám (‘Floating high assignment’)
 you 2SG=IMPERF:cook-TR food ‘You cook food.’

(6) H LHHL H L H H L
 | | | |
 cam, i=téd-o → cáam, i=téd-ó
 food, 2SG=IMPERF:cook-TR ‘Food, you cook.’

(7) LH L(H)
 |/
 in → ín ‘you’

If High spread takes place between a topicalized NP and the following phonological unit, the high toneme must be assigned not only to the TBU of the topicalized NP *cam* ‘food’, but also to the leftmost TBU of the following phonological unit *i=téd-o* ‘You cook’ as in (8). However, the surface representation in (8) is not well-formed. The suprasegmental boundary after a topicalized NP blocks the application of tone sandhi rules.

There is no suprasegmental boundary after a subject NP. The 2nd person singular independent pronoun *in* ‘you’ bears a tonal pattern LH and it satisfies the environments where floating high tonemes appear. The floating high toneme is assigned to the leftmost TBU of the following phonological unit *i=téd-o* ‘You cook’ according to ‘Floating high assignment’. The leftmost TBU of the following phonological unit is pronounced with a high tone in (5).

(8) H LHHL H (L)H H L
 | \ | |
 cam, i=téd-o → *cam, í=!téd-ó
 food, 2SG=IMPERF:cook-TR ‘Food, you cook.’

The suprasegmental boundary has a function to differentiate a topicalized NP from a subject NP.

1. 3. 7 Tone in verbal morphology

Kumam does not indicate tense, but aspect in verbal morphology. Imperfect and perfect aspects are indicated suprasegmentally. Perfect aspect is marked with a suprasegmental morpheme, a low toneme. Imperfect aspect is marked without any morpheme. Every simple or non-extended verbal stem always has a lexical high toneme in indicative. Subject clitics and object suffixes have their own particular tonal patterns in lexicon. A transitive formative suffix *-ɔ/-o* bears a lexical low toneme. Consequently surface tonal representations of verbal complexes are predictable from lexical tonal patterns of subject clitics, aspectual morphemes, verb stems, a transitive formative suffix *-ɔ/-o* and object suffixes which constitute verbal complexes.

For instance, the 1st person singular subject clitic *a=* bears the lexical tonal pattern LH. Imperfect aspect is expressed without any morpheme. Every simple verbal stem bears a lexical high toneme in indicative. The transitive formative suffix *-ɔ/-o* bears a low toneme in lexicon. The noun *cam* ‘food’ has a high toneme in lexicon. All tonemes are assigned to TBUs from left to right, and besides high tonemes are preferable for being assigned to TBUs. The rightmost low toneme of the verbal complex *a=tedo* ‘I cook’ loses a TBU to be assigned and becomes a floating low toneme, because the TBU to which it is expected to be assigned is already connected to a high toneme. The TBU of the noun *cam* ‘food’ associated with a high toneme is pronounced with a downstep high tone after a floating low toneme in (1).

(1) LHHL	H	L	H H (L) H	(Imperfect)
<i>a=ted-o</i>	<i>cam</i>	→	<i>a=tédó</i> <i>!cám</i>	
1SG=IMP:cook-TR food				
‘I cook food.’				

The 1st person singular subject clitic *a=* bears a lexical tonal pattern LH. Perfect aspect is marked with a suprasegmental morpheme, a low toneme. Every simple verbal stem bears a lexical high toneme in indicative. The transitive formative suffix *-ɔ/-o* bears a low toneme in lexicon. All tonemes are assigned to TBUs from left to right. The third low, the second high from right end and the rightmost low toneme are left to be assigned to the rightmost TBU in the verbal complex *a=ted-o* ‘I cooked’. The second high toneme from right end is chosen to be assigned to the rightmost TBU, because high tonemes are preferable for being assigned to TBUs. The rightmost TBU of the verbal complex associated with a high toneme is pronounced with a downstep high tone because it is preceded by a floating low toneme. The TBU of the noun *cam* ‘food’ associated with a high toneme is pronounced with a downstep high tone because it is preceded by a floating low toneme in (2).

(2) L		L		
wic	→	wic	'head'	(Tonal class I)
(3) H		H		
mac	→	mác	'fire'	(Tonal class II)
(4) LL		L L		
tuno	→	tuno	'breast'	(Tonal class III)
(5) HH		H H		
doke	→	dóké	'cattle, pl.'	(Tonal class IV)
(6) LH		L H		
adam	→	adám	'brain'	(Tonal class V)

Nouns of the tone class VI are specified in lexicon to bear a high toneme and a low toneme in a sequence in (7) and (8). Some nouns in tone class VI consist of one TBU, and others consist of two TBUs. When nouns of the tone class VI consist of two TBUs, they are usually pronounced with a high tone in (8). A TBU associated with a high toneme and a low toneme in sequence may be pronounced with a falling tone only in limited environments.

When a word bearing a low toneme in leftmost position follows a word bearing a high toneme in rightmost position, the leftmost TBU of the following word is associated with a high toneme according to High spread rule. The leftmost TBU of the following word may be pronounced with a high tone or with a falling tone.

The word *lé* 'animal' is phonetically pronounced with a high tone in the citation form. Though the word *lé* 'animal' is pronounced with a high tone, the TBU of the following word *rac* 'bad' bearing a lexical low toneme is not pronounced with a falling tone on the surface representation. This is because the floating low toneme in the rightmost position of the word *lé(L)* 'animal' blocks the application of High spread in (9).

(7) HL		H L		
ɲamo	→	ɲámo	'yawn'	(Tonal class VI)

(8) H L H (L)
 | /
 le → lé ‘animal’ (Tonal class VI)

(9) H L L H L L
 | |
 le rac → lé rac ‘The animal is bad.’

The tone class VII nouns and the tone class VIII nouns bear the lexical tonal patterns LLL and LHH, respectively. They consist of three TBUs. All tonemes are assigned to TBUs from left to right in accordance with the general tonal principles in (10) and (11).

(10) L L L L L L
 | | |
 toḡini → toḡini ‘spears’ (Tonal class VII)

(11) L H H L H H
 | | |
 abajna → abájna ‘stool’ (Tonal class VIII)

The tone class IX nouns are specified to bear the lexical tonal pattern LLH in (12) and (13). Some of them consist of two TBUs, and others consist of three TBUs. When nouns in the tone class IX consist of two TBUs, the rightmost TBU of them is usually pronounced with a high tone. In addition, there are some exceptional nouns in the tone class IX that consist of three TBUs and bear the lexical tonal pattern LLLH in (14). The exceptional nouns are referred to as the tone class IX*. The rightmost TBU of them is also pronounced with a high tone.

(12) L L H L L H
 | | |
 cogere → cogéré ‘bones’ (Tonal class IX)

(13) L L H L L (H)
 | | /
 remo → remó ‘blood’ (Tonal class IX)

(14) L L L H L L L (H)
 | | | /
 arba → arbá ‘wedding’ (Tonal class IX*)

The nouns of the tone class X are specified to bear the lexical tonal pattern LHL in (15) and (16).

Some of them consist of two TBUs, others of three TBUs. When nouns in the tone class X consist of two TBUs, the rightmost TBU of them is pronounced with a high tone in (16).

- (15) LHL L H L
 | | |
 epepet → epépet ‘shoulder’ (Tonal class X)
- (16) LHL L H (L)
 | | /
 emaj → emáj ‘liver’ (Tonal class X)

Most of the tone class XI nouns consist of two TBUs and bear the tonal pattern HHL in lexicon. A few nouns of the tone class XI consist of three TBUs and are specified to bear the tonal pattern HHHL in lexicon. The rightmost TBU of them is pronounced with a high tone in (17) and (18). As already discussed, a TBU associated with a high toneme and a low toneme in a sequence is usually pronounced with a high tone. It is pronounced with a falling tone only in limited phonological environments.

- (17) HHL H H (L)
 | | /
 piso → písó ‘needle’ (Tonal class XI)
- (18) HHHL H H H (L)
 | | | /
 mʊsʊja → mʊ́ sʊ́ já ‘fever’ (Tonal class XI)

Most of the tone class XII nouns are borrowed words. These words are of Swahili origin, but likely to have been borrowed via the Teso language. The nouns of the tone class XII are characterized by the fact that they bear a third high and a second floating low toneme from right end, and a high toneme in rightmost position. The rightmost TBUs associated with a high toneme are pronounced with a downstep high tone in the surface representations in (19). The second high tone from right end and a downstep high tone in the rightmost position in the surface representations correspond to the accent pattern of the Swahili language, whose words always have a pitch accent on the second syllable from right end.

- (19) LH(L)H L H(L) H
 | | /
 jokoni → jokó!ní ‘kitchen’ (Tonal class XII)

The class XIII is divided into two groups. The nouns of one group consist of three TBUs, and the nouns of the other group consist of more than three TBUs. One feature of the tone class XIII nouns is that they bear a low toneme in the leftmost position in (20) and (21). Another feature is that they bear more tonemes than the number of TBUs that they consist of. For instance, tone class XIII nouns consisting of three TBUs bear the lexical tonal patterns LHHL in (21). This tonal pattern corresponds to the tonal pattern of the tone class XI being preceded by a low toneme. The tone class IX nouns bear a tonal pattern HHL. Some tone class XIII nouns are likely to originate from the compounds of a tone class I noun and a tone class XI noun (e.g. *ŋa-*, tone class I, ‘person’ + *túó(L)*, tone class XI, ‘illness’ → *ŋa-túó(L)*, class XIII, ‘patient’). Others are likely to originate from the compounds of a tone class I noun and a tone class X noun. The tone class XIII nouns which consist of more than four TBUs are mostly borrowed words. The tone class XIII nouns consist of compounds that are derived from tone class I nouns and tone class XI nouns and that are derived from tone class I nouns and tone class X nouns, and borrowed words.

- (20) LHLHL L H L H (L)
 | | | | /
 otyemotyem → otyémotyém ‘spider’ (Tonal class XIII)
- (21) LHHL L H H (L)
 | | | /
 ɔpɪra → a pírá ‘fingers’ (Tonal class XIII)

The nouns of tone class XIV predominantly consist of more than three TBUs. They bear the same number of tonemes as that of TBUs in (22). Most nouns of the tone class XIV are borrowed words from other languages.

- (22) LHLH L H L H
 | | | |
 apuseret → apúserét ‘widow’ (Tonal class XIV)

Every Kumam noun is specified to bear a particular tonal pattern in lexicon. Consequently it is necessary for the lexical tonal patterns of nouns to be specified.

1. 4 Morphology

1. 4. 1 Verbs

1. 4. 1. 1 Classification of verbs

Verbs are classified into twelve classes. Kumam verbs are divided into intransitive and transitive

verbs according to the cross-linguistically common definition⁹. Intransitive verbs allow only one argument, while transitive verbs require more than two arguments in (1). There is a clear distinction between intransitive and transitive verbs in Kumam. Kumam does not allow transitive verbs to behave as intransitives without morphological operation. Kumam transitive verbs have only one type of valency, if they are not morphologically extended. Transitive sentences accompanied by only one argument are ungrammatical in Kumam in (2).

English verbs such as ‘eat’ can be specified in two ways with regard to valency. In one scheme the verb allows two arguments, a subject and an object, and in the other scheme it allows only one argument, a subject. English transitive verbs such as ‘eat’ sometimes behave like intransitive verbs without any morphological operation. English verbs can function in so-called intransitive usage in the translation in (2).

(1) a=cá!m-ó !dék
 1SG=PERF:eat-TR stew
 ‘I ate stew.’

(2) *a=cá!m-ó
 1SG=PERF:eat-TR
 ‘I ate.’

Infinitives of transitive verbs may behave like intransitives in Kumam. Infinitives of transitive verbs may not be accompanied by an object only if they function as complements in (3).

(3) a=tye caamo
 1SG=IMPERF:be eat:INF
 ‘I am eating.’

Kumam transitive verbs never function in so-called intransitive usage like English transitive verbs. Instead, some transitive verbs have a particular intransitive form as their counterpart in (4) and (5) (e.g. the transitive infinitive form: yεεηɔ, the intransitive form: yεη ‘to satisfy’).

(4) cáṃ ó=yεη-á (Transitive)
 Food 3S/P=PERF:satisfy-TR:1SG
 ‘Food satisfied me.’

⁹ Kumam has a small number of ditransitive verbs.

- (5) a=yéŋ kéde-cám (Intransitive)
 1SG=IMPERF:be satisfied with-food
 ‘I am satisfied with food.’

Some transitive verbs have middle forms which are productively derived from transitive stems via morpho-phonological processes. The middle forms are derived by attaching middle suffix *-éré(L)* to transitive stems. The transitive formative suffix *-ɔ/-o* is deleted before the middle suffix *-éré(L)* according to vowel sandhi in (7) (e.g. *nɛn-ɔ + éré(L) → nɛnéré(L)*, the transitive infinitive form: *nɛnɔ*, ‘to see’)¹⁰. When verbal stems end in a vowel, the mid front vowel /ɛ/ of the middle suffix *-éré(L)* is assimilated to the preceding vowel after the transitive formative suffix *-ɔ* is deleted according to vowel sandhi rule (e.g. *dt-ɔ + éré(L) → *dteré(L) → dí!ré(L)*, the transitive infinitive form: *dúɔ*, ‘to press down’)¹¹. Though vowels are deleted, the tonemes associated with the deleted vowels are preserved during tonal processes.

Middle verbs allow only one argument. As for valency, middle verbs behave syntactically in the same manner as intransitive verbs in (7).

- (6) a=nén-ɔ á!tín (Transitive)
 1SG=PERF:see-TR child
 ‘I saw the child.’
- (7) atín ɔ=nɛn-ééré (Middle)
 child 3S/P=PERF:see-MID
 ‘The child has been seen (by someone)’

All transitive verbs do not necessarily have an intransitive forms as their counterpart, nor a middle form that is morphologically derived from a transitive stem. Some verbs have neither an intransitive form as a counterpart nor a morphologically derived middle form. They only have a transitive form in (8) (e.g. the transitive infinitive form: *nlɔ*, the intransitive form: **!l* ‘to itch’). Moreover, a few verbs have neither a transitive nor an intransitive form, but only have a middle form in (9) (e.g. the transitive infinitive form: **neekɔ*, the intransitive form: **nek*, middle form: *nekere* ‘to envy’).

¹⁰ Transitive infinitive forms are derived by attaching a transitive infinitive suffix *-nɔ* to transitive stems. The alveolar nasal /n/ of the suffix is assimilated to the preceding consonant in the point and manner of articulation. And then one of the geminated consonants that are derived by the consonantal assimilation is deleted, and the stem vowel is lengthened in compensation for the loss of the consonant.

¹¹ When transitive stems end in a vowel, transitive infinitive forms are derived by attaching a transitive infinitive suffix *-nɔ* to transitive stems. Stem vowels are lengthened for adjustment of rhythm. Linguistic forms are required to bear iambic rhythms from the right end.

necessary to specify which transitive forms have a frequentative transitive form. On the other hand, the derivation of frequentative intransitive forms is not productive, and frequentative intransitive forms are in limited distribution. It is not predictable which transitive forms have a frequentative intransitive form. Frequentative intransitive forms denote fundamentally repetition of voluntary actions or events. Moreover, frequentative intransitive forms denote that the actions or the events extend far and wide in (4).

- (1) puput-ɔ ‘to uproot frequently’ ← puutɔ ‘to uproot’
 (2) a=púpút-o dɔr
 1SG=IMPERF:uproot:FREQ-TR weed
 ‘I frequently uproot weed.’
 (3) puput-un ‘to be uprooted frequently’ ← puutɔ ‘to uproot’
 (4) yer ɔ=puput-un
 feathers 3S/P=PERF:uproot:FREQ-INT
 ‘The feathers are plucked and plucked (by themselves) everywhere.’

1. 4. 1. 3 Neuter forms

A few verbs have a neuter form. Neuter forms are derived by lengthening a stem vowel and attaching the suffix -é (e.g. CV₁C → CV₁V₁C-é). Some neuter forms have a free variant that is derived by reduplicating a consonant in stem-final position and attaching the suffix -é (e.g. CVC₁ → CVC₁C₁-é). Neuter forms allow only one argument in the same manner as middle forms. As for valency, neuter forms behave syntactically in the same manner as intransitive verbs.

- (1) rɪdɛ ‘to be squeezed’ ← rɪdɔ ‘to squeeze’
 (2) a=ríd-ó itabɔ í-ɲet-á (Transitive)
 1SG=IMPERF:squeeze-TR book in-side of body-my
 ‘I squeeze the book in my armpit.’
 (3) atín ó=rɪdɛ
 child 3S/P=IMPERF:be squeezed:NEUT (Neuter)
 ‘The child is squeezed.’
 (4) kɔtté ~ kɔsté ‘to make sound by blowing’ ← kɔstɔ ‘to blow’
 (5) a=kút!té ~ a=kúú!té
 1SG=IMPERF:make sound by blowing (Neuter)
 ‘I make sound by blowing with mouth in order to draw someone’s attention.’

Neuter forms denote the state of events. Neuter forms do not presuppose agents of actions or events

that the verbs express, while middle forms presuppose agents of actions or events that the verbs express. For instance, an agent is not presupposed in the neuter sentence (8), while an agent is presupposed in the middle sentence (9). The neuter sentence (8) expresses that the clothes are in water. The middle sentence (9) expresses that someone dipped the clothes in water.

- (6) *biidé* ‘to be dipped’ ← *biido* ‘to dip’
- (7) *a=bíd-ó* *igoen* *i-pi* (Transitive)
 1SG=IMPERF:dip clothes in-water
 ‘I dip clothes in water.’
- (8) *igoen* *ɔ=biidé* (Neuter)
 clothes 3S/P=PERF:be dipped
 ‘Clothes are dipped.’
- (9) *igoen* *ɔ=bid-éré* (Middle)
 clothes 3S/P=PERF:be dipped
 ‘Clothes are dipped (by someone).’

Neuter forms sometimes denote continuous state of events or actions. The neuter sentence (11) denotes that the 1st person singular and the girl are in sexual relationship continuously, while the middle sentence (12) denotes that the girl has sexual intercourse with the boy temporarily.

- (10) *a=cód-ó* *!nákó* (Transitive)
 1SG=IMPERF:have sexual intercourse girl
 ‘I have sexual intercourse with the girl.’
- (11) *a=cóó!!dé* *kede-nákó* (Neuter)
 1SG=PERF:have sexual intercourse with-girl
 ‘I have sexual relationship with the girl.’
- (12) *nákó* *codéré* *kede-awóbi* (Middle)
 girl 3S/P:IMPERF:have sexual intercourse with-boy
 ‘The girl has sexual intercourse with the boy.’

1. 4. 1. 4 -*Vkm* and -*ar* forms

There are other peripheral intransitive forms which are derived by attaching the suffixes, *-ar* and *-Vkm*, to stems in (2) and (3), respectively (e.g. *CVC* → *CVC-ar*, *CV₁C* → *CV₁C-V₁km*). Although a few intransitive forms ending in the suffix *-Vkm* pair up with the transitive counterparts ending in the suffix *-Vkmɔ*, many of the *-Vkm* intransitive forms have no corresponding *-Vkmɔ* transitive counterparts. The *-ar* and the *-Vkm* intransitive forms denote fundamentally the state of events or

actions. Because many of the *-Vkin* and the *-ar* intransitive verbs are isolated, it is not easy to find the original transitive verbs from which the *-Vkin* and the *-ar* intransitive forms are derived.

- (1) *jurus-ar* ‘to be taken off’ ← *jurus-o* ‘to take off’
- (2) *a=júrús-o* *bóké* (Transitive)
 1SG=IMPERF:take off-TR leaves
 ‘I take off leaves.’
- (3) *bóké* *o=jurus-ar* (Intransitive)
 leaves 3S/P=PERF:take off-INT
 ‘The leaves were taken off.’
- (4) *rókóm-úkín* ‘to be incubated’ ← *rókóm-o* ‘to incubate’
- (5) *gwəno* *rókóm-o* *imíon* (Transitive)
 chicken 3S/P:IMPERF:incubate-TR chicks
 ‘The chicken incubates the chicks.’
- (6) *imíon* *o=rókóm-úkín* (Intransitive)
 chicks 3S/P=PERF:incubate-INT
 ‘The chicks have been incubated.’

1. 4. 1. 5 Infinitive forms

Transitive infinitive forms are derived by attaching the transitive infinitive formative suffix *-no* to verb stems. The alveolar nasal of the suffix *-no* is assimilated to the preceding consonant in point and manner of articulation. Moreover, stem vowels are lengthened in compensation for the loss of one of the geminated consonants (e.g. *ted-no* → **ted-do* → *teedo* ‘to cook’). When stems end in a vowel, consonantal assimilation and compensatory lengthening do not occur. However, stem vowels are lengthened because of rhythm adjustment (e.g. *mi-no* → *minno* ‘to give’)¹².

Infinitives are used as complements for verbs and nouns in (1) and (3). Moreover, infinitives occur as nominalizations in (2).

- (1) *a=tyé* *soomo* *itabó*
 1SG=IMPERF:be read:INF book
 ‘I am reading the book.’
- (2) *soomo* *itabó-ní* *yot*
 read:INF book-this easy
 ‘To read this book is easy.’

¹² Linguistic forms are supposed to end with iambic rhythm in Kumam.

- (3) itab̄-ní soomo yot
 book-this read:INF easy
 ‘This book is easy to read.’

Negative particle *lika* is followed by infinitives. However, the construction which consists of the verb *dagi* ‘to refuse’ and infinitives is often used as negative infinitives in (5).

- (4) lika t̄im̄o tic arac
 NEG do:INF job bad
 ‘Not to do job is bad.’
- (5) dágí t̄im̄o tic arac
 refuse do:INF job bad
 ‘Not to do job is bad.’

1. 4. 1. 6 Inflection, tense and aspect

Tense is not marked in verbal complexes, and is expressed by adverbial phrases. Aspect is marked with a suprasegmental morpheme in Kumam. Perfect aspect is distinguished from imperfect aspect by a lexical low toneme. Imperfect aspect is characterized without any morpheme. Verbal complexes consist of subject clitics, verbal stems and object suffixes segmentally. Only 2nd person plural subject is distinguished from the singular in indicative mood by the suffix *-unu*, by which plurality is indicated. Clitics are not subject to vowel harmony, while suffixes are subject to vowel harmony. [+ATR] vowels control vowel harmony.

The subject clitics are the followings: *a=*, *i=* and *ε=* for 1st, 2nd and 3rd person singular, respectively and *ɔ=*, *i=* and *gɔ=* for 1st, 2nd and 3rd person plural, respectively. When verbs have an independent noun as a subject, the suprasegmental 3rd person subject clitic is attached to verb stems in imperfect aspect and the 3rd person subject clitic *ɔ=* is attached to them in perfect aspect, which are called ‘switch-reference’¹³. The suprasegmental 3rd person subject clitic consists of a high toneme. The suprasegmental 3rd person subject clitic in imperfect aspect and the 3rd person subject clitic *ɔ=* in perfect aspect are used not only for singular but also for plural.

- | | | |
|-----|-----------------------|--|
| (1) | Imperfect | Perfect |
| | sg. 1 a=téd-ó !cám | a=té!d-ó !cám |
| | 2 i=téd-ó !cám | i=té!d-ó !cám |
| | 3 ε=téd-ó !cám / tédo | ε=té!d-ó !cám / ɔ=téd-o (‘switch reference’) |

¹³ The 3rd person and the 1st person plural subjects are distinguished in perfect aspect only by tone.

pl. 1	ɔ=téd-ó	!cám	ɔ=té!d-ó	!cám
2	i=téd-ú!nú	cám	i=té!d-ú!nú	cám
3	gɪ=téd-ó	!cám / tédó	gɪ=té!d-ó	!cám / ɔ=téd-o ('switch reference') ¹⁴
	'I cook food, etc.'		'I cooked food, etc.'	

When verbs have an independent noun as a subject, no subject clitic is attached to verb stems segmentally in imperfect aspect, and the subject clitic ɔ= is attached to them in perfect aspect. Plural cannot be distinguished from singular in verbal inflection. Even if subjects are plural, the suprasegmental 3rd person singular clitic is attached to verb stems in imperfect aspect in (3). The 'switch-reference' 3rd person singular subject clitic ɔ= is used in perfect aspect, whether subjects are singular or plural.

(2) Imperfect			Perfect		
icúɔ	téd-ó	!cám	icúɔ	ɔ=téd-o	cám
man	3S/P:IMPERF:cook-TR	food	man	3S/P=PERF:cook-TR	food
'The man cooks food.'			'The man cooked food.'		
(3) cʉɔ	téd-ó	!cám	cʉɔ	ɔ=téd-o	cám
men	3S/P:IMPERF:cook-TR	food	men	3S/P=PERF:cook-TR	food
'The men cook food.'			'The men cooked food.'		

The 3rd person singular subject clitic ɔ= is used to indicate that the subject of the complement is not the same as the subject of the matrix in (4). The function of the subject clitic ɔ= is referred to as 'switch reference'. In addition to 'switch reference' function, the subject clitic ɔ= is used for indicating that the subject is an unspecific referent.

The 3rd person singular subject clitic ε= is used to indicate that the subject of the complement may be the same or may not be the same as the subject of the matrix (5). The function of the subject clitic ε= is referred to as non-'switch reference'. In addition to non-'switch reference' function, the subject clitic ε= is used to indicate that the subject is a specific referent.

(4) icúɔ	ɔ=yutuno	bé	ɔ=cego	ekéko	
man ₁	3S/P=PERF:remember	COMP	3S/P _j =PERF:close	door	('switch reference')
'The man ₁ remembered that he ₂ closed the door.'					

¹⁴ When verbs are preceded by the 3rd person plural independent pronoun *gm*, the 3rd person plural subject clitic *ɪ=* is attached to verbs (e.g. *gín i=!tédó* in imperfect, *gín i=!té!dó* in perfect).

- (5) $\text{icóó } \text{ɔ=yutuno} \quad \text{bé} \quad \text{é=!cé!gó} \quad \text{ekéko}$
 man_i 3S/P=PERF:remember COMP 3S/P_{ij}=PERF:close door (non-‘switch-reference’)
 ‘The man_i remembered that he_{ij} closed the door.’

When the non-‘switch reference’ subject clitic é= is used in consequences of sentences, the non-‘switch-reference’ subject clitic é= refers any referent which is mentioned in the preceding sentences in (6). However, if the preceding sentence has a topicalized noun phrase, the non-‘switch reference’ subject clitic é= is usually used to indicate that it is coreferential with the topic of the preceding sentence in (7).

- (6) $\text{icóó } \text{ɔ=neno} \quad \text{dákó.} \quad \text{é=cá!mó} \quad \text{dek.}$
 man_i 3S/P=PERF:see woman_j 3S/P_{ij}=PERF:eat stew
 ‘The man saw the woman. He/She ate stew.’

- (7) $\text{dákó, } \text{icóó } \text{ɔ=neno.} \quad \text{é=cá!mó} \quad \text{dek.}$
 woman_i, man_i 3S/P=PERF:see 3S/P_j=PERF:eat stew
 ‘The woman, the man saw. She ate stew.’

Perfect aspect is marked with a low toneme, and imperfect aspect is characterized without any toneme. A subject clitic bears a low and a high toneme in lexicon. Every simple verb stem bears a high toneme when it is not extended morphologically. The transitive formative suffix $-\text{ɔ}/-o$ bears a lexical low toneme. The relation between underlying and surface representations is illustrated with conventions of autosegmental analysis in (8).

The suprasegmental 3rd person singular subject clitic consists of a high toneme in imperfect aspect. The 3rd person singular subject clitic ɔ= bears a low toneme in perfect aspect. Every simple verb stem bears a low toneme only for the 3rd person singular in perfect aspect, though they usually bear a high toneme for other persons in imperfect and perfect aspect. The relation between underlying and surface representations is illustrated with conventions of autosegmental analysis as follows.

Verbal complexes have a floating low toneme in rightmost position both in imperfect and perfect aspect. When words beginning with a high toneme follow the verbal complexes, the initial syllable of the words is pronounced with a downstep high tone both in imperfect and perfect aspect in (45) and (9).

(8) Imperfect	Perfect
L H H(L) H	L H(L)H(L) H
	/
a=téd-ó !cám	a=té!d-ó !cám
'I cook food.'	'I cooked food.'

(9) Imperfect	Perfect
LHL H H(L) H	LHL LL LL H
icóo téd-ó !cám	icóo o=téd-o cáam
'The man cooks food'	'The man cooked food.'

Object suffixes are attached to transitive stems following the transitive formative suffix *-o*. When object suffixes begin with a vowel, vowel sandhi takes place between the transitive formative suffix *-o/-o* and vowels of object suffixes. Although vowels are deleted according to vowel sandhi rules, tonemes are preserved all through tonal processes.

The object suffixes are the followings: *-a*, *-i* and *-e* for 1st, 2nd and 3rd person singular, and *wa-*, *-wu* and *-gi* for 1st, 2nd and 3rd person plural in (10).

(10) Imperfect	Perfect
sg.1 ε=dí!p-á	ε=dí!!p-á
2 ε=dí!p-í	ε=dí!!p-í
3 ε=dí!p-é	ε=dí!!p-é
pl.1 ε=díp-ó-!wá	ε=dí!p-ó-!wá
2 ε=díp-ó-!wú	ε=dí!p-ó-!wú
3 ε=díp-ó-!gí	ε=dí!p-ó-!gí
'He hits me, etc.'	'He hit me, etc.'

The 2nd person subject clitic *i=* is attached to verb stems both in the singular and the plural. Plural is distinguished from singular by the plurality suffix *-unu*. Personal pronominal object suffixes are attached to verb stems before the plurality suffix *-unu* in (12).

(11) Imperfect	Perfect
i=né!k-á	i=né!!k-á
2SG=IMPERF:kill-1SG	2SG=PERF:kill-1SG
'You (sg.) kill me.'	'You (sg.) killed me.'

(12) Imperfect	Perfect
i=né!k-á-!nú	i=né!!k-á-!nú ¹⁵
2SG=IMPERF:kill-1SG-PL	2SG=PERF:kill-1SG-PL
‘You (pl.) kill me.’	‘You (pl.) killed me.’

All object suffixes have a lexical high toneme. Object suffixes in 1st, 2nd, and 3rd person singular are pronounced with a double downstep high tone in perfect aspect, while they are pronounced with a downstep high tone in imperfect aspect.

The relation between underlying and surface tonal representations is illustrated with conventions of autosegmental analysis in (13). Subject clitics bear a low and a high toneme in lexicon. Perfect aspect is marked by a low toneme, while imperfect aspect is characterized without any toneme. Every simple verb stem bears a lexical high toneme in indicative. The transitive formative suffix -ɔ/-o bears a lexical low toneme.

(13) Imperfect	Perfect
L H(H)(L)H	L H(L)(H)(L)H
/	/
ε=dí!p-á	ε=dí!!p-á
‘He hits me.’	‘He hit me.’

Tonal representations of verbal complexes are always predictable, because simple verb stems always bear a lexical high toneme in indicative and a lexical tonal pattern of a low and a high toneme in subjunctive, when they are not extended morphologically.

Past tense is expressed by the adverbial particle *ɔɔɔ*, which is originated from the main verb *ɔ=ɔɔ* ‘it observed’ in complementation. The adverbial particle *ɔɔɔ* is followed by verbal complexes. The verbal complexes may be inflected with imperfect or perfect.

(14) Past imperfect	Past perfect
sg. 1 <i>ɔɔɔ</i> a=tédó !cám	<i>ɔɔɔ</i> a=té!dó !cám
2 <i>ɔɔɔ</i> i=tédó !cám	<i>ɔɔɔ</i> i=té!dó !cám
3 <i>ɔɔɔ</i> ε=tédó !cám	<i>ɔɔɔ</i> ε=té!dó !cám
pl. 1 <i>ɔɔɔ</i> ɔ=tédó !cám	<i>ɔɔɔ</i> ɔ=té!dó !cám
2 <i>ɔɔɔ</i> i=tédú!nú cá	<i>ɔɔɔ</i> i=té!dú!nú !cám

¹⁵ The vowel of the object suffix changes its [ATR] value from [-] to [+] in harmony with the vowels of the plurality suffix *-unu*. The initial vowel of the plurality suffix is deleted according to particular vowel sandhi rule. In general preceding vowels are deleted in vowel sandhi when vowels are in sequence.

3 ɔɔdɔ gr=tédó !cám ɔɔdɔ gr=té!dó !cám
 ‘I cooked food, etc.’ ‘I had cooked food, etc.’

Kumam has two types of complement constructions, a hypotactic and a paratactic construction, according to Noonan’s terminology. A complementizer *be* ‘that’ is followed by subordinate clauses in the hypotactic construction, while subordinate clauses directly follow verbs of main clauses without a complementizer in the paratactic construction. Past tense expressions originate from paratactic constructions which have the verb *ɔɔdɔ* ‘to observe’ in the main clauses in (15).

(15) ɔ=ɔdɔ a=tédó !cám
 3S/P=PERF:observe 1SG=IMPERF:cook food
 ‘Someone observed (that) I cook food.’

The main verb *ɔɔdɔ* ‘someone observed’ is lexicalized as an adverbial particle for expressing the past, and can be quite freely located in sentences. It may be located in initial, middle or final position of sentences.

(16) ɔɔdɔ dákó ɔ=wɪɔ kal
 PAST woman 3S/P=PERF:buy millet
 dákó ɔɔdɔ ɔ=wɪɔ kal
 woman PAST 3S/P=PERF:buy millet
 dákó ɔ=wɪɔ ɔɔdɔ kal
 woman 3S/P=PERF:buy PAST millet
 dákó ɔ=wɪɔ kal ɔɔdɔ
 woman 3S/P=PERF:buy millet PAST
 ‘The woman bought millet.’

Events or actions which happened in the past are usually expressed with simple perfect aspect, not with past tense. However, ‘stative’ verbs such as ‘to want’ are not inflected with perfect aspect. ‘Stative’ verbs are always inflected with imperfect aspect being accompanied by the past adverbial particle *ɔɔdɔ* when they denote that events happened in the past in (19).

(17) a=mító !cám
 1SG=IMPERF:want food
 ‘I want food.’

- (18) *a=mí!tó !cám
 1SG=PERF:want food
 'I wanted food.'
- (19) ɔʊdɔ a=mító !cám
 PAST 1SG=IMPERF:want food
 'I wanted food.'
- (20) *ɔʊdɔ a=mí!tó !cám
 PAST 1SG=PERF:want food
 'I wanted food.'

Action verbs can be marked with imperfect and perfect aspect in present and past tense in (21), (22), (23) and (24).

- (21) a=wíló rtabó
 1SG=IMPERF:buy book
 'I buy a book.'
- (22) a=wí!ló rtabó
 1SG=PERF:buy book
 'I bought a book.'
- (23) ɔʊdɔ a=wíló rtabó
 PAST 1SG=IMPERF:buy book
 'I used to buy a book.'
- (24) ɔʊdɔ a=wí!ló rtabó
 PAST 1SG=PERF:buy book
 'I had bought a book.'

Future tense is expressed by the verb *yaarɔ* 'to decide' and infinitives of verbs. The verb *yaarɔ* 'to decide' is always inflected with perfect aspect when it is used to indicate the future tense.

- (25) sg. 1 a=yá!ró teedɔ cám
 2 i=yá!ró teedɔ cám
 3 ɛ=yá!ró teedɔ cám
 pl. 1 ɔ=yá!ró teedɔ cám
 2 i=yá!ró teedɔ cám
 3 gr=yá!ró teedɔ cám
 'I will cook food, etc.'

(3) sg.	pl.
cam-é	cam-é!nú
eat:IMP-3SG	eat:IMP-3SG:PL
‘Eat it!’	‘Eat (pl.) it!’

Every simple verb stem bears a particular lexical tonal pattern LH in imperative mood. Since every simple verb stem consists of a monosyllabic structure, simple verb stem in imperative mood for singular satisfies the environment where floating high tonemes appear. If simple verb stems are followed by words beginning with a low toneme in singular imperative mood, ‘Floating high assignment’ occurs between verb stems in imperative mood and the following words.

(4) LH	LLH		L	HLLH	
				\	
cam	rijo	→	cam	rí!ηó	
eat	meat		‘Eat (sg.)	meat!’	(‘Floating high assignment’)

When verbs are not followed by objects in singular imperative, the subjunctive suffix *-i* is attached to the verb stems.

(5)	LH	
		\
	cam-í	‘Eat (sg.)’

When the suffix *-unu* for plurality is attached to verb stems in imperative, the subjunctive suffix *-i* is not attached to verb stems.

(6)	LH(L)H	
		\
	cam-ú!nú	
	eat-PL	‘Eat (pl.)!’

(7)	LHLH	LLH		LHLH	(L)LH
				\	
				\	/
cam-unu	rijo	→	cam-ú!nú	rí!ηó	
eat-PL	meat		‘Eat (pl.)	meat!’	

First person dual is distinguished from 1st person plural only in subjunctive mood. 1st person dual

denotes that a subject consists of two persons including a speaker. 1st person plural denotes that a subject consists of more than two persons including a speaker. The suffix *-unu* for plurality is attached to verb stems for 1st person plural, but not to verb stems for 1st person dual in (8). The suffix *-unu* for plurality is also attached to verb stems for 2nd person plural. When verbs are not followed by objects, the subjunctive suffix *-i* is attached to verb stems except for 1st person dual and 2nd person plural.

- (8) sg. 1 myero a=cá!m-í
 2 myero i=cá!m-í
 3 myero ε=cá!m-í
 pl. 1 dual myero ɔ=cá!m-í
 1 myero ɔ=cá!m-ú!nú
 2 myero i=cá!m-ú!nú
 3 myero gr=cá!m-í
 ‘I should eat, etc.’

Subject clitics bear a lexical tonal pattern LH, and simple verb stems always bear a lexical tonal pattern LH in subjunctive. Verbal complexes have neither segmental nor suprasegmental morpheme for expressing aspect in subjunctive mood.

- (9) LL LH LH LL L H(L)H
 | | | | |
 myero a=cam-i → myero a=cá!m-í
 should 1SG=eat:SUB-sub ‘I should eat.’

- (10) sg. 1 myero a=cám !rí!ŋó
 2 myero i=cám !rí!ŋó
 3 myero ε=cám !rí!ŋó
 pl. 1 dual myero ɔ=cám !rí!ŋó
 1 myero ɔ=cá!m-únú rí!ŋó
 2 myero i=cá!m-ú!nú rí!ŋó
 3 myero gr=cám !rí!ŋó
 ‘I should eat meat, etc.’

Kumam has no morphological device for constructing benefactive stems. However, when benefactive nominal phrases follow verbs in subjunctive, the preposition *né* ‘for’ is attached to the preceding verb stems in (12). The nasal consonant of the preposition *né* is assimilated with the

preceding consonant and one of the geminated consonants is deleted resulting in lengthening of verb stem vowels in compensation for the loss of the consonant (e.g. *wil + né > willé > wulé*)¹⁶.

(11) a=mító !bé dákó wĩl né-atín rtabó
 1SG=IMPERF:want that woman buy:SUB for-child book
 ‘I want that the woman should buy the book for the child.’

(12) a=mító !bé dákó wulé atín rtabó
 1SG=IMPERF:want that woman buy:SUB:BEN child book
 ‘I want that the woman should buy the book for the child.’

Kumam has the pseudo-benefactive construction for some verbs. Direct objects are interrupted as benefactive NPs when they are attached to verbs as object suffixes in (13). Since the object suffixes in the verbal complexes are objects in the pseudo-benefactive construction, other objects are not allowed to follow the verbal complexes in (14). The verbs which allow the pseudo-benefactive construction are *yaabo* ‘to open (a door)’, *soomɔ* ‘to read’, and *bulɔ* ‘to taste’. The thematic role of benefactive is usually expressed by the preposition *né* in (15). The other verbs do not have the pseudo-benefactive construction in (16).

(13) dákó ɔ=tɛd-á
 woman 3SG=PERF:cook-1SG
 ‘The woman cooked for me.’

(14) *dákó ɔ=tɛd-á cáɱ
 woman 3SG=PERF:cook-1SG food
 ‘The woman cooked food for me.’

(15) dákó ɔ=tɛdo n:á cáɱ
 woman 3SG=PERF:cook for:1SG food
 ‘The woman cooked food for me.’

(16) *ɪcúɔ ɔ=ger-á
 man 3SG=PERF:build-1SG
 ‘The man built for me.’

1. 4. 1. 8 Gerunds

Some verbs can be used in repetition. Verbs are followed by gerund forms, which are constructed from verb stems being prefixed with *a-* and suffixed with *-á*. The gerunds may follow verbal

¹⁶ In indicative the transitive formative suffix *-ɔ/-o* blocks the assimilation of the nasal.

complexes for constructing repetitions of verbs. The repetition forms denote that actions are performed repeatedly.

- (1) kal mé α-ryég-á
 millet of GER-grind-GER
 ‘millet for grinding’

Gerunds may be followed by nominal phrases as objects in (3). Gerunds may follow transitive verbs or prepositions as the objects in sentences.

- (2) a=bínó α-bín-á joró.
 1SG=IMPEF:come GER-come-GER yesterday
 ‘I came and came yesterday.’

- (3) ε=só!mó α-sóm-á itabú
 3SG=PERF:read GER-read-GER book
 ‘He read and read a book.’

1. 4. 1. 9 Negation

The negative particle *líká* is followed by predicates in indicative mood in (1). The negative particle *kór* is used for negation in subjunctive mood in (2). Negative subjunctives inflected with 2nd person are used for negative imperatives in (3) and (4).

- (1) dákó líká ɔ=tedo sám
 woman NEG 3S/P=PERF:cook food
 ‘The woman did not cook food.’

- (2) a=mí!ó ícúɔ lworo bé kór ε=kwal gwéno
 1SG=PERF:give man threat COMP NEG 3SG=steal:SUB chicken
 ‘I threatened the man not to steal the chicken.’

- | | |
|-----------------|---------------------|
| (3) sg. | pl. |
| kór í=!cá!m-í | kór í=!cá!m-ú!nú |
| NEG 2SG=eat-SUB | NEG 2SG=eat:SUB:PL |
| ‘Do not eat!’ | ‘Do not eat (pl.)!’ |

- | | |
|----------------------|--------------------------|
| (4) sg. | pl. |
| kór í=!cám rí!njó | kór í=!cá!m-ú!nú ríjé |
| NEG 2SG=eat:SUB meat | NEG 2PL=eat:SUB-PL meat |
| ‘Do not eat meat!’ | ‘Do not eat (pl.) meat!’ |

Since the negation particles are always followed by predicates, negative nominal phrases cannot be expressed by the negation particles. Negative nominal phrases are usually expressed by relative constructions.

(5) atín amé líká ɔ=oto gólɔ
 child REL NEG 3S/P=PERF:go Gulu
 ‘No child has gone to Gulu.’

(6) gín amé líká a=cá!mó
 thing REL NEG 1SG=PERF:eat
 ‘I ate nothing.’

1. 4. 2 Nouns

1. 4. 2. 1 Number

Most of nouns have no distinctive singular and plural forms in Kumam. Although there is no productive morphological operation to derive plural forms from singular forms or to derive ‘singulative’ forms from plural forms, a few nouns have distinct singular and plural forms. The distinctive plural or ‘singulative’ forms might be relics of archaic morphological operations through which ‘singulative’ and plural forms were derived. Although morphological operation for deriving ‘singulative’ and plural forms is lost in the present language, most of the borrowed words (probably from Teso) in Kumam have distinctive singular and plural forms, which are not of Kumam origin. Kumam might borrow the singular and plural forms after the language lost the productive morphological devices to derive plural and ‘singulative’ forms. Plural or ‘singulative’ forms are recorded in this dictionary only when nouns have distinctive ‘singulative,’ singular or plural forms. For instance, the noun ‘boat’ preserves an archaic singular and a plural form in (1). The noun ‘cow’ retains an archaic ‘singulative’ and a plural form in (2). The noun ‘cat’ has distinctive singular and plural forms, which are probably borrowed from Teso in (3).

- (1) ye ‘boat, sg.’ yédé(L) ‘boat, pl.’
 (2) dyaŋ ‘cow, ‘singulative’” dóké ‘cow, pl.’
 (3) apús(L) ‘cat, sg.’ apusin ‘cat, pl.’

1. 4. 2. 2 Possession

Kumam distinguishes alienable and inalienable possession like other western Nilotic languages. Some nouns for body parts and kinship terms have distinctive forms for inalienable and alienable possession.

Forms for alienable possession are derived through productive morpho-phonological operation.

For instance, the 1st person singular possessive suffix *-ná* is attached to nouns, and the alveolar nasal /n/ of the suffix may be assimilated to the preceding consonant. The alveolar nasal of the suffix constitutes geminated consonants with the preceding consonants. Moreover, vowels preceding the geminated consonants may be lengthened in compensation for the loss of one of the geminated consonants. When nouns end in a vowel, the consonantal assimilation or compensatory lengthening is blocked.

- (1) *ogwók* + *-ná* → *ogwók!ná* ‘my dog’
del + *-ná* → *dellá* ‘my skin, Inalienable’
del + *-ná* → *deelá* ‘my skin, Inalienable’
keno + *-ná* → *kenoná* ‘my fireplace’

When nouns end in a consonant, three variants of possessive forms coexist synchronically in (2). The first are the forms that do not follow consonantal assimilation or compensatory lengthening (e.g. *itna* ‘my ear’). The second are the forms that follow only consonantal assimilation (e.g. *itta* ‘my ear’). The third are the forms that follow both consonantal assimilation and compensatory lengthening (e.g. *iita* ‘my ear’).

- (2) *ít* + *-ná* → *itná* ~ *ittá* ~ *iitá* ‘my ear, Alienable’

A few nouns preserve archaic forms for inalienable possession. The preserved inalienable possessive forms are relics of archaic morphological operations for distinguishing inalienable from alienable possession. For instance, the 1st person singular inalienable possessive suffix **-á* is attached to nouns.

- (3) *wic* + **-á* → *wiá* ‘my head, Inalienable’

Inalienable possessive forms are sometimes used to distinguish between singular and plural, because Kumam has lost productive morphology for deriving ‘singulative’ and plural forms. For instance, *wia* ‘my head, inalienable’ is used for the singular, because human beings have only one own head. The alienable possessive form *wicna* ‘my head or my heads, alienable’ is often used for expressing plurality, because human beings do not possess more than two heads on their necks. Many heads are not possessors’ own heads, but animals’ heads of possessors, for instance.

- (4) *wic* ‘head’ + *-ná* ‘my’ → *wicná* ‘my head, Alienable’

(5) Inalienable	Alienable
sg. 1 wiá	wic-ná
2 wií	wic-ní
3 wié	wic-méré
pl. 1 wiwá	wic-wá
2 wiwú	wic-wú
3 wigí	wic-gí
‘my head, etc.’	‘my head, etc.’

Many nouns lost original distinctive forms for alienable and inalienable possession. However, Kumam developed innovation for distinguishing inalienable from alienable possession. A variant of alienable possessive forms are sometimes used for inalienable possession. In order to express inalienable possession, speakers make use of the forms that are derived by applying the consonantal assimilation and the compensatory lengthening. The forms that are not subject to consonantal assimilation or compensatory lengthening are used for expressing alienable possession in (6). For instance, the possessive form *adamna* ‘my brain’ is used for alienable possession, and the possessive form *adaama* ‘my brain’ is used for inalienable possession.

(6) adám + -ná	→	*adámmá	→	adáámá	‘my brain, Inalienable (Innovation)’
adám + -ná	→	adámná			‘my brain, Alienable’
del + -ná	→	dellá	~	deelá	‘my skin, Inalienable (Innovation)’
del + -ná	→	delná			‘my skin, Alienable’

The innovated forms cannot distinguish alienable and inalienable possession for first, second and third person plurals, because first, second and third person plural possessive suffixes do not begin with an alveolar nasal consonant in (7). The 3rd person singular possessive suffix *-méré* is newly developed for expressing alienable possession. The innovation is not a norm, but a tendency at present.

(7) Inalienable (Innovation)	Alienable
sg. 1 léébá	léb-ná
2 léébí	léb-ní ¹⁷
3 léébe	léb-méré

¹⁷ When nominal stems end in a consonant, nasals interrupt vowel harmony.

pl. 1	léb-wá	léb-wá
2	léb-wú	léb-wú ¹⁸
3	léb-gí	léb-gí
	‘my tongue, etc.’	‘my tongue, etc.’

Inalienable and alienable possession is distinguished also in genitive constructions. Possessed nouns and possessors are linked with the possessive particle *á(L)* in alienable possession¹⁹. Possessed nouns and possessors are linked only with a suprasegmental morpheme, a low toneme, in inalienable possession. For instance, the noun *dɔg* ‘mouth’ may constitute a genitive construction with the noun *dakɔ* ‘woman’ in inalienable possessive, and the noun *ɔgulu* ‘pot’ constitutes a genitive construction with the noun *dakɔ* ‘woman’ in alienable possession.

(8) Inalienable	Alienable
H (L) H H L	L H H H(L) H H L
dɔg !dákó	ɔgúlú á !dákó
mouth woman	pot of woman
‘mouth of a woman’	‘pot of a woman’

1. 4. 2. 3 Animate vs. inanimate

Kumam distinguishes animate and inanimate nouns morpho-syntactically. Distinctive forms of possessive particles are used for animate and inanimate nouns in genitive constructions. When possessors are inanimate nouns, the possessive particle *mé(L)* ‘of’, is used for linking possessed nouns with possessors in (1)²⁰. However, both the possessive particle *a* and the possessive particle *mé(L)* ‘of’ may be used for many of animate possessors in (2).

(1) jámé mé-egóe	/	*jámé á-egóe
things of-cloth		things of-cloth
‘things of cloth’		‘things of cloth’
(2) jámé mé-emúrón	/	jámé á-emúrón
things of-doctor		things of-doctor
‘things of a doctor’		‘things of a doctor’

¹⁸ When nominal stems end in a consonant, glide consonants interrupt vowel harmony.

¹⁹ The possessive particle bears a high and a low toneme in lexicon. The vowel of the particle is harmonized to vowels of the following forms.

²⁰ The vowel of the preposition *mɛ* ‘of’ is harmonized with vowels of the following words.

When possessors are animate nouns, the possessive particle *a* is basically used for linking possessed nouns with possessors. The possessive particle *a* is exclusively used when possessors are some terms for relatives such as ‘mother’ and ‘father’, and the noun ‘God’.

- (3) *jámé mé-papa / jámé á-papa
 things of father things of-father
 ‘things of father’ ‘things of father’

Vowel sandhi occurs between the possessive article *a* and vowels of nouns. When a vowel is followed by another vowel, the preceding vowel is deleted. However, vowel sandhi occurs only in unstressed vowels. All lexical tonemes are preserved though vowels are deleted according to vowel sandhi rules. The final vowel of the noun *jame* ‘things’ may be deleted because it is not stressed, while the vowel of the noun *le* ‘animal’ is not deleted because it is stressed.

- (4) jámé á-dákó → [já má!dákó]
 things of-woman ‘things of a woman’
 (5) lé á-dákó → [*lá!dákó]
 animal of-woman ‘animal of a woman’

When possessors begin with a vowel, the possessive particle can be deleted before the following vowels, because the possessive particle is not stressed.

- (6) pi á-úm → [piúm]
 water of-nose ‘water of nose’
 (7) agúlú á-icóó → [agúlí!cóó]
 pot of-man ‘pot of a man’

When final vowels of possessed nouns are followed by initial vowels of possessors after the possessive particle is deleted according to vowel sandhi rules, vowel sandhi occurs between the final vowels of possessed nouns and the initial vowels of possessors if they are not stressed in (7).

1. 4. 2. 4 Compound

Compounds are constructed from nouns in combination with more than two words. The leftmost word in compounds is the head. The elements are simply juxtaposed without any segmental or suprasegmental morpheme in (2). When compounds are followed by qualifiers, they are not

intervened by qualifiers. For example, possessive suffixes are attached to the final constituents in compounds in (3) and (6).

- | | |
|---------------------|--------------------------|
| (1) atín | ‘child’ |
| sukú!lú | ‘school’ |
| (2) atín sukú!lú | ‘pupil’ |
| (3) atín sukú!lú-ná | ‘my pupil’ |
| (4) ŋut | ‘neck’ |
| cíŋ | ‘hand’ |
| (5) ŋut cíŋ | ‘wrist’ |
| (6) ŋut cíŋ-ŋá | ‘my wrist’ ²¹ |

1. 4. 2. 5 Definite and indefinite

The indefinite suffix is *-mɔrɔ*, which has a plural counterpart *-mɔgɔ* in (1). Nouns that are not affixed by the indefinite suffixes are interpreted as definite in (2).

- | | |
|------------|--------------|
| (1) sg. | pl. |
| yat-mórɔ | yén-!mógó |
| ‘a tree’ | ‘some trees’ |
| (2) sg. | pl. |
| yat | yén |
| ‘the tree’ | ‘the trees’ |

1. 4. 3 Adjectives

1. 4. 3. 1 Number

Some adjectives have distinctive forms for singular and plural. Others have same forms for singular and plural in (1). The vowel *ɔ/o* is considered to be the 3rd person subject clitic *ɔ=* in perfect aspect. The adjectives beginning with the vowel *ɪ/i* originate from compounds of the preposition *ɪ* ‘at, on, in’ and nouns.

- | | | |
|---------|------|--------------|
| (1) sg. | pl. | |
| rac | reco | ‘bad’ |
| bɛr | bɛcɔ | ‘good’ |
| dwónŋ | dɔŋɔ | ‘large, big’ |

²¹ Note that *mɪɛl mé-pom* ‘wedding dance’ is a compound (cf. *mɪɛl mé pɔmá* ‘my wedding dance’)

títídí	títínɔ	‘small’
lyet	lyet	‘hot’
ojoŋ	ojoŋ	‘thin’
íkúkú	íkúkú	‘dull’

Adjectives agree with modified nouns in number.

- (2) sg. pl.
- | | | |
|--------------|----------------|-----------------------|
| ɲat a-bér | jo a-bécɔ | ‘good man, men’ |
| atín a-rác | ídóé a-réco | ‘bad child, children’ |
| ogwók a-dwóŋ | igwógín a-dóŋɔ | ‘big dog, dogs’ |
| ɔt a-títídín | údé a-títínɔ | ‘small hut, huts’ |
| ícóó ojoŋ | cúó ojoŋ | ‘thin man, men’ |
- (3) twol rac
snake bad
‘The snake is bad.’
- (4) twólé reco
snakes bad, pl.
‘The snakes are bad.’
- (5) ogwók bér
dog good
‘The dog is good.’
- (6) igwógín bécɔ
dogs good, pl.
‘The dogs are good.’
- (7) ícóó ojoŋ
man thin
‘The man is thin.’

1. 4. 3. 2 Inflection, tense and aspect

Adjectives behave like verbs in many respects. Adjectives constitute complexes with subject clitics in imperfect aspect. Adjectival complexes are always used in imperfect aspect. Perfect aspect is not possible for adjectives. Past tense is expressed by the adverbial particle *ɔɔdɔ* ‘lit. it observed’, which is an innovation from the main verb *ɔɔdɔ* ‘to observe’ in complementation.

(1)	Present	Past
sg. 1	a=rác	ɔʊdo a=rác
2	i=rác	ɔʊdo i=rác
3	ε=rác	ɔʊdo ε=rác
pl. 1	ɔ=réco	ɔʊdo ɔ=réco
2	i=récunú	ɔʊdo i=récunú
3	gr=réco	ɔʊdo gr=réco
	'I am bad, etc.'	'I was bad, etc.'

When subjects are independent nouns in predicate adjectival constructions, subjects and adjectival complements are linked without a copula.

(2)	atín	rac	ɔʊdo	atín	rac
	child	bad	PAST	child	bad
	'The child is bad.'			'The child was bad.'	

1. 4. 3. 3 Associative construction

When adjectives modify nouns, modified nouns and adjectives are linked with the attributive particle *a(H)*, which bears a low and a high toneme in lexicon (1)²².

(1)	LH L	LH L
		\
	atín	a - rác
	child	ATT-bad
	'bad child' ²³	

Associative construction is considered to be equivalent to relative construction. Relative clauses are preceded by the attributive particle *a(H)* in (2). The vowel of the attributive particle *a(H)* is often deleted before the following vowel in vowel sandhi, where all tonemes are preserved in tonal processes in (3).

²² The attributive particle is subject to vowel harmony. The vowel of the particle is harmonized to vowels of the following morphemes.

²³ There is a morphological boundary between a noun and the attributive particle by which tonal rules are obstructed.

(2) a=twó!mó dákó a ó=tedo cáam
 1SG=PERF:hit woman REL 3S/P=PERF:cook food
 ‘I hit the woman who cooked food.’

(3) a=twó!mó dákó ó=tedo cáam
 1SG=PERF:hit woman REL:3S/P=PERF:cook food
 ‘I hit the woman who cooked food.’

Some adjectives begin with a vowel (e.g. *ojot* ‘thin’). Vowel sandhi occurs only in unstressed vowels. The attributive particle is not stressed. When adjectives begin with a vowel, the vowel of the attributive particle *a*(H) is deleted before the vowels of adjectives in vowel sandhi. All lexical tonemes are preserved in tonal processes, though vowels are deleted in vowel sandhi. For instance, the high toneme of the attributive particle *a*(H) is assigned to the leftmost TBU of the adjective *ojot* ‘weak’, though the vowel of the attributive particle is deleted in (5). Vowel sandhi and tonal processes in associative constructions (4) and (5) are the same as in relative constructions (2) and (3).

(4) ɪcúɔ a(H) ojot → [ɪcúɔ ójot] (Vowel Sandhi: a + o → o)
 man ATT weak ‘weak man’

(5) LHL L H LL
 | | | \ |
 ɪcúɔ ATT ójot
 man weak
 ‘weak man’

Many of monosyllabic adjectives bear a low toneme in lexicon. However, some adjectives have a specific tonal pattern in lexicon individually. Consequently, unlike in tonal system of verbal morphology, tones of adjectives in surface representation are not predictable unless tonal patterns of them are specified in lexicon.

(6) mit ‘sweet’
 tek ‘hard’
 rírírǎ ‘liquid’
 tídí ‘small’

1. 4. 3. 4 Infinitive and subjunctive

Although adjectives behave like verbs morpho-syntactically on many occasions, they lack

particular forms for infinitive and subjunctive. When adjectival forms for infinitive or subjunctive are required, verbs *beedo* ‘to stay’ or *dooko* ‘to become’ must be used with adjectives.

- (1) a=yá!ró beedo rac
 1SG=PERF:will stay:INF bad
 ‘I will be bad.’
- (2) bed ber
 stay:SUB good
 ‘Be good!’

1. 4. 3. 5 Nominalization

Some adjectives form nominalizations. Nouns are derived from adjectives by adding a suffix *-o* to adjectival stems. Noun derived from adjectives bear a specific tonal pattern in lexicon. When adjectives do not have morphologically derived nouns, an infinitive form of a verb *beedo* ‘to stay’ must be used with them.

- | | | | |
|---------------|-----------|----------------|---------------|
| (1) adjective | | noun | |
| lac | ‘wide’ | lácó(L) | ‘width’ |
| tek | ‘hard’ | tékó(L) | ‘hardness’ |
| yom | ‘soft’ | yómó(L) | ‘softness’ |
| dɪdɪŋ | ‘narrow’ | beedo dɪdɪŋ | ‘narrowness’ |
| ɪsedeŋeŋ | ‘shallow’ | beedo ɪsedeŋeŋ | ‘shallowness’ |

Adjectives beginning with the vowel *ɔ/o* and with the vowel *ɪ/i* have no derivative nouns morphologically derived from adjectives. The nominal equivalents for the adjectives beginning with the vowel *ɪ/i* consist of the infinitive of the verb *beedo* ‘to stay, live’ and the adjectives. The fact attests that the adjectives beginning with the vowel *ɪ/i* originate from compounds of the preposition *ɪ* ‘at, on, in’ and nouns (e.g. *beedo ɪsedeŋeŋ* ‘shallowness’ < **beedo* ‘to stay’ *ɪ* ‘at’ *sedeŋeŋ* ‘shallowness’).

1. 4. 3. 6 Reduplication

Some adjectives have reduplication forms. The partial reduplication forms usually express reductive meanings of original adjectives. Some reduplication forms are used in more semantically limited domains than original forms.

- (1) ber ‘good’ > beber ‘somehow good’

cek 'short' > cecek 'somehow short'
 rac 'bad' > rarak 'ugly, somehow bad'
 cɔl 'black, dark' > cɔcɔl 'black' (only for color)

Repetition of full forms expresses expanded meanings of original adjectives.

- (2) cám-ní rac
 food-this bad
 'This food is bad.'
- (3) cám-ní rac rac
 food-this bad bad
 'This food is really bad.'
- (4) cám-ní rarak
 food-this somehow bad
 'This food is somehow bad.'

1. 4. 4 Adverbs

1. 4. 4. 1 Adverbs

Time adverbials may be placed quite freely at any place in sentences. The time adverbial *ɲoró* 'yesterday' is located in final, initial and middle position in sentences.

- (1) ɔkélɔ ɔ=dwogo ɲoró
 Okelo 3S/P=PERF:come back yesterday
- (2) ɲoró ɔkélɔ ɔ=dwogo
 yesterday Okelo 3S/P=PERF:come back
- (3) ɔkélɔ ɲoró ɔ=dwogo
 Okelo yesterday 3S/P=PERF:come back
 'Okelo came back yesterday.'

Prepositional phrases function as adverbs expressing location. Proper nouns can function as adverbs of location without any preposition.

- (4) dákó ɔ=oto tú-ɔt
 woman 3S/P=PERF:go toward-house
 'The woman went toward the house.'

- (5) *dákó* *ɔ=oto* *lirá*
 woman 3S/P=PERF:go Lira
 ‘The woman went to Lira.’

New information is usually placed after predicates, and old information is located before predicates in Kumam. The sentences (2) and (3) are well-formed when the adverbial expressions denote old information. Topic slot is located in sentence initial position. The sentence (2) is well-formed when the adverbial expression is of old information and a topic.

Adverbials may be placed quite freely at any place, though they cannot intervene between predicates and object noun phrases in (8). Moreover they cannot intervene between predicates and benefactive noun phrases in (10). For instance, the adverb *ateteni* ‘certainly’ intervene neither between the predicate *ɔ=kwalɔ* ‘he stole’ and the object *gwen* ‘chickens’ in (7), nor between the predicate *ɔ=kwalɔ* ‘he stole’ and the benefactive phrase *ni-dakɔ* ‘for the woman’ in (9).

- (6) *atéténi* *ɪcɔɔ* *ɔ=kwalɔ* *gwen*
 certainly man 3S/P=PERF:steal chickens
 ‘Certainly, the man stole the chicken.’
- (7) *ɪcɔɔ* *atéténi* *ɔ=kwalɔ* *gwen*
 man certainly 3S/P=PERF:steal chickens
 ‘Certainly, the man stole the chicken.’
- (8) **ɪcɔɔ* *ɔ=kwalɔ* *atéténi* *gwen*
 man 3S/P=PERF:steal certainly chickens
 ‘Certainly, the man stole the chicken.’
- (9) *ɪcɔɔ* *ɔ=kwalɔ* *gwen* *ni-dákó* *atéténi*
 man 3S/P=PERF:steal chickens for-woman certainly
 ‘Certainly, the man stole the chickens for the woman.’
- (10) **ɪcɔɔ* *ɔ=kwalɔ* *atéténi* *ni-dákó* *gwen*
 man 3S/P=PERF:steal certainly for-woman chickens
 ‘Certainly, the man stole the chickens for the woman.’

1. 4. 4. 2 Reduplication

Some adverbs can be used in repetition. The repetition of adverbs denotes more limited meanings than original adverbs.

- (1) *ɲoró* ‘yesterday’ > *ɲoro aɲora* ‘just yesterday’
díki ‘tomorrow’ > *díki adíki* ‘just tomorrow’

1. 4. 5 Prepositions

Kumam has a small set of prepositions.

(1) ɪ	‘in, on, at, to’
bút	‘to’
mé(L)	‘of’
pí	‘because of’
kede	‘with’
tú	‘toward’

Each of the prepositions can be attached with pronominal possessive suffixes in inalienable possession. When the prepositions are attached with pronominal possessive suffixes, some prepositions change their forms to particular forms which are followed by modifiers. Vowels of the prepositions and the pronominal possessive suffixes are both subject to vowel harmony. The [+ATR] vowels control vowel harmony.

(2)	pí	bút
sg. 1	pír-á	bút-á
2	pír-í	bút-í
3	pír-é	bút-é
pl. 1	pír-wá	bút-wá
2	pír-wú ²⁴	bút-wú
3	pír-gí	bút-gí
	‘because of me, etc.’	‘to me, etc.’

When prepositions are followed by nouns, only the preposition ɪ ‘in, on, at, from’ is subject to vowel harmony with vowels of the following nouns (3).

(3)	ɪ-ot	‘in the house’
	i-sukú!lú	‘in the school’

Other prepositions are not subject to vowel harmony, even though they are followed by nouns bearing [+ATR] vowels.

²⁴ The suffixes beginning with a glide do not cause vowel harmony.

- (1) sg. 1 áǵó(L)
 2 ín ²⁵
 3 én
 pl. 1 wán
 2 wún
 3 gín

Independent personal pronouns occur basically as subjects and topicalized noun phrases²⁶.

- (2) in í=!cámó dek
 2SG 2SG=IMPERF:eat stew
 ‘You eat stew.’
 (3) én, a=dó!ǵ-é
 3SG 1SG=IMPERF:hit with a fist-3SG
 ‘Him, I hit with a fist.’

In other positions personal pronouns appear as clitics on verbs, or suffixes on verbs or prepositions.

- (4) a=tédó !cám
 1SG=IMPERF:cook food
 ‘I cook food.’
 (5) ǵóó dó!ǵ-á
 man 3S/P:IMPERF:hit with a fist-1SG
 ‘The man hits me with a fist.’
 (6) dákó !tédó !n:á cáǵ
 woman 3S/P:IMPERF:cook for:1SG food
 ‘The woman cooks food for me.’

Independent personal pronouns may sometimes occur as subjects in predicate nominal constructions, which are followed by predicate nominals without a copula.

- (7) áǵó emúrón
 1SG doctor
 ‘I am a doctor.’

²⁵ All personal pronouns except for 1st person singular bear a lexical tonal pattern LH.

²⁶ Topicalized noun phrases are distinguished from subjects by tone.

(12) sg. 1	íkom-á	‘me alone’
	2 íkom-í	‘you(sg.) alone’
	3 íkom-é	‘him, her, it alone’
pl. 1	íkom-wá	‘us alone’
	2 íkom-wú	‘you(pl.) alone’
	3 íkom-gí	‘them alone’

1. 4. 6. 2 Demonstratives

The deictic affixes express three relations of spatial deixis in (13). The deictic affixes are subject to vowel harmony in (14). The [+ATR] vowels control vowel harmony. The demonstratives for near and far spatial deixis construct contracted forms with the preceding nouns. The alveolar nasal of the demonstratives is assimilated to the preceding consonant in manner and points of articulation, when modified nouns end in a consonant and constructs geminated consonants with the preceding consonant. One of the geminated consonants is deleted and the preceding vowel of a noun is lengthened in compensation for the loss of the consonant.

The demonstratives for remoteness *-no* and *-go* consist of a [+ATR] vowel, which do not cause vowel harmony. The alveolar nasal obstructs the vowel harmony.

(1)	sg.	pl.
this	-ni	-gi
that	-no	-go
that, far	-ca	-ka

The nasal consonant of the demonstratives *-ni* ‘this’ and *-no* ‘that’ may be assimilated to the preceding consonant.

(2)	ɔt-ni	ɔɔt-i	‘this house’
	ɔt-no	ɔɔt-o	‘that house’
	ɔt-ca		‘that, far house’
	ude-gi		‘these houses’
	ude-go		‘those houses’
	ude-ka		‘those, far houses’

Independent, self-standing, demonstrative pronouns are the followings:

(3)	sg	pl
this	mán(L)	mági(L)
that	mánó(L)	mágó(L)
that, far	mácá(L)	máká(L)

The independent, self-standing, demonstrative pronouns bear a floating low toneme in the rightmost position.

1. 4. 6. 3 Interrogative pronouns

Interrogative pronouns are distinguished in singular and plural.

(1)	sg.	pl.
'who'	ḡái	alú
'what'	ḡó	ḡoígo
'which'	méné	mégé

(2) atín !méné amé i=mító
 child which REL 2SG=IMPERF:want
 'Which child do you want?'

(3) igwógín mégé amé i=mító
 dogs which REL 2SG=IMPERF:want
 'Which dogs do you want?'

The interrogative pronouns are located quite freely in sentences²⁹. However, when the interrogative pronouns bear grammatical relation as an object in sentences, they cannot intervene between subjects and predicates.

(4) ḡoro ó!kélo ɔ=wɪlo ḡó
 yesterday Okelo 3S/P=PERF:buy what

(5) ḡó ḡoro ó!kélo ɔ=wɪlo
 what yesterday Okelo 3S/P=PERF:buy

(6) ḡoro ḡó okélo ɔ=wɪlo
 yesterday what Okelo 3S/P=PERF:buy

(7) *ḡoro ó!kélo ḡó ɔ=wɪlo
 yesterday Okelo what 3SG=PERF:buy

²⁹ The position of interrogative pronouns is determined by pragmatic factors.

‘Yesterday what did Okelo buy?’

1. 4. 7 Numerals

The basic cardinal numbers are the followings:

(1) 1	acél(L)	6	kaɲaré
2	aré	7	kaɲaré
3	adéek	8	kaɲaúní(L)
4	ɔɲwón	9	kaɲaɲón
5	kaɲ	10	tómón ³⁰

The numbers 1 through 4 have a prefix *a-*, which is deleted before the stem vowel *ɔ* of the number 4 in vowel sandhi. The prefix seems to be the original attributive particle, because the numerals as modifiers are usually preceded by nouns. Even when they are pronounced in citation, the numerals are accompanied by the prefix.

Number 11 through 19 are formed by combining the numerals 1 through 9 with *tómón* ‘10’ by *íwi-é* ‘on top of it’.

(2) 11 *tómón íwi-é á!cél(L)*

12 *tómón íwi-é á!ré*

(3) *agúlú !á!cél*

pot one

‘one pot’

(4) *món !á!ré*

women two

‘two women’

Numbers 20, 30, 40, 50, 60, 70, 80 and 90 are formed by modifying the noun *ɔt* with numerals 2 through 9. Numbers 100, 200, etc. are formed by modifying *tól* with numerals 1 through 9.

(5) 20 *ɔt aré*

30 *ɔt adéek*

40 *ɔt ɔɲwón*

50 *ɔt kaɲ*

³⁰ The number ten bears a lexical tonal pattern LLH.

- (6) 100 tól á!cé!l(L)
 200 tól á!ré

1. 4. 8 Word order in nominal phrases

Nouns are followed by modifiers, which are placed in the following order; Nouns, Possessives, Adjectives, Numerals and Demonstratives. Numerals can be replaced with adjectives. Moreover, demonstratives can be placed before adjectives.

- (1) del dóg-á á-!tí acyél
 lip-1SG ATT-big one
 ‘my one big lip’
- (2) del dóg á-!tí acyél-nɪ
 lip ATT-big one-this
 ‘this one big lip’
- (3) del dóg á!cyél a-tí-nɪ
 lip one ATT-big-this
 ‘this one big lip’
- (4) igwogin aré a-dóŋɔ-gi
 dogs two ATT-big pl.-these
 ‘these two big dogs’
- (5) igwogin aré-gi a-dóŋɔ
 dogs two-these ATT-big pl.
 ‘these two big dogs’

Syntax and pragmatics

2 The syntax of simple sentences

2.1 Basic order of the sentence

Kumam is syntactically a fairly rigid language with respect to word order, though it deviates from canonical word order for pragmatic reasons. Kumam uses grammatical relations such as subject and direct object to indicate thematic roles, such as agent and patient. Word order is the primary device for indicating the grammatical relations in simple sentences. Subjects are always followed by verbs. Objects are preceded by verbs in transitive sentences in which they are not topicalized. Kumam has no morphological devices for indicating grammatical relations. Verbs are not marked for grammatical relations, and nouns are not inflected for case. Moreover, there are no particles that indicate the grammatical relations such as subject or object.

Prepositional phrases are used to indicate thematic roles other than agent and patient, such as benefactive, locative, instrumental, accompaniment, and reason.

Word order is rigid in preverbal position. Subjects are always followed by verbs, and direct objects are invariably located in postverbal position, when they are not topicalized in sentences. Prepositional phrases such as benefactive, locative, instrumental, accompaniment, and reason are located in postverbal position when they are not topicalized.

As discussed in Chapter 4, however, the order of constituents in postverbal position is not rigid and determined by syntactic and pragmatic factors. Benefactive NPs are located in the direct postverbal position in pragmatically unmarked sentences, when they are not topicalized. Direct objects are preceded by a benefactive NP in pragmatically unmarked sentences. Subjects, predicates, benefactive NPs and direct objects constitute the core elements in sentences. Other constituents such as locative, instrumental, accompaniment, and reason NPs constitute the peripheral elements in sentences. However, benefactive NPs sometimes behave as a core element or a peripheral element in sentences¹.

The topic slot is located in sentence initial position. To the extent that syntactic word order permits, the order of constituents in Kumam sentences is such that topics are first and comments are last with the exception of 'idiomatic' expressions². These 'idiomatic' expressions do not follow the pragmatic convention of the order of constituents. The word order of elements in pragmatically unmarked sentences is as follows.

(Topic) (Subject) Verb (Benefactive NP) (Direct object) (Locative NP, Instrumental NP, Accompaniment NP, Reason NP, etc.)(Adverbials)

¹Cf. Van Valin & Lapolla (1997) discuss core and peripheral. It is not easy to explain the dualism of benefactive NPs in Kumam.

²The word order of 'idiomatic' expressions is discussed in Section 4.1.2.

Constituents that are located in postverbal position, such as direct objects, benefactive, locative, instrumental, accompaniment, reason NPs, or adverbials, are divided into two groups: those that may precede direct objects and those that may not precede direct objects. Benefactive NPs belong to the former group. These NPs constitute a single group together with direct objects. Other constituents such as locative, instrumental, accompaniment, reason NPs, and adverbials belong to the latter group. They never precede direct objects when they are not topicalized, with the exception of accompaniment NPs.

Subjects, verbs, direct objects, and benefactive NPs constitute the core in sentences. The constituents that may not precede direct objects such as benefactive, locative, instrumental, accompaniment, reason NPs, and adverbials constitute the periphery in sentences. Constituents of the former type are termed core elements and those of the latter type are peripheral elements. Core elements can intervene between other core elements, while peripheral elements cannot intervene between core elements.

(1) a=tédó !né-á!tín !cám. (Benefactive)

1SG=IMPERF:cook for child food

‘I cook food for the child.’

(2) a=tédó !cám né-á!tín. (Benefactive)

1SG=IMPERF:cook food for-child

‘I cook food for the child.’

(3) a=cátó !né-í!cúó itabó. (Benefactive)

1SG=IMPERF:sell for-man book

‘I sold the book for the man.’

(4) a=wíló itabó pí-!á!tín. (Reason)

1SG=IMPERF:buy book because of-child

‘I buy the book for the child.’

(5) *a=wíló pí-á!tín itabó. (Reason)

1SG=IMPERF:buy because of-child book

‘I buy the book for the child.’

A prepositional phrase consisting of the preposition *né-* ‘for’ plays the thematic role of benefactive in sentences. A prepositional phrase consisting of the preposition *pí(H)-* ‘because of’ plays the thematic role of reason in sentences. The benefactive prepositional phrase *né-á!tín* ‘for the child’ may precede the direct object *cam* ‘food’ or *itabó* ‘book’ in (1) and (3), while the reason prepositional phrase *pí-á!tín* ‘because of the child’ may not precede the direct object *itabó* ‘book’ in (5). Benefactive NPs may intervene between core elements,

while reason NPs may not. Benefactive NPs constitute core elements along with subjects, verbs, and direct objects, while reason NPs constitute peripheral elements in sentences.

The order of benefactive NPs and direct objects is not invariable. Direct objects are preceded by benefactive NPs in pragmatically unmarked sentences in (1) and (3). Sentence (2) shows deviation from the canonical word order on syntactic grounds that direct objects are preceded by benefactive NPs in pragmatically unmarked sentences³. The order of benefactive NPs and direct objects is determined by syntactic and pragmatic factors as discussed in Chapter 4.

A topic slot is located in sentence initial position. The topic slot may be filled by a nominal phrase fulfilling any grammatical role or any thematic role in the sentences. In addition to arguments, NPs in prepositional phrases may also be topicalized. Moreover, any NPs may be topicalized from subordinate clauses. Adverbials may also be topicalized. Topicalization includes movement of the NPs from their original place to sentence initial position. When topicalization is not applied to sentences, subjects are preferably selected as topics⁴.

Subjects also can be topicalized. When a topic slot is occupied by a subject, a subject slot cannot be occupied by any noun. A topicalized subject is phonologically distinguished from a subject that is not topicalized. There is a phonological boundary after a topicalized subject, which obstructs the application of vowel and tonal sandhi rules, as shown in (6).

(6) $\acute{a}\eta\acute{o}$, a=cámó dek . [$\acute{a}\eta\acute{o}\#\text{acámódek}$] (Topicalization)
 I, 1SG=IMPERF:eat stew
 ‘I eat stew.’

(7) $\acute{a}\eta\acute{o}$ a=cámó dek . [$\acute{a}\eta\acute{a}!\text{cámódek}$] (Non topicalization)
 I 1SG=IMPERF:eat stew
 ‘I eat stew.’

The topic slot is occupied by the subject $\acute{a}\eta\acute{o}$ (H) ‘1SG’ in (6). The 1st person singular subject clitic $a=$ ‘1SG’ is not coalesced with the preceding vowel, even though it is preceded by the independent 1st person singular pronoun ending with a vowel. It is phonetically pronounced with a low tone without any tonal change.

The independent 1st person singular pronoun $\acute{a}\eta\acute{o}$ (H) ‘1SG’ occupies the subject slot in (7). There is no phonological boundary between the subject and the following verb. The final

³Sentence (1) has different pragmatic meaning from sentence (2). The pragmatic function is discussed in Section 4.2.

⁴ Topicalization is discussed in Section 4.1. The choice of topics is discussed in Section 4.1.4.2.

vowel of the pronoun is coalesced with the initial vowel of the following subject clitic *a=* ‘1SG’ into a simple low vowel, which is phonetically pronounced with a high tone. The original low toneme of the subject clitic *a=* ‘1SG’ is preserved as a floating low toneme that causes the following high toneme to be pronounced as a downstepped high tone.

When direct objects that refer to humans are pronominalized, object suffixes must be attached to verbs. For example, in (8), the 3rd person singular object refers to a human and is pronominalized; thus, the object suffix *-é* ‘3SG’ is affixed to the verb *neko* ‘to kill’.

- (8) *icóo ɔ=nek-é.*⁵
 man 3S/P=PERF:kill-3SG
 ‘The man killed him/her.’

When non-human direct objects are pronominalized, the object suffix *-é* is attached to verbs in (9). However, if direct objects are presupposed by context, transitive verbs alone suffice. The object suffix *-é* ‘3SG’ is not attached to the verb *caamɔ* ‘to eat’ in (10). The non-human direct object is presupposed because it is mentioned in the preceding sentence.

- (9) *a=cá!m-é.*
 1SG=IMPERF:eat-3SG
 ‘I eat it.’
- (10) *dákó-!ná ɔ=tedo dek.*
 woman-1SG 3S/P=PERF:cook stew
a=cá!mó.
 1SG=PERF:eat
 ‘My wife cooked stew. I ate it.’

Benefactive NPs immediately follow verbs in pragmatically unmarked sentences according to canonical word order, even though they consist of prepositional phrases. Kumam verbs have no benefactive stem in the verbal morphology. Kumam verbs appear to formulate benefactive stems only in the subjunctive, but these stems actually consist of a verb stem and the benefactive preposition *né-* ‘for’. The alveolar nasal consonant in the preposition is assimilated to the final consonant of the preceding verb stem, when the verb stem ends in a consonant. Moreover, the vowel in the verb stem is lengthened to compensate for the loss of the final consonant of the stem in (11).

⁵Kuman does not distinguish grammatical gender.

Kumam transitive verbs always end with a consonant in the subjunctive mood except for verbs whose stems end in a vowel, while they always end with the transitive formative suffix *-ɔ* in the indicative mood. The alveolar nasal consonant of the benefactive preposition *né-* ‘for’ is assimilated with the preceding consonant only in the subjunctive mood because it directly follows a consonant. The consonantal assimilation is blocked by a vowel in the indicative mood where the transitive formative suffix *-ɔ* is attached to verb stems.

(11) *myero a=wɪl:é ítabó. (wɪlé←wɪl + né:é)*

must 1SG=buy:SUB:for:3SG book

‘I must buy the book for him.’

(12) *myero a=wɪl n:é ítabó.*

must 1SG=buy:SUB for:3SG book

‘I must buy the book for him.’

(13) *myero a=wɪl né-ó!kélo ítabó.*

must 1SG=buy:SUB for-Okelo book

‘I must buy the book for Okelo.’

(14) *myero a=wɪl ítabó.*

must 1SG=buy:SUB book

‘I must buy the book.’

Prepositional phrases consisting of the preposition *né-* ‘for’ are typically used to indicate the thematic role of benefactive. There are a few verbs that can take a human direct object that is interpreted as a benefactive NP, as in (15). Though the NP *awóbí* ‘boy’ is a direct object, it has a benefactive meaning. The human direct object is interpreted as a benefactive NP semantically, but it functions syntactically an argument of the verb, that is, as a direct object. Therefore, the verb cannot be followed by another direct object, whether it is human or non-human, as in (16). Sentence (16) is ungrammatical because the transitive verb *tedo* ‘to cook’ has three arguments; a subject, an indirect object, and a direct object. Transitive verbs take two arguments in sentences. Kumam verbs strictly follow the valence restriction.

(15) *dákó ɔ=tedo awóbí.*

woman 3S/P=PERF:cook boy

‘The woman cooked for the boy.’

(16) **dákó ɔ=tedo awóbí sám.*

woman 3S/P=PERF:cook boy food

‘The woman cooked food for the boy.’

When these verbs take a pronominalized direct object, the pronominalized direct object is also semantically interpreted as a benefactive NP. The 1st person singular object suffix *-á* is attached to the verb *teedo* ‘to cook’ in (17). The 1st person singular object has a benefactive meaning. Even when an object suffix is attached to the verbs, it cannot be followed by another direct object whether it is human or non-human, as in (18). Since these verbs are not ditransitive, they cannot take more than two arguments.

If these verbs take a non-human NP as a direct object, the NP is not interpreted as a benefactive NP. Therefore, prepositional phrases must be used to indicate benefactive meanings, as in (19). These particular verbs such as *teedo* ‘to cook’, *yaabɔ* ‘to open (door)’ and *cyego* ‘to close (door)’ with human direct objects that are interpreted as benefactive NPs semantically express actions that agents perform for the benefit of other patients.

- (17) *dákó* *!té!d-á*.
 woman 3SG:IMPERF:cook-1SG
 ‘The woman cooks for me.’
- (18) **dákó* *!té!d-á* *cám*.
 woman 3SG:IMPERF:cook-1SG food
 ‘The woman cooks food for me.’
- (19) *dákó* *!tédó* *!n:á* *cám*.
 woman 3SG:IMPERF:cook for:1SG food
 ‘The woman cooks food for me.’
- (20) *dákó* *ɔ=yab-á*.
 woman 3SG=PERF:open-1SG
 ‘The woman opened (the door) for me.’
- (21) **dákó* *ɔ=yab-á* *é!kéko*.
 woman 3SG=PERF:open-1SG door
 ‘The woman opened the door for me.’
- (22) *dákó* *ɔ=yabɔ* *n:á* *é!kéko*.
 woman 3S/P=PERF:open for:1SG door
 ‘The woman opened the door for me.’

The sentences in (16), (18) and (21) do not follow the valence constraint, while the sentences in (19) and (22) do follow this constraint because the benefactive prepositional phrases do not constitute an argument in these sentences.

The thematic role of benefactive is usually expressed by a prepositional phrase consisting of the preposition *né-* ‘for’. If an object suffix is attached to verbs as a pronominalized object, it

is not interpreted as a benefactive NP but rather as a direct object except for the case of the particular verbs discussed above. For example, the 3rd person singular object suffix -é is interpreted to be a direct object in (24).

(23) dákó !nékó !n:á gwéno.
 woman 3SG:IMPERF:kill for:1SG chicken
 ‘The woman kills the chicken for me.’

(24) dákó !né!k-á.
 woman 3SG:IMPERF:kill-1SG
 ‘The woman kills me.’

Though object suffixes are attached to verb stems, they are not inflectional morphemes in the verbal morphology, but are weak forms of pronouns. If strong forms of pronouns, that is, independent pronouns, follow verbs as direct objects, then object suffixes cannot be attached to the verbs, as in (27). Object suffixes are in complementary distribution with independent pronouns. Since object suffixes do not coincide with independent pronouns, they are regarded as weak forms of pronouns.

(25) a=né!n-é.
 1SG=IMPERF:see-3SG
 ‘I see him.’

(26) a=nénó !én.
 1SG=IMPERF:see 3SG
 ‘I see him.’

(27) *a=né!n-é én.
 1SG=IMPERF:see-3SG 3SG
 ‘I see him.’

Kumam verbs strictly follow the valence constraint. Transitive verbs always require two arguments. The sentence in (28) has two arguments; a subject and a direct object. The sentence in (29) contains a transitive verb and is ungrammatical if it is uttered independently. The reason for this is that it has only one argument.

(28) a=nénó itabó.
 1SG=IMPERF:see book
 ‘I see the book.’

(29) *a=nénó.

1SG=IMPERF:see

‘I see.’

When direct objects are presupposed by context, however, they are not expressed with overt forms. For example, the direct object is presupposed in the second sentence in (30), because it is mentioned by the first sentence. If the second sentence contains the direct object *itabó* ‘book’, which refers to the same referent as the direct object *itabó* ‘book’ in the first sentence, then the sentence in (31) is not grammatical. The sentences in (32) are grammatical under the supposition that the direct object *itabó* ‘book’ in the second sentence refers to a different referent than that of the direct object *itabó* ‘book’ in the first sentence.

(30) okélo ɔ=wɪlo itabó.

Okelo 3S/P=PERF:buy book

a=né!nó

1SG=PERF:see

‘Okelo bought the book. I saw it.’

(31)*okélo ɔ=wɪlo itabó.

Okelo 3S/P=PERF:buy book_i

a=né!nó itabó

1SG=PERF:see book_i

‘Okelo bought the book_i. I saw the book_i.’

(32) okélo ɔ=wɪlo itabó.

Okelo 3S/P=PERF:buy book_i

a=né!nó itabó

1SG=PERF:see book_j

‘Okelo bought the book_i. I saw the book_j.’

Although independent pronouns do not coincide with object suffixes as discussed above, they can coincide with subject clitics. They may precede verbs to which subject clitics are attached. The sentence initial position is a slot for topics in the left periphery. Kumam has slots for topics or subjects in the left periphery.

(33) áŋó a=cámó dek.

1SG 1SG=IMPERF:eat stew

‘I eat stew.’

- (34) áŋó, a=cámó dɛk.
 1SG 1SG=IMPERF:eat stew
 ‘I, I eat stew.’

Non-human direct objects may be pronominalized. Kumam strictly follows the valence constraint. Transitive verbs always require direct objects as well as subjects whether they are independent NPs or pronominalized NPs, as in (35) and (36). The indirect usage of transitive verbs is not allowed, as in (37).

- (35) a=wíló rtabó.
 1SG=IMPERF:buy book
 ‘I buy the book.’

- (36) a=wí!l-é.
 1SG=IMPERF:buy-3SG
 ‘I buy it.’

- (37) *a=wíló.
 1SG=IMPERF:buy
 ‘I buy.’

Dative NPs may occur either as indirect objects or as objects of the preposition *bút*-‘to’ in sentences with ditransitive verbs. Otherwise, prepositional phrases with the preposition *bút*-‘to’ are used to indicate the thematic role of dative in sentences. The Kumam verb *minɔ* ‘to give’ is one of the ditransitive verbs that take three arguments in sentences. When the verb *minɔ* ‘to give’ takes an indirect object, the indirect object always precedes the direct object, as in (38). When the verb *minɔ* ‘to give’ is directly followed by a direct object, the prepositional phrase with the preposition *bút*- ‘to’ is used to indicate the dative thematic role, and it is preceded by the direct object, as in (39).

- (38) ɪcɔɔ ɔ=mɪɔ dákó rtabó.
 man 3S/P=PERF:give woman book
 ‘The man gave the woman the book.’

- (39) ɪcɔɔ ɔ=mɪɔ itabɔ bút-dákó.
 man 3S/P=PERF:give book to-woman
 ‘The man gave the book to the woman.’

The sentence in (39) is not semantically equivalent to the sentence in (38). The sentence in

(39) has a different meaning from the sentence in (38). The sentence in (38) expresses that the indirect object *dákó* ‘woman’ receives and possesses the direct object *ítabó* ‘book’, while the sentence in (39) expresses that the indirect object *dákó* ‘woman’ receives the direct object *ítabó* ‘book’ but that it passes through the dative NP *dákó* ‘woman’ to another person.

When a human indirect object is pronominalized, it may be attached to the verb *miɔ* ‘to give’ as an object suffix, as in (40). Otherwise, a prepositional phrase that contains the preposition *bút-* ‘to’ with a pronominal suffix is used to indicate the dative thematic role, as in (41). The verb is always followed by a direct object. If the verb is not followed by a direct object, the sentence in (42) is not well-formed syntactically. Kumam speakers feel that sentences such as (42) are hanging or unfinished. If a direct object is not expressed by a segmental constituent, the verb *miɔ* ‘to give’ is followed by a prepositional phrase with the preposition *bút-* ‘to’, as in (43).

(40) *ɪcɔ́ɔ ɔ=mi-á ítabó.*
 man 3S/P=PERF:give-1SG book
 ‘The man gave me the book.’

(41) *ɪcɔ́ɔ ɔ=miɔ dyaŋ bút-á.*
 man 3S/P=PERF:give cow to-1SG
 ‘The man gave the cow to me.’

(42) *?ɪcɔ́ɔ ɔ=mi-á.*
 man 3S/P=PERF:give-1SG
 ‘?The man gave me.’

(43) *ɪcɔ́ɔ ɔ=miɔ bút-á.*
 man 3S/P=PERF:give to-1SG
 ‘The man gave it to me.’

Since a direct object is not expressed by a segmental morpheme but by zero anaphor, it must be presupposed in context. The direct object refers to a referent that is mentioned in the preceding sentence or stored in the back grounded knowledge of the speaker and hearer. The direct object belongs to old information. As discussed in Chapter 4, old information is followed by new information. The sentence in (45) is appropriate pragmatically because old information is followed by new information. The direct object that conveys old information is followed by the prepositional phrase with the preposition *bút-* ‘to’.

The sentence in (44) is not appropriate pragmatically, because the direct object that conveys old information occupies the unmarked focus position which is only occupied by items

conveying new information⁶.

(44) #icóɔ ɔ=mi-á φ.
man 3S/P=PERF:give-1SG φ
'The man gave me.'

(45) icóɔ ɔ=miɔ φ bút-á.
man 3S/P=PERF:give φ to-1SG
'The man gave it to me.'

When a direct object is pronominalized, the object suffix *-é* '3SG' is attached to the verb *miinɔ* 'to give', which is followed by a human dative NP consisting of the preposition *bút-* 'to'. One possible interpretation of the sentence in (46) is that the human dative NP receives and possesses the direct object, although the sentence also expresses intrinsically that the human dative NP temporarily receives the direct object and that the direct object passes through the dative NP to another person.

(46) iúɔ ɔ=mi-é búp-dákó.
man 3S/P=PERF:give-3SG to-woman
'The man gave it to the woman.'

The sentence in (46) is appropriate pragmatically because it follows the principle of information structure whereby old information is first and new information is last. The direct object conveys old information, because it is expressed by a pronominal suffix. Non-human direct objects are expressed by a pronominal element or zero anaphor when they are presupposed.

If both a benefactive NP and a dative NP occur in the same sentence, a prepositional phrase with the preposition *bút-* 'to' is used to indicate the dative thematic role and a prepositional phrase with the preposition *né-* 'for' is used to indicate the benefactive thematic role. The dative NP is necessarily preceded by the benefactive NP in pragmatically unmarked sentences⁷.

(47) icóɔ ɔ=miɔ itabɔ né-á!tín !búp-dákó.
man 3S/P=PERF:give book for-child to woman
'The man gave the book to the woman for the child.'

⁶ The unmarked focus position is discussed in Section 4.2.2.2.

⁷ The order of constituents in postverbal position is discussed in Section 4.2.

The direct object cannot be preceded by the dative NP. The peripheral dative prepositional phrase may not intervene between core elements.

- (48) * $\text{ic}\acute{\text{o}}\text{o}$ $\text{o}=\text{m}\text{i}\text{o}$ $\text{n}\acute{\text{e}}\text{-}\acute{\text{a}}\text{!t}\acute{\text{i}}\text{n}$ $\text{!b}\acute{\text{u}}\text{t}\text{-d}\acute{\text{a}}\text{k}\acute{\text{o}}$ $\text{i}\text{t}\text{a}\text{b}\acute{\text{o}}$.
 man 3S/P=PERF:give for-child to woman book
 ‘The man gave the book to the woman for the child.’

If both an indirect object and a benefactive NP occur in a same sentence, the sentence cannot take a bare NP as an indirect object. Benefactive NPs do not coincide with indirect objects. Prepositional phrases consisting of the preposition $\text{p}\text{i}(\text{H})$ -‘because of’ are used to express benefactive meanings.

- (49) * $\text{ic}\acute{\text{o}}\text{o}$ $\text{o}=\text{m}\text{i}\text{o}$ $\text{d}\acute{\text{a}}\text{k}\acute{\text{o}}$ $\text{i}\text{t}\text{a}\text{b}\text{v}$ $\text{n}\acute{\text{e}}\text{-}\acute{\text{a}}\text{!t}\acute{\text{i}}\text{n}$.
 man 3S/P=PERF:give woman book for-child
 ‘The man gave the book to the woman for the child.’

- (50) $\text{ic}\acute{\text{o}}\text{o}$ $\text{o}=\text{m}\text{i}\text{o}$ $\text{d}\acute{\text{a}}\text{k}\acute{\text{o}}$ $\text{i}\text{t}\text{a}\text{b}\text{v}$ $\text{p}\acute{\text{i}}\text{-}\acute{\text{a}}\text{!t}\acute{\text{i}}\text{n}$.
 man 3S/P=PERF:give woman book for-child
 ‘The man gave the book to the woman for the child.’

The sentence in (49) is not grammatical because the indirect object $\text{d}\acute{\text{a}}\text{k}\acute{\text{o}}$ ‘woman’ is followed by the benefactive NP $\text{at}\acute{\text{i}}\text{n}$ ‘child’. The sentence in (49) is only appropriate under the supposition that the sequence of the two nouns, $\text{d}\acute{\text{a}}\text{k}\acute{\text{o}}$ ‘woman’ and $\text{i}\text{t}\text{a}\text{b}\acute{\text{o}}$ ‘book’ is interpreted as a compound direct object in this sentence. However, the compound $\text{d}\text{a}\text{k}\text{o}$ $\text{i}\text{t}\text{a}\text{b}\acute{\text{o}}$ ‘woman of book’ is strange semantically.

Prepositional phrases consisting of the preposition $\text{n}\acute{\text{e}}$ - ‘for’ are invariably used to indicate the benefactive thematic role, even though benefactive NPs are pronominalized, as in (52) and (53).

- (51) $\text{ic}\acute{\text{o}}\text{o}$ $\text{o}=\text{m}\text{i}\text{o}$ $\text{n}\acute{\text{e}}\text{-}\acute{\text{a}}\text{!t}\acute{\text{i}}\text{n}$ $\text{i}\text{t}\text{a}\text{b}\text{v}$ $\text{b}\acute{\text{u}}\text{t}\text{-d}\acute{\text{a}}\text{k}\acute{\text{o}}$.
 man 3S/P=PERF:give for-child book to-woman
 ‘The man gave the book to the woman for the child.’

- (52) $\text{ic}\acute{\text{o}}\text{o}$ $\text{o}=\text{m}\text{i}\text{o}$ $\text{i}\text{t}\text{a}\text{b}\text{v}$ $\text{n}:\acute{\text{e}}$ $\text{b}\acute{\text{u}}\text{t}\text{-d}\acute{\text{a}}\text{k}\acute{\text{o}}$.
 man 3S/P=PERF:give book for:3SG to-woman
 ‘The man gave the book to the woman for her/him.’

- (53) $\text{ic}\acute{\text{o}}\text{o}$ $\text{o}=\text{m}\text{i}\text{o}$ $\text{i}\text{t}\text{a}\text{b}\text{v}$ $\text{n}:\acute{\text{e}}$ $\text{b}\acute{\text{u}}\text{t}\text{-}\acute{\text{e}}$.
 man 3S/P=PERF:give book for:3SG to-3SG

‘The man gave the book to her/him for her/him.’

In summary, Kumam sentences consist of a core and a periphery. Only benefactive prepositional phrases may precede direct objects. Other prepositional phrases may not intervene within core elements in sentences. Subjects, verbs, benefactive NPs, and direct objects constitute the core and other constituents constitute the periphery in sentences. Moreover, ditransitive verbs take bare nouns as indirect objects in the core of sentences.

The negative particle *líká* ‘NEG’ is normally placed in direct preverbal position or before predicates. If the subject of a sentence is an independent noun or pronoun, the negative particle is placed between the subject and the verb, as in (56). The negative particle is placed before an adjective or a noun in predicative adjective or predicative noun constructions, as in (57) and (58).

(54) líká á=!cámó ðek.

NEG 1SG=IMPERF:eat stew

‘I do not eat stew.’

(55) líká á=!yá!ró beedo emuron.

NEG 1SG=PERF:like become:INF doctor

‘I will not be a doctor.’

(56) áŋó !líká á=!cá!mó ðek.

1SG NEG 1SG=PERF:eat stew

‘I did not eat stew.’

(57) áŋó !líká émuron.

1SG NEG doctor

‘I am not the doctor.’

(58) ɔʊdɔ áŋó !líká émuron.

PAST 1SG NEG doctor

‘I was not the doctor.’

2.2 Verbal complex

2.2.1 Introduction

The number of arguments in sentences determines the form of verbal stems in Kumam. If sentences consist of one argument, the verbs take an intransitive stem. If sentences consist of more than two arguments, the verbs take a transitive stem. Many Kumam verbs make pairs of intransitive and transitive stems.

Subjects and objects constitute arguments in sentences. Transitive verbs take two arguments;

subjects and direct objects. Kumam has a few ditransitive verbs. For ditransitive verbs, indirect objects also constitute arguments in sentences. Other elements are always objects of prepositions except for adverbials. The prepositional phrases and adverbials do not constitute arguments. They do not take part in valence of verbs. They do not affect the form of verbs.

Kumam verbs are classified according to their morpho-syntactic features. Kumam verbs are divided into intransitive and transitive verbs according to the traditional cross-linguistic definition. Intransitive verbs allow only one argument, as in (1), while transitive verbs require two arguments with a few exceptions, as in (2). Two arguments suffice for transitive verbs, though Kumam has a few ditransitive verbs that allow more than two arguments.

There is clear distinction between intransitive and transitive verbs in Kumam. Kumam does not allow transitive verbs to behave as intransitive without a morphological operation. In other words, transitive verbs do not have an ‘intransitive’ usage. Kumam transitive verbs have only one type of valency, provided they are not morphologically extended. Transitive sentences accompanied by only one argument are ungrammatical, as in (3).

(1) i=ótó i-sukú!lú. (Intransitive)

2SG=IMPERF:go to-school

‘You go to the school.’

(2) a=cá!mó dək. (Transitive)

1SG=PERF:eat stew

‘I ate the stew.’

(3) *a=cá!mó. (Transitive)

1SG=PERF:eat

‘I ate.’

When an object is defocalized, one argument suffices for some transitive verbs. For example, the sentence in (4) brings the action into focus. The speaker does not draw the hearer’s attention to what the subject eats. The referent to which the direct object refers is defocalized in the second clause in (4).

(4) ε=bí!nó (dí) ε=kó caamɔ. (Defocalization)

3SG=PERF:come (and) 3SG=PERF:do eat:INF

‘He came and then he ate.’

When a non-human direct object is presupposed by context, transitive verbs do not require two arguments articulately in sentences. The presupposed direct object is not articulated in

the second sentence in (5). When direct objects are not articulated according to pragmatic demand, transitive verbs follow the valence restriction. Even when one direct object is presupposed by context, if transitive verbs take another direct object, transitive sentences such as (6) are not grammatical. Sentences such as (7) are grammatical under the supposition that the direct object in the second sentence indicates a different referent from the direct object in the first sentence. The examples in (6) and (7) provide corroborating evidence that transitive verbs follow the valence restriction even when their direct objects are not articulated as a result of pragmatic demand. Since the second sentence in (6) has a presupposed direct object that is not articulated, the transitive verb cannot take another direct object according to the valence restriction.

(5) *dákó-!ná* *ó=tedo* *dək.*
 wife-1SG 3S/P=PERF:cook stew
a=cá!mó.
 1SG=PERF:eat
 ‘My wife cooked the stew. I ate it.’

(6) *dákó-ná* *ó=tedo* *dək.*
 wife-1SG 3S/P=PERF:cook stew_i
 **a=cá!mó* *dək.*
 1SG=PERF:eat stew_i
 ‘My wife_i cooked the stew_i. I ate it.’

(7) *dákó-ná* *ó=tedo* *dək.*
 wife-1SG 3S/P=PERF:cook stew_i
a=cá!mó *dək.*
 1SG=PERF stew_j
 ‘My wife cooked the stew_i. I ate the stew_j.’

Infinitive forms of transitive verbs sometimes may not be accompanied by an object, if they function as complements, where objects are defocalized. For example, the infinitive of the transitive verb *caamɔ* ‘to eat’ constitutes a complement in (8). Moreover, participle forms are usually used in intransitive sentences, as in (9). Participle forms may not be followed by an object, as in (11), while infinitive forms of transitive verbs may take a direct object, as in (10).

(8) *a=tyé* *caamɔ.*
 1SG=IMPERF:be eat:INF

‘I am eating.’

- (9) a=tyé cam.
 1SG=IMPERF:be eat:PAR

‘I am eating.’

- (10) a=tyé caamɔ dek.
 1SG=IMPERF:be eat:INF stew

‘I am eating stew.’

- (11) *a=tyé cam dek.
 1SG=IMPERF:be eat:PAR stew

‘I am eating stew.’

Kumam transitive verbs never function as intransitive ones like English transitive verbs. Instead, some transitive verbs have a particular intransitive verb as their counterpart. The transitive verb *yεεηɔ* ‘to satisfy’ is paired with the intransitive verb *yεη* ‘to be satisfied’ in (12) and (13). There is a morphological connection between transitive verbs and their paired intransitive verbs.

- (12) *cám* *ó=yεη-á.* (Transitive)
 food 3S/P=PERF:satisfy-1SG
 ‘The food satisfied me.’

- (13) a=*yéη* *kede-cám.* (Intransitive)
 1SG=PERF:be satisfied with-food
 ‘I am satisfied with the food.’

Many transitive verbs have middle forms that are productively derived from transitive stems via morpho-phonological processes. The middle forms are derived by attaching the middle suffix *-ééré(L)* to the transitive stems. The transitive formative suffix *-ɔ* is deleted before the middle suffix according to vowel sandhi (e.g. *nεn-ɔ* + *ééré(L)* → *nεn-ééré(L)*, the infinitive: *nεεnɔ* ‘to see’). When verbal stems end in a vowel, the mid front vowel /ε/ of the middle suffix is assimilated to the preceding vowel after the transitive formative suffix *-ɔ* is deleted (e.g. *dɪ-ɔ* + *ééré(L)* → **dɪééré* → *dɪ-íré(L)*, the infinitive: *dɪmɔ* ‘to press down’)⁸. Though vowels are deleted according to vowel sandhi rules, the tonemes associated with the deleted vowels are preserved during tonal processes.

Middle verbs allow only one argument. As for valency, middle verbs behave syntactically in

⁸The transitive formative suffix *-ɔ* is not separated from stems if it is not necessary.

the same manner as intransitive verbs. Some middle verbs are in complementary distribution with intransitive verbs.

- (14) atín ɔ=nɛn-éré. (Middle)
 child 3S/P=PERF:see-MID
 ‘The child was seen (by someone).’

Not all transitive verbs have an intransitive counterpart or a productively derived middle form as their counterpart. Some verbs only have a transitive stem, as in (15). If the transitive verb *nlɔ* ‘to itch’ had an intransitive counterpart, it would be **il* or **il*, as shown in (16).

- (15) del-á ɔ=ɪ!l-á. (Transitive)
 skin-1SG 3S/P:PERF:itch-1SG
 ‘My skin itches.’
- (16) *del-á ɔ=ɪl/ɔ=il. (Intransitive)
 skin-1SG 3S/P=PERF:itch
 ‘My skin itches.’

A few middle verbs do not have transitive counterparts from which they would be derived. These verbs are irregular in the sense that all middle forms are morphologically derived from transitive stems. If the middle verb *nekéré* ‘to envy’ had a transitive counterpart, it would be **neeko* ‘to make someone to envy’.

- (17) a=nék-é!ré ked:é. (Middle)
 1SG=envy-MID with:3SG
 ‘I envy him/her.’

Some intransitive verbs have neither a transitive counterpart nor a middle form. Since middle forms are morphologically derived from transitive stems, if an intransitive form has no transitive counterpart, then it also has no middle form as its pair.

- (18) i=ótó i-sukú!lú. (Intransitive)
 2SG=IMPERF:go to-school
 ‘You go to the school.’

Kumam verbs are classified into fourteen according to their morpho-syntactic features. First,

they are divided according to the following criteria: (1) they are intransitive or transitive, (2) they have a middle form or not.

If verbs have no middle form, they are further classified into three groups: (1) intransitive verbs that do not have a transitive counterpart, (2) transitive verbs that do not have an intransitive counterpart and (3) transitive verbs that make a pair with an intransitive counterpart. These three groups are called Intransitive verbs (Intr verbs), Transitive verbs (Tr verbs), and Intransitive/Transitive verbs (Intr/Tr verbs), respectively.

A few verbs have only a middle form. These verbs are called Middle verbs (Mid verbs).

Intr verbs appear only in intransitive sentences, and they have neither transitive forms nor middle forms as their counterparts, as in (19). Tr verbs appear only in transitive sentences, and they have neither intransitive forms nor middle forms as their pairs, as in (20). Intr/Tr verbs have transitive forms and paired intransitive forms. Intransitive forms appear in intransitive sentences and paired transitive forms appear in transitive sentences, as shown in (21) and (22). However, they have no middle forms that are productively derived from transitive forms, as in (23).

(19) i=ótó i-sukú!lú. (Intr)

2SG=IMPERF:go to-school

‘You go to the school.’

(20) del-á ó=il-á. (Tr)

skin-1SG 3S/P=PERF:itch-1SG

‘My skin itches.’

(21) a=kók. (Intr/Tr)

1SG=IMPERF:cry

‘I cry.’

(22) a=kókó !cák. (Intr/Tr)

1SG=IMPERF:cry for milk

‘I cry for milk.’

(23) *a=kó!k-é!ré. (Middle)⁹

1SG=PERF:cry-MID

‘I cried.’

As discussed above, middle forms are morphologically derived only from transitive forms. Intr verbs usually have no middle form as their counterparts, since they also have no

⁹ If the intransitive/transitive verb *kooko* ‘to cry for’ had a middle form, it would be *kok-éré(L)*.

counterpart transitive forms. Only one intransitive verb, namely *beedo* ‘to live, stay’ has a possible middle form, namely *bed-éré(L)* ‘to be inhabitable’. The verb *beedo* ‘to live, stay’ usually allows only one argument. If it takes more than two arguments, as in (25), the sentence is ungrammatical. However, some speakers reluctantly accept a middle sentence, shown in (26), as grammatical, which contains the middle form *bed-éré(L)* ‘to be inhabitable’. Intransitive sentences such as (27) are grammatical only when the intransitive verbs are followed by proper nouns without any prepositions. Since proper nouns may function as adverbials that play locative thematic roles in sentences, sentences such as (27) follow the valence restriction. Some speakers that accept the middle form *bed-éré(L)* ‘to be inhabitable’ might interpret intransitive sentences such as (27) as transitive. If the verb *beedo* ‘to live, stay’ is interpreted as a transitive verb, the middle form *bed-éré(L)* ‘to be inhabitable’ is considered to be derived from the verb *beedo* ‘to live, stay’ via productive morphological processes.

- (24) a=bé!dó ɪ-ot. (Intransitive)
 1SG=PERF:stay in-house
 ‘I stayed in the house.’
- (25) *a=bé!dó ot. (Transitive)
 1SG=PERF:stay house
 ‘I stayed in the house.’
- (26) /?Kampala bé!d-éré. (Middle)
 Kampala 3SG:IMPERF:live-MID
 ‘Kampala is inhabitable.’
- (27) a=bé!dó Kampala. (Intransitive)
 1SG=PERF:live Kampala
 ‘I lived in Kampala.’

Intr verbs are divided into two subgroups. The arguments required by one subgroup of verbs are regarded as goals or patients. The Intr verbs have no transitive verbs as their counterparts. However, if they had a transitive counterpart, the arguments that function as direct objects in the transitive sentences would be subjects of the corresponding intransitive sentences, similar to the case of English unaccusative verbs. For example, if the intransitive verb *poto* ‘to fall’ had a transitive counterpart, the object of the transitive verb would be the subject of the corresponding intransitive sentence¹⁰.

The arguments required by another subgroup of verbs are sources or agents. If these verbs

¹⁰ The English example is as follows: ‘I fell the tree.’

had transitive counterparts, the arguments that function as subjects in the transitive sentences would be subjects in the corresponding intransitive sentences, similar to the case of English unergative verbs. For example, if the intransitive verb *niino* ‘to sleep’ had a transitive counterpart, the subject of the transitive verb would also be the subject in the corresponding intransitive sentence¹¹. However, I do not divide Intr verbs into two subgroups, because they do not have transitive counterparts, which is a necessary criterion for classifying these verbs.

(28) yat ɔ=poto. (Intr)

tree 3S/P=PERF:fall

‘The tree fell down.’

(29) a=nínó. (Intr)

1SG=IMPERF:sleep

‘I sleep.’

Thus far, we have defined three verb classes in this section; Intr verbs, Tr verbs and Mid verbs. The category of Intr/Tr verbs will be discussed later.

2.2.2 Middle voice

Before we define Intr/Tr verbs, we shall discuss middle voice. Middle forms are morphologically derived from transitive stems. Many transitive verbs have a productively derived middle form. Moreover, middle forms are syntactically divided into two subgroups; Middle 1 (Mid 1) and Middle 2 (Mid 2). Mid 1 and Mid 2 verbs are defined in relation to their corresponding transitive verbs. When the arguments that are direct objects of the transitive verbs are the subjects of the corresponding middle forms, the middle forms are called Mid 1. When the arguments that are subjects of the transitive verbs are also the subjects of the corresponding middle forms, the middle forms are called Mid 2. For example, the direct object *atín* ‘child’ in the transitive sentence in (1) is the subject in the corresponding middle sentences in (2). The subject *welo* ‘visitor(s)’ in the transitive sentence in (3) is also the subject in the corresponding middle sentence in (4).

(1) a=ú!dó atín. (Transitive)

1SG=PERF:find child

‘I found the child.’

¹¹ The English example is as follows: ‘I slept a deep sleep.’

- (2) atín ɔ=ʊd-éré. (Mid 1)
 child 3S/P=PERF:find-MID
 ‘The child was found (by someone).’
- (3) welo ɔ=mot-á. (Transitive)
 visitor 3S/P=PERF:greet-1SG
 ‘The visitors greeted me.’
- (4) welo ɔ=mot-éré. (Mid 2)
 visitor 3S/P=PERF:greet-MID
 ‘The visitors greeted each other.’

2.2.3 Transitive/Middle 1, Transitive/Middle 2 and Transitive/Middle 1/Middle 2 verbs

This section discusses Transitive/Middle 1 verbs, Transitive/Middle 2 verbs, and Transitive/Middle 1/Middle 2 verbs. The transitive verbs that make pairs with Mid 1 forms are called Transitive/Middle 1 verbs (Tr/Mid 1 verbs). The transitive verbs that make pairs with Mid 2 forms are called Transitive/Mid 2 verbs (Tr/Mid 2 verbs). Moreover, the verbs that make pairs with Mid 1 forms in addition to Mid 2 forms are called Transitive/Mid 1/Mid 2 verbs (Tr/Mid 1/Mid 2 verbs). Sentences that contain Mid 1 forms are called Middle 1 sentences, and sentences that contain Mid 2 forms are Middle 2 sentences.

Some transitive verbs make pairs with middle forms in both Middle 1 and Middle 2 sentences. The same middle forms derived from transitive stems may be used in both Middle 1 and Middle 2 sentences. While subjects in Middle 1 sentences will be objects in the corresponding transitive sentences, subjects in Middle 2 sentences will be subjects in the corresponding transitive sentences. For instance, the middle form *wijn-éré(L)* ‘to be heard, understand’ is derived from the transitive verb *wijno* ‘to hear’. The direct object *wer* ‘song’ in the transitive sentence shown in (1) is the subject of the corresponding middle sentence in (2), while the 1st person singular subject in the transitive sentence shown in (1) is also the subject in the middle sentence in (3).

- (1) a=wíjńó wer. (Transitive)
 1SG=IMPERF:hear song
 ‘I hear the song.’
- (2) wer wí!jń-éré. (Mid 1)
 song 3SG:IMPERF:hear-MID
 ‘The song can be heard.’
- (3) a=wíjń-é!ré ked:é. (Mid 2)
 1SG=IMPERF:hear-MID with:3SG

‘I understand her/him (I agree with her/him).’

Kumam has no morphological construction for the passive voice. To compose sentences having passive sense, such as ‘I was born in Kampala’, it is necessary to use transitive sentences with an unspecified agent as the subject, such as the sentence in (4). The subjects in these sentences having passive sense would be direct objects, which are preceded by verbs in Kumam transitive sentences. For example, the 1st person singular direct object *-á* ‘1SG’ in a Kumam transitive sentence would be translated into the subject of the corresponding English passive sentence, as shown in (4).

- (4) ɔ=ɲwal-á Kampala. (Transitive)
3S/P=PERF:give birth-1SG Kampala
‘Someone bore me (I was born) in Kampala.’

As discussed later in Section 4.2, a focus slot is located in a postverbal position. The focus slot is usually occupied by new information that is focalized in the discourse. Direct objects are located in a postverbal position when they are not topicalized. However, direct objects do not necessarily convey new information because they might convey old information. When direct objects convey old information, they are moved from the postverbal position into a preverbal position in order to avoid occupying a focus slot. Middle voice construction is one of the syntactic devices that move direct objects from postverbal to preverbal position.

- (5) okélo ɔ=kwaɔ riɲó .
Okelo 3S/P=PERF:request meat
 dákó-!né ɔ=wɪɔ .
wife-3SG 3S/P=PERF:buy
 riɲo ɔ=cat-éré ɪ-dú!ká .
meat 3S/P=PERF:sell-MID at-shop
‘Okelo requested meat. His wife bought it. The meat was sold at the shop.’

The third sentence in (5) is a middle sentence consisting of the middle form *cat-éré(L)* ‘to be sold’. Since the noun *riɲó* ‘meat’ conveys old information in this context, it is not focalized and avoids occupying the unmarked focus position¹². It occupies a topic slot in the sentence initial position, which is usually occupied by old information. If the noun *riɲó* ‘meat’

¹² The unmarked focus position is discussed in Section 4.2.2.2.

occupies the unmarked focus position as a postverbal direct object, the transitive stem *caato* ‘to sell’ must be used in the transitive sentence with an unspecified agent as its subject. The transitive sentence in (6) is syntactically grammatical, but not pragmatically appropriate if it follows the first and second sentences in (5). It is not pragmatically equivalent to the third sentence in (5). If the sentence in (6) follows the first and second sentence in (5), it is pragmatically appropriate under the supposition that the object *riño* ‘meat’ in (6) refers to a referent other than the one mentioned in the first and second sentence.

(6) #ɔ=catɔ riño í-!dó!ká. (Tr)¹³
 3S/P=PERF:sell meat at-shop
 ‘Someone sold the meat at the shop.’

The above discussion provides a pragmatic explanation for the Mid 1 construction. Middle sentences are used when an argument that would be an object in the corresponding transitive sentences does not occupy a focus slot. The focus slot in the postverbal position is reserved for other constituents in Mid 1 constructions. Arguments that would be objects in the corresponding transitive sentences occupy preverbal positions as subjects in Mid 1 constructions, while in transitive constructions, arguments that would be subjects in the corresponding transitive sentences occupy preverbal positions. A topic slot is located in preverbal position. Constituents that are moved from postverbal to preverbal position in Mid 1 construction are preferably interpreted as topics.

Topic shift does not take place in Mid 2 constructions. Arguments that would be subjects in the corresponding transitive sentences may occupy preverbal positions as subjects in Mid 2 constructions under the condition that the subjects are coreferential or connected psychologically with the objects in the corresponding transitive sentences. Arguments that would be subjects in the corresponding transitive sentences occupy preverbal positions even in Mid 2 sentences. Arguments that would be objects in the corresponding transitive sentences do not occupy preverbal position in Mid 2 constructions, unlike Mid 1 constructions. The common characteristics between Mid 1 and Mid 2 construction are that focus slots in postverbal position are preserved for constituents other than objects in corresponding transitive sentences.

Subjects preferably occupy a topic slot when topicalization is not applied to sentences. Topics usually convey old information. If subjects are coreferential or connected psychologically with objects, then the arguments that occupy focus slots as objects in

¹³ The symbol # means a pragmatically inappropriate sentence.

postverbal position also do not convey new information in corresponding transitive sentences. Instead of objects, predicates are focalized in corresponding transitive sentences. When corresponding transitive sentences have predicates as their focus, their middle counterparts tend to constitute Mid 2 constructions.

It is not predictable what verbs have or do not have a derived middle form. However, verbs that have no middle form tend to express events or actions that are causally accomplished by agents. For example, the Intr/Tr verb *kok/kooko* ‘to cry/to cry for’ has no middle form.¹ The Tr verb *mino* ‘to give’ has neither a middle form nor an intransitive counterpart.

(7) a=kók. (Intr)

1SG=IMPERF:cry

‘I cry.’

a=kó!kó !cám. (Tr)

1SG=PERF:cry for food

‘I cried for food.’

While transitive sentences require two arguments, middle sentences permit only one argument. Since middle forms are productively derived from transitive stems, middle sentences presuppose transitive sentences. According to the definitions of Mid 1 and Mid 2, subjects of Mid 1 are objects, and subjects of Mid 2 are subjects in the corresponding transitive sentences. Moreover, subjects are coreferential or connected psychologically with objects in transitive sentences corresponding to Mid 2.

One type of arguments in transitive sentences is an agent (or sometimes an experiencer) which causes an event or a change of state, and another is a patient or a goal which an event or a change of state affects. The former type functions as a subject and the latter as an object in transitive sentences. Since subjects of Mid 1 are objects in the corresponding transitive sentences, they play the thematic role of patient or goal.

Although an agent is not articulated segmentally in middle sentences, it is predicted that middle sentences presuppose an agent from the fact that they presuppose the transitive counterpart. For example, the middle sentence in (8) is well formed under the condition that it presupposes an agent that is not segmentally articulated.

(8) wer wí!n-éré. (Mid 1)

song 3SG:IMPERF:hear-MID

‘The song can be heard (by someone).’

Subjects of Mid 2 constructions are also subjects in the corresponding transitive sentences. Since middle sentences presuppose transitive counterparts, Mid 2 sentences presuppose an agent and a patient in spite of the fact that they have only one segmentally articulated argument. Consequently, arguments of Mid 2 sentences take the thematic role of agent as well as patient. Mid 2 sentences include reflexive or reciprocal meanings. When Mid 2 sentences are used to express reflexive or reciprocal meanings, the subjects are coreferential with the logical direct objects. Middle 2 sentences presuppose direct objects that are not articulated segmentally.

The subjects in middle sentences such as (9) and (10) are coreferential with the presupposed direct objects. Historically middle forms originated from reflexive forms by adding the 3rd person singular reflexive suffix *-érré(L)*, which is not productive in the modern Kumam language.

(9) a=lwó!k-é!ré. (Mid 2)

1SG=PERF:wash-MID

‘I washed myself (my body).’

(10) welo o=mot-érré. (Mid 2)

guests 3S/P=PERF:greet-MID

‘The guests greeted each other.’

Subjects in middle sentences are objects in the corresponding transitive sentences, or are coreferential or connected psychologically with objects in the corresponding transitive sentences. Without topicalization, subjects are preferably selected as topics in pragmatically unmarked sentences. Because topics usually convey old information, subjects in middle sentences that would be objects in the corresponding transitive sentences must be previously mentioned in context or already be known by the participants of a conversation.

If the events or changes of state that are denoted by middle sentences are accomplished, middle sentences are used in the perfect aspect. The middle sentences express that the events or changes of state affect the subjects because the subjects already exist in hypothetical world. Consequently, the middle sentences express passive notions. If the events or changes of state that are denoted by middle sentences are not accomplished, middle sentences are used in the imperfect aspect. The middle sentences in the perfect aspect express the possibility that the events or changes of state might occur, because the subjects already exist in hypothetical world. The events or changes of state are able to affect the subjects that already exist in hypothetical world. Consequently, the middle sentences in the imperfect aspect express possibilities of events or changes of state.

(11) riŋo ó=wil-éré r-dó!ká. (Mid 1)
 meat 3S/P=PERF:buy-MID at-shop
 ‘The meat was bought at the shop.’

(12) riŋo wí!l-éré r-dó!ká. (Mid 1)
 Meat 3SG:IMPERF:buy-MID at-shop
 ‘The meat can be bought at the shop.’

Noonan (1992) points out the distribution of reflexive sentences (i.e., Mid 2 sentences) and Secondary Argument (SA) sentences (i.e., Mid 1 sentences) in Lango. Noonan (1992) points out, when the Tr has an inanimate DO, the middle will take this argument as Su and have an SA interpretation¹⁴. Kumam differs from Lango as to the distribution of Mid 1 and Mid 2 sentences. Even when the corresponding transitive sentences have an inanimate direct object, some middle sentences have a reflexive interpretation. In other words the Middle 2 sentences can be used even when the corresponding transitive sentences have an inanimate direct object. For example, though the transitive sentence in (13) has an inanimate direct object *cet* ‘feces’, the middle sentence in (14) constitutes a Mid 2 construction.

(13) a=pyéló cet a-ték. (Transitive)
 1SG=IMPERF:defecate feces ATT-hard
 ‘I defecate hard feces.’

(14) a=pyél-é!ré. (Mid 2)
 1SG=IMPERF:defecate-MID
 ‘I defecate.’

It is not easy to predict what verbs take a Mid 1 interpretation, and what verbs take a Mid 2 interpretation; however, there is a pattern. Subjects of Mid 2 sentences perform the thematic role of patients or goals on one hand and agents (or sometimes experiencers) on the other simultaneously, because the subjects are coreferential or connected (physically or psychologically) with objects in corresponding transitive sentences. For example, the 1st person singular subject *a=* ‘1SG’ is coreferential with the logical object in middle sentence in (9). The subject *welo* ‘guests’ is coreferential with the logical object in (10). The 1st person singular subject is physically or psychologically connected with the logical object in the middle sentence in (14). The distribution of Mid 1 and Mid2 sentences is not predicted by a rigid principle. Therefore, the differentiation of Mid 1 and Mid 2 sentences is limited within

¹⁴ Noonan (1992: 133).

the definition, and further explanation is left for future research.

Tr/Mid 1/Mid 2 verbs have a middle form that can be used in both types of middle sentences, Mid 1 and Mid 2. Subjects in the middle sentences may sometimes be objects, and sometimes subjects in the corresponding transitive sentences. For instance, the argument *wer* ‘song’ is the object of the verb *wiino* ‘to hear’ in the transitive sentence shown in (15), while it is the subject of the middle form *win-ere* ‘to be heard’ in the Mid 1 sentence shown in (16). The 1st person singular argument is the subject of the verb *wiino* ‘to hear’ in the transitive sentence in (15), while it is the subject of the middle form *win-ere* ‘to understand’ in the Mid 2 sentence in (17).

(15) a=*wínó* *wer.* (Transitive)

1SG=IMPERF:hear song

‘I hear the song.’

(16) *wer* *wí!n-éré.* (Mid 1)

song 3SG:IMPERF:hear-MID

‘The song can be heard.’

(17) a=*wín-é!ré* *ked:é.* (Mid 2)

1SG=IMPERF:hear-MID with:3SG

‘I can understand him (I agree with him).’

2.2.4 Intransitive 1/Transitive and Intransitive 2/Transitive verbs

Some transitive verbs do not have a middle form and instead have an intransitive form as a counterpart. These verbs are divided into two subgroups; Intransitive 1/Transitive verbs (Intr 1/Tr) and Intransitive 2/Transitive verbs (Intr 2/Tr). Intransitive 1 (Intr 1) and Intransitive 2 (Intr 2) are defined in relation to the corresponding transitive verbs in the same manner that Mid 1 and Mid 2 were defined in the previous section. When arguments that would be direct objects of corresponding transitive stems are subjects of intransitive sentences, these verbs are called Intr 1/Tr verbs.

(1) a=*ɲwéó* *rijó.* (Transitive)

1SG=IMPERF:smell meat

‘I smell the meat.’

(2) *rijo* *ɲwé* *râc.* (Intr 1)

meat 3SG:IMPERF:smell bad

‘The meat smells bad.’

On the other hand, when arguments that would be subjects of corresponding transitive stems are subjects of intransitive sentences, these verbs are called Intr 2/Tr verbs. Intr 1/Tr as well as Intr 2/Tr verbs have no middle form.

(3) a=kókó !cám. (Transitive)

1SG=IMPERF:cry for food

‘I cry for food.’

(4) a=kók. (Intr 2)

1SG=IMPERF:cry

‘I cry.’

It is not predictable what verbs have no middle form. Noonan (1992) points out that stative verbs like *mìttɔ* ‘to want’, *tàmmɔ* ‘to think’ and *tíê* ‘to be present’ have no middle form in Lango¹⁵. Although the Kumam verb *taamɔ* ‘to think’ has only a transitive stem, the Kumam verbs *paarɔ* ‘to think’ and *mutɔ* ‘to want’ have the middle form *par-ere* ‘to be worried’ and *mit-ere* ‘to be needed’ respectively. Noonan (1992) does not provide definition that syntactically explains how Lango verbs are divided into stative and non-stative verbs¹⁶. Without a syntactic explanation, it is not possible to make a decision that these verbs are stative even if they have stative-like meanings.

As the Kumam verbs *paarɔ* ‘to think’ and *mutɔ* ‘to want’ suggest, the cross-linguistic and well known distinction between stative and non-stative verbs is not sufficient to distinguish what verbs have a middle form and what verbs do not. We need a language specific reason for explaining what verbs have a middle form and what verbs do not.

Intransitive verbs of the Intr 1/Tr type express the physical state of participants, such as the verbs, *poŋ* ‘to be full’ and *tɔɔ* ‘to be dry’. Their transitive counterparts take agents as subjects and they have causative meanings whereby agents cause patients to be in the physical state that the intransitive verbs express.

(5) cúpá ɔ=poŋ. (Intr 1)

bottle 3S/P=PERF:full

‘The bottle is full.’

(6) a=póŋó !cúpá. (Transitive)

1SG=IMPERF:fill bottle

‘I fill the bottle.’

¹⁵ Noonan (1992: 133).

¹⁶ Noonan (1992: 133).

Intransitive verbs of the Intr 2/Tr type express emotional actions, such as the verbs, *redo* ‘to shout’ and *yei* ‘to agree’. Their transitive counterparts take actors as subjects, and express that those actors perform indirect emotional actions toward patients.

(7) a=redo. (Intr 2)
 1SG=IMPERF:shout
 ‘I shout’

(8) a=rédó atín. (Transitive)
 1SG=IMPERF:shout child
 ‘I shout to the child.’

Many frequentative transitive verbs, which are productively derived from basic forms, are paired with intransitive counterparts. These frequentative forms have no middle form. They are divided into Intr 1/Tr and Intr 2/Tr in the same manner as discussed above. The objects of transitive verbs of the Intr 1/Tr type are subjects in corresponding intransitive sentences, as shown in (9) and (10). The subjects of transitive verbs of the Intr 2/Tr type are subjects in corresponding intransitive sentences, as shown in (11) and (12).

(9) a=sásáro mac. (Transitive)
 1SG=IMPERF:FREQ:stir fire
 ‘I frequently stir the fire.’

(10) mac ɔ=sasarun. (Intr 1)
 fire 3S/P=PERF:FREQ:stir
 ‘The fire is stirred and stirred.’

(11) a=rárápo píj. (Transitive)
 1SG=IMPERF:grope earth
 ‘I frequently grope the earth.’

(12) a=rárápun. (Intr 2)
 1SG=IMPERF:FREQ:grope
 ‘I grope and grope everywhere.’

Frequentative intransitive verbs of the Intr 1/Tr type express physical state of participants. Frequentative transitive counterparts of the Intr 2/Tr type express indirect actions that are directed toward patients.

2.2.5 Intransitive 1/Transitive/Middle 1 and Intransitive 2/Transitive/Middle 2 verbs

Some transitive verbs have both a counterpart intransitive form and a middle form morphologically derived from a transitive stem. These transitive verbs are divided into two subgroups. When the arguments that would be direct objects of transitive verbs are subjects of both middle and intransitive sentences, these verbs are called Intransitive 1/Transitive/Middle 1 verbs (Intr 1/Tr/Mid 1). When the arguments that would be subjects of transitive verbs are subjects of middle and intransitive sentences, these verbs are called Intransitive 2/Transitive/Middle 2 verbs (Intr 2/Tr/Mid 2). For example, the transitive verb *bεelo* ‘to split’ has the middle form *bεl-ερε* ‘to be split’ and the intransitive (neuter) counterpart *bεελέ* ‘to be split’. The transitive verb *pyelo* ‘to defecate’ has the middle form *pyel-ερε* ‘to defecate’ and the intransitive counterpart *pyelo* ‘to defecate’.

- (1) a=bé!ó yen. (Transitive)
1SG=IMPERF:split trees
‘I split the firewood.’
- (2) yen bé!l-éré. (Mid 1)
trees 3SG=IMPERF:split-MID
‘The firewood can be split.’
- (3) agúlú ó=bεελέ. (Intr 1, Neuter)¹⁷
pot 3S/G=PERF:split:NEUT
‘The pot is cracked.’
- (4) a=pyéló remó. (Transitive)
1SG=IMPERF:defecate blood
‘I defecate blood.’
- (5) a=pyé!l-ére. (Mid 2)
1SG=IMPERF:defecate-MID
‘I defecate (by myself).’
- (6) a=pyéló. (Intr 2)
1SG=IMPERF:defecate
‘I defecate.’

When transitive verbs have middle forms that are used in Middle 1 sentences, intransitive counterparts are usually used in Intransitive 1 sentences. Similarly, when transitive verbs have middle forms that are used in Middle 2 sentences, the intransitive counterparts are

¹⁷ The neuter is discussed in Section 2.2.13.

usually used in Intransitive 2 sentences. However, a few irregular transitive verbs have middle forms that are used in Middle 1 sentences, while they have intransitive counterparts that are used in Intransitive 2 sentences. These verbs are called Intransitive 2/Transitive/Middle 1 verbs. For example, the subject of the middle form *ɲwal-ere* ‘to be laid’ would be an object in the corresponding transitive sentence shown in (7). The subject of the intransitive counterpart *ɲwal* ‘to give birth’ would be a subject in the corresponding transitive sentence shown in (7).

(7) $\text{ɔ}=\text{ɲwal-á}$. (Transitive)

3S/P=PERF:give birth-1SG

‘She bore me (I was born).’

(8) $\text{abé } \text{ɔ}=\text{ɲwal-éré}$. (Mid 1)

eggs 3S/P=bear-MID

‘The eggs have been laid.’

(9) $\text{a}=\text{ɲwál}$. (Intr 2)

1SG=PERF:give birth

‘I gave birth.’

2.2.6 Intransitive 1/Transitive/Middle 1/Middle 2 and Intransitive 2/Transitive/Middle 1/Middle 2 verbs

Some transitive verbs have both an intransitive counterpart and a middle form that is used in both types of middle sentences, that is, Middle 1 and Middle 2. These verbs are further divided into two subgroups. In one group, the intransitive counterparts are used in Intransitive 1 sentences, and in the other group, they are used in intransitive 2 sentences.

For example, the usage of the middle form *ɲɔl-ere* ‘to be cut’ is allowed in both the Middle 1 sentence in (2) and the Middle 2 sentence in (3). The argument that would be the object *kom* ‘body’ in the corresponding transitive sentence in (1) is the subject in the Middle 1 sentence in (2). The argument that would be the 1st person singular subject *a=* ‘1SG’ in the corresponding transitive sentence in (1) is the subject in the middle sentence in (3). The intransitive counterpart *ɲɔl* ‘to be cut’ is used only in Intransitive 1 constructions, as shown in (4). The arguments that would be objects in the corresponding transitive sentence are subjects in Intransitive 1 constructions. Verbs such as the verb *ɲɔɔɔ* ‘to cut’ are called Intransitive 1/Transitive/Middle 1/Middle 2 verbs.

(1) $\text{a}=\text{ɲóɔɔ}$ kom. (Transitive)

1SG=IMPERF:cut body

no transitive form. The classification depends on the definition in relation to corresponding transitive verbs. These verbs that have only a middle form are called Middle verbs.

- (9) a=ɲék-é!ré kéd:é. (Middle)
 1SG=IMPERF:envy-MID with:3SG
 ‘I envy him.’

2.2.8 Transitive verbs

Some verbs have neither an intransitive counterpart nor a morphologically middle form. These verbs have only transitive stems that are used in transitive sentences. They always require two arguments. These verbs are called Transitive verbs. For example, the transitive verb *mimɔ* ‘to give’ has neither an intransitive counterpart nor a middle form¹⁸.

- (1) a=míó itabó. (Transitive)
 1SG=IMPERF:give book
 ‘I give the book.’

2.2.9 Intransitive verbs

Some verbs are used only in intransitive sentences. These verbs have no counterpart transitive stems. They also have no middle form because middle forms are morphologically derived from transitive stems.

- (1) a=ótó i-sukú!lú. (Intransitive)
 1SG=IMPERF:go to-school
 ‘I go to the school.’
- (2) a=bédó ɪ-ɔt. (Intransitive)
 1SG=IMPERF:live in-house
 ‘I live in the house.’
- (3) igóén ó=dókɔ cɔl. (Intransitive)
 clothes 3S/P=PERF:become dirty
 ‘The clothes become dirty.’

2.2.10 Exceptional verbs, Intransitive/Middle verbs

The verb *tuo* ‘to be sick’ is regarded as an intransitive verb, though it has a middle form via

¹⁸The verbe *mimɔ* is a ditransitive verb.

the sentence is syntactically ungrammatical. However, transitive sentences without direct objects are sometimes pragmatically acceptable. A focus slot is usually located in the postverbal position, and often occupied by an object. When the focus of sentences is not on objects but on manners of actions or events, transitive verbs do not require objects, such as the sentence in (3). When actions expressed by verbs are focalized, transitive verbs do not require direct objects such as the sentence in (4). If the defocalization of objects does not occur in sentences, transitive verbs always require two arguments whether they are finite or infinite, as in (5) and (6).

- (1) okélo ɔ=camɔ dɛk.
 Okelo 3S/P=PERF:eat food
 ‘Okelo ate the stew.’
- (2) *okélo ɔ=camɔ.
 Okelo 3S/P=PERF:eat
 ‘Okelo ate.’
- (3) okélo ɔ=camɔ awákawáká.
 Okelo 3S/P=PERF:eat in a hurry
 ‘Okelo ate in a hurry.’
- (4) caamɔ bɛr.
 eat:INF good
 ‘To eat is good.’
- (5) caamɔ kwon bɛr.
 eat:INF porridge good
 ‘To eat porridge is good.’
- (6) *a=mító caamɔ.
 1SG=IMPERF:want eat:INF
 ‘I want to eat.’

Transitive verbs take only two arguments in sentences. When object suffixes are attached to verbs, the verbs cannot be followed by independent direct objects. For example, the sentences in (9) and (12) are not grammatical because they have three arguments, namely a subject, an object suffix, and an independent direct object. Object suffixes constitute an argument in sentences. Object suffixes are not regarded as inflectional morphemes that mark verbal agreement but as reduced forms of independent pronouns.

(7) a=né!nó okélo.

1SG=PERF:see Okelo

‘I saw Okelo.’

(8) a=né!!n-é.

1SG=PERF:see-3SG

‘I saw him.’

(9) *a=né!!n-é okélo.

1SG=PERF:see Okelo

‘I saw Okelo.’

(10) a=né!nó itabó.

1SG=PERF:see book

‘I saw the book.’

(11) a=né!!n-é.

1SG=PERF:see-3SG

‘I saw it.’

(12) *a=né!!n-é itabó.

1SG=PERF:see-SG book

‘I saw the book.’

Transitive verbs require two arguments in sentences except for imperatives. However, transitive verbs do not repeat non-human direct objects in answers to questions, as in (13). Moreover, object suffixes also are not added to transitive verbs when they refer to non-human direct objects. If object suffixes are added to transitive verbs, the sentences are not pragmatically appropriate¹⁹. The answer in (14) is syntactically well formed but pragmatically inappropriate.

(13) i=mátó pi?

2SG=IMPERF:drink water

‘Do you drink water?’

Ee, a=mátó.

Yes 1SG=IMPERF:drink

‘Yes, I drink it.’

(14) i=mátó pi?

2SG=IMERF:drink water

¹⁹ The information structure is discussed in detail in Section 3.2.

‘Do you drink water?’

#Ee, a=má!t-é.

Yes 1SG=IMPERF:drink-3SG

‘Yes, I drink it.’

When direct objects refer to humans, object suffixes are added to transitive verbs in answers to questions. The answer in (16) is not grammatical because an object suffix is not added to the transitive verb *neeko* ‘to kill’.

(15) i=né!kó okélo?

2SG=PERF:kill Okelo

‘Did you kill Okelo?’

Ee, a=né!!k-é.

Yes 1SG=PERF:kill-3SG

‘Yes, I killed him.’

(16) i=né!kó okélo?

2SG=PERF:kill Okelo

‘Did you kill Okelo?’

*Ee, a=né!kó.

Yes 1SG=PERF:kill

‘Yes, I killed.’

We can summarize this discussion as follows. When direct objects are human, object suffixes in sentences that function as answers are coreferential with the objects mentioned in the corresponding questions. When direct objects are non-human, no object suffixes are added to transitive verbs. The same hierarchy of NP slots and animacy is observed in topicalization and relativization²⁰.

2.2.12 Ditransitive

Kumam has a very small set of ditransitive verbs. They allow three arguments, namely a subject, an indirect object, and a direct object. Transitive verbs require only two arguments. Kumam strictly follows the valence condition with a few exceptions.

For example, the ditransitive verb *minɔ* ‘to give’ allows an indirect and a direct object, as shown in (1).

²⁰ The hierarchy of NP slots and animacy is discussed in Section 3.1.2.

- (1) a=míó atín itabó.
 1SG=IMPERF:give child book
 ‘I give the child the book.’

The transitive verb *teedo* ‘to cook’ requires only one object. If the transitive verb *teedo* ‘to cook’ takes more than two objects, the sentence is ungrammatical, as in (3). Even if the transitive verb *teedo* ‘to cook’ has no object, the sentence is still ungrammatical, as in (4).

- (2) a=tédó dek.
 1SG=IMPERF:cook stew
 ‘I cook stew.’
- (3) *a=tédó atín dek.
 1SG=IMPERF:cook child stew
 ‘I cook stew for the child.’
- (4) *a=tédó.
 1SG=IMPERF:cook
 ‘I cook.’

2.2.13 Neuter

Some transitive verbs have a neuter form that is morphologically derived by lengthening a stem vowel and attaching the neuter suffix *-é* (e.g. $CV_1C \rightarrow CV_1V_1C-é$). Some neuter forms have a free variant form derived by reduplicating a stem final consonant instead of lengthening a stem vowel (e.g. $CVC_1 \rightarrow CVC_1C_1-é$), such as the neuter forms of the verb *kʷɔtɔ* ‘to blow’. The neuter suffix originally began with an alveolar nasal consonant. The alveolar nasal consonant was assimilated to the preceding consonant. One of the reduplicated consonants was lost. Stem vowels were lengthened to compensate for the loss of the consonant (e.g. $*CV_1C_2-né \rightarrow CV_1C_2-C_2é \rightarrow CV_1V_1C_2-é$).

- (1) kʷtt-é ~ kʷt-é ‘to make sound by blowing’ ← kʷɔtɔ ‘to blow’

Neuter forms allow only one argument in sentences, as middle forms do. Neuter sentences are syntactically intransitive. They behave in a similar manner to middle forms syntactically. Neuter forms denote states of participants. Neuter forms do not presuppose agents of events or actions that cause state of participants, while middle forms presuppose agents of events or actions that are not articulated segmentally.

For example, the neuter sentence in (3) expresses that the subject *igoen* ‘clothes’ are dipped

(in water), but there is no mention of an agent. The middle sentence in (4) presupposes an agent who causes the patient *igoen* ‘clothes’ to be in their current state, that is, dipped (in water).

(2) a=bídó i goen i-pi. (Transitive)

1SG=IMPERF:dip clothes in-water

‘I dip the clothes in water.’

(3) i goen ɔ=biid-é. (Neuter)

clothes 3S/P=PERF:dip-NEUT

‘The clothes are dipped.’

(4) i goen ɔ=bid-éré. (Middle)

clothes 3S/P=PERF:dip-MID

‘The clothes are dipped (by someone).’

Neuter forms are divided into two groups in the same way middle forms are divided into Mid 1 and Mid 2 types. They are classified in relation to their corresponding transitive verbs. Arguments that would be objects in the corresponding transitive sentences are subjects in Neuter 1 sentences. Similarly arguments that would be subjects in the corresponding transitive sentences are subjects in Neuter 2 sentences. The former type of neuter forms is called Neuter 1 and the latter type is Neuter 2.

(5) a=bídó i goen i-pi. (Transitive)

1SG=IMPERF:dip clothes in-water

‘I dip the clothes in water.’

(6) i goen ɔ=biid-é. (Neuter 1)

clothes 3S/P=PERF:dip-NEUT

‘The clothes are dipped.’

(7) a=kótó mac. (Transitive)

1SG=IMPERF:blow fire

‘I blow fire.’

(8) a=kóú!t-é. (Neuter 2)

1SG=IMPERF:make sound by blow-NEUT

‘I make sound by blowing with mouth in order to draw someone’s attention.’

Neuter sentences sometimes express continuous states of events, while middle sentences express temporary states of events. As discussed above, neuter forms do not presuppose

agents of events or actions. Since neuter forms express events or actions without referring to agents, they express more stable states of events than middle forms.

For example, the neuter sentence in (10) expresses that the 1st person singular subject *a=* ‘1SG’ has stable relationship with the accompaniment NP *ǰákó* ‘girl’, while the middle sentence in (11) expresses that the subject *ǰákó* ‘girl’ has a temporary relationship with the accompaniment NP *awóbí* ‘boy’.

- (9) *a=códó* *ǰákó.* (Transitive)
 1SG=IMPERF:have sexual intercourse girl
 ‘I have sexual intercourse with the girl.’
- (10) *a=cóó!!d-é* *kede-ǰákó.* (Neuter)
 1SG=IMPERF:have sexual intercourse-MID with-girl
 ‘I have sexual relationship with the girl.’
- (11) *ǰákó ó=cóð-éré* *kede-awóbí.* (Middle)
 girl 3S/P=have sexual intercourse-NEUT with-boy
 ‘The girl has sexual intercourse with the boy temporarily.’

2.2.14 Frequentative intransitive and transitive

Most transitive verbs have a frequentative transitive form that is productively derived from a basic verbal stem. Kumam basic verbal stems consist of a monosyllable (C)V(C). Frequentative verbal stems are derived by reduplicating an initial consonant and a core vowel of basic verbal stems (e.g. $C_1V_2C \rightarrow C_1V_2C_1V_2C$). Frequentative transitive forms consist of a frequentative verbal stem and the transitive formative suffix *-ó* (e.g. $C_1V_2C_1V_2C-ó$). Frequentative transitive forms fundamentally denote repetition of actions or events.

Some frequentative transitive forms are paired with intransitive forms. Frequentative intransitive forms are derived by adding the frequentative intransitive suffix *-un* to frequentative verbal stems (e.g. $C_1V_2C_1V_2C \rightarrow C_1V_2C_1V_2C-un$). Since most of transitive verbs have a frequentative transitive form, it is not necessary to specify which transitive verbs have a frequentative transitive form and which transitive verbs do not. On the other hand, the derivation of frequentative intransitive forms is limited. Only a small number of transitive verbs have a frequentative intransitive forms. It is not predictable what transitive verbs have a frequentative intransitive form. Frequentative intransitive forms fundamentally denote repetition of voluntary events or actions that occur without the intention of agents. Frequentative forms denote that the events or actions they describe extend far and widely. The frequentative transitive and intransitive form, *puputo* and *puputun*, are derived from the verb *puito* ‘to uproot’ respectively, as shown in (1) and (2)

(3) a=júruso bóké. (Transitive)
 1SG=IMPERF:take off leaves
 ‘I take off leaves.’

(4) bóké ɔ=jurus-ar. (-ar Intransitive)
 leaves 3S/P=PERF:take off-ar
 ‘The leaves are taken off.’

2.3 Benefactive

Kumam verbs have no benefactive stem in the verbal morphology. Benefactive notions are expressed by prepositional phrases consisting of the preposition *né-* ‘for’. Verbs are sometimes constructed with seemingly benefactive forms only in the subjunctive mood. However, they are not actual benefactive forms of verbs but verbs that are attached with the prepositional phrases.

The alveolar nasal consonant of the preposition *né-* ‘for’ is assimilated to the preceding consonant of verb stems. One of the reduplicated consonants is lost. Stem vowels are lengthened to compensate for the loss of the consonant (e.g. *wil + né* → **willé* → *wilé* ‘buy for’). The assimilation of the alveolar nasal consonant of the preposition *né-* ‘for’ is not obligatory, as in (2). The consonantal assimilation occurs only in the subjunctive mood because verbs are not attached by the transitive formative suffix *-ɔ* nor end in a consonant in the subjunctive. The process of consonantal assimilation and compensatory lengthening is blocked by the transitive formative suffix *-ɔ* in the indicative mood, as in (3).

(1) myero a=wílé ítabó. (Subjunctive)
 must 1SG=buy:SUB:for:3SG book
 ‘I must buy the book for her/him.’

(2) myero a=wíl n:é ítabó. (Subjunctive)
 must 1SG=buy:SUB for:3SG book
 ‘I must buy the book for her/him.’

(3) a=wíló !né-á!tín itabó. (Indicative)
 1SG=IMPERF:buy for-child book
 ‘I buy the book for the child.’

Prepositional phrases consisting of the preposition *né-* ‘to, for’ may sometimes function as benefactive NPs, and sometimes as dative NPs in sentences such as (4). It is ambiguous whether the prepositional phrases consisting of the preposition *né-* ‘to, for’ express benefactive or dative meaning. If sentences have both a benefactive NP and a dative NP at the

same time, a prepositional phrase consisting of the preposition *né-* ‘for’ is used to express the benefactive notion and a dative NP consists of the preposition *bút-* ‘to’, as shown in (5).

- (4) a=kéló !né-dákó itabó.
 1SG=IMPERF:bring to/for-woman book
 ‘I bring the book to/for the woman.’
- (5) a=kéló itabó né-dákó !bút-á!tín.
 1SG=IMPERF:bring book for-woman to-child
 ‘I bring the book for the woman to the child.’

The benefactive-direct object order is not invariable. Although the word order is determined by pragmatic factors, a benefactive is usually followed by a direct object in pragmatically unmarked sentences. When dative/benefactive phrases are followed by direct objects, they are usually interpreted as benefactive. If dative/benefactive phrases follow direct objects, it is ambiguous whether the preposition phrases convey benefactive or dative meanings.

- (6) a=kéló !né-dákó itabó.
 1SG=IMPERF:bring to/for-woman book
 ‘I bring the book for the woman.’
- (7) a=kéló itabó né-dákó.
 1SG=IMPERF:bring book to/for-woman
 ‘I bring the book to/for the woman.’

When verbs take both a benefactive and a dative NP, the benefactive NP is followed by the dative NP. The benefactive–dative order is invariable syntactically. Pragmatic demands do not change the benefactive–dative order. If benefactive NPs are preceded by dative NPs as a result of pragmatic demands, prepositional phrases consisting of the reason preposition *pi(H)-* ‘because of’ are used to express benefactive notions instead of prepositional phrases consisting of the preposition *né-* ‘for’. For example, the dative NP *atín* ‘child’ is preceded by the benefactive NP *dákó* ‘woman’ in (8), while the reason NP *dákó* ‘woman’ is preceded by the dative NP *atín* ‘child’ in (9). The sentence in (9) is semantically equivalent to the sentence in (8). The reason NP *dákó* ‘woman’ is used to express benefactive meaning in (9).

- (8) a=kéló itabó né-dákó !bút-á!tín.
 1SG=IMPERF:bring book for-woman to-child
 ‘I bring the book for the woman to the child.’

- (9) a=kéló itabũ bũt-á!tín pɪ-dákó.
 1SG=IMPERF:bring book to-child because of-woman
 ‘I bring the book to the child for the woman.’

Dative NPs that include prepositional phrases consisting of the preposition *bũt-* ‘to’ are peripheral elements, while benefactive NPs consisting of the preposition *né-* ‘for’ constitute core elements in sentences²¹. Peripheral elements may not intervene between core elements. Therefore, benefactive NPs are not preceded by dative NPs. If benefactive NPs are preceded by dative NPs, the sentences are not grammatical because peripheral elements intervene between core elements.

Dative NPs and reason NPs both are members of peripheral elements. Peripheral elements may intervene between other peripheral elements. Dative NPs may either be preceded or followed by reason NPs. The sentence in (9) is grammatical, because the reason NP *dákó* ‘woman’ is preceded by the dative NP *atín* ‘child’.

A small set of verbs allows a human direct object that may be interpreted as a benefactive in sentences. Verbs such as *teedo* ‘to cook’ usually take a non-human direct object in Kumam. When they take a human object, the object is interpreted as benefactive, though it is syntactically a direct object in sentences. These verbs cannot take another argument as a direct object. For example, the thematic role of the 1st person singular direct object is interpreted as benefactive in (10). If the sentence in (10) had another argument, namely *cam* ‘food’, the sentence in (11) would be ungrammatical. The prepositional phrase consisting of the preposition *né-* ‘for’ is used to construct a benefactive NP when the sentence has a non-human direct object, as in (12). The human object is interpreted as fulfilling thematic role of benefactive because the verb *teedo* ‘to cook’ does not have another object in (13).

- (10) *dákó* !té!d-á.
 woman 3SG:IMPERF:cook-1SG
 ‘The woman cooks for me.’
- (11) **dákó* !té!d-á *cám*.
 woman 3SG:IMPERF:cook-1SG food
 ‘The woman cooks food for me.’
- (12) *dákó* !té dó !ná *cám*.
 woman 3SG:IMPERF:cook for:1SG food
 ‘The woman cooks food for me.’

²¹ The dative NPs consisting of the preposition *bũt-* ‘to’ are included in the group of locative NPs.

- (13) *dákó* σ =tedo *icúó*.
 woman 3S/P=PERF:cook man
 ‘The woman cooked for the man.’

The direct objects do not indicate the thematic role of benefactive. When they are human, they may be interpreted as fulfilling the thematic role of benefactive for only a particular set of transitive verbs. Therefore, the sentence in (14) is ambiguous. It is unclear whether the 3rd person singular object suffix-*é* ‘3SG’ is interpreted as referring to a human referent that is a benefactive or a non-human referent that is a direct object.

- (14) *dákó* σ =ted-*é*.
 woman 3S/P=PERF:cook-3SG
 ‘The woman cooked for him/The woman cooked it.’

2.4 Expressions of passive senses

Kumam has no morphological passive construction. The pragmatic function of the passive, which is to create sentences that focus on patients in transitive relationships, is performed by transitive sentences with indefinite subjects, by middle sentences, or by topicalized sentences.

If agents are unspecific, transitive sentences with indefinite subjects or middle sentences are used to express passive senses. When transitive verbs have no morphologically derived middle form, transitive sentences with indefinite subjects are used as a passive equivalent. The verb *ɲwalɔ* ‘to bear’ is inflected to convey 3rd person in the transitive sentence with an indefinite subject ‘someone’ in (1). When transitive verbs have a middle form as their counterpart, Middle 1 sentences are used as passive equivalent. If agents are specific, transitive sentences with a topicalized object are used to express passive notions. The direct object *atín* ‘child’ occupies the topic slot in the topicalized sentence shown in (3).

- (1) σ =*ɲwal-á* *Kampala*. (Transitive)
 3S/P=PERF:give birth-1SG *Kampala*
 ‘Someone bore me (I was born) in Kampala.’
- (2) *atín* σ =*nɛn-éré*. (Mid 1)
 child 3S/P=PERF:see-MID
 ‘The child was seen (by someone).’
- (3) *atín*, *dákó* σ =*nɛn-é*. (Topicalization)
 child woman 3S/P=PERF:see-3SG
 ‘The child, the woman saw (the child was seen by the woman).’

When transitive sentences with indefinite subjects are used to express passive notions, the indefinite subjects perform the thematic role of agent. The speaker is not included among the agents. For example, the sentence in (4) denotes that some people, not the speaker cooked the food.

When Mid 1 sentences are used as passive equivalents, they presuppose agents that are not articulated segmentally in sentences. The speaker is included among the agents. For example, the sentence in (5) denotes that some people including the speaker cooked the food.

(4) ɔ=tedo cám. (Transitive)

3S/P=PERF:cook food

‘The food has been cooked (by someone else not the speaker him/herself).’

(5) cám ɔ=téd-éré. (Mid 1)

Food 3S/P=cook-MID

‘The food has been cooked (by someone or the speaker him/herself).’

Transitive sentences with an indefinite subject are limited in the perfect aspect. Verbs inflected for 3rd person are always attached with the 3rd person subject clitic ϵ = ‘3SG’ for the singular and $gɪ$ = ‘3PL’ for the plural in the imperfect aspect, which refer to a specific person already mentioned in the context, as shown in (7). Therefore, verbs inflected in the imperfect aspect do not take an unspecified person as their subjects.

(6) $*\text{tédó}$ $!\text{cám.}$

3SG:IMPERF:cook food

‘He/she (unspecific) cooks the food.’

(7) $\epsilon=\text{tédó}$ $!\text{cám.}$

3SG=IMPERF:cook food

‘He/she (already mentioned) cooks the food.’

If verbs are not attached with the 3rd person singular subject clitic ϵ - ‘3SG’, they are preceded by an independent noun or pronoun, as in (8) and (9). The noun ηata ‘person’ with the modifier $-\text{móró}$ ‘some’ is used to express indefinite subjects in the imperfect aspect in (10).

(8) okélo tédó $!\text{cám.}$

Okelo 3SG:IMPERF:cook food

‘Okelo cooks the food.’

(9) én tédó !cám.
 3SG 3SG:IMPERF:cook food
 ‘He/she cooks food.’

(10) ŋata-móró tédó !cám.
 person-some 3SG=IMPERF:cook food
 ‘Someone cooks the food.’

A patient still occupies the postverbal position as a direct object in the transitive sentence shown in (1). A topic slot is usually located in the sentence initial position, while a focus slot is located in the postverbal position. Constituents that occupy the topic slot convey old information, and constituents that occupy the focus slot convey new information. However, it is an unspecified agent that occupies the sentence initial position. Unspecified agents are not regarded as old information. They are not specified in the back grounded knowledge of the speaker and hearer. Unspecified agents do not occupy topic slots in transitive sentences with indefinite subjects, such as like (1). Transitive sentences with indefinite subjects allocate topical constituents to a postverbal position. Transitive sentences with indefinite subject do not follow the principle of information structure that is common cross-linguistically²².

Arguments that would be direct objects in corresponding transitive sentences occupy a sentence initial topic slot in Mid 1 sentences, as shown in (2). Mid 1 sentences presuppose agents that are not articulated. Instead of agents, patients in transitive relationships occupy topic slots in Mid 1 sentences. Given the fact that Mid 1 sentences do not allow articulated agents, they lack the true semantic aspects of passive constructions.

Direct objects are moved by topicalization to sentence initial position in transitive sentences, as shown in (3). The direct objects perform the thematic role of patient in transitive relationships. Patients occupy a topic slot in sentence initial position, while specific agents are still located in preverbal position. Since transitive sentences with a topicalized direct object have agents in preverbal position, they semantically function as a true passive equivalent.

The three constructions above perform the pragmatic function of passive by allocating patients in transitive relationships to a topic slot. Topicalized sentences are closer to passive sentences than the other constructions considering that they still have overt agents in the sentences.

Kumam has no impersonal construction. To some extent the meaning of impersonal subjects

²² The pragmatic structure of the transitive sentences with an indefinite subjects is similar to that of ‘idiomatic’ expressions. The principle of information structure is discussed in Chapter 4.

is achieved by using indefinite subjects. Sentences with indefinite subjects, such as (11), are seemingly similar to sentences with indefinite nouns as subjects, such as (12). There is, however, pragmatic difference between them. Patients occupy a topic slot in postverbal position in sentences with an indefinite subject, such as (11), while agents occupy a topic slot in preverbal position in sentences with an unspecified subject, such as (12).

- (11) $\text{ɔ}=\text{tedo}$ cám. (Transitive)
 3S/P=PERF:cook food
 ‘Someone cooked the food.’
- (12) $\eta\text{ata-móró}$ $\text{ó}=\text{tedo}$ cám. (Transitive)
 person-some 3S/P=PERF:cook food
 ‘Some person cooked the food.’

As discussed above, the pragmatic function of passive construction is rendered in part by topicalization. The patients *riṅó* ‘meat’ and *dek nám* ‘fish’ occupy the topic slots in the second sentence in (13). The meat and fish are old information. The speaker and hearer have knowledge about them and they want to know who ate them. The topicalized sentence in (13) denotes that the meat was consumed by Okelo, and the fish by Ojuk. The sentences in (13) express the following situation. The speaker went to the restaurant and noticed that there was no meat and no fish at the restaurant. The speaker was told that they were consumed by Okelo and Ojuk.

On the other hand, the subjects, *okélo* ‘Okelo’ and *ɔjók* ‘Ojuk’ occupy the topic slots in the second sentence in (14). Okelo and Ojuk are old information because the speaker and hearer know them. The speaker described what Okelo and Ojuk did in the restaurant. The second sentence in (14) denotes that Okelo chose the meat and Ojuk the fish.

- (13) $\text{okélo kede-}\text{ɔjók}$ $\text{ɔ}=\text{bino}$ $\text{ɪ-}\text{ɔtêl.}$
 Okelo and-Ojuk 3S/P=PERF:come in-restaurant
 ‘Okelo and Ojuk came in the restaurant.’
 riṅó, okélo $\text{ɔ}=\text{cam}\text{ɔ.}$ $\text{dek nám, } \text{ɔjók}$ $\text{ɔ}=\text{cam}\text{ɔ.}$ (Topicalization)
 meat, Okelo 3S/P=PERF:eat fish, Ojuk 3S/P=PERF:eat
 ‘The meat was eaten by Okelo. The fish was eaten by Ojuk.’
- (14) $\text{okélo kede-}\text{ɔjók}$ $\text{ɔ}=\text{bino}$ $\text{ɪ-}\text{ɔtêl.}$
 Okelo and-Ojuk 3S/P=PERF:come in-restaurant
 ‘Okelo and Ojuk came in the restaurant.’

okélo ɔ=camɔ riŋó. ɔjúk ɔ=camɔ dek nám.
 Okelo 3S/P=PERF:eat meat. Ojuk 3S/P=PERF:eat fish
 ‘Okelo ate the meat.Ojuk ate the fish.’

2.5 Expressions of tense and aspect

Kumam can express the meanings of past, present, and future. Kumam distinguishes three aspects, namely imperfect, perfect, and progressive in the verbal morphology. Aspect plays an important role syntactically and semantically in Kumam.

2.5.1 Aspect

Kumam verbs are always inflected with imperfect or perfect aspect, but not inflected for tense in the verbal morphology. Imperfect and perfect aspect is distinguished by supra-segmental morphemes. Progressive aspect is expressed by the use of the auxiliary *tye* ‘to be’ followed by an infinitive form of a verb. Time is expressed by various adverbials. For example, past tense is expressed by the adverbial particle *ɔɔdɔ* ‘PAST’. Past tense sentences originally consist of a complement construction, while future tense is expressed by the use of the auxiliary *yaarɔ* ‘to decide’ followed by an infinitive form of verbs.

(1) Imperfect

a=tédó !cám.
 1SG=IMPERF:cook food
 ‘I cook food.’

Perfect

a=té!dó !cám.
 1SG=PERF:cook food
 ‘I cooked food.’

Perfect aspect is characterized by a low toneme between subject clitics and verbal stems, while imperfect aspect is characterized by the absence of a toneme in this position. The underlying low toneme expressing perfect aspect reflects a down stepped high tone phonetically in verbs, as shown in (1).

Progressive aspect stems consist of the auxiliary *tye* ‘to be’ inflected with imperfect aspect and an infinitive form of the verbs, as shown in (2).

(2) Progressive

a=tyé teedo cám.
 1SG=IMPERF:be cook:INF food
 ‘I am cooking food.’

The three aspects clearly mark the aspectual phases of events that the verbs express. Perfect is

used to describe completed events bounded in time. Verbs in perfect aspect describe single events or processes that are affected by actions. Consequently, perfect aspect does not coincide with adverbials such as *nakanaká* ‘always’, which denote durative or repetitive time, as in (4). Events coded in perfect aspect must be completed at a particular time.

Imperfect aspect is used to describe events that are not completed at a particular time. The events expressed by imperfect aspect are not bounded in time but durative or repetitive. Consequently, imperfect aspect includes a habitual or repetitive meaning. Imperfect aspect may coincide with adverbials such as *nakanaká* ‘always’, which denote durative or repetitive time, as in (3). Since the events described by verbs in imperfect aspect are not bounded in time, the imperfect aspect cannot be used to express actions that happen only once. Therefore, the sentences in imperfect aspect shown in (5) denote habitual acts. Habitual actions or events in the past are expressed by the adverbial *ɔɔdɔ* ‘PAST’ followed by verbs inflected with imperfect aspect, as in (6). In order to express actions or events that happen only once in the present time, in cases where the actions or events have not yet begun, verbs in the future tense are used, as shown in (7). The future tense is expressed by the auxiliary *yaarɔ* ‘to decide’ inflected with perfect aspect followed by an infinitive form of the verbs.

(3) a=sómó itabɔ nákanaká. (Imprfect)

1SG=IMPERF:read book always

‘I always read the book.’

(4) *a=só!mó itabɔ nákanaká. (Perfect)

1SG=PERF:read book always

‘I always read the book.’

(5) i=cámó !jɔ? (Imperfect)

2SG=IMPERF:eat what

‘What do you eat (usually)?’

(6) ɔɔdɔ a=sómó itabɔ nákanaká mwáka jɔ!ró. (Past Imperfect)

PAST 1SG=IMPERF:read book repeatedly year yesterday

‘I read book repeatedly last year.’

(7) i=yá!ró caamɔ jɔ?

2SG=PERF:decide eat:INF what

‘What will you eat (now)?’

Perfect aspect is used to describe events that are completed at a particular time. Without context, it is interpreted as past tense. If sentences consisting of verbs inflected with perfect aspect do not contain time adverbials that specify time, they are interpreted as expressing

events that have been completed before the time of the speaker's utterance. If sentences have time adverbials that specify time, events expressed by verbs inflected with perfect aspect are interpreted as having been completed at the time specified by the adverbials. For example, the sentence in (8) denotes that the 1st person singular subject *a*= '1SG' had finished reading the book at the time specified by the time adverbial *nán* 'now'.

- (8) *a=só!mó itabv nán. (Perfect)*
 1SG=PERF:read book now
 'I have read (finished reading) the book now.'

Without specifying time, perfect aspect expresses that the events described by verbs were completed in the past. Therefore, events expressed by verbs in perfect aspect must not still be continuing at the time of the speaker's utterance. For example, the subject in (8) had finished reading the book.

Perfect aspect is used also to denote states of events that have been completed at a specified time. When verbs in perfect aspect are used without being accompanied by time adverbials, the verbs express state of events in the present. The sentence in (9) expresses that *awóbi* 'boy' is thirsty in the present state. To express states of events in the past, time adverbials must be added in sentences such as (10) to specify the time when the events were accomplished.

- (9) *oríó ó=neko awóbi.*
 thirst 3S/P=PERF:kill boy
 'The boy is thirsty.'
- (10) *oríó óvdo o=neko awóbi.*
 thirst PAST 3S/P=PERF:kill boy
 'The boy was thirsty.'

A sequence of aspects is observed between main and subordinate clauses. For example, the relative construction in (12), which consists of the verb *wilɔ* 'to buy' inflected in imperfect aspect, is not appropriate in terms of the sequence of aspects. Since the event of, buying the book has not been completed, the particular book does not exist yet. It is impossible for the 1st person singular subject *a*= '1SG' in the main clause to require a book that does not exist.

The relative clause in (11) consists of the verb *wilɔ* 'to buy' with perfect aspect. Since the event of buying the book has been completed, it is possible for the subject in the main clause to require the book because it already exists. The sentence in (11) is appropriate in terms of the sequence of aspects. If the sentence in (12) is uttered by Kumam speakers, it has a

specialized interpretation whereby the 1st person singular subject *a*= ‘1SG’ in the main clause loves every book that the 3rd person singular subject *ε*= ‘3SG’ in the relative clause buys (i.e., the subject in the main clause is pleased with his choice of books). Otherwise, the sentence in (12) is not appropriate in terms of the sequence of aspects.

(11) *a=mító itabv á!mé !én é=!wí!ló.*
 1SG=IMPERF:want book REL 3SG 3SG=PERF:buy
 ‘I want the book which he bought.’

(12) **a=mító itabv á!mé !én é=!wí!ló.*
 1SG=IMPERF:want book REL 3SG 3SG=IMPERF:buy
 ‘I want the book which he buys.’

Since future tense consists of the auxiliary inflected with perfect aspect, future tense follows the restriction on the sequence of aspects. If future tense is used instead of imperfect aspect in the relative clause, sentences such as (13) are appropriate. Events or actions described by verbs in future tense are bounded in time. For example, the event described by the verb *wí!lɔ* ‘to buy’ with the future auxiliary *yaarɔ* ‘to decide’ will be accomplished at a particular time in the future. It is possible for the subject in the main clause can want the book that will exist at a particular time.

(13) *a=mító itabv á!mé ε=yá!rɔ wí!lɔ tín.*
 1SG=IMPERF:want book REL 3SG=PERF:decide buy:INF today
 ‘I want the book which he will buy today.’

Progressive aspect consists of the auxiliary *tye* ‘to be’ inflected in imperfect aspect followed by an infinitive form of the verbs. Progressive is used to describe events that are ongoing at a particular point in time. The events expressed by verbs in progressive aspect are durative. The events must have started before a specified time and must still be continuing at the time of speaking. For example the sentence in (14) expresses that the event has already started and continues at the present time.

(14) *a=tyé soomo itabv nán. (Progressive)*
 1SG=IMPERF:be read:INF book now
 ‘I am reading the book now.’

Without context, progressive aspect as well as imperfect aspect will be assigned a present

interpretation. If verbs in progressive or imperfect aspect are not accompanied with time adverbials, they express events or actions that are performed at present.

2.5.2 Aspect and definiteness

Kumam has no morphological device to distinguish definite from indefinite nouns. Though it is not possible to distinguish definite from indefinite NPs morphologically, bare NPs are usually interpreted as definite. If speakers want to express unspecific NPs, the unspecific suffix *-móró* 'some' is used to express that the NPs are unspecific.

(1) *a=wí!lós itabó.*

1SG=PERF:buy book

'I bought the book.'

(2) *a=mítós itabó.*

1SG=IMPERF:want book

'I want a book/the book.'

(3) *a=wí!lós itabó-móró.*

1SG=PERF:buy book-some

'I bought some book.'

Bare NPs are basically interpreted as definite; however, in sentences consisting of verbs inflected with imperfect aspect, such as (2), bare NPs tend to be interpreted as indefinite. Events or actions described by verbs in imperfect aspect are unbounded in time. Imperfect aspect is used to express events or actions that are repeated or habitual. Typically, indefinite referents are affected by repeated or habitual actions. For example, the object *itabó* 'book' is likely interpreted as indefinite in (4) because the 1st person singular subject *a=* '1SG' buys books as a regular practice. The book that he buys is not specific.

(4) *a=wílós itabó.*

1SG=IMPERF:buy book

'I buy a book.'

On the other hand, NPs in sentences consisting of verbs inflected with perfect aspect tend to be interpreted as definite. The perfect aspect is used to express events or actions that happen only once. Definite referents are affected by events or actions only once. The object *itabó* 'book' is interpreted as definite in (5) because the 1st person singular subject *a=* '1SG' buys the book once as an intentional action.

- (5) a=wí!lǒ itabǒ.
 1SG=PERF:buy book
 ‘I bought the book.’

Since the NP in the sentence consisting of the verb *wí!lǒ* ‘to buy’ inflected with perfect aspect is easily interpreted as definite, the sentence in (6) gives rise to a semantically appropriate interpretation that the 1st person singular subject wants a particular book that someone bought.

The sentence in (7) is marked for Kumam speakers. The lexical meaning of the verb in the main clause, *mítǒ*, is ‘to want’. The NP in the sentence consisting of the verb *wí!lǒ* ‘to buy’ inflected with imperfect aspect is interpreted as indefinite. The action of wanting an indefinite thing is unnatural, because it is not possible to want a thing that does not exist in the real world. Kumam speakers reluctantly interpret this sentence to mean that the 1st person singular subject loves every book that someone buys.

- (6) a=mítǒ itabǒ á!mé !én é=!wí!lǒ.
 1SG=IMPERF:want book REL 3SG 3SG=PERF:buy
 ‘I want the book which he bought.’
- (7) ?a=mítǒ itabǒ á!mé !én é=!wí!lǒ.
 1SG=IMPERF:want book REL 3SG 3SG=IMPERF:buy
 ‘*I want a book which he buys.’
 ‘I love every book which he buys.’

2.5.3 Tense

Past tense is expressed by the use of the adverbial *ǒǒǒ* ‘PAST’ which is originally the main verb in complement constructions. The original complement construction consists of the main verb *ǒǒǒ* ‘to observe’ conjugated in the 3rd person as an indefinite subject and the following ‘paratactic’ complement clauses²³. The verb *ǒǒǒ* ‘to observe’ is inflected with perfect aspect in the original complement construction. ‘Paratactic’ complement clauses may consist of verbs in imperfect, perfect, or progressive aspect. The main verb *ǒǒǒ* ‘someone observed’ is grammaticalized as a time adverbial that expresses past tense in the modern language.

Past imperfect consists of the adverbial *ǒǒǒ* ‘PAST’ and the following verbs inflected with imperfect aspect. Past imperfect expresses events that have not yet been completed at a particular time in the past. Past perfect consists of the adverbial *ǒǒǒ* ‘PAST’ and the

²³ The ‘paratactic’ complement is discussed in Section 3.2.

following verbs inflected with perfect aspect. Past perfect expresses events that have been completed at a particular time in the past. Past progressive consists of the adverbial *ɔɔdɔ* ‘PAST’ and the following verbs with progressive aspect. Past progressive expresses that events are ongoing at a particular time in the past that the speakers specify.

- (1) *ɔɔdɔ a=sómó itabɔ nákanaká.* (Past imperfect)
 PAST 1SG=IMPERF:read book always
 ‘I always read the book (in the past)’
- (2) *ɔɔdɔ a=só!mó itabɔ ɲó!ró.* (Past perfect)
 PAST 1SG=PERF:read book yesterday
 ‘I read (finished reading) the book yesterday.’
- (3) *ɔɔdɔ a=tyé soomo itabɔ ɲó!ró.* (Past progressive)
 PAST 1SG=IMPERF:be read:INF book yesterday
 ‘I was reading the book yesterday.’

Future tense consists of the auxiliary *yaarɔ* ‘to decide’ and an infinitive form of verbs. The auxiliary *yaarɔ* ‘to decide’ is always inflected in perfect aspect to construct the future tense. Events described by verbs in future tense do not start before a particular time that the speaker specifies, while events described by verbs in progressive aspect have already started at a particular time that the speaker specifies. For example, the sentences in future tense shown in (5) and (6) are used when the speaker and hearer are at the table but have not started eating.

- (4) *a=yá!ró soomo itabɔ nán.* (Future)
 1SG=PERF:decide read:INF book now
 ‘I will read the book now.’
- (5) *i=yá!ró caamɔ ɲó?* (Future)
 2SG=PERF:decide eat:INF what
 ‘What are you going to eat?’
- (6) *a=yá!ró caamɔ riŋó.* (Future)
 1SG=PERF:decide eat:INF meat
 ‘I will eat meat.’

The past adverbial *ɔɔdɔ* ‘PAST’ can be added to verbs in future tense. When the past adverbial *ɔɔdɔ* ‘PAST’ is added to verbs in future tense, the verbs express an indeterminate future meaning. Indeterminate future tense is used to express actions or events that will occur at a particular time; however, it is uncertain whether these events will occur. For example,

sentences such as (7) express that it is uncertain whether the events described by verbs in future tense and accompanied by the past adverbial *ɔɔdɔ* ‘PAST’ will occur.

When the past adverbial *ɔɔdɔ* ‘PAST’ is not added to the future tense, verbs in the future tense denote determinate future meaning. Determinate future tense is used to express events or actions that will occur definitely. Sentences such as (8) express certainly that the events or actions described in future tense will occur.

(7) *okélo ɔ=wacɔ bé ɔɔdɔ ε=yá!ró dok.* (Indeterminate future)

Okelo 3SG=PERF:say COMP PAST 3SG=PERF:decide go out:INF

‘Okelo said that he might go out.’

(8) *okélo ɔ=wacɔ bé é=!yá!ró dok.* (Determinate future)

Okelo 3SG=PERF:say COMP 3SG=PERF:decide go out:INF

‘Okelo said that he would go out.’

Events or actions described by verbs inflected with future tense are bounded in time. The auxiliary *yaarɔ* ‘to decide’ is always inflected with perfect aspect when it is used to express future tense. Therefore, future tense does not coincide with adverbials that express habitual or repeated events.

(9) **a=yá!ró teedo cá m nákanaká.*

1SG=PERF:decide cook:INF food repeatedly

‘I will cook food repeatedly.’

Most verbs show morphological contrast with regard to the main combinations of tenses and aspects, including: past imperfect, past perfect, past progressive, present imperfect, present perfect, present progressive, future, and future progressive, as shown in (10). However, future tense does not distinguish between imperfect and perfect aspect. The phasal verbs such as *tyeko* ‘to finish’ must be used to distinguish perfective from imperfective meanings in the future when this distinction is required, as in (12). Otherwise, future tense can be used to express the events or actions that are completed or are not completed at a particular time in the future.

Present tense is characterized by bare verbs inflected with imperfect aspect, which are neither preceded by the past adverbial *ɔɔdɔ* ‘PAST’ nor by the auxiliary *yaarɔ* ‘FUT’. However, bare verbs in imperfect aspect do not necessarily denote simple present tense. They are unspecified in terms of tense. They can be assigned any tense in different contexts provided it is allowed semantically. They can be assigned past, present, or future

interpretations in different contexts.

On the other, hand bare verbs inflected with perfect aspect are logically assigned a past interpretation. If bare verbs inflected with perfect aspect are not preceded by the time adverbial *ɔɔdo* ‘PAST’ or the auxiliary *yaarɔ* ‘FUT’, they are assigned past interpretation.

(10) Morphological combinations of tenses and aspects

Tense	Aspect
Past	Imperfect
Present	Perfect
Future	Progressive

- (11) *ɔɔdo* a=tédó !cám. (Past imperfect)
 PAST 1SG=IMPERF:cook food
ɔɔdo a=té!dó !cám. (Past perfect)
 PAST 1SG=PERF:cook food
ɔɔdo a=tyé teedo cám. (Past progressive)
 PAST 1SG=IMPERF:be cook:INF food
 a=tédó !cám. (Present imperfect)
 1SG=IMPERF:cook food
 a=té!dó !cám. (Present perfect)
 1SG=PERF:cook food
 a=tyé teedo cám. (Present progressive)
 1SG=IMPERF:be cook:INF food
 a=yá!ró teedo cám. (Future imperfect/perfect)
 1SG=PERF:decide cook:INF food
 a=yá!ró tye teedo cám. (Future progressive)
 1SG=PERF:decide be:INF cook:INF food
- (12) a=yá!ró tyeko teedo cám. (Future perfect)
 1SG=PERF:decide finish:INF cook:INF food
 ‘I will finish cooking food.’

We can summarize the morphological combinations of tenses and aspects in Kumam as follows. The time adverbial *ɔɔdo* ‘PAST’ can be accompanied by other tenses or aspects. The auxiliary *yaarɔ* ‘FUT’ is followed only by infinitive forms of verbs.

(13) 'Boundness in time'

Bound	Unbound
Perfect	Imperfect
Progressive	
Future	

Events or actions that are expressed by perfect aspect, progressive aspect, and future tense are bounded in time. Perfect aspect, progressive aspect, and future tense are characterized by a positive value of 'boundness in time'. Events or actions bounded in time are those that happen only once at a particular time. Events or actions expressed by imperfect aspect are not bounded in time. Imperfect is characterized by a negative value of 'boundness in time'. Imperfect cannot be used to express events or actions that happen only once at a particular time; instead, it denotes events or actions that occur repeatedly or habitually. For example, the sentence in (14) is semantically appropriate provided that the event described by the verb *wilɔ* 'to buy' is repeated habitually.

(14) a=wílɔ itábun. (Imperfect)

1SG=IMPERF:buy books

'I buy the books (habitually).'

Imperfect aspect is used to express habitual or repeated events and actions that are performed in the past, present, and future. Imperfect aspect usually coincides with stative verbs as discussed in the following section. 'Stative' verbs express state of events that are not bounded in time.

Perfect aspect is used to express events and actions that have been completed at a particular time specified by the speaker. The sentence in (15) is semantically appropriate if the event had been completed at the particular time specified by the speaker.

(15) a=wí!lɔ itabɔ nɔ!ró. (Perfect)

1SG=PERF:buy book yesterday

'I bought the book yesterday.'

Progressive aspect is used to express events and actions that have already occurred and are continuing to occur at a time specified by the speaker. The sentence in (16) expresses that the event has already happened and it continues at the time specified by the speaker.

- (16) a=tyé caamɔ cá:m. (Progressive)
 1SG=IMPERF:be eat:INF food
 ‘I am eating food.’

Future tense is used to express events and actions that have not yet happened at a time specified by the speaker. The sentence in (17) is semantically appropriate if the event has not yet happened yet at the time specified by the speaker.

- (17) a=yá!ró caamɔ riŋó. (Future)
 1SG=PERF:decide eat:INF meat
 ‘I will eat the meat.’

The time adverbial *ɔɔdɔ* ‘PAST’ can be followed by any verbs inflected with imperfect, perfect, or progressive aspect, or even future tense, as discussed above.

Our conclusions about the system of tense and aspect in Kumam are as follows. Bare verbs in imperfect aspect are used to express events and actions that occur repeatedly or habitually at a particular time in the present or future. They may co-occur with the time adverbial *ɔɔdɔ* ‘PAST’ to express events and actions that happened repeatedly or habitually. Bare verbs in perfect aspect are used to express events and actions that are accomplished only once at a particular time. When they are not accompanied with time adverbials, they usually express events or actions that occurred only once at a particular time before the speaker’s utterance. They are also accompanied with the time adverbial *ɔɔdɔ* ‘PAST’ or the future auxiliary *yaarɔ* ‘FUT’ to express events or actions that occurred only once at a particular time in the past or will occur in the future. The progressive aspect is used to express events or actions that have already begun and continue at a particular time. The future tense is used to express events or actions that have not yet begun but will begin soon in the present, or events and actions that will occur in the future, as shown in (20) or (21).

- (18) a=só!mó itabɔ ɲó!ró. (PAST)
 1SG=PERF:read book yesterday
 ‘I read the book yesterday (already finish reading).’

- (19) a=tyé soomo itabɔ nán. (Progressive)
 1SG=IMPERF:be read:INF book now
 ‘I am reading the book now (already start reading).’

- (20) a=yá!ró soomo itabɔ nán. (Future)
 1SG=PERF:decide read:INF book now

‘I will read the book now (not yet start reading)’

- (21) a=yá!rǒ soomo itabǔ díkí. (Future)
1SG=PERF:decide read:INF book tomorrow
‘I will read the book tomorrow.’

2.5.4 ‘Stative’ verbs

Some ‘stative’ verbs denote events or actions that are not bounded in time. They are not inflected in perfect aspect. For example, the verb *mitǔ* ‘to want’ is usually inflected only in imperfect aspect. If events described by the verb *mitǔ* ‘to want’ occurred in the past, the verb *mitǔ* ‘to want’ is inflected in imperfect and is accompanied by the past adverbial *ǔǔdǔ* ‘PAST’, as in (2). This is the case because emotional events described by verbs such as *mitǔ* ‘to want’ are durative and not completed at a particular point in time. If verbs such as *mitǔ* ‘to want’ are inflected in perfect aspect, the sentences are not appropriate semantically. Some speakers reject sentences such as (1), others reluctantly accept them but they feel that they are marked. These verbs are called ‘stative’ verbs in Kumam.

- (1) */?a=mí!tǒ itabǔ. (Perfect)
1SG=PERF:want book
‘I wanted the book.’
- (2) ǔǔdǔ a=mítǒ itabǔ. (Past imperfect)
PAST 1SG=IMPERF:want book
‘I wanted the book.’

Some ‘stative’ verbs can be inflected in imperfect or perfect aspect in some contexts. For example, the verb *maarǔ* ‘to like’ is sometimes used in the imperfect and sometimes in the perfect aspect. When the verb *maarǔ* ‘to like’ is inflected in imperfect aspect, it expresses that the described events are durative, as in (3). If it is inflected in perfect aspect, it expresses that the described emotion is directed to a particular object. The sentence in (4) has a particular interpretation whereby the speaker has finished reading the books and is pleased by them. The verb *maarǔ* ‘to like’ inflected in perfect aspect expresses that the events that have led to the speaker’s emotions have already been completed. The meaning of the sentence (4) is that the speaker has finished reading the books and is pleased with them.

- (3) a=márǒ itábun. (Imperfect)
1SG=IMPERF:like books
‘I like (reading) books.’

- (4) a=má!rǒ itábun. (Perfect)
 1SG=PERF:like books
 ‘The books please me.’

The ‘stative’ verb *ηεeno* ‘to know’ is sometimes inflected in imperfect aspect and sometimes in perfect aspect. When the verb *ηεeno* ‘to know’ is inflected in imperfect, it denotes a cognitive meaning, as in (5). The verb *ηεeno* ‘to know’ inflected in imperfect aspect is accompanied with the past adverbial *ϷϷdo* ‘PAST’ to express that the event occurred in the past. When the verb *ηεeno* ‘to know’ is inflected in perfect aspect, it denotes an active meaning, as in (7).

- (5) a=ηέó okélo.
 1SG=IMPERF:know Okelo
 ‘I know Okelo.’

- (6) ϷϷdo a=ηέó okélo.
 PAST 1SG=IMPERF:know Okelo
 ‘I knew Okelo.’

- (7) a=ηέ!ó okélo.
 1SG=PERF:know Okelo
 ‘I identified Okelo among many persons (I met Okelo first time).

Kumam verbs are not easily classified as ‘stative’ or non-‘stative’ verbs. As discussed above, the verb *mittǒ* ‘to want’ is usually not inflected in perfect aspect as a ‘stative’ verb. However, it can be used in imperfect or perfect aspect when it is followed by infinitival complement clauses as a phasal verb, as shown in (8) and (9).

For example, the verb *mittǒ* ‘to want’ inflected in imperfect aspect expresses that an emotion continues at a particular time, while the verb inflected in perfect aspect expresses that the emotion was not present at a particular time. The speaker has already made some decision at a particular time. The sentence in (9) is translated in an English as ‘I will, shall come’ because the speaker has already made the decision. The verb *mittǒ* ‘to want’ in perfect aspect as a phasal verb is semantically equivalent to the future auxiliary *yaarǒ* ‘to decide’, because it denotes that the speaker has already stopped wishing and made his or her decision.

- (8) a=mító biino. (Imperfect)
 1SG=IMPERF:want come:INF
 ‘I want to come.’

- (9) a=mí!tó biino. (Perfect)
 1SG=PERF:want come:INF
 ‘I will, shall come.’

It is not easy to divide Kumam verbs into ‘stative’ and non-‘stative’ categories with regard to aspect, because ‘stative’ verbs may be used in imperfect or perfect aspect in different contexts. However, events that are expressed by ‘stative’ verbs have causes and results. Causes are completed at a particular time and results denote states of events.

2.6 Arguments, core and peripheral

Constituents in sentences are divided into core and peripheral elements, as previously discussed. Core elements include verbs, arguments, and benefactive NPs. Other NPs, such as locative, dative, instrumental, reason, and accompaniment NPs, and adverbials constitute peripheral elements in sentences. Accompaniment NPs are members of peripheral elements but they behave irregularly in sentences for lexical reasons. Kumam transitive verbs always require two arguments, namely a subject and a direct object. Kumam also has a small set of ditransitive verbs, which may allow an indirect and a direct object. An NP can occupy a subject slot, whether it consists of a noun or a pronoun. Subject clitics are added to the following verbs, which agree with subjects. The subject clitics, *ɔ*= ‘3S/P’ and *a*= ‘1SG’, agree with the subjects, *okélo* ‘Okelo’ and *áηó*(L) ‘1SG’, respectively, in (1) and (2). Subject clitics are morphemes that agree with subjects. Subject clitics are obligatorily added to verbs in sentences except in the case of imperatives. Subject slots can be empty because subject clitics are added to verbs, as illustrated in (3).

- (1) *okélo* *ɔ*=*nɛnɔ* *ɪcúɔ*.
 Okelo 3S/P=PERF:see man
 ‘Okelo saw the man.’
- (2) *áηó* *a*=*né!nó* *ɪcúɔ*.
 1SG 1SG=PERF:see man
 ‘I saw the man.’
- (3) *a*=*né!nó* *ɪcúɔ*.
 1SG=PERF:see man
 ‘I saw the man.’

When verbs are transitive, direct object slots must be filled by nominal or pronominal elements. The pronominal elements include independent pronouns and object suffixes. The

noun *ιεσο* ‘man’ occupies a direct object slot in (1), (2), and (3). The object suffix *-á* ‘1SG’ occupies a direct object slot as a pronominal element in (4). The 1st person singular independent pronoun *άηό*(L) ‘1SG’ occupies an object slot in (5). Object suffixes are not morphemes that mark agreement with objects. When object suffixes are added to verbs, the verbs are not followed by direct objects whether they are independent nouns or pronouns. If object slots are occupied by direct objects, whether they are independent nouns or pronouns, object suffixes must not be added to verbs. The sentence (6) is ungrammatical because it does not follow the valence restriction. The verb *νεενο* ‘to see’ has three arguments in spite of the fact that transitive verbs allow only two arguments. If transitive verbs have only one argument in a sentence, the sentence is not grammatical except for the case of imperatives, as shown in (7). From these facts we can conclude that object suffixes are not morphemes that mark agreement with objects but weak forms of pronouns that are attached to verbs.

(4) *okélo* *ο=νεη-ά*.

Okelo 3S/P=PERF:see-1SG

‘Okelo saw me.’

(5) *okélo* *ο=νεηο* *άηό*.

Okelo 3S/P=PERF:see 1SG

‘Okelo saw me.’

(6) **okélo* *ο=νεη-ά* *άηό*.

Okelo 3S/P=PERF:see-1SG 1SG

‘Okelo saw me.’

(7) **okélo* *ο=νεηο*.

Okelo 3S/P=PERF:see

‘Okelo saw.’

Intransitive verbs take only one argument, namely a subject. The intransitive verb *οοτο* ‘to go’ allows only one argument, namely a subject, as in (8). The locative prepositional phrases such as *i-sukú!lú* ‘to school’ in (8) do not constitute arguments in sentences.

(8) *atín* *ότό* *i-sukú!lú*.

child 3SG:IMPERF:go to-school

‘The child goes to the school.’

Kumam has some ditransitive verbs. Ditransitive verbs allow three arguments in sentences. In (9), the ditransitive verb *μιννο* ‘to give’ has the subject *okélo* ‘Okelo’, the indirect object *atín*

‘child’, and the direct object *itabó* ‘book’. Ditransitive verbs do not necessarily require three arguments. Two arguments are sufficient enough for ditransitive sentences to be grammatical. In (10), the ditransitive verb *dunó* ‘to force’ has two arguments, namely the 1st person singular as the subject and the object complement clause *icóó kwal gwén* ‘that the man should steal the chickens’.

(9) okélo ɔ=mɪɔ atín itabó.
 Okelo 3S/P=PERF:give child book
 ‘Okelo gave th child the book.’

(10) a=dí!ó icóó kwal gwén.
 1SG=PERF:force man 3SG:steal:SUB chickens
 ‘I forced the man to steal the chickens.’

Core elements of sentences include subjects, verbs, direct objects, and benefactive NPs. Benefactive NPs are a type of core elements. Benefactive NPs may intervene between verbs and direct objects. For example, the benefactive NP *atín* ‘child’ intervenes between the verb *teedo* ‘to cook’ and the direct object *cám* ‘food’ in (12). The order of constituents is determined by syntactic and pragmatic factors as discussed in Section 4.2.

(11) dákó ɔ=tedo cáam né-á!tín poró.
 woman 3S/P=PERF:cook food for-child yesterday
 ‘The woman cooked food for the child yesterday.’

(12) dákó ɔ=tedo né-á!tín !cám pó!ró.
 woman 3S/P=PERF:cook for-child food yesterday
 ‘The woman cooked food for the child yesterday.’

Peripheral elements cannot intervene between core elements. Locative, instrumental, reason, and accompaniment NPs, along with time adverbials, constitute peripheral elements in sentences. However, time adverbials are freely located in sentences. Moreover, accompaniment NPs behave irregularly for lexical reasons. The sentence in (14) is ungrammatical because the reason NP *atín* ‘child’ intervenes between the verb *wiló* ‘to buy’ and the direct object *itabó* ‘book’. The sentence in (16) is ungrammatical because the locative NP *atállé* ‘market’ intervenes between the verb *wiló* ‘to buy’ and the direct object *itabó* ‘book’. The sentence in (18) is accepted by Kumam speakers even though the time adverbial *poró* ‘yesterday’ intervenes between the verb *wiló* ‘to buy’ and the direct object *itabó* ‘book’. Time adverbials are freely located in sentences.

- (13) okélo ɔ=wɪɔ itabɔ pí-!á!tín. (Reason)
 Okelo 3S/P=PERF:buy book because of child
 ‘Okelo bought the book because of-the child.’
- (14) *okélo ɔ=wɪɔ pí-á!tín itabó. (Reason)
 Okelo 3S/P=PERF:buy because of-child book
 ‘Okelo bought the book because of the child.’
- (15) okélo ɔ=wɪɔ itabɔ í-atá!lé. (Locative)
 Okelo 3S/P=PERF:buy book at-market
 ‘Okelo bought the book at the market.’
- (16) *okélo ɔ=wɪɔ í-atá!lé ítabó. (Locative)
 Okelo 3S/P=PERF:buy at-market book
 ‘Okelo bought the book at the market.’
- (17) okélo ɔ=wɪɔ itabɔ jó!ró. (Time adverbial)
 Okelo 3S/P=PERF:buy book yesterday
 ‘Okelo bought the book yesterday.’
- (18) ?okélo ɔ=wɪɔ joro ítabó. (Time adverbial)
 Okelo 3S/P=PERF:buy yesterday book
 ‘Okelo bought the book yesterday.’

Time adverbials are freely located in sentences. They sometimes may intervene between core elements. For example, the time adverbial *joro* ‘yesterday’ intervenes between the direct object *cám* ‘food’ and the benefactive NP *atín* ‘child’ in (20), even though direct objects and benefactive NPs are members of core elements.

- (19) okélo ɔ=wɪɔ itabɔ né-á!tín jó!ró.
 Okelo 3S/P=PERF:buy book for-child yesterday
 ‘Okelo bought the book for the child yesterday.’
- (20) dákó ɔ=tedo cám joro né-á!tín.
 woman 3S/P=PERF:cook food yesterday for-child
 ‘The woman cooked food for the child yesterday.’

Peripheral elements can intervene between other peripheral elements. The time adverbial *joro* ‘yesterday’ is followed by the locative NP *atá!lé* ‘market’ in (21). The reason NP *atín* ‘child’ is preceded by the locative NP *atá!lé* ‘market’ in (22), while it is followed by the locative NP *atá!lé* ‘market’ in (23). The order of peripheral elements within periphery is determined by pragmatic factors.

- (21) okélo ɔ=wɪɔ itabɔ ɲóro í-!atá!lé. (Time, Locative)
 Okelo 3S/P=PERF:buy book yesterday at-marked
 ‘Okelo bought the book at the marked yesterday.’
- (22) okélo ɔ=wɪɔ itabɔ í-atá!lé pí-!á!tín. (Locative, Reason)
 Okelo 3S/P=PERF:buy book at-market because of-child
 ‘Okelo bought the book for the child at the market.’
- (23) okélo ɔ=wɪɔ itabɔ pí-!á!tín í-atá!lé. (Reason, Locative)
 Okelo 3S/P=PERF:buy book because of- child at-market
 ‘Okelo bought the book for the child at the market.’

Accompaniment NPs behave irregularly in terms of the position in sentences for lexical reasons. Accompaniment NPs consist of the preposition *kede-* ‘with’ and the following NPs. Accompaniment NPs are preferably located in direct postverbal positions, as in (24).

The preposition *kede-* ‘with’ has another function as a coordinate conjunction that links NPs. Accompaniment NPs are ambiguously interpreted as coordinate conjunctive constructions with their preceding NPs. For example, in (25) the preposition *kede-* ‘with, and’ is usually interpreted as a coordinate conjunction that connects the NP *ɔpio* ‘Opio’ with the preceding NP *okélo* ‘Okelo’.

- (24) dákó ɔ=dipo kede-okélo ɔpio.
 woman 3S/P=PERF:hit with-Okelo Opio
 ‘The woman hit Opio with Okelo.’
- (25) dákó ɔ=dipo okélo kede-ɔpio.
 woman 3S/P=PERF:hit Okelo and-Opio
 ‘The woman hit Okelo and Opio.’

If accompaniment NPs are located in direct postverbal positions, they are easily interpreted as performing the thematic role of accompaniment in sentences.

2.7 ‘Switch’ and non-‘switch’ reference

Kumam has two sets of subject clitics for 3rd person. When 3rd person subject clitics do not refer to the same referents mentioned in the preceding NPs in a given context, ‘switch’ reference subject clitics are used²⁴. The ‘switch’ reference subject clitics are *ɔ=* and *ɔ=* for 3rd person singular and plural in imperfect and perfect aspect, respectively. ‘Switch’ reference

²⁴ The term logophoric is used in other literatures. I adopt the terms ‘switch’ and non-‘switch’ reference defined by Noonan (1992).

clitics do not distinguish number. The ‘switch’ reference clitic $\varphi=$ is added to the verb *teedo* ‘to cook’ in the sentence in (4), if the subject *okélo* ‘Okelo’ does not refer to the same referent as those to which the preceding NPs refer in a given context.

When 3rd person subject clitics may or may not refer to the same referents as those to which the preceding NPs refer in a given context, non-‘switch’ reference subject clitics are used. Non-‘switch’ reference subject clitics are $\varepsilon=$ for the singular and $g\iota=$ for the plural both in imperfect and perfect aspect²⁵. The non-‘switch’ reference clitics may or may not refer to the same referents as those to which are referred by the preceding NPs in a given context. For example, the non-‘switch’ reference clitic $\varepsilon=$ may sometimes refer to the same referent as that which has been identified in the preceding context or may sometimes refer to the different referent from that which has been identified in the preceding NPs. This point is illustrated in (3).

- | | | |
|--------------------------|---------------------|-----------------------------|
| (1) Imperfect | Perfect | (Non-‘switch’ reference) |
| sg $\varepsilon=tédó$ | $\varepsilon=té!dó$ | |
| pl $g\iota=tédó$ | $g\iota=té!dó$ | |
| (2) Imperfect | Perfect | (‘Switch’ reference) |
| sg/pl $tédó$ | $\varphi=tedo$ | |
| (3) $\varepsilon=té!dó$ | $!cám.$ | (Non-‘switch’ reference) |
| 3SG=PERF:cook | food | |
| ‘He or she cooked food.’ | | |
| (4) <i>okélo</i> | $\varphi=tedo$ | $cám.$ (‘Switch’ reference) |
| Okelo | 3S/P=PERF:cook | food |
| ‘Okelo cooked food.’ | | |

From the paradigms of the 3rd person clitics illustrated in (1) and (2) we could propose a diachronic account of the ‘switch’ reference clitic $\varphi=$ for 3rd person singular and plural in imperfect as well as perfect aspect. The ‘switch’ reference 3rd person clitic $\varphi=$ ‘3S/P’ in perfect aspect in modern Kumam might have originally been an aspect marker for perfect aspect. The aspect marker $\varphi-$ is coalesced with vowels of the preceding subject clitics (e.g. $\varepsilon + \varphi \rightarrow \varepsilon$, $g\iota + \varphi \rightarrow g\iota$)²⁶. However, I propose a synchronic account of the non-‘switch’ reference clitic $\varphi=$ ‘3S/P’ in modern Kumam, because there is no clear evidence for suggesting that

²⁵When the independent personal pronoun *gín* ‘3PL’ is followed by verbs, the 3rd person plural non-‘switch’ reference clitic $\iota=$ ‘3PL’ is used instead of $g\iota(H)=$ ‘3PL’.

²⁶ The original perfect aspect marker $\varphi-$ was grammaticalized as the subject clitic for the 3rd person singular and plural in the perfect aspect.

vowel coalescence takes place between the supposed aspect marker *ɔ-* and subject clitics.

When ‘switch’ reference subject clitics are used in subordinate clauses, they refer to different than the referents of the matrix clause subjects. When non-‘switch’ reference clitics are used in subordinate clauses, they may or may not refer to the same referents as the referents of the matrix subjects. To be accurate, non-‘switch’ reference subject clitics in the subordinate clauses refer to different referents than those to which the controllers of coreference refer in the main clauses. The controllers are topics, not subjects, as discussed later in Section 4.1.

For example, in (5) the ‘switch’ reference clitic *ɔ=* ‘3S/P’ refers to a different person from the referent of the matrix subject *ɪcɔɔ* ‘man’. The man who closed the door is different from the man who is the referent of the subject *ɪcɔɔ* ‘man’ in the matrix clause. On the other hand, in (6), the man who closed the door may or may not be the same person as the man who is the referent of the subject *ɪcɔɔ* ‘man’ in the matrix clause.

(5) *ɪcɔɔ* *ɔ=yutuno* *bé* *ɔ=yego* *ekéko.* (‘Switch’reference)
 man_i 3S/P_i=PERF:remember COMP 3S/P_j=PERF:close door
 ‘The man_i remembered that he_j closed the door.’

(6) *ɪcɔɔ* *ɔ=yutuno* *bé* *é=!cyé!gó* *ekéko.* (Non-‘switch’reference)
 man_i 3S/P_i=PERF:remember COMP 3S_{i/j}=PERF:close door
 ‘The man_i remembered that he_{i/j} closed the door.’

The topic slot is empty by accident in (5) and (6). The subject *ɪcɔɔ* ‘man’ is chosen as the topic in the matrix clause in (5) and (6) because the topic slot is empty. The topic *ɪcɔɔ* ‘man’ is the controller that determines the coreference in the subordinate clauses. In (5), the subject of the subordinate clause does not refer to the same referent as the controller *ɪcɔɔ* ‘man’ in the matrix clause, so the ‘switch’ reference subject clitic *ɔ=* ‘3S/P’ is used in the subordinate clause. When the subject of the subordinate clause may or may not refer to the same referent as the controller *ɪcɔɔ* ‘man’ in the matrix clause, the non-‘switch’ reference subject clitic *ε=* ‘3SG’ is used.

‘Switch’ or non-‘switch’ reference subject clitics are used also in coordinate constructions or in sequences of sentences. When ‘switch’ reference subject clitics are used in following clauses of coordinate constructions, they do not refer to same referents as those of the subjects in the preceding clauses. When ‘switch’ reference subject clitics are used in following sentences in sequences of sentences, they do not refer to same referents as those of the subjects or controllers of coreference in the preceding sentences. When non-‘switch’ reference clitics are used in following clauses of coordinate constructions or in following

sentences of sequences of sentences, they may or may not refer same referents as those of the subjects or controllers of coreference in the preceding clauses of coordinate constructions or in the preceding sentences of sequences of sentences.

Kumam has a particular coordinate construction consisting of the auxiliary *ko* ‘and to do’. For example, in (7), the ‘switch’ reference subject clitic ϱ = ‘3S/P’ in the second clause does not refer to the same referent as the subject or the controller of coreference *dákó* ‘woman’ in the first clause of the coordinate construction. In (8), the non-‘switch’ reference subject clitic ε = ‘3SG’ in the second clause may or may not refer to the same referent as the subject or the controller of coreference *dákó* ‘woman’ in the first clause of the coordinate construction.

(7) *dákó* ϱ =tedo *cám* \acute{o} =!kó *caamɔ*. (‘Switch’reference)
 woman_i 3S/P_i=PERF:cook food 3S/P_j=PERF:do eat:INF
 ‘The woman cooked food and he ate it.’

(8) *dákó* ϱ =tedo *cám* \acute{e} =!kó *caamɔ*. (Non-‘switch’reference)
 woman_i 3S/P_i=PERF:cook food 3SG_{i/j}=PERF:do eat:INF
 ‘The woman cooked food and she/he ate it.’

The examples in (9) and (10) consist of two sentences. In (9), the ‘switch’ reference subject clitic ϱ = ‘3S/P’ in the second sentence does not refer to the same referent as the subject or the controller of coreference *dákó* ‘woman’ in the first sentence of the sequence of sentences. On the other hand, in (10), the non-‘switch’ reference subject clitic ε = ‘3SG’ may or may not refer to the same referent as the subject or the controller of referent *dákó* ‘woman’ in the first sentence of the sequence of sentences.

(9) *dákó* ϱ =tedo *cám*.
 woman_i 3S/P_i=PERF:cook food
 ϱ =camɔ. (‘Switch’reference)
 3S/P_j=PERF:eat
 ‘The woman cooked food. He ate it.’

(10) *dákó* ϱ =tedo *cám*.
 woman_i 3S/P_i=PERF:cook food
 ε =cá!mó. (Non-‘switch’reference)
 3SG_{i/j}=PERF:eat
 ‘The woman cooked food. She/he ate it.’

2.8 Predicate nominal and predicate adjective constructions

Predicate nominal constructions consist of subjects and following predicate nominal elements. When subjects are personal pronominals, independent personal pronouns are used as subjects. In (1), the independent personal pronoun *áńó*(L) ‘1SG’ is the subject and is followed by the predicate nominal *emúrón* ‘doctor’ without a copula. When subjects are independent nouns, they are linked with predicate nominal elements by the verb *tye* ‘to be’ inflected in imperfect aspect. For example, in (2), the independent noun *okélo* ‘Okelo’ is linked with the predicate nominal *apwoń* ‘teacher’ by the verb *tye* ‘to be’ inflected in imperfect aspect. If independent nouns are not separated from predicate nominal elements by the verb *tye* ‘to be’, they constitute independent words that are considered separate from the following nominal elements. For example, in (4), the independent noun *apío* ‘Apio’ constitutes an independent word that is separate from the following nominal element *dákó okélo* ‘Okelo’s wife’. The construction is regarded as made up of two sentences.

(1) *áńó emúrón.*

1SG doctor
‘I am a doctor.’

(2) *okélo tyé apwoń.*

Okelo 3SG:IMPERF:be teacher
‘Okelo is a teacher.’

(3) *apío tyé !dákó okélo.*

Apio 3SG:IMPERF:be wife of:Okelo
‘Apio is Okelo’s wife.’

(4) *apío. dákó okélo.*

Apio wife of:Okelo
‘Apio. Okelo’s wife.’

Although Kumam has lost a morphological distinction for number in the nominal morphology, a small set of nouns have distinct plural forms. When nouns have distinct plural forms, they agree with subjects in number and the plural forms are used in predicate nominal constructions. For example, in (6), because the subject *wán* ‘1PL’ is plural, the plural form *awobe* ‘boys’ is used in the predicate nominal construction.

(5) *áńó awóbí.*

1SG boy
‘I am a boy.’

- (6) wán áwobe.
 IPL boys
 ‘We are boys.’

Past tense is expressed by the adverbial particle *ɔɔdɔ* ‘PAST’ in predicate nominal constructions. Although the location of the past tense particle *ɔɔdɔ* ‘PAST’ is varied in sentences, the order of subjects and predicate nominal elements is invariable. Independent pronouns that are subjects are linked with predicate nominal elements without a copula, while independent nouns are linked with predicate nominal elements by the verb *tye* ‘to be’. Even if predicate nominal constructions have the adverbial particle *ɔɔdɔ* ‘PAST’, the verb *tye* ‘to be’ is always inflected in imperfect aspect.

- (7) ɔɔdɔ áŋɔ awóbí.
 PAST 1SG boy
 ‘I was a boy.’
- (8) ɔɔdɔ okélo tyé apwoŋ.
 PAST Okelo 3SG:IMPERF:be teacher
 ‘Okelo was a teacher.’

Future tense is expressed by the auxiliary *yaarɔ* ‘to decide’ and the following infinitive form of the verb *beedo* ‘to stay, become’ in predicate nominal constructions. The auxiliary *yaarɔ* ‘to decide’ is inflected in perfect aspect, agreeing with subjects for person and number. Even if subjects are personal pronominals, since the auxiliary *yaarɔ* ‘to decide’ is inflected for person and number to agree with subjects, independent personal pronouns are not necessary as subjects.

- (9) áŋɔ a=yá!rɔ beedo apwoŋ.
 1SG 1SG=PERF:decide stay:INF teacher
 ‘I will be a teacher.’
- (10) a=yá!rɔ beedo apwoŋ.
 1SG=PERF:decide stay:INF teacher
 ‘I will be a teacher.’
- (11) okélo ɔ=yarɔ beedo apwoŋ.
 Okelo 3S/P=PERF:decide stay:INF teacher
 ‘Okelo will be a teacher.’

Predicate nominal constructions may constitute infinitive complement clauses. Predicate nominal constructions are infinitive complement clauses when they consist of the infinitive form of the verb *beedo* ‘to stay’ and the following NPs.

- (12) a=mító beedo apwoj.
 1SG=IMPERF:want stay:INF teacher
 ‘I want to be a teacher.’

Predicate nominal elements may be modified by various modifiers in the usual way. For example, the predicate nominal *apwoj* ‘teacher’ is modified by the adjective *ber* ‘good’ or the possessive *-ná* ‘1SG’ in (13) and (14).

- (13) áηó apwoj a-bér.
 1SG teacher ATT-good
 ‘I am a good teacher.’

- (14) okélo tyé apwoj-ná.
 Okelo 3SG:IMPERF:be teacher-1SG
 ‘Okelo is my teacher.’

Predicate adjectives behave like verbs in many respects. Predicate adjectives are inflected to agree with subjects for person and number. Adjectives constitute complex constructions with subject clitics, though they are inflected only in imperfect aspect. Even if subjects are pronominal, independent personal pronouns are not necessary because adjectives are inflected to agree with subjects.

- (15) áηó a=rác.
 1SG 1SG=IMPERF:bad
 ‘I am bad.’

- (16) a=rác.
 1SG=IMPERF:bad
 ‘I am bad.’

When predicate adjectives follow independent nominal subjects, they are linked with subjects without a copula. They are not inflected to agree with subjects. No toneme is observed between subjects and predicate adjectives. Given the fact that no toneme occurs before predicate adjectives it is supposed that predicate adjective constructions are inflected in

imperfect aspect²⁷. In (17), the subject *twol* ‘snake’ is linked with the adjective *rac* ‘bad’ without a copula.

Many adjectives preserve a morphological distinction for number. They morphologically distinguish plural and singular forms. When subjects are plural, plural forms of adjectives are used in predicate adjective constructions. For example, the plural form *reco* ‘bad:PL’ is used to agree with the subject *twólé* ‘snakes’ for number in (18).

(17) *twol rac.*
snake bad
‘The snake is bad.’

(18) *twólé réco.*
snakes bad:PL
‘The snakes are bad.’

Past tense is expressed by the adverbial particle *ɔɔdo* ‘PAST’. Though the position of the adverbial particle *ɔɔdo* ‘PAST’ is varied in sentences, the order of subjects and predicate adjectives is invariable. When subjects are pronominal, predicate adjectives are inflected to agree with subjects for person and number in imperfect aspect. Independent personal pronouns are not necessary because predicate adjectives are inflected for person and number.

(19) *ɔɔdo áŋó a=rác.*
PAST 1SG 1SG=IMPERF:bad
‘I was bad.’

(20) *ɔɔdo a=rác.*
PAST 1SG=IMPERF:bad
‘I was bad.’

When predicate adjectives are preceded by independent nouns or pronouns that are subjects, the predicate adjectives are inflected to agree with subjects for person and number. For example, in (21), the predicate adjective *rac* ‘bad’ is inflected with 3rd person singular in imperfect agreeing with the subject *atín* ‘child’. When subjects are plural, plural forms of adjectives are used to agree with subjects in number, such as in (22).

²⁷Verbs in imperfect aspect are not preceded by any toneme in the verbal morphology.

(21) atfn rac.
 PAST child 3SG:IMPERF:bad
 ‘The child was bad.’

(22) $\text{wán } \text{reco.}$
 PAST 1PL 1PL=IMPERF:bad:PL
 ‘We were bad.’

Future tense is expressed by the auxiliary *yaarɔ* ‘to decide’ and the infinitive form of the verb *beedo* ‘to stay, become’ in predicate adjective constructions. The auxiliary *yaarɔ* ‘to decide’ is inflected to agree with subjects for person and number in perfect aspect. Adjectives follow the infinitive form of the verb *beedo* ‘to stay, become’ without inflection. When subjects are personal pronominals, independent pronouns are not necessary because the auxiliary *yaarɔ* ‘to decide’ is inflected for person and number.

(23) $\text{a=yá!rɔ beedo rac.}$
 1SG 1SG=PERF:decide become:INF bad
 ‘I will be bad.’

(24) $\text{a=yá!rɔ beedo rac.}$
 1SG=PERF:decide become:INF bad
 ‘I will be bad.’

When subjects are independent nouns, the auxiliary *yaarɔ* ‘to decide’ is inflected for 3rd person to agree with the subjects. The auxiliary *yaarɔ* ‘to decide’ is always inflected in perfect aspect for future tense.

(25) $\text{atfn } \text{reco beedo rac.}$
 child 3S/P=PERF:decide become:INF bad
 ‘The child will be bad.’

Predicate adjective constructions may constitute infinitive complement clauses. Predicate adjective constructions are infinitive complement clauses when they consist of the infinitive form of the verb *beedo* ‘to stay, become’ and the following adjectives. The adjectives are not inflected for person and number.

(26) a=mítɔ beedo rac.
 1SG=IMPERF:want stay:INF bad

‘I want to be bad.’

Cleft sentences can be constructed from predicate nominal constructions. The vowel of the relative marker is usually coalesced into the following vowel²⁸. The subject is moved to the main clause in the cleft construction in (27).

(27) awóbí, én á !ó!kélo. → [...é!nó!kélo]

boy 3SG REL Okelo

‘It is the boy who is Okelo.’

(28) awóbí okélo.

boy Okelo

‘The boy is Okelo’

2.9 Existence, location and possession

Existential and locational constructions are formed with *tye* ‘to be’ in affirmative and *líká tye* ‘not to be’ in negative sentences. The verb *tye* ‘to be’ is always inflected with imperfect aspect. The verb *tye* ‘to be’ is preceded by NPs in existential and locational constructions. The verb *tye* ‘to be’ may be followed by NPs in existential constructions. Existential constructions preferably consist of relative clauses, as in (2). The verb *tye* ‘to be’ is always preceded by NPs in locational constructions. Bare nouns are usually interpreted as definite. The unspecific suffix *-móró* ‘some’ is attached to nouns in order to denote indefiniteness.

Existential constructions are not distinguished from locational constructions. If it is necessary to distinguish existential from locational constructions, relative clauses are used in existential constructions, as shown in (2).

(1) ɪ!tábɔn tyé i-wi-εmé!sá. (Existential)

books 3SG:IMPERF:be in-head-table

‘There are the books on the table.’

(2) tyé ɪtábɔn α tyé i-wi-εmé!sá. (Existential)

3SG:IMPERF:be books REL 3SG:IMPERF:be in-head-table

‘There are the books which are on the table.’

(3) ɪtabɔ tyé ɪ-ɔt. (Locational)

book 3SG:IMPERF:be in-house

²⁸The relative marker á(L) is preferably used when subjects are relativized.

‘The book is in the house.’

- (4) líká ítabũ tyé ɪ-ɔt. (Existential)
NEG book 3SG:IMPERF:be in-house

‘There is not a book in the house.’

- (5) itabũ-móró tyé ɪ-ɔt. (Existential)
book-some 3SG:IMPERF:be in-house

‘There is a book in the house.’

- (6) a=tyé ɪ-ɔt. (Locational)
1SG=IMPERF:be in-house

‘I am in the thouse.’

- (7) líká á!tín-!ná tyé i-sukú!lú. (Locational)
NEG child-1SG 3SG:IMPERF:be in-school

‘My child is not in the school.’

Possessive constructions are formed with the verb *tye* ‘to be’ followed by the preposition *kede-* ‘with’ or *ɪ-* ‘with’. The verb *tye* ‘to be’ is always inflected with imperfect aspect.

- (8) okélo tyé kede-itabó.
Okelo 3SG:IMPERF:be with-book

‘Okelo has the book.’

The past tense is expressed by the adverbial *ɔɔdɔ* ‘PAST’ for existential, locational and possessive constructions.

- (9) ɔɔdɔ itabũ-móró tyé ɪ-ɔt. (Existential)
PAST book-some 3SG:IMPERF:be in-house

‘There was a book in the house.’

- (10) atín-!ná ɔɔdɔ tyé i-sukú!lú. (Locational)
child-1SG PAST 3SG:IMPERF:be in-school

‘The child was not in the school.’

- (11) okélo ɔɔdɔ tyé kede-itabó. (Possession)
Okelo PAST 3SG:IMPERF:be with-book

‘Okelo had the book.’

2.10 Deviations from the canonical order

Kumam permits deviations from the canonical word order outlined in Section 2.1. Deviations

from the canonical word order are mainly due to pragmatic demand discussed later in Section 4.2. Aside from some variations in the placement of constituents, only topicalization can affect the linear order of constituents in simple sentences.

2.10.1 Variation in the placement of benefactive NPs

The pragmatic factors that determine word order of constituents will be discussed later in Section 4.2. The variation in the placement of benefactive NPs will be summarized here. Benefactive NPs may behave as core elements in sentences. While benefactive NPs are freely located in any places in the core postverbally, they are usually followed by direct objects in pragmatically unmarked sentences.

- (1) *dákó* *ɔ=tedo* *né-í!cǔɔ* *rijó*.
 woman 3S/P=PERF:cook for-man meat
 ‘The woman cooked the meat for the man.’

The benefactive NP may be preceded by a direct object.

- (2) *dákó* *ɔ=tedo* *rijo* *né-í!cǔɔ*.
 woman 3S/P=PERF:cook meat for-man
 ‘The woman cooked the meat for the man.’

The benefactive NP *icǔɔ* ‘man’ behaves as a core in (1) and (2), because it intervenes between the verb *ɔ=tedo* ‘she cooked’ and the direct object *rijó* ‘meat’ in (1).

Though the placement of benefactive NPs is free in the core postverbally, benefactive NPs are not located in preverbal positions except in the cases when they are topicalized.

2.10.2 Variation in the placement of peripheral element

Peripheral elements are freely located in any place in the periphery of sentences. For example, the reason NP *atín* ‘child’ is preceded by the locative NP *atá!lé* ‘market’ in (1), and is followed by the locative NP *atá!lé* ‘market’ in (2). Reason NPs and locative NPs are members of peripheral elements.

Peripheral elements do not intervene between core elements. The sentence in (3) is not grammatical because the locative NP *atále* ‘market’ intervenes between the verb *ɔ=wɪɔ* ‘he bought’ and the direct object *itabǔ* ‘book’, both of which are members of core elements.

- (1) $\text{ic}\acute{\text{o}}\text{o}$ $\text{c}=\text{w}\text{i}\text{l}\text{o}$ $\text{itab}\bar{\text{v}}$ $\text{i-at}\acute{\text{a}}!\text{l}\acute{\text{e}}$ $\text{p}\acute{\text{i}}-\text{!}\acute{\text{a}}!\text{t}\acute{\text{i}}\text{n}$.
 man 3S/P=PERF:buy book at-market because of-child
 ‘The man bought the book at the market yesterday.’
- (2) $\text{ic}\acute{\text{o}}\text{o}$ $\text{c}=\text{w}\text{i}\text{l}\text{o}$ $\text{itab}\bar{\text{v}}$ $\text{p}\acute{\text{i}}-\text{!}\acute{\text{a}}!\text{t}\acute{\text{i}}\text{n}$ $\text{i-at}\acute{\text{a}}!\text{l}\acute{\text{e}}$.
 man 3S/P=PERF:buy book because of-child at-market
 ‘The man bought the book at the marked yesterday.’
- (3) * $\text{ic}\acute{\text{o}}\text{o}$ $\text{c}=\text{w}\text{i}\text{l}\text{o}$ $\text{i-at}\acute{\text{a}}!\text{l}\acute{\text{e}}$ $\text{itab}\bar{\text{v}}$ $\text{j}\acute{\text{o}}!\text{r}\acute{\text{o}}$.
 man 3S/P=PERF:buy at-market book yesterday
 ‘The man bought the book at the market yesterday.’

The word order in postverbal position is determined by both syntactic and pragmatic factors, as discussed in Section 4.2.

2.10.3 Topicalization

Kumam has topicalization, a syntactic device that moves NPs from their original positions to the beginning of sentence. Any NPs such as direct objects and objects of prepositions can be topicalized. NPs can be topicalized even from subordinate clauses. When human direct objects are topicalized, the pronominal copies are left in the original positions from which the NPs are moved. When non-human direct objects are topicalized, the pronominal copies are not left in the original positions from which the NPs are moved. For example, the 3rd person object suffix *-é* is attached to the verb *neeno* ‘to see’ as the pronominal copy of the topicalized NP *icoo* ‘man’ which is moved to the sentence initial position in (2). In (4) the topicalized NP *itabó* ‘book’ is non-human, so no pronominal copy is left in the original place from which the NP is moved.

- (1) $\text{a}=\text{n}\acute{\text{e}}\text{n}\acute{\text{o}}$ $\text{ic}\acute{\text{o}}\text{o}$.
 1SG=PERF:see man
 ‘I saw the man.’
- (2) $\text{ic}\acute{\text{o}}\text{o}$, $\text{a}=\text{n}\acute{\text{e}}!\text{n-}\acute{\text{e}}$. (Topicalization)
 man_i 1SG=PERF:see-3SG_i
 ‘The man, I saw.’
- (3) $\text{a}=\text{w}\acute{\text{i}}!\text{l}\acute{\text{o}}$ $\text{itab}\acute{\text{o}}$.
 1SG=PERF:buy book
 ‘I bought the book.’
- (4) $\text{itab}\acute{\text{o}}$, $\text{a}=\text{w}\acute{\text{i}}!\text{l}\acute{\text{o}}$. (Topicalization)
 book 1SG=PERF:buy

‘The book, I bought.’

When objects of prepositions, whether they are human or non-human, are topicalized, the pronominal copies are left in the original positions from which the NPs are moved. For example, in (6), when the human object *icóo* ‘man’ of the preposition *né-* ‘for’ is topicalized, the 3rd person singular suffix *-é* ‘3SG’ is attached to the preposition as the pronominal copy²⁹. In (8), when the associative non-human NP *dyaŋ* ‘cow’ is moved into the sentence initial position according to topicalization, the 3rd person singular possessive *-éré* ‘3SG’ is attached to the noun *riŋó* ‘meat’ as the pronominal copy³⁰.

(5) *dákó* *o=tedo* *né-í!cóo* *cám.*

woman 3S/P=PERF for-man food

‘The woman cooked food for the man.’

(6) *icóo*, *dákó* *o=tedo* *n:é* *cám.* (Topicalization)

man_i woman 3S/P=PERF:cook for:3SG_i food

‘The man, the woman cooked food for.’

(7) *dákó* *o=tedo* *riŋo mé-dyaŋ.*

woman 3S/P=PERF:cook meat of-cow

‘The woman cooked the meat of cow.’

(8) *dyaŋ*, *dákó* *o=tedo* *riŋo-méré.* (Topicalization)

cow_i woman 3S/P=PERF:cook meat-3SG_i

‘The cow, the woman cooked the meat of.’

When adverbials are topicalized, the pronominal copies are not left in the original positions from which the adverbials are moved³¹. For example, the time adverbial *ŋoró* ‘yesterday’ is moved into the sentence initial position according to topicalization in (10). It does not leave a pronominal copy in the original position.

(9) *okélo* *o=wilo* *itabɔ nólró.*

Okelo 3S/P=PERF:buy book yesterday

²⁹The vowel of the 3rd person singular suffix *-é* is coalesced with the vowel of the preposition *né-* ‘for’.

³⁰The 3rd person singular inalienable possessive suffix *-éré* ‘3SG’.

³¹ Topicalization as well as relativization includes movement of NPs. The pronominal copies are left in the original positions from which the adverbials are moved according to relativization. The difference between topicalization and relativization is that topic nodes are not controlled by CP (cf. Rizzi, 1997).

‘Okelo bought the book yesterday.’

- (10) $\mu\alpha\acute{o}$, okélo $\sigma=\omega\iota\omicron$ itabó. (Topicalization)
yesterday, Okelo 3S/P=PERF:buy book
‘Yesterday, Okelo bought the book.’

Any NPs may be topicalized, even those from subordinate clauses. When human direct objects are topicalized from subordinate clauses, pronominal copies are left in the original positions from which the NPs are moved. For example, in (12), when the human direct object *ogway* ‘Ogwang’ is moved into the sentence initial position from the subordinate clause, the 3rd person singular object suffix *-é* ‘3SG’ is attached to the verb *neko* ‘to kill’ as the pronominal copy.

- (11) abáka $\eta\acute{\epsilon}\acute{o}$!bé ó!kélo $\sigma=neko$ ogway.
king 3SG:IMPERF:know COMP Okelo 3S/P=PERF:kill Ogwang
‘The king knows that Okelo killed Ogwang.’

- (12) ogway, abáka $\eta\acute{\epsilon}\acute{o}$!bé ó!kélo $\sigma=nek-\acute{\epsilon}$. (Topicalization)
Ogwang, king 3SG:IMPERF:know COMP Okelo 3S/P=PERF:kill-3SG;
‘Ogwang, the king knows that Okelo killed.’

When pronominal direct objects are topicalized, whether they are human or non-human, the pronominal copies are not left in the original positions from which the pronominal direct objects are moved. Moreover, subject slots must be filled with nouns or independent pronouns when pronominal direct objects are topicalized. For example, the 3rd person singular *én* ‘3SG’ is moved into the sentence initial position in (14). Whether the topicalized pronoun *én* ‘3SG’ refers to a human or non-human referent, it does not leave a pronominal copy in the original position from which it is moved. The sentence in (16) is not grammatical because the topicalized pronoun leaves a pronominal copy in the original position. The 3rd person singular suffix *-é* ‘3SG’ is attached to the verb *neenó* ‘to see’ as the pronominal copy of the topicalized pronoun. The sentence in (15) is not grammatical because the subject slot is empty.

- (13) $a=n\acute{\epsilon}!!n-\acute{\epsilon}$.
1SG=PERF:see-3SG
‘I saw him.’

- (14) $\acute{\epsilon}n$, $\acute{\alpha}\eta\acute{o}$ $a=n\acute{\epsilon}!n\acute{o}$. (Topicalization)
3SG 1SG 1SG=PERF:see
‘Him, I saw.’

(15) *én, a=né!nó. (Topicalization)

3SG 1SG=PERF:see

‘Him, I saw.’

(16) *én, áηό a=né!!n-έ. (Topicalization)

3SG_i 1SG 1SG=PERF:see-3SG_i

‘Him, I saw.’

Noonan (1992) proposes that the topicalized NPs do not need leave pronominal copies in Lango, in cases where, a human 3rd person DO or IO is topicalized (Noonan, 1992: 151). In other words, the pronominal copy is optional in Lango. However, the examples cited by Noonan for demonstrating the optionality are the types of sentences that I call as ‘idiomatic’ expressions here.

The distribution of pronominal copies is complementary in Kumam. Namely, when pronominal direct objects are topicalized, they leave no pronominal copy whether they are human or non-human. On the other hand, when human direct objects are topicalized, they leave pronominal copies in the original positions from which they are moved.

When nominal direct objects are topicalized, if they are activated as topics for the following clauses in the preceding contexts, they do not leave a pronominal copy, even though they are human. For example, in (17) and (18), the human direct object NP *icóó* ‘man’ is mentioned in the first sentence and it is activated as a topic for the following sentence in the preceding context. When the topicalized direct object *icóó* ‘man’ is activated as a topic in the preceding context, it does not leave a pronominal copy in the original position, regardless of the fact that it is human. The second sentence (18) is not grammatical, because the topicalized direct object, which is human, leaves the pronominal copy -έ ‘3SG’ in the original position in spite of the fact that the topicalized direct object conveys old information.

(17) a=né!nó icóó.

1SG=PERF:see man_i

icóó, áηό a=né!kó. (Topicalization)

man_i 1SG 1SG=PERF:kill

‘I saw the man. The man, I killed.’

(18) *a=né!nó icóó.

1SG=PERF:see man_i

icóó, áηό a=né!!k-έ. (Topicalization)

man_i 1SG 1SG=PERF:kill-3SG_i

‘I saw the man. The man, I killed.’

The distribution of the pronominal copies in examples (17) and (18) are parallel to that in (14) and (16). Pronominal copies are not used to refer to referents that are activated as topics in the preceding contexts. The sentence in (18) is ungrammatical because the topicalized NP *icóo* ‘man’ leaves the pronominal copy in the original position of the first sentence, though the NP is activated as a topic for the second sentence in the first sentence. The sentence in (16) is not grammatical because the topicalized 3rd person singular pronoun leaves a pronominal copy in the original position. Pronominal elements always refer to referents that are activated as topics in contexts. Topicalized NPs do not leave the pronominal copies in the original position when they are activated as topics in contexts. These facts indicate that the distribution of pronominal copies has something to do with informational structure. The syntactic and pragmatic characteristics of topicalization will be discussed in Section 4.1.2.

2.11 Organization of noun phrase

Nouns are neither inflected morphologically nor marked with particles for case. Occasionally they are distinguished morphologically for number.

2.11.1 Order of elements within the noun phrase

Head nouns are always located first in Kumam noun phrases. They are followed by associative NPs, relative clauses, adjectives, numerals, and demonstratives.

(1) Noun Associative NP Relative Clause (Adjective, Numeral, Demonstrative)

Numerals can be replaced with adjectives. Demonstratives are normally placed in the final position of nominal phrases; however, they may sometimes be placed before adjectives. Possessive suffixes are always attached to head nouns. Demonstratives are dependent morphemes and attached to other elements. Associative NPs may constitute head nouns with the preceding nouns. No constituent intervenes between head nouns and relative clauses.

- (2) del dóg-á á-!tí acyéł
 skin mouth-1SG ATT-big one
 ‘one big lip’
- (3) del dóg á-!tí acyéł-nɪ
 skin mouth ATT-big one-this
 ‘this one big lip’
- (4) del dóg á!cyél a-tí-nɪ
 skin mouth one ATT-big-this

- ‘this one big lip’
- (5) tic a-ték-nɪ ɔ=ɔl-á.
 job ATT-hard-this 3S/P=PERF:tire-1SG
 ‘This hard job tired me.’
- (6) igwogin aré a-dóŋɔ-gɪ
 clothes two ATT-big.PL-these
 ‘these two big clothes’
- (7) igwogin aré-gɪ a-dóŋɔ
 clothes two-these ATT-big.PL
 ‘these two big clothes’
- (8) ɔmín-á á-!dwóŋ
 brother-1SG ATT-big
 ‘my elder brother’
- (9) riŋo-ná mé-dyaŋ
 meat-1SG of-cow
 ‘my meat of cow.’

Compounds constitute a head noun. They consist of a noun and the following noun. Possessive suffixes are attached to the final elements of compounds. For example, the compound consisting of the noun *ŋut* ‘neck’ and the noun *cíŋ* ‘hand’ is followed by the 1st person possessive suffix *-ná* ‘1SG’ in (10)³². Associative constructions sometimes constitute head nouns as a whole. The possessive suffixes are attached to the final elements of associative constructions. For example, the associative construction *myel mé-ŋom* ‘wedding dance’ is followed by the 1st person singular possessive *-ná* ‘1SG’ in (11)³³.

- (10) ŋut cíŋ-ŋá
 neck hand-1SG
 ‘my list’
- (11) myel mé-ŋom:á
 dance of-wedding:1SG
 ‘my wedding dance’

³² The alveolar nasal consonant of the possessive is assimilated with the preceding consonant.

³³ The alveolar nasal consonant of the possessive is assimilated with the preceding consonant. One of the reduplicated consonants is lost and the stem vowel of the noun is lengthened to compensate for the loss of the consonant.

Head nouns are directly followed by relative clauses. Other constituents do not intervene between head nouns and relative clauses. Relative clauses are distinguished from the following constituents by a morphological boundary that obstructs the application of the vowel and tone sandhi rules.

- (12) atín amé okélo o=nɛnɔ ɲoró a-tídí³⁴
 child REL Okelo 3S/P=PERF:see yesterday ATT-small
 ‘the small child whom Okelo saw yesterday’
- (13) a=né!nó ɪɔɔ a ʒɔdɔ tyé ɪ-jɛra mwaka-cá
 1SG=PERF:see man REL PAST 3SG:IMPERF:be in-jail year-that
 kede-mótɔká.
 with-car
 ‘I saw the man with the car who was in jail last year.’

In (12), the relative clause *amé okélo o=nɛnɔ ɲoró* ‘whom Okelo saw yesterday’ is followed by the adjective *a-tídí* ‘small’. The tonal sandhi rule, High Spread, is not applied between the final syllable of the relative clause and the initial syllable of the adjective. In (13), the relative clause, *a ʒɔdɔ tyé ɪ-jɛra mwaka-cá* ‘who was in jail last year’ is followed by the prepositional phrase *kede-mótɔká* ‘with-car’. The application of High Spread is obstructed between the relative clause and the prepositional phrase.

If associative constructions constitute head nouns as a whole, the head nouns are followed directly by relative clauses. For example, in (14), the associative construction *apón mé kɪlasi* ‘teacher of class’ constitutes a head noun which is modified by the relative clause *a ʒ=poɲo léb munú* ‘who taught English’. The possessive suffix *-ná* ‘1SG’ is attached to the final element of the associative construction.

- (14) a=ryá!mó kede-apón mé-kɪlasi-ná á !ʒ=poɲo léb munú.
 1SG=PERF:meet with-teacher o f-class-1SG REL 3S/P=PERF:teach English
 ‘I met with my classroom teacher who taught English.’

Noun modifiers occur with the attributive particle *a(H)*, which is distinguished from the relative marker *a(H)* by [ATR] category. The attributive particle is fused with numerals lexically.

³⁴ The floating high toneme in the rightmost position of *ɲoró* ‘yesterday’ is not assigned to the leftmost tone unit of *a-tídí* ‘ATT-small’ because the morphological boundary obstructs the application of Floating High Assignment.

(15) atín a-tídí
child ATT-small
'small child'

(16) itábun aré
books two
'two books'

2.11.2 Associative constructions

Associative constructions consist of noun heads followed by associative NPs. Associative NPs are preceded by the preposition *mé(L)-* or the associative particle *á(L)*. The associative particle *á(L)* is distinguished from the attributive particle *a(H)* by tone. Associative constructions are used to express possession and other semantic relations. When possessor NPs are not human, the preposition *mé(L)-* is used for possessive constructions. When possessor NPs are human, the preposition *mé(L)-* or the associative particle *á(L)* may be used for associative constructions. For example, the associative construction in (2) is not grammatical because the possessor NP *egóe* 'cloth' is connected to the possessed NP *jámé* 'things' by the associative particle *á(L)* in spite of the fact that the possessor NP is not human. The associative constructions in (3) and (4) are grammatical. Since the possessor NP *emúrón* 'doctor' is human, it may be connected with the possessed NP *jámé* 'things' by the preposition *mé(L)-* or by the associative particle *á(L)*.

- (1) *jámé mé-egóe*
things of-cloth
'things of the cloth'
- (2) **jámé á-!é!góe*
things ASS-cloth
'things of the cloth'
- (3) *jámé mé-emúrón*
things of-doctor
'things of the doctor'
- (4) *jámé á-!é!múrón*
things ASS-doctor
'things of the doctor'

Some terms for human relations such as 'father' or 'mother' and the noun for 'God' are not preceded by the preposition *mé(L)-* in possessive constructions. The associative particle *á(L)*

only is used for these nouns in associative constructions.

(5) *jámé mé-papa
things of-father
'things of father'

(6) jámé á-papa
things ASS-father
'things of father'

Kumam distinguishes inalienable possession from alienable possession. When possessor NPs are human, the associative particle *á(L)* is used for alienable possession. On the other hand possessed NPs are linked with possessor NPs only by a low toneme for inalienable possession. For example, in (8), the possessor NP *dákó* 'woman' is linked with the possessed NP *dóg* 'mouth' by the low toneme (L) in the possessive construction. When the possessed NP *dóg* 'mouth' is part of the possessor's body, it is not able to be separated from the possessor NP *dákó* 'woman'. The inalienable possessive construction is used in the case of possession. In (8), the initial vowel of the possessor NP *dákó* 'woman' is pronounced with a down stepped high tone because it is preceded by the low toneme between the possessed NP *dóg* 'mouth' and the possessor NP *dákó* 'woman'.

(7) agúlú á-!dákó (Alienable)
pot ASS-woman
'the pot of the woman'

(8) dóg !dákó (Inalienable)
mouth (L) woman
'the woman's mouth'

Possessive suffixes are attached to head nouns of associative constructions. When the entire associative construction is interpreted as a head noun, the possessive suffix is attached to the final element of the associative constructions. For example, because the entire associative constructions *apwoŋ mé-kɪlasi* 'class teacher' and *ɲáká mé-cíŋ* 'finger' constitute head nouns, the 1st person singular possessive suffix *-ná* '1SG' is attached to the final constituents *kɪlasi* 'class' and *cíŋ* 'hand' in (10) and (12), respectively.

(9) riŋo-ná mé-dyaŋ
meat-1SG of-cow

- ‘my meat of cow’
 (10) apwón mé-kɪlasi-ná
 teacher of-class-1SG
 ‘My class teacher’
 (11) lwét-á mé-dyere
 finger-1SG of-center
 ‘my middle finger’
 (12) náká! mé-!cín-ŋá
 daughter of-hand-1SG
 ‘my finger’

The sequence of words *náká !mé-!cín* ‘lit. daughter of hand’ is interpreted as a compound. The possessive suffix *-ná* ‘1SG’ is attached to the final element of the compound. The sequence of words *lwét mé-dyere* ‘lit. finger of center’ constitutes an associative construction, but it does not constitute a head noun. The possessive suffix *-ná* ‘1SG’ is attached to the head noun *lwét* ‘finger’ in the associative construction.

We can summarize the order of constituents in noun phrases as follows. The position of associative NPs and relative clauses in the constituents of noun phrases is determined syntactically. The order of the other constituents is determined by pragmatic factors. For example, the focalized modifiers are located in the final position of noun phrases³⁵.

2.12 Prepositional phrases

Kumam has a small set of prepositions as follows. When vowels in the prepositions are members of the [–ATR] category, they are harmonized with vowels in the following nouns in their [ATR] category.

- (1) ɪ- ‘in, on, at, to’
 bú- ‘to’
 mé(L)- ‘of’
 pɪ(H)- ‘because of’
 kede- ‘and, with’
 tú- ‘toward’
 né- ‘for’

³⁵ Crazzolaro (1955) points out that adjectives follow nouns and other adjectives without any conjunction; the most important adjective comes last (Crazzolaro, 1955: 53).

Prepositional phrases are used to express other thematic roles other than agent and patient, such as benefactive, locative, instrumental, accompaniment, reason, and associative.

- (2) okélo ɔ=wɪɔ né-á!tín itabó. (Benefactive)
Okelo 3S/P=PERF:buy for-child book
'Okelo bought the book for the child.'
- (3) dákó ɔ=tedo cáɔ í-jokó!ní. (Locative)
woman 3S/P=PERF:cook food at-kitchen
'The woman cooked food in the kitchen.'
- (4) atín ɔ=rɪŋɔ i-sukú!lú. (Locative)
child 3S/P=PERF:run to-school
'The child ran to the school.'
- (5) ɪcúɔ ɔ=ŋɔɔ rɪŋɔ kéde-pala. (Instrumental)
man 3S/P=cut meat with-knife
'The man cut the meat with the knife.'
- (6) ɪcúɔ ɔ=rɪŋɔ kede-atín i-dwaliro. (Accompaniment)³⁶
man 3S/P=PERF:run with-child to-hospital
'The man ran to the hospital with the child.'
- (7) ɪcúɔ ɔ=wɪɔ itabɔ né-á!tín pɪ-tíímɔ aɓepá. (Reason)
man 3S/P=PERF:buy book for-child because of-do:INF examination
'The man bought the book for the child to do the examination.'
- (8) apíɔ ɔ=myeɪɔ myeɪ mé-ɓoomo. (Associative)
Apio 3S/P=PERF:dance dance of-marry:INF
'Apio danced the marriage dance.'

Benefactive NPs constitute the core of sentences along with subjects, verbs and direct objects. Other prepositional phrases such as locative NPs, instrumental NPs, accompaniment NPs constitute the periphery in sentences. The order of constituents in postverbal position is determined by syntactic and pragmatic factors, as discussed in Section 4.2.

2.13 Expressions of adverbial notions

Prepositional phrases or adverbials are used to express adverbial notions.

³⁶ The accompaniment NP is preferably located in direct postverbal position.

2.13.1 Instrument

Instruments are expressed as objects of the preposition *kede-* 'with'.

- (1) ɪcɔɔ ɔ=ɲɔɔ riŋo kéde-pala.
man 3S/P=PERF:cut meat with-knife
'The man cut the meat with the knife.'

2.13.2 Location and direction

Locational expressions are formed with prepositional phrases consisting of the preposition *ɪ-* 'in, at, to'. The prepositional phrases consisting of the preposition *ɪ-* 'in, at, to' include directional expressions. Directions are expressed also as objects of the preposition *bút-* 'to'.

- (1) dákó ɔ=tedo cáɓ í-jokó!ní.
woman 3S/P=PERF:cook food in-kitchen
'The woman cooked food in the kitchen.'
- (2) okélo ɔ=rɪŋo í-sukú!lú.
Okelo 3S/P=PERF:run to-school
'Okelo ran to the school.'
- (3) okélo ɔ=cwao ɪtabɔ búɓ-sukú!lú.
Okelo 3S/P=PERF:send book to-school
'Okelo sent the book to the school.'

Complex prepositions are formed with more than two prepositions. Moreover, complex prepositional phrases are formed with the following body part nouns. These complex phrases are used to express more specific locative relationships.

- (4) ɪcɔɔ ɔ=bedo i-wi-kóm.
man 3S/P=PERF:sit in-head-chair
'The man sat on the chair.'
- (5) okélo ɔ=cwao ɪtabɔ í-!búɓ-sukú!lú.
Okelo 3S/P=PERF:send book in-to-school
'Okelo sent the book into the school.'

The preposition *ɪ-* 'in, at, to' is not required when it is followed by a proper noun for locations or *pacɔ* 'home'.

- (6) $\text{icóó } \text{ɔ=bedo } \text{Kampala.}$
 man 3S/P=PERF:live Kampala
 ‘The man lived in Kampala.’
- (7) $\text{okélo } \text{ɔ=binó } \text{gulú.}$
 Okelo 3S/P=PERF:come Gulu
 ‘Okelo came from Gulu.’
- (8) $\text{okélo } \text{ɔ=dók } \text{pacó.}$
 Okelo 3S/P=PERF:go back home
 ‘Okelo went back home.’

Deictic expressions are expressed by the adverbials, *píj* ‘down’ and *maló* ‘up’, which originate from the nouns *píj* ‘earth’ and *maló* ‘sky, heaven’, respectively.

- (9) $\text{yat } \text{ɔ=poto } \text{píj.}$
 tree 3S/P=PERF:fall down
 ‘The tree fell down.’
- (10) $\text{atín } \text{ɔ=sómó } \text{maló.}$
 child 3S/P=PERF:jump up
 ‘The child jumped up.’

2.13.3 Accompaniment

Accompaniment is expressed by prepositional phrases consisting of the preposition *kede-* ‘with’. The preposition *kede-* ‘with’ has another function as a coordinate conjunction to connect NPs. Accompaniment prepositional phrases tend to be directly preceded by verbs in order to avoid ambiguities. When accompaniment prepositional phrases are preceded by nouns, they are possibly interpreted as coordinate constructions with the preceding nouns. For example, the sentence in (1) has a possible interpretation that the noun *atín* ‘child’ is linked with the preceding noun *dwaliro* ‘hospital’ by the coordinating preposition *kede-* ‘with, and’. Since the accompaniment prepositional phrase *kede-atín* ‘with child’ is located in the direct postverbal position, the sentence in (2) may avoid any ambiguities.

- (1) $\text{icóó } \text{ɔ=ríjé } \text{i-dwaliro } \text{kede-atín.}$
 man 3S/P=PERF:run to-hospital with-child
 ‘The man ran to the hospital with the child.’
- (2) $\text{icóó } \text{ɔ=ríjé } \text{kede-atín } \text{i-dwaliro.}$
 man 3S/P=PERF:run with-child to-hospital

‘The man ran to the hospital with the child.’

2.13.4 Manner and degree

Manner expressions are formed with the preposition *i-* ‘in, at, to’ and the following adjectives. There are also adverbials that express manners.

- (1) *icóo* *o=timó* *tic* *i-tek*.
man 3S/P=PERF:do job in-hard
‘The man worked hard.’
- (3) *okélo* *o=timó* *tic* *i-ber*.
Okelo 3S/P=PERF:do job in-good
‘Okelo worked well.’
- (3) *atín* *o-rɪŋo* *i-sukú!lú* *á!wákawáká*.
child 3S/P=PERF:run to-school in a hurry
‘The child ran to the school in a hurry.’

There are also degree adverbs. The degree adverb *tɔtwal* ‘very’ can modify verbs or other adverbs. The degree adverb *twatwal* ‘very much’ modifies verbs.

- (4) *icóo* *o=timó* *tic* *i-tek* *tɔtwal*.
man 3S/P=PERF:do job in-hard very
‘The man worked very hard.’
- (5) *a=máro* *Kampala* *tɔtwal*.
1SG=IMPERF:like Kampala very much
‘I like Kampala very much.’
- (6) *icóo* *o=timó* *tic* *twatwal*.
man 3S/P=PERF:do job very much
‘The man worked the job very much.’

2.13.5 Probability

There are some adverbials that express probability. Adverbials of probability are located in sentence initial or sentence final position.

- (1) *cəmɔgo* ‘perhaps’
amotokó ‘perhaps’
cepák ‘maybe’

iatéteni ‘truly’

(2) ɪcɔɔ ɔ=kwalɔ gwen cɛmɔɔ.
man 3S/P=PERF:steal chickens perhaps
‘Perhaps, the man stole the chickens.’

(3) okélo ɔ=kwalɔ gwen iatéteni.
Okelo 3S/P=PERF:steal chickens truly
‘Truly, Okelo stole the chickens.’

Speaker’s judgments of probability are often expressed by matrix verbs in complement constructions.

(4) a=támó !bé ó!kélo ɔ=kwalɔ gwen.
1SG=IMPERF:think COMP Okelo 3S/P=PERF:steal chickens
‘I think that Okelo stole the chickens.’

2.13.6 Time

Kumam has a set of time adverbials. The time adverbials are freely located in sentences, however, they may not intervene between a subject and a verb. Otherwise, the position of time adverbials is determined by pragmatic factors. For example, the sentence in (3) is not grammatical because the time adverbial *poró* ‘yesterday’ intervenes between the subject *okélo* ‘Okelo’ and the verb *ɔ=wɪlɔ* ‘he bought’. Other sentences are accepted as grammatical by Kumam speakers. The order of constituents including time adverbials is determined by syntactic and pragmatic factors, as discussed in Section 4.2.

(1) poró ‘yesterday’

tin ‘today’

nán ‘now’

díkí ‘tomorrow’

mwaka nó!ró ‘last year’

(2) okélo ɔ=wɪlɔ né-á!tín riŋo í-atá!lé nó!ró.

Okelo 3S/P=PERF:buy for-child meat at-market yesterday

‘Okelo bought the meat for the child at the marked yesterday.’

(3) *okélo poro ó=wɪlɔ né-á!tín riŋo í-atá!lé.

Okelo yesterday 3S/P=PERF:buy for-child meat at-market

‘Okelo bought the meat for the child at the marked yesterday.’

- (4) okélo ɔ=wɪɔ ɲoro né-á!tín riŋo í-atá!lé.
Okelo 3S/P=PERF:buy yesterday for-child meat at-market
'Okelo bought the meat for the child at the marked yesterday.'
- (5) okélo ɔ=wɪɔ né-á!tín ɲoro riŋo í-atá!lé.
Okelo 3S/P=PERF:buy for-child yesterday meat at-market
'Okelo bought the meat for the child at the marked yesterday.'
- (6) ɲoro ó!kélo ɔ=wɪɔ né-á!tín riŋo í-atá!lé.
yesterday Okelo 3S/P=PERF:buy for-child meat at-market
'Okelo bought the meat for the child at the marked yesterday.'

2.14 Interrogative constructions

Yes/no questions are distinguished from their corresponding declarative sentences only by intonation. There is no morphological device such as interrogative particles. Kumam has no syntactic device such as word order change for constructing interrogative sentences.

- (1) okélo ɔ=tedo né-dákó !cám ɲoró.
Okelo 3S/P=PERF:cook for-woman food yesterday
'Okelo cooked the food for the woman yesterday.'
- (2) okélo ɔ=tedo né-dákó !cám ɲoró?
Okelo 3S/P=PERF:cook for-woman food yesterday
'Did Okelo cook the food for the woman yesterday?'

Illocutionary scope of interrogation extends to entire sentences when they have no topics. Illocutionary scope is limited to some extent when sentences have topics, as discussed in Section 4.1.8. The interrogative sentence in (2) has several various interpretations, listed from (3) to (8) below, because it has no topicalized NP.

- (3) The speaker knows that someone cooked the food for the woman yesterday. He wants to know whether it was Okelo who cooked it.
- (4) The speaker knows that Okelo cooked something for the woman yesterday. He wants to know whether it was the food that Okelo cooked.
- (5) The speaker knows that Okelo cooked the food for someone yesterday. He wants to know whether it was the woman for whom Okelo cooked it.
- (6) The speaker knows that Okelo cooked the food for woman on some day. He wants to know whether it was yesterday when Okelo cooked it.
- (7) The speaker knows that Okelo did something to the food for the woman yesterday. He

wants to know whether it was cooking that Okelo did to the food.

(8) The speaker wants to know whether Okelo did something or not.

Wh-questions contain interrogative words. Wh-questions have no special intonation similar to yes/no questions. The position of wh-words is freely located in in situ interrogative sentences with regard to syntax. However, the position of wh-words is determined rigidly in in situ interrogative sentences by pragmatic factors. They are located in the unmarked focus position as discussed later in Section 4.2.4.

There are three types of wh-questions including in situ interrogative sentences. The other two types are wh-questions consisting of relative and cleft constructions. The following examples show the three types of wh-questions; in situ interrogative, relative construction and cleft construction types. The in situ interrogatives in the following examples show the position of wh-words in pragmatically unmarked sentences.

When wh-words are subjects, in situ interrogative sentences are not grammatical. Interrogative sentences consisting of relative or cleft constructions are used when wh-words are subjects. In other words, wh-words cannot be located in sentence initial position in in situ interrogative sentences. The in situ interrogative sentence in (9) is not grammatical because the wh-word *ɲáí* ‘who’ occupies the sentence initial position.

Relative and cleft constructions are discussed in Section 3.1 and 3.5 respectively.

(9) **ɲáí* *ó=dipo* *okélo?* (In situ)

who 3S/P=PERF:hit Okelo

‘Who hit Okelo?’

(10) *ɲáí* *á* *!ó=dipo* *okélo?* (Relative)

who REL 3S/P=PERF:hit Okelo

‘Who hit Okelo?’

(11) *ɲáí,* *én* *á* *!é=!dí!pó* *okélo?* (Cleft)

who 3SG REL 3SG=PERF:hit Okelo

‘Who hit Okelo?’

(12) *okélo* *ɔ=wɪɔ* *né-á!tín* *!nó?* (In situ)

Okelo 3S/P=PERF:buy for-child what

‘What did Okelo buy for the child?’

(13) *nó* *á!mé* *okélo* *ɔ=wɪɔ* *né-á!tín?* (Relative)

what REL Okelo 3S/P=PERF:buy for-child

‘What did Okelo buy for the child?’

- (14) *ɲó, én á!mé okélo ɔ=wɪlo né-á!tɪn?* (Cleft)
 what 3SG REL Okelo 3S/P=PERF:buy for-child
 ‘What did Okelo buy for the child?’
- (15) *okélo ɔ=wɪlo itabʊ né-ɲáí?* (In situ)
 Okelo 3S/P=PERF:buy book for-who
 ‘For whom did Okelo buy the book?’
- (16) *ɲáí á!mé okélo ɔ=wɪlo n:é ítabʊ?* (Relative)
 who REL Okelo 3S/P=PERF:buy for:3SG book
 ‘For whom did Okelo buy the book?’
- (17) *ɲáí, én á!mé okélo ɔ=wɪlo n:é ítabʊ?* (Cleft)
 who 3SG REL Okelo 3S/P=PERF:buy for:3SG book
 ‘For whom did Okelo buy the book?’
- (18) *okélo ɔ=wɪlo itabʊ túai?* (In situ)
 Okelo 3S/P=PERF:buy book where
 ‘Where did Okelo buy the book?’
- (19) *túai amé okélo ɔ=wɪlo itabʊ í-!é?* (Relative)
 where REL Okelo 3S/P=PERF:buy book in-3SG
 ‘Where did Okelo buy the book?’
- (20) *túai, én á!mé okélo ɔ=wɪlo itabʊ í-!é?* (Cleft)
 where 3SG REL Okelo 3S/P=PERF:buy book in-3SG
 ‘Where did Okelo buy the book?’
- (21) *okélo ɔ=wɪlo itabʊ wéne?* (In situ)
 Okelo 3S/P=PERF:buy book when
 ‘When did Okelo buy the book?’
- (22) *wene amé okélo ɔ=wɪlo ked:é ítabʊ?* (Relative)
 when REL Okelo 3S/P=PERF:buy with:3SG book
 ‘When did Okelo buy the book?’
- (23) *wene, én á!mé okélo ɔ=wɪlo ked:é ítabʊ?* (Cleft)
 when 3SG REL Okelo 3S/P=PERF:buy with:3SG book
 ‘When did Okelo buy the book?’

We can summarize the constructions of wh-questions as follows. When wh-words are subjects, in situ interrogative sentences are not allowed. Wh-words are located in the sentence initial position of in situ interrogative sentences, when they are subjects. Topic slots are located in sentence initial position. Wh-words cannot occupy topic slots because they convey new information; topics typically convey old information. For example, the interrogative sentence

in (24) denotes that the speaker does not have knowledge about the person who hit Okelo. The information that the wh-word *ηάí* ‘who’ conveys is new one.

- (24) **ηάí* *ῶ=dipo* *okélo?* (In situ)
 who 3S/P=PERF:hit Okelo
 ‘Who hit Okelo?’

Although wh-words are located in sentence initial position, wh-questions with relative and cleft constructions are grammatical. Wh-words do not occupy topic slots in wh-questions with relative and cleft constructions. Wh-words occupy focus slots in relative wh-questions. Wh-words occupy contrastive focus positions in cleft wh-questions, as discussed in Section 4.2.4.

- (25) *ηάí* *ά* *!ῶ=dipo* *okélo?* (Relative)
 who REL 3S/P=PERF:hit Okelo
 ‘Who hit Okelo?’

- (26) *ηάí,* *έν* *ά* *!έ=!dí!πό* *okélo?* (Cleft)
 who 3SG REL 3SG=PERF:hit Okelo
 ‘Who hit Okelo?’

The wh-questions with relative constructions have the following pragmatic structure, as discussed in Section 3.2.5. An empty category that occupies a topic slot is linked to wh-word without any copula.

- (27) [\varnothing]_{TOP} [COP] [WH-WORD]_{FOC} REL (Relative)

The wh-questions with cleft constructions have the following pragmatic structure. Wh-words occupy the contrastive focus position.

- (28) $\left\{ \begin{array}{l} \text{[WH-WORD]}_{\text{FOC}} \\ \text{someone} \end{array} \right\}_{\text{TOP}}$ [\varnothing] [COP] *έν* REL (Cleft)

3 The syntax of complex sentences

Kumam complex sentences include four main constructions; 1) relativization, 2) complementation, 3) clefting, and 4) clause linking. Coordination and adverbial constructions are included within the category of clause linking. These four constructions are divided into two types with regard to their structures, namely hypotaxis and ‘parataxis’ types according to Noonan’s definition. The hypotaxis structure is used in relativization, complementation, clefting and various clause linking constructions. The ‘parataxis’ structure is used in complementation and clause linking constructions. The ‘parataxis’ structure is wide spread in those constructions and plays an important function in the syntax of complex sentences.

We will examine the syntax of complex sentences, paying specific attention to the difference between hypotaxis and ‘parataxis’.

3.1 Relativization

3.1.1 Introduction

Relative constructions consist of antecedents followed by relative clauses. The relative clauses consist of the relative marker *a*(H) or *amé*(L) followed by clauses in which NP slots are empty or filled with the pronominal elements interpreted as coreferential with the antecedents.

- (1) *dákó* σ =tedo *cám.*
woman 3S/P=PERF:cook food
‘The woman cooked food.’
- (2) *dákó* *a* $\acute{\sigma}$ =tedo *cám*
woman REL 3S/P=PERF:cook food
‘the woman who cooked food’
- (3) *cám* *á!mé* *!dákó* σ =tedo
food REL woman 3S/P=PERF:cook
‘the food which the woman cooked’
- (4) *okélo* σ =dipo *icóó.*
Okelo 3S/P=PERF:hit man
‘Okelo hit the man.’
- (5) *icóó* *amé* *okélo* σ =dip-é
man_i REL Okelo 3S/P=PERF:hit-3SG_i
‘the man whom Okelo hit’

In (2), the subject slot in the relative clause is empty or filled by a zero anaphor that is

interpreted as coreferential with the antecedent *dákó* ‘woman’. In (3), the direct object slot in the relative clause is empty or occupied by a zero anaphor that is interpreted as coreferential with the antecedent *cám* ‘food’. On the other hand, in (5), the 3rd person object suffix *-é* ‘3SG’ is attached to the verb *diipo* ‘to hit’. The object suffix *-é* ‘3SG’ is coreferential with the antecedent NP *icóo* ‘man’, which is relativized. The relativized NP leaves behind the pronominal element in the original place from which the relativized NP is moved. When human direct objects are relativized, they leave the pronominal elements in the original position from which they are moved. When non-human direct objects are relativized, they do not leave behind the segmentally articulated pronominal elements in the original place from which they are moved.

When subjects are relativized, the subject slots in the relative clauses are empty, whether the subjects are human or non-human. In (7), when the non-human subject *itabó* ‘book’ is relativized, the subject slot in the relative clause is empty or filled by a zero anaphor that is interpreted as coreferential with its antecedent.

- (6) *itabó ó=wil-éré í-!dó!ká.*
 book 3S/P=PERF:buy:MID at-shop
 ‘The book was bought at the shop (by someone).’
- (7) *itabó á!mé ó=wil-éré í-!dó!ká*
 book REL 3S/P=PERF:buy-MID at-shop
 ‘the book which was bought at the shop’

3.1.2 Hierarchy of NP slots and animacy

Relativized NPs leave behind the pronominal copies in the original place from which they are moved. When human direct objects are relativized, pronominal elements are left in the original position from which the NPs are moved. When non-human direct objects are relativized, pronominal element are not left in the original position. For example, in (2), the 3rd person singular object suffix *-é* ‘3SG’ is attached to the verb *jwató* ‘to hit’ as the pronominal element which the relativized NP *atín* ‘child’ leaves behind in the original position. The object suffix *-é* ‘3SG’ is interpreted as coreferential with the antecedent *atín* ‘child’.

The non-human direct object *itabó* ‘book’ is relativized in (4). No pronominal element is left in the original position from which the NP is moved. The direct object slot in the relative clause is empty.

- (1) a=jwá!tó atín.
 1SG=PERF:hit child
 ‘I hit the child with a stick.’
- (2) atín amé a=jwá!!t-é
 child_i REL 1SG=PERF:hit-3SG_i
 ‘the child whom I hit’
- (3) a=wí!lós itab̃ jó!ró.
 1SG=PERF:buy book yesterday
 ‘I bought the book yesterday.’
- (4) itab̃ á!mé a=wí!lós joró
 book REL 1SG=PERF:buy yesterday
 ‘the book which I bought yesterday’

Kumam has a small set of ditransitive verbs. When human indirect objects are relativized, the pronominal elements are left in the original position. For example, the 3rd person singular object suffix *-é* ‘3SG’ is attached to the verb *minɔ* ‘to give’ as the pronominal element connected to the relativized NP *atín* ‘child’ that has moved. The object suffix *-é* ‘3SG’ is coreferential with the antecedent *atín* ‘child’ in (6). The noun *atín* ‘child’ functions grammatically as an indirect object for the ditransitive verb *minɔ* ‘to give’.

Ditransitive verbs may be followed by dative NPs consisting of prepositional phrases. When dative NPs are relativized from prepositional phrases, the pronominal elements are left in the original place from which the NPs are moved. For example, the dative NP *atín* ‘child’ is the object of a prepositional phrase consisting of the preposition *né-* ‘for, to’ in (7). The NP *atín* ‘child’ is relativized from the prepositional phrase. The 3rd person singular suffix *-é* ‘3SG’ is attached to the pronoun *né-* ‘for, to’ as the pronominal element that the relativized NP *atín* ‘child’ leaves behind in its original place in (8)³⁷.

- (5) a=mí!ós atín itab̃.
 1SG=PERF:give child book
 ‘I gave the child the book.’
- (6) atín amé a=mí-!!é itab̃
 child_i REL 1SG=PERF:give-3SG_i book
 ‘the child whom I gave the book’

³⁷ The vowel of the suffix is coalesced with the preceding vowel of the preposition.

(7) a=mí!ó itabũ né-á!tín.
 1SG=PERF:give book to-child
 ‘I gave the book to the child.’

(8) atín amé a=mí!ó itabũ n:é
 child_i REL 1SG=PERF:give book to:3SG_i
 ‘the child to whom I gave the book’

When NPs from prepositional phrases are relativized, whether they are human or non-human, regardless of their thematic role in sentences, the pronominal elements are left in the original position from which the relativized NPs are moved. For example, in (10), when the NP *dákó* ‘woman’ is relativized from the prepositional phrase, the 3rd person singular suffix *-é* is attached to the preposition as the pronominal element that is left in the original place from which the NP moved.

(9) a=cwá!ó !bá!lwá bú!-!dákó.
 1SG=PERF:send letter to-woman
 ‘I sent the letter to the woman.’

(10) dákó amé a=cwá!ó !bá!lwá bú!t-é
 woman_i REL 1SG=PERF:send letter to-3SG_i
 ‘the woman to whom I sent the letter’

Even if NPs perform benefactive thematic roles, when they are relativized from prepositional phrases, the pronominal elements are left in the original place from which the relativized NPs are moved. For example, in (12), the 3rd person singular suffix *-é* ‘3SG’ is attached to the preposition *né-* ‘for’.

(11) dákó ɔ=tedo né-á!tín !cám.
 woman 3S/P=PERF:cook for-child food
 ‘The woman cooked the food for the child.’

(12) atín amé dákó ɔ=tedo n:é cám
 child REL woman 3S/P=PERF:cook for-3SG food
 ‘the child for whom the woman cooked the food’

When NPs perform the thematic role of possessor in associative constructions, if they are relativized from preposition phrases, the pronominal elements are obligatorily left in the original position from which the NPs are moved. For example, the possessor *ɪcɔɔ* ‘man’ is

relativized. The 3rd person singular possessive suffix *-éré* ‘3SG’ is attached to the preposition *mé(L)*- ‘of’ as the pronominal element that the relativized NP leaves behind in the original position in (14).

- (13) *a=cwá!ó* *!bá!lwá mé-icóó*.
 1SG=PERF:send letter of-man
 ‘I sent the letter of the man.’
- (14) *icóó amé a=cwá!ó !bá!lwá-méré*
 man_i REL 1SG=PERF:send letter-3SG_i
 ‘the man whose letter I sent’

Accompaniment NPs are relativized in (16). When the accompaniment NP *sén!té* ‘money’ is relativized from the prepositional phrase, the 3rd person singular object suffix *-é* ‘3SG’ is attached to the preposition *kede-* ‘with’ as the pronominal element that the relativized NP leaves behind in the original place.

Locative NPs are relativized in (18). For example, when the NP *ot* ‘house’ is relativized, the 3rd person singular object suffix *-é* ‘3SG’ is attached to the preposition *ɪ-* ‘in, at, on’ as the pronominal element that is left by the relativized NP in the original place.

- (15) *a=tyé* *kede-sén!té*.
 1SG=IMPERF:be with-money
 ‘I have money.’
- (16) *sén!té á!mé a=tyé ked:é*
 money_i REL 1SG=IMPERF:be with:3SG_i
 ‘the money which I have.’
- (17) *icóó ɔ=cwao bá!lwá í-ot*.
 man 3S/P=PERF:send letter to-house
 ‘The man sent the letter to the house.’
- (18) *ot amé icóó ɔ=cwao bá!lwá í-!é*
 house_i REL man 3S/P=PERF:send letter to-3SG_i
 ‘the house which the man sent the letter to’

We can summarize the NP slots and animacy in relativization as follows. When NPs are relativized from subject slots, the pronominal elements are not left, whether the NPs are

human or non-human³⁸. When NPs are relativized from direct or indirect object slots, if NPs are human, the pronominal elements are left in the original position from which the NPs are moved. If NPs are non-human, the pronominal elements are not left in the original position. When NPs are relativized from prepositional phrases, the pronominal elements are left in the original position from which the NPs are moved.

Kumam allows time adverbials to be relativized. When time adverbials are relativized, the pronominal elements are left in the original position from which the adverbials are moved³⁹. Moreover, the preposition *kede-* ‘with’ or *ɪ-* ‘in, at, on’ is added to the pronominal elements. The pronominal elements do not appear independently in sentences. For example, the adverbial *ɲoró* ‘yesterday’ is relativized in (20) and (21). The pronominal element *-é* is attached to the preposition *kede-* ‘with’ or *ɪ-* ‘in’ and located in the direct postverbal position. The accompaniment NPs consisting of the preposition *kede-* ‘with’ behave irregularly regarding their positions in sentences. They are located preferably directly after verbs because of the lexical reasons previously discussed.

(19) a=wí!lǒ rɪŋo ɲó!ró.
 1SG=PERF:buy meat yesterday
 ‘I bought the meat yesterday.’

(20) ɲoro á!mé a=wí!lǒ ked:é rí!ŋó
 yesterday_i REL 1SG=PERF:buy with:3SG_i meat
 ‘yesterday when I bought the meat’

(21) ɲoro á!mé a=wí!lǒ ɪ-é rí!ŋó
 yesterday REL 1SG=PERF:buy in-3SG meat
 ‘yesterday when I bought the meat’

Relativization in Kumam shows the hierarchy of NP slots and animacy. Subjects do not require the pronominal elements. Non-human direct objects do not require the pronominal elements, while human direct or indirect objects do require the pronominal elements. Other NPs such as benefactive, locative, instrumental, associative, and accompaniment NPs require the pronominal elements, whether they are human or non-human. Time adverbials require the

³⁸ If relativized 3rd person singular subjects left behind their pronominal copies in the original place, the pronominal copies would be the non-‘switch’ reference subject clitic *ε=* ‘3SG’.

³⁹ When adverbials are topicalized, the pronominal elements are not left in the original place from which the relativized adverbials are moved. Relativization as well as topicalization includes the movement of constituents. However, there is a difference in terms of the hierarchy of NP slots and animacy.

pronominal elements accompanied by the preposition *kede-* ‘with’ or *I-* ‘in, at, on’. The similar hierarchies for NP slots and animacy are also observed in topicalization, which is discussed later.

Any NPs or adverbials can be relativized in simple sentences. Moreover, they can be relativized from subordinate clauses. Relativization is also applicable to any NPs or adverbials in hypotactic or ‘paratactic’ complement clauses⁴⁰. Namely any NPs can be relativized from hypotactic or ‘paratactic’ complement clauses. For example, the sentence in (22) consists of the ‘paratactic’ complement clause *icóó kwáló gwen* ‘(that) Okelo steals the chickens’. The subject *icóó* ‘man’ in the ‘paratactic’ complement clause is relativized in (23). The object *gwen* ‘chickens’ in the ‘paratactic’ complement clause is relativized in (24). No pronominal element is necessary because the subject *icóó* ‘man’ is relativized in (23). Since the relativized direct object *gwen* ‘chickens’ is not human, the pronominal element is not necessary in (24).

- (22) *a=né!nó icóó kwáló gwen.*
 1SG=PERF:see man 3SG:IMPEF:steal chickens
 ‘I saw the man stealing the chickens.’
- (23) *icóó amé a=né!nó kwáló gwen*
 man REL 1SG=PERF:see 3SG:IMPERF:steal chickens
 ‘the man who I saw stealing the chickens’
- (24) *gwen amé a=né!nó icóó kwáló*
 chickens REL 1SG=PERF:see man 3SG:IMPERF:steal
 ‘the chickens which I saw the man stealing’

Any NPs or adverbials can be relativized from hypotactic complement clauses. For example, the subject *icóó* ‘man’ is relativized from the complement clause in the hypotactic construction in (26). The object *atín* ‘child’ in the hypotactic complement clause is relativized in (27). Since the relativized direct object is human, the 3rd person singular object suffix *-é* ‘3SG’ is attached to the verb *kóóhó* ‘to help’ as the pronominal element which is left in the original position by the relativized NP. The object *gwen* ‘chickens’ is relativized from the infinitive complement clause in (29). Since the relativized direct object is non-human, no pronominal element is needed in the original place from which the relativized NP is moved.

⁴⁰ Complementation is discussed in Section 3.2.

- (25) *dákó !mító !bé í!cúo kəŋ á!tín.*
 woman 3SG:IMPERF:want COMP man 3SG:help:SUB child
 ‘The woman wants the man to help the child.’
- (26) *ícúo amé !dákó !mító !bé kəŋ !á!tín*
 man REL woman 3SG:IMPERF:want COMP 3SG:help:SUB child
 ‘the man who the woman wants should help the child’
- (27) *atín amé !dákó !mító !bé í!cúo kəŋ-é*
 child; REL woman 3SG:IMPERF:want COMP man 3SG:help:SUB-3SG;
 ‘the child who the woman wants the man to help’
- (28) *a=wá!có !né-í!cúo kwaló gwen.*
 1SG=PERF:say to-man steal:INF chickens
 ‘I told the man to steal the chickens.’
- (29) *gwen amé a=wá!có !né-í!cúo kwaló*
 chickens REL 1SG=PERF:say to-man steal:INF
 ‘the chickens that I told the man to steal’

Kumam has a particular clause linking construction whereby two clauses are connected without any conjunction. This construction is called ‘paratactic’ clause linking. Relativization is applicable to clauses that undergo ‘paratactic’ clause linking. Any NPs can be relativized from the first or second clauses in ‘paratactic’ clause linking. For example, the object *riŋó* ‘meat’ in the second clause of ‘paratactic’ clause linking is relativized in (31). Since the relativized direct object is non-human, no pronominal element is left in the original place from which the relativized NP is moved.

- (30) *áŋó a-ték, a=cámó riŋó.*
 1SG ATT-strong 1SG=IMPERF:eat meat
 ‘Because I am strong, I eat meat.’
- (31) *mán !én riŋo á!mé !áŋó a-ték, a=cámó.*
 this 3SG meat REL 1SG ATT-strong 1SG=IMPERF:eat
 ‘This is meat which I eat, because I am strong.’

Relativization is not applicable to NPs in the second clauses in coordinate constructions. Kumam has a particular coordinate construction in which second clauses consist of the auxiliary *kó* ‘and to do’ followed by an infinitive form of verbs. For example, the sentence in (32) consists of the first clause *dákó o=tedo cáŋ* ‘the woman cooked the food’ and the second clause *ícúo o=kó maato kəŋó* ‘and the man drank the beer’. The example in (33) is not

grammatical, because the subject *icóo* ‘man’ is relativized from the second clause in the *kó* coordinate construction. The example in (34) is not grammatical because the direct object *koŋó* ‘beer’ is relativized from the second clause in the *kó* coordinate construction.

- (32) *dákó* *ɔ=tedo* *cám* *icóo* *ɔ=kó* *maatɔ* *koŋó*.
 woman 3S/P=PERF:cook food man 3S/P=PERF:and do drink:INF beer
 ‘The woman cooked the food and then the man drank the beer.’
- (33) **icóo* *amé* !*dákó* *ɔ=tedo* *cám* *ɔ=kó* *maatɔ* *koŋó*
 man REL woman 3S/P=PERF:cook food 3S/P=PERF:and do drink:INF beer
 ‘*the man₁ who the woman cooked the food and he₁ drank the beer’
- (34) **koŋo* *á!mé* !*dákó* *ɔ=tedo* *cám* *icóo* *ɔ=kó* *maatɔ*
 beer REL woman 3S/P=PERF:cook food man 3S/P=PERF:and do drink:INF
 ‘*the beer which the woman cooked the food and then the man drank’

Any NPs can be relativized from first clauses in coordinate construction. For example, the subject *dákó* ‘woman’ is relativized from the first clause in the coordinate construction in (35). The direct object *cám* ‘food’ is relativized from the first clause in (36).

- (35) *dákó* *amé* *ɔ=tedo* *cám* (di) *icóo* *ɔ=kó* *maatɔ* *koŋó*.
 woman REL 3S/P=PERF:cook food (and) man 3S/P=and do drink:INF beer
 ‘The woman who cooked food (and) the man drank beer.’
- (36) *cám* *á!mé* !*dákó* *ɔ=tedo* (di) *icóo* *ɔ=kó* *maatɔ* *koŋó*
 food REL woman 3S/P=PERF:cook (and) man 3S/P=PERF:and do drink:INF beer
 ‘The food that the woman cooked, and the man drank beer.’

3.1.3 Constraints in relativization

Relative clauses cannot be separated from their antecedents by other constituents. Even adverbials cannot intervene between antecedents and relative clauses. The sentence in (2) is not grammatical, because the locative prepositional phrase *ɪ-ɔt* ‘to house’ intervenes between the antecedent *itabó* ‘book’ and the relative clause *amé a=wí!ló* ‘which I bought’. The sentence in (3) is not grammatical because the time adverbial *ŋoró* ‘yesterday’ intervenes between the antecedent and the relative clause. The intervening constituents must be removed from the original position. The sentence in (4) is grammatical because the time adverbial *ŋoró* ‘yesterday’ is removed from the position between the antecedent and the relative clause.

- (1) a=wí!lṵ itabṽ í-!dó!ká.
 1SG=PERF:buy book at-shop
 ‘I bought the book at the shop.’
- (2) *a=cwá!ṵ itabṽ í-ot amé a=wí!lṵ.
 1SG=PERF:send book to-house REL 1SG=PERF:buy
 ‘I sent the book which I bought to the house.’
- (3) *a=cwá!ṵ itabṽ joro á!mé a=wí!lṵ.
 1SG=send book yesterday REL 1SG=PERF:buy
 ‘I sent the book yesterday which I bought.’
- (4) a=cwá!ṵ joro itabṽ á!mé a=wí!lṵ.
 1SG=PERF:send yesterday book REL 1SG=PERF:buy
 ‘I sent the book yesterday which I bought.’

NPs, not nouns are relativized. However, no constituent can intervene between head nouns and relative clauses. If head nouns are followed by modifiers, the modifiers should be located after the relative clauses. For example, the NP *icóo kede-mótóká* ‘man with the car’ is relativized in (5) and (6). The sentence in (5) is not grammatical because the modifier *kede-mótóká* ‘with the car’ intervenes between the head noun *icóo* ‘man’ and the relative clause *amé oṣṣo tyé i-jera mwaka-cá* ‘who was in jail last year’. The sentence in (6) is grammatical because the modifier *kede-mótóká* ‘with the car’ is located after the relative clause.

- (5) *a=né!nó icóo kede-mótóká á!mé oṣṣo tyé i-jera mwaka-cá.
 1SG=PERF:see man with-car REL PAST 3SG:IMPERF:be in-jail last year
 ‘I saw the man with the car who was in jail last year.’
- (6) a=né!nó icóo amé oṣṣo tyé i-jera mwaka-cá kede-mótóká.
 1SG=PERF:see man REL PAST 3SG:IMPERF:be in-jail last year with-car
 ‘I saw the man with the car who was in jail last year.’
- (7) a=né!nó icóo kede-mótóká.
 1SG=PERF:see man with-car
 ‘I saw the man with the car.’
- (8) icóo kede-mótóká oṣṣo tyé i-jera mwaka-cá.
 man with-car PAST 3SG:IMPERF:be in-jail last year
 ‘The man with the car was in jail last year.’

Associative constructions sometimes constitute a head noun with the preceding nouns. When

NPs followed by associative constructions are interpreted to be head nouns, the associative constructions are not removed from the original position. For example, in (9), because the associative construction *mé-kɪlasi* ‘of class’ is interpreted to constitute the head noun with the preceding noun *apwɔŋ* ‘teacher’, it is not removed from its original position. The fact that the 1st person possessive suffix *-ná* ‘my’ is attached to the last noun *kɪlasi* ‘class’ in the noun phrase demonstrates that the associative construction constitutes the head noun with the preceding noun.

- (9) a=ryá!mó kede-apwɔŋ mé-kɪlasi-ná á!mé ɔ=pwɔŋo léb munú.
 1SG=PERF:meet with-teacher of-class-1SG REL 3S/P=PERF:teach English
 ‘I met with my class teacher who taught English.’

The arrangement of antecedents and relative clauses follows the order of constituents in noun phrases, where head nouns are directly followed by relative clauses as qualifiers.

The antecedents must not be pronouns whether they are independent or dependent forms. In other words, pronouns cannot be relativized whether they are independent pronouns, suffixes, or clitics. Pronouns cannot be relativized from any slots such as subject or object slots. They also cannot be relativized from subordinate clauses. For example, the sentences in (11) and (12) are not grammatical, because the antecedents are the 3rd person singular object suffix *-é* ‘3SG’ and the 3rd person singular independent pronoun *én* ‘3SG’, respectively.

- (10) ε=cá!mó kwon.
 3SG=PERF:eat porridge
 ‘He ate porridge.’
- (11) *a=twó!!m-é á!mé ε=cá!mó kwon.
 1SG=PERF:hit-3SG REL SG=PERF:eat porridge
 ‘*I hit him who ate porridge.’
- (12) *a=twó!mó !én á!mé ε=cá!mó kwon.
 1SG=PERF:hit 3SG REL 3SG=PERF:eat porridge
 ‘*I hit him who ate porridge.’

The direct object is relativized in (14) and (15). The sentences in (14) and (15) are not grammatical because the antecedents are the 3rd person singular object suffix *-é* ‘3SG’ and the 3rd person singular independent pronoun *én* ‘3SG’, respectively.

(13) a=né!!k-é.

1SG=PERF:kill-3SG

‘I killed him.’

(14) *a=i!!k-é á!mé a=né!!k-é.

1SG=PERF:bury-SG REL 1SG=PERF:kill-3SG

‘*I buried him whom I killed.’

(15) *a=i!kó !én á!mé a=né!!k-é.

1SG=PERF:bury 3SG REL 1SG=PERF:kill-3SG

‘*I buried him whom I killed.’

Pronouns or pronominal elements presuppose referents that have been previously mentioned in context or are already known as shared knowledge by speakers and hearers. Pronouns refer to referents that are considered old information. Relative clauses cannot modify antecedents that are pronouns or pronominal elements. In other words, relative clauses cannot refer to referents that are old information. On the other hand, relative clauses are used by speakers to provide hearers with new information. Referents of pronouns or pronominal elements convey old information, and information provided by relative clauses is considered new information. Pronouns and relative clauses are in clash pragmatically. This pragmatic inconsistency does not allow relative clauses to be preceded by a pronoun as the antecedent.

3.1.4 Relative markers, amé(L) and a(H)

Kumam has two relative markers *amé*(L) and *a*(H). While the two relative markers are largely interchangeable, there is a tendency for one of the two relative markers to be chosen in a particular syntactic environment. The relative marker *a*(H) is preferably used when subjects are relativized. Moreover, the relative marker *a*(H) is frequently coalesced with the following vowel according to vowel sandhi when the following clauses begin with a vowel. The preserved vowels copy the value of the [ATR] category of the relative marker that is deleted. The lexical tonemes are preserved even if the vowel of the relative marker is deleted according to vowel sandhi.

(1) a=jwá!tó !lé á !ó=dɔɔɔ ɪ-ɔt. → [.. !lé !óɔɔɔ ..]

1SG=PERF:hit animal REL 3S/P=PERF:enter in-house

‘I hit the animal which entered in the house.’

(2) a=jwá!tó !lé á!mé ɔ=dɔɔɔ ɪ-ɔt.

1SG=PERF:hit animal REL 3S/P=PERF:enter in-house

‘I hit the animal which entered in the house.’

When subjects are relativized, sentences such as (1) are used more frequently in daily speech by Kumam speakers than sentences such as (2). It is not easy to explain why Kumam speakers prefer to use the relative marker *a(H)* when subjects are relativized. Moreover, if the relative marker *a(H)* is chosen, vowel coalescence frequently occurs between the relative marker *a(H)* and the following vowel because many subject clitics begin with a vowel. If the relative marker *a(H)* is chosen, there is no segmental morpheme between antecedents and verbs in relative constructions. The antecedents are easy to interpret as the subjects of verbs in relative clauses. For example, the object *lé* ‘animal’ in the main clause sounds like the subject of the verb *dɔɔnɔ* ‘to enter’ in the relative clause if the relative marker *a(H)* is deleted according to vowel coalescence, as shown in (1).

3.1.5 Relative clauses and wh-questions

Kumam has three types of wh-questions, in situ, relative and cleft type interrogatives. Relative wh-questions consist of relative clauses. When wh-words are subjects, relative or cleft wh-questions must be used. In situ interrogatives must not be used when wh-words are subjects. The interrogative sentence in (3) is not grammatical because the wh-word *ɲái* ‘who’ is the subject of the sentence.

(1) *ɲó á!mé ɪcɔɔ ɔ=kwalɔ ɲoró?*
 what REL man 3S/P=PERF:steal yesterday
 ‘What did the man steal yesterday?’

(2) *ɲái á !ɔ=kwalɔ gwen?*
 who REL 3S/P=PERF:steal chickens
 ‘Who stole the chickens?’

(3) **ɲái ɔ=kwalɔ gwen?*
 who 3S/P=PERF:steal chickens
 ‘Who stole the chickens?’

Wh-words must not be located in the sentence initial position of in situ wh-questions. Topic slots are located in sentence initial position. When topic slots are empty, subjects are usually interpreted to be topics because they are located in sentence initial position. Therefore, wh-words are interpreted to occupy topic slots when wh-words are subjects in in situ wh-questions.

Constituents that occupy topic slots usually refer to referents that have been previously mentioned in context or are stored in the backgrounded knowledge of speakers and hearers. In other words, topics are old information. However, wh-words are new information.

Wh-questions are used by speakers to get new information. For example, the wh-question in (1) is used by the speaker to get knowledge about the item the man stole. The speaker does not have any information about what the man stole. This information is new to the speaker. Constituents that convey new information do not occupy topic slots. When wh-words occupy topic slots, they convey new information, resulting in a pragmatic clash. The interrogative sentence in (3) is not grammatical because the wh-word occupies the topic slot.

On the other hand, the wh-question in (2) is grammatical, though the wh-word *ɲái* ‘who’ is located in sentence initial position. As discussed above, no constituent intervenes between antecedents and relative clauses. Therefore, the wh-word *ɲái* ‘who’ constitutes the antecedent of the following relative clause *a ɔ=kwalɔ gwen* ‘who stole the chickens’ in (2). An empty category might occupy the topic slot in sentence initial position. The empty category is connected with the wh-word *ɲái* ‘who’ followed by the relative clause *a ɔ=kwalɔ gwen* ‘who stole the chickens’ without any copula in the predicate nominal construction.

The interrogative sentence in (2) is formalized into the scheme in (4). The topic slot is occupied by the empty category. The interrogative pronoun is linked to the empty category without any copula. The empty category may be regarded as a pronominal element that is coreferential with the interrogative pronoun. When subjects are independent pronominal elements, they are linked to predicate nominal elements without any copula. The interrogative pronoun followed by the relative clause constitutes the complement in predicate nominal constructions. The interrogative pronoun occupies the focus slot in the postverbal position of the sentence. The relative clause directly follows the interrogative pronoun, which is the antecedent. The wh-question in (1) also has the same structure, even if the wh-word *ɲó* ‘what’ is a direct object.

(4) Pragmatic structure of relative type wh-questions

[\emptyset]_{TOP} [COP] [WH-WORD]_{FOC} REL

If wh-words are located in postverbal positions, the interrogative sentences are grammatical because the interrogative pronouns do not occupy topic slots in sentences. For example, the interrogative sentence in (5) is grammatical because the interrogative pronoun *ɲó* ‘what’ does not occupy the topic slot.

(5) *icóɔ ɔ=kwalɔ ɲó ɲó!ró?*
 man 3S/P=PERF:steal what yesterday
 ‘What did the man steal yesterday?’

However, Kumam speakers prefer wh-questions consisting of relative constructions to in situ interrogative sentences in which interrogative pronouns are located in postverbal position.

As discussed in Section 3.2.3 pronominal elements are not allowed to be antecedents of relative clauses. Pronominal elements refer to referents that have been previously mentioned in context or are already stored in the backgrounded knowledge of speakers or hearers. Pronominal elements refer to referents that convey old information. On the other hand, wh-words are allowed to be antecedents of relative clause, because they refer to referents that convey new information. Wh-words refer to referents about which speakers want to get unknown information. Pragmatically speaking, wh-words are in complementary distribution with other pronominal elements.

3.1.6 Relative clauses and aspect

Kumam distinguishes imperfect from perfect aspect morpho-phonologically. When verbs are inflected with imperfect aspect in relative clauses, the events or actions that are expressed by the relative clauses have not been accomplished at the time of the speaker's utterance. On the other hand, when verbs are inflected with perfect aspect in relative clauses, the events or actions described by the relative clauses have already been accomplished at the time of the speaker's utterance. For example, the sentence in (1) consists of the relative clause in which the verb *mitɔ* 'to want' is inflected with imperfect aspect. The sentence in (1) denotes that the subject in the relative clause still wants the book at the time when the speaker utters the sentence.

On the other hand, the sentence in (2) consists of a relative clause in which the verb *neɛnɔ* 'to see' is inflected with perfect aspect. The sentence in (2) denotes that the subject in the relative clause saw the book before the time of the speaker's utterance.

- (1) $\epsilon=wí!lɔ$ $\mu o r o$ $í t a b \bar{v}$ $á!m é !á \eta \acute{o}$ $a=mító.$
 3SG=PERF:buy yesterday book REL 1SG 1SG=IMPERF:want
 'He bought the book yesterday which I want. (Still I need.)'
- (2) $\epsilon=wí!lɔ$ $\mu o r o$ $í t a b \bar{v}$ $á!m é !á \eta \acute{o}$ $a=n é !n ó.$
 3SG=PERF:buy yesterday book REL 1SG 1SG=PERF:see
 'He bought the book yesterday which I saw.'

3.2 Complementation

Kumam has two types of complements; N-complement and V-complement (N-Comp and V-Comp, respectively). N-Comps do not constitute arguments in sentences, while V-Comps constitute one of the arguments that main verbs require. N-Comps modify the preceding NPs

as adjuncts.

3.2.1 N-Comp

N-Complement clauses are always preceded by the complementizer *bé* ‘COMP’, while V-Complement clauses are sometimes preceded by the complementizer *bé* ‘COMP’ and sometimes are not preceded by a complementizer, which will be discussed later.

Complement clauses preceded by the complementizer *bé* ‘COMP’ modify the preceding NPs as adjuncts. For example, the complement clause *bé ókélo ɔ=neko ɔgwán* ‘that Okelo killed Ogwan’ modifies the preceding NP *kóp* ‘message’ as an adjunct in (1). The main verb *cwano* ‘to send’ is a transitive verb and requires two arguments. One argument is the 1sr person singular subject *a=* ‘1SG’ and the other argument is the object *kóp* ‘message’. The prepositional phrase *né-á!bá!ká* ‘to the chief’ does not constitute an argument. The complement clause *bé ókélo ɔ=neko ɔgwán* ‘that Okelo killed Ogwan’ does not constitute an argument but modifies the preceding NP *kóp* ‘message’ as an adjunct.

- (1) *a=cwáɔ !né-á!bá!ká kóp bé ókélo ɔ=neko ɔgwán.*
 1SG=PERF:send to-chief message COMP Okelo 3S/P=PERF:kill Ogwan
 ‘I sent to the chief the message that Okelo killed Ogwan’

Complementation is syntactically similar to relativization to the extent that clauses are embedded in main sentences. Complementation differs from relativization because complement clauses do not include empty categories, while relative clauses have empty categories in the places from which relativized NPs are moved. For example, the sentence in (1) has no empty category in the complement clause.

The sentences in (2) and (3) have relative constructions. The relative clause includes the empty category *e_i* in the position from which the relativized NP *kóp* ‘message’ is moved in (2). The sentence in (3) has the empty category *e_i* in the position from which the relativized NP *ókélo* ‘Okelo’ is moved.

- (2) *én kóp amé okélo ɔ=cwáɔ né-á!bá!ká e.*
 3SG message_i REL Okelo 3S/P=PERF:send to-chief e_i
 ‘It is the message that Okelo sent to the chief.’
- (3) *én ókélo a e ɔ=cwáɔ né-á!bá!ká kóp.*
 3SG Okelo_i REL e_i 3S/P=PERF:send to-chief message
 ‘It is Okelo who sent the message to the chief.’

V-Complement clauses also do not include an empty category. The sentence in (4) contains a V-Comp. The sentence in (4) has no empty category in the complement clause.

- (4) a=ŋé!ó !bé ó!kélo ɔ=kwalɔ gwen.
 1SG=PERF:know COMP Okelo 3S/P=PERF:steal chickens
 ‘I knew that Okelo stole the chickens.’

N-Complementation is wide spread in Kumam. The use of N-Complementation is not limited to a small set of nouns. Many nouns including proper nouns can be modified by N-Complement clauses.

3.2.2 V-Comp, its syntactic structure

V-Complement clauses constitute one of arguments that main verbs require in sentences. For example, the sentence in (1) consists of a V-Comp. The main verb *wiŋɔ* ‘to hear’ is a transitive verb and requires two arguments. The complement clause *bé ó!gwók ɔ=gweo ɲɔrɔ* ‘that the dog barked yesterday’ constitutes an argument as a direct object of the verb *wiŋɔ* ‘to hear’.

- (1) a_s=wí!ŋɔ_v [!bé ó!gwók ɔ=gweo ɲɔrɔ.]_o
 1SG=PERF:hear COMP dog 3S/P=bark yesterday
 ‘I heard that the dog barked yesterday.’

The verb *ɔumɔ* ‘to force’ is a ditransitive verb and allows three arguments in a sentence. Moreover, the verb *ɔumɔ* ‘to force’ may be followed by an infinitive complement clause. The infinitive complement clause *kwalɔ gwen* ‘to steal the chickens’ constitutes an argument as one of two objects of the verb in (2).

- (2) a_s=dí!ɔ_v okélo_o [kwalɔ gwen.]_o
 1SG=PERF:force Okelo steal:INF chickens
 ‘I forced Okelo to steal the chickens.’

Kumam has a particular complement construction in which the complement clause is not preceded by a complementizer, yet it still constitutes an argument of the main verb. We call this type of the complementation ‘paratactic’.

For example, the sentence in (3) contains a ‘paratactic’ complement clause. The complement clause *okélo kwálɔ gwen* ‘(that) Okelo steals the chickens’ constitutes an argument of the main verb *neɛnɔ* ‘to see’. When an object suffix *-é* ‘3SG’ is added to the main verb *neɛnɔ* ‘to

see', the sentence in (5) is not grammatical because the main verb has three arguments. The verb *nεεnɔ* 'to see' is a transitive verb and allows only two arguments. However, the sentence in (4) has three arguments, namely the 1st person singular subject, the 3rd person singular object suffix *-é* '3SG' and the complement clause *ε=kwáló gwen* '(that) he steals the chickens'.

(3) $a_s=né!nó_v$ [okélo kwáló gwen.]_o
 1SG=PERF:see Okelo 3SG:IMPERF:steal chickens
 'I saw Okelo stealing the chickens.'

(4) $a_s=né!nó_v$ [ε=kwáló gwen.]_o
 1SG=PERF:see 3SG=IMPERF:steal chickens
 'I saw him stealing the chickens.'

(5) $*a_s=né!!n_v-é_o$ [é=!kwáló gwen.]_o
 1SG=PERF:see-3SG 3SG=IMPERF:steal chickens
 'I saw him stealing the chickens.'

When independent pronouns are located between the first and second clause in 'paratactic' complement constructions, the pronouns are subjects in the second clauses, not objects in the first clauses. For example, the 3rd person independent pronoun *én* is the subject in the second clause in the 'paratactic' complementation in (6).

(6) $a_s=né!nó_v$ [!én é=!kwáló gwen.]_o
 1SG=PERF:see 3SG 3SG=IMPERF:steal chickens
 'I saw him stealing the chickens.'

The 3rd person plural object suffix *-gí* '3SG' is added to the main verb *nεεnɔ* 'to see' in (7). Since the verb *nεεnɔ* 'to see' has three arguments, namely the 1st person singular subject, the 3rd person plural object suffix *-gí* '3PL', and the complement clause *gí i=kwáló gwen* '(that) they steal the chickens', the sentence in (7) is syntactically ungrammatical in terms of the valence.

The sentence in (8) is grammatical because it contains only two arguments, namely the 1st person singular subject and the complement clause *gí i=kwáló gwen* '(that) they steal the chickens'. The 3rd person plural subject clitic *i=* is attached to the verb *kwáló* 'to steal' in the complement clause in (8). The 3rd person plural subject clitic *i=* is used only when verbs are preceded by the 3rd person plural independent pronoun *gí* '3PL'. This fact provides evidence that the independent pronoun *-gí* '3PL' is the subject of the complement clause.

(7) *a_s=né!nó_v-!gí_o [gí=!kwáló gwen.]_o
 1SG=PERF:see-3PL 3PL=IMPERF:steal chickens
 ‘I saw them stealing the chickens.’

(8) a_s=né!nó_v [!gí í=!kwáló gwen.]_o
 1SG=PERF:see 3PL 3PL=IMPERF:steal chickens
 ‘I saw them stealing the chickens.’

The sentences in (5) and (7) are ungrammatical if they are interpreted to be simple sentences. If they are interpreted to consist of two independent sentences, similar to examples in (9) and (10), they are grammatical. They do not constitute complementation. Because the two sentences are independent, tonal sandhi does not occur between the first and second sentences in (9) and (10).

(9) a=né!!n-é. ε=káló gwen.
 1SG=PERF:see-3SG 3SG=IMPERF:steal chickens
 ‘I saw him. He steals the chickens.’

(10) a=né!nó-!gí. gí=kwáló gwen.
 1SG=PERF:see-3PL 3PL=IMPERF:steal chickens
 ‘I saw them. They steal the chickens.’

3.2.3 V-Comp, its pragmatic structure

Kumam has a particular construction for expressing contrastive focus. Intensive reflexive pronouns are used for this purpose⁴¹. They are inflected to agree with subjects in clauses.

Hypotactic complement clauses are completely independent from main clauses with regard to controlling the intensive reflexive pronouns that serve as the contrastive focus marker. For example, the intensive reflexive pronoun *ikom-é* ‘himself’ is inflected to agree with the subject of the complement clause *okélo* ‘Okelo’ in the hypotactic construction in (1), (2), (3), and (4). Though the intensive reflexive pronoun *ikom-é* ‘himself’ can be located in any place, it is inflected to agree with the subject *okélo* ‘Okelo’ in the complement clause.

(1) a=tá!mó !bé ó!kélo ɔ=wílo né-á!tín riŋo íkom-é.
 1SG=PERF:think COMP Okelo_i 3S/P=PERF:buy for-child meat himself_i
 ‘I thought that Okelo bought *the meat* for the child.’

⁴¹ The intensive reflexive pronouns are discussed in Section 4.2.2.

(2) a=tá!mó !bé ó!kélo ɔ=wɪlo né-á!tín ikom-é rí!ŋó.
 1SG=PERF:think COMP Okelo_i 3S/P=PERF:buy for-child himself_i meat
 ‘I thought that Okelo bought the meat for *the child*.’

(3) a=tá!mó !bé ó!kélo ɔ=wɪlo riŋo í-atá!lé íkom-é.
 1SG=PERF:think COMP Okelo_i 3S/P=PERF:buy meat at-market himself_i
 ‘I thought that Okelo bought the meat *at the market*.’

(4) a=tá!mó !bé ó!kélo ɔ=wɪlo riŋo ɲóro íkom-é.
 1SG=PERF:think COMP Okelo_i 3S/P=PERF:buy meat yesterday himself_i
 ‘I thought that Okelo bought the meat *yesterday*.’

The sentence in (5) consists of a ‘paratactic’ complement clause. If the intensive reflexive pronoun *ikom-é* ‘himself’ is controlled by the subject *okélo* ‘Okelo’ in the ‘paratactic’ complement clause, the sentence is not grammatical.

(5) *a=né!nó okélo kwáló gwen ikom-é.
 1SG=PERF:see Okelo_i 3SG:IMPERF:steal chickens himself_i
 ‘I saw Okelo stealing *the chickens*.’

Subjects in main clauses control the intensive reflexive pronouns that are the contrastive focus markers in ‘paratactic’ complement constructions, while subjects in complement clauses control the intensive reflexive pronouns that are the contrastive focus markers in hypotactic complement constructions.

The sentence in (6) contains a ‘paratactic’ complementation. The intensive reflexive pronoun *ikom-á* ‘myself’ acts as the contrastive focus marker and is inflected to agree with the 1st person singular subject in the main clause.

(6) a=né!nó okélo kwáló gwen ikom-á.
 1SG_i=PERF:see Okelo 3SG:IMPERF:steal chickens myself_i
 ‘I saw Okelo stealing *the chickens*.’

As discussed later, coreference is controlled by topics not by subjects. Subjects occupy topic slots in sentences when topicalization is not applied. For example, the subject *okélo* ‘Okelo’ occupies the topic slot in the hypotactic complement clause in (7). The intensive reflexive pronoun *ikom-é* ‘himself’ is controlled by the topic *okélo* ‘Okelo’ because the hypotactic complement clause is pragmatically independent from the main clause. Hypotactic complements constitute pragmatically independent domains from main clauses.

(7) a=tá!mó [!bé ó!kélo_{TOP} [ɔ=wílo né-á!tín ikom-é rí!njó.]_{COMMENT}]
 1SG=PERF:think COMP Okelo_i 3S/P=PERF:buy for-child himself_i meat
 ‘I thought that Okelo bought the meat for *the child*.’

‘Paratactic’ complement clauses do not constitute pragmatically independent domains from main clauses. The sentence in (8) is not grammatical because the intensive reflexive pronoun *ikom-é* ‘himself’ is coreferential with the subject *okélo* ‘Okelo’ in the ‘paratactic’ complement clause⁴².

(8) *a=né!nó [okélo_{TOP} [kwáló gwen ikom-é.]_{COMMENT}]
 1SG=PERF:see Okelo_i 3SG:IMPERF:steal chickens himself_i
 ‘I saw Okelo stealing *the chickens*.’

Main clauses include ‘paratactic’ complement clauses within their pragmatic domains. Topics in main clauses control intensive reflexive pronouns that act as the contrastive focus markers in ‘paratactic’ complement clauses. For example, the intensive reflexive pronoun *ikom-á* ‘myself’ is inflected to agree with the 1st person singular, which is the topic in the main clause.

(9) a_{TOP}=[né!nó okélo kwáló gwen ikom-á.]_{COMMENT}
 1SG_i=PERF:see Okelo 3SG:IMPERF:steal chickens myself_i
 ‘I saw Okelo stealing *the chickens*.’

3.2.4 Complement types

V-Comp is classified into five morpho-syntactic types; hypotactic indicative, ‘paratactic’ indicative, hypotactic subjunctive, ‘paratactic’ subjunctive, and infinitive complement.

Hypotactic indicative

Hypotactic indicative complement clauses are always preceded by the complementizer *bé* ‘COMP’. Moreover, they consist of predicates inflected in indicative mood. The sentence in (1) consists of a complement clause that is preceded by the complementizer *bé* ‘COMP’ and contains the verb *kwálo* ‘to steal’ inflected in indicative mood. The complement clause *bé ó!kélo ɔ=kwálo sén!té* ‘that Okelo stole the money’ constitutes an argument required by the main verb *neeno* ‘to know’.

⁴²The intensive reflexive pronoun *ikom-é* ‘himself’ does not modify the preceding NP *gwen* ‘chickens’. If it modifies the preceding NP *gwen* ‘chickens’, it must be inflected with the 3rd person plural *ikom-gí* ‘themselves’.

(1) a=ŋé!ó !bé ó!kélo ɔ=kwalɔ sén!té.
 1SG=PERF:know COMP Okelo 3S/P=PERF:steal money
 ‘I knew that Okelo stole the money.’

‘Paratactic’ indicative

‘Paratactic’ indicative complement clauses are not preceded by a complementizer and consist of predicates in indicative mood. The sentence in (2) contains a ‘paratactic’ complement construction. The complement clause *okélo ɔ=kwalɔ gwen* ‘Okelo stole the chickens’ constitutes an argument as an object required by the main verb *nɛɛnɔ* ‘to see’, though it is not preceded by a complementizer. Moreover, the verb *kwalɔ* ‘to steal’ in the complement clause is conjugated with 3rd person in indicative mood.

(2) a=né!nó okélo ɔ=kwalɔ gwen.
 1SG=PERF:see Okelo 3S/P=PERF:steal chickens
 ‘I saw Okelo stealing the chickens.’

Hypotactic subjunctive

Hypotactic subjunctive complement clauses are preceded by the complementizer *bé* ‘COMP’ and consist of predicates in subjunctive mood. The sentence in (3) constitutes hypotactic subjunctive complementation. The complement clause is preceded by the complementizer *bé* ‘COMP’ and consists of the verb *kwalɔ* ‘to steal’ conjugated with 3rd person in subjunctive mood.

(3) a=mító !bé í!cúɔ kwal gwén.
 1SG=IMPERF:want COMP man 3S:steal:SUB chickens
 ‘I hope that the man should steal the chickens.’

‘Paratactic’ subjunctive

‘Paratactic’ subjunctive complement clauses are not preceded by a complementizer and consist of predicates in subjunctive mood. The complement clause *ícúɔ kwal gwén* ‘the man should steal the chickens’ constitutes an argument as an object required by the main verb. The verb *kwalɔ* ‘to steal’ in the complement clause is conjugated with 3rd person in subjunctive mood.

(4) a=mító ícúɔ kwal gwén.
 1SG=IMPERF:want man 3S:steal:SUB chickens

‘I want the man to steal the chickens.’

Infinitive

Infinitive complement clauses consist of an infinitive form of the verb. The complement clauses are not preceded by the complementizer *bé* ‘COMP’. The sentence in (5) consists of the infinitive complement clause *kwalo gwen* ‘to steal chickens’. The complement clause *kwalo gwen* ‘to steal the chickens’ constitutes an argument as an object required by the main verb *waaco* ‘to tell’. The infinitive form of the verb *kwalo* ‘to steal’ is used in the infinitive complement clause.

Logical subjects of infinitive forms of verbs in infinitive complement clauses are one of the NPs in the preceding clauses. For example, the logical subject of the infinitive form of the verb *kwalo* ‘to steal’ is the dative NP *okélo* ‘Okelo’ in the main clause of (5).

- (5) a=wá!cò !né-ó!kélo kwalo gwen.
1SG=PERF:tell to-Okelo steal:INF chickens
‘I told Okelo to steal the chickens.’

‘Paratactic’ structures

The ‘paratactic’ constructions defined above consist of two clauses without any connecting word. Therefore, we must attest that ‘paratactic’ constructions form one sentence phonologically and syntactically. Otherwise, ‘paratactic’ constructions might be regarded as consisting of two independent sentences.

First, ‘paratactic’ constructions have an intonation pattern that represents one sentence. Second, vowel sandhi and tonal sandhi rules are applied between main and complement clauses in ‘paratactic’ constructions. For example, the final vowel of the main verb *a=né!nó* ‘I saw’ is coalesced with the initial vowel of the following clause according to vowel sandhi rules in (6).

Second, the initial syllable of the complement clause has a downstepped high tone in (7). Down step takes place between the main and the following complement clause because the main verb *a=né!nó* ‘I saw’ has a floating low toneme in the rightmost position. The high toneme in the leftmost position of the complement clause is pronounced with a downstepped high tone after the floating low toneme. Vowel and tonal sandhi rules are interrupted by a sentence boundary. Since vowel and tonal sandhi rules are not obstructed between the main and the complement clause, there is no sentence boundary between the clauses.

(6) a=né!nó okélo kwáló gwen. = [ané!nó!kélo.....]
 1SG=PERF:see Okelo 3SG:IMPERF:steal chickens
 ‘I saw Okelo stealing the chickens.’

(7) a=né!nó !dákó-!ná tédó !cám.
 1SG=PERF:see wife-1SG 3SG:IMPERF:cook food
 ‘I saw my wife cooking food.’

Third, any NPs can be topicalized from second clauses in ‘paratactic’ constructions. Since topicalization is applied to any NPs in subordinate clauses in sentences, second clauses in ‘paratactic’ constructions constitute subordinate clauses in sentences.

Topic slots are located in sentence initial position. Topicalization is applicable to the NP *cám* ‘food’ in the second clause of the ‘paratactic’ construction in (8). When the NP *cám* ‘food’ is topicalized, it is moved into the sentence initial position in (9). Since the NP can be topicalized from the second clause of a ‘paratactic’ construction, this second clause is regarded as a subordinate clause in the sentence. The sentence in (9) is regarded as one sentence.

This phonological and syntactic evidence demonstrates that there is no sentence boundary between two clauses in ‘paratactic’ structures.

(8) a=né!nó !dákó-!ná tédó !cám. = (7)
 1SG=PERF:see wife-1SG 3SG:IMPERF:cook food
 ‘I saw my wife cooking food.’

(9) *cám*, a=né!nó !dákó-ná tédó.
 food, 1SG=PERF:see wife-1SG 3SG:IMPERF:cook
 ‘Food, I saw my wife cooking.’

The example in (10) has a similar construction to ‘paratactic’ one. However, the example in (10) consists of two independent sentences. Vowel and tonal sandhi do not take place between the first and the second sentence. Moreover, if object suffixes are added to main verbs, the verbs cannot be followed by complement clauses. The transitive verbs are not allowed to take more than two arguments. When verbs with object suffixes are followed by complement clauses, they do not follow the valence constraint. The second sentence is regarded as being independent from the first one in (10).

(10) a=né!!n-é. ε=kwáló gwen.
 1SG=PERF:see-3SG 3SG=IMPERF:steal chickens

‘I saw him. He steals the chickens.’

3.2.5 Distribution of complement types

Main verbs determine which types of complements should be selected. Perception verbs such as *nɛɛnɔ* ‘to see’, *bɪlɔ* ‘to taste’, and *wɪɪnɔ* ‘to feel’ are followed only by a ‘paratactic’ indicative complement. Perception verbs such as *wɪɪnɔ* ‘to hear’ and *ɔɔdɔ* ‘to find, notice’ are followed by a ‘paratactic’ or a hypotactic indicative complement clause. Cognition verbs such as *ɲeɛnɔ* ‘to know’ and *taamɔ* ‘to think’ are followed by a hypotactic indicative or a hypotactic subjunctive complement. Some cognition verbs are followed by a ‘paratactic’ indicative complement in some contexts. When cognition verbs are followed by a ‘paratactic’ indicative complement, however, they are conjugated in imperfect aspect. Manipulation verbs show a relatively complicated distribution. However, manipulation verbs are followed by a ‘paratactic’ or a hypotactic subjunctive complement or an infinitive complement. Manipulation verbs such as *dɪnɔ* ‘to force’ and *yɛi* ‘to allow’ are followed by an infinitive complement. Kumam clearly distinguishes causation from manipulation. Causation verbs such as *mɪɪnɔ* ‘to make, give’ are followed by a ‘paratactic’ indicative complement or an infinitive complement. Phasal verbs such as *gɛɛnɔ* ‘to begin’ and *tyeko* ‘to finish’ are followed only by an infinitive complement.

3.2.6 Complement types and their semantic characteristics

Perception verbs

Perception verbs are divided into two subgroups syntactically and semantically. Perception verbs such as *nɛɛnɔ* ‘to see’, *bɪlɔ* ‘to taste’, and *wɪɪnɔ* ‘to feel’ are followed only by a ‘paratactic’ indicative complement in (2), (3), and (5). Other perception verbs such as *wɪɪnɔ* ‘to hear’ and *ɔɔdɔ* ‘to find, notice’ may be followed by a hypotactic or a ‘paratactic’ indicative complement, as in (1) and (4). ‘Paratactic’ indicative complement clauses are used to express Direct Perception, when they are preceded by perception verbs. Hypotactic indicative complement clauses are used to express Indirect Perception, when they are preceded by perception verbs.

The sentences in (1) to (5) contain ‘paratactic’ constructions. Perception verbs express Direct Perception when they are followed by a ‘paratactic’ complement. They express that speakers perceive the events described by the complement clauses directly. For example, in (1), the verb *wɪɪnɔ* ‘to hear’ is followed by a ‘paratactic’ indicative complement clause, which expresses that the subject in the main clause hears the event described by the complement clause with his own ears.

'Paratactic' indicative (Direct Perception)

- (1) a=wí!nó ogwók !gwéó.
1SG=PERF:hear dog 3SG:IMPERF:bark
'I heard the dog barking (with my ears).'
- (2) a=bí!ló eráŋi wíniwíni.
1SG=PERF:taste tea sweet
'I felt the tea tasted sweet.'
- (3) a=wí!nó συδο πίη lyêt tin.
1SG=PERF:feel PAST earth hot today
'I felt it was hot today.'
- (4) a=ú!dó ekéko σ=gor:e.
1SG=PERF:find door 3S/P=PERF:open:NEUT
'I saw the door opened.'
- (5) a=né!nó icóσ kwáló gwen.
1SG=PERF:see man 3SG:IMPERF:steal chickens
'I saw the man stealing the chickens.'

Hypotactic indicative (Indirect Perception)

- (6) a=wí!nó !bé ó!gwók σ=gweo.
1SG=PERF:hear COMP dog 3S/P=PERF:bark
'I heard (from somebody) that the dog barked.'
- (7) a=ú!dó !bé é!kéko σ=gor:e.
1SG=PERF:find COMP door 3S/P=PERF:open:NEUT
'I noticed that the door was opened.'

Hypotactic indicative complement clauses are used to express Indirect Perception, when they are preceded by perception verbs. For example, in (6), the verb *wíησ* 'to hear' is followed by a hypotactic complement, which denotes Indirect Perception. The speaker heard from somebody that the dog barked. In (7), the verb *συδο* 'to find' is used in a hypotactic construction, which expresses that the speaker noticed that someone opened the door with intention.

The perception verb *νεενο* 'to see' is usually followed by a 'paratactic' complement clause. However, the perception verb *νεενο* 'to see' can also be followed by a hypotactic complement clause in some contexts. When the verb *νεενο* 'to see' is used in a hypotactic complement construction, it denotes Indirect Perception. For example, the sentence in (8) contains a hypotactic indicative complement clause. It expresses that the speaker saw the empty henhouse and understood that the man stole the chickens.

- (8) a=né!nó !bé í!cúó ɔ=kwaló gwen.
 1SG=PERF:see COMP man 3S/P=PERF:steal chickens
 ‘I noticed that the man stole the chickens.’

Since the perception verb *wiɲɔ* ‘to hear’ in a ‘paratactic’ construction denotes Direct Perception, it cannot be accompanied with a prepositional phrase such as *ɪ-bɔt* NP ‘from NP’ which expresses the source of information. When the verb *wiɲɔ* ‘to hear’ is used with a hypotactic indicative complement clause, it expresses Indirect Perception. In this case, it can be accompanied with a prepositional phrase that denotes source of information.

- (9) *a=wí!ɲó ɪ-but-okélo ogwók ɔ=gweo.
 1SG=PERF:hear from-Okelo dog 3S/P=PERF:bark
 ‘*I heard from Okelo the dog barking.’

- (10) a=wí!ɲó ɪ-but-okélo bé ó!gwók ɔ=gweo.
 1SG=PERF:hear from-Okelo COMP dog 3S/P=PERF:bark
 ‘I heard from Okelo that the dog barked.’

The perception verb *wiɲɔ* ‘to hear’ may semantically express Direct or Indirect Perception. That is, speakers can hear events happening directly with their own sensory organs or they can receive information about events indirectly from other people.

The second sentence in (11) is not semantically acceptable. The first sentence in (11) contains a ‘paratactic’ indicative complement clause. When the perception verb *wiɲɔ* ‘to hear’ is used in a ‘paratactic’ construction, it denotes Direct Perception. It expresses that the speaker heard the dog barking with his own ears. Therefore, he cannot reject the fact in the following sentence.

The second sentence in (12) is acceptable. The first sentence in (12) contains a hypotactic construction. The perception verb *wiɲɔ* ‘to hear’ denotes Indirect Perception when it is followed by a hypotactic indicative complement clause. It expresses that the speaker received information about the dog’s barking from somebody. Thus, he can reject the fact that he heard the dog barking in (12).

- (11) *a=wí!ɲó ogwók ɔ=gweo ɲoró,
 1SG=PERF:hear dog 3S/P=PERF:bark yesterday
 do áɲó !líká á=!wí!!ɲ-é. a=bú!tó ɪ-ber.
 but 1SG NEG 1SG=PERF:hear-3SG 1SG=PERF:sleep in-good
 ‘*I heard the dog barking yesterday, but I did not hear it. I slept well.’

- (12) a=wí!ɲó !bé ó!gwók ɔ=gweo ɲoró,
 1SG=PERF:hear COMP dog 3S/P=PERF:bark yesterday
 do áɲó !líká á=!wí!ɲ-é. a=bú!tó r-ber.
 but 1SG NEG 1SG=PERF:hear-3SG 1SG=PERF:sleep in-good
 ‘I heard that the dog barked yesterday, but I did not hear it. I slept well.’

Perception verbs such as *neɛno* ‘to see’, *biɪlo* ‘to taste’, and *wiɲɔ* ‘to feel’ are followed only by a ‘paratactic’ indicative complement clause, because they express only Direct Perception. Speakers can see, taste, or feel objects directly with their own sensory organs. Perception verbs such as *wiɲɔ* ‘to hear’ and *σσɔ* ‘to notice’ may be followed by a ‘paratactic’ or a hypotactic indicative complement clause. They sometimes denote Direct Perception and sometimes denote Indirect Perception. Speakers sometimes can hear or notice objects directly with their own sensory organs, and they sometimes get hearsay information from others. The distribution of complement types reflects the semantic features of perception verbs.

Cognition verbs

Cognition verbs are followed by a hypotactic indicative or a hypotactic subjunctive complement clause.

Particular cognition verbs such as *ɲeeno* ‘to know’ may be followed by a ‘paratactic’ indicative complement. When cognition verbs are followed by a ‘paratactic’ indicative complement clause, they express that an idea or knowledge is inherent for a speaker. When cognition verbs are followed by a hypotactic indicative complement clause, they express that a speaker receives an idea or knowledge about the event described by the complement clause from another person. For example, the sentence in (13) contains a ‘paratactic’ construction. It expresses that the speaker knows that Okelo steals the chickens by witnessing the event. On the other hand, the sentence in (14) consists of a hypotactic construction. It expresses that the speaker learned about the event described in the complement clause from somebody else.

‘Paratactic’ indicative (Inherent Knowledge)

- (13) a=ɲéó okélo kwáló gwen.
 1SG=IMPERF:know Okelo 3SG:IMPERF:steal chickens
 ‘I know that Okelo steals the chickens (by witnessing).’

Hypotactic indicative (Learned Knowledge)

- (14) a=ɲéó !bé ó!kélo kwáló gwen.
 1SG=IMPERF:know COMP Okelo 3SG:IMPERF:steal chickens
 ‘I know that Okelo steals the chickens (from somebody’s information).’

When the cognition verb *ηεeno* ‘to know’ is followed by a ‘paratactic’ complement, the verb should be inflected with 1st person singular in imperfect aspect. Moreover, the main verb is grammaticalized into an adverbial which has a lexical meaning ‘surely, certainly’. The main clause *a=ηέó* ‘I know’ is grammaticalized into an adverbial in (15). The ‘paratactic’ construction in (16) is not grammatical because the main verb is inflected in perfect aspect.

(15) *a=ηέó* *ιcόc* *kwáló* *gwen*.
 1SG=IMPERF:know man 3SG=IMPERF:steal chickens
 ‘Certainly, the man steals the chickens.’

(16) **a=ηέ!ó* *ιcόc* *kwáló* *gwen*.
 1SG=PERF:know man 3SG=IMPERF:steal chickens
 ‘I knew the man steals the chickens.’

When the cognition verb *ηεeno* ‘to know’ is followed by a ‘paratactic’ complementation, it denotes that the knowledge is inherent for the speaker. It does not express that the speaker has received knowledge about the event from another person at that particular time. The speaker already has the knowledge in his mind after having witnessed the event or received information about the event from somebody else. The cognition verb does not express the action for the most part. However, if the verb expresses an action, the action described by the verb has the last moment when the action is accomplished. When the verb expresses an action, it is inflected in perfect aspect.

The cognition verb *ηεeno* ‘to know’ does not express action when it is followed by a ‘paratactic’ indicative complement. Therefore, the cognition verb cannot be inflected in perfect aspect in ‘paratactic’ construction. When the cognition verb is followed by a hypotactic complement, the verb expresses an action about which the speaker receives knowledge. Therefore, the cognition verb may be inflected in imperfect aspect or in perfect aspect when it is followed by a hypotactic indicative complement clause.

When the cognition verb *ηεeno* ‘to know’ is followed by a ‘paratactic’ complement, it denotes Inherent Knowledge of speaker. For example, the first sentence in (17) contains a ‘paratactic’ construction. The speaker knows that Okelo stole the money by witnessing the event. Therefore, the speaker cannot deny the fact described by the complement clause in the following sentence.

When the cognition verb *ηεeno* ‘to know’ is followed by a hypotactic complement, it denotes Learned Knowledge. The knowledge is not inherent in the speaker’s mind. For example, the first sentence in (18) contains a hypotactic construction. It expresses that the speaker learned from somebody else that Okelo stole the money. The information might be wrong. Therefore,

the event described by the complement can be denied in the following sentence.

(17) *a=ŋéó okélo ɔ=kwalɔ sɛn!té dó !líká é=!kwá!lɔ.
 1SG=IMPERF:know Okelo 3S/P=PERF:steal money but NEG 3S=PERF:steal
 ‘*Certainly, Okelo stole money but he did not steal.’

(18) a=ŋé!ó !bé ó!kélo ɔ=kwalɔ sɛn!té dó !líká é=!kwá!lɔ.
 1SG=PERF:know COMP Okelo 3S/P=PERF:steal money but NEG 3S=PERF:steal
 ‘I knew that Okelo stole money but he did not steal.’

Many cognition verbs may not be followed by a ‘paratactic’ complement clause. They are followed by a hypotactic indicative or a hypotactic subjunctive complement clause. Therefore, they do not distinguish Inherent Knowledge from Learned Knowledge.

The sentence in (21) is not grammatical because the cognition verb *taamɔ* ‘to think’ cannot be followed by a ‘paratactic’ complement clause.

Hypotactic indicative

(19) a=tá!mó !bé ó!kélo ɔ=kwalɔ gwen.
 1SG:PERF:think Comp Okelo 3S/P=PERF:steal chickens
 ‘I thought that Okelo stole the chickens.’

Hypotactic subjunctive

(20) a=tá!mó !bé ó!kélo kwal gwén.
 1SG:PERF:think Comp Okelo 3SG:steal:SUB chickens
 ‘I thought that Okelo should steal the chickens.’

‘Paratactic’ indicative

(21) *a=tá!mó okélo ɔ=kwalɔ gwen.
 1SG:PERF:think Okelo 3S/P=PERF:steal chickens
 ‘I thought that Okelo stole the chickens.’

Manipulation verbs

Manipulation verbs show a complicated distribution of complement types; however, they are mainly followed by a ‘paratactic’ subjunctive, a hypotactic subjunctive complement, or an infinitive complement. Causation verbs such as *minɔ* ‘to give, make’ are followed by a ‘paratactic’ indicative complement in addition to an infinitive complement as discussed below.

'Paratactic' subjunctive (Strong Manipulation)

- (22) ʊʊdɔ a=mító atín somí.
PAST 1SG=IMPERF:want child 3SG:read:SUB
'I wanted the child to read (without fail).'

Hypotactic subjunctive (Weak Manipulation)

- (23) ʊʊdɔ a=mító !bé á!tín somí.
PAST 1SG=IMPERF:want COMP child 3SG:read:SUB
'I hoped that the child would read.'

As a typical manipulation verb the verb *mitɔ* 'to want' may be followed by a 'paratactic' subjunctive or a hypotactic subjunctive complement. When the manipulation verb *mitɔ* 'to want' is used in a 'paratactic' construction, it denotes Strong Manipulation. It expresses that a speaker's wish is accomplished without fail.

For example, the first sentence in (24) contains a 'paratactic' subjunctive clause. The manipulation verb *mitɔ* 'to want' in 'paratactic' construction denotes Strong Manipulation. It expresses that the speaker's wish is achieved without fail. The entire sentence in (24), linked together with coordination, is not acceptable semantically. Since the first sentence presupposes that the speaker's wish is accomplished without fail, it is meaningless for the speaker to confirm accomplishment of his will in the second sentence. Kumam speakers judge the sentence in (24) as unnecessarily repetitive. When the manipulation verb is followed by a hypotactic subjunctive complement, the event denoted by the complement is not necessarily realized. The sentence in (23) contains a hypotactic construction that is regarded as appropriate, whether the child reads a book or not.

- (24) ?ʊʊdɔ a=mító atín somi é=!kó soomo.
PAST 1SG=IMPERF:want child 3SG:read:SUB 3SG=PERF:and do read:INF
'I wanted the child to read (without fail) and he read.'

When the manipulation verb *mitɔ* 'to want' is followed by a hypotactic subjunctive complement, the manipulation is not necessarily fulfilled. The sentence in (23) contains a semantically acceptable hypotactic construction, whether the child may read a book or not. When manipulation verbs are followed by a hypotactic subjunctive complement clause, they denote Weak Manipulation.

When manipulation verbs are followed by an infinitive complement, they also denote Weak Manipulation. When manipulation verbs are followed by an infinitive complement, the event described by the complement is not necessarily realized. Manipulation may or may not be

fulfilled. The sentence in (25) is acceptable semantically even if Okelo does not steal the chickens.

- (25) a=wá!cɔ́ !né-ó!kélo kwalɔ gwen.
 1SG=PERF:tell to-Okelo steal:INF chickens
 ‘I told Okelo to steal the chickens.’

There are some manipulative expressions, namely *muno tam* ‘to advise’ and *keelo tam* ‘to suggest’, that consist of a verbal phrase. They are followed by an N-comp, nota V-comp. The N-comp does not constitute an argument in sentences. Because a constituent cannot intervene between the head noun and the following N-comp, the noun *tam* ‘thought’ cannot be followed directly by an indirect object. The sentence in (27) is not grammatical because the indirect object *dákó* ‘woman’ intervenes between the head noun *tam* ‘thought’ and the complement clause *bé é=lwɔk ígoen* ‘that she should wash the clothes’. If a constituent might intervene between the head noun and the N-Comp, the sentence in (27) would not follow the valence restriction because the noun *tam* ‘thought’, the noun *dákó* ‘woman’, and the complement clause *be é=lwɔk ígoen* ‘that she should wash the clothes’ are interpreted as objects for the verb *muno* ‘to give’ independently.

- (26) ɪcɔ́ɔ ɔ=mɪɔ dákó tam bé é=lwɔk ígoen.
 man 3S/P=PERF:give woman thought COMP 3SG=wash:SUB clothes
 ‘The man advised the woman that she should wash the clothes.’
- (27) *ɪcɔ́ɔ ɔ=mɪɔ tam dákó !bé é=lwɔk ígoen.
 man 3/P=PERF:give thought woman COMP 3SG=wash:SUB clothes
 ‘The man advised the woman that she should wash the clothes.’

Causation verbs

Kumam clearly distinguishes causation from manipulation. The causation verb *muno* ‘to give’ is followed only by a ‘paratactic’ indicative or an infinitive complement clause. The causation verb *muno* ‘to give’ cannot be followed by a subjunctive complement clause. Moreover, the causation verb *muno* ‘to give’ is not followed by a hypotactic indicative complement clause, though manipulation verbs are mainly followed by a ‘paratactic’ complement, either a hypotactic subjunctive complement, or an infinitive complement clause.

When the causation verb *muno* ‘to give’ is followed by a ‘paratactic’ indicative complement, the event described by the complement clause will necessarily be accomplished. The causation is always realized at the time specified in a main clause if the causation verb *muno*

'to give' is used in 'paratactic' constructions. For example, the sentence in (28) contains a 'paratactic' construction. It expresses that the speaker's father made him become a teacher and that he actually did become a teacher. When the causation verb *mino* 'to give' is followed by an infinitive complement, the event described by the complement will not necessarily be accomplished. The verb is followed by an infinitive complement clause in (29). The sentence in (29) expresses that the speaker's father tried to make him become a teacher but that he might or might not have become a teacher.

(28) papá ɔ=miɔ a=bédó apwój.
 father 3S/P=PERF:give 1SG=IMPERF:become teacher
 'Father made me become a teacher. (I became a teacher)'

(29) papá ɔ=mi-á béedo apwój.
 father 3S/P=PERF:give-1SG become:INF teacher
 'Father made me become a teacher.'

The sentence in (30) is acceptable, while the sentence in (31) is not acceptable semantically. The second sentence in (30) contains a 'paratactic' indicative construction. It expresses that the event described by the complement clause will be accomplished without fail. The sentence in (30) expresses that he missed the examination, and as a result he felt sad. Anyone would feel sad if he or she failed an examination. Causation verbs are followed by a 'paratactic' indicative complement clause to express the realization of the causation.

The causation verb *mino* 'to give' is followed by an infinitive complement clause in the second sentence in (31). The event described by the complement clause will not necessarily be accomplished. The sentence in (31) expresses that he failed the examination but that he might or might not feel sad. Kumam does not allow the possibility that person would not mind failing an examination. Thus, the sentence (31) is not acceptable semantically.

(30) ε=ké!í apepá, ε=mí!!-é é=!wíjɔ i-rac.
 3SG=PERF:miss examination 3SG=PERF:give-3SG 3SG=IMPERF:hear in-bad
 'He missed the examination, it made him feel sad.'

(31) *ε=ké!í apepá, ε=mí!!-é wíjɔ i-rac.
 3SG=PERF:miss examination 3SG=PERF:give-3SG hear:INF in-bad
 'He missed the examination, it made him feel sad.'

'Paratactic' indicative complements are used to express Realization of Causation when they are preceded by causation verbs. On the other hand, when causation verbs are followed by an

infinitive complement clause, they do not express Realization of Causation.

The causation verb *mino* ‘to give’ does not denote speakers’ wishes, but speakers’ urging causes into accomplishing events. In these cases, the speakers are only concerned whether the events described by complement clauses are realized.

Phasal verbs

Phasal verbs are followed only by an infinitive complement.

- (32) a=tyé!kó soomo itabó.
1SG=PERF:finish read:INF book
‘I finished reading the book.’

The observations discussed above show the basic distribution of ‘paratactic’ and hypotactic complement construction. There are some irregularities in this distribution for a limited set of verbs. These irregularities are related to the semantic features of the verbs.

The main verbs determine which types of complements should be selected. Perception verbs show a clear distribution in terms of complements. They are followed only by ‘paratactic’ or hypotactic indicative complement clauses. They are not followed by subjunctive complement or infinitive complement clauses.

Perception verbs are classified into two subgroups, namely those that are followed only by ‘paratactic’ indicative complement clauses and those that may be followed by ‘paratactic’ indicative or hypotactic indicative complement clauses. The former group consists of verbs such as *neeno* ‘to see’, *buló* ‘to taste’, and *wino* ‘to feel’ that denote only Direct Perception. They denote perceptual experiences that animate beings receive directly from objects because of the physical characteristics of their sensory organs. The latter group consists of verbs such as *wino* ‘to hear’, *σδο* ‘to discover’, and *yei* ‘to admit fact’ that may denote Direct Perception or Indirect Perception. They denote perceptual experiences that animate beings receive directly or indirectly from objects, depending on the physical characteristics of their sensory organs.

The verb *yei* ‘to accept fact’ shows a mixed distribution. The verb *yei* ‘to accept fact’ has another meaning, namely ‘to agree’. When the verb is used as a perception verb, it is followed by a ‘paratactic’ indicative or a hypotactic indicative complement clause. When the verb is used as a manipulation verb, it may be followed by a ‘paratactic’ or a hypotactic subjunctive complement. The sentence in (34) consists of the perception verb *yei* ‘to accept fact’, while the sentence in (35) consists of the manipulation verb *yei* ‘to agree’. The brackets in the list in (33) show the mixed distribution type.

(33) Distribution of V-comps in perception verbs

	neeno to see	buulo to taste	wiwo 1 to feel	wiwo 2 to hear	uudo to discover	yei to admit fact
PI	+	+	+	+	+	+
HI	-	-	-	+	+	+
PS	-	-	-	-	-	(+)
HS	-	-	-	-	-	(+)
I	-	-	-	-	-	-

(PI: 'paratactic' indicative, HI: hypotactic indicative,

PS: 'paratactic' subjunctive, HS: hypotactic subjunctive, I: infinitive)

(34) a=yé!í ɪcúɔ ɔ=kwalɔ gwen. (Perception)

1SG=PERF:admit man 3S/P=PERF:steal chickens

'I admitted the fact that the man stole the chickens.'

(35) a=yé!í ɪcúɔ kwal gwén. (Manipulation)

1SG=PERF:agree man 3SG:steal:SUB chickens

'I agreed that the man should steal the chickens.'

Cognition verbs show relatively clear distribution in terms of complement constructions. They are mainly followed by a hypotactic indicative or a subjunctive complement. They are not followed by a 'paratactic' complement or an infinitive complement. Though most cognition verbs follow the regular distribution, the cognition verb *neeno* 'to know' in imperfect aspect may be followed by a 'paratactic' indicative complement.

(36) Distribution of V-comps in cognition verbs

	taamo to think	geeno to know	wic wɪ to forget	pyemo to deny	tye kede par to be afraid	waaco to say
PI	-	(+)	-	-	-	-
HI	+	+	+	+	+	+
PS	-	-	-	-	-	-
HS	+	+	+	+	+	+
I	-	-	-	-	-	(+)

(PI: 'paratactic indicative, HI: hypotactic indicative, PS: 'paratactic' subjunctive,

HS: hypotactic subjunctive, I: infinitive)

Cognition verbs like 'to judge', 'to accuse', 'to understand', 'to reply', 'to be glad', 'to be

sad', 'to be surprised', and 'to doubt' show the typical distribution of cognition verbs outlined in (36). The cognition verb *cukɔ* 'to promise' is followed only by a hypotactic indicative complement.

The cognition verb *peɛno* 'to ask' is followed by the complementizer *kamé* 'whether'.

- (37) a=pé!jó kamé ɛ=pó!tó aɛɛjá.
 1SG=PERF:ask whether 3SG=PERF:fail examination
 'I asked whether he failed the examination.'

Some cognition verbs show the distribution of V-comps mixed with that of manipulation or causation verb. When the cognition verbs *waacɔ* 'to say', *kwanɔ* 'to ask for', and *yaamɔ* 'to say' are used as manipulation verbs, they may be followed by an infinitive complement clause. For example, the cognition verbs *waacɔ* 'to say' and *yaamɔ* 'to speak' are followed by a hypotactic indicative or a hypotactic subjunctive complement clause in (38) and (39). The verb *waacɔ* 'to say' and *kwanɔ* 'to ask for' may be followed by infinitive complements as manipulation verbs⁴³.

- (38) a=wá!cɔ !bé í!cɔɔ ɔ=kwalɔ gwen. (Cognition)
 1SG=PERF:say COMP man 3S/P=PERF:steal chickens
 'I said that the man stole the chickens.'

- (39) a=yá!mɔ !né-í!cɔɔ !bé é=kwal gwén.
 1SG=PERF:say to-man COMP 3SG=steal:SUB chickens (Cognition)
 'I said to the man that he should steal the chickens.'

- (40) a=wá!cɔ !né-í!cɔɔ kwalɔ gwen. (Manipulation)
 1SG=PERF:say to-man steal:INF chickens
 'I told the man to steal the chickens.'

- (41) ícɔɔ ɔ=kwaɔ dákó teedo cáɱ. (Manipulation)
 man 3S/P=PERF:ask woman cook:INF food
 'The man asked the woman to cook food.'

The verb *yutuno* 'to remember, remind' sometimes acts as a cognition verb and sometimes acts as a causation verb. When the verb *yutuno* 'to remember, remind' is used as a causation verb, it may be followed by a 'paratactic' indicative or an infinitive complement, as shown in (43) and (44), respectively. Otherwise, the verb *yutuno* 'to remember' acts as a cognition verb

⁴³ The verb *kwanɔ* 'to ask for' is a ditransitive verb. It allows three arguments in sentences.

and is followed by a hypotactic indicative complement, as shown in (42). When the verb *yutuno* ‘to remind’ is followed by a ‘paratactic’ indicative complement clause, it expresses that the event described by the complement clause will be realized. When the verb *yutuno* ‘to remind’ is followed by an infinitive complement clause, the event described by the complement may or may not be realized.

- (42) a=yítuno bé í!cúo o=kwalo gwen. (Cognition)
 1SG=PERF:remember COMP man 3S/P=PERF:steal chickens
 ‘I remembered that the man stole the chickens.’
- (43) a=yítuno ícúo o=kwalo gwen. (Causation)
 1SG=PERF:remind man 3S/P=PERF:steal chickens
 ‘I reminded the man to steal the chickens. (He stole the chickens)’
- (44) a=yítuno ícúo kwalo gwen. (Causation)
 1SG=PERF:remind man steal:INF chickens
 ‘I reminded the man to steal the chickens.’

The verb *ηaalɔ* ‘to tell a lie, deceive into’ also follows the distribution of a cognition verb along with that of a causation verb. When the verb *ηaalɔ* ‘to deceive into’ is used as a causation verb, it is followed by a ‘paratactic’ indicative complement. It expresses that the subject deceives somebody and makes that person do something. When the verb *ηaalɔ* ‘to deceive into’ is followed by a ‘paratactic’ indicative complement, the sentence expresses that the event described by the complement will be realized.

- (45) a=ηálɔ ícúo kwálɔ gwen.
 1SG=IMPERF:deceive man 3SG:IMPERF:steal chickens
 ‘I deceive the man and make him to steal the chickens. (He steals.)’

Though the distribution of complement types among manipulation verbs is varied, manipulation verbs are mainly followed by a ‘paratactic’, a hypotactic subjunctive, or an infinitive complement.

The verbs *waacɔ* ‘to say’ and *kwano* ‘to ask’ follow the distribution of cognition verbs as well as that of manipulation verbs. The verb *waacɔ* ‘to tell’ can be followed by a hypotactic subjunctive or an infinitive complement as a manipulation verb. The verb *kwano* ‘to ask for’ as a manipulation verb is followed only by an infinitive complement clause.

(46) Distribution of V-comps among manipulation verbs

	dĩnɔ	mĩtɔ	sũpɔ	mĩnɔ lworɔ	kwanɔ	waacɔ
	to force	to want	to persuade	to threaten	to askfor	to tell
PI	+	-	+	-	-	-
HI	-	-	-	-	(+)	(+)
PS	+	+	-	-	-	-
HS	+	+	+	+	-	+
I	+	-	?	-	+	+

(PI: ‘paratactic’ indicative, HI: hypotactic indicative,

PS: ‘paratactic’ subjunctive, HS: hypotactic subjunctive, I: infinitive)

As a typical manipulation verb, the verb *mĩtɔ* ‘to want’ is followed by a ‘paratactic’ or a hypotactic subjunctive complement clause. When the verb *mĩtɔ* ‘to want’ is followed by a ‘paratactic’ subjunctive complement clause, the event described by the complement clause is expected to be accomplished, as in (47). When the verb *mĩtɔ* ‘to want’ is followed by a hypotactic subjunctive complement clause, the event described by the complement clause may or may not be fulfilled, as in (48). Manipulation verbs in ‘paratactic’ construction are used to express Strong Manipulation. Manipulation verbs in hypotactic construction are used to express Weak Manipulation.

(47) a=mítɔ !dákɔ ted cám. (Strong Manipulation)

1SG=IMPERF:want woman 3SG:cook:SUB food

‘I want the woman to cook food. (She will cook.)’

(48) a=mítɔ !bé dákɔ ted cám. (Weak Manipulation)

1SG=IMPERF:want COMP woman 3SG:cook:SUB food

‘I want the woman to cook food. (It is not sure that she will cook.)’

As a manipulation verb, the verb *waacɔ* ‘to tell’ is followed by a hypotactic subjunctive or an infinitive complement clause. When it is followed by a hypotactic subjunctive complement clause, it denotes Weak Manipulation. Moreover, when it is followed by an infinitive complement clause, it denotes weaker manipulation than that it expresses what is expressed when it is followed by a hypotactic subjunctive complement. The sentence in (50), in which the manipulation verb *waacɔ* ‘to tell’ is followed by an infinitive complement, expresses Soft Manipulation.

- (49) a=wá!cɔ́ !né-í!cɔ́ɔ bé é=kwal gwén. (Weak Manipulation)
 1SG=PERF:say to-man COMP 3SG=steal:SUB chickens
 ‘I told the man that he should steal the chickens.’
- (50) a=wá!cɔ́ !né-í!cɔ́ɔ kwalo gwen. (Soft Manipulation)
 1SG=PERF:say to-man steal:INF chickens
 ‘I told the man to steal the chickens.’

The scale of manipulation can be summarized as follows. The examples in (47) and (48) show a hierarchy whereby a ‘paratactic’ subjunctive construction is ranked higher than a hypotactic subjunctive on the scale of manipulation. The examples in (49) and (50) show that hypotactic subjunctive construction is ranked higher than an infinitive construction.

(51) Scale of manipulation

‘Paratactic’ subjunctive > Hypotactic subjunctive > Infinitive

Manipulation verbs are roughly divided into two subgroups. Verbs in one group are followed by a ‘paratactic’ subjunctive or a hypotactic subjunctive, and verbs in the other group are followed by a hypotactic subjunctive or an infinitive subjunctive. The former group consists of verbs such as *dinɔ* ‘to force’ and *mitɔ* ‘to want’, and the latter group consists of verbs such as *sɔɔpɔ* ‘to persuade’, *minɔ lwoɔ* ‘to threaten’, *kwano* ‘to ask for’, and *waaco* ‘to tell’. The former group of verbs conveys strong manipulation, while the latter group of verbs conveys weak manipulation.

Kumam clearly distinguishes causation from manipulation. Causation verbs are followed by a ‘paratactic’ indicative or an infinitive complement clause, while manipulation verbs are followed by a ‘paratactic’ or a hypotactic subjunctive complement clause. True causation verbs consist of the two verbs *minɔ* ‘to make, give’ and *geɛɲo* ‘forbid, make not to do’. The verb *minɔ* ‘to make, give’ is followed by a ‘paratactic’ indicative or an infinitive complement. The verb *geɛɲo* ‘to forbid’ is followed only by an infinitive complement. The verbs *yutuno* ‘to remind’ and *ɲaalo* ‘to deceive into’ show a mixed distribution as both cognition and causation verbs.

(52) Distribution of V-comps in causation verbs

	mimo to make	geejo to forbid	yutuno to remind	jaalo to deceive into
PI	+	-	+	+
HI	-	-	(+)	(+)
PS	-	-	-	-
HS	-	-	-	-
I	+	+	+	+

(PI: ‘paratactic’ indicative, HI: hypotactic indicative,

PS: ‘paratactic’ subjunctive, HS: hypotactic subjunctive, I: infinitive)

Phasal verbs are followed only by an infinitive complement.

Verbs that may be used in complementation are classified into five groups; perception, cognition, manipulation, causation, and phasal verbs. This classification is tentative in order to describe Kumam complementation. Similar to the observations about mixed types, some verbs are not easily classified into the five classes proposed above. Some verbs show particular distributions of V-comps because of their semantic characteristics. However, the observation discussed above provides the outline of the distribution of V-comps and verbs.

3.2.7 Complementation and aspect

There is a restriction involving aspect on ‘paratactic’ complement constructions. When main verbs consist of a perception verb, ‘paratactic’ complement clauses must consist of a predicate inflected with imperfect aspect. Moreover, when perception verbs in main clauses are conjugated with imperfect aspect, they must not be followed by a ‘paratactic’ complement with a predicate in perfect aspect. If perception verbs in perfect aspect are followed by a ‘paratactic’ complement that consists of a predicate inflected with perfect aspect, the sentences are appropriate only in limited contexts.

In (1), the main verb *wijno* ‘to hear’, which is conjugated with perfect aspect, is followed by a ‘paratactic’ indicative complement clause consisting of the predicate *gweno* ‘to bark’ in imperfect aspect. The sentence in (1) is perfectly acceptable semantically. It expresses that the dog continued to bark at the time when the speaker heard some sound.

In (2), the main verb *wijno* ‘to hear’, which is inflected with imperfect aspect, is followed by a ‘paratactic’ indicative complement clause consisting of the verb *gweno* ‘to bark’ in perfect aspect. The sentence in (2) is not acceptable semantically. Perception verbs in ‘paratactic’ construction denote Direct Perception when they are followed by a ‘paratactic’ complement. Speakers cannot directly perceive events that have already been completed before the time of

the speaker's utterance. The sentence in (2) expresses that the dog had already finished barking at the time when the speaker heard some sound with his or her own ears. This meaning is impossible.

- (1) a=wí!ńó ogwók !gwéó ńoró.
 1SG=PERF:hear dog 3SG:IMPERF:bark yesterday
 'I heard the dog barking yesterday.'
- (2) *a=wíńó ogwók ɔ=gweo.
 1SG=IMPERF:hear dog 3S/P=PERF:bark
 '*I hear the dog barked.'

In (3) and (4), the main verb *wińɔ* 'to hear', which is inflected with perfect aspect, is followed by a 'paratactic' complement clause consisting of the predicate *gweno* 'to bark' in perfect aspect. The sentence in (3) gives rise to an inappropriate semantic interpretation. It expresses that the dog barked yesterday and that the speaker finished hearing some sound before the time of the speaker's utterance. If time is not specified by a time adverbial, predicates in perfect aspect usually denote that events have been completed by the time of the speaker's utterance. It is impossible to finish hearing the sound of a dog barking yesterday.

If a context allows, predicates in perfect aspect can be interpreted to mean that events were completed before the time when the sentences are uttered. A possible context for this interpretation is one where the speaker has finished hearing some sound before he or she produces the utterance. If this context is given, the sentence in (3) can be interpreted such that the dog barked yesterday and the speaker completed hearing the sound at that same time.

The sentence in (4) is semantically better than the sentence in (3). The sentence in (4) has no time adverbial both in the main and complement clause. It is not specified when the events happen in the main and complement clause. Therefore, the sentence in (4) could be easily interpreted to mean that the speaker finished hearing some sound at the same time when the dog barked. In general, when time is not specified by a time adverbial, and if 'paratactic' complement clauses consist of a verb inflected with perfect aspect, events or actions described by the complement clauses have been completed just before the subjects in the main clauses perceive them.

- (3) */?a=wí!ńó ogwók ɔ=gweo ńoró.
 1SG=PERF:hear dog 3S/P=PERF:bark yesterday
 '*I heard the dog barked yesterday.'

(4) ?a=wí!pó ogwók ɔ=gweo.
 1SG=PERF:hear dog 3S/P=PERF:bark
 ‘I heard the dog barking.’

When perception verbs are followed by a ‘paratactic’ indicative complement clause consisting of a predicate in imperfect aspect, they give rise to semantically appropriate interpretations, whether they are inflected with imperfect or perfect aspect. Predicates in imperfect aspect denote events that continue at a particular time. For example, the main perception verb *wiiŋɔ* ‘to hear’ is followed by a ‘paratactic’ indicative complement clause consisting of the predicate *gweo* ‘to bark’ in imperfect aspect in (5). The sentence in (5) expresses that the dog still continued to bark at the time when the speaker heard some sound.

(5) a=wí!pó ogwók !gwéó ɲoró.
 1SG=PERF:hear dog 3SG:IMPERF:bark yesterday
 ‘I heard the dog barking yesterday.’

Perception verbs in hypotactic construction denote Indirect Perception. Speakers receive information from another person at any time about events that are described by hypotactic complement clauses. The sentence in (6) gives rise to an interpretation whereby the dog barked yesterday and the speaker received the information from somebody at a particular time in the past. The sentence in (7) expresses that the dog barked yesterday but that the speaker was continuing to receive the information at the time when the sentence is uttered.

(6) a=wí!pó !bé ó!gwók ɔ=gweo ɲoró.
 1SG=PERF:hear COMP dog 3S/P=PERF:bark yesterday
 ‘I heard that the dog barked yesterday.’

(7) a=wí!pó !bé ó!gwók ɔ=gweo ɲoró.
 1SG=IMPERF:hear COMP dog 3S/P=PERF:bark yesterday
 ‘I hear that the dog barked yesterday.’

Cognition verbs behave syntactically as ‘stative’ verbs, because they are mainly inflected in imperfect aspect. When cognition verbs are followed by a ‘paratactic’ indicative complement, they are conjugated in imperfect aspect. Since cognition verbs in ‘paratactic’ construction express that ideas or knowledge are inherent within the speaker, the speaker continues to hold the ideas or knowledge at a particular time.

When cognition verbs are followed by a hypotactic indicative complement clause, they

denote that the speaker receives information from another person about an event that is described by a complement clause. Sentences that contain cognition verbs in hypotactic constructions bring the process of transferring information into focus. For example, the sentence in (8) contains a ‘paratactic’ construction. It expresses that the speaker inherently knows that Okelo stole the chickens by witnessing the event. It denoted the state whereby the speaker recognizes the information described by the complement clause. The sentence in (9) contains a hypotactic construction. It expresses that the speaker learned from another person that Okelo stole the chickens. It denotes the process whereby the speaker receives the information described by the complement.

- (8) a=ɲéó okélo ɔ=kwalɔ gwen.
 1SG=IMPERF:know Okelo 3S/P=PERF:steal chickens
 ‘I know Okelo stole the chickens.’
- (9) a=ɲé!ó !bé ó!kélo ɔ=kwalɔ gwen.
 1SG=PERF:know COMP Okelo 3S/P=PERF chickens
 ‘I got to know the fact that Okelo stole the chickens.’

Restrictions involving aspect are summarized in (10). When perception verbs are inflected in imperfect aspect, predicate in ‘paratactic’ complement are not inflected in perfect aspect. Cognition verbs are not inflected in perfect aspect, when they are followed by a ‘paratactic’ complement clause. Predicates, however, do not distinguish aspect in subjunctive mood. They do not distinguish aspect also in infinitives. These restrictions involving aspect have nothing to do with ‘paratactic’ complements consisting of predicates inflected in subjunctive mood or consisting of infinitive forms of verbs. Since manipulation and causation verbs are mainly followed by a subjunctive or an infinitive complement, restrictions involving aspect for manipulation or causation verbs are not included in (10) and (11).

(10) Combinations of aspects in ‘paratactic’ construction

Perception verbs	Cognition verbs
Main - Complement	Main - Complement
Imperfect - Imperfect	Imperfect - Imperfect
*Imperfect - Perfect	Imperfect - Perfect
Perfect - Imperfect	*Perfect - Imperfect
Perfect - Perfect	*Perfect - Perfect

There is no restriction involving aspect on hypotactic construction. Every combination of

aspects is allowed between clauses in hypotactic constructions.

(11) Combination of aspects in hypotactic construction

Perception verbs	Cognition verbs
Main - Complement	Main - Complement
Imperfect - Imperfect	Imperfect - Imperfect
Imperfect - Perfect	Imperfect - Perfect
Perfect - Imperfect	Perfect - Imperfect
Perfect - Perfect	Perfect - Perfect

The tables in (10) and (11) show the basic restrictions involving aspect on ‘paratactic’ and hypotactic constructions. In addition to these restrictions, there are restrictions particular to some verbs. The restrictions are related to the semantic characteristics of the verbs.

For example, when the verb *nɛɛnɔ* ‘to see’ is used in a main clause of a hypotactic construction, the verb *nɛɛnɔ* ‘to see’ in perfect aspect cannot be followed by complement clauses containing verbs in imperfect aspect. When the verb *nɛɛnɔ* ‘to see’ is followed by a hypotactic complement, it denotes Indirect Perception. The sentence in (12) expresses that the speaker noticed, from circumstantial evidence, that the child eats meat. For a speaker to notice an event from circumstantial evidence, the event must have been completed before the moment he encounters the evidence.

- (12) *a=né!nó !bé á!tín !cámó riǵó.
 1SG=PERF:see COMP child 3SG:IMPERF:eat meat
 ‘*I noticed that the child eats meat (from circumstantial evidence).’

The verb *nɛɛnɔ* ‘to see’ is used in ‘paratactic’ complement construction, because the perceptual experience expressed by the verb *nɛɛnɔ* ‘to see’ usually includes Direct Perception, that is, to see with the speakers’ own eyes. Although the verb *nɛɛnɔ* ‘to see’ may be followed by a hypotactic complement in particular context, it is not classified as a cognition verb. The verb *nɛɛnɔ* ‘to see’ in a particular context means that the speaker sees the circumstantial evidence with his eyes and gets information from this evidence. The action expressed by the verb involves the perceptual experience of speakers seeing things with their own eyes. For this reason, the verb *nɛɛnɔ* ‘to see’ in perfect aspect cannot be followed by a hypotactic complement clause that consists of verbs in imperfect aspect.

The verbs *yɛi* ‘to admit fact’ and *taamɔ* ‘to think’ follow the same restriction. When these verbs are in perfect aspect, they cannot be followed by a hypotactic complement consisting of

a verb in imperfect aspect, as shown in (13). These verbs presuppose that the events have been completed before the speaker recognizes them. If the events have not been completed before the speakers notice them, the speakers cannot perceive or recognize the events.

- (13) *a=yé!í !bé í!cúo kwáló gwen.
 1SG=PERF:admit COMP man 3SG:IMPERF:steal chickens
 ‘*I admitted that the man steals the chickens.’

3.2.8 Complementation and subjunctive

Verbs can be inflected with subjunctive mood in ‘paratactic’ or hypotactic complement clauses. However, some verbs are followed only by a hypotactic complement clause that consists of a verb in subjunctive mood. Others can be followed by a ‘paratactic’ and a hypotactic subjunctive complement clause.

- (14) a=mító !dákó ted cám. (Strong Manipulation)
 1SG=IMPERF:want woman 3SG:cook:SUB food
 ‘I want the woman to cook food. (she must cook)’

- (15) a=mító !bé dákó ted cám. (Weak manipulation)
 1SG=IMPERF:want COMP woman 3SG:cook:SUB food
 ‘I want the woman to cook food.’

When manipulation verbs are followed by a ‘paratactic’ complement clause consisting of a verb in subjunctive mood, they denote Strong Manipulation, as discussed in the previous section. The events described by ‘paratactic’ complement clauses are always accomplished. The speakers’ manipulation is always fulfilled when manipulation verbs are followed by a ‘paratactic’ complement. When manipulation verbs are followed by a hypotactic complement clause, the speakers’ manipulation is not necessarily fulfilled. Hypotactic complement clauses denote Weak Manipulation when they are preceded by manipulation verbs as discussed in the previous section.

3.2.9 ‘Paratactic’ complement and first person effect

Agreement between ‘paratactic’ complement clauses and person is observed. ‘Paratactic’ constructions are limited to first person forms, including first person plural. When main verbs are followed by a ‘paratactic’ complement clause, they are conjugated with first person singular or plural. If main verbs are conjugated with forms other than first persons, they cannot be followed by a ‘paratactic’ complement.

For example, perception verbs in ‘paratactic’ construction denote Direct Perception. If main verbs are conjugated with first person, subjects in the main clauses are equal to the speakers of the sentences. Consequently, the speakers are making the claim that they perceive the events directly with their own sensory organs. The sentence in (16) is grammatical because the speaker perceived the event described by the complement clause directly with his or her eyes. By using this form, the speaker guaranteed that he saw the event with his or her eyes. The sentence in (17) is not grammatical because the speaker did not see the event with his or her eyes, and thus he cannot guarantee that the event occurred.

(16) a=né!nó okélo kwáló gwen.
 1SG=PERF:see Okelo 3SG:IMPERF:steal chickens
 ‘I saw Okelo stealing the chickens.’

(17) *ɔ=né!nó okélo kwáló gwen.
 3S/P=PERF:see Okelo 3SG:IMPERF:steal chickens
 ‘He saw Okelo stealing the chickens.’

In order to report others’ words, the sentence in (17) can be embedded in another main clause such as ‘somebody said that’. In the reporting sentence, it is the subject in the embedded clause who guarantees that he or she perceives the event described by the ‘paratactic’ complement clause. The sentence in (18) is grammatical. The embedded clause includes a ‘paratactic’ complement clause. The subject of the perception verb *neɛnɔ* ‘to see’ in the embedded clause is coreferential with the subject in the main clause. The subject in the embedded clause guarantees that he saw the event described by the ‘paratactic’ complement clause with his own eyes. Moreover, main clauses in sentences such as (18) are sometimes omitted in daily speech.

(18) (ɪcúɔ ɔ=wacɔ bé) é=!né!nó okélo kwáló gwen.
 (man 3S/P=PERF:say COMP) 3S=PERF:see Okelo 3S=IMPERF:steal chickens
 ‘(The man said that) he saw Okelo stealing the chickens.’

Cognition verbs in ‘paratactic’ construction denote idea or knowledge that is inherent to the subject in the main sentence. If the subject is the same as the speaker, that is, if the main verb is conjugated with first person, then the speaker guarantees that the idea or knowledge about an event described by the ‘paratactic’ complement clause is inherent. The speaker cannot guarantee that the idea or knowledge about the event is inherent for somebody else. Consequently, cognition verbs in main clauses cannot be conjugated in forms other than first

persons in ‘paratactic’ constructions.

(19) a=ŋéó okélo ɔ=kwalɔ gwen.
1SG=IMPERF:know Okelo 3S/P=PERF:steal chickens
‘I know Okelo stole the chickens.’

(20) *ɪcúɔ ŋéó okélo ɔ=kwalɔ gwen.
man 3SG:IMPERF:know Okelo 3S/P=PERF:steal chickens
‘The man knows Okelo stole the chickens.’

A ‘paratactic’ construction consisting of a cognition verb also can be embedded in another clause such as ‘someone said that’ on the condition that the subject of the cognition verb in the ‘paratactic’ construction is same as the subject in the main clause.

When main verbs are followed by a hypotactic complement clause, perception as well as cognition verbs denote hearsay knowledge of the event described by the complement clause. These verbs denote Learned Knowledge in hypotactic constructions. It is not the speaker who guarantees the events described by complement clauses. In this case, the speaker must not be equal to the subject in the main clause in the hypotactic construction. Consequently, hypotactic constructions are not limited to first persons.

3.2.10 Truth value and complement types

Why do ‘paratactic’ constructions have the syntactic and semantic characteristics discussed in the preceding sections? ‘Paratactic’ constructions differ from hypotactic ones regarding their logical structures.

Truth value is determined in main and subordinate clauses independently in ‘paratactic’ constructions, while truth value is determined in entire sentences in hypotactic constructions.

For example, the sentence in (1) is appropriate if both of the main and the subordinate clause have positive truth value. The sentence in (2) is not appropriate as a whole. Since the first sentence in a ‘paratactic’ construction presupposes that the second sentence has an independently positive truth value, it cannot be followed by a negative sentence that denies the event described by the preceding ‘paratactic’ complement clause.

The sentence in (1) is semantically acceptable on the assumption that the speaker heard some sound and that the dog barked yesterday. Truth value in ‘paratactic’ constructions must be determined independently in complement and main clauses. If main and complement clauses both have a positive truth value, the whole sentence has a positive truth value. For example, if the speaker heard some sound and if the dog barked yesterday, the sentence in (1) gives rise to an appropriate interpretation.

The example in (2) is not acceptable semantically. The second sentence in (2) denies the event described by the complement in the first sentence. The first sentence contains a ‘paratactic’ structure. It gives rise to an appropriate interpretation if the main and complement clause both have a positive truth value. It presupposes that the speaker heard some sound and that the dog barked yesterday. The second sentence, however, indicates that the dog did not bark, which contradicts the first sentence. The sentence in (2) is not acceptable semantically, because the second clause is contradictory to the first one with regard to the logical structure.

(1) a=wí!ńó ogwók !gwéó ńoró.
 1SG=PERF:hear dog 3SG:IMPERF:bark yesterday
 ‘I heard the dog barking yesterday.’

(2) *a=wí!ńó ogwók !gwéó ńoró, do líká ó=gweo.
 1SG=PERF:hear dog 3SG:IMPERF:bark yesterday, but NEG 3S/P=PERF:bark
 ‘*I heard the dog barking yesterday, but it did not bark.’

On the other hand, truth value in hypotactic construction is determined for the whole sentences. If main clauses have a positive truth value, then the whole sentence has a positive truth value whether the complement clauses have a positive truth value or not. For example, the sentence in (3) fulfills the truth value only if the speaker heard the news about the dog’s barking, whether the dog barked or not.

The example in (4) is acceptable semantically. The second sentence in (4) denies the event described by the complement clause in the first sentence. The first sentence consists of a hypotactic construction. If the main clause has a positive truth value, then the whole sentence has a positive truth value. For example, the sentence in (4) gives rise to an appropriate interpretation only if the speaker heard the news about the dog’s barking, even though the dog did not bark. Since the first sentence in the hypotactic construction does not necessarily imply that the dog barked, the second sentence can deny that the dog barked.

(3) a=wí!ńó !bé ó!gwók ɔ=gweo ńoró.
 1SG=PERF:hear COMP dog 3S/P=PERF:bark yesterday
 ‘I heard that the dog barked yesterday.’

(4) a=wí!ńó !bé ó!gwók ɔ=gweo ńoró, do líká ó=gweo.
 1SG=PERF:hear COMP dog 3S/P=PERF:bark yesterday, but NEG 3S/P:PERF:bark
 ‘I heard that the dog barked yesterday, but it did not bark.’

Logical structure provides an explanation for the semantic characteristics of ‘paratactic’

complements that are preceded by manipulation verbs. When manipulation verbs are followed by a ‘paratactic’ complement clause, the manipulation must be always fulfilled. Since truth value in a ‘paratactic’ construction is determined independently in complement and main clauses, both types of clauses must have a truth positive value in order for the whole sentence to have a positive truth value.

For example, the sentence in (5) contains a ‘paratactic’ construction. The sentence in (5) is appropriate on the assumption that the speaker wants the child to read and that his wish is fulfilled. Truth value in hypotactic construction is determined for the whole sentence. If the speaker wants the child to read, then the sentence in (6) is appropriate whether the child fulfills the speaker’s wish or not.

(5) a=mító atín somí.
 1SG=IMPERF:want child 3SG:read:SUB
 ‘I want the child to read.’

(6) a=mító !bé á!tín somí.
 1SG=IMPERF:want COMP child 3SG:read:SUB
 ‘I hope that the child will read.’

The example in (7) is not acceptable semantically. The first sentence in (7) contains a ‘paratactic’ construction. The ‘paratactic’ construction presupposes that the main and the complement clause both have a positive truth value. The sentence in (7) is appropriate on the assumption that the speaker wants the child to read and that the child fulfills his wish. Therefore, the second sentence in (7) cannot reject the event described by the complement in the first sentence.

On the other hand, the first sentence in (8) contains a hypotactic construction. The hypotactic construction has an appropriate interpretation only if the main clause has a positive truth value. The sentence in (8) is appropriate only if the speaker wants the child to read, whether the child fulfills the speaker’s wish or not. Therefore, the second sentence in (8) can reject the event described by the complement in the first sentence.

(7) *ɔvdɔ a=mító atín som ítabɔ dó líká ó=somo.
 PAST 1SG=IMPERF:want child 3SG:read:SUB book but NEG 3S/P=PERF:read
 ‘I wanted the child to read the book but he did not read.’

(8) ɔvdɔ a=mító !bé á!tín som ítabɔ dó líká ó=somo.
 PAST 1SG=IMPERF:want COMP child 3SG:read:SUB book but NEG 3S/P=PERF:read
 ‘I hoped that the child should read the book but he did not read.’

The cognition verb *ηεeno* ‘to know’ can be conjugated with 1st person singular in imperfect aspect when it is followed by a ‘paratactic’ complement clause. Moreover, the main verb is grammaticalized into an adverbial expression. For example, the assertion of the first sentence in (9) is made only by the ‘paratactic’ complement clause. Since the speaker makes an assertion that the man steals the chickens, he cannot deny the assertion in the following sentence.

- (9) *a=ηέó ικούó kwáló gwen, do líká é=!kwáló.
 1SG=IMPERF:know man 3SG:IMPERF:steal chickens but NEG 3SG=IMPERF:steal
 ‘Certainly the man steals the chickens but he does not steal them.’

Typologists suggest that there is an iconic relationship between syntax and semantics such that the closer linguistic elements are linked semantically, the closer they are connected syntactically. The ‘paratactic’ complement clauses seem to be logically linked more independently from the main clauses than the hypotactic complement clauses are.

Both of the clauses in a ‘paratactic’ construction must have a positive truth value in order for the whole sentence to have a satisfactory truth value. On the other hand, only the main clauses in hypotactic constructions need to have a positive truth value in order for the whole sentence to have a satisfactory truth value. The hypotactic complement clauses are dependent on the main clauses from a logical point of view. The clauses in hypotactic structures have stronger logical links than the clauses in ‘paratactic’ structures. This logical consideration supports the typologists’ observation. We can summarize the above discussion as follows.

- (10) Clauses in hypotactic structure are semantically or logically more closely linked than those in ‘paratactic’ structures.

3.2.11 Direct and indirect speech

Direct and indirect speech in Kumam is constructed by complementation. Both constructions contain hypotactic indicative complement clauses that are preceded by the complementizer *bé* ‘COMP’. Kumam does not distinguish segmentally direct speech from indirect speech. Rather, Kumam makes a morpho-phonological distinction between direct and indirect speech suprasegmentally⁴⁴. Direct speech is differentiated from indirect speech by a suprasegmental morpho-phonological boundary after the complementizer *bé* ‘COMP’. The morpho-phonological boundary obstructs the application of tonal and vowel sandhi rules.

⁴⁴ Noonan (1992) does not notice formal distinction between direct and indirect speech in Lango.

- (1) *dákó* *ɔ=wacɔ* *né-í!cúɔ* *bé* *á=!tédó* *!cám.* (Indirect)
 woman 3S/P=PERF:say to-man COMP 1SG=IMPERF:cook food
 ‘The woman said to the man that I cooked the food.’
- (2) *dákó* *ɔ=wacɔ* *né-í!cúɔ* *bé* *a=tédó* *!cám.* (Direct)
 woman 3S/P=PERF:say to-man COMP 1SG=IMPERF:cook food
 ‘The woman said to the man, ‘I cook the food.’

Deictic elements such as person, demonstrative, and location indicators are changed in direct and indirect speech. The sentence in (1) constitutes an indirect speech construction, where the speaker, not the woman, cooked the food. The sentence in (2) constitutes a direct speech construction, where the woman, not the speaker, cooked the food. In this sentence, the 1st person singular clitic *a=* ‘1SG’ in the subordinate clause refers to the woman.

The sentence in (3) is semantically equivalent to the sentence in (4). Both sentences convey the meaning that the speaker cooked the meat. However, the verb *teedo* ‘to cook’ in the complement clause is conjugated with 3rd person singular in (3) and with 1st person singular in (4).

- (3) *ε=wá!cɔ* *!bé* *é=!tédó* *rijó.* (Indirect speech)
 3SG=PERF:say COMP 3SG=PERF:cook meat
 ‘He said that he cooked meat.’
- (4) *ε=wá!cɔ* *!bé* *a=tédó* *rijó.* (Direct speech)
 3SG=PERF:said COMP 1SG=PERF:cook meat
 ‘He said, ‘I cooked meat’

Unlike English, Kumam has no ‘correspondence of tense’, because Kumam does not obligatorily express tense in sentences. Aspect is obligatorily marked suprasegmentally in the verbal morphology. Kumam distinguishes only two aspects; imperfect and perfect. There is no restriction on the combination of aspects in direct and indirect speech⁴⁵. Main verbs inflected with perfect aspect may be followed by subordinate clauses consisting of verbs with either imperfect or perfect aspect both in direct and indirect speech. Main verbs inflected with imperfect aspect may be followed by subordinate clauses consisting of verbs with either imperfect or perfect aspect both in direct and indirect speech. The main verbs are inflected in perfect aspect in the sentences presented in (1), (2), (5), and (6). The main verbs are followed by a subordinate clause consisting of a verb inflected with imperfect aspect in (1) and (2).

⁴⁵ There is a restriction of ‘boundness of time’ which is discussed later.

The main verbs are followed by a subordinate clause consisting of a verb inflected with perfect in (5) and (6).

(5) dákó ɔ=wacɔ né-í!cɔɔ bé á=!té!dó !cám. (Indirect speech)
 woman 3S/P=PERF:say to-man COMP 1SG=PERF:cook food
 ‘The woman said to the man that I cooked food.’

(6) dákó ɔ=wacɔ né-í!cɔɔ bé a=té!dó !cám. (Direct speech)
 woman 3S/P=PERF:say to-man COMP 1SG=PERF:cook food
 ‘The woman said to the man, ‘I cooked’.’

The main verbs are inflected with imperfect aspect in the sentences presented in (7) to (10). The main verbs are followed by a subordinate clause consisting of a verb inflected with imperfect aspect in (7) and (8). The main verbs are followed by a subordinate clause consisting of a verb inflected with perfect aspect in (9) and (10).

(7) dákó !wácó !né-í!cɔɔ bé á=!té!dó !cám. (Indirect speech)
 woman 3SG:IMPERF:say to-man COMP 1SG=IMPERF:cook food
 ‘The woman says to the man that I cook food.’

(8) dákó !wácó !né-í!cɔɔ bé a=tédó !cám. (Direct speech)
 woman 3SG:IMPERF:say to-man COMP 1SG=IMPERF:cook food
 ‘The woman says to the man, ‘I cook food.’

(9) dákó !wácó !né-í!cɔɔ bé á=!té!dó !cám. (Indirect speech)
 woman 3SG:IMPERF:say to-man COMP 1SG=PERF:cook food
 ‘The woman says to the man that I cooked food.’

(10) dákó !wácó !né-í!cɔɔ bé a=té!dó !cám. (Direct speech)
 woman 3SG:IMPERF:say to-man COMP 1SG=PERF:cook food
 ‘The woman says to the man, ‘I cooked food’.’

Direct speech is distinguished from indirect speech by a morpho-phonological boundary that obstructs tonal and vowel sandhi rules. Direct and indirect speech consists of a hypotactic construction, where complement clauses are preceded directly by the complementizer *bé* ‘COMP’. The complementizer *bé* ‘COMP’ bears a lexical high toneme. If there is no boundary that obstructs tonal sandhi rules, the high toneme spreads beyond the word boundary to the following tone bearing unit with a low toneme according to the High Spread rule. For example, the tone bearing unit following the complementizer *bé* ‘COMP’ is pronounced with a high tone according to the High Spread rule, though the verb *teedo* ‘to

cook' in the subordinate clause begins with a lexical low toneme in (11).

The High Spread rule is obstructed by a morpho-phonological boundary in direct speech. Though the verb *teedo* 'to cook' in the subordinate clause begins with a lexical low toneme and is preceded by the complementizer *bé* 'COMP', the initial tone bearing unit is pronounced with a low tone in (12). The lexical high toneme of the complementizer *bé* 'COMP' does not spread to the following tone bearing unit with a low toneme, because the morpho-phonological boundary obstructs the application of the High Spread rule.

(11) H (L)HH (L) (Indirect speech)

| \ | |
 bé á=!tédó

COMP 1SG=IMPERF:cook

(12) H L HH (L) (Direct speech)

| | | |
 bé # a=tédó

COMP 1SG=IMPERF:cook

(#: morpho-phonological boundary)

Kumam has phonetic vowel sandhi. When a word beginning with a vowel is preceded by a word ending in a vowel, the preceding vowel is lost leaving its toneme. The value of [ATR] of the lost vowel is copied to the retained vowel. For example, the vowel of the complementizer *bé* 'COMP' is deleted according to vowel sandhi rules in (13). The [+] value of [ATR] of the lost vowel is copied to the retained vowel. Vowel sandhi is obstructed by the morpho-phonological boundary in direct speech. For example, in (14), the vowel of the complementizer *bé* 'COMP' is not lost before the subordinate clause that begins with a vowel in the direct speech construction. Moreover, the 1st person singular subject clitic is pronounced with an [-ATR] vowel.

(13) bé á=!tédó → [..... bá!tédó] (Indirect speech)

COMP 1SG=IMPERF:cook

(14) bé # a=tédó → [..... bé#a=tédó] (Direct speech)

COMP 1SG=IMPERF:cook

(#: morpho-phonological boundary)

Typologists suggest that direct speech construction in English is a possible counter example against the iconic relationship between syntax and semantics. An iconic relationship suggests

that the closer linguistic elements are linked semantically, the closer they are connected syntactically. English direct speech construction has no morpheme that separates the subordinate clause from the main clause. While the subordinate clause is interpreted as strongly connected to the main clause syntactically, it is not strongly linked semantically with the main clause.

On the other hand, Kumam direct speech construction has a suprasegmental morpheme that separates the subordinate clause from the main clause. There is a weak syntactic connection between the subordinate clause and the main clause, and the subordinate clause is also semantically independent from the main clause. Kumam direct speech construction offers evidence to support the iconic relationship between syntax and semantics. It is possible that English direct speech construction has some suprasegmental morpheme, such as a pause or an intonation that separates the subordinate clause from the main clause. However, this proof is beyond the scope of this discussion.

3.2.12 Complement and ‘switch’ reference

In complements (indicative and subjunctive), the ‘switch’ reference 3rd person clitics are used to indicate that the subjects of the complement clauses are not the same as the subjects of the matrix sentences. For example, the ‘switch’ reference 3rd person subject clitic σ = ‘3S/P’ is added to the verb *cyego* ‘to close’ in the complement clause in (1). The subject clitic in the complement clause does not refer to the same person as the subject in the matrix sentence. The man who closed the door is not the same person to whom the subject refers in the matrix sentence.

The non-‘switch’ reference 3rd person singular subject clitic ε = ‘3SG’ is added to the verb *cyego* ‘to close’ in the complement clause in (2). When non-‘switch’ reference subject clitics are used in complements, they may refer to the same person as the subjects in the matrix sentences or a different person. For example, the man who closed the door may be the same person as the subject in the matrix sentence or a different person.

(1) $\text{ic}\acute{\text{o}}\sigma$ σ =yutuno bé $\acute{\sigma}$ =cyego ekéko. (‘Switch’reference)
 man_i 3S/P_i=PERF:remember COMP 3S/P_j=PERF:close door
 ‘The man remembered that he closed the door.’

(2) $\text{ic}\acute{\text{o}}\sigma$ σ =yutuno bé $\acute{\varepsilon}$ =!cyé!gó ekéko. (Non-‘switch’reference)
 man_i 3S/P_i=PERF:remember COMP 3S/P_{i/j}=PERF:close door
 ‘The man remembered that he closed the door.’

The ‘switch’ reference is discussed in Section 2.7.

3.2.13 Negative raising

For some main verbs, negative markers may be moved from the complement clauses with which they are associated and raised to positions within the matrix sentences. The negative marker *líká* ‘NEG’ is moved to the matrix sentence from the complement clause in (2). The scope of negation extends to the whole sentence. The sentence in (2) may be interpreted such that the event described in the matrix clause is negated, or that the event described in the complement clause is negated. The sentence in (2) is semantically equivalent to the sentence in (1).

(1) a=támó !bé ó!kélo líká ó=tedo cá.m.
 1SG=IMPERF:think COMP Okelo NEG 3S/P=PERF:cook food
 ‘I think that Okelo did not cook food.’

(2) líká á=!támó !bé ó!kélo ɔ=tedo cá.m.
 NEG 1SG=IMPERF:think COMP Okelo 3S/P=PERF:cook food
 ‘I do not think that Okelo cooked food.’

‘Paratactic’ constructions are not natural when they have complement clauses consisting of negative predicates. Negative raising is found only in hypotactic complement constructions where matrix sentences consist of a limited set of main verbs, such as *taamɔ* ‘to think’.

The scope of negation is limited to the main clause in (4). The sentence in (4) is interpreted to mean that the event described by the main clause is negated. The sentence in (3) is not natural, though it may be interpreted to mean that the event described by the complement clause is negated. Nobody can observe events or actions that do not happen. The sentence in (4) is not semantically equivalent to the sentence in (3).

(3) *a=né!nó okélo líká kwáló gwen.
 1SG=PERF:see Okelo NEG 3SG:IMPERF:steal chickens
 ‘*I saw Okelo not stealing the chickens.’

(4) líká á=!né!nó okélo kwáló gwen.
 NEG 1SG=PERF:see Okelo 3SG:IMPERF:steal chickens
 ‘I did not see Okelo stealing the chickens.’

Negative raising is not possible in ‘paratactic’ constructions even if predicates can be negated in ‘paratactic’ complement clauses, because truth value is determined in main and subordinate clauses independently in ‘paratactic’ constructions. The sentence in (4) is not derived from the sentence (3) through negative raising.

3.3 Serialization

Serial verb constructions consist of an infinitive form of verbs in Kumam. Infinitive verbal phrases are preceded by finite clauses. The logical subject of an infinitive form is the same as the subject in the preceding finite clause. For example, in (1), the logical subject of the infinitive form of the verb *luubo* ‘to follow’ is the same as the subject *icóó* ‘man’ in the preceding finite clause.

(1) *icóó c=itó moru lúubo dákó.*

man 3S/P=PERF:climb mountain follow:INF woman

‘The man climbed the mountain toward the woman.’

(2) *dákó dwoŋ lóónó icóó.*

woman big defeat:INF man

‘The woman is bigger than the man.’

Infinitive verbal phrases in serial verb constructions do not constitute arguments in the preceding finite clauses, while V-Comps constitute arguments in sentences. Infinitive verbal phrases in serial verb constructions are not preceded by a complementizer, while N-Comps are always preceded by the complementizer *bé* ‘COMP’. Moreover, infinitive verbal phrases in serial verb constructions do not modify the preceding NPs as adjuncts, while N-Comps modify the preceding NP as adjuncts.

3.4 Comparative constructions

An equal relation is expressed by the conjunction *bala* ‘as’. The sentence in (2) is a negative counterpart of the sentence in (1).

(1) *dákó-ní cíl bala ín.*

woman-this beautiful as you

‘This woman is as beautiful as you.’

(2) *dákó-ní líká cíl bala ín.*

woman-this NEG beautiful as you

‘This woman is not as beautiful as you.’

Kumam adjectives have no particular form for expressing the comparative degree.

The comparative meaning can be indicated in two ways, namely the serial construction, and the ‘paratactic’ coordinate construction. The serial construction consists of the infinitive form of the verb *lóónó* ‘to defeat, exceed’. The ‘paratactic’ coordinate construction consists of the

verb *lɔɔnɔ* ‘to defeat, exceed’ inflected with imperfect aspect.

The sentences in (3), (5), and (7) contain serial constructions. The sentences in (4), (6) and (8) contain ‘paratactic’ coordinate constructions. For example, the serial verbal phrase consisting of the infinitive form of the verb *lɔɔnɔ* ‘to defeat, exceed’ is preceded by the finite clause in (3).

- (3) *dákó dwɔŋ lɔɔnɔ ɪcɔɔ.* (Serial)
woman big defeat:INF man
‘The woman is bigger than the man.’

The sentence in (4) contains a ‘paratactic’ coordinate construction, where clauses are linked in coordination without any conjunction. The second clause consisting the verb *lɔɔnɔ* ‘to defeat, exceed’ inflected in imperfect aspect is linked with the preceding clause without any conjunction. Coordinate constructions without any conjunctions are called ‘paratactic’ coordinate constructions here. ‘Paratactic’ coordinate constructions are one of clause linking constructions that are unique to Kumam.

- (4) *dákó dwɔŋ lɔ́ɔ ɪcɔɔ.* (‘Paratactic’ coordinate linking)
woman big 3SG:IMPERF:defeat man
‘The woman is bigger than the man.’

The sentences in (7) and (8) are negative counterparts of the sentences in (3) and (4), respectively.

- (5) *ín í=!ték lɔɔnɔ abáka.* (Serial)
2SG 2SG=IMPERF:strong defeat:INF king
‘You are stronger than the king’

- (6) *ín í=ték lɔ́ɔ abáka.* (‘Paratactic’ coordinate)
2SG 2SG=IMPERF:strong 3SG:IMPERF:defeat king
‘You are stronger than the king.’

- (7) *dákó !líká dwɔŋ lɔɔnɔ ɪcɔɔ.* (Serial)
woman NEG big defeat:INF man
‘The woman is not bigger than the man.’

- (8) *dákó !líká dwɔŋ lɔ́ɔ ɪcɔɔ.* (‘Paratactic’ coordinate linking)
woman NEG big 3SG:IMPERF:defeat man
‘The woman is not bigger than the man.’

Adverbials also have no particular form for expressing the comparative degree. The adverbial comparative meaning is indicated by a serial construction consisting of an infinitive form of the verb *lɔɔnɔ* ‘to defeat, exceed’. The verb *lɔɔnɔ* ‘to defeat’ is a transitive verb taking the object NP *keta* ‘manner’ that refers to the adverbial expression. When the adverbial *awáka* ‘fast’ is relativized, the noun *keta* ‘manner’ is added to the matrix sentence as the antecedent of the relativized adverbial. The relativized adverbial *awáka* leaves the pronominal copy *-é* ‘3SG’ in the original position accompanied by the preposition *kede-* ‘with’ in the relativized clause. The manner adverbial *awáka* ‘fast’ is originally located in the post verbal position in (11).

- (9) okélo ɔ=camɔ gwen awáka lɔɔnɔ keta amé
 Okelo 3S/P=PERF:eat chickens fast defeat:INF manner REL
 opío ɔ=kwalɔ-gí ked:é.
 Opio 3S/P=PERF:steal-3PL with:3SG
 ‘Okelo ate the chickens faster than Opio stole them.’

- (10) okélo ɔ=camɔ gwen awáka.
 Okelo 3S/P=PERF:eat chickens fast
 ‘Okelo ate the chickens fast.’

- (11) opío ɔ=kwalɔ-gí awáka.
 Opio 3S/P=PERF:steal-3PL fast
 ‘Opio stole them fast.’

There is no special superlative construction. The superlative is expressed with a comparative construction. The comparative construction consists of the verb *lɔɔnɔ* ‘to defeat, exceed’.

- (12) lyece én léni a-dóŋɔ lɔɔnɔ i-lobo (lɛŋ).
 elephants 3SG animals ATT-big:PL defeat:INF in-world (whole)
 ‘Elephants are biggest animals in the world.’

- (13) ɪcɔɔ-nɪ én dánó a-ték lɔɔnɔ i-lobo (lɛŋ).
 man-this 3SG person ATT-strong defeat:INF in-world (whole)
 ‘This man is a strongest man in the world.’

3.5 Cleft constructions

Cleft sentences are used when the speaker identifies a particular entity in contrast with other possible entities.

- (1) okélo, én á!mé ópíó ɔ=dipo.
 Okelo 3SG REL Opio 3S/P=PERF:hit
 ‘It is Okelo that Opio hit.’

The sentence in (1) presupposes that Opio hit someone. The speaker and hearer know that Opio hit someone. Moreover, they have back grounded knowledge that there is a set of candidates that Opio possibly hit. The speaker identifies a particular person that Opio actually hit from the set of possible candidates.

The corresponding negative sentence in (2) also presupposes that Opio hit some person other than Okelo. The speaker and hearer have back grounded knowledge about the set of possible persons hit by Opio. The speaker makes an assertion that Opio did not hit Okelo.

- (2) líká ó!kélo, én á!mé ópíó ɔ=dipo.
 NEG Okelo 3SG REL Opio 3S/P=PERF:hit
 ‘It is not Okelo that Opio hit.’

The NP *itabó* ‘book’ is clefted from the sentence in (3) which consists of a predicate nominal construction. Constituents are linked without any copula in predicate nominal construction. The cleft sentence in (4) presupposes a set of books from which the speaker identifies a particular book.

- (3) itaḅv-ní mé!r-á.
 book-this of-1SG
 ‘This book is mine.’
- (4) itaḅv-ní, én á !mé!r-á.
 book-this 3SG REL of-1SG
 ‘It is this book that is mine.’

Cleft sentences consist of clefted NPs and the 3rd person singular independent pronoun *én* ‘3SG’ which is followed by a relative clause. The clefted NPs are distinguished by the morpho-phonological boundary from the 3rd person singular independent pronoun *én* ‘3SG’. The morph-phonological boundary obstructs the application of vowel and tone sandhi rules between the clefted NPs and the 3rd person singular independent pronoun *én* ‘3SG’. The 3rd person singular pronoun *én* ‘3SG’ is invariable in terms of person and number in cleft constructions. For example, a 1st person singular subject is clefted in (5).

(5) *ánó, én á!mé a=dí!pó okélo.*
 1SG 3SG REL 1SG=PERF:hit Okelo
 ‘It is me who hit Okelo.’

Because the morpho-phonological boundary that obstructs the application of vowel and tone sandhi rules separates between clefted NPs and the 3rd person singular independent pronoun *én* ‘3SG’, the clefted NPs are interpreted to occupy the topic slot in sentences.

The sentence in (6) is the non-cleft sentence from which the cleft sentence in (7) is derived by moving the NP *okélo* ‘Okelo’ to the topic slot in sentence initial position. The 3rd person singular independent pronoun *én* ‘3SG’ is the antecedent of the following relative clause *amé opío* *o=dipo* ‘whom Opio hit’. Because Kumam does not allow any constituent to intervene between head nouns and the following relative clauses, the 3rd person singular independent pronoun *én* ‘3SG’ is directly followed by a relative clause as the head noun. The 3rd person singular independent pronoun *én* ‘3SG’ followed by the relative clause *a!mé opío o=dipo* ‘the one whom Opio hit’ is linked with the predicate nominal *okélo* ‘Okelo’ without any copula in the predicate nominal construction.

The clefted NP *okélo* ‘Okelo’ occupies the topic slot in the cleft sentence shown in (7). It is moved to the topic slot in sentence initial position from the complement position in the predicate nominal construction.

(6) *én á!mé opío o=dipo okélo.* (Non cleft)
 3SG REL Opio 3S/P=PERF:hit Okelo
 ‘The one whom Opio hit is Okelo.’

(7) *okélo, én á!mé opío o=dipo.* (Cleft)
 Okelo 3SG REL Opio 3S/P=PERF:hit
 ‘It is Okelo that Opio hit.’

Cleft sentences are frequently used as answers to wh-questions. When wh-words are subjects in interrogatives, cleft sentences are preferably used as answers to the wh-questions. For example, the wh-word *ηάí* ‘who’ is a subject in the wh-question in (8). The cleft sentence in (9) is a preferable answer to the wh-question, while the non-cleft sentence in (10) is not appropriate as an answer to the wh-question in (8).

(8) *ηάí á/ά!mé o=dipo okélo?*
 who REL 3S/P=PERF:hit Okelo
 ‘Who hit Okelo?’

(9) $\sigma\pi\acute{o}$, $\acute{\epsilon}n$ $\acute{\alpha}$ $!\acute{\epsilon}=!d\acute{i}!p\acute{o}$.

Opio 3SG REL 3SG=PERF:hit

‘It is Opio who hit Okelo.’

(10) $?/*\sigma\pi\acute{o}$ $\sigma=dipo$ $ok\acute{e}lo$.

Opio 3S/P=PERF:hit Okelo

‘Opio hit Okelo.’

The wh-question in (8) presupposes a set of persons who possibly hit Okelo. The speaker and hearer have back grounded knowledge about the set of persons. The speaker utters the wh-question in order to identify from the set of possible candidates the person who hit Okelo.

Answers to wh-questions are used to identify a particular entity in contrast with other possible candidates. The referents to which clefted NPs refer are new to the hearer. Namely, information about the referents to which clefted NPs refer is new information. However, information about sets of possible candidates is stored in back grounded knowledge of the speaker and hearer. Information about the sets of possible candidates is old information. Therefore, the clefted NPs perform the pragmatic function of foci, but the sets of possible candidates perform the pragmatic function of topics. Answers to wh-questions mention particular referents to which the clefted NPs refer as well as sets of possible candidates. The clefted NPs are distinguished by the morpho-phonological boundary from the following the 3rd person singular independent pronoun $\acute{\epsilon}n$ ‘3SG’. Thus, we can conclude that clefted NPs occupy a topic slot in sentences. The pragmatic structure of cleft constructions is formalized as follows.

(11) Pragmatic structure of clefted NPs

$$\left\{ \begin{array}{l} \text{[_____]}_{\text{FOC}} \\ \text{[someone else]} \end{array} \right\}_{\text{TOP}} \quad [\varphi] \quad [\text{COP}] \quad \acute{\epsilon}n \quad \text{REL}$$

Clefted NPs are originally located after the copula, which is not segmentally articulated, as complements in predicate nominal constructions, as shown in (12). The NPs, which are moved to the sentence initial topic position by clefting, leave behind the 3rd person singular independent pronoun $\acute{\epsilon}n$ ‘3SG’ as their pronominal copy in the original position. The clefted NPs are moved from the slot for the complements to the sentence initial topic slot. They leave the 3rd person singular independent pronoun $\acute{\epsilon}n$ ‘3SG’ as their pronominal copy. The 3rd person singular independent pronoun $\acute{\epsilon}n$ ‘3SG’ as the antecedent directly followed by a relative clause is linked to the empty category without any copula in the predicate nominal construction, as shown in (11). Given that no constituents can intervene between head nouns

and relative clauses, the 3rd person singular independent pronoun *én* ‘3SG’ is the antecedent and is directly followed by relative clauses. The clefted NPs directly followed by a relative clause are originally linked to the empty category without any copula in the predicate nominal construction, as shown in (12).

(12) Proposed structure for cleft constructions before clefting

[\varnothing]_{TOP} [\varnothing] [COP] NP REL

Acooli, one of the southern Lwo languages, uses a contrastive focus construction for answers to wh-questions. The contrastive focus construction consists of the contrastive focus marker *ayé* ‘CFM’ in sentences with canonical word order. The sentence in (14) is the answer to the wh-question in (13). The contrastive focus marker *ayé* ‘CFM’ is directly preceded by the focalized NP *okélo* ‘Okelo’ in (14).

(13) aŋâ/ŋâ má ɔ=wɪlo búk í-!cók lá!wór? (Acooli)

who REL 3S/P=PERF:buy book at-market yesterday

Who bought the book at the market yesterday?

(14) okélo ayé ɔ=wɪlo búk í-!cók lá!wór. (Acooli)

Okelo CFM 3S/P=PERF:buy book at-market yesterday

‘Okelo (not somebody else) bought the book at the market yesterday.’

Cleft sentences are used as answers to wh-questions in Kumam because clefted NPs are used to express contrastive focus in sentences.

Entire NPs are clefted, not individual nouns, and modifiers can follow the head nouns. For example, the NP *ɪcɔɔ a-dwɔŋ* ‘big man’ is clefted in (15). The modifier *a-dwɔŋ* ‘big’ constitutes an NP with the head noun *ɪcɔɔ* ‘man’.

(15) ɪcɔɔ a-dwɔŋ, én á!mé ogwók ɔ=kaɔ.

man ATT-big 3SG REL dog 3S/P=PERF:bite

‘It is the big man that the dog bit.’

Cleft sentences consist of relative constructions, as discussed above. The same hierarchy of NP slots and animacy is expected to be observed in cleft constructions as in relative constructions. Although cleft constructions shows a similar hierarchy to that of relative constructions, there is a significant difference in terms of the hierarchy of NP slots and animacy between cleft and relative construction.

When human direct objects are relativized, the pronominal elements are left in the original position from which the NPs are moved. However, when human direct objects are clefted, the pronominal elements are not left in the original position from which the NPs are moved. For example, no pronominal element is left in the original position from which the human direct object *opio* ‘Opio’ is clefted in (16). On the other hand, the 3rd person singular object suffix *-é* ‘3SG’ is added to the verb *dipo* ‘to hit’ as the pronominal copy which the relativized human direct object *icoo* ‘man’ leaves in the original position in (17).

(16) *opio, én á!mé okélo o=dipo.* (Cleft)

Opio 3SG REL Okelo 3S/P=PERF:hit

‘It is Opio that Okelo hit.’

(17) *icoo amé okélo o=dip-é* (Relative)

man_i REL Okelo 3S/P=PERF:hit-3SG_i

‘the man whom Okelo hit.’

When personal pronominal objects are clefted, no pronominal element is left in the original position. On the other hand, when personal pronominal objects are topicalized, pronominal copies are obligatorily left in the original position from which the pronouns are moved. For example, when the 1st person singular pronominal object is clefted, no pronominal element is left in the original position in (19). When it is topicalized, the 1st person singular object suffix *-á* is added to the verb *tedo* ‘to cook’ as the pronominal copy in (21)⁴⁶.

(18) *ε=nen-á.*

3SG=PERF:see-1SG

‘He saw me.’

(19) *ájó, én á!mé ε=né!nó.* (Cleft)

1SG 3SG REL 3SG=PERF:see

‘It is me whom he saw.’

(20) *dákó-!ná o=téd-á.*

wife-1SG 3S/P=PERF:cook-1SG

‘My wife cooked for me.’

(21) *ájó, dákó-!ná o=téd-á.* (Topicalization)

1SG_i wife-1SG 3S/P=PERF:cook-1SG_i

‘Me, my wife cooked for.’

⁴⁶ The 1st person singular object syntactically functions as an object, though it conveys a semantically benefactive meaning.

A similar discrepancy is observed in topicalization. When human direct objects are topicalized, the pronominal copies are usually left in the original position from which the NPs are moved. For example, the 3rd person singular object suffix *-é* ‘3SG’ is added to the verb *neeko* ‘to kill’ in the topicalized sentence (23). However, some sentences do not follow this rule. These sentences are ‘idiomatic’ expressions. When human direct objects are moved to the left periphery in ‘idiomatic’ expressions, no pronominal copy is left in the original position. For example, when the human direct object *icóó* ‘man’ is topicalized, no pronominal copy is left in the original position from which the NP is moved in the ‘idiomatic’ sentence in (25).

Moreover, the distribution of pronominal copies in the ‘idiomatic’ expressions is parallel to the distribution of those in cases when pronominal objects or direct objects activated as a topic in context are topicalized⁴⁷.

(22) okélo ɔ=neko icóó.

Okelo 3S/P=PERF:kill man

‘Okelo killed the man.’

(23) icóó, okélo ɔ=nek-é. (Topicalization)

man_i Okelo 3S/P=PERF:kill-SG_i

‘The man, Okelo killed.’

(24) kec ɔ=neko icóó. (‘Idiomatic’)

hunger 3S/P=PERF:kill man

‘The man is hungry.’

(25) icóó, kec ɔ=neko. (‘Idiomatic’, Topicalization)

man hunger 3S/P=PERF:kill

‘The man, he is hungry.’

The ‘idiomatic’ expression (24) conveys about what happens to the direct object *icóó* ‘man’. The referent to which the direct object *icóó* ‘man’ refers is old information. The speaker and hearer understand that the conversation refers to the direct object *icóó* ‘man’. The direct object *icóó* ‘nan’ is activated as a topic in context. The speaker wants to give new information about what happens to the direct object *icóó* ‘man’. The other constituents in the sentence represent new information and constitute comments on the topic *icóó* ‘man’. The pragmatic formula of ‘idiomatic’ expressions is formalized in (26). Topicalization for ‘idiomatic’ expressions is defined by the pragmatic scheme in (27) whereby as the topical constituent is

⁴⁷ Cf. Section 4.1.

dislocated to the left periphery.

(26) Pragmatic structure of ‘idiomatic’ expressions

[kɛC ɔ=neko]_{COMMENT} [ɪCúɔ]_{TOPIC}

(27) Topicalization in ‘idiomatic’ expressions

[ɪCúɔ]_{TOPIC}, [kɛC ɔ=neko]_{COMMENT} (Topicalization)

Cleft sentences have similar pragmatic characteristics to those of the ‘idiomatic’ expressions. The cleft sentence in (28) presupposes the set of possible entities that Okelo hit. The speaker and the hearer understand that the sentence in (28) refers to the set of possible entities. The set of possible entities is old information and constitutes a topic in the sentence. The set of entities is activated as a topic in context. The other constituents represent new information. The speaker wants to give new information that Okelo hit Opio. The pragmatic formula of the cleft construction is formalized in (29). The clefted NPs occupy the topic slot. The empty category is connected with the 3rd person singular independent pronoun *én* ‘3SG’ as an antecedent followed by the relative clause in the predicate nominal construction without any copula. The constituents other than the clefted NP constitute comments on the topics in (29).

(28) *ɔpío, én á!mé okélo ɔ=dipo.*

Opio 3SG REL Okelo 3S/P=PERF:hit

‘It is Opio that Okelo hit.’

(29) Pragmatic structure of cleft construction

$$\left[\begin{array}{l} \text{[_____]}_{\text{FOC}} \\ \text{someone else} \end{array} \right]_{\text{TOPIC}} \quad [\varphi] \quad [\text{COP}] \quad \text{én} \quad \text{REL}]_{\text{COMMENT}}$$

In summary, the cleft construction includes similar movement of constituents to relativization and topicalization. The movement of constituents to the left periphery in cleft construction is the same movement that is applied to constituents of ‘idiomatic’ expressions in topicalization.

With the exception of clefted direct objects, cleft constructions show the same hierarchy of NP slots and animacy as relativization. When subjects are clefted, whether they are human or not human, no pronominal copy is left in the original position from which the NPs are moved.

(30) *ɔpío ɔ=dipo okélo.*

Opio 3S/P=PERF:hit Okelo

‘Opio hit Okelo.’

- (31) $\sigma\pi\acute{o}$, $\acute{\epsilon}\nu$ $\acute{\alpha}!\acute{m}\acute{\epsilon}$ $\epsilon=\acute{d}!\acute{p}\acute{o}$ $ok\acute{e}lo$. (Cleft)
 Opio 3SG REL 3S/P=PERF:hit Okelo
 ‘It is Opio who hit Okelo.’

When objects of prepositions are clefted, the pronominal copies are left in the original position from which the NPs are moved. For example, when the NP $\sigma\gamma\omega\acute{\alpha}\eta$ ‘Ogwang’ is clefted from the associative construction, the 3rd person singular possessive suffix $-m\acute{e}r\acute{e}$ ‘3SG’ is attached to the preceding NP $ogw\acute{o}k$ ‘dog’ as the pronominal copy in (33).

- (32) $ogw\acute{o}k$ $!\acute{m}\acute{\epsilon}-\sigma\gamma\omega\acute{\alpha}\eta$ $\sigma=kao$ $ab\acute{a}ka$.
 dog of-Ogwang 3S/P=PERF:bite king
 ‘The dog of-Ogwang bit the king.’

- (33) $\sigma\gamma\omega\acute{\alpha}\eta$, $\acute{\epsilon}\nu$ $\acute{\alpha}!\acute{m}\acute{\epsilon}$ $ogw\acute{o}k-!\acute{m}\acute{e}r\acute{e}$ $\sigma=kao$ $ab\acute{a}ka$. (Cleft)
 Ogwang_i 3SG REL dog-3SG_i 3S/P=bite king
 ‘It is Ogwang whose dog bit the king.’

When the object $\iota\acute{c}\acute{\upsilon}\acute{\omega}$ ‘man’ of the preposition $n\acute{e}-$ ‘for’ is clefted, the 3rd person singular inalienable possessive suffix $-\acute{\epsilon}$ ‘3SG’ is attached to the preceding preposition $n\acute{e}-$ ‘for’ as the pronominal copy in (35).

- (34) $d\acute{a}k\acute{o}$ $\sigma=tedo$ $c\acute{a}m$ $n\acute{e}-\acute{\iota}!\acute{c}\acute{\upsilon}\acute{\omega}$.
 woman 3S/P=PERF:cook food for-man
 ‘The woman cooked food for the man.’

- (35) $\iota\acute{c}\acute{\upsilon}\acute{\omega}$, $\acute{\epsilon}\nu$ $\acute{\alpha}!\acute{m}\acute{\epsilon}$ $!\acute{d}\acute{a}k\acute{o}$ $\sigma=tedo$ $n:\acute{\epsilon}$ $c\acute{a}m$. (Cleft)
 man_i 3SG REL woman 3S/P=PERF:cook for:3SG_i food
 ‘It is the man for whom the woman cooked food.’

Any NPs can be clefted from infinitive or subordinate clauses. For example, the direct object $ok\acute{e}lo$ ‘Okelo’ is clefted from the infinitive complement clause in (37). When direct objects are clefted even from infinitive or subordinate clauses, whether they are human or not, no pronominal copy is left in the original position. On the other hand, when human direct objects are topicalized, the pronominal copies are left in the original position. For example, the 3rd person singular object suffix $-\acute{\epsilon}$ is attached to the verb $k\omega\omega\eta\omega$ ‘to help’ as the pronominal copy in (38).

- (36) *dákó !mító kɔɔŋɔ okélo.* (Infinitive)
 woman 3SG:IMPERF:want help:INF Okelo
 ‘The woman wants to help Okelo.’
- (37) *okélo, én á!mé !dákó !mító kɔɔŋɔ.* (Cleft)
 Okelo 3SG REL woman 3SG:IMPERF:want help:INF
 ‘It is Okelo whom the woman wants to help.’
- (38) *okélo, dákó !mító kɔɔŋɔ:é.* (Topicalization)
 Okelo_i woman 3SG:IMPERF:want help:INF:3SG_i
 ‘Okelo, the woman wants to help.’

The direct object *opío* ‘Opio’ is clefted and topicalized from the hypotactic complement clause in (40) and (41), respectively. When the human direct object *opío* ‘Opio’ is clefted from the hypotactic complement clause, no pronominal copy is left in the original position. On the other hand, when it is topicalized, the 3rd person singular object suffix *-é* is attached to the verb *kɔɔŋɔ* ‘to help’ as the pronominal copy in (41).

- (39) *dákó !mító !bé ó!kélo kɔŋ ó!pío.* (Hypotactic)
 woman 3SG:IMPERF:want COMP Okelo 3SG:help:SUB Opio
 ‘The woman wants Okelo to help Opio.’
- (40) *opío, én á!mé !dákó !mító !bé ó!kélo kɔŋ.* (Cleft)
 Opio 3SG REL woman 3SG:IMPERF:want COMP Okelo 3SG:help:SUB
 ‘It is Opio whom the woman wants Okelo to help.’
- (41) *opío, dákó !mító !bé ó!kélo kɔŋ-é.* (Topicalization)
 Opio_i woman 3SG:IMPERF:want COMP Okelo 3SG:help:SUB-3SG_i
 ‘Opio, the woman wants Okelo to help.’

The subject *okélo* ‘Okelo’ is clefted from the hypotactic complement clause in (43). The object *ogwanɔ* ‘Ogwanɔ’ is clefted from the hypotactic complement clause in (44).

- (42) *abáka ɲéó !bé ó!kélo ɔ=neko ɔgwanɔ.* (Hypotactic)
 king 3SG:IMPERF:know COMP Okelo 3S/P=PERF:kill Ogwanɔ
 ‘The king knows that Okelo killed Ogwanɔ.’
- (43) *okélo, én á!mé abáka ɲéó !bé ɔ=neko ɔgwanɔ.* (Cleft)
 Okelo 3SG REL king 3SG:IMPERF:know COMP 3S/P=PERF:kill Ogwanɔ
 ‘It is Okelo, the king knows that killed Ogwanɔ.’

- (44) *ogway, én á!mé abáka ñéó !bé ó!kélo ɔ=neko.* (Cleft)
 Ogwang 3SG REL king 3SG:IMPERF:know COMP Okelo 3S/P=PERF:kill
 ‘It is Ogwang, the king knows that Okelo killed.’

In summary, when human direct objects are topicalized, the pronominal copies are left in the original position from which the NPs are moved. However, when human direct objects are clefted even from infinitive or subordinate clauses, the pronominal elements are not left in the original position from which the NPs are moved.

Any NPs also can be clefted from ‘paratactic’ or infinitive complement clauses.

The human direct object *ogway* ‘Ogwang’ is clefted and topicalized from the ‘paratactic’ complement clause in (46) and (47), respectively. No pronominal element is left in the original position when the human direct object is clefted, while the pronominal element is left when the human direct object is topicalized. The 3rd person singular suffix *-é* ‘3SG’ is attached to the verb *kɔɔɲɔ* ‘to help’ as the pronominal copy in (47).

- (45) *alába mító okélo kɔɲ ógway.* (‘Paratactic’)
 Alaba 3SG:IMPERF:want Okelo 3SG:help:SUB Ogwang
 ‘Alaba wants Okelo to help Ogwang.’
- (46) *ogway, én á!mé alába mító okélo kɔɲ.* (Cleft)
 Ogwang 3SG REL Alaba 3SG:IMPERF:want Okelo 3SG:help:SUB
 ‘It is Ogwang whom Alaba wants Okelo to help.’
- (47) *ogway, alába mító okélo kɔɲ-é.* (Topicalization)
 Ogwang, Alaba 3SG:IMPERF:want Okelo 3SG:help:SUB-3SG
 ‘Ogwang, Alaba wants Okelo to help.’

The direct object *kal* ‘millet’ is clefted and topicalized from the infinitive complement clause in (49) and (50), respectively.

- (48) *dákó ɔ=dɪɔ ɪɔ́ɔ pyɛɔ kal.* (Infinitive)
 woman 3S/P=PERF:force man winnow:INF millet
 ‘The woman forced the man to winnow the millet.’
- (49) *kal, én á!mé !dákó ɔ=dɪɔ ɪɔ́ɔ pyɛɔ.* (Cleft)
 millet 3SG REL woman 3S/P=force man winnow:INF
 ‘It is the millet that the woman forced the man to winnow.’
- (50) *kal, dákó ɔ=dɪɔ ɪɔ́ɔ pyɛɔ.* (Topicalization)
 millet woman 3S/P=PERF:force man winnow:INF

‘The millet, the woman forced the man to winnow.’

Possessor NPs can be clefted from associative and possessive constructions, as shown in (52) and (54), respectively. The possessor NP is clefted after the preposition *me-* ‘of’ in (52). The 3rd person singular possessive suffix *-méré* ‘3SG’ is attached to the preceding NP *riŋó* ‘meat’ as the pronominal copy in (52). The 1st person singular possessor is clefted in (54). The 1st person singular possessive suffix *-ná* ‘1SG’ is attached to the preceding NP *riŋó* ‘meat’ as the pronominal copy in (54).

(51) *dákó* *ɔ=tedo* *riŋo mé-dyaŋ*.

woman 3S/P=PERF:cook meat of-cow

‘The woman cooked the meat of cow.’

(52) *dyaŋ, én á!mé !dákó* *ɔ=tedo* *riŋo-méré*. (Cleft)

cow_i 3SG REL woman 3S/P=PERF:cook meat-3SG_i

‘It is the cow that the woman cooked meat of.’

(53) *dákó* *ɔ=tedo* *riŋo-ná*.

woman 3S/P=PERF:cook meat-1SG

‘The woman cooked my meat.’

(54) *áŋó, én á!mé !dákó* *ɔ=tedo* *riŋo-ná*. (Cleft)

1SG_i 3SG REL woman 3S/P=PERF:cook meat-1SG_i

‘It is me that the woman cooked the meat of.’

Moreover, clefting is possible in subordinate clauses, as shown in (55) and (56). The subject is clefted in the subordinate clause in (55), and the object is clefted in (56).

(55) *ɔpío* *ɔ=wacɔ* *bé* *ó!kélo, én á!mé* *ɔ=neko* *ɔgwaŋ*. (Cleft)

Opio 3S/P=PERF:say COMP Okelo 3SG REL 3S/P=PERF:kill Ogowang

‘Opio said that it is Okelo who killed Ogowang.’

(56) *ɔpío* *ɔ=wacɔ* *bé* *ógwaŋ, én á!mé okélo* *ɔ=neko*. (Cleft)

Opio 3S/P=PERF:say COMP Ogowang 3SG REL Okelo 3S/P=PERF:kill

‘Opio said that it is Ogowang that Okelo killed.’

Kumam clefting and topicalization applies across clausal boundaries to constituents in subordination and complementation. Clefting and topicalization, however, are blocked by clausal boundaries in coordinate structure. Though clefting and topicalization include similar movement of constituents, they have different characteristics in terms of information

structure⁴⁸.

Relative clauses cannot be preceded by a pronominal antecedent, while pronouns may occupy the position for clefted NPs in cleft sentences.

(57) *áŋó a!mé a=dí!pó okélo. (Relative)
1SG REL 1SG=PERF:hit Okelo
'*I who hit Okelo'

(58) áŋó, én á!mé a=dí!pó okélo. (Cleft)
1SG 3SG REL 1SG=PERF:hit Okelo
'It is me who hit Okelo.'

The clefted NPs are not antecedents of the relative clauses. The clefted NPs occupy the topic slot in the sentence-initial position. Pronouns may occupy the slot for the clefted NPs because pronouns are candidates for topicalization. Pronouns convey old information because they refer to referents that have previously been mentioned in context or are part of the shared backgrounded knowledge of the speaker and hearer.

3.5.1 Cleft constructions and wh-questions

Kumam has three types of constructions for wh-questions: relative constructions, cleft constructions, and interrogative sentences with a wh-word in situ in postverbal position. When wh-words are subjects in interrogative sentences, however, only the first and second types are used for constructing wh-questions.

Wh-words always occupy the sentence initial position in wh-questions consisting of relative constructions. The wh-words are followed by relative clauses. The 'switch' reference subject clitics are added to verbs in the relative clauses. For example, when the subject is 3rd person in the relative clause, the 'switch' reference 3rd person subject clitic ϱ = '3S/P' is added to the verb *diipo* 'to hit' in (1).

(1) ŋái á !ó=dipo okélo? → [ŋái!ódipo...] (Relative)
who REL 3S/P=PERF:hit Okelo
'Who hit Okelo?'

Topics in preceding clauses control coreference in following clauses. Given the fact that the 'switch' reference subject clitics are used in relative clauses in wh-questions, there is no

⁴⁸ Topicalization and information structure are discussed in Section 4.1.

preceding topic to control coreference in the relative clauses. Wh-words followed by relative clauses are not preceded by any topics. Kumam wh-questions consisting of relative clauses construct a predicate nominal construction where an empty category is connected to wh-words followed by relative clauses as modifiers without any copula. Thus, the wh-words are not located in the sentence initial position. They do not occupy a sentence initial topic slot. The wh-questions consisting of relative construction are schematized as follows.

(2) Structure for Wh-questions (Relative)

[ϕ] [COP] [Wh-word] REL

Wh-words that function as head nouns are directly followed by relative clauses. Wh-words must occupy the focus slot because they represent new information that the speaker wants to get. However, wh-questions are used by the speaker to identify a particular entity from a set of possible candidates. For example, the wh-question in (1) presupposes that somebody hit Okelo. The speaker and the hearer know that somebody hit Okelo. They have knowledge about the set of candidates who possibly hit Okelo. The speaker wants to identify a particular entity from the set of candidates who actually hit Okelo. The whole set of candidates occupies the topic slot and the wh-word occupies the focus slot.

(3) Pragmatic structure of Wh-questions (Relative)

[ϕ] [COP] $\left\{ \begin{array}{l} \text{[Wh-word]}_{\text{FOC}} \\ \text{someone else} \end{array} \right\}_{\text{TOP}} \text{REL}$

Wh-words occupy the slot for clefted NPs in wh-questions consisting of cleft construction. Wh-words are always followed by 3rd person singular independent pronoun *én*. The 3rd person singular pronoun *én* is the head noun and is directly followed by relative clauses. It is not invariable in terms of person and number, regardless of its referent.

When wh-words are subjects, the wh-questions consisting of the relative marker *a(H)*, such as the wh-question in (4), are more common than those consisting of the relative marker *amé(L)*, such as the wh-question in (5). The vowel of the relative marker *a(H)* is frequently coalesced with the following vowel. Moreover, non-‘switch’ reference subject clitics are added to verbs in relative clauses. For example, the non-‘switch’ reference 3rd person singular subject clitic $\epsilon=$ is added to the verb *diipo* ‘to hit’ in (4) and (5). This fact suggests that the non-‘switch’ reference 3rd person singular subject clitic $\acute{\epsilon}=$ ‘3SG’ is coreferential with the clefted wh-words.

(4) ηάί, έν ά !έ=δί!πό okέλο? (Cleft)
 who 3SG REL 3S/P=PERF:hit Okelo
 ‘Who hit Okelo?’

(5) ηάί, έν ά!μέ ε=δί!πό okέλο? (Cleft)
 who 3SG REL 3S/P=PERF:hit Okelo
 ‘Who hit Okelo?’

The wh-word *ηάί* ‘who’ is located in the slot for clefted NPs in (6). It is the object in the relative clause.

(6) ηάί, έν ά!μέ okέλο ς=dipo? (Cleft)
 who 3SG REL Okelo 3S/P=PERF:hit
 ‘Whom did Okelo hit?’

Wh-questions consisting of interrogative sentences with canonical word order have the same structure as the corresponding affirmative sentences where wh-words are located in situ. For example, the wh-word *ηάί* ‘who’ in (7) is located in the same place as in the corresponding affirmative sentence in (8). When wh-words are subjects in sentences, however, wh-questions with in situ interrogative construction cannot be used. The interrogative sentence in (9) is ungrammatical.

(7) okέλο ς=dipo ηάί? (In situ)
 Okelo 3S/P=PERF:hit who
 ‘Whom did Okelo hit?’

(8) okέλο ς=dipo οπίο.
 Okelo 3S/P=PERF:hit Opio
 ‘Okelo hit Opio.’

(9)*ηάί ό=dipo okέλο? (In situ)
 who 3S/P=PERF:hit Okelo
 ‘Who hit Okelo?’

Since the sentence initial position is the slot for topics, wh-words cannot occupy this slot. Wh-words represent new information. Constituents that convey new information cannot occupy a topic slot. Wh-words are not located in sentence initial position in wh-questions consisting of relative constructions; however, they function as contrastive focus in the schematized structure for wh-questions in (2). The whole sets of candidates occupy the topic

slot, but *wh*-words occupy the focus slot, as schematized in (3).

The cleft sentence in (10) is the response to the *wh*-question with cleft construction in (11). The *wh*-word *ηάι* ‘who’ is the subject in the *wh*-question.

(10) *οπίο, έν ά !έ=!δί!πό okélo. → [οπίο#έν !έ=!δί!πό...] (Cleft)*
Opio 3SG REL 3S/P=PERF:hit Okelo
 ‘It is Opio who hit Okelo.’

(11) *ηάί, έν ά !έ=!δί!πό okélo? (Wh-question, Cleft)*
who 3SG REL S/P=PERF:hit Okelo
 ‘Who hit Okelo?’

The cleft sentence in (12) is the response to the *wh*-question with cleft construction in (13). The *wh*-word *ηάι* ‘who’ is the direct object in the *wh*-question.

(12) *οπίο, έν ά!μέ okélo ο=dipo. (Cleft)*
Opio 3SG REL Okelo 3S/P=PERF:hit
 ‘It is Opio whom Okelo hit.’

(13) *ηάί, έν ά!μέ okélo ο=dipo? (Wh-question, Cleft)*
who 3SG REL Okelo 3S/P=PERF:hit
 ‘Whom did Okelo hit?’

The cleft sentence in (14) is the response to the *wh*-question with cleft construction in (15). The *wh*-word *ηάι* ‘who’ is the possessor NP in the *wh*-question. The 3rd person possessive suffix *-méré* ‘3SG’ is added to the preceding noun *ogwók* ‘dog’ as the pronominal copy that the *wh*-word leaves behind in the original position.

(14) *ογwάη, έν ά!μέ ogwók-!méré ο=kaο abáka. (Cleft)*
Ogwang 3SG REL dog-3SG 3S/P=PERF:bite king
 ‘It is Ogwang whose dog bit the king.’

(15) *ηάί, έν ά!μέ ogwók-!méré ο=kaο abáka? (Wh-question, Cleft)*
who 3SG REL dog-3SG 3S/P=PERF:bite king
 ‘Whose dog bit the king?’

Clefted NPs in sentence initial position function as the contrastive focus, as discussed previously. *Wh*-words are located in the same position as clefted NPs in *wh*-questions consisting of cleft construction. Therefore, *wh*-words in cleft constructions have the same

functions. Kumam wh-words may only occupy the focus slot, similar to Acooli wh-words. Kumam wh-words never occupy the topic slot in sentence initial position. When wh-words are subjects, the wh-questions consisting of relative or cleft construction must be used. Interrogative sentences having wh-words in situ are ungrammatical. The sentence initial position in wh-questions consisting of relative or cleft constructions is a slot for contrastive focus.

- (19) **ŋáí* *ó=dipo* *okélo?* (In situ)
 who 3S/P=PERF:hit Okelo
 ‘Who hit Okelo?’
- (20) *ŋáí* *á* *!é=!dí!pó* *okélo?* (Relative)
 who REL 3SG=hit Okelo
 ‘Who hit Okelo?’
- (21) *ŋáí*, *én* *á* *!é=!dí!pó* *okélo?* (Cleft)
 who 3SG REL 3SG=PERF:hit Okelo
 ‘Who hit Okelo?’

In summary, wh-words occupy the focus slot in the position for contrastive focus, but the sets of possible candidates, including entities referred to by the wh-words, occupy the topic slot in the position for contrastive focus in wh-questions consisting of relative constructions.

Kumam wh-questions consisting of cleft constructions have the same structure as affirmative sentences consisting of cleft constructions. The pragmatic structure of wh-questions consisting of cleft construction is formalized in (22). Wh-words are located in the position for clefted NPs in cleft constructions. The 3rd person singular independent pronoun *én* ‘3SG’ is the antecedent and is directly followed by relative clauses, because no constituents can intervene between head nouns and relative clauses.

The original structure of wh-questions consisting of cleft constructions is proposed in (23). The wh-words are connected to the empty category without any copula in nominal predicate constructions. The wh-words are moved after the copula to the sentence initial topic slot in cleft sentences such as in (22). They leave the 3rd person singular independent pronoun *én* ‘3SG’ as their pronominal copy in the original position. The pronominal copy followed by a relative clause is linked with the empty category in predicate nominal constructions without any copula. The relative clause modifies the preceding 3rd person singular independent pronoun *én* ‘3SG’ as an adjunct, because no constituents can intervene between head nouns and relative clauses.

(22) Pragmatic structure of Wh-questions (Cleft) in Kumam

$$\left[\begin{array}{l} [\text{Wh-word}]_{\text{FOC}} \\ \text{someone else} \end{array} \right]_{\text{TOP}} \quad [\varphi] \quad [\text{COP}] \quad \acute{\epsilon}\text{n} \quad \text{REL}$$

(23) Proposed structure for Wh-questions (Cleft) before clefting

$$[\varphi]_{\text{TOP}} \quad [\varphi] \quad [\text{COP}] \quad [\text{Wh-word}] \quad \text{REL}$$

Wh-questions presuppose a set of entities among which a particular entity is chosen by the speaker. For example, the wh-question in (24) presupposes that someone hit Okelo. The speaker and the hearer have back grounded knowledge about a set of candidates who possibly hit Okelo. The speaker wants to identify the person among possible candidates who actually hit Okelo. The set of the possible persons who hit Okelo is old information. The whole set of candidates including the particular person occupies a topic slot in the scheme shown in (22).

The speaker brings a particular person whom he identifies among candidates into focus. The particular person is new information. The particular person who the speaker identifies is located in a focus position in the scheme shown in (22).

(24) $\eta\acute{\alpha}i$, $\acute{\epsilon}\text{n}$ $\acute{\alpha}$! $\acute{\epsilon}$ =!d \acute{i} !p \acute{o} ok \acute{e} lo? (Cleft)

who 3SG REL 3SG=PERF:hit Okelo

‘Who hit Okelo?’

The difference in coreference between wh-questions consisting of relative construction and wh-questions consisting of cleft constructions proves the structures formalized in (18) and (22).

‘Switch’ reference subject clitics are attached to verbs in wh-questions consisting of relative constructions, while non-‘switch’ reference subjects clitics are attached to verbs in wh-questions consisting of cleft constructions. For example, the 3rd person ‘switch’ reference subject clitic ɔ = ‘3S/P’ is added to the verb *diipo* ‘to hit’ in the wh-question consisting of a relative construction in (25), while the 3rd person singular non-‘switch’ reference subject clitic ϵ = ‘3SG’ is added to the verb *diipo* ‘to hit’ in the wh-question consisting of a cleft construction in (26).

(25) $\eta\acute{\alpha}i$ $\acute{\alpha}$! \acute{o} =dipo ok \acute{e} lo? (Relative)

who REL 3S/P=PERF:hit Okelo

‘Who hit Okelo?’

- (26) ḡáí, én á !é=!dí!pó okélo? (Cleft)
 who 3SG REL 3SG=PERF:hit Okelo
 ‘Who hit Okelo?’

Topics in preceding clauses usually control coreference within following subordinate clauses. Given the fact that ‘switch’ reference subject clitics are attached to verbs in wh-questions consisting of relative construction, we can conclude that relative clauses are not preceded by any topics that are coreferential with the subjects in relative clauses, as shown in (27).

On the other hand, given the fact that non-‘switch’ reference subject clitics are attached to verbs in wh-questions consisting of cleft constructions, we can conclude that relative clause are preceded by topics that are coreferential with the subjects of the following relative clauses, as shown in (28). The wh-words occupy the topic slots that precede the relative clauses in wh-questions consisting of cleft constructions.

- (27) ḡáí á !ó=dipo okélo? (Relative)
 who REL 3S/P=PERF:hit Okelo
 ‘Who hit Okelo?’

- (28) ḡáí, én á !é=!dí!pó okélo? (Cleft)
 who_i 3SG REL 3SG_i=PERF:hit Okelo
 ‘Who hit Okelo?’

Acooli speakers prefer to use wh-questions that contain in situ wh-words in postverbal position. They do not frequently use wh-questions consisting of relative constructions. Moreover, Acooli has no wh-question consisting of cleft constructions. The pragmatic function of Acooli wh-words is to express contrastive focus. Acooli has the particular contrastive focus marker *ayé* ‘CFM’. The contrastive focus construction marked with the contrastive focus marker *ayé* ‘CFM’ does not include movement of constituents. On the other hand, Kumam speakers prefer to use wh-questions consisting of relative or cleft constructions. They include movement of constituents. Wh-words occupy the contrastive focus position in wh-questions consisting of relative or cleft constructions. Since Kumam wh-words do not express contrastive focus, Kumam speakers use wh-questions consisting of relative or cleft constructions that syntactically express contrastive focus.

3.6 Linking clauses

There are morphological or syntactic devices for linking clauses in Kumam.

3.6.1 Coordinate construction *ko* ‘and to do’

Kumam has a particular coordinate construction consisting of the auxiliary *ko* ‘and to do’. Second clauses in the coordinate construction consist of the auxiliary *ko* ‘and to do’ followed by an infinitive form of the verbs. The auxiliary *ko* ‘and to do’ is always inflected with person and number in perfect aspect. Verbs in the first clauses in the coordinate construction *ko* ‘and to do’ are inflected with perfect or are accompanied with the past adverbial *ɔɔdɔ* ‘PAST’ if they are inflected in imperfect. Subjects in the second clauses may or may not be coreferential with those in the first clauses. Topics in the first clauses control coreference in the second clauses in coordinate constructions. Second clauses are not necessarily connected to first clauses with conjunctions such as *di* ‘and’ in the coordinate constructions *ko* ‘and to do’.

For example, the sentence in (1) constitutes the coordinate construction *ko* ‘and to do’. The verb *wɪlɔ* ‘to buy’ in the first clause is inflected in perfect aspect. The auxiliary *ko* ‘and to do’ is inflected with 3rd person in perfect aspect. The subject *dákó-!méré* ‘his wife’ in the second clause is not coreferential with the subject *okélo* ‘Okelo’ in the first clause. The conjunction *di* ‘and’ is not necessarily used for linking two clauses.

- (1) *okélo ɔ=wɪlɔ kal (di) dákó-!méré ɔ=!kó teed:é.*
 Okelo 3S/P=PERF:buy millet (and) wife-3SG 3S/P=PERF:do cook:INF:3SG
 ‘Okelo bought the millet and his wife cooked it.’
- (2) *a=wí!lɔ kal (di) a=kó teed:é.*
 1SG=PERF:buy millet (and) 1SG=PERF:do cook:INF:3SG
 ‘I bought the millet and cooked it.’
- (3) *ε=né!kó !gwénɔ (di) a=kó caam:é.*
 3SG=PERF:kill chicken (and) 1SG=PERF:do eat:INF:3SG
 ‘He killed the chicken and I ate it.’

The coordinate construction *ko* ‘and to do’ denotes that the events or actions described by the first clauses occurred before the events or actions described by the second clauses happened. This construction does not denote that the events or actions described by the first clauses occurred at the same time as the events or actions described by the second clauses.

- (4) *dákó ɔ=myɛlɔ (di) ε=kó weero wer.*
 woman 3S/P=PERF:dance (and) 3SG=PERF:do sing:INF song
 ‘The woman danced and then she sang the song (not simultaneously).’

There is another coordinate construction in which the auxiliary *ko* ‘and to do’ is not used. The

second clauses are linked to the first clauses with the conjunction *di* ‘and’ in coordinate construction. The coordinate construction with the conjunction *di* ‘and’ denotes that the events or actions described by the first clauses occurred at the same time as the events or actions described by the second clauses. Predicates are inflected independently in terms of aspect and declension in the first and second clauses in the coordinate construction with the conjunction *di* ‘and’.

- (5) *dákó* *ɔ=myeɔ* *di* *ε=wé!ró* *wer.*
 woman 3S/P=PERF:dance and 3SG=PERF:sing song
 ‘The woman danced while singing the song.’

The coordinate construction *ko* ‘and to do’ is restricted to clauses consisting of verbs inflected in perfect aspect or accompanied with the past adverbial *ɔɔdɔ* ‘PAST’, because the auxiliary *ko* ‘and to do’ is always inflected in perfect aspect⁴⁹. First clauses cannot be inflected with imperfect aspect in the coordinate construction *ko* ‘and to do’ if they are not accompanied with the past adverbial *ɔɔdɔ* ‘PAST’. The sentence in (6) is not grammatical because the verb *keelo* ‘to bring’ in the first clause is inflected in imperfect aspect.

- (6) **ε=ké!ló* *kal* *ɪ-ɔt* *(di)* *dákó-!méré* *ó=!kó* *teed:é.*
 3SG=IMPERF:bring millet to-house (and) wife-3SG 3S/P=PERF:do cook:INF:3SG
 ‘He brings the millet to the house and his wife cooks it.’

The auxiliary *ko* ‘and to do’ cannot be followed by the future tense auxiliary *yaarɔ* ‘to decide’.

- (7) **ε=ké!ló* *kal* *ɪ-ɔt* *do* *dákó-!méré* *ó=!kó* *yaarɔ* *teed:é.*
 3SG=PERF:bring millet to-house but wife-3SG 3S/P=PERF:do decide:INF cook:INF:3SG
 ‘He brought the millet but his wife would cook it.’

The auxiliary *ko* ‘and to do’ may co-occur with verbs in first clauses accompanied with the past tense adverbial *ɔɔdɔ* ‘PAST’ whether they are inflected with imperfect or perfect.

- (8) *dákó* *ɔɔdɔ* *ɔ=tedo* *né-á!tín-!méré* *cám* *é=!kó* *caam:é.*
 woman PAST 3S/P=PERF:cook for-child-3SG food 3SG=PERF:do eat:INF:3SG

⁴⁹ The ‘boundness in time’ restriction is discussed in Section 3.6.2.

‘The woman cooked food for her child and he ate it.’

(9) dákó ɔʋdɔ tédó !né-á!tín-!méré cáam é=!kó caam:é.
woman PAST 3SG:IMPERF:cook for-child-3SG food 3SG=PERF:do eat:INF:3SG

‘The woman cooked food for her child (habitually) and he ate it.’

The auxiliary *ko* ‘and to do’ may co-occur with the past adverbial *ɔʋdɔ* ‘PAST’ in second clauses.

(10) dákó ɔ=tedo né-á!tín-!méré cáam ɔʋdɔ ε=kó caam:é.
woman 3S/P=cook for-child-3SG food PAST 3SG=PERF:do eat:INF:3SG

‘The woman cooked food for her child and then he ate it.’

3.6.2 Coordinate construction *ko* ‘and to do’ and tense (aspect)

There is a restriction of tense (aspect) in the coordinate construction *ko* ‘and to do’. Clauses in the coordinate construction *ko* ‘and to do’ must share the feature of ‘boundness in time’. The sentence in (1) is not grammatical because the clauses do not share the feature of ‘boundness in time’.

(1) *a=wíló kal (di) a=kó teed-é.
1SG=IMPERF:buy millet (and) 1SG=PERF:do cook:INF-3SG

‘*I buy the millet and cooked it.’

If one clause consists of a verb inflected with tense/aspect that has a positive value of ‘boundness in time’, the verb in the other clause must have a positive value in the coordinate construction *ko* ‘and to do’. Because the auxiliary in the coordination *ko* ‘and to do’ is always inflected with perfect aspect, second clauses in the coordinate construction *ko* ‘and to do’ necessarily have a positive value of ‘boundness in time’. Therefore, first clauses in the coordinate construction *ko* ‘and to do’ must not be inflected with imperfect aspect, because this aspect is characterized by a negative value of ‘boundness in time’. For example, the sentence in (1) is not acceptable semantically because the event described by the first clause is not bounded in time and the event described by the second clause is bounded in time. The first clause denotes a repeated or habitual event or action, but the second clause denotes an event or action that is accomplished only once at a specific time.

The future tense auxiliary *yaarɔ* ‘to decide’ is always inflected in perfect aspect. Future tense shares the same value of ‘boundness in time’ with the aspect of the auxiliary of coordination *ko* ‘and to do’. Although the future tense follows the ‘boundness in time’

restriction, clauses consisting of verbs in future tense cannot be followed by clauses consisting of the *ko* ‘and to do’ construction. The sentence in (2) is not semantically acceptable though both clauses share a positive value of ‘boundness in time’.

- (2) *a=yá!ró wɪlɔ kal (di) a=kó teed:é.
 1SG=PERF:decide buy:INF millet (and) 1SG=PERF:do cook:INF:3SG
 ‘*I will buy the millet and cooked it.’

Topics in first clauses control coreference in second clauses in the coordinate construction *ko* ‘and to do’. Subjects are usually interpreted as topics in first clauses in pragmatically unmarked sentences. The topics in first clauses control coreference in second clauses, because the topics continue into the second clauses. Therefore, non-‘switch’ reference clitics in second clauses are coreferential with subjects in first clauses in the coordinate construction *ko* ‘and to do’. For example, the non-‘switch’ reference subject clitic ε= in the second clause is coreferential with the subject in the first clause in the coordinate construction *ko* ‘and to do’ in (3).

- (3) ε=wí!lɔ kal (di) ε=kó teed:é.
 3SG_i=PERF:buy millet (and) 3SG_i=PERF:do cook:INF:3SG
 ‘He bought the millet and cooked it.’

If the auxiliary *ko* ‘and to do’ is preceded by independent pronouns, a topic shift occurs between the first and second clauses in the coordinate construction, as discussed later in Section 4.1.4. When the auxiliary *ko* ‘and to do’ is preceded by independent pronouns, these pronouns refer to referents other than the topics in the first clauses. In this case, topics in the first clauses do not control coreference in second clauses in coordinate construction *ko* ‘and to do’. The independent pronouns occupy the topic slot in second clauses, and moreover they refer to referents other than the topics in the first clauses. Topics in second clauses control coreference in the second clauses. In other words, independent pronouns trigger the topic shift.

- (4) ε=wí!lɔ kal (di) én é=!kó teed:é.
 3SG_i=PERF:buy millet (and) 3SG_j 3SG_j=PERF:do cook:INF:3SG
 ‘He bought the millet and she cooked it.’

3.6.3 Coordinate construction *ko* ‘and to do’ and negation

The negative particle *líká* ‘NEG’ is followed by predicates. When clauses are connected with the auxiliary *ko* ‘and to do’, the negative particle *líká* ‘NEG’ is located in the first clauses and must not be repeated in the second clauses in the coordinate construction. The scope of negation extends to the whole sentences. Both the first and second clauses are negated.

- (1) *líká á=!té!dó riŋo á=!kó caamo.*
 NEG 1SG=PERF:cook meat 1SG=PERF:and do eat:INF
 ‘I did not cook the meat nor ate it.’
- (2) **líká á=!té!dó riŋo líká á=!kó caamo.*
 NEG 1SG=PERF:cook meat NEG 1SG=PERF:and do eat:INF
 ‘I did not cook the meat nor ate it.’

3.6.4 ‘Paratactic’ linking clauses

Kumam has another particular construction for linking clauses. When two clauses are closely connected semantically or logically, they are linked to each other without any conjunction. The construction is called a ‘paratactic’ coordinate construction. When clauses are linked in a ‘paratactic’ coordinate construction, the first clause denotes the cause and the second clause denotes the result. The events or actions described by the first clauses cause the results described by the second clauses in ‘paratactic’ coordinate constructions.

- (1) *a=tí!ó, a=tyé kede-sén!té.*
 1SG:PERF:work 1SG=IMPERF:be with-money
 ‘I worked, so I have maney.’
- (2) *a=só!mó, a=ó!dó tic.*
 1SG=PERF:study 1SG=PERF:find job
 ‘I studied, so I found the job.’
- (3) *ε=rí!ŋó ɪ-tək, ε=má!kó bʊs.*
 3SG=PERF:run with-hard 3SG=PERF:catch bus
 ‘He ran fast, so he caught the bus.’
- (4) *tic tək, a=ól.*
 job hard 1SG:IMPERF:be tired
 ‘The job is hard, so I am tired.’
- (5) *a=ryék, líká á=!mátó kɔŋó.*
 1SG=IMPERF:be wise NEG 1SG=IMPERF:drink beer
 ‘I am wise, so I do not drink beer.’

The ‘paratactic’ coordinate constructions can be paraphrased by sentences consisting of ‘paratactic’ indicative complement with the causation verb *μῖνω* ‘to give’. The verb *μῖνω* ‘to give’, which is always inflected with 3rd person in perfect aspect, is followed by ‘paratactic’ indicative complement clauses⁵⁰.

(6) a=ti!ó, ρ=μῖνω a=tyé kede-sén!té. ≐ (16)
 1SG=PERF:work 3S/P=PERF:give 1SG=IMPERF:be with-money
 ‘I worked, which made me have money.’

(7) a=só!mó, ρ=μῖνω a=ó!dó tic. ≐ (17)
 1SG=PERF:study 3S/P=PERF:give 1SG=PERF:find job
 ‘I studied, which made me find the job.’

(8) ε=ρί!ηό ι-tek, ρ=μῖνω ε=μά!kó bus. ≐ (18)
 3SG=PERF:run with-hard 3S/P=PERF:give 3SG=PERF:catch bus
 ‘He ran fast, which made him catch the bus.’

(9) tic tek, ρ=μῖνω a=ó!l. ≐ (19)
 job hard 3S/P=PERF:give 1SG=IMPERF:be tired
 ‘The job is hard, which makes me be tired.’

(10) a=ryek, ρ=μῖνω líká á=!mátó κοηό. ≐ (20)
 1SG=IMPERF:be wise 3S/P=PERF:give NEG 1SG=IMPERF:drink beer
 ‘I am wise, which makes me not drink beer.’

The events or actions described by the first and second clauses in ‘paratactic’ coordinate constructions are closely connected in a semantic or logical causal relationship. If there is no clear relationship between them, conjunctions such as *πῖ(H)*- ‘because’ must be used for linking clauses. For example, the sentence in (12) is not grammatical because the two clauses have no causal relationship.

(11) áηό a=ryék, líká á=!mátó κοηό.
 1SG 1SG=IMPERF:be wise NEG 1SG=IMPERF:drink beer
 ‘I am wise, so I do not drink beer.’

(12) *líká á=!mátó κοηό, áηό a=ryék.
 NEG 1SG=IMPERF:drink beer 1SG 1SG=IMPERF:be wise
 ‘I do not drink beer, so I am wise.’

⁵⁰ Cf. Section 3.2.

The sentence in (11) is grammatical because the two clauses have a clear causal relationship semantically. Kumam speakers believe that if people are wise then as a result they do not drink beer. The sentence in (12) is not grammatical because there is no clear causal relationship between the first and the second clause. In other words, Kumam speakers believe that not drinking beer does not cause people to be wise.

If sentences have conjunctions that express semantic or logical relationships between the first and second clauses, they are grammatical even though they are not in a causal relationship. The sentences in (13) is grammatical, because the two clauses are connected with the conjunction *pi(H)*- ‘because’ to express the semantic or logical relationship between them. The sentence in (14) consists of a causative construction. The second clause consists of a ‘paratactic’ indicative complement with the causation verb *miɪnɔ* ‘to give’. The causative construction expresses a semantic or logical causal relationship between the first and the second clause.

(13) líká á=mátó kɔŋó, pi á=!ryék.
 NEG 1SG=IMPERF:drink beer because 1SG=IMPERF:be wise
 ‘I do not drink beer, because I am wise.’

(14) líká á=!mátó kɔŋó ɔ=mɪɔ a=ryék.
 NEG 1SG=IMPERF:drink beer 3S/P=PERF:give 1SG=IMPERF:be wise
 ‘I do not drink beer, and it made me to be wise.’

Since ‘paratactic’ coordinate constructions are used to express causal relationships between events or actions described by first and second clauses, there is a restriction in terms of the time of the events or actions. The events or actions described by the first clauses must occur before the events or actions described by the second clauses. The sentence in (15) consists of a ‘paratactic’ coordinate construction and is grammatical because the verbs in the two clauses are inflected in perfect aspect. Kumam speakers believe that drinking beer intoxicates people. The sentence in (15) is easily interpreted to mean that Okelo drank beer and then he was drunk. The sentence in (15) follows the restriction of time on the events or actions.

(15) okélo ɔ=má!tó kɔŋó, ɛ=mêr.
 Okelo 3S/P=PERF:drink beer 3SG=PERF:be drunk
 ‘Okelo drank beer, so he was drunk.’

The sentence in (16) sounds slightly strange. A ‘paratactic’ coordinate construction denotes a causal relationship between the events or actions described by first and second clauses. The

events or actions described by the first clause cause the events or actions described by the second clauses. Therefore, the sentence in (16) conveys the meaning that the subject *okélo* ‘Okelo’ became drunk and then drank beer.

- (16) ?okélo ɔ=mer, ε=mató kɔŋó.
 Okelo 3S/P=PERF:be drunk 3SG=PERF:drink beer
 ‘Okelo was drunk, so he drank beer.’

The sentence in (17) is not acceptable semantically because it does not follow the restriction of time on events or actions. The verb in the first clause is inflected in perfect accompanied with the past adverbial *ɔɔdɔ* ‘PAST’, and the verb in the second clause is inflected in perfect. The event described by the first clause occurred before the event described by the second clause. The sentence in (17) gives an inappropriate interpretation that the subject *okélo* ‘Okelo’ had been drunk before he drank beer.

- (17) *okélo ɔɔdɔ ɔ=mer, ε=mató kɔŋó.
 Okelo PAST 3S/P=PERF:be drunk 3SG=PERF:drink beer
 ‘*Okelo had been drunk, so he drank beer.’

The sentence in (18) consisting of a ‘paratactic’ coordinate construction is grammatical. It is easily interpreted to mean that the topicalized NP *okélo* ‘Okelo’ got sick⁵¹. As a result, he died. On the other hand, the sentence in (19) consisting of a ‘paratactic’ coordinate construction is not acceptable semantically, because people cannot get sick after dying. The sentence has an inappropriate interpretation that the subject *okélo* died and then he got sick. The sentence in (19) does not follow the restriction of time on events.

- (18) okélo, túó ɔ=makɔ, ε=tɔ̂.
 Okelo sickness 3S/P=PERF:catch 3SG=PERF:die
 ‘Okelo got sick, so he died.’
 (19) *okélo ɔ=tɔ, túó ɔ=mak-é.
 Okelo 3S/P=PERF:die sickness 3S/P=PERF:catch-3SG
 ‘*Okelo died, so he got sick.’

‘Paratactic’ coordinate constructions are used to express causal relationships among events,

⁵¹ The topicalized NP *okélo* ‘Okelo’ is the object of the verb *maakɔ* ‘to catch’. The literally meaning of the sentence (18) is that sickness caught Okelo.

not to express reason relationships, as discussed previously. Therefore, there is a restriction of tense or aspect on ‘paratactic’ coordinate constructions. Verbs must be inflected in perfect aspect in ‘paratactic’ coordinate constructions. For example, the sentence in (20) consisting of a ‘paratactic’ coordinate construction is not grammatical. The verb *tye* ‘to be’ in the first clause and the verb *maatɔ* ‘to drink’ in the second clause are inflected with imperfect aspect. Verbs in imperfect aspect express that events or actions take place habitually or repeatedly. The sentence in (20) is interpreted to mean that the subject does not drink habitually because he does not have money. When verbs are inflected in imperfect, they denote repeated or habitual events or actions. Repeated or habitual events or actions are related to reason relationships not causal relationships. Temporal events or actions that happen once stem from causal relationships.

- (20) *líká á=!tyé kede-sén!té, líká á=!mátó kɔŋó.
 NEG 1SG=IMPERF:be with-money NEG 1SG=IMPERF:drink beer
 ‘I have no money, so I do not drink beer.’

The sentence in (21) is grammatical, because the first and second clauses denote a temporal event or action that happened at one time. The state described in the first clause denotes the cause that led to the event described in the second clause. The sentence in (21) is interpreted to mean that the 1st person singular subject did not have money at a particular time and so he did not drink beer.

- (21) líká óɔɔɔ a=tyé kede-sén!té, líká á=!mátó kɔŋó.
 NEG PAST 1SG=IMPERF:be with-money NEG 1SG=PERF:drink beer
 ‘I had no money, so I did not drink beer.’

The first clause is the reason that brings about the event described by the second clause in (22). Since the verb *maatɔ* ‘to drink’ is inflected in imperfect aspect, it denotes a repeated or habitual event or action. Repeated or habitual events or actions arise from events or actions that are caused by relationships of reason. If two clauses are linked with the conjunction *pi(H)*- ‘because’, the sentence in (22) is grammatical. Clauses preceded by the conjunction *pi(H)*- are used for expressing adverbial notions of reason. Clauses expressing adverbial notions may be followed by main clauses or may be preceded by main clauses.

- (22) pi líká á=!tyé kede-sén!té, líká á=!mátó kɔŋó.
 because NEG 1SG=IMPERF:be with-money NEG 1SG=IMPERF:drink beer

‘Because I have no money, I do not drink beer (habitually).’

- (23) líká á=!mátó kəŋó, pɪ líká á=!tyé kede-sén!té.
 NEG 1SG=IMPERF:drink beer because NEG 1SG=IMPERF:be with-money
 ‘I drink beer because I have no money (habitually).’

The ‘paratactic’ coordinate construction is used to express a comparative meaning. The second clauses in comparative sentences consist of the verb *lɔɔnɔ* ‘to defeat’ inflected with imperfect aspect. Clauses in comparative sentences also are linked to each other semantically in causal relationships. The sentence in (24) is interpreted to mean that the woman is big and as a result she defeats the man in the height.

- (24) dákó dwon lóó ɪcúɔ.
 woman big 3SG:IMPEF:defeat man
 ‘The woman is bigger than the man.’

3.6.5 Other linking clause constructions

Verbs are inflected in perfect aspect in the coordinate construction *ko* ‘and to do’ and ‘paratactic’ coordinate constructions. Otherwise, if they are inflected in imperfect, they are accompanied by the past adverbial *ɔɔdo* ‘PAST’. When verbs are inflected with other tenses or aspect, clauses are linked with conjunctions that express semantic or logical relationships between clauses. For example, the clauses are linked with the conjunction *di* ‘and’ in (1). The verbs *keelo* ‘to bring’ and *teedo* ‘to cook’ are inflected in imperfect aspect.

- (1) ε=kéló kal ɪ-ɔt di dákó-!méré té!d-é nákanaka.
 3SG=PERF:bring millet to-house and wife-3SG 3SG:IMPERF:cook-3SG repeatedly
 ‘He brings the millet and his wife cooks it repeatedly.’

There is a restriction of ‘boundness in time’ on clauses in coordination. The sentence in (1) adheres to the restriction of ‘boundness in time’, because the two clauses consist of the verbs inflected with imperfect. The events described by both clauses are not bounded in time. Events or actions described by verbs inflected in imperfect aspect are not bound in time.

The sentences in (2) and (3) are not grammatical because they do not follow the restriction of ‘boundness in time’. In (2), the first clause consists of the verb *yaarɔ* ‘to decide’ inflected with perfect and the second clause consists of the verb *teedo* ‘to cook’ inflected with imperfect. In (3), the first clause consists of the verb *keelo* ‘to bring’ inflected with imperfect and the second clause consists of the verb *yaarɔ* ‘to decide’ inflected with perfect.

(2) *ε=yá!rǒ keelo kal ɪ-ɔt di dákó-!méré té!d-é.
 3SG=PERF:decide bring:INF millet to-house and wife-3SG IMPERF:cook-3SG
 ‘*He will bring the millet to the house and his wife cooks it.’

(3) *ε=kéló kal ɪ-ɔt di dákó-!méré ó=yarǒ teed:é.
 3SG=IMPERF:bring millet to-house and wife-3SG 3SG=PERF:decide cook:INF:3SG
 ‘*He brings the millet to the house and his wife will cook it.’

The sentence in (4) is semantically marked to Kumam speakers but permitted as a grammatical sentence because it follows the restriction of ‘boundness in time’. The two clauses are linked with the conjunction *do* ‘but’.

(4) ε=ké!ló kal ɪ-ɔt do dákó-!méré ó=yarǒ teed:é.
 3SG=PERF:bring millet to-house but wife-3SG 3S/P=PERF:decide cook:INF:3SG
 ‘He brought the millet but his wife will cook it.’

We summarize the combinations of tense or aspect in coordinate constructions as follows.

(5) Combination of tense or aspect in coordinate constructions⁵²

First clause - Second clause	‘Boundness in time’	Conjunction	
Imperfect - Imperfect		C ₁ di C ₂	(6)
Imperfect - Perfect	*		(7)
Imperfect - Future	*		(8)
Perfect - Imperfect	*		(9)
Perfect - Perfect		C ₁ (di) C ₂ ko	(10)
Perfect - Future		C ₁ do C ₂	(11)
Future - Imperfect	*		(12)
Future - Perfect	not natural semantically		(13)
Future - Future		C ₁ di C ₂	(14)

(* : violate the restriction of ‘boundness in time’)

Only four combinations of tense or aspect are available to clauses in coordinate constructions in light of the restriction of ‘boundness in time’. When verbs in first clauses are inflected in imperfect, verbs in second clauses should be inflected in imperfect. When verbs in first clauses are inflected in perfect, verbs in second clauses may be inflected in perfect or may be

⁵² The ‘stative’ verbs are inflected only in imperfect.

accompanied with the future tense auxiliary. When verbs in first clauses are accompanied with the future auxiliary, verbs in second clauses should be accompanied with the future auxiliary. When verbs in first clauses are accompanied with the future auxiliary, verbs in second clauses may be inflected in perfect according to the restriction of ‘boundness in time’. However, this combination is not natural semantically.

- (6) ε=nekó gwen di a=cámó!-gí. (IMPERF - IMPERF)
 3SG=IMPERF:kill chickens and 1SG=IMPERF:eat-3PL
 ‘He kills the chickens and I eat them.’
- (7) *ε=nekó gwen di a=cá!mó!-gí. (IMPERF - PERF)
 3SG=IMPERF:kill chickens and 1SG=PERF:eat-3PL
 ‘*He kills the chickens and I ate them.’
- (8) *ε=nekó gwen do a=yá!ró caamɔ-gí. (IMPERF - FUT)
 3SG=IMPERF:kill chickens but 1SG=PERF:decide eat:INF-3PL
 ‘He kills the chickens and I will eat them.’
- (9) *ε=né!kó !gwéno do a=cá!m:é. (PERF - IMPERF)
 3SG=PERF:kill chicken but 1SG=IMPERF:eat:3SG
 ‘He killed the chicken and I ate it.’
- (10) ε=né!kó !gwéno (di) a=kó caam:é. (PERF - PERF)
 3SG=PERF:kill chicken (and) 1SG=PERF:and do eat:INF:3SG
 ‘He killed the chicken and I ate it.’
- (11) ε=né!kó !gwéno do a=yá!ró caam:é. (PERF - FUT)
 3SG=PERF:kill chicken but 1SG=PERF:decide eat:INF:3SG
 ‘He killed the chicken and I will eat it.’
- (12) *ε=yá!ró neeko gwéno do a=cá!m:é. (FUT - IMPERF)
 3SG=PERF:decide kill:INF chicken but 1SG=IMPERF:eat:SG
 ‘*He will kill the chicken and I eat it.’
- (13) ?ε=yá!ró neeko gwéno do a=cá!m:é. (FUT - PERF)
 3SG=PERF:decide kill:INF chicken but 1SG=PERF:eat:SG
 ‘*He will kill the chicken and I ate it.’
- (14) ε=yá!ró neeko gwéno di a=yá!ró caam:é. (FUT - FUT)
 3SG=PERF:decide kill:INF chicken and 1SG=PERF:decide eat:INF:3SG
 ‘He will kill the chicken and I will eat it.’

In summary, Kumam has three types of coordinate constructions; the coordinate construction *ko*, the ‘paratactic’ coordinate construction, and the coordinate construction with conjunctions

such as *di* ‘and’. The coordinate construction *ko* is used to express events or actions that happen in order of occurrence. Clauses are arranged to reflect the order of occurrence in which the events or actions happened. The ‘paratactic’ coordinate construction is used to express a causal relationship between events or actions. Clauses denoting causes are followed by clauses denoting results. Coordinations with conjunctions such as *di* ‘and’ are used to link clauses with a wide range of semantic relationships.

(15) *dákó* *ɔ=myelɔ* (di) *ε=kó* *weero* *wer.* (ko coordinate)

woman 3S/P=PERF:dance (and) 3SG=PERF:and do sing:INF song

‘The woman danced and she sang the song (not simultaneously).’

(16) *ε=tí!ó* *ɪ-tɛk,* *a=mí-!lé* *gíamɪa.* (‘Paratactic’ coordinate)

3SG=PERF:work with-hard 1SG=PERF:give-3SG present

‘He worked hard, so I gave him the present.’

(17) *dákó* *ɔ=myelɔ* *di* *ε=wé!ró* *wer.* (Coordinate with conjunction)

woman 3S/P=PERF:dance and 3SG=PERF:sing song

‘The woman danced while singing the song.’

3.6.6 Other linking clause constructions and negation

The negative particle *líká* ‘NEG’ is followed by predicates. When the negative particle *líká* ‘NEG’ is followed by predicates in first clauses in coordinate constructions connected by the conjunction *di* ‘and/but’, the scope of negation extends to the entire constructions. However, the scope of negation is limited to each clause independently. For example, if the first clauses are negated by the negative particle *líká* ‘NEG’, the second clauses are not negated if they are connected with the conjunction *di* ‘and/but’. If the first clauses are not negated by the negative particle *líká* ‘NEG’, the second clauses are negated in coordination with the conjunction *di* ‘and, but’. For example, the negative sentence in (1) has two interpretations.

(1) *líká* *á=!myé!lɔ* *di* *a=wé!ró* *wer.*

NEG 1SG=PERF:dance but 1SG=PERF:sing song

‘I did not dance but I sang the song.’

‘I danced but I did not sing the song.’

‘*I neither danced nor sang the song.’

Both the first and second clauses do not share negation in coordination with the conjunction *di* ‘and, but’.

When predicates are preceded by the negative particle in second clauses, the scope of

negation extends only to the second clauses. For example, the sentence in (2) has only one interpretation that the second clause is negated by the negative particle.

- (2) a=myé!lɔ́ di líká á=!wé!ró wer.
 1SG=PERF:dance but NEG 1SG=PERF:sing song
 ‘I danced but I did not sing the song.’

Negative sentences such as (1) are derived from different two structures. The scope of negation is limited to the first clause in (3). The first clause is negated by the negative particle. The scope of scope of negation is limited to the second clause in (4). The second clause is negated by the negative particle.

- (3) [líká á=!myé!lɔ́] di a=wé!ró wer.
 NEG 1SG=PERF:dance but 1SG=PERF:sing song
 ‘I did not dance but I sang the song.’

- (4) a=myé!lɔ́ di [líká á=!wé!ró wer.]
 1SG=PERF:dance but NEG 1SG=PERF:sing song
 ‘I danced but I did not sing the song.’

When the sentence in (1) is derived from the structure in (3), it has the interpretation that the first clause is negated by the negative particle. When the sentence in (1) is derived from the structure in (4), it has the interpretation that the second clause is negated by the negative particle. The sentence in (1) can be derived from the structure in (4) by negative rising. The negative particle appears to be removed from the second clause to the preverbal position in the first clause.

Negative raising is observed for some main verbs in complementation, as discussed previously. The negative particle *líká* ‘NEG’ is moved from the complement clauses to the matrix sentences. The negative particle *líká* ‘NEG’ is understood to be raised to the ordinary position in the matrix. For example, the negative particle *líká* ‘NEG’ is moved from the complement clause to the matrix sentence in (5). The negative sentence in (5) is equivalent to the sentence in (6) which includes the negative particle in the complement clause.

- (5) líká á=!tá!mó !bé ó!kélo ɔ=kwalɔ gwen.
 NEG 1SG=PERF:think COMP Okelo 3S/P=PERF:steal chickens
 ‘I did not think that Okelo stole the chickens.’

- (6) a=tá!mó !bé ó!kélo líká ó=kwaló gwen.
 1SG=PERF:think COMP Okelo NEG 3S/P=PERF:steal chickens
 ‘I thought that Okelo did not steal the chickens.’

3.7 Adverbial phrases

Adverbial notions are expressed in various ways.

3.7.1 Time

Adverbial clauses of time consist of relative clauses that are not preceded by any antecedent. However, the relative marker *kamé* ‘when’, of which adverbial clauses of time consist, originates from the noun *kar* ‘place’ and the relative marker *amé* ‘REL’. Verbs in time adverbial clauses are followed by the preposition *kede-* ‘with’ to which the 3rd person singular inalienable possessive suffix-é ‘3SG’ is attached as the pronominal copy. The distribution of the pronominal copy is the same as in the relativization of time adverbials. Therefore, adverbial clauses of time are regarded as being derived from clauses with time adverbials that are relativized.

- (1) kamé a=ó!tó ked:é páco, a=tédó !cám.
 when 1SG=PERF:go with:3SG home, 1SG=IMPERF:cook food
 ‘When I go home, I cook food.’
- (2) kamé a=dók ked:é, a=ó!!d-é páco.
 when 1SG=PERF:go back with:3SG, 1SG=PERF:find-3SG home
 ‘When I went back, I found him at home.’
- (3) kamé a=ó!tó ked:é páco, a=yá!ró teedo cá.m.
 when 1SG=PERF:go with:3SG home 1SG=PERF:decide cook:INF food
 ‘When I go home, I will cook food.’

If the events or actions described in the first clause are closely connected with those described by the second clause, and if their causal relationship is clear, adverbial clauses of time can be paraphrased by clauses in a ‘paratactic’ coordinate construction.

- (4) a=dók, a=ó!!d-é páco. ≙ (2)
 1SG=PERF:go back 1SG=PERF:find-3SG home
 ‘When I went back, I found him at home (as a result).’

The temporal meanings of ‘after’ or ‘during’ are expressed by coordinate constructions. The

temporal meanings such as ‘after’ are expressed by coordinate construction with the auxiliary *tyeko* ‘to finish’. The coordinate construction with the conjunction *di* ‘and’ denotes that events or actions described by the two coordinating clauses happened simultaneously.

(5) *dákó* *ɔ=lwəkó* *igoen di* *ε=tyé!kó* *cam.*
 woman 3S/P=PERF:wash clothes and 3SG=PERF:finish eat:PART
 ‘The woman washed clothes after she ate.’

(6) *icúɔ* *ɔ=camɔ* *riŋo dí* *ε=mátó* *koŋó.*
 man 3S/P=PERF:eat meat and 3SG=IMPERF:drink beer
 ‘The man ate meat during drinking beer.’

The temporal meaning of ‘before’ is expressed by clauses with the negative particle *líká* ‘NEG’ that are preceded by the conjunction *di pwódi* ‘before’.

(7) *dákó* *ɔ=camɔ* *cám dí !pwódí líká* *é=!lwó!kó* *igoen.*
 woman 3S/P=PERF:eat food and before NEG 3SG=PERF:wash clothes
 ‘The woman ate food before she washed clothes.’

(8) *di pwódí* *dákó !líká* *é=!lwó!kó* *igoen,* *ε=cá!mó !cám.*
 and before woman NEG 3SG=PERF:wash clothes 3SG=PERF:eat food
 ‘Before the woman washed clothes, she ate food.’

3.7.2 Condition

Adverbial clauses of simple condition are formed with the same conjunction *kamé* ‘if’ as in adverbial clauses of time. The adverbial clauses of simple condition, however, do not consist of relative clauses. They do not include the preposition *kede-* ‘with’, which is preceded by verbs in adverbial clauses of time.

(1) *kamé icúɔ* *ɔ=bino,* *ε=yá!ró* *do* *caamɔ* *cám.*
 if man 3S/P=come 3SG=PERF:decide then eat:INF food
 ‘If the man comes, then he will eat food.’

(2) *kamé icúɔ* *ɔ=bino,* *ɔɔdɔ* *ε=cá!mó* *!cám.*
 if man 3S/P=PERF, PAST 3SG=PERF:eat food
 ‘If the man came, then he had eaten food.’

(3) *kamé !áŋó* *a=tyé* *atín !mé-makeré!ré,* *a=sómó* *ɪ-tɛk.*
 if 1SG 1SG=IMPERF child of Makerere 1SG=IMPERF in-hard
 ‘If I am a student of-Makerere, I study hard.’

Since the first clause of the sentence in (1) does not include the preposition *kede-* ‘with’, it may be interpreted as an adverbial clause of simple condition. The sentence in (1) presupposes that the subject *icóó* ‘man’ has not yet come. It expresses the possibility that the subject *icóó* ‘man’ will come and eat food. The sentence in (2) presupposes that the subject *icóó* ‘man’ did not come. It expresses the realistic possibility in the past that if the subject *icóó* ‘man’ came, then he certainly would eat food.

Adverbial clauses of simple condition can be preceded by the main clause.

- (4) *ɔ=yá!ró teedo cá m ká!mé abáka ɔ=bino.*
 1PL=PERF:decide cook:INF food if king 3S/P=PERF:come
 ‘We will cook food if the king comes.’

Adverbial clauses of unrealistic conditions are formed with the conjunction *kóto* ‘if’. Adverbial clauses as well as main clauses are preceded by the conjunction *kóto* ‘if’. For example, the conjunction *kóto* ‘if’ leads the adverbial clause *a=tyé kede-cám* ‘I had food’ and the main clause *a=mí!!-í* ‘I gave it to you’ in (5). Main clauses always consist of verbs inflected with perfect aspect in sentences that convey unrealistic conditions. Unrealistic conditions in the past are expressed by verbs inflected in perfect accompanied with the past particle *ɔɔdɔ* ‘PAST’ in main clauses. For example, the verb *tye* ‘to be’ in the adverbial and the verb *mimɔ* ‘to give’ in the main clause are accompanied with the past particle *ɔɔdɔ* ‘PAST’ in (6). The sentence in (6) denotes an unrealistic condition in the past. It presupposes that the subject had no food and did not give any food to the hearer.

- (5) *kóto a=tyé kede-cám, kóto a=mí!!í.*
 if 1SG=IMPERF:be with-food if 1SG=PERF:give-2SG
 ‘If I had food, I would give it to you.’

- (6) *kóto ɔɔdɔ a=tyé kede-cám, kóto ɔɔdɔ a=mí!!í. (PAST)*
 if PAST 1SG=IMPERF:be with-food if PAST 1SG=PERF:give-2SG
 ‘If I had had food, I would have given it to you.’

- (7) *kóto (di) áŋó a=só!mó ɪ-tek, kóto a=bé!dó ryek.*
 if (and) 1SG 1SG=PERF:study in-hard if 1SG=PERF:stay wise
 ‘If I studied hard, I would be wise.’

- (8) *kóto (di) áŋó ɔɔdɔ a=só!mó ɪ-tek, ɔɔdɔ kóto a=bé!dó ryek. (PAST)*
 if (and) 1SG PAST 1SG=PERF:study in-hard PAST if 1SG=PERF:stay wise
 ‘If I had studied hard, I would have been wise.’

(9) kóto (di) áhó (a=tyé) wíhó, kóto a=pór !bút-i.
 if (and) 1SG (1SG=IMPEF:be) bird if 1SG=PERF:fly to-2SG
 ‘If I were a bird, I would fly to you.’

(10) kóto ɔɔɔ a=ó!tó ñoró, kóto ɔɔɔ a=ryá!mó ked:é. (PAST)
 if PAST 1SG=PERF:go yesterday if PAST 1SG=PERF:meet with:3SG
 ‘If I had gone yesterday, I would have met with him.’

The unrealistic condition in the present tense is used to express events or actions that have not actually happened at the time of speaking. The unrealistic condition in the present are expressed by verbs inflected in perfect which are not accompanied by the past particle *ɔɔɔ* ‘PAST’. The unrealistic condition in the past tense is used to express events or actions that had not actually happened at a particular past time specified by the sentence.

The position of the past particle *ɔɔɔ* ‘PAST’ is flexible. The past particle *ɔɔɔ* ‘PAST’ can be followed by the conjunction *kóto* ‘if’.

(11) ɔɔɔ kóto a=tyé kede-cám, ɔɔɔ kóto a=mí-!í.
 PAST if 1SG=IMPERF:be with-food PAST if 1SG=PERF:give-2SG
 ‘If I had had food, I would have given it to you.’

3.7.3 Reason

The adverbial clauses of reason are preceded by the conjunction *pi*(H)- ‘because’. Adverbial clauses of reason may be preceded by main clauses or may be followed by main clauses.

(1) líká á=!twéró ooto r-siné!má, pi myéro a=ted cám.
 NEG 1SG=IMPERF:be able go:INF to-cinema because must 1SG=cook:SUB food
 ‘I cannot go to the cinema, because I must cook food.’

(2) pi myéro a=ted cám, líká á=!twéró ooto r-siné!má.
 because must 1SG=cook:SUB food NEG 1SG=IMPERF:be able go:INF to-cinema
 ‘Because I must cook food, I cannot go to the cinema.’

3.7.4 Cause

Causal meanings may be expressed by ‘paratactic’ complements or infinitive complements. The causation verb *minɔ* ‘to give’ is followed by ‘paratactic’ indicative or infinitive complement clauses⁵³. It may not be followed by subjunctive complement clauses or by

⁵³ Cf. Section 3.2.

hypotactic indicative clauses.

When the causation verb *mimɔ* ‘to give’ is followed by ‘paratactic’ complement clauses, the sentences denote that the events described by the complement clauses are necessarily accomplished. The causation is always realized. When the causation verb *mimɔ* ‘to give’ is followed by infinitive complement clauses, the causation is not necessarily accomplished. The events described by infinitive complement clauses are not necessarily realized.

For example, the sentence in (1) expresses that the subject *dákó* ‘woman’ in the complement clause necessarily cooks food, because the causation verb *mimɔ* ‘to give’ is followed by the ‘paratactic’ indicative complement clause. On the other hand, the sentence in (2) does not express that the logical subject *dákó* ‘woman’ of the infinitive *tedo* ‘to cook’ might or might not cook the food, because the causation verb *mimɔ* ‘to give’ is followed by the infinitive complement clause.

- (1) *okélo ɔ=mɪɔ dákó ɔ=tedo cím.*
 Okelo 3S/P=PERF:give woman 3S/P=PERF:cook food
 ‘Okelo made the woman to cook the food. (She cooked it.)’

- (2) *okélo ɔ=mɪɔ dákó teedo cím.*
 Okelo 3S/P=PERF:give woman cook:INF food
 ‘Okelo made the woman to cook the food. (She might or might not cook it.)’

The sentence in (3) is not grammatical because it consists of a hypotactic subjunctive complement clause. The sentence in (4) is also not grammatical, because the causation verb *mimɔ* ‘to give’ is followed by a hypotactic indicative complement clause.

- (3) **okélo ɔ=mɪɔ bé dákó ted cím.*
 Okelo 3S/P=PERF:give COMP woman 3SG:cook:SUB food
 ‘Okelo made the woman to cook the food.’
- (4) **okélo ɔ=mɪɔ bé dákó ɔ=tedo cím.*
 Okelo 3S/P=PERF:give COMP woman 3S/P:PERF:cook food
 ‘Okelo made the woman to cook the food.’

3.7.5 Result

Statements about result are expressed by ‘paratactic’ clause linking constructions. Adverbial clauses of result are connected to clauses of cause by the conjunctive morpheme *ɔ=mɪɔ* ‘it made’, which originates from the causation verb *mimɔ* ‘to give’. Clauses of result originally

consist of ‘paratactic’ indicative complement clauses that are preceded by the causation verb *μῖνω* ‘to give’ as the main verb. The subject of the conjunctive morpheme *ο=μι* ‘it made’ refers to the entire preceding clause of cause. For example, the sentence in (1) can be directly translated into English as follows. That Okelo missed the examination made him feel sad.

- (1) okélo ο=κεῖ ἀρενά, ο=μι-έ ἐ=!wίηό ι-rac.
 Okelo 3S/P=PERF:miss exam 3SG=PERF:give-3SG 3SG:IMPERF:hear in-bad ·
 ‘Okelo missed the exam, it made him feel sad.’

The conjunctive morpheme *ο=μι* ‘it made’ is always followed by ‘paratactic’ indicative complement clauses in result constructions. If it is followed by infinitive complement clauses, the sentences are not grammatical as result construction. Statements of result must be always realized. When events or actions described in complement clauses are accomplished, the causation verb *μῖνω* ‘to give’ must be followed by ‘paratactic’ indicative complement clauses.

- (2) *okélo ο=κεῖ ἀρενά, ο=μι-έ wίηο ι-rac.
 Okelo 3S/P=PERF:miss exam 3SG=PERF:give-3SG hear:INF in-bad
 ‘Okelo missed the exam, it made him feel sad.’

4 The pragmatics of sentences

There are many linguistic phenomena for which it is difficult to provide persuasive syntactic explanations. A pragmatic perspective is the key to solving this problem. For example, word order in post verbal position is relatively flexible in Kumam. There is no previous literature that provides satisfactory rules to determine the order of constituents in post verbal position in Western Nilotic languages⁵⁴. To the best of my knowledge, there is no sufficient description of information structure in Nilo-Saharan languages except of Jacob (2010). The word order in post verbal position is determined by pragmatic factors. In the following sections, we will discuss the interaction between syntax and pragmatics. The following sections provide a description of information structure in Kumam.

4.1 Topics

Kumam has two types of topics. We expect that languages will have more than two types of topics. We demonstrate how the two types of topics are defined in Kumam. In addition, topicalization has pragmatic restrictions. What constituents may be topicalized? In what environments may constituents be topicalized? Moreover, we discuss the relationship between topicalization and scope of negation, and the relationship between topicalization and illocutionary scope.

4.1.1 Introduction

The pragmatic structure of sentences includes topics and comments. The slot for topics is located in sentence initial position. Topicalization includes movement of NPs from their original position to the beginning of sentences. When topicalization is not applied to sentences, subjects are usually interpreted as topics and the following constituents as comments. When topicalization is applied to sentences, the topicalized NPs are topics and the following constituents are interpreted as comments. For example, the subject *ɪcɔɔ* ‘man’ is interpreted as the topic and the following constituents are comments in (1). The speaker and hearer recognize that the conversation is about the subject *ɪcɔɔ* ‘man’. The information about the subject *ɪcɔɔ* ‘man’ is old and stored in the back grounded knowledge of the speaker and hearer. Or, the subject *ɪcɔɔ* ‘man’ has already been activated as a topic in the discourse context. The speaker gives new information about what the subject *ɪcɔɔ* ‘man’ does. Namely, the constituents other than the subject *ɪcɔɔ* ‘man’ deserve providing new information⁵⁵.

⁵⁴Noonan (1992) suggests that word order is fairly rigid in Lango. Lango has a deviation from canonical word order. Noonan (1992) does not include an explanation about this deviation.

Word order in post verbal position is also relatively free in Acooli, a southern Lwo language.

⁵⁵Bare NPs are usually interpreted as definite when they occupy the slot for topics. However,

Topicalization is applied to the sentence in (2). The topicalized NP *cám* ‘food’ is located in the sentence initial topic position. The following constituents are comments. The speaker and hearer recognize that the conversation is about the topicalized NP *cám* ‘food’. The speaker gives new information about what happens to the topicalized NP. The other constituents than the topicalized NP *cám* ‘food’ deserve providing new information.

(1) *icóo o=tedo cá*m.
 man 3S/P=cook food
 ‘The man cooked food.’

(2) *cám, icóo o=tedo.*
 Food man 3S/P=PERF:cook
 ‘The food, the man cooked.’

Kumam has no morpheme to express definiteness of NPs. NPs without the unspecific suffix *-móró* ‘some’ may be interpreted as definite or as indefinite. However, topicalized NPs are usually interpreted as definite or specific, because topic slots are pragmatically occupied by old information. Referents that represent old information are interpreted as definite or specific in most cases. For example, the non topicalized sentence in (3) may be interpreted to mean that the direct object *icóo* ‘man’ is definite or indefinite. The topicalized sentence in (4) usually has an interpretation such that the topicalized NP *icóo* ‘man’ is definite.

(3) *gi=né!kó icóo.*
 3PL=PERF:kill man
 ‘They killed the/a man.’

(4) *icóo, gi=né!!k-é.*
 man 3PL=PERF:kill-3SG
 ‘The man, they killed.’

Old information is either mentioned in the preceding contexts or is stored in the backgrounded knowledge of the speaker and hearer. Therefore, topicalized sentences usually do not precede other sentences as first utterances in a conversation. The topicalized sentence in (5) cannot be uttered as the first sentence in a conversation. Topicalized sentences must

they are interpreted as indefinite if the topic is a stage topic.

(1') [Stage]_{TOP} [icóo=bino nóró]_{FOC}
 man 3S/P=PERF:come yesterday
 ‘A man came yesterday.’

With the subject included in the focus, the subject is interpreted as indefinite.

follow other sentences in a discourse. The topicalized sentence follows other sentences in (6).

(5) #*ιcύc*, a=*nέ!*n-έ.

man, 1SG=PERF:see-3SG

ε=*nέ!*kό !*dákó*.

3SG=PERF:kill woman

‘The man, I saw. He killed the woman.’

(6) (*dákó* *c*=*kwalc* *gwen*.) *líká á*=!*dí!*pó !*dákó*.

woman 3S/P=PERF:steal chickens NEG 1SG=PERF:hit woman

dákó, *ιcύc* *c*=*dip*-έ.

woman, man 3S/P=PERF:hit-3SG

‘(The woman stole the chickens.) I did not hit the woman. The woman, the man hit.’

The information about the topicalized NP *dákó* ‘woman’ is shared by the speaker and hearer as the backgrounded knowledge. In the preceding sentence, the NP *dákó* ‘woman’ is activated as the topic for the last sentence.

4.1.2 Topicalization and information structure

Any NPs can be topicalized, including direct objects, indirect objects, associative NPs, objects of prepositions, or NPs in subordinate clauses.

When topicalized direct objects are human, the pronominal copies are typically left in the original position from which the NPs are moved. For example, the 3rd person singular object suffix -έ ‘3SG’ is added to the verb *νεεnε* ‘to see’ in (2). The sentence in (3) is not grammatical because the pronominal copy is not left in the original position.

(1) a=*nέ!*nό *ιcύc*.

1SG=PERF:see man

‘I saw the man.’

(2) *ιcύc*, a=*nέ!*n-έ . (Topicalization)

man_i, 1SG=PERF:see-3SG_i

‘The man, I saw.’

(3) **ιcύc*, a=*nέ!*nό. (Topicalization)

man, 1SG=PERF:see

‘The man, I saw.’

The sentence in (4) has no pronominal element added to the verb *ηεeno* ‘to know’ in spite of

the fact that the human NP *okélo* ‘Okelo’ is fronted. The sentence in (4) is not an example of topicalization. The first NP is an vocative word independent from the following sentence that the speaker uses in order to draw the hearer’s attention.

- (4) *okélo!* a=ɲéó.
 Okelo 1SG=IMPERF:know
 ‘Okelo! I know.’

When human indirect objects are topicalized, the pronominal copies are typically left in the original position from which the NPs are moved. For example, the 3rd person singular object suffix *-é* ‘3SG’ is added to the verb *muɲɔ* ‘to give’ in (6). The sentence in (7) is not grammatical because the pronominal copy is not left in the original position.

- (5) a=mí!ó a wóbí sɛn!té.
 1SG=PERF:give boy money
 ‘I gave the boy money.’
- (6) a wóbí, a=mí!!-é sɛn!té. (Topicalization)
 boy_i 1SG=PERF:give-3SG_i money
 ‘The boy, I gave money.’
- (7) *a wóbí, a=mí!ó !sɛn!té. (Topicalization)
 boy 1SG=PERF:give money
 ‘The boy, I gave money.’

When topicalized direct objects are not human, no pronominal copy is left in the original position from which the NPs are moved. For example, the 3rd person singular object suffix *-é* ‘3SG’ is not added to the verb *wɪlɔ* ‘to buy’ in (9). If it is added to the verb, the topicalized sentence in (10) is ungrammatical.

- (8) a=wí!ló itabú.
 1SG=PERF:buy book
 ‘I bought the book.’
- (9) itabú, a=wí!ló. (Topicalization)
 book, 1SG=PERF:buy
 ‘The book, I bought.’

(10) **itabó*, a=wí!!l-é. (Topicalization)

book_i, 1SG=PERF:buy-3SG_i

‘The book, I bought.’

Even when topicalized direct objects are animate, if they are not human, no pronominal copy is left in the original position.

(11) *okélo* ɔ=neko ogwók.

Okelo 3S/P=PERF:kill dog

‘Okelo killed the dog.’

(12) *ogwók*, *okélo* ɔ=neko. (Topicalization)

dog Okelo 3S/P=PERF

‘The dog, Okelo killed.’

(13) **ogwók*, *okélo* ɔ=nek-é. (Topicalization)

dog_i Okelo 3S/P=PERF:kill-3SG_i

‘The dog, Okelo killed.’

Object suffixes are frequently added to verbs as the pronominal copies that topicalized object NPs leave in the original position. Object suffixes are not inflectional morphemes that agree with objects but reduced forms of pronouns that follow verbs as objects. Object suffixes must be counted as one of the arguments that verbs require. When human objects are topicalized, pronominal copies are typically left in the original position from which the NPs are moved, as discussed above. The object suffixes are added to verbs as the pronominal copies. The object suffixes are coreferential with the topicalized NPs.

(14) *icóɔ*, a=né!!n-é. (Topicalization)

man_i 1SG=PERF:see-3SG_i

‘The man, I saw.’

When topicalized objects are not human, no pronominal element is left in the original position from which the NPs are moved. However, a zero anaphoric element is regarded as being left in the original position from which the NPs are moved. The zero anaphor is counted as one of the arguments that verbs require. The zero anaphor is coreferential with the topicalized NPs. For example, the topicalized NP *itabó* ‘book’ leaves the zero anaphor in the original position in (15). The zero anaphor is coreferential with the topicalized NP *itabó* ‘book’.

If object suffixes are added to verbs when non-human objects are topicalized, the sentences are not grammatical because the verbs take three arguments, namely a subject, an object suffix, and a zero anaphor. Except for a small set of ditransitive verbs, transitive verbs must not take more than two arguments in sentences. For example, the sentence in (16) is not grammatical because the transitive verb *wilɔ* ‘to buy’ takes the following three arguments; the 1st person singular subject, the 3rd person singular object suffix, and the zero anaphor.

(15) *rtabó*, a=*wí!lɔ* \varnothing . (Topicalization)

book_i 1SG=PERF:buy \varnothing _i

‘The book, I bought.’

(16) **rtabó*, a=*wí!!l-é* \varnothing . (Topicalization)

book_i 1SG=PERF:buy-3SG_i \varnothing _i

‘The book, I bought.’

When human direct objects are topicalized, the pronominal copies are typically left in the original position from which the NPs are moved. A zero anaphor must not appear in post verbal position. If a zero anaphor appears in post verbal position, the sentence in (17) is not grammatical, because it has three arguments, namely the 1st person singular subject, the 3rd person singular object suffix *-é* ‘3SG’, and the zero anaphor.

(17) **rcóɔ*, a=*né!!n-é* \varnothing . (Topicalization)

man_i 1SG=PERF:see-3SG_i \varnothing _i

‘The man, I saw.’

When human direct objects are topicalized, if neither a pronominal copy nor a zero anaphor is left in the original position, the sentences are not grammatical. For example, the sentence in (18) is not grammatical because it does not follow the constraint of valence. The transitive verb *neeɔ* ‘to see’ has only one argument, the 1st person singular subject; however, transitive verbs always require two arguments. Topicalized NPs are not regarded as one of the arguments that verbs require.

(18) **rcóɔ*, a=*né!nó*. (Topicalization)

man 1SG=PERF:see

‘The man, I saw.’

The example in (19) has the 3rd person singular object suffix *-é* ‘3SG’ added to the verb *wilɔ*

‘to buy’. Though the object suffix *-é* is coreferential with the preceding NP *itabó* ‘book’, the preceding NP *itabó* ‘book’ is not a topicalized NP from the following sentence. It is an independent word from the second sentence that is uttered by the speaker to draw the attention of the hearer.

- (19) *itabó!* a=wí!!l-é.
 book_i 1SG=PERF:buy-3SG_i
 ‘The book! I bought it.’

NPs can be topicalized from any slots in sentences.

The benefactive NP is topicalized from the prepositional phrase in (21). The 3rd person singular inalienable possessive suffix *-é* is added to the preposition *né-* ‘for’ as the pronominal copy.

- (20) *dákó* *ɔ=tedo* *cám* *né-í!cúɔ*.
 woman 3S/P=PERF:cook food for-man
 ‘The woman cooked food for the man.’
- (21) *icúɔ*, *dákó* *ɔ=tedo* *cám* *n.é*. (Topicalization)
 man_i woman 3S/P=PERF:cook food for:3SG_i
 ‘The man, the woman cooked food for.’

The object *okélo* ‘Okelo’ of the preposition *mé(L)-* ‘of’ is topicalized in (23). When objects of prepositions are topicalized, the pronominal copies must be left in the original position. The 3rd person singular alienable possessive suffix *-méré* ‘3SG’ is added to the preceding noun as the pronominal copy.

- (22) a=*né!nó* *itabɔ* *mé-okélo*.
 1SG=PERF:see book of-Okelo
 ‘I saw Okelo’s book.’
- (23) *okélo*, a=*né!nó* *itabɔ-méré*. (Topicalization)
 Okelo_i, 1SG=PERF:see book-3SG_i
 ‘Okelo, I saw his book.’

Any NPs can be topicalized even from subordinate clauses. Kumam has ‘paratactic’ and hypotactic complements. NPs in the ‘paratactic’ and the hypotactic complement clauses can be topicalized. For example, the subject *atín* ‘child’ in the ‘paratactic’ complement is

topicalized in (25). The object *sukú!lú* ‘school’ of the preposition *ɪ-* ‘in’ in the ‘paratactic’ complement is topicalized in (26).

(24) a=né!nó atín !ríjós i-sukú!lú.
 1SG=PERF:see child 3SG:IMPERF:run in-school
 ‘I saw the child running in the school.’

(25) atín, a=né!nó !ríjós i-sukú!lú. (Topicalization)
 child, 1SG=PERF:see 3SG:IMPERF:run in-school
 ‘The child, I saw him running in the school.’

(26) sukú!lú, a=né!nó atín !ríjós ɪ-é. (Topicalization)
 school_i 1SG=PERF:see child 3SG:IMPERF:run in-3SG_i
 ‘The school, I saw the child running in it.’

The human direct object *opio* ‘Opio’ in the hypotactic complement clause is topicalized in (28). Even when human direct objects are topicalized from complement clauses, they leave the pronominal copies in the original position. The 3rd person singular object suffix *-é* ‘3SG’ is added to the verb *kəjə* ‘to help’ as the pronominal copy.

(27) dákó !mító !bé ó!kélo kəjə ó!pio.
 woman 3SG:IMPERF:want COMP Okelo 3SG:help:SUB Opio
 ‘The woman wants Okelo to help Opio.’

(28) opio, dákó !mító !bé ó!kélo kəjə-é. (Topicalization)
 Opio_i, woman 3SG:IMPERF:want COMP Okelo 3SG:help:SUB-3SG_i
 ‘Opio, the woman wants Okelo to help.’

Any NPs can be topicalized, including those from complement clauses that are embedded in other clauses. The complement clause *bé ó!kélo ə=cwe* ‘that Okelo was fat’ is embedded in the other complement clause *bé ó!pio wácó* ‘that Opio says’. The subject *okélo* ‘Okelo’ is topicalized from the embedded clause and moved to the sentence initial position in (30).

(29) a=wí!jós !bé ó!pio wácó !bé ó!kélo ə=cwe.
 1SG=PERF:hear COMP Opio 3SG:IMPERF:say COMP Okelo 3S/P=PERF:be fat
 ‘I heard that Opio said that Okelo was fat.’

(30) okélo, a=wí!jós !bé ó!pio wácó !bé ə=cwe. (Topicalization)
 Okelo 1SG=PERF:hear COMP Opio 3SG:IMPERF:say COMP 3S/P=PERF:be fat
 ‘Okelo, I heard that Opio said that he was fat.’

NPs can also be topicalized from infinitive clauses. The object *rijo-ní* ‘this meat’ in the infinitive clause is topicalized in (32).

- (31) *ɲaamɔ riʝo-ní tɛk.*
 chew:INF meat-this hard
 ‘To chew this meat is hard.’
- (32) *riʝo-ní, ɲaamɔ tɛk.* (Topicalization)
 meat-this chew:INF hard
 ‘This meat, to chew is hard.’

Even when human direct objects are topicalized from infinitive clauses, the pronominal copies are left in the original position from which the NPs are moved. The 3rd person singular object suffix *-é* ‘3SG’ is added to the infinitive of the verb *kɔʝɲɔ* ‘to help’ as the pronominal copy in (34).

- (33) *dákó !mító kɔʝɲɔ okélo.*
 woman 3SG:IMPERF:want help:INF Okelo
 ‘The woman wants to help Okelo.’
- (34) *okélo, dákó !mító kɔʝɲ-é.* (Topicalization)
 Okelo_i woman 3SG:IMPERF:want help:INF-3SG_i
 ‘Okelo, the woman wants to help.’

Kumam has a particular coordinate construction that consists of the auxiliary *ko* ‘and to do’. NPs cannot be topicalized from second clauses of coordinate constructions. The sentences in (36) is not grammatical because the subject *ɪcúɔ* ‘man’ is topicalized from the second clause in the coordinate construction. The sentence in (37) is not grammatical because the object *kɔʝɔ* ‘beer’ is topicalized from the second clause in the coordinate construction in (37).

- (35) *dákó ɔ=tɛdo cáɱ (dí) ɪcúɔ ɔ=kó maato kɔʝɔ.*
 woman 3S/P=PERF:cook food (and) man 3S/P=PERF:do drink:INF beer
 ‘The woman cooked food and the man drank beer.’
- (36) **ɪcúɔ, dákó ɔ=tɛdo cáɱ (dí) ɔ=kó maato kɔʝɔ.* (Topicalization)
 man woman 3S/P=PERF:cook food (and) 3S/P=PERF:do drink:INF beer
 ‘The man, the woman cooked food and he drank beer.’
- (37) **kɔʝɔ, dákó ɔ=tɛdo cáɱ (dí) ɪcúɔ ɔ=kó maato.* (Topicalization)
 beer woman 3S/P=PERF:cook food (and) man 3S/P=PERF:do drink:INF

‘The beer, the woman cooked food and the man drank it.’

Topicalization, however, can be applied to NPs within subordinate clauses as well as within second clauses of coordinate constructions. The object *οπίο* ‘Opio’ is topicalized within the subordinate clause in (39). It occupies the topic slot in the initial position within the subordinate clause. The object *κρησό* ‘beer’ is topicalized within the second clause of the coordinate construction *κο* ‘and to do’ in (41). It occupies the topic slot in the initial position of the second clause in the coordinate construction.

(38) *dákó !mító !bé ó!kélo kəŋ ó!pío.*
 woman 3SG:IMPERF:want COMP Okelo 3SG:help:SUB Opio
 ‘The woman wants Okelo to help Opio.’

(39) *dákó !mító !bé ó!pío, okélo kəŋ-é. (Topicalization)*
 woman_i 3SG:IMPERF:want COMP Opio Okelo 3SG:help:SUB-3SG_i
 ‘The woman wants that Opio, Okelo will help him.’

(40) *dákó ɔ=tedo cáŋ (dí) ɪcúɔ ɔ=kó maato kəŋó.*
 woman 3S/P=PERF:cook food (and) man 3S/P=PERF:do drink:INF beer
 ‘The woman cooked food and the man drank beer.’

(41) *dákó ɔ=tedo cáŋ (dí) kəŋó, ɪcúɔ ɔ=kó maato. (Topicalization)*
 woman 3S/P=PERF:cook food (and) beer man 3S/P=PERF:do drink:INF
 ‘The woman cooked food and the beer, the man drank it.’

When pronominal elements are topicalized, if they are in a form other than 3rd persons, they must be left in the original position as the pronominal copies. Independent pronouns occupy the slot for topics in sentence initial position. For example, the 1st person singular object is topicalized in (43). The independent pronoun *άηό*(L) ‘1SG’ is located in the sentence initial position.

(42) *dákó-!ná ó=ted-á.*
 wife-1SG 3S/P=PERF:cook-1SG
 ‘My wife cooked for me.’

(43) *άηό, dákó-!ná ó=ted-á. (Topicalization)*
 1SG_i, woman-1SG 3S/P=PERF:cook-1SG_i
 ‘Me, my wife cooked for.’

Topicalization typically shows a similar distribution of the pronominal copies in terms of the

hierarchy of NP slots and animacy to that of relativization. When human direct or indirect objects are topicalized, the pronominal copies are typically left in the original position from which the NPs are moved. However, there are some deviations from the canonical distribution of the pronominal copies according to the hierarchy of NP slots and animacy. One of these derivations has to do with ‘idiomatic’ sentences.

When human direct objects are topicalized in ‘idiomatic’ sentences, no pronominal copy is left in the original position from which the NPs are moved. For example, the human direct object *awóbi* ‘boy’ is topicalized in (45). Though the human direct object is topicalized, the 3rd person singular object suffix *-é* ‘3SG’ is not added to the verb *neko* ‘to kill’. If the 3rd person singular object suffix *-é* is added to the verb *neko* ‘to kill’, the sentence in (46) is ungrammatical.

- (44) *oríó* *ó=neko* *awóbi*.
 thirst 3S/P=PERF:kill boy
 ‘The boy is thirsty.’
- (45) *awóbi*, *oríó* *ó=neko*. (Topicalization)
 boy thirst 3S/P=PERF:kill
 ‘The boy, he is thirsty.’
- (46) **awóbi*, *oríó* *ó=nek-é*. (Topicalization)
 boy_i thirst 3S/P=PERF:kill-3SG_i
 ‘The boy, he is thirsty.’

The NPs located in postverbal position are topics in ‘idiomatic’ sentences. For example, the sentence in (44) is uttered by the speaker and place the event or state that happens to the NP *awóbi* ‘boy’ in postverbal position. The attention of the speaker and hearer is already directed to the postverbal NP. It is the event or the state, not the postverbal NP that is focalized in the sentence. In other words, the post verbal NP has already been activated as a topic.

The referents to which the postverbal NPs refer are old information. The other constituents convey new information. The postverbal NPs are topics, and the other constituents are comments in ‘idiomatic’ sentences. Therefore, the pragmatic structure of the sentence in (44) is formalized as follows.

- (47) [*oríó* *ó=neko*]_{COMMENT} [*awóbi*]_{TOPIC}

The NP *awóbi* ‘boy’ is old information. Moreover, it is an activated NP that functions as a topic in the ‘idiomatic’ sentence. We assume that when human direct objects are topicalized,

if they have already been activated as topics, they do not leave pronominal copies.

The ‘idiomatic’ sentences indicate that the distribution of pronominal copies has something to do with information structure. There are other examples that indicate the relation between the distribution of pronominal copies and information structure.

When personal elements are topicalized, if they are 3rd person singular whether they are human or not, they do not leave the pronominal copies in the original position. For example, the 3rd person singular direct object is topicalized in (49). Though it is human, no pronominal copy is left in the original position from which it is moved. The 3rd person singular independent pronoun *én* ‘3SG’ is located in sentence initial position.

When pronouns occupy the topic slot in sentence initial position, the subject slot must be filled with independent NPs or independent pronouns in order to distinguish the topic from the subject. The subject slot is filled by the 1st person singular independent pronoun *ájó*(L) ‘1SG’ in (49).

When 3rd person pronominal elements are topicalized, if the pronominal copies are left in the original position, the sentences are not grammatical. For example, the sentence in (50) is not grammatical, because the 3rd person object suffix *-é* ‘3SG’ is added to the verb *neeno* ‘to see’.

(48) a=*né!*!n-*é*.

1SG=PERF:see-3SG

‘I saw him.’

(49) *én*, *ájó* a=*né!*nó. (Topicalization)

3SG 1SG 1SG=PERF:see

‘Him, I saw.’

(50) **én*, *ájó* a=*né!*!n-*é*. (Topicalization)

3SG_i 1SG 1SG=PERF:see-3SG_i

‘Him, I saw.’

Pronouns are used to refer to referents that have already been mentioned in context or that are stored in the back grounded knowledge of the speaker and hearer. Referents to which pronominal elements refers convey old information. Moreover, pronouns must be explicit in terms of their referents. In other words, the referents of pronouns are activated as topics in discourse. When direct objects are topicalized, if they have been activated as topics, they do not leave pronominal copies in the original position.

There is another example that indicates the relationship between the distribution of pronominal copies and information structure. When human direct objects are topicalized, if they have been activated as topics, they do not leave pronominal copies in the original

position. For example, the direct object NP *icóó* ‘man’ is topicalized in the second sentence in (51). Though it is human, it does not leave a pronominal copy in the original position.

The second sentence is the answer to the first interrogative sentence. The direct object NP *icóó* ‘man’ is mentioned in the first interrogative sentence and activated as a topic for the following sentence. It is an activated NP that functions as the topic in the second sentence response to the interrogative sentence.

If a human direct object is topicalized, a pronominal copy is expected to be left in the original position from which the NP is moved. However, the human direct object *icóó* ‘man’ does not leave a pronominal copy in (51). On the other hand, the sentence in (52) is not grammatical, because the pronominal copy appears in the original position from which the direct object is moved.

(51) *i=né!kó icóó?*
 2SG=PERF:kill man
icóó, a=né!kó.
 man 1SG=PERF:kill (Topicalization)
 ‘Did you kill the man. The man, I killed.’

(52) *i=né!kó icóó?*
 2SG=PERF:kill man
 **icóó, a=né!!k-é.* (Topicalization)
 man_i 1SG=PERF:kill-3SG_i
 ‘I saw the man. The man, I killed.’

We can summarize this discussion as follows.

When direct objects are topicalized in ‘idiomatic’ sentences, they do not leave pronominal copies even if they are human. ‘Idiomatic’ sentences are uttered to talk about what happens to direct objects that have already drawn the attention of the speaker and hearer. The direct objects are activated as topics. The other constituents are comments in ‘idiomatic’ sentences.

When direct objects are topicalized, if they are 3rd person singular pronominal elements, they do not leave pronominal copies. Pronominal elements refer to referents that are identifiable by the hearer. The referents of pronouns have already been activated as topics in discourse.

NPs corresponding to interrogatives have already been activated as topics in sentences that function as answers. When activated NPs are topicalized, they do not leave pronominal copies, even though they are human direct objects.

From these observations we can conclude that there are two patterns of pronominal copying

in topicalization. On the one hand, topicalized direct objects leave pronominal copies in the original position from which the NPs are moved if they are human. On the other hand, topicalized direct objects do not leave pronominal copies in the original position from which the NPs are moved, even if they are human.

These facts indicate that Kumam distinguishes two types of topics, namely activated topics and inactivated topics. The activated topics are exemplified by the topicalized objects in ‘idiomatic’ sentences, the topicalized pronominal elements, and the topicalized activated NPs. Topics must represent old information, because topicalized sentences may not precede other sentences as first utterances in a discourse. The inactivated topics are not activated as topics, but stored in the back grounded knowledge of the speaker and hearer. The activated topics are topics that are activated as topics for the following clauses in the preceding contexts.

1st and 2nd person forms indicate the speakers and hearers who exist in the occasion. They are permanently available topics and have no need to be previously mentioned. Therefore, they do not distinguish between activated and inactivated topics.

Topicalized NPs are distinguished from subjects by a suprasegmental morpho-phonological boundary. The morpho-phonological boundary obstructs the application of tonal and vowel sandhi rules between topics and the following constituents. For example, vowel sandhi and High Spread rules are obstructed between the topic *dákó* ‘woman’ and the following constituents *a=né!!n-é* ‘I saw’ in (53).

(53) *dákó, a=né!!n-é. → [*dáká!né!!né]*
 woman_i, 1SG=PERF:see-3SG_i
 ‘The woman, I saw.’

Independent pronouns can occupy slots for either topics or subjects. When independent pronouns occupy slots for topics, they are separated from the following constituents by the suprasegmental morpho-phonological boundary that obstructs tonal sandhi rules. The 2nd person singular independent pronoun in ‘2SG’ occupies the slot for a subject in (54). High spread rule is applied between the independent pronoun and the following subject clitic. When the independent pronoun occupies the topic slot, High Spread rule is obstructed between the independent pronoun and the following subject clitic in (55).

(54) *ín í=!tédó !cám. → [íní!tédó ...]*
 2SG 2SG=IMPERF:cook food
 ‘you cook food.’

- (55) *ín, i=tédó !cám. → [ín#itédó ...]* (Topicalization)
 2SG 2SG=IMPERF:cook food
 ‘You, you cook food.’

Languages such as English and German differentiate ‘true’ topicalization from left dislocation. The crucial characteristics of ‘true’ topicalization are that no pronominal element occurs in the canonical position of the sentence and that the topicalized NPs are distinguished from the following constituents by morpho-phonological devices such as a pause or an intonation. On the other hand, left dislocated NPs leave pronominal elements in the original position from which they are moved. Left dislocated NPs are distinguished from the following constituents by some morpho-phonological devices.

- (56) The woman, I saw. (‘True’ topicalization)
 (57) The woman, I saw her. (Left dislocation)

The two patterns of distribution of pronominal copies in topicalization in Kumam show similar characteristics to the pattern of ‘true topicalization’ and left dislocation. Topicalized human direct objects leave pronominal elements in the original position from which they are moved, when topicalized NPs have not been activated. When activated NPs are topicalized, they do not leave a pronominal copy even if they are human direct objects. The former pattern is similar to English left dislocation, and the latter pattern to English ‘true topicalization’. If the characteristics cited above are cross-linguistically universal criteria to distinguish ‘true’ topicalization and left dislocation, Kumam’s two distribution patterns of pronominal copies are regarded as ‘true’ topicalization and left dislocation patterns. However, Kumam’s two distribution patterns of pronominal copies have something to do with pragmatic factors not syntactic ones. The former pattern is observed in the topicalization of NPs that are not activated as topics, and the latter pattern is observed in the topicalization of NPs that are activated as topics.

A similar phenomenon is observed in German. German differentiates left dislocation from ‘true’ topicalization. When a direct object is topicalized, German uses both a left dislocated and ‘true’ topicalized sentence if the direct object is not a pronoun. The dislocated NP leaves the pronominal element *ihn* ‘3SG’ in (59). The ‘true’ topicalized NP does not leave the pronominal copy in (60). When a pronoun is topicalized, however, only ‘true’ topicalization is allowed in German.

- (58) Ich sah Tom gestern.
 1SG see:PAST:1SG Tom yesterday
 'I saw Tom yesterday.'
- (59) Tom, ich sah ihn gestern. (Left dislocation)
 Tom 1SG see:PAST:1SG 3SG yesterday
 'Tom, I saw him yesterday.'
- (60) Tom, sah ich gestern. ('True' topicalization)
 Tom see:PAST:1SG 1SG yesterday
 'Tom, I saw yesterday.'

The sentence in (62) is not grammatical because the left dislocated pronoun leaves the pronominal copy *ihn* '3SG' in the original position. The 'true' topicalized sentence in (63) is perfectly grammatical because it does not leave a pronominal copy. Left dislocation is not possible in German when pronominal elements are topicalized. This fact is same as the case of Kumam topicalization where topicalized pronominal elements do not leave behind their pronominal copies in the original position.

- (61) Ich sah ihn gestern.
 1SG see:PAST:1SG 3SG yesterday
 'I saw him yesterday.'
- (62) *Ihn, sah ich ihn gestern. (Left dislocation)
 3SG see:PAST:1SG 1SG 3SG yesterday
 '*Him, I saw him yesterday.'
- (63) Ihn, sah ich gestern. ('True' topicalization)
 3SG see:PAST:1SG 1SG yesterday
 'Him, I saw yesterday.'

Pragmatic considerations rather than syntactic ones might supply a better explanation for the German topicalization and left dislocation patterns cited above, similar to the case of Kumam topicalization.

4.1.3 Topics and reference

Topics control coreference with adjacent clauses, or have a high possibility to be selected as controllers of coreference with adjacent clauses. If topic slots are empty, subjects or NPs that could be selected as topics control coreference with adjacent clauses. For example, Kumam has a particular coordinate construction that connects clauses with an auxiliary *ko* 'and to do'.

Topics, not subjects, in first clauses control coreference in second clauses.

For example, the topicalized sentence in (2) has only one interpretation. The topicalized NP *ɪcɔɔ* ‘man’ in the first clause controls coreference in the second clause in (2). On the other hand, the sentence in (1) has two interpretations. One interpretation is that the subject in the first clause *dákó* ‘woman’ is also the subject in the second clause of the coordinate construction. Another interpretation is that the benefactive *ɪcɔɔ* ‘man’ in the first clause is the subject in the second clause. The former interpretation is more possible than the latter one.

When topic slots are empty, NPs that are able to be topicalized in first clauses control coreference with adjacent clauses. Subjects are most likely to be selected as topics, because they are located in sentence initial position when topic slots are empty. Subjects are, however, not topics even if topic slots are empty, because topics are distinguished from subjects by a morph-phonological boundary. When topic slots are empty, there is a chance for other NPs to be selected as topics. For example, the benefactive NP *ɪcɔɔ* ‘man’ can be chosen as a topic in (1).

(1) *dákó* *ɔ=tedo* *né-í!cɔɔ* *cám* *é=!kó* *myɛl.*
 woman_i 3S/P_i=PERF:cook for-man_j food 3SG_{i/j}=PERF: and do dance:INF
 ‘The woman cooked food for the man and then s/he danced.’

(2) *ɪcɔɔ*, *dákó* *ɔ=tedo* *n:é* *cám* *é=!kó* *myɛl.* (Topicalization)
 man_j woman_i 3S/P_i=PERF:cook for:3SG_j food 3SG_j=PERF:and do dance:INF
 ‘The man, the woman cooked for and then he danced.’

The topicalized NP *okélo* ‘Okelo’ in the first clause controls coreference in the second clause in (4). The topicalized sentence in (4) has only one interpretation, while the sentence in (3) has two possible interpretations. One interpretation is that the subject *dákó* ‘woman’ in the first clause is also the subject in the second clause. Another interpretation is that the dative NP *okélo* ‘Okelo’ in the first clause is the subject in the second clause. However, the former interpretation is rejected by Kumam speakers because of extra-linguistic knowledge that the letter cannot be read by the sender.

(3) *dákó* *ɔ=cwao* *bá!lwá* *bút-ó!kélo* *ε=kó* *soom:é.*
 woman_i 3S/P_i=PERF:send letter to-Okelo_j 3SG_{i/j}=PERF:and do read:INF:3SG
 ‘The woman sent the letter to-Okelo and he read it.’

(4) *okélo*, *dákó* *ɔ=cwao* *bá!lwá* *bút-é* *é=!kó* *soom-é.* (Topicalization)
 Okelo_j, woman_i 3S/P_i=PERF:send letter to-3SG_j 3SG_j=PERF:and do read:INF-SG
 ‘Okelo, the woman sent the letter to him and he read it.’

Topics in matrix clauses do not exclusively control coreference with subordinate clauses. Though it is highly possible that topics are selected as controllers of coreference, other NPs can be chosen as controllers of coreference in subordination. For example, the topicalized sentence in (6) has two interpretations. One interpretation is that the topicalized NP *icóó* ‘man’ is the subject in the subordinate clause. Another interpretation is that the subject *okélo* ‘Okelo’ in the main clause is also the subject in the subordinate clause. The former interpretation is more possible than the latter, because a topic is preferably chosen to control coreference with subordinate clauses.

The sentence in (5) also has these two interpretations. However, the latter interpretation is more possible than the former for the sentence in (5). A topic slot is empty in the sentence shown in (5). When topic slots are empty, NPs that are able to be chosen as a topic in main clauses control coreference with subordinate clauses. Subjects are most likely selected as controllers of coreference, because they are located in sentence initial position when topic slots are empty. Even though subjects are located in sentence initial position, they are not topics. Other NPs have the potential to be selected as controllers of coreference in subordination. The dative NP *icóó* ‘man’ may be selected as the controller of coreference with the subordinate clause in (5).

(5) *okélo* *ɔ=wacɔ* *né-í!cúɔ* *bé* *é=!kwá!lɔ* *gwen.*

*Okelo*_i 3S/P_i=PERF:say to-man_j COMP 3SG_{i/j}=PERF:steal chickens

‘*Okelo*₁ said to the man₂ that he_{1/2} stole the chickens.’

(6) *icóó*, *okélo* *ɔ=wacɔ* *n:é* *bé* *é=!kwá!lɔ* *gwen.* (Topicalization)

man_j, *Okelo*_i 3S/P_i=PERF:say to:3SG_j COMP 3SG_{j/i}=PERF:steal chickens

‘The man₂, *Okelo*₁ said to him₂ that he_{2/1} stole the chickens’

The sentence in (7) has two interpretations. One interpretation is that the subject *dákó* ‘woman’ in the main clause is also the subject in the subordinate clause. Another is that the dative NP *icóó* ‘man’ in the main clause is the subject in the subordinate clause. The former interpretation is more possible than the latter one. The sentence in (8) also has these two interpretations. According to our hypothesis that topicalized NPs are preferably chosen to control coreference with subordinate clauses, the latter interpretation has a higher possibility than the former one for the sentence in (8). However, the former one is as preferable as the latter one. The topicalized NP *icóó* ‘man’ is preferably selected to control coreference with the subordinate clause, but the subject *dákó* ‘woman’ is still preferred as a controller of coreference with the subordinate clause.

The embedded clauses constitute N-complements that qualify the preceding NPs in (7) and

(8), while the embedded clauses constitute V-complements that are arguments of the verbs in (5) and (6). If topicalization is not applied, subjects are strongly selected as controllers of coreference with subordinate clauses, whether they are V-complements or N-complements. When topicalization is applied to V-complement constructions, topicalized NPs are chosen more preferably than subjects as controllers of coreference with subordinate clauses. When topicalization is applied to N-complement constructions, topicalized NPs are chosen as preferably as subjects to control coreference with subordinate clauses.

(7) $dákó$ $\varnothing=cwao$ $bút-i!c\acute{o}o$ $bá!lwá$ $bé$ $\acute{e}=!né!kó$ $ogwók$.
 woman_i 3S/P_i=PERF:send to-man_j letter COMP 3SG_{i/j}=PERF:kill dog
 ‘The woman sent the letter to the man that s/he killed the dog.’

(8) $ic\acute{o}o$, $dákó$ $\varnothing=cwao$ $bút-é$ $bá!lwá$ $bé$ $\acute{e}=!né!kó$ $ogwók$. (Topicalization)
 man_j, woman_i 3S/P_i=PERF:send to-3SG_j letter COMP 3SG_{i/j}=PERF:kill dog
 ‘The man, the woman sent the letter to him that s/he killed the dog.’

In summary, topicalized NPs are most preferably chosen to control coreference with adjacent clauses in coordinate construction, more preferably with subordinate clauses in V-complementation, and preferably with subordinate clauses in N-complementation. If topicalization is not applied to sentences, subjects are preferably chosen as controllers of coreference with adjacent or subordinate clauses, whether they are V-complements or N-complements. Since subjects are located in sentence initial position, they are the most preferable candidates to be interpreted as topics. Other NPs are possible controllers of coreference with adjacent or subordinate clauses because they have the potential to be interpreted as topics.

4.1.4 Independent pronouns and topic shift

4.1.4.1 Independent pronouns and topicalization

Independent pronouns trigger topic shifts. When following clauses have independent pronouns in the initial position, the independent pronouns refer to NPs that are not topics in the preceding clauses. Moreover, the independent pronouns control coreference in the following clauses. For example, when first clauses in coordinate constructions have topicalized NPs, independent pronouns in the initial position of second clauses refer to referents other than the topicalized NPs in the first clauses.

The benefactive NP $ic\acute{o}o$ ‘man’ is topicalized in the first clauses of the coordinate constructions in (1) and (2). The sentence (1) has no independent pronoun in the initial position of the second clause. If second clauses have no independent pronoun in the initial

position, topicalized NPs in first clauses control coreference with second clauses, as discussed above. The topicalized NP *icóɔ* ‘man’ controls coreference with the second clause in (1). The sentence in (2) has the 3rd person singular independent pronoun *én* ‘3SG’ in the initial position of the second clause. The independent pronoun *én* ‘3SG’ in the second clause refers to an NP that is not topicalized in the first clause. It refers to the subject *dákó* ‘woman’ and controls coreference in the second clause.

- (1) *icóɔ, dákó ɔ=tedo n:é cá m é=!kó myel.* (Topicalization)
 man_j woman_i 3S/P_i=PERF:cook for:3SG_j food 3SG_j:PERF:and do dance:INF
 ‘The man, the woman cooked food for him and he danced.’
- (2) *icóɔ, dákó ɔ=tedo n:é cá m én é=!kó myel.* (Topicalization)
 man_j woman_i 3S/P_i=PERF:cook for:3SG_j food 3SG_i 3SG_i=PERF:and do dance
 ‘The man, the woman cooked food for him and she danced.’

When second clauses have no independent pronouns, topicalized NPs in first clauses control coreference with second clauses. When second clauses have independent pronouns in the initial position, the independent pronouns control coreference in second clauses. Therefore, independent pronouns are regarded as topics in second clauses, and they refer to referents other than the topicalized NPs in first clauses. Consequently, topic shift takes place between the first and the second clauses.

Independent pronouns also trigger topic shifts between main and subordinate clauses.

When topicalization is applied to first clauses, if subordinate clauses have no independent pronoun in the initial position, the topicalized NPs in main clauses are preferably chosen to control coreference with subordinate clauses. When topicalization is applied to first clauses, if subordinate clauses have independent pronouns in the initial position, the independent pronouns refer to referents other than the topicalized NPs in the main clauses.

- (3) *icóɔ, okélo ɔ=wacɔ n:é bé é=kwá!lɔ gwen.* (Topicalization)
 man_j Okelo_i 3S/P_i=PERF:say to:3SG_j COMP 3SG_{j/i}=PERF:steal chickens
 ‘The man₂, Okelo₁ said to-him₂ that he_{2/1} steal the chickens.’
- (4) *icóɔ, okélo ɔ=wacɔ n:é bé én é=!kwá!lɔ gwen.* (Topicalization)
 man_j Okelo_i 3S/P_i=PERF:say to:3SG_j COMP 3SG_{i/j} 3SG_{i/j}=PERF:steal chickens
 ‘The man₂, Okelo₁ said to-him₂ that he_{1/2} steal the chickens.’

The sentence in (3) has no independent pronoun in the initial position of the subordinate clause. The sentence in (3) has two interpretations. One interpretation is that the dative NP

icóó ‘man’ in the main clause is the subject in the subordinate clause. Another is that the subject *okélo* ‘Okelo’ in the main clause is also the subject in the subordinate clause. The former interpretation is more preferable than the latter one, because the topicalized NP *icóó* ‘man’ in the main clause controls coreference with the subordinate clause. Topics in main clauses preferably control coreference with subordinate clauses if the subordinate clauses have no independent pronoun in the initial position.

The sentence in (4) also has the same two interpretations. However, the latter interpretation is more preferable than the former one. The independent pronouns trigger a topic shift. The independent pronoun in the subordinate clause refers to a referent other than the topicalized NPs. If the topicalized NP *icóó* ‘man’ is chosen as the controller of coreference with subordinate clauses, the independent pronoun *én* ‘3SG’ refers to NPs other than the topicalized NP *icóó* ‘man’ in the main clause. It refers to the subject *okélo* ‘Okelo’ in the main clause. If the subject *okélo* ‘Okelo’ in the main clause is chosen to control coreference with the subordinate clause, though it is not preferable, the independent pronoun *én* ‘3SG’ refers to the dative NP *icóó* ‘man’ in the main clause.

When subjects are chosen to control coreference with subordinate clauses, they are activated as topics in the following subordinate clauses. Therefore, we must modify the rule of topic shift by independent pronouns as follows. Independent pronouns refer to NPs that are not activated as topics in preceding clauses.

For example, if the subject *okélo* ‘Okelo’ is activated as a topic in the main clause, it is chosen as the controller of coreference with the subordinate clause. The independent pronoun *én* ‘3SG’ refers to another NP *icóó* ‘man’ that is not activated in the main clause.

4.1.4.2 Independent pronouns and topic shift

Independent pronouns trigger a topic shift to take place between clauses in coordination, as previously discussed. When second clauses have no independent pronoun, a topic shift does not occur between clauses in coordination.

For example, the sentence in (1) has no independent pronoun in the initial position of the second clause in coordination. The sentence in (1) has two interpretations. One interpretation is that the subject in the second clause is coreferential with the subject in the first clause. The other is that the subject in the second clause refers to a different referent from the subject of the first clause. Since the non-‘switch’ reference subject clitic *é* ‘3SG’ is attached to the auxiliary *ko* ‘and to do’ in the second clause, there must be a preceding referent that is coreferential with the subject in the second clause. This referent is the one to which the subject in the first clause refers, since the subject of the second clause also refers to it. There must be another referent that is coreferential with the subject in second clause, because the

subject in the second clause is not coreferential with the subject in the first clause. We will discuss the other referent later.

When the second clause has the 3rd person singular independent pronoun *én* ‘3SG’, the sentence in (2) has only one interpretation. The independent pronoun *én* ‘3SG’ refers to another NP other than the referent of the subject in the first clause. The 3rd person singular subject clitic ε = ‘3SG’ in the second clause refers to a different referent than the subject in the first clause. Subjects are preferably chosen as topics if topicalization is not applied. Moreover, independent pronouns in following clauses refer to referents other than the NPs that are not activated as topics in the preceding clauses, as previously discussed. Therefore, given that the sentence in (2) has no topicalized NP, the 3rd person singular independent pronoun *én* ‘3SG’ refers to a referent other than the subject in the first clause.

(1) ε =í!kó kɔŋɔ é=!kó teedo cá.m.
 3SG_i=PERF:prepare beer 3SG_{i/j}=PERF:and do cook:INF food
 ‘He_i prepared beer and he_{i/j} cooked food.’

(2) ε =má!ró riŋɔ én é=!kó maarɔ dɛk nam.
 3SG_i=PERF:like meat 3SG_j 3SG_j=PERF:and do like:INF fish
 ‘He_i liked meat and she_j liked fish.’

The sentences in (1) and (2), however, are not appropriate pragmatically when they are uttered at the beginning of a discourse. Since the 3rd person singular non-‘switch’ reference clitic ε = ‘3SG’ refers to a specific NP that is mentioned in context or identifiable by the backgrounded knowledge of the speaker and hearer, it requires an antecedent referent in context or a referent that is stored in the backgrounded knowledge. Similarly, the sentence in (3) is syntactically well-formed but not appropriate pragmatically if it is uttered without context. The sentence in (3) is appropriate pragmatically on the supposition that the 3rd person singular clitic ε = ‘3SG’ refers to an antecedent in the context.

(3) # ε =té!dó !cám.
 3SG=PERF:cook food
 ‘He cooked food.’

The sentences in (1) and (2) are appropriate pragmatically on the supposition that the 3rd person singular non-‘switch’ reference clitic ε = ‘3SG’ in the first clause refers to a specific antecedent NP in context. The sentences in (1) and (2) are rewritten from the pragmatic point of view in (4) and (5), respectively. If the 3rd person singular non-‘switch’ reference subject

clitic $\varepsilon=$ ‘3SG’ in the first clause refers to someone_i, then the 3rd person singular non-‘switch’ reference subject clitic $\varepsilon=$ ‘3SG’ in the second clause preferably refers to someone_i in (4). Since the sentence in (4) has no independent pronoun in the initial position of the second clause, a topic shift does not occur between two clauses. Moreover, when topic slots are empty, subjects preferably are selected as topics. The subject someone_i is preferably selected as the topic in (4). The subject someone_i is an activated topic that controls coreference with the second clause. If there is another activated topic, that is, if someone_j is activated as a topic, then the topic someone_j controls coreference with the second clause. The 3rd person singular non-‘switch’ reference subject clitic $\varepsilon=$ ‘3SG’ in the second clause refers to someone_j in (4). Thus, there are two possibilities for choosing a topic that give two different interpretations of the sentence in (1).

(4) [someone_j]

[someone_i] $\varepsilon=i!$ kó kəŋɔ $\acute{\varepsilon}=!$ kó teedo cá:m.
 someone_i 3SG_i=PERF:prepare beer 3SG_{i/j}=PERF:and do cook:INF food
 ‘(Someone_{i/j}) prepared the beer and he_i/he_j cooked the food.’

The sentence in (5) has an independent pronoun in the initial position of the second clause. A topic shift occurs between two clauses. The topic in the second clause must be different from that of the first clause. If the topic in the first clause is someone_i, the topic in the second clause is someone_j. On the other hand, if the topic in the first clause is someone_j, then the topic in the second clause is someone_i.

(5) [someone_j]

[someone_i] $\varepsilon=$ máró riŋɔ én $\acute{\varepsilon}=!$ kó maarɔ dək nám.
 someone_i 3SG_i=PERF:like meat 3SG_j 3SG_j=PERF:do like:INF fish
 ‘(Someone_{i/j}) liked the meat and he_{j/i} liked fish.’

The sentence in (6) has no independent pronoun in the initial position of the second clause in the coordinate construction. The sentence in (7) has the 3rd person singular independent pronoun *én* ‘3SG’ in the initial position of the second clause. A topic shift occurs between two clauses in (7), while it does not in (6).

Since topicalization is not applied to the sentences in (6) and (7), the topic slots are empty in both sentences. The sentence in (6) has two interpretations. When the direct object *atín-!méré* ‘her child’ in the postverbal position is focalized and activated as a topic for the second clause, it controls coreference with the second clause. When the subject is chosen as a topic, it

controls coreference with the second clause. Since the sentence in (6) has no independent pronoun in the initial position of the second clause, topic shift does not occur.

Topic shift occurs in (7), because this sentence has the 3rd person singular independent pronoun *én* ‘3SG’ in the initial position of the second clause. The independent pronoun is not allowed to refer to the direct object *atín-!méré* ‘her child’. We must modify our hypothesis as follows. Independent pronouns refer to referents other than activated topics in the preceding clauses. If there are no activated topics in the preceding clauses, independent pronouns refer to referents in the preceding context.

The sentence in (7) has only one interpretation. When the direct object *atín-!méré* ‘her child’ is activated as a topic, the 3rd person singular independent pronoun *én* ‘3SG’ refers to the subject *dákó* ‘woman’. Given that the 3rd person singular independent pronoun *én* ‘3SG’ refers to an NP other than the activated topic in the first clause, it must refer to the subject *dákó* ‘woman’ in the first clause. If there is no activated topic in the preceding clause, the 3rd person singular independent pronoun *én* ‘3SG’ refers to the subject *dákó* ‘woman’ because the subject *dákó* ‘woman’ is only one candidate to which the 3rd person singular independent pronoun *én* ‘3SG’ refers.

(6) *dákó* σ =bujo *atín-!méré* \acute{e} =!kó *koko*.
 woman_i 3S/P_i=PERF:beat child-3SG_j 3SG_{j/i}=PERF:do cry:INF
 ‘The woman_i beat her child_j and he_j/she_i cried.’

(7) *dákó* σ =bujo *atín-!méré* *én* \acute{e} =!kó *koko*.
 woman_i 3S/P_i=PERF:beat child-3SG_j 3SG_i 3SG_i=PERF:do cry
 ‘The woman_i beat her child_j and she_i cried.’

The sentence in (8) has the 3rd person singular independent pronoun *én* ‘3SG’ in the initial position of the second clause. The sentence in (8) has only one interpretation, namely that the independent pronoun refers to the subject *okélo* ‘Okelo’ in the first clause. The independent pronoun refers to the subject because the benefactive NP *apio* ‘Apio’ may be activated as a topic in the first clause as discussed above. However, there is another possible explanation why the independent pronoun refers to the subject.

(8) *okélo* σ =wandiko *bá!lwá* *né-á!pio* *én* \acute{e} =!kó *soom* *n:é*.
 Okelo_i 3S/P_i=PERF:write letter for-Apio 3SG_i 3SG_i=PERF:do read:INF for:3SG
 ‘Okelo wrote the letter for Apio and he read it for her.’

The subject *okélo* ‘Okelo’ is not activated as a topic, because the 3rd person ‘switch’ reference

clitic ϱ = ‘3S/P’ is used to refer to it. If the subject *okélo* ‘Okelo’ is mentioned in context and activated as a topic, it must be referred to by the non-‘switch’ reference subject clitic ε = ‘3SG’. In fact, the sentence in (8) is pragmatically appropriate even if it is uttered at the beginning of a discourse. The subject *okélo* ‘Okelo’ conveys new information. The topic slot is empty in the first clause. If the first clause has a topic, the topic is a ‘stage topic’. The sentence in (8) is rewritten pragmatically in (9) with a ‘stage topic’. The 3rd person singular independent pronoun *én* ‘3SG’ in the second clause refers to a referent other than the ‘stage topic’. It refers to the subject in the first clause. Even if the benefactive NP *apí ϱ* ‘Apio’ is not activated as a topic, the independent pronoun refers to the subject in the first clause.

(9) [stage]_{top}

[stage] okélo ϱ =wandí ϱ bá!lwá né-á!pí ϱ én ε =!kó soomo n:é.
 Okelo_i 3S/P_i=PERF:write letter for-Apio 3SG_i 3SG_i=PERF:do read:INF for:3SG
 ‘(stage) Okelo_i wrote the letter for Apio and he_i read it for her.’

An independent pronoun cannot be followed by another independent pronoun. Independent pronouns do not appear more than once in coordinate constructions. In other words, a topic shift by independent pronouns may occur only once in sentences. The sentence in (10) is not grammatical because the 3rd person singular independent pronoun *én* ‘3SG’ is located in the initial position of the second and the third clause in the coordinate construction.

Independent pronouns do not refer to NPs that are activated as topics in preceding clauses as previously discussed. For example, once the benefactive NP *atín-!méré* ‘her child’ is activated as a topic in the first sentence, the independent pronoun in the second clause refers to the subject *dákó* ‘woman’. There is no candidate to which the independent pronoun in the third clause may refer, because the benefactive NP *atín-!méré* ‘her child’ and the subject *dákó* ‘woman’ function as topics in the preceding clauses.

(10) *dákó ϱ =tedo né-á!tín-!méré cá ϱ én ε =!kó caam:é.
 woman 3S/P=PERF:cook for-child-3SG food 3SG 3SG=PERF:do eat:INF:3SG
 én ε =!kó maato cak
 3SG 3SG=PERF:do drink:INF milk
 ‘The woman cooked the food for her child and he/she ate it and he/she drank milk.’

The second sentence in (11) contains no independent pronoun in the initial position of the second clause. No topic shift occurs in the second sentence. The 3rd person singular clitic ε = ‘3SG’ in the first and the second clause of the second sentence refers to the same referent *apí ϱ*

‘Apio’. The non-‘switch’ reference subject clitic $\varepsilon=$ ‘3SG’ refers to the topic that is activated in the first clause of the second sentence. The activated topic *apíɔ* ‘Apio’ controls the adjacent clauses in the second sentence. On the other hand, the second sentence in (12) has the independent pronoun *én* ‘3SG’ in the initial position of the second clause. It refers to the subject *okélo* ‘Okelo’ in the first sentence, because it cannot refer to an NP that is activated as a topic in the preceding clause. Independent pronouns refer to NPs beyond sentence boundaries. This fact gives evidence of stage topics previously proposed.

- (11) *okélo* $\varepsilon=$ *ɲɔɔ* *riɲó*. *apíɔ* $\varepsilon=$ *ɲɔɔ* *kata*
 Okelo_i 3S/P_i=PERF:cut meat Apio_j 3S/P_j=PERF:cut potatoes
é=!kó *teedo* *cám* *é=!kó* *caam:é*.
 3SG_j=PERF:do cook:INF food 3SG_j=PERF:do eat:INF:3SG
 ‘Okelo cut the meat. Apio cut the potatoes and cooked the food and ate it.’

- (12) *okélo* $\varepsilon=$ *ɲɔɔ* *riɲó*. *apíɔ* $\varepsilon=$ *ɲɔɔ* *kata*
 Okelo_i 3S/P_i=PERF:cut meat. Apio_j 3S/P_j=PERF:cut potatoes
é=!kó *teedo* *cám* (*dí*) *!én* *é=!kó* *caam:é*.
 3SG_j=PERF:do cook:INF food (and) 3SG_i 3SG_j=PERF:do eat:INF:3SG
 ‘Okelo cut the meat. Apio cut the potatoes and cooked the food, and he (Okelo) ate it.’

The independent pronouns also trigger topic shift in the subordinate clauses. When subordinate clauses have no independent pronoun in initial position, a topic shift does not occur between main and subordinate clauses. For example, the sentence in (13) has usually two interpretations. One is that the non-‘switch’ reference clitic $\varepsilon=$ ‘3SG’ refers to the subject *ɪcɔɔ* ‘man’ in the main clause. Another is that the non-‘switch’ reference clitic $\varepsilon=$ ‘3SG’ refers to the daughter who is mentioned in the context. The daughter is activated as a topic in the context. If the speaker and hearer understand that the sentence in (13) is about the man, the former interpretation is appropriate. The subject *ɪcɔɔ* ‘man’ is chosen as a topic and controls coreference with the subordinate clause. If they understand that the sentence in (13) is about the man’s daughter, the latter interpretation is appropriate. The activated topic ‘daughter’ controls coreference with the subordinate clause. The topic continues from the main clause into the subordinate clause in both cases.

- (13) (The man_i had a daughter_j. His daughter_j studied hard)
ɪcɔɔ $\varepsilon=$ *pá!ró* *!bé* *é=!yá!ró* *beedo* *daktá!lé*.
 man_i 3S/P_i=PERF:think COMP 3SG_{i/j}=IMPERF:decide become:INF doctor
 ‘The man_i thought that he_j/she_j would be a doctor.’

When subordinate clauses have independent pronouns in the initial position, a topic shift occurs between the main and subordinate clauses. For example, the daughter is activated as a topic in the context in (14). The 3rd person singular independent pronoun *én* ‘3SG’ refers to an NP that is not activated as a topic. Therefore, the 3rd person singular subject clitic *ε=* ‘3SG’ in the subordinate clause refers to the subject ‘the man’ or to someone else. If the speaker and hearer understand that the sentence in (14) is about the daughter, the independent pronoun refers to the subject in the first clause. If they understand that the sentence in (14) is about the subject in the first clause, the independent pronoun refers to someone else. A topic shift takes place between the main clause and the subordinate clause in both cases.

(14) (The man_i had a daughter_j. His daughter_j studied hard.)

ιcúo c=pá!ró !bé én é=!yá!ró beedo daktá!lé.
 man_i 3S/P_i=PERF:think COMP 3SG_{i/k} 3SG_{i/k}=IMPERF:decide become:INF doctor
 ‘The man_i thought that he_j/someone_k would be a doctor.’

Independent pronouns also trigger topic shift in sequences of sentences. The example in (15) includes no independent pronoun. A topic shift does not occur between the second and the third sentence. The topic *apío* ‘Apio’ continues from the second sentence into the third sentence.

In the example presented in (16), the third sentence has the 3rd person singular independent pronoun *én* ‘3SG’ in the initial position. The 3rd person singular independent pronoun *én* refers to the NP *okélo* ‘Okelo’ in the first sentence, not to the NP *apío* ‘Apio’ that is activated as a topic in the second sentence. A topic shift takes place between the second and third sentences.

(15) okélo kede-apío c=oto i-Disco.

Okelo and-Apio 3S/P=PERF:go to-Disco

apío c=myelc.

Apio, 3S/P_j=PERF:dance

ε=wé!ró wer.

3SG_j=PERF:sing song

‘Okelo and Apio went to Disco. Apio danced. She sang the song.’

(16) okélo kede-apío c=oto i-Disco.

Okelo_i and-Apio 3S/P=PERF:go to-Disco

apío c=myelc.

Apio 3S/P=PERF:dance

én é=wé!ró wer.

3SG_i 3SG_i=PERF:sing song

‘Okelo and Apio went to-Disco. Apio danced. He sang the song.’

4.1.5 Topicalized NPs and information structure

Any NPs can be topicalized from slots for subjects, objects, objects of prepositions, as well as any NPs from subordinate clauses. In addition to the syntactic features discussed in 3.2, there are pragmatic restrictions on topicalization. Candidates for topicalization must always convey old information. Some candidates are activated topics, and others are inactivated topics. Moreover, if there are other candidates that are activated as topics, NPs cannot be topicalized.

For example, the topicalized sentence in (2) is appropriate on the supposition that the speaker and hearer share information about the book in their back grounded knowledge. Topicalized sentences cannot be uttered at beginning of a discourse if the topicalized NPs are not old information stored in the back grounded knowledge of the speaker and hearer.

(1) okélo ɔ=wɪɔ itabó.

Okelo 3S/P=PERF:buy book

‘Okelo bought the book.’

(2) itabó, okélo ɔ=wɪɔ. (Topicalization)

book Okelo 3S/P=PERF:buy

‘The book, Okelo bought.’

The second sentence in (3) is grammatical if it is not preceded by the first sentence. Candidates for topicalization must convey old information. However, the direct object NP *itabó* ‘book’ may not be topicalized because the subject *okélo* ‘Okelo’ is still activated as a topic in the second sentence. According to the pragmatic restriction that there should not be other candidates activated as a topic in sentences, the NP *itabó* ‘book’ cannot be topicalized. Therefore, the second sentence in (3) is not appropriate pragmatically.

(3) okélo ɔ=wɪɔ itabó.

Okelo 3S/P=PERF:buy book

#itabó, okélo ɔ=somo. (Topicalization)

book Okelo 3S/P=PERF:buy

‘Okelo bought the book. The book, Okelo read.’

In (4), the dative NP *cám* ‘food’ is activated as a topic for the second sentence in the first

sentence. The first wh-question asks what happened to the dative NP *cám* ‘food’. The second sentence is the response and gives information about what happened to the dative NP *cám* ‘food’. The dative NP *cám* ‘food’ is the topic and the other constituents are comments in the response. The first wh-question brings the dative NP *cám* ‘food’ into focus to be activated as a topic for the following response. Topicalization may be applied to the NP *cám* ‘food’ in the second sentence because there is no candidate for topicalization that has been activated as a topic. The second sentence in (5) is grammatical; however, it is not pragmatically appropriate as the answer to the first wh-question because the dative NP *cám* ‘food’ does not occupy the topic slot. Moreover, there is no candidate other than the dative NP *cám* ‘food’ to be topicalized.

(4) *jó á !ó=tim-éré né-cám?*
 what REL 3S/P=PERF:do-MID to-food
cám, okélo ɔ=tedo. (Topicalization)
 food, Okelo 3S/P=PERF:cook
 ‘What happened to the food. The food, Okelo cooked.’

(5) *jó á !ó=tim-éré né-cám?*
 what REL 3S/P=PERF:do-MID to-food
 #*okélo ɔ=tedo cám.*
 Okelo 3S/P=PERF:cook food
 ‘What happened to the food. Okelo cooked the food.’

Unspecific NPs modified by the unspecific suffix *-móró* ‘some’ can be topicalized if they are activated as topics. For example, the topicalized NP *atín-!móró* ‘some child’ is activated as a topic for the second sentence in the question in (7). The interrogative sentence asks whether the hearer found the direct object *atín-!móró* ‘some child’. When unspecific NPs are not activated as topics in context, they cannot be topicalized. For example, the direct object *atín-móró* ‘some child’ is not activated as a topic for the second sentence in (8) because the 1st person singular subject is still activated as a topic in the second sentence.

(6) *a=ú!dó atín-!móró í-sukú!lú.*
 1SG=PERF:find child-UNSP in-school
 ‘I found a child in the school.’

(7) *i=ú!dó atín-!móró í-sukú!lú?*
 2SG=PERF:find child-UNSP in-school
atín-!móró, a=ú!dó í-sukú!lú.

child-UNSP 1SG=PERF:find in-school

‘Did you find a child? A child, I found in the school.’

(8) a=ó!dó atín-!móró í-sukú!lú

1SG=PERF:find child-UNSP in-school

*atín-!móró, a=dá-!!é.

child-UNSP 1SG=PERF:hit-3SG

‘I found a child in the school. A child, I hit.’

Moreover, the second sentence in (8) violates the distribution of pronominal copies in topicalization, that is, that topicalized human direct objects do not leave pronominal elements in the original position from which NPs are moved, if the topicalized NPs are activated as topics.

4.1.6 Topics and distribution of pronominal copies

The previous discussion pointed out that the distribution of pronominal copies in topicalization is divided into two patterns with regard to hierarchy of NP slots and animacy. One pattern is that topicalized human direct objects leave pronominal copies when they are not mentioned in context or are not activated as topics. The other pattern is that topicalized human direct objects do not leave pronominal copies when they are already mentioned in context or activated as topics.

Human direct objects in ‘idiomatic’ sentences, pronominal human direct objects, and activated human direct objects show the latter pattern of distribution for pronominal copies. Inactivated human direct objects show the former pattern of distribution for pronominal copies.

The similar patterns of distribution for pronominal copies are observed in relativization and cleft constructions. Human direct objects leave pronominal copies in relativization, while they do not leave pronominal copies in clefting.

Similarly, the same patterns are observed in the distribution of object suffixes in referential usage. The distribution is complementary. Object suffixes are added to verbs when they refer to human referents that are mentioned in context. For example, the 3rd person object suffix -é ‘3SG’ is added to the verb *neeko* ‘to kill’ in the second sentence in (4).

The distribution of pronominal copies in topicalization, relativization, and clefting when they are applied to human direct objects is summarized in Table (1). The distribution of object suffixes is included to Table (1). Topicalized human direct objects leave pronominal copies if they are not activated as topics. Relativized human direct objects leave pronominal copies in the original position. Object suffixes are added to verbs when they refer to human objects that

are mentioned in context. On the other hand, topicalized human direct objects do not leave pronominal copies if they are activated as topics. Pronominal human direct objects and human direct objects in ‘idiomatic’ sentences do not leave pronominal copies. Clefted human direct objects do not leave pronominal copies.

(1) Distribution of pronominal copies (human direct objects)

Pronominal copy

Topicalization of inactivated NP (2)

Relativization (3)

Reference of NP mentioned in context (4)

No pronominal copy

Topicalization of activated NP (5)

Topicalization of pronominal NP (6)

Topicalization of NP in ‘idiomatic’ sentences (7)

Clefting (8)

(2) *dákó*, *a=né!!n-é*. (Topicalization)

woman_i 1SG=PERF:see-3SG_i

‘The woman, I saw.’

(3) *mán* *!én* *á!tín* *ámé* *a=jwá!!t-é*. (Relativization)

this 3SG child_i REL 1SG=PERF:hit-3SG_i

‘This is the child whom I hit.’

(4) *i=né!kó* *!cúó?*

1SG=PERF:kill man_i

Ee, *a=né!!k-é*.

Yes 1SG=PERF:kill-3SG_i

‘Did you kill the man? Yes, I killed him.’

(5) *a=né!nó* *!cúó*.

1SG=PERF:see man

?*!cúó*, *a=né!kó*. (Topicalization)

man 1SG=PERF:kill

‘I saw the man. I killed him.’

(6) *én*, *a=né!nó*. (Topicalization)

3SG, 1SG=PERF:see

‘Him, I saw.’

(7) awóbí, oríó ó=neko. (Topicalization)

boy thirst 3SG=PERF:kill

‘The boy, he is thirsty.’

(8) atín, én á!mé a=jwá!tó. (Cleft)

child 3SG REL 1SG=PERF:hit

‘It is the child that I hit.’

The second sentence in (5) is not appropriate pragmatically, though it is acceptable. The pragmatically appropriate sentence is the non-topicalized sentence in (9) consisting of a verb added with the 3rd person singular object suffix -é ‘3SG’.

(9) a=né!!k-é.

1SG=PERF:kill-3SG

‘I killed him.’

From Table (1), we propose that clefted NPs have the same pragmatic characteristics as activated topics.

All of these examples, except for (4), include movement of constituents. If we take the syntactic devices that include movement of constituents into consideration, human direct objects indicate two patterns of distribution for pronominal copies regarding the hierarchy of NP slots and animacy. Non-human direct objects never leave pronominal copies in the original position in topicalization, relativization or clefting. We can summarize the hierarchy of NP slots and animacy in movement as follows.

(10) Hierarchy of NP slots and animacy in movement

Pronominal copy	No pronominal copy
Human direct object	Human direct object
(inactivated as a topic)	(activated as a topic)
	Non-human direct object

The suffixation in the second sentence of (4) shows the same hierarchy of NP slots and animacy as the topicalization of inactivated NPs and relativization. When antecedents are human and activated as topics, object suffixes in reference usages are added to verbs, while object suffixes are not added to verbs when antecedents are not human. When antecedents are not human but activated as topics, a zero anaphor is used to refer to the antecedents. For example, the zero anaphor in the second sentence refers to the antecedent *itabó* ‘book’ in

(11).

- (11) $i=wí!l\acute{o}$ $itab\acute{o}?$
2SG=PERF:buy book_i
Ee, $a=wí!l\acute{o}$ ϕ .
Yes, 1SG=PERF:buy ϕ _i
'Did you buy the book? Yes, I bought it.'

The second sentence in (4) has the antecedent *ic\acute{o}* 'man' in the preceding context to which the 3rd person singular object suffix-*\acute{e}* '3SG' refers. The second sentence in (11) also has an antecedent in the preceding context, but no object suffix is added to the verb. It has a zero anaphor that is coreferential with the antecedent. The pragmatic structure of the sentence in (4) is formalized in light of the object suffix in (12). The pragmatic structure for reference is similar to that of topicalization of inactivated NPs, as formalized in (13).

(12) Pragmatic structure for reference (if NP is human)

- [NP_i]_{TOP} (in context)
[S V-suffix_i]_{COMMENT}

(13) Pragmatic structure for inactivated NP in topicalization (if NP is human)

- [NP_i]_{TOP} (in context)
[NP_i]_{TOP}, [S V-suffix_i]_{COMMENT}

Object suffixes are added to verbs when antecedents are human. When antecedents are non-human, object suffixes are added to verbs if the antecedents are not activated as topics in context. If antecedents are activated as topics in context, object suffixes are not added to verbs. For example, the 3rd person singular object suffix -*\acute{e}* '3SG' is added to the verb *wil\acute{o}* 'to buy' in (15). The speaker believes that the information about the referent is stored in the hearer's back grounded knowledge. However, the referent is not activated as a topic.

When referents are not activated as a topic in context, the speaker uses object suffixes to refer the referents that are expected to be in the hearer's back grounded knowledge. When the referents are not activated as topics, the sentences (14) and (15) are grammatical if the speaker believes that the hearer has the knowledge about the referents.

If the sentence in (16) is uttered without any context, it is not grammatical, though it has the same syntactic structure as the second sentence in (11). The second sentence in (11) is acceptable even though the object suffix is not added to the verb. The second sentence has an antecedent that is activated as a topic in the preceding context. The activated antecedent that

functions as a topic is referred by the zero anaphor if it is not human. Since the sentence in (16) has no antecedent that is activated as a topic in the preceding context, it is not grammatical.

(14) a=né!!k-é.

1SG=PERF:kill-3SG

‘I killed him.’

(15) a=wí!!l-é.

1SG=PERF:buy-3SG

‘I bought it.’

(16) *a=wí!!l-ó.

1SG=PERF:buy

‘I bought.’

In summary, there are two patterns of distribution for object suffixes in terms of reference when they refer to non-human NPs. When referents are not activated as topics, object suffixes are added to verbs. When referents are activated, no object suffix is added to verbs. A zero anaphor refers to the referent.

4.1.7 Topics and scope of negation

The negative particle líká ‘NEG’ is always followed by predicates. The scope of negation is limited to topicalized NPs in sentences, if topicalization is applied to them. When sentences have no topicalized NP, the scope of negation extends to the whole sentences.

For example, the scope of negation extends to the whole sentence in (1) because topicalization is not applied. The negative sentence in (1) has various interpretations, shown from (2a) to (2g). The sentence in (1) may negate the subject *okélo* ‘Okelo’ and have the interpretation shown in (2a). The sentence in (1) may negate the direct object *itabó* ‘book’ and have the interpretation shown in (2b). The sentence (1) may negate the benefactive NP *atín* ‘child’ and have the interpretation shown in (2c). The sentence (1) may negate the locative NP *atá!lé* ‘market’ and have the interpretation shown in (2d). The sentence (1) may negate the time adverbial *poró* ‘yesterday’ and have the interpretation shown in (2e). The sentence (1) may negate the predicate and have the interpretations shown in (2f) and (2g).

(1) okélo líká ó=wílo né-á!tín itabó í-atá!lé jó!ró.

Okelo NEG 3S/P=PERF:buy for-child book at-market yesterday

‘Okelo did not buy the book for the child at the market yesterday.’

- (2a) Okelo did not buy the book for the child at the market yesterday. Ojuk did.
 (2b) Okelo did not buy the book for the child at the market yesterday. Okelo bought the millet.
 (2c) Okelo did not buy the book for the child at the market yesterday. Okelo bought it for the girl.
 (2d) Okelo did not buy the book for the child at the market yesterday. Okelo bought it at the shop.
 (2e) Okelo did not buy the book for the child at the market yesterday. Okelo bought it today.
 (2f) Okelo did not buy the book for the child at the market yesterday. Okelo sold the book.
 (2g) Okelo did not buy the book for the child at the market yesterday. Okelo did not do anything.

Topicalization is applied to the benefactive NP *atín* ‘child’, which is located in sentence initial position in (3). The sentence in (3) allows only one interpretation, as shown in (2c). It negates only the benefactive NP *atín* ‘child’.

- (3) *atín, okélo líká ʒ=wɪɔ n:é itabɔ í-atá!lé jó!ró.*
 child, Okelo NEG 3S/P=PERF:buy for:3SG book at-market yesterday
 ‘The child, Okelo did not buy the book for him at the market yesterday.’

The direct object *itabɔ* ‘book’ is topicalized and located in sentence initial position in (4). The sentence in (4) has only one interpretation, as shown in (2b). It negates only the direct object *itabɔ* ‘book’.

- (4) *itabɔ, okélo líká ʒ=wɪɔ né-á!tín í-atá!lé jó!ró.*
 book, Okelo NEG 3S/P=PERF:buy for-child at-market yesterday
 ‘The book, Okelo did not buy for the child at the market yesterday.’

The locative NP *atá!lé* ‘market’ is topicalized and located in sentence initial position in (5). The sentence in (5) negates only the locative NP *atá!lé* ‘market’. It has only one interpretation, as shown in (2d).

- (5) *atá!lé, okélo líká ʒ=wɪɔ né-á!tín itabɔ í-!é jó!ró.*
 market, Okelo NEG 3S/P=PERF:buy for-child book at-3SG yesterday
 ‘Market, Okelo did not buy the book for the child at yesterday.’

Topicalization is applied to the time adverbial *poró* ‘yesterday’ in (6). The sentence in (6) only has the interpretation shown in (2e).

- (6) *poró, okélo líká ó=wílo né-á!tín itabɔ í-atá!lé.*
 yesterday Okelo NEG 3S/P=PERF:buy for-child book at-market
 ‘Yesterday, Okelo did not buy the book for the child at the market.’

We can conclude that the scope of negation is limited to topics in sentences when the sentences have topicalized NPs. If topicalization is not applied to sentences, the scope of negation extends to the whole sentence.

Gerund forms are used to make predicate topic sentences⁵⁶. They are preceded by finite forms of verbs with direct objects in transitive sentences. For example, the gerund form *á-wíl-á* ‘buying’ is preceded by the finite form of the verb *wílo* ‘to buy’ and the direct object *itabɔ* ‘book’ in (7). The negative sentence in (7) negates only the predicate. It has interpretations such as (2f) or (2g).

- (7) *okélo líká ó=wílo itabɔ á-wíl-á né-á!tín í-atá!lé jó!ró.*
 Okelo NEG 3S/P=PERF:buy book GER-buy-GER for-child at-market yesterday
 ‘Okelo did not *buy* the book for the child at the market yesterday.’

When Kumam speakers want to negate subjects, they use relative construction where subjects are relativized. The relative clauses constitute predicate nominal elements in predicate nominal construction. The predicate nominal constructions have zero anaphors that are not segmentally expressed. The zero anaphors are connected to the predicate nominal elements without any copula. The negative particle *líká* ‘NEG’ is followed by [COP] that is not articulated in predicate nominal constructions.

The structure formalized in (9) is the same as that of wh-questions when wh-words are subjects. The negative particle *líká* ‘NEG’ is always followed by predicates. Moreover, the scope of negation is limited to topicalized NPs. The zero anaphors that occupy the slot for topics are coreferential with the relativized NPs.

For example, the sentence in (8) consists of the empty subject and the following relative clause whose antecedent is *okélo* ‘Okelo’ as the complement in the predicate nominal construction. The negative sentence in (8) has an interpretation similar to (2a). The scope of the negative particle *líká* ‘NEG’ is limited to the following NP *okélo* ‘Okelo’, which is the

⁵⁶Cf. Section 4.2.3.

antecedent of the relative clause.

- (8) líká ó!kélo α ó=wɪlo né-á!tín itabʊ í-atá!lé jóró.
 NEG Okelo REL 3S/P=PERF:buy for-child book at-market yesterday
 ‘(It is) not Okelo who bought the book for the child at the market yesterday.’

- (9) [φ]_{TOP} líká [COP] NP REL

4.1.8 Topics and illocutionary scope

Interrogative sentences are distinguished from affirmative ones by intonation in Kumam. They do not change the word order from the corresponding affirmative sentences. Illocutionary scope of interrogative sentences does not coincide with the scope of negation. If topicalization is not applied to sentences, the illocutionary scope extends to the whole sentence, in the same way the scope of negation does. However, when topicalization is applied to sentences, the illocutionary scope is different from the scope of negation to some extent.

For example, the sentence in (1) has no topicalized NP. It has various interpretations from (2a) to (2f). When the illocutionary scope is limited to the subject *okélo* ‘Okelo’, the sentence in (1) has an interpretation similar to (2a). When the illocutionary scope is limited to the object *itabó* ‘book’, the sentence in (1) has an interpretation similar to (2b). When the illocutionary scope is limited to the benefactive NP *atín* ‘child’, the sentence in (1) has an interpretation such as (2c). When the illocutionary scope is limited to the locative NP *atá!lé* ‘market’, the sentence in (1) has an interpretation similar to (2d). When the illocutionary scope is limited to the time adverbial *joró* ‘yesterday’, the sentence in (1) has an interpretation similar to (2e). When the illocutionary scope is limited to the predicate, the sentence in (1) has an interpretation similar to (2f). The sentence in (1), when topicalization is not applied, has all the interpretations from (2a) to (2f). When topicalization is not applied to sentences, namely the illocutionary scope extends to the whole sentence.

- (1) okélo α=wɪlo né-á!tín itabʊ í-atá!lé jóró?
 Okelo 3S/P=PERF:buy for-child book at-market yesterday
 ‘Did Okelo buy the book for the child at the market yesterday?’

(2a) The speaker knows that someone bought the book for the child at the market yesterday.

He wants to know if it was Okelo or not.

(2b) The speaker knows that Okelo bought something for the child at the market yesterday.

He wants to know if it was the book or not.

- (2c) The speaker knows that Okelo bought the book for someone at the market yesterday. He wants to know if it was the child or not.
- (2d) The speaker knows that Okelo bought the book for the child somewhere yesterday. He wants to know if it was the market or not.
- (2e) The speaker knows that Okelo bought the book for the child at the market at some time. He wants to know if it was yesterday or not.
- (2f) The speaker knows that Okelodid something to the book for the child at the market yesterday. He wants to know if it was buying or not.

The object *itabó* ‘book’ is topicalized and located in sentence initial position in (3). The sentence in (3) has possible interpretations such as (2a), (2c), (2d), (2e), and (2f). The speaker knows that someone bought the book. He wants to know whether it was Okelo who bought it. Or the speaker knows that Okelo bought the book. He wants to know if it was the child for whom Okelo bought it. Or the speaker knows that Okelo bought the book for the child. He wants to know whether Okelo bought it at the market. Or the speaker knows that Okelo bought the book for the child at the market. He wants to know whether Okelo bought it yesterday.

- (3) *itabó, okélo ɔ=wɪɔ né-á!tín i-atá!lé nó!ró?*
 book, Okelo 3S/P=PERF:buy for-child at-market yesterday
 ‘The book, did Okelo buy for the child at the market yesterday?’

The benefactive NP *atín* ‘child’ is topicalized and located in sentence initial position in (4). The sentence (4) has possible interpretations such as (2a), (2b), (2d), (2e), and (2f). The speaker knows that someone bought the book for the child at the market yesterday. He wants to know whether it was Okelo. Or, the speaker knows that Okelo bought something for the child. He wants to know if it was the book. Or, the speaker knows that Okelo bought the book for the child somewhere. He wants to know whether Okelo bought at the market. Or, the speaker knows that Okelo bought the book for the child at some time. He wants to know whether Okelo bought it yesterday

- (4) *atín, okélo ɔ=wɪɔ n:é ítabɔ í-atá!lé nó!ró?*
 child, Okelo 3S/P=PERF:buy for:3SG book at-market yesterday
 ‘The child, did Okelo buy the book for him at the market yesterday?’

In summary, direct objects and benefactive NPs are members of core elements. When core

elements are topicalized, the illocutionary scope is limited to constituents other than the topicalized NPs in the interrogative sentence. Since topics are presupposed, they are outside the illocutionary scope.

Topicalized NPs are out of the illocutionary scope in interrogative sentences. For example, the response to the interrogative in (5) is appropriate, while the response in (6) is not appropriate. The benefactive NP *atín* ‘child’ is within the illocutionary scope in the interrogative sentence in (5) and (6). The response in (5) corresponds to the interrogative sentence by rejecting the benefactive NP. The response in (6) does not correspond to the interrogative sentence. It rejects the direct object that is topicalized in the interrogative sentence. Since topicalized constituents are presupposed, they cannot be rejected.

(5) Q: *itabó, okélo ɔ=wɪlo né-á!tín?*

book Okelo 3S/P=PERF:buy for-child
 ‘The book, did Okelo buy for the child?’

A: *lí. okélo ɔ=wɪlo né-dákó.*

No Okelo 3S/P=PERF:buy for-woman
 ‘No. Okelo bought it for the woman.’

(6) Q: *itabó, okélo ɔ=wɪlo né-á!tín?*

book Okelo 3S/P=PERF:buy for-child
 ‘The book, did Okelo buy for the child?’

A: *#lí. okélo ɔ=wɪlo riŋó.*

No Okelo 3S/P=PERF:buy meat
 ‘No. Okelo bought the meat.’

The benefactive NP *atín* ‘child’ is topicalized in the interrogative sentence in (7) and (8). The direct NP *itabó* ‘book’ is within the illocutionary scope in the interrogative sentence. The response in (7) is not appropriate. It does not correspond to the interrogative sentence because it rejects the benefactive NP. The benefactive NP is topicalized in the interrogative sentence. It is presupposed and it cannot be rejected.

The response in (8) is appropriate because it corresponds to the interrogative sentence by rejecting the direct object.

(7) Q: *atín, okélo ɔ=wɪlo n:é ítabó?*

child Okelo 3S/P=PERF:buy for:3SG book
 ‘The child, did Okelo buy the book for him?’

A: #lí. okélo ɔ=wɪɔ né-dákó.
 No Okelo 3S/P=PERF:buy for-woman
 ‘No. Okelo bought it for the woman.’

(8) Q: atín, okélo ɔ=wɪɔ n:é ítabó?
 child Okelo 3S/P=PERF:buy for:3SG book
 ‘The child, did Okelo buy the book for him?’

A: lí. okélo ɔ=wɪɔ rɪjó.
 No Okelo 3S/P=PERF:buy meat
 ‘No. Okelo bought the meat.’

The locative NP *atá!lé* ‘market’ is topicalized and located in sentence initial position in (9). The interrogative sentence in (9) has the primary interpretation shown in (2d). The speaker wants to know if it was the market where Okelo bought the book for the child yesterday. Other interpretations are also possible for the interrogative sentence in (9).

The time adverbial *ɲoró* ‘yesterday’ is topicalized and located in sentence initial position in (10). The interrogative sentence in (10) has the primary interpretation shown in (2e). The speaker wants to know if it was yesterday when Okelo bought the book for the child at the market. Other interpretations are also possible for the interrogative sentence in (10).

Locative NPs and time adverbials are peripheral elements. When a peripheral element is topicalized, the illocutionary scope of the interrogative sentence is limited primarily to the topicalized NP. However, the illocutionary scope also can possibly extend to the whole interrogative sentence.

(9) atá!lé, okélo ɔ=wɪɔ né-á!tín itabɔ í-!é ɲó!ró?
 market, Okelo 3S/P=PERF:buy for-child book at-3SG yesterday
 ‘The market, did Okelo buy the book for the child there yesterday?’

(10) ɲoró, okélo ɔ=wɪɔ né-á!tín itabɔ í-atá!lé?
 yesterday, Okelo 3S/P=PERF:buy for-child book at-market
 ‘Yesterday, did Okelo buy the book for the child at the market yesterday?’

The locative NP *atá!lé* ‘market’ is topicalized in the interrogative sentence in (11) and (12). A locative NP constitutes a peripheral element in sentences. When a peripheral element is topicalized, illocutionary scope is limited primarily to the topicalized constituent. The response to the interrogative in (11) is not appropriate because it does not correspond to the interrogative sentence. The response in (11) rejects the direct object, not the locative NP.

The response in (12) is appropriate because it corresponds to the interrogative sentence. It

rejects the locative NP.

(11) Q: atále, okélo ɔ=wɪɔ itabʊ í-!é?
market Okelo 3S/P=PERF:buy book at-3SG
'At the market, did Okelo buy the book?'

A: #lí. okélo ɔ=wɪɔ riŋó.
No Okelo 3S/P=PERF:buy meat
'No. Okelo bought the meat.'

(12) Q: atále, okélo ɔ=wɪɔ itabʊ í-!é?
market Okelo 3S/P=PERF:buy book at-3SG
'At the market, did Okelo buy the book?'

A: #lí. okélo ɔ=wɪɔ ɪ-dʊ!ká.
No Okelo 3S/P=PERF:buy at-shop
'No. Okelo bought it at the shop.'

Time adverbials are peripheral elements. When a peripheral element is topicalized, illocutionary scope is limited primarily to the topicalized constituent. The time adverbial *poró* 'yesterday' is within the illocutionary scope. The response in (13) is not appropriate because it does not correspond to the interrogative sentence. It rejects the direct object.

The response in (14) is appropriate. It corresponds to the interrogative sentence by rejecting the time adverbial.

(13) Q: poró, okélo ɔ=wɪɔ itabʊ?
yesterday Okelo 3S/P=PERF:buy book
'Yesterday, did Okelo buy the book?'

A: #lí. okélo ɔ=wɪɔ riŋó.
No Okelo 3S/P=PERF:buy meat
'No. Okelo bought the meat.'

(14) Q: poró, okélo ɔ=wɪɔ itabʊ?
yesterday Okelo 3S/P=PERF:buy book
'Yesterday, did Okelo buy the book?'

A: lí. okélo ɔ=wɪɔ tɪn.
No Okelo 3S/P=PERF:buy today
'No. Okelo bought it today.'

The instrumental NP *pala* 'knife' is topicalized in the interrogative sentence in (15) and (16).

Instrumental NPs are peripheral elements in sentences. When a peripheral element is topicalized, illocutionary scope is limited primarily to the topicalized constituent. The response in (15) is not appropriate because it does not correspond to the interrogative sentence. It rejects the direct object.

The response in (16) is appropriate because it corresponds to the interrogative sentence. It rejects the instrumental NP.

(15) Q: pala, okélo ɔ=ɲolo riɲo ké!d:é?

knife Okelo 3S/PPERF:cut meat with:3SG

‘With the knife, did Okelo cut the meat?’

A: #lí. okélo ɔ=ɲolo maém!bé.

No Okelo 3S/P=PERF:cut mango

‘No. Okelo cut the mango.’

(16) Q: pala, okélo ɔ=ɲolo riɲo ké!d:é?

knife Okelo 3S/PPERF:cut meat with:3SG

‘With the knife, did Okelo cut the meat?’

A: lí. okélo ɔ=ɲolo kede-pán!gá.

No Okelo 3S/P=PERF:cut with-machete

‘No. Okelo cut it with the machete.’

In summary, when a core element is topicalized, the illocutionary scope extends to the constituents other than the topicalized NP. Topics are presupposed. The other constituents are assertion. Presupposed constituents are outside the illocutionary scope, while illocutionary scope extends to the assertion in a sentence.

Topics are presupposed. For example, the topicalized NP *itabó* ‘book’ in the second sentence is mentioned in the first sentence in (17). The second sentence is not appropriate pragmatically. Under the supposition that the topicalized NP *itabó* ‘book’ in the second sentence is not coreferential with the NP *itabó* ‘book’, the second sentence is grammatical and appropriate pragmatically.

Even though topicalization is not applied to the second sentence, the second sentence is not appropriate pragmatically in (18). If the non-human direct object *itabó* ‘book’ in the second sentence is coreferential with the direct object in the first sentence, it must be expressed by a zero anaphor in (19). A zero anaphor is used to refer to an activated direct object. From these examples we can conclude that topics are presupposed or given in the context.

- (17) a=wí!lóló itabó.
 1SG=PERF:buy book_i
 ‘I bought the book.’
 #itabó, atín-!ná ɔ=somo.
 book_i child-1SG 3S/P=PERF:read
 ‘The book, my child read.’
- (18) a=wí!lóló itabó.
 1SG=PERF:buy book_i
 ‘I bought the book.’
 #atín-!ná ɔ=somo itabó.
 child-1SG 3S/P=PERF:read book_i
 ‘My child read the book.’
- (19) a=wí!lóló itabó.
 1SG=PERF:buy book_i
 ‘I bought the book.’
 atín-!ná ɔ=somo φ.
 child-1SG 3S/P=PERF:read φ_i
 ‘My child read the book.’

When a peripheral element is topicalized, the illocutionary scope is limited primarily to the topicalized constituent. The illocutionary scope, however, can possibly extend to the whole interrogative sentence. Further studies are needed to determine the pragmatic or syntactic difference between the core and the peripheral elements when they are topicalized.

4.2 Focus

There is no established theory to define focus structure in languages. How many types of foci do languages have? Kumam has at least two types of foci, namely contrastive focus and unmarked focus.

4.2.1 Old and new information

Sentences convey old information and new information. Old information is mentioned in context or stored in the back grounded knowledge of the speaker and hearer. Old information is typically referred to by a zero anaphor or a weak form of a pronoun when it is activated in context.

Kumam transitive verbs always require two arguments. If they do not have direct objects, the sentences are not grammatical. However, if non-human objects are identified by the

speaker and hearer in context, the objects are not articulated segmentally. When human objects are identified by the speaker and hearer in context, object suffixes, weak forms of pronouns, are added to verbs.

For example, the non-human direct object is not articulated segmentally in the second sentence in (1) because it is identified in context by the speaker and hearer. If the human direct object *okélo* ‘Okelo’ is identified by the speaker and hearer, the 3rd person singular object suffix *-é* ‘3SG’ is added to the verb *neeko* ‘to kill’ in the second sentence in (2).

(1) *i=mátó pi?*
 2SG=IMPERF:drink water
 ‘Do you drink water?’
ee, a=mátó.
 yes 1SG=IMPERF:drink
 ‘Yes, I drink.’

(2) *i=né!kó okélo?*
 2SG=PERF:kill Okelo
 ‘Did you kill Okelo?’
ee, a=né!!k-é.
 yes 1SG=PERF:kill-3SG
 ‘Yes, I killed him.’

If the 3rd person singular object suffix *-é* ‘3SG’ is added to the verb *maatɔ* ‘to drink’ in the response, the sentence is not grammatical unless the object suffix refers to another referent than the one referred to by the object in the interrogative sentence.

(3) *i=mátó pi?*
 2SG=IMPERF:drink water_i
 ‘Do you drink water?’
 **ee, a=má!t-é.*
 yes 1SG=IMPERF:drink-3SG_i
 ‘Yes, I drink it.’

Given the fact discussed above, we could propose a zero anaphor after the verb *maatɔ* ‘to drink’ in the responses, that refers to a non-human direct object. The zero anaphor is coreferential with the object in the interrogative sentences.

(8) *κεε* *ο=nek-ά.*
 hunger 3S/P=PERF:kill-1SG
 ‘I am hungry.’

(9) *κεε* *ο=neko* *άηό.*
 hunger 3S/P=PERF:kill 1SG
 ‘The hunger killed me.’

The ‘idiomatic’ sentence in (8) brings focus on what happened to the 1st person singular object. The 1st person singular object is the topic in the sentence. Topics are always old information. Referents that convey old information should be referred to by a zero anaphor or a weak form of pronoun.

On the other hand, because the object in (9) is referred to by the 1st person singular independent pronoun, which is a strong form, it does not convey old information. It functions as the focus in the sentence. The subject *κεε* ‘hunger’ is the topic. The sentence in (9) puts focus on the 1st person singular object. Although pronominal elements usually convey old information, strong forms of pronouns can be focalized in sentences.

4.2.2 Focus structure

Information packaging is a common feature of languages. There are many variations among languages in terms of how to express packaged information linguistically. Some languages have phonological devices to express packaged information, others have morphological ones. Many languages have syntactic or pragmatic devices to express packaged information.

4.2.2.1 Introduction

Word order is determined in terms of information structure in non-configurational languages. For example, Japanese is a non-configurational language. The word order is determined not only by syntactic factors but also by pragmatic factors.

Japanese has SOV word order. The sentence in (1) is unmarked, while the sentence in (2) is marked pragmatically. The sentence in (2) is used by the speaker when he wants to say who is writing a letter. The speaker and hearer know that somebody is writing a letter. Thus, writing a letter is old information. The speaker believes that the hearer does not know who is writing a letter. The 1st person singular subject conveys new information. The sentence in (2) follows the principle that old information is first and new information is last. Word order in Japanese is flexible syntactically but strict pragmatically.

- (1) *watashi-ga tegami-o kaiteimasu.*
 1SG-NOM letter-ACC write:PROG:PRES
 ‘I am writing a letter.’
- (2) *tegami-o watashi-ga kaiteimasu.*
 letter-ACC 1SG-NOM write:PROG:PRES
 ‘I am writing a letter.’

English is a configurational language. The word order is highly restricted, but plays a role in identifying the topic and focus in sentences. English has a syntactically strict but pragmatically flexible word order. For example, the word order is fixed, but stress plays a pragmatic role in (3), (4), and (5). The sentence in (3) has stress on the subject, and the subject is focalized. The sentence in (4) is a predicate focus sentence. The sentence in (5) puts focus on the object.

- (3) *I* am writing a letter (not Tom).
 (4) I am *writing* a letter (not reading).
 (5) I am writing *a letter* (not a book).

Kumam is a configurational language like English, where word order is mainly determined by syntactic factors. Though Kumam is a configurational language, it shows some divergences from the canonical word order as a result of pragmatic factors. Kumam has relatively rigid SVO word order, when topicalization is not applied to sentences. Preverbal position is firmly restricted to subjects or adverbials in sentences when topicalization is not applied. Subjects are always located in preverbal position. On the other hand, word order in postverbal position is relatively flexible and is not only determined by syntactic factors but also by pragmatic factors.

4.2.2.2 Unmarked focus position

Kumam has two types of focus structures. One is contrastive focus and the other is unmarked focus structure⁵⁷. When the speaker brings constituents into focus, there is a position that the focalized constituents must occupy. This is called the unmarked focus position. We discuss the unmarked focus in this section.

The unmarked focus position is located in the final position of the core for core elements and in the final position of the periphery for peripheral elements.

⁵⁷ We will discuss contrastive focus constructions in Section 4.2.3.

Benefactive NPs are followed by direct objects in pragmatically unmarked sentences. However, the benefactive NP *okélo* ‘Okelo’ is preceded by the direct object *riḡó* ‘meat’ in the second sentence in (2). The second sentence is preceded by the first one in the discourse context. The first sentence provides information that the subject *dákó* ‘woman’ bought the direct object *kal kede-riḡó* ‘millet and meat’. The subject *dákó* ‘woman’ and the direct object *riḡó* ‘meat’ are old information in the second sentence. The benefactive NP *okélo* ‘Okelo’ is new information and is focalized in the second sentence. The unmarked focus position is the position that focalized constituents occupy in pragmatically unmarked sentences. Constituents that occupy the unmarked focus position typically convey new information. The speaker believes that the hearer has no knowledge about the constituents that occupy the unmarked focus position.

(1) *dákó* $\text{ɔ}=\text{tedo}$ *né-ó!kélo* *cám.*
 woman 3S/P=PERF:cook for-Okelo food
 ‘The woman cooked the food for Okelo.’

(2) *dákó* $\text{ɔ}=\text{wɪɔ}$ *kal* *kede-riḡó.*
 woman 3S/P=PERF:buy millet and-meat
dákó $\text{ɔ}=\text{tedo}$ *riḡo* *né-ó!kélo.*
 woman 3S/P=PERF:cook meat for-Okelo

‘The woman bought the millet and the meat. The woman cooked the meat for Okelo.’

The following examples consist of two sentences. The first sentence in (3) is followed by the second sentence presented from (3.a) to (3.f).

The sentences in (3.d), (3.e) and (3.f) are not grammatical syntactically because they do not follow the constraint that peripheral elements should not intervene between core elements. The locative NP *atá!lé* ‘market’, which is a peripheral element, intervenes between the core elements, namely the verb *tedo* ‘to cook’ and the direct object *riḡó* ‘meat’.

The sentence in (3.c) is not appropriate pragmatically when it is preceded by the sentence in (3) in the discourse context, though it is perfectly grammatical. The sentence in (3) provides information about the subject *dákó* ‘woman’ and the direct object *kal kede-riḡó* ‘millet and meat’. The direct object *riḡó* ‘meat’ is old information, while the benefactive NP *okélo* ‘Okelo’ is new information. Given that the direct object *riḡó* ‘meat’ is old information and occupies the unmarked focus position in the final position of core, the sentence in (3.c) is not pragmatically appropriate.

The sentences in (3.a) and (3.b) are grammatical syntactically and appropriate pragmatically, because the benefactive NP *okélo* ‘Okelo’ conveys new information and occupies the

unmarked focus position in the final position of the periphery in (3.a) and the final position of the core in (3.b). Benefactive NPs sometimes behave as core elements, sometimes as peripheral elements⁵⁸.

- (3) *dákó* \varnothing =wilo kal kede-rijó.
 woman 3S/P=PERF:buy millet and-meat
- (3.a) *dákó* \varnothing =tedo rijó í-atá!lé né-ó!kélo.
 woman 3S/P=PERF:cook meat in-market for-Okelo
- (3.b) *dákó* \varnothing =tedo rijó né-ó!kélo í-atá!lé.
 woman 3S/P=PERF:cook meat for-Okelo in-market
- (3.c) #*dákó* \varnothing =tedo né-ó!kélo rijó í-atá!lé.
 woman 3S/P=PERF:cook for-Okelo meat in-market
- (3.d) **dákó* \varnothing =tedo í-atá!lé rijó né-ó!kélo.
 woman 3S/P=PERF:cook in-market meat for-Okelo
- (3.e) **dákó* \varnothing =tedo né-ó!kélo í-atá!lé rijó.
 woman 3S/P=PERF:cook for-Okelo in-market meat
- (3.f) **dákó* \varnothing =tedo í-atá!lé né-ó!kélo rijó.
 woman 3S/P=PERF:cook in-market for-Okelo meat
 ‘The woman cooked millet and meat for Okelo yesterday.’

Direct object vs. Benefactive NP

Direct objects and benefactive NPs are members of core elements in sentences. If sentences are pragmatically unmarked, benefactive NP-direct object order is preferable. However, the order of benefactive NPs and direct objects is determined by pragmatic factors.

For example, the second sentence in (4) is perfectly grammatical, though it is pragmatically inappropriate. The direct object *kal* ‘millet’ is old information in the second sentence, because it has already been mentioned in the first sentence. Since the core element *kal* ‘millet’ conveys old information and occupies the final position of core for unmarked focus, the second sentence is not appropriate. On the other hand, the second sentence in (5) is pragmatically appropriate because the benefactive NP *atín* ‘child’ represents new information and occupies the unmarked focus position. The core element *atín* ‘child’ represents new information and occupies the final position of the core for unmarked focus. The second sentence in (5) follows the pragmatic convention that new information must occupy the

⁵⁸ The syntactic behavior of benefactive NPs needs to be studied further. Their behaviour might have something to do with the fact that benefactive NPs consist of the preposition *né-* ‘for’.

unmarked focus position.

- (4) a=wí!lós kal.
1SG=PERF:buy millet
'I bought the millet.'
#a=té!dó !né-á!tín kal.
1SG=PERF:cook for-child millet
'I cooked the millet for the child.'
- (5) a=wí!lós kal.
1SG=PERF:buy millet
'I bought the millet.'
a=té!dó kal né-á!tín.
1SG=PERF:cook millet for-child
'I cooked the millet for the child.'

The second sentence in (6) is the same as the second one in (4). The second sentence in (7) is the same as the second one in (5). The second sentence in (6) is appropriate pragmatically, while the second one in (4) is not. On the other hand, the second sentence in (7) is not appropriate pragmatically, while the second one in (5) is appropriate.

The benefactive NP *atín* 'child' is old information and the direct object *kal* 'millet' is new information in the second sentence in (6) and (7). Since the direct object *kal* 'millet' is new information and occupies the final position of core for unmarked focus, the second sentence in (6) is pragmatically appropriate. Because the benefactive NP *atín* 'child' is old information and occupies the final position of core for unmarked focus, the second sentence in (7) is inappropriate. The second sentence in (7) does not follow the pragmatic convention that new information must occupy the unmarked focus position.

The principle of the information packaging is that old information is first and new information is last. Constituents that represent old information should be followed by constituents that represent new information. The second sentences in (4) and (7) also do not follow this principle of information packaging.

- (6) a=né!nós atín.
1SG=PERF:see child
'I saw the child.'
a=té!dó !né-á!tín kal.
1SG=PERF:cook for-child millet

‘I cooked the millet for the child.’

(7) a=né!nó atín.

1SG=PERF:see child

‘I saw the child.’

#a=té!dó kal né-á!tín.

1SG=PERF:cook millet for-child

‘I cooked the millet for the child.’

The direct object *kal* ‘millet’ conveys new information in the second sentence in (8) and (9). The second sentence in (8) is appropriate pragmatically, because the constituent representing new information occupies the final position of the core for unmarked focus. Moreover, it follows the principle of information packaging in that old information is first and new information last.

The second sentence in (9) is pragmatically inappropriate because the benefactive NP *atín* ‘child’ conveys old information and occupies the unmarked focus position.

(8) atín ɔ=bino.

child 3S/P=PERF:come

‘The child came.’

a=té!dó !né-á!tín kal.

1SG=PERF:cook for-child millet

‘I cooked the millet for the child.’

(9) atín ɔ=bino.

child 3S/P=PERF:come

‘The child came.’

#a=té!dó kal né-á!tín.

1SG=PERF:cook millet for-child

‘I cooked the millet for the child.’

We can summarize the pragmatic convention as follows. Core elements should occupy the final position of the core for unmarked focus if they represent new information. This pragmatic convention is based on the principle of information packaging, namely that old information is followed by new information.

Direct object vs. Accompaniment NP

While accompaniment NPs are members of peripheral elements, they sometimes behave

irregularly regarding their position in sentences. They may intervene between core elements. For example, though the sentence in (11) violates the constraint that peripheral elements should not intervene between core elements, it is acceptable. Accompaniment NPs are sometimes directly preceded by verbs. The accompaniment preposition *kede-* ‘with’ has another function as a coordinator to connect NPs in conjunction. For example, the prepositional phrase *kede-atín* ‘with the child’ is interpreted to constitute a coordinate construction with the preceding NP *kal* ‘millet’ in (10). If the prepositional phrase *kede-atín* ‘with the child’ is directly preceded by the verb *teedo* ‘to cook’, it is easily interpreted to be an accompaniment NP in (11).

(10) a=té!dó kal kede-atín.
 1SG=PERF:cook millet with-child
 ‘I cooked the millet with the child.’

(11) a=té!dó kede-atín kal.
 1SG=PERF:cook with-child millet
 ‘I cooked the millet with the child.’

The order of direct objects and accompaniment NPs is determined by pragmatic factors. For example, the second sentence in (13) is syntactically grammatical but not appropriate pragmatically, because the direct object *kal* ‘millet’ conveys old information and occupies the unmarked focus position. Though the accompaniment NPs are preferably directly preceded by verbs as discussed above, the second sentence in (13) is not appropriate pragmatically.

The second sentence in (12) adheres to the principle of information packaging that old information is first and new information last. The accompaniment NP *atín* ‘child’ is new information and is preceded by the direct object *kal* ‘millet’ that is old information.

(12) a=wí!lós kal.
 1SG=PERF:buy millet
 ‘I bought the millet.’
 a=té!dó kal kede-atín.
 1SG=PERF:cook millet with-child
 ‘I cooked the millet with the child.’

(13) a=wí!lós kal.
 1SG=PERF:buy millet
 ‘I bought the millet.’

#a=té!dó kede-atín kal.
 1SG=PERF:cook with-child millet
 ‘I cooked the millet with the child.’

The second sentence in (14) is not appropriate pragmatically because the accompaniment NP *atín* ‘child’ conveys old information and occupies the unmarked focus position.

The second sentence in (15) is pragmatically appropriate, though it violates the constraint that peripheral elements should not intervene between core elements. However, accompaniment NPs may be directly preceded by verbs because of lexical reason. The direct object *kal* ‘millet’ conveys new information and occupies the unmarked focus position. The second sentence in (15) follows the principle of information packaging that old information is first and new information last.

(14) atín ɔ=bino.
 child 3S/P=PERF:come
 ‘The child came.’
 #a=té!dó kal kede-atín.
 1SG=PERF:cook millet with-child
 ‘I cooked the millet with the child.’

(15) atín ɔ=bino.
 child 3S/P=PERF:come
 ‘The child came.’
 a=té!dó kede-atín kal.
 1SG=PERF:cook with-child millet
 ‘I cooked the millet with the child.’

Direct object vs. Time adverbial

Time adverbials are members of peripheral elements, though they may intervene between core elements. They are located freely in sentences. Though they are usually preceded by direct objects in pragmatically unmarked sentences, the order of direct objects and time adverbials is determined by pragmatic factors.

For example, the second sentence in (16) is appropriate pragmatically. The second sentence in (17) is pragmatically inappropriate because the direct object *kal* ‘millet’ conveys old information and occupies the unmarked focus position. The second sentence in (17) does not follow the principle of information packaging that old information is followed by new information.

(16) a=wí!lós kal i-atá!lé.
 1SG=PERF:buy millet at-market
 ‘I bought the millet at the market.’
 a=té!dó kal ꞑoró.
 1SG=PERF:cook millet yesterday
 ‘I cooked the millet yesterday.’

(17) a=wí!lós kal i-atá!lé.
 1SG=PERF:buy millet at-market
 ‘I bought the millet at the market.’
 #a=té!dó ꞑoro kál.
 1SG=PERF:cook yesterday millet
 ‘I cooked the millet yesterday.’

The second sentence in (18) is not pragmatically appropriate because the time adverbial *ꞑoró* ‘yesterday’ represents old information and occupies the unmarked focus position. The second sentence in (19) is pragmatically appropriate because it follows the principle of information packaging that old information is first and new information last.

(18) dákó ɔʋdɔ túó ꞑoró.
 woman PAST sick yesterday
 ‘The woman was sick yesterday.’
 #a=té!dó kal ꞑoró.
 1SG=PERF:cook millet yesterday
 ‘I cooked the millet yesterday.’

(19) dákó ɔʋdɔ túó ꞑoró.
 woman PAST sick yesterday
 ‘The woman was sick yesterday.’
 a=té!dó ꞑoro kál.
 1SG=PERF:cook yesterday millet
 ‘I cooked the millet yesterday.’

Time adverbials may be freely located in sentences. If sentences are unmarked pragmatically, the scope of time adverbials extends to the whole sentence regardless of where they are located in the sentences. Therefore, the position of time adverbials does not clearly reflect information structure in the same way as the position of other participants.

Though the direct object *kal* ‘millet’ conveys old information and is preceded by the time

adverbial *ɲoró* ‘yesterday’, which conveys new information, Kumam speakers make a judgment that the second sentence in (21) is acceptable. Time adverbials may constitute a different linguistic category from nominal elements in Kumam.

- (20) ɔʊdɔ a=máró kal.
 PAST 1SG=IMPERF:like millet
 ‘I liked the millet.’
 a=té!dó kal ɲoró.
 1SG=PERF:cook millet yesterday
 ‘I cooked the millet yesterday.’
- (21) ɔʊdɔ a=máró kal.
 PAST 1SG=IMPERF:like millet
 ‘I liked the millet.’
 a=té!dó ɲoro kál.
 1SG=PERF:cook yesterday millet
 ‘I cooked the millet yesterday.’

Direct object vs. Benefactive NP vs. Time adverbial

Direct objects and benefactive NPs are core elements, while time adverbials are peripheral. Time adverbials, however, may intervene between core elements. The order of direct objects, benefactive NPs, and time adverbials is determined by pragmatic factors.

For example, the second sentences in (22) and (23) are pragmatically appropriate, while the second ones in (24), (25), (26), and (27) are inappropriate. Because the direct object *kal* ‘millet’ conveys old information and is followed by the benefactive NP *atín-!ná* ‘my child’ and the time adverbial *ɲoró* ‘yesterday’, which convey new information, the second sentences in (22) and (23) follow the principle of information packaging that old information is followed by new information.

The direct object *kal* ‘millet’ is preceded by the benefactive NP *atín-!ná* ‘my child’ in the second sentences in (24), (25), and (27). It is preceded by the time adverbial *ɲoró* ‘yesterday’ in the second sentence in (26). These sentences are not pragmatically appropriate because they do not follow the principle of information packaging.

- (22) a=wí!lɔ kal i-atá!lé.
 1SG=PERF:buy millet at-market
 ‘I bought the millet at the market.’

a=té!dó kal né-á!tín-!ná jóró.
 1SG=PERF:cook millet for-child-1SG yesterday
 ‘I cooked the millet for my child yesterday.’

(23) a=wí!lós kal i-atá!lé.
 1SG=PERF:buy millet at-market
 ‘I bought the millet at the market.’

a=té!dó kal joro né-á!tín-!ná.
 1SG=PERF:cook millet yesterday for-child-1SG
 ‘I cooked the millet for my child yesterday.’

(24) a=wí!lós kal i-atá!lé.
 1SG=PERF:buy millet at-market
 ‘I bought the millet at the market.’

#a=té!dó !né-á!tín-!ná kál joró.
 1SG=PERF:cook for-child-1SG millet yesterday
 ‘I cooked the millet for my child yesterday.’

(25) a=wí!lós kal i-atá!lé.
 1SG=PERF:buy millet at-market
 ‘I bought the millet at the market.’

#a=té!dó !né-á!tín-!ná joro kál.
 1SG=PERF:cook for-child-1SG yesterday millet
 ‘I cooked the millet for my child yesterday.’

(26) a=wí!lós kal i-atá!lé.
 1SG=PERF:buy millet at-market
 ‘I bought the millet at the market.’

#a=té!dó joro kál !né-á!tín-!ná.
 1SG=PERF:cook yesterday millet for-child-1SG
 ‘I cooked the millet for my child yesterday.’

(27) a=wí!lós kal i-atá!lé.
 1SG=PERF:buy millet at-market
 ‘I bought the millet at the market.’

#a=té!dó joro né-á!tín-!ná kál.
 1SG=PERF:cook yesterday for-child-1SG millet
 ‘I cooked the millet for my child yesterday.’

The benefactive NP *atín* ‘child’ is old information, and the direct object *kal* ‘millet’ and the time adverbial *joró* ‘yesterday’ represent new information in the second sentences cited

below. The second sentences in (30) and (31) are pragmatically appropriate, because the benefactive NP *atín* ‘child’ represents old information and is followed by the direct object *kal* ‘millet’ or the time adverbial *poró* ‘yesterday’, both of which represent new information. However, the second sentences in (28), (29), (32) and (33) are not appropriate, because the benefactive NP *atín!-ná* ‘my child’ conveys old information and is preceded by the direct object *kal* ‘millet’ or the time adverbial *poró* ‘yesterday’, which conveys new information.

- (28) ovdo a=tyé kede-atín.
 PAST 1SG=IMPERF:be with-child
 ‘I had the child.’
 #a=té!dó kal né-á!tín-!ná jó!ró.
 1SG=PERF:cook millet for-child-1SG yesterday
 ‘I cooked the millet for my child yesterday.’
- (29) ovdo a=tyé kede-atín.
 PAST 1SG=IMPERF:be with-child
 ‘I had the child.’
 #a=té!dó kal poro né-á!tín-!ná.
 1SG=PERF:cook millet yesterday for-child-1SG
 ‘I cooked the millet for my child yesterday.’
- (30) ovdo a=tyé kede-atín.
 PAST 1SG=IMPERF:be with-child
 ‘I had the child.’
 a=té!dó !né-á!tín-!ná kál poró.
 1SG=PERF:cook for-child-1SG millet yesterday
 ‘I cooked the millet for my child yesterday.’
- (31) ovdo a=tyé kede-atín.
 PAST 1SG=IMPERF:be with child
 ‘I had the child.’
 a=té!dó !né-á!tín-!ná jóro kál.
 1SG=PERF:cook for-child-1SG yesterday millet
 ‘I cooked the millet for my child yesterday.’
- (32) ovdo a=tyé kede-atín.
 PAST 1SG=IMPERF:be with-child
 ‘I had the child.’
 #a=té!dó poro kál !né-á!tín-!ná.
 1SG=PERF:cook yesterday millet for-child-1SG

‘I cooked the millet for my child yesterday.’

(33) ɔɔdɔ a=tyé kede-atín.
PAST 1SG=IMPERF:be with-child

‘I had the child.’

#a=té!dó ɲoro né-á!tín-!ná kál.
1SG=PERF:cook yesterday for-child-1SG millet
‘I cooked the millet for my child yesterday.’

The second sentences in (38) and (39) are appropriate pragmatically. The time adverbial *ɲoró* ‘yesterday’ represents old information and is followed by the direct object *kal* ‘millet’ or the benefactive NP *atín-!ná* ‘my child’, which represent new information. Thus, the second sentences in (34), (35), (36), and (37) are pragmatically inappropriate. Only the second sentences in (38) and (39) follow the principle of information packaging that old information is first and new information last.

(34) a=bí!nó ɲoró.
1SG=PERF:come yesterday

‘I came yesterday.’

#a=té!dó kal né-á!tín-!ná ɲó!ró.
1SG=PERF:cook millet for-child-1SG yesterday
‘I cooked the millet for my child yesterday.’

(35) a=bí!nó ɲoró.
1SG=PERF:come yesterday

‘I came yesterday.’

#a=té!dó kal ɲoro né-á!tín-!ná.
1SG=PERF:cook millet yesterday for-child-1SG
‘I cooked the millet for my child yesterday.’

(36) a=bí!nó ɲoró.
1SG=PERF:come yesterday

‘I came yesterday.’

#a=té!dó !né-á!tín-!ná kál ɲoró.
1SG=PERF:cook for-child-1SG millet yesterday
‘I cooked the millet for my child yesterday.’

(37) a=bí!nó ɲoró.
1SG=PERF:come yesterday

‘I came yesterday.’

#a=té!dó !né-á!tín-!ná jóro kál.
 1SG=PERF:cook for-child-1SG yesterday millet
 ‘I cooked the millet for my child yesterday.’

(38) a=bí!nó joró.
 1SG=PERF:come yesterday
 ‘I had the child.’

a=té!dó joro kál !né-á!tín-!ná.
 1SG=PERF:cook yesterday millet for-child-1SG
 ‘I cooked the millet for my child yesterday.’

(39) a=bí!nó joró.
 1SG=PERF:come yesterday
 ‘I had the child.’

a=té!dó joro né-á!tín-!ná kál.
 1SG=PERF:cook yesterday for-child-1SG millet
 ‘I cooked the millet for my child yesterday.’

Only the second sentence in (41) is appropriate pragmatically. The direct object *kal* ‘millet’ and the time adverbial *joró* ‘yesterday’ convey old information. The benefactive NP *atín* ‘child’ conveys to new information. The direct object *kal* ‘millet’ and the time adverbial *joró* ‘yesterday’ convey old information and are followed by the benefactive NP *atín-!ná* ‘my child’, which conveys new information, in the second sentence in (41). The benefactive NP *atín-!ná* ‘my child’ representing new information is followed by the direct object *kal* ‘millet’ or the time adverbial *joró* ‘yesterday’ representing old information in the second sentences in the other examples. Only the second sentence in (41) follows the principle of information packaging that old information is followed by new information.

(40) a=wí!lós kal joró.
 1SG=PERF:buy millet yesterday
 ‘I bought the millet yesterday.’

#a=té!dó kal né-á!tín-!ná jó!ró.
 1SG=PERF:cook millet for-child-1SG yesterday
 ‘I cooked the millet for my child yesterday.’

(41) a=wí!lós kal joró.
 1SG=PERF:buy millet yesterday
 ‘I bought the millet yesterday.’

a=té!dó kal joro né-á!tín-!ná.
 1SG=PERF:cook millet yesterday for-child-1SG
 ‘I cooked the millet for my child yesterday.’

(42) a=wí!lól kal joró.
 1SG=PERF:buy millet yesterday
 ‘I bought the millet yesterday.’
 #a=té!dó !né-á!tín-!ná kál joró.
 1SG=PERF:cook for-child-1SG millet yesterday
 ‘I cooked the millet for my child yesterday.’

(43) a=wí!lól kal joró.
 1SG=PERF:buy millet yesterday
 ‘I bought the millet yesterday.’
 #a=té!dó !né-á!tín-!ná joro kál.
 1SG=PERF:cook for-child-1SG yesterday millet
 ‘I cooked the millet for my child yesterday.’

(44) a=wí!lól kal joró.
 1SG=PERF:buy millet yesterday
 ‘I bought the millet yesterday.’
 #a=té!dó joro kál !né-á!tín-!ná.
 1SG=PERF:cook yesterday millet for-child-1SG
 ‘I cooked the millet for my child yesterday.’

(45) a=wí!lól kal joró.
 1SG=PERF:buy millet yesterday
 ‘I bought the millet yesterday.’
 #a=té!dó joro né-á!tín-!ná kál.
 1SG=PERF:cook yesterday for-child-1SG millet
 ‘I cooked the millet for my child yesterday.’

Time adverbial vs. Locative NP

Time adverbials and locative NPs are members of peripheral elements. The final position of the periphery is the unmarked focus position for peripheral elements.

For example, the second sentence in (47) is grammatical but inappropriate pragmatically because the locative NP *dwaliro* ‘hospital’ represents old information and occupies the final position of the periphery for unmarked focus. The second sentence in (46) is appropriate, because the time adverbial *joró* ‘yesterday’ conveys new information and occupies the unmarked focus position.

(46) a=ó!dó dwaliro.
 1SG=PERF:find hospital
 ‘I found the hospital.’
 a=rí!ηó i-dwaliro ηoró.
 1SG=PERF:run to-hospital yesterday
 ‘I ran to the hospital yesterday.’

(47) a=ó!dó dwaliro.
 1SG=PERF:find hospital
 ‘I found the hospital.’
 #a=rí!ηó ηoro í-dwaliro.
 1SG=PERF:run yesterday to-hospital
 ‘I ran to the hospital yesterday.’

The time adverbial *ηoró* ‘yesterday’ is old information. The second sentence in (48) is not pragmatically appropriate because the time adverbial *ηoró* ‘yesterday’ occupies the unmarked focus position. The second sentence in (49) is pragmatically appropriate because the locative NP *dwaliro* ‘hospital’ conveys new information and occupies the unmarked focus position. The second sentence in (49) follows the principle of information packaging that old information is first and new information last.

(48) atín-!ná óυδο túó ηoró.
 child-1SG PAST sick yesterday
 ‘My child was sick yesterday.’
 #a=rí!ηó i-dwaliro ηoró.
 1SG=PERF:run to-hospital yesterday
 ‘I ran to the hospital yesterday.’

(49) atín-!ná óυδο túó ηoró.
 child-1SG PAST sick yesterday
 ‘My child was sick yesterday.’
 a=rí!ηó ηoro í-dwaliro.
 1SG=PERF:run yesterday to-hospital
 ‘I ran to the hospital yesterday.’

Direct object vs. Locative NP

Locative NPs are members of peripheral elements, while direct objects are members of core elements. Locative NPs may not intervene between core elements. If a locative NP intervenes

between core elements, the sentence is syntactically ungrammatical. For example, the second sentence in (51) is ungrammatical because the locative NP *jokó!ní* ‘kitchen’ intervenes between the verb *teedo* ‘to cook’ and the direct object *kal* ‘millet’. The second sentence in (50) is grammatical and appropriate pragmatically because the locative NP *jokó!ní* ‘kitchen’ conveys new information and is preceded by the direct object *kal* ‘millet’ representing old information. It follows the principle of information packaging that old information is first and new information last.

(50) a=wí!lós kal.
 1SG=PERF:buy millet
 ‘I bought the millet.’
 a=té!dó kal i-jokó!ní.
 1SG=PERF:cook millet in-kitchen
 ‘I cooked the millet in the kitchen.’

(51) a=wí!lós kal.
 1SG=PERF:buy millet
 ‘I bought the millet.’
 *a=té!dó i-jokó!ní kál.
 1SG=PERF:cook in-kitchen millet
 ‘I cooked the millet in the kitchen.’

The locative NP *jokó!ní* ‘kitchen’ belongs to old information. The second sentence in (52) is not appropriate pragmatically because the locative NP *jokó!ní* ‘kitchen’ occupies the unmarked focus position. However, the second sentence in (53) is not syntactically grammatical because it violates the constraint that peripheral elements should not intervene between core elements. Therefore, the second sentence in (52) is accepted by Kumam speakers, though it is not appropriate pragmatically.

(52) a=ó!tó i-jokó!ní.
 1SG=PERF:go to-kitchen
 ‘I went to the kitchen.’
 #a=té!dó kal i-jokó!ní.
 1SG=PERF:cook millet in-kitchen
 ‘I cooked the millet in the kitchen.’

(53) a=ó!tó i-jokó!ní.
 1SG=PERF:go to-kitchen

‘I went to the kitchen.’

*a=té!dó i-jokó!ní kál.

1SG=PERF:cook in-kitchen millet

‘I cooked the millet in the kitchen.’

Direct object vs. Instrumental NP

Instrumental NPs are members of peripheral elements. They do not intervene between core elements. The second sentence in (55) is ungrammatical because it violates the constraint that peripheral elements should not intervene between core elements. The second sentence in (54) is syntactically grammatical and pragmatically appropriate, because the instrumental NP *pala* ‘knife’ represents new information and occupies the unmarked focus position.

(54) a=wí!lóló riŋó.

1SG=PERF:buy meat

‘I bought the meat.’

a=ŋó!lóló riŋo kéde-pala.

1SG=PERF:cut meat with-knife

‘I cut the meat with the knife.’

(55) a=wí!lóló riŋó.

1SG=PERF:buy meat

‘I bought the meat.’

*a=ŋó!lóló kede-pala riŋó.

1SG=PERF:cut with-knife meat

‘I cut the meat with the knife.’

The second sentence in (56) is not appropriate pragmatically because the instrumental NP *pala* ‘knife’ conveys old information and occupies the unmarked focus position. However, the second sentence in (57) is not grammatical syntactically because it violates the constraint that peripheral elements should not intervene between core elements. The second sentence in (56) is accepted by Kumam speakers, though it is not appropriate pragmatically.

(56) a=wí!lóló pala.

1SG=PERF:buy knife

‘I bought the meat.’

#a=ŋó!lóló riŋo kéde-pala.

1SG=PERF:cut meat with-knife

‘I cut the meat with the knife.’

(57) a=wí!lós pala.

1SG=PERF:buy knife

‘I bought the meat.’

*a=ηós!lós kede-pala rijó.

1SG=PERF:cut with-knife meat

‘I cut the meat with the knife.’

Direct object vs. Reason NP

Reason NPs are members of peripheral elements. They do not intervene between core elements.

The second sentence in (58) is grammatical and appropriate pragmatically because the reason NP *apejá* ‘examination’ belongs to the category of new information and occupies the unmarked focus position. The second sentence in (59) is not grammatical because the reason NP *apejá* ‘examination’ intervenes between the verb *wiló* ‘to buy’ and the direct object *itabó* ‘book’. It violates the constraint that peripheral elements should not intervene between core elements.

(58) a=ó!dós itabó.

1SG=PERF:find book

‘I found the book.’

a=wí!lós itabó pí-!ápejá.

1SG=PERF:buy book because of-examination

‘I bought the book because of the examination.’

(59) a=ó!dós itabó.

1SG=PERF:find book

‘I found the book.’

*a=wí!lós pí-ápejá itabó.

1SG=PERF:buy because of-examination book

‘I bought the book because of the examination.’

The second sentence in (60) is grammatical but pragmatically inappropriate because the reason NP *apejá* ‘examination’ represents old information and occupies the unmarked focus position. On the other hand, the second sentence in (61) is appropriate pragmatically because the direct object *itabó* ‘book’ conveys new information and occupies the unmarked focus position. However, it violates the constraint that peripheral elements should not intervene

between core elements. The second sentence in (60) is accepted by Kumam speakers.

- (60) $\sigma\upsilon\delta\omicron$ a=tyé kede-apepá.
PAST 1SG=IMPERF:be with-examination
'I had the examination.'
#a=wí!lós rtabσ pí-!ápepá.
1SG=PERF:buy book because of examination
'I bought the book because of the examination.'

- (61) $\sigma\upsilon\delta\omicron$ a=tyé kede-apepá.
PAST 1SG=IMPERF:be with-examination
'I had the examination.'
*a=wí!lós pí-ápepá ítabó.
1SG=PERF:buy because of-examination book
'I bought the book because of the examination.'

Pragmatic factors shape the arrangement of word order; however, sentences follow the syntactic constraint that peripheral elements should not intervene between core elements.

Direct object vs. Locative NP again

Locative NPs are members of peripheral elements. They do not intervene between core elements. For example, when direct objects are activated as topics, if they are not human, they are referred to by zero anaphors, and if they are human, they are referred to by pronominal elements.

For example, the zero anaphor of the second sentence refers to the direct object *kal* 'millet' in the first sentence in (62).

- (62) a=wí!lós kal.
1SG=PERF:buy millet_i
'I bought the millet.'
a=té!dó φ i-jokó!ní.
1SG=PERF:cook φ_i in-kitchen
'I cooked it in the kitchen.'

The 3rd person singular object suffix -é '3SG' in the second sentence refers to the direct object *ιcσσ* 'man' in the first sentence in (63).

- (63) a=né!nó icóó.
 1SG=PERF:see man_i
 ‘I saw the man.’
 a=nék-!!é kede-pala.
 1SG=PERF:kill-3SG_i with-knife
 ‘I killed him with the knife.’

When direct objects are expressed by zero anaphors or pronominal elements, sentences follow the pragmatic convention that constituents representing new information should occupy the unmarked focus position.

Accompaniment NP vs. Locative NP

Accompaniment NPs and locative NPs are members of peripheral elements. However, accompaniment NPs are preferably located directly after verbs for lexical reason. The accompaniment preposition *kede-* ‘with’ has another function as a coordinator to connect NPs. If accompaniment NPs consisting of the preposition *kede-* ‘with’ are preceded by other NPs, the accompaniment NP and the preceding NP are likely interpreted as an NP in a coordinate construction.

For example, the second sentence in (65) is usually interpreted to mean that the noun *atín* ‘child’ is connected to the preceding noun *dwaliro* ‘hospital’ by the preposition *kede-* ‘and, with’. Since the noun *atín* ‘child’ is located in the unmarked focus position, it is usually interpreted to refer to a different referent from the one to which the subject *atín* ‘child’ refers in the first sentence, because the unmarked focus position should be occupied by new information. Therefore, it is a natural interpretation that the noun *atín* ‘child’ is connected to the preceding NP by the preposition *kede-* ‘with’. The second sentence in (65) gives rise to a semantically strange interpretation. Even if the NP *atín* ‘child’ is interpreted to be an accompaniment, the second sentence in (65) is not appropriate because the locative NP *dwaliro* ‘hospital’ does not occupy the unmarked focus position.

The second sentence in (64) is pragmatically appropriate because the locative NP *dwaliro* ‘hospital’ conveys new information and occupies the unmarked focus position. Because the accompaniment NP *atín* ‘child’ represents old information and is followed by the locative NP *dwaliro* ‘hospital’, the second sentence in (64) follows the principle of information packaging.

- (64) atín ɔɔdɔ túó.
 child PAST sick

‘The child was sick.’

a=rí!ŋó kede-atín i-dwaliro.
1SG=PERF:run with-child to-hospital

‘I ran to the hospital with the child.’

(65) atín ɔ̀ɔ̀ɔ̀ túó.

child PAST sick

‘The child was sick.’

#?a=rí!ŋó i-dwaliro kede-atín.
1SG=PERF:run to-hospital and-child

‘?I ran to the hospital and the child.’

The locative NP *dwaliro* ‘hospital’ is old information in the second sentences in (66) and (67). The second sentence in (66) is not appropriate pragmatically, because the locative NP *dwaliro* ‘hospital’ represents old information and occupies the unmarked focus position. However, the second sentence does not give rise to a semantically strange interpretation. When accompaniment NPs are preceded by other NPs, they are usually interpreted to be connected to the preceding NPs with the preposition *kede-* ‘and’. The second sentence in (67) follows the principle of information packaging; however, it rises to a semantically strange interpretation. Therefore, the second sentence in (66) is accepted by Kumam speakers.

(66) a=ó!dó dwaliro.

1SG=PERF:find hospital

‘I found the hospital.’

#a=rí!ŋó kede-atín i-dwaliro.
1SG=PERF:run with-child to-hospital

‘I ran to the hospital with the child.’

(67) a=ó!dó dwaliro.

1SG=PERF:find hospital

‘I found the hospital.’

??a=rí!ŋó i-dwaliro kede-atín.
1SG=PERF:run to-hospital and-child

‘??I ran to the hospital and the child.’

Direct object vs. Indirect object

Kumam has a few ditransitive verbs that allow three arguments. For example, the verb *mino* ‘to give’ takes a subject, an indirect object, and a direct object as arguments. Indirect objects

are always followed by direct objects.

(68) a=mí!ó atín itabó.

1SG=PERF:give child book

‘I gave the child the book.’

(69) *a=mí!ó itabó á!tín.

1SG=PERF:give book child

‘I gave the child the book.’

A dative NP consisting of the preposition *bút-* ‘to’ cannot necessarily function as an indirect object in Kumam. When the verb *míno* ‘to give’ is followed by an indirect object, it denotes that the receivers keep the given items as their belongings. When the verb *míno* ‘to give’ is followed by the dative NP consisting of the preposition *bút-* ‘to’, it denotes that the receivers receive the given items and then pass them to others. The sentence in (70) is not semantically equivalent to the sentence in (68).

The dative NPs consisting of the preposition *bút-* ‘to’ are members of peripheral elements. The sentence in (71) is not grammatical because it violates the constraint that peripheral elements should not intervene between core elements.

(70) a=mí!ó itabó bú!tín.

1SG=PERF:give book to-child

‘I give the book to the child temporarily.’

(71) *a=mí!ó !bút-á!tín itabó.

1SG=PERF:give to-child book

‘I give the book to the child temporarily.’

Indirect objects cannot be preceded by direct objects. Moreover, the dative NPs consisting of the preposition *bút-* ‘to’ cannot function as indirect objects. Therefore, rearrangement of the order of constituents is not easy to fulfill pragmatic requirements.

When direct objects are activated as topics, they are referred to by zero anaphors or pronominal elements. When zero anaphors are used to refer to direct objects, they are preceded by indirect objects. For example, when the zero anaphor refers to the direct object *itabó* ‘book’, it is preceded by the indirect object *atín* ‘child’ in the second sentence in (72). When pronominal elements are used to refer to direct objects, they are attached to verbs and dative NPs consisting of the preposition *bút-* ‘to’ serve as the indirect objects. For example, when the pronominal element is used to refer to the direct object *itabó* ‘book’, the 3rd person

singular object suffix *-é* ‘3SG’ is attached to the verb *mɪnɔ* ‘to give’ and the indirect object is exchanged by the dative NP consisting of the preposition *bút-* ‘to’ in the second sentence in (73).

(72) a=wí!lɔ́ itabó.

1SG=PERF:buy book_i

‘I bought the book.’

#a=mí!lɔ́ atín φ.

1SG=PERF:give child φ_i

‘I gave it to the child.’

(73) a=wí!lɔ́ itabó.

1SG=PERF:buy book_i

‘I bought the book.’

a=mí!!-é bút-á!tín.

1SG=PERF:give-3SG_i to-child

‘I gave it to the child.’

Though sentences consisting of the verb *mɪnɔ* ‘to give’ followed by dative NPs with the preposition *bút-* ‘to’ have the original interpretation that receivers keep the given items and pass them to others, they are preferably used as equivalent sentences to those that consist of indirect objects. For example, Kumam speakers consider the second sentence in (73) more preferable than the second one in (72).

The second sentence in (72) is not appropriate pragmatically because the zero anaphor conveys old information and occupies the unmarked focus position. On the other hand, the second sentence in (73) is pragmatically appropriate because the dative NP *atín* ‘child’ conveys new information and occupies the unmarked focus position. Kumam speakers prefer pragmatically natural sentences even though they are not semantically equivalent.

The second sentence in (75) is grammatical and pragmatically appropriate. It follows the principle of information packaging that old information is first and new information last. When the indirect object *atín* ‘child’ is activated as a topic, however, it is referred to by the pronominal element *-é* ‘3SG’ that is attached to the verb *mɪnɔ* ‘to give’ in the second sentence in (74). The verb *mɪnɔ* ‘to give’ is followed by the direct object *itabó* ‘book’. The sentence in (74) is also pragmatically appropriate because it adheres to the principle of information packaging.

(74) $\alpha\upsilon\delta\omega$ a=tyé kede-atín.
 PAST 1SG=PERF:be with-child
 ‘I had the child.’
 a=mí!!-é ítabó.
 1SG=PERF:give-3SG book
 ‘I gave him the book.’

(75) $\alpha\upsilon\delta\omega$ a=tyé kede-atín.
 PAST 1SG=PERF:be with-child
 ‘I had the child.’
 a=mí!ís atín itabó.
 1SG=PERF:give child book
 ‘I gave the child the book.’

Benefactive NP vs. Locative NP

Benefactive NPs sometimes behave as core elements and sometimes as peripheral elements in sentences. Locative NPs are members of peripheral elements.

The second sentence in (76) is not appropriate pragmatically because the locative NP *atá!lé* ‘market’ represents old information and occupies the unmarked focus position for peripheral elements. The second sentence in (77) is appropriate because the benefactive NP *atín* ‘child’ is new information and occupies the unmarked focus position for peripheral elements. The benefactive NP *atín* ‘child’ behaves as a peripheral element in this case. The second sentence in (76) does not follow the principle of information packaging that old information is first and new information last. The second sentence in (77) follows the principle of information packaging⁵⁹.

(76) a=ó!tó i-atá!lé.
 1SG=PERF:go to-market
 ‘I went to the market.’
 #a=wí!lós riŋo né-át!ín i-atá!lé.
 1SG=PERF:buy meat for-child at-market
 ‘I bought the meat for the child at the market.’

(77) a=ó!tó i-atá!lé.
 1SG=PERF:go to-market

⁵⁹ We compare benefactive NPs with locative NPs here. Benefactive NPs are preferably followed by direct objects in pragmatically unmarked sentences.

‘I went to the market.’

a=wí!lós rijo í-atá!lé né-át!ín.

1SG=PERF:buy meat at-market for-child

‘I bought the meat for the child at the market.’

The second sentence in (78) is pragmatically appropriate, while the second sentence in (79) is not appropriate. The locative NP *atá!lé* ‘market’ represents new information and occupies the unmarked focus position for peripheral elements in the second sentence in (78). The benefactive NP *atín* ‘child’ is old information and occupies the unmarked focus position for peripheral elements. The second sentence in (79) does not follow the pragmatic convention that the unmarked focus position should be occupied by new information.

(78) *atín* ɔ=bino.

child 3S/P=PERF:come

‘The child.’

a=wí!lós rijo né-át!ín i-atá!lé.

1SG=PERF:buy meat for-child at-market

‘I bought the meat for the child at the market.’

(79) *atín* ɔ=bino.

child 3S/P=PERF:come

‘The child.’

#a=wí!lós rijo í-atá!lé né-át!ín.

1SG=PERF:buy meat at-market for-child

‘I bought the meat for the child at the market.’

Instrumental NP vs. Time adverbial

Instrumental NPs and time adverbials are members of peripheral elements in sentences. Time adverbials are freely located in sentences as discussed before. However, instrumental NP – time adverbial order is determined to some extent by pragmatic factors.

For example, the second sentence in (80) is pragmatically appropriate because the time adverbial *ɲoró* ‘yesterday’ represents new information and occupies the unmarked focus position for peripheral elements. Since the instrumental NP *pala* ‘knife’ conveys old information and occupies the unmarked focus position for peripheral elements, the second sentence in (81) is not appropriate pragmatically⁶⁰.

⁶⁰ We compare instrumental NPs with time adverbials. We ignore the position of direct objects.

- (80) a=wí!lós pala.
 1SG=PERF:buy knife
 ‘I bought the knife.’
 a=ŋó!lós riŋo kéde-pala ŋoró.
 1SG=PERF:cut meat with-knife yesterday
 ‘I cut the meat with the knife yesterday.’
- (81) a=wí!lós pala.
 1SG=PERF:buy knife
 ‘I bought the knife.’
 #a=ŋó!lós riŋo ŋóro kéde-pala.
 1SG=PERF:cut meat yesterday with-knife
 ‘I cut the meat with the knife yesterday.’

The second sentence in (82) is not pragmatically appropriate because the time adverbial *ŋoró* ‘yesterday’ represents old information and occupies the unmarked focus position for peripheral elements. The second sentence in (83) is pragmatically appropriate because the instrumental NP *pala* ‘knife’ conveys new information and occupies the unmarked focus position for peripheral elements.

- (82) ŋoro óudó céŋ sábiti.
 yesterday PAST Sunday
 ‘Yesterday was Sunday.’
 #a=ŋó!lós riŋo kéde-pala ŋoró.
 1SG=PERF:cut meat with-knife yesterday
 ‘I cut the meat with the knife yesterday.’
- (83) ŋoro óudó céŋ sábiti.
 yesterday PAST Sunday
 ‘Yesterday was Sunday.’
 a=ŋó!lós riŋo ŋóro kéde-pala.
 1SG=PERF:cut meat yesterday with-knife
 ‘I cut the meat with the knife yesterday.’

Locative NP vs. Instrumental NP

Locative NPs and instrumental NPs are members of peripheral elements. Locative NP – instrumental NP order is determined by pragmatic factors.

For example, the second sentence in (84) is pragmatically appropriate because the locative

NP *atá!lé* ‘market’ belongs to new information and occupies the unmarked focus position for peripheral elements. The second sentence in (85) is not appropriate pragmatically because the instrumental NP *pala* ‘knife’ represents old information and occupies the unmarked focus position for peripheral elements. It does not follow the pragmatic convention that the unmarked focus position should be occupied by new information⁶¹.

- (84) a=wí!lós pala.
 1SG=PERF:buy knife
 ‘I bought the knife.’
 a=ŋó!lós riŋo kéde-pala i-atá!lé.
 1SG=PERF:cut meat with-knife at-market
 ‘I cut the meat with the knife at the market.’
- (85) a=wí!lós pala.
 1SG=PERF:buy knife
 ‘I bought the knife.’
 ?/#a=ŋó!lós riŋo i-atá!lé kéde-pala.
 1SG=PERF:cut meat at-market with-knife
 ‘I cut the meat with the knife at the market.’

The second sentence in (86) is not appropriate pragmatically because the locative NP *atá!lé* ‘market’ belongs to old information and occupies the unmarked focus position. The second sentence in (87) is appropriate pragmatically because the instrumental NP *pala* ‘knife’ is new information and occupies the unmarked focus position. However, Kumam speakers prefer the second sentence in (86) to the second one in (87).

The preposition *kede-* ‘with’ has another function as a coordinator to connect NPs. The second sentence in (87) gives rise to a semantically strange interpretation, namely that the speaker cut the meat at the market and knife.

- (86) a=cá!tó riŋo i-atá!lé.
 1SG=PERF:sell meat at-market
 ‘I sold the meat at the market.’
 #a=ŋó!lós riŋo kéde-pala i-atá!lé.
 1SG=PERF:cut meat with-knife at-market
 ‘I cut the meat with the knife at the market.’

⁶¹ We compare locative NPs with instrumental NPs. We ignore the position of direct objects.

- (87) a=cá!tó rijo í-atá!lé.
 1SG=PERF:sell meat at-market
 ‘I sold the meat at the market.’
 ?a=ŋó!lóló rijo í-atá!lé kéde-pala.
 1SG=PERF:cut meat at-market with-knife
 ‘I cut the meat with the knife at the market.’

4.2.2.3 Unmarked focus position and wh-words

Kumam has three types of wh-questions, wh-questions in cleft construction, wh-questions in relative constructions, and in situ wh-questions. We discuss the relationship between in situ wh-questions and information structure in this section.

Wh-words occupy the unmarked focus position in in situ wh-questions. Wh-words typically represent new information because wh-questions are used by the speaker to get new information about the entities to which the wh-words correspond. New information should occupy the unmarked focus position, as discussed in the preceding section. Therefore, wh-words should occupy the unmarked focus position, either the final position of the core for core elements or the final position of the periphery for peripheral elements in pragmatically unmarked sentences.

When wh-words are subjects in in situ wh-questions, they are located in sentence initial position, which is not the position for unmarked focus. For example, the wh-word *ŋái* ‘who’ is located in the sentence initial position in (1).

- (1) ?ŋái ó=neko né-món é!ŋú í-abúm ɲoró?
 who 3S/P=PERF:kill for-women lion in-forest yesterday
 ‘Who killed the lion for the women in the forest yesterday?’

When wh-words are subjects, however, in situ wh-questions are reluctantly accepted but are not preferred by Kumam speakers, because wh-words do not occupy the unmarked focus position. Wh-questions in cleft constructions are preferably used by Kumam speakers when wh-words are subjects in interrogative sentences⁶². Wh-words occupy the slot for clefted NPs in wh-questions consisting of cleft constructions. For example, the wh-word *ŋái* ‘who’ occupies the slot for clefted NPs in (2).

⁶² Cf. Section 4.2.4.

- (2) ḡáí éñ á !ó=neko né-món é!ḡú í-abúm ḡoró?
 who 3SG REL 3S/P=PERF:kill for-women lion in-forest yesterday
 ‘It is who killed the lion for the women in the forest yesterday?’

When wh-words are not subjects in interrogative sentences, they occupy the unmarked focus position in in situ wh-questions.

For example, the wh-word *ḡó* ‘what’ is a member of core elements. The sentences in (3) and (4) are grammatical because they follow the syntactic constraint that peripheral elements should not intervene between core elements. The sentence in (5) is not grammatical syntactically, because the locative NP *abúm* ‘forest’ intervenes between the benefactive NP *món* ‘women’ and the wh-word *ḡó* ‘what’.

The sentence in (6) is ungrammatical, because the locative NP *abúm* ‘forest’ and the time adverbial *ḡoró* ‘yesterday’ intervene between the benefactive NP *món* ‘women’ and the wh-word *ḡó* ‘what’. However, some Kumam speakers reluctantly accept the sentence in (6). Though the wh-word *ḡó* ‘what’ is not a member of peripheral elements, it occupies the unmarked focus position for peripheral elements. That might be the reason why the sentence in (6) is accepted by some Kumam speakers.

The sentences in (3) and (4) are both syntactically grammatical but the arrangement of word order is determined by pragmatic factors, as discussed later.

- (3) ɪcɔɔ ɔ=neko né-món ḡó í-abúm ḡoró?
 man 3S/P=PERF:kill for-women what in-forest yesterday
 ‘What did the man kill for the women in the forest yesterday?’
- (4) ɪcɔɔ ɔ=neko ḡó né-món í-abúm ḡoró?
 man 3S/P=PERF:kill what for-women in-forest yesterday
 ‘What did the man kill for the women in the forest yesterday?’
- (5) *ɪcɔɔ ɔ=neko né-món í-abúm ḡó ḡó!ró?
 man 3S/P=PERF:kill for-women in-forest what yesterday
 ‘What did the man kill for the women in the forest yesterday?’
- (6) */?ɪcɔɔ ɔ=neko né-món í-abúm ḡoro ḡó?
 man 3S/P=PERF:kill for-women in-forest yesterday what
 ‘What did the man kill for the women in the forest yesterday?’

Direct object vs. Benefactive NP

Direct objects and benefactive NPs are members of core elements in sentences. If sentences are pragmatically unmarked, the benefactive NP-direct object order is preferable. When

wh-words are direct objects, they are preceded by benefactive NPs in pragmatically unmarked sentences. The responses to the wh-question have the corresponding NPs to the wh-words in situ position. For example, the wh-word *ɲó* ‘what’ is preceded by the benefactive NP *atín* ‘child’ in the wh-question shown in (7), and the direct object *kal* ‘millet’ corresponding to the wh-word *ɲó* ‘what’ is preceded by the benefactive NP *atín* ‘child’ in the response, as shown in (8).

- (7) $\epsilon=té!dó$ $!né-á!tín$ $!ɲó?$
 3SG=PERF:cook for-child what
 ‘What did he cook for the child?’
- (8) $\epsilon=té!dó$ $!né-á!tín$ *kal*.
 3SG=PERF:cook for-child millet
 ‘He cooked the millet for the child.’

The wh-question in (9) is pragmatically appropriate because the wh-word *ɲó* ‘what’ represents new information and occupies the unmarked focus position. It follows the principle of information packaging that old information is first and new information last.

- (9) *atín* $\text{ɔ}=\text{bino}$.
 child 3S/P=PERF:come
 ‘The child came.’
- $\epsilon=té!dó$ $!né-á!tín$ $!ɲó?$
 3SG=PERF:cook for-child what
 ‘What did he cook for the child?’

The wh-question in (10) is not pragmatically appropriate because the benefactive NP *atín* ‘child’ is old information and occupies the unmarked focus position. It does not follow the principle of information packaging that old information is followed by new information.

- (10) *atín* $\text{ɔ}=\text{bino}$.
 child 3S/P=PERF:come
 ‘The child came.’
- $\# \epsilon=té!dó$ $!ɲó$ $né-á!tín?$
 3SG=PERF:cook what for-child
 ‘What did he cook for the child?’

The response to the wh-question in (9) is presented below in (11).

- (11) ε=té!dó !né-á!tín kal.
3SG=PERF:cook for-child millet
'He cooked the millet for the child.'

If direct objects are old information, they avoid occupying the unmarked focus position. For example, the wh-question in (12) is not appropriate pragmatically because the direct object *riŋó* 'meat' conveys old information and occupies the unmarked focus position. The wh-word *ŋái* 'who' is new information. The wh-question does not follow the principle of information packaging that old information should be followed by new information.

The wh-question in (13) is pragmatically appropriate because the wh-word *ŋái* 'who' is new information and occupies the unmarked focus position. It follows the principle of information packaging that old information is first and new information last. The sentence in (14) is the answer to the wh-question in (13) and also follows the principle of information packaging.

- (12) i=wí!ló riŋó.
2SG=PERF:buy meat
'You bought the meat.'
#i=té!dó !né-ŋái ri!ŋó?
2SG=PERF:cook for-who meat
'For whom did you cook the meat?'

- (13) i=wí!ló riŋó.
2SG=PERF:buy meat
'You bought the meat.'
i=té!dó riŋo né-ŋái?
2SG=PERF:cook meat for-who
'For whom did you cook the meat?'

- (14) a=té!dó riŋo né-á!tín.
1SG=PERF:cook meat for-child
'I cooked the meat for the child.'

Direct object vs. Locative NP

Direct objects are members of core elements and locative NPs are peripheral. Peripheral elements may not intervene between core elements. Even though locative NPs are old information, they are not followed by direct objects.

For example, the wh-question in (15) is grammatical syntactically but inappropriate pragmatically because the locative NP *abúm* ‘forest’ represents old information and occupies the unmarked focus position. On the other, though the wh-question in (16) is pragmatically appropriate, it is not syntactically grammatical. It violates the syntactic constraint that peripheral elements should not intervene between core elements. Kumam speakers allow the wh-question in (15) but do not accept the wh-question in (16).

- (15) a=ó!dó abúm.
 1SG=PERF:find forest
 ‘I found the forest.’
 #ε=né!kó !jó í-abúm?
 3SG=PERF:kill what in-forest
 ‘What did he kill in the forest?’

- (16) a=ó!dó abúm.
 1SG=PERF:find forest
 ‘I found the forest.’
 *ε=né!kó i-abúm jó?
 3SG=PERF:kill in-forest what
 ‘What did he kill in the forest?’

The sentence in (17) is accepted by Kumam speakers as the answer to the wh-question in (15), though it is not appropriate pragmatically. The sentence in (18) is not syntactically grammatical because the locative NP *abúm* ‘forest’ intervenes between the verb *neeko* ‘to kill’ and the direct object *ejú* ‘lion’.

- (17) ε=né!kó ejú í-abúm.
 3SG=PERF:kill lion in-forest
 ‘He killed the lion in the forest.’
 (18) *ε=né!kó i-abúm ejú.
 3SG=PERF:kill in-forest lion
 ‘He killed the lion in the forest.’

Direct object vs. Time adverbial

Time adverbials are members of peripheral elements, though they are freely located in sentences. The order of direct objects and time adverbials is not often rearranged by information structure, because the scope of time adverbials extends to whole sentences.

For example, the wh-question in (19) is not pragmatically appropriate in terms of the principle of information packaging, because the time adverbial *ɲoró* ‘yesterday’ is old information and occupies the unmarked focus position. However, it follows the syntactic constraint that peripheral elements should not intervene between core elements.

On the other hand, the wh-question in (20) is appropriate pragmatically because the wh-word *ɲó* ‘what’ conveys new information and occupies the unmarked focus position. However, it violates the syntactic constraint that peripheral elements should not intervene between core elements. As pointed out above, time adverbials are freely located in sentences. Given that the scope of time adverbials extends to whole sentences, the wh-question in (19) is semantically equivalent to the one in (20). Kumam speakers accept the wh-questions in (19) and (20).

The responses to the wh-questions in (19) and (20) are the sentences shown in (21) and (22), respectively, though the wh-question in (19) is pragmatically inappropriate.

(19) a=né!!n-é ɲó!ró.

1SG=PERF:see-3SG yesterday

‘I saw him yesterday.’

#ε=né!kó !ɲó ɲó!ró?

3SG=PERF:kill what yesterday

‘What did he kill yesterday?’

(20) a=né!!n-é ɲó!ró.

1SG=PERF:see-3SG yesterday

‘I saw him yesterday.’

ε=né!kó ɲoro ɲó?

3SG=PERF:kill yesterday what

‘What did he kill yesterday?’

(21) ε=né!kó eɲú ɲó!ró.

3SG=PERF:kill lion yesterday

‘He killed the lion yesterday.’

(22) ε=né!kó ɲoro é!ɲú.

3SG=PERF:kill yesterdaylion

‘He killed the lion yesterday.’

Direct object vs. Indirect object

Indirect objects are always followed by direct objects in sentences. The wh-question in (23) is syntactically grammatical and pragmatically appropriate. The wh-word *ɲó* ‘what’ conveys

new information and occupies the unmarked focus position. The wh-question in (23) follows the principle of information packaging that old information is first and new information last.

- (23) $\text{ovdo} \quad \varepsilon=\text{tyé} \quad \text{kede-atín.}$
 PAST 3SG=IMPERF:be with-child
 ‘He had the child.’
 $\varepsilon=\text{mí!ó} \quad \text{atín} \quad \text{!jó?}$
 3SG=PERF:give child what
 ‘What did he give the child?’

The wh-question in (24) is syntactically ungrammatical and also pragmatically inappropriate. The indirect object *atín* ‘child’ represents old information and occupies the unmarked focus position. Moreover, it is preceded by the direct object *jó* ‘what’.

- (24) $\text{ovdo} \quad \varepsilon=\text{tyé} \quad \text{kede-atín.}$
 PAST 3SG=IMPERF:be with-child
 ‘He had the child.’
 $*\varepsilon=\text{mí!ó} \quad \text{!jó} \quad \text{á!tín?}$
 3SG=PERF:give what child
 ‘What did he give the child?’

The wh-question in (25) is syntactically grammatical but pragmatically inappropriate. The direct object *itabó* ‘book’ represents old information and occupies the unmarked focus position. The wh-question in (25) does not follow the principle of information packaging that old information is first and new information last.

- (25) $\text{i=wí!ló} \quad \text{itabó.}$
 2SG=PERF:buy book
 ‘You bought the book.’
 $\#i=\text{mí!ó} \quad \text{!háí} \quad \text{itabó?}$
 2SG=PERF:give who book
 ‘To whom did you give the book?’

The wh-question in (26) is not grammatical because the wh-word *háí* ‘who’ as an indirect object is preceded by the direct object *itabó* ‘book’.

- (26) *i=wí!ló* *itabó.*
 2SG=PERF:buy book
 ‘You bought the book.’
 **i=mí!ló* *itabó* *ɲái?*
 2SG=PERF:give book who
 ‘To whom did you give the book?’

In order to follow the pragmatic convention that the unmarked focus position should be occupied by new information, one must use pronominal elements to refer to direct objects that represent old information. When direct objects are referred to by pronominal elements, indirect objects should be expressed by prepositional phrases consisting of the preposition *bút-* ‘to’. The sentences consisting of the prepositional phrases with *bút-* ‘to’ are semantically different from the sentences consisting of indirect objects. They denote that the receivers keep the given items temporarily. However, they are sometimes used as equivalents to the sentences consisting of indirect objects in order to fulfill pragmatic requirements. Wh-questions consisting of prepositional phrases with *but-* ‘to’ are used to fulfill pragmatic requirements. For example, the wh-question in (27) follows the pragmatic convention because the wh-word *ɲái* ‘who’ occupies the unmarked focus position.

- (27) *i=wí!ló* *itabó.*
 2SG=PERF:buy book
 ‘You bought the book.’
i=mí!!-é *bút-ɲái?*
 2SG=PERF:give:3SG to-who
 ‘To whom did you give it?’

Benefactive NP vs. Locative NP

Benefactive NPs sometimes behave as core elements and sometimes as peripheral elements. Locative NPs are members of peripheral elements. When benefactive NPs are interpreted as peripheral elements, they may be preceded by locative NPs.

The wh-question in (28) is not appropriate pragmatically because the locative NP *atá!lé* ‘market’ conveys old information and occupies the unmarked focus position.

The wh-question in (29) is syntactically grammatical and pragmatically appropriate. The wh-word *ɲái* ‘who’ is new information and occupies the unmarked focus position for peripheral elements. The benefactive NP behaves as a peripheral element. The wh-question in (29) adheres to the principle of information packaging.

- (28) i=ó!tó i-atá!lé.
 2SG=PERF:go to-market
 ‘You went to the market.’
 #i=wí!lós riŋo né-ŋái í-atá!lé?
 2SG=PERF:buy meat for-who at-market
 ‘For whom did you buy the meat at market?’
- (29) i=ó!tó i-atá!lé.
 2SG=PERF:go to-market
 ‘You went to the market.’
 i=wí!lós riŋo í-atá!lé né-ŋái?
 2SG=PERF:buy meat at-market for-who
 ‘For whom did you buy the meat at market?’

Benefactive NP vs. Time adverbial

Time adverbials are freely located in any position except for direct preverbal positions. The scope of time adverbials extends to whole sentences. Consequently, the position of time adverbials does not directly reflect information structure. However, the position of time adverbials is sometimes determined by pragmatic factors.

For example, the *wh*-question in (30) is not pragmatically appropriate because the time adverbial *poró* ‘yesterday’ is old information and occupies the unmarked focus position. The *wh*-question in (31) is syntactically grammatical and pragmatically appropriate. The *wh*-word *ŋái* ‘who’ conveys new information and occupies the unmarked focus position for peripheral elements. The *wh*-word *ŋái* ‘who’ as a benefactive NP is preceded by the time adverbial *poró* ‘yesterday’. The *wh*-word *ŋái* ‘who’ behaves as a peripheral element here. The *wh*-question in (31) follows the principle of information packaging that old information is first and new information last.

- (30) poro óũdó céŋ sábiti.
 yesterday PAST Sunday
 ‘Yesterday was Sunday.’
 #i=wí!lós riŋo né-ŋái poró?
 2SG=PERF:buy meat for-who yesterday
 ‘For whom did you buy the meat yesterday?’
- (31) poro óũdó céŋ sábiti.
 yesterday PAST Sunday
 ‘Yesterday was Sunday.’

i=wí!lǒ rijo jǒro né-ŋáí?
 2SG=PERF:buy meat yesterday for-who
 ‘For whom did you buy the meat yesterday?’

Wh-words ‘when’ and ‘where’

Wh-words *awene* ‘when’ and *i-túai/túai/ai* ‘where’ are always located in the unmarked focus position for peripheral elements. They are members of peripheral elements. Since these wh-words convey new information, they should occupy the unmarked focus position in pragmatically unmarked sentences. For example, the wh-question in (32) is appropriate because the wh-word *awene* ‘when’ occupies the unmarked focus position. The wh-question in (33) is inappropriate pragmatically because the benefactive NP *atín* ‘child’ is old information and occupies the unmarked focus position.

(32) atín ɔ=bino.
 child 3S/P=PERF:come
 ‘The child came.’
 i=té!dó rijo né-á!tín awene?
 2SG=PERF:cook meat for-child when
 ‘When did you cook the meat for the child?’

(33) atín ɔ=bino.
 child 3S/P=PERF:come
 ‘The child came.’
 #i=té!dó rijo áwene né-á!tín?
 2SG=PERF:cook meat when for-child
 ‘When did you cook the meat for the child?’

The wh-question in (34) is appropriate because the wh-word *i-túai* ‘where’ occupies the unmarked focus position. The wh-question in (35) is not appropriate pragmatically because the benefactive NP *atín* ‘child’ is old information and occupies the unmarked focus position. The wh-question in (35) does not follow the principle of information packaging that old information is first and new information last.

(34) atín ɔ=bino.
 child 3S/P=PERF:come
 ‘The child came.’

i=wí!lós rijo né-átín itúai?
 2SG=PERF:buy meat for-child where
 ‘Where did you buy the meat for the child?’

(35) atín ɔ=bino.

child 3S/P=PERF:come
 ‘The child came.’

#i=wí!lós rijo í!túai né-átín?
 2SG=PERF:buy meat where for-child
 ‘Where did you buy the meat for the child?’

Direct object ‘what’ vs. Benefactive NP vs. Locative NP

Locative NPs are members of peripheral elements. They may not intervene between core elements. The wh-questions in (37), (40) and (41) are syntactically ungrammatical because the locative NP *jokó!ní* ‘kitchen’ intervenes between core elements.

Though the wh-questions in (36), (38) and (39) are syntactically grammatical, only the wh-question in (36) is pragmatically appropriate because the wh-word *jó* ‘what’ is new information and occupies the unmarked focus position. The wh-questions in (38) and (39) are not pragmatically appropriate because the benefactive NP *atín* ‘child’ is old information and occupies the unmarked focus position for core elements in (38) and the unmarked focus position for peripheral elements in (39).

(36) ɔɔdɔ ɛ=tyé kede-atín.

PAST 3SG=IMPERF:be with-child
 ‘He had the child.’

ɛ=té!dó !né-á!tín !jó í-jokó!ní?
 3SG=PERF:cook for-child what in-kitchen
 ‘What did he cooked for the child in the kitchen?’

(37) ɔɔdɔ ɛ=tyé kede-atín.

PAST 3SG=IMPERF:be with child
 ‘He had the child.’

*ɛ=té!dó !né-á!tín í-jokó!ní jó?
 3SG=PERF:cook for-child in-kitchen what
 ‘What did he cooked for the child in the kitchen?’

(38) ɔɔdɔ ɛ=tyé kede-atín.

PAST 3SG=IMPERF:be with-child
 ‘He had the child.’

#ε=té!dó !jó né-átín i-jokó!ní?

3SG=PERF:cook what for-child in-kitchen

‘What did he cooked for the child in the kitchen?’

(39) ɔɔɔɔ ε=tyé kede-atín.

PAST 3SG=IMPERF:be with-child

‘He had the child.’

#ε=té!dó !jó í-jokó!ní né-átín?

3SG=PERF:cook what in-kitchen for-child

‘What did he cooked for the child in the kitchen?’

(40) ɔɔɔɔ ε=tyé kede-atín.

PAST 3SG=IMPERF:be with-child

‘He had the child.’

*ε=té!dó i-jokó!ní jó né-átín?

3SG=PERF:cook in-kitchen what for-child

‘What did he cooked for the child in the kitchen?’

(41) ɔɔɔɔ ε=tyé kede-atín.

PAST 3SG=IMPERF:be with-child

‘He had the child.’

*ε=té!dó i-jokó!ní jó né-átín?

3SG=PERF:cook in-kitchen what for-child

‘What did he cooked for the child in the kitchen?’

Direct object ‘what’ vs. Benefactive NP vs. Time adverbial

Time adverbials are quite freely located in sentences. The scope of time adverbials extends to whole sentences regardless of their position in sentences. However, the position of time adverbials reflects information structure to some extent.

For example, the wh-questions in (42), (43), and (44) are not appropriate pragmatically. The time adverbial *joró* ‘yesterday’ is old information and occupies the unmarked focus position for peripheral elements in the wh-question of (42). The wh-word *jó* ‘what’ represents new information and occupies the unmarked focus position, however, the time adverbial *joró* ‘yesterday’ is old information and is preceded by the benefactive NP *atín* ‘child’, which belongs to new information in the wh-questions in (43) and (44). The benefactive NP *atín* ‘child’ behaves as a core element in the wh-question of (43) and as a peripheral element in the wh-question of (44).

- (42) *ɲoro* *óʊdɔ* *céŋ sábiti*.
 yesterday PAST Sunday
 ‘Yesterday was Sunday.’
#ε=té!dó *!né-á!tín* *!ɲó* *ɲó!ró?*
 3SG=PERF:cook for-child what yesterday
 ‘What did he cook for the child yesterday?’
- (43) *ɲoro* *óʊdɔ* *céŋ sábiti*.
 yesterday PAST Sunday
 ‘Yesterday was Sunday.’
#ε=té!dó *!né-á!tín* *ɲoro* *ɲó?*
 3SG=PERF:cook for-child yesterday what
 ‘What did he cook for the child yesterday?’
- (44) *ɲoro* *óʊdɔ* *céŋ sábiti*.
 yesterday PAST Sunday
 ‘Yesterday was Sunday.’
#ε=té!dó *!ɲó* *né-á!tín* *ɲoró?*
 3SG=PERF:cook what for-child yesterday
 ‘What did he cook for the child yesterday?’

The wh-question in (45) is grammatical and appropriate pragmatically. The wh-word *ɲó* ‘what’ occupies the unmarked focus position for core elements. The time adverbial *ɲoró* ‘yesterday’ represents old information and is followed by the benefactive NP *atín* ‘child’ that represents new information within the periphery.

- (45) *ɲoro* *óʊdɔ* *céŋ sábiti*.
 yesterday PAST Sunday
 ‘Yesterday was Sunday.’
ε=té!dó *!ɲó* *ɲóro* *né-á!tín?*
 3SG=PERF:cook what yesterday for-child
 ‘What did he cook for the child yesterday?’

The wh-questions in (46) and (47) are accepted by Kumam speakers. The wh-word *ɲó* ‘what’ occupies the unmarked focus position. However, the time adverbial *ɲoró* ‘yesterday’ intervenes between core elements. The wh-question in (45) is more acceptable than the wh-questions in (46) and (47).

(46) *ɲoro óʊdo céŋ sábiti.*
 yesterday PAST Sunday
 ‘Yesterday was Sunday.’
 ?ε=té!dó ɲoro né-á!tín !ɲó?
 3SG=PERF:cook yesterday for-child what
 ‘What did he cook for the child yesterday?’

(47) *ɲoro óʊdo céŋ sábiti.*
 yesterday PAST Sunday
 ‘Yesterday was Sunday.’
 ?ε=té!dó ɲoro ɲó né-á!tín?
 3SG=PERF:cook yesterday what for-child
 ‘What did he cook for the child yesterday?’

The wh-word *ɲó* ‘what’ is separated from the time adverbial *ɲoro* ‘yesterday’ by the boundary between the core and periphery in the wh-question in (45). The wh-word *ɲó* ‘what’ occupies the unmarked focus position for core elements. The time adverbial *ɲoro* ‘yesterday’ represents old information and is followed by the benefactive NP *atín* ‘child’ that represents new information, as shown in (48). This is the reason why the wh-question in (45) is preferred by Kumam speakers to others.

(48) [ε=té!dó !ɲó]_{CORE} [ɲoro né-á!tín.]_{PERIPHERY}
 3SG=PERF:cook what yesterday for-child
 ‘What did he cook for the child yesterday?’

Direct object ‘what’ vs. Benefactive NP vs. Reason NP

When wh-words are direct objects, infinitive complements are used to express notions of reason. Since infinitive complements are located in the periphery, they should not be followed by wh-words. For example, the wh-question in (51) is syntactically ungrammatical because the infinitive adverbial clause is followed by the wh-word *ɲó* ‘what’.

The wh-question in (49) is pragmatically appropriate because the wh-word *ɲó* ‘what’ represents new information and occupies the unmarked focus position for core elements. The wh-question in (50) is not appropriate because the benefactive NP *atín* ‘child’ conveys old information and occupies the unmarked focus position. It does not follow the principle of information packaging that old information is first and new information last.

- (49) ovdo e=tyé kede-atín.
 PAST 3SG=IMPERF:be with-child
 ‘He had the child.’
 e=wí!lól !né-á!tín !jól pí-!tímó apejá?
 3SG=PERF:buy for-child what because of-do:INF examination
 ‘What did he buy for the child for doing the examination?’
- (50) ovdo e=tyé kede-atín.
 PAST 3SG=IMPERF:be with-child
 ‘He had the child.’
 \#e=wí!lól !jól né-á!tín pí-tímó apejá?
 3SG=PERF:buy what for-child because of-do:INF examination
 ‘What did he buy for the child for doing the examination?’
- (51) ovdo e=tyé kede-atín.
 PAST 3SG=IMPERF:be with-child
 ‘He had the child.’
 *e=wí!lól pí-tímó apejá né-á!tín !jól?
 3SG=PERF:buy because of-do:INF examination for-child what
 ‘What did he buy for the child for doing the examination?’

We can summarize this discussion as follows. Wh-words occupy the unmarked focus position in in situ wh-questions. When wh-words are subjects, they are located in sentence initial position. Since sentence initial position is not a slot for unmarked focus, when wh-words are subjects, in situ wh-questions are not preferably used by Kumam speakers. They use wh-questions in cleft constructions.

When wh-words are direct objects, they are located in the final position of the core. When wh-words are benefactive, the position of the wh-words denoting benefactive NPs is determined in relation to other participants. Wh-words as benefactive NPs sometimes behave as core elements, sometimes as peripheral elements. When wh-words are locative NPs or time adverbials, they are located in the final position of the periphery⁶³.

4.2.3 Intensive reflexive pronouns and contrastive focus

Contrastive focus constructions are used to bring constituents into focus in contrast with other members of the sets in which the constituents are included.

Reflexive pronouns function as contrastive focus markers. They are used to bring the

⁶³ We discuss other types of wh-question in Section 4.2.4.

preceding NPs into focus in sentences. Reflexive pronouns that function as contrastive focus markers are called intensive reflexive pronouns. The intensive reflexive pronouns are always directly preceded by NPs or adverbials that are brought into focus in sentences. The intensive reflexive pronouns are coreferential with subjects, not with the preceding NPs in sentences⁶⁴.

For example, the intensive reflexive pronoun *ikom-é* ‘himself’ is coreferential with the subject *icóɔ* ‘man’ in the sentences from (2) to (5). The direct object *enú* ‘lion’ is brought into focus in (2). The benefactive NP *dákó* ‘woman’ is brought into focus in (3). The locative NP *abúm* ‘forest’ is brought into focus in (4). The time adverbial *poró* ‘yesterday’ is brought into focus in (5).

- (1) *icóɔ ɔ=neko enú né-dákó i-abúm poró.*
 man 3S/P=PERF:kill lion for-woman in-forest yesterday
 ‘The man killed the lion for the woman in the forest yesterday.’
- (2) *icóɔ ɔ=neko enú íkom-é né-dákó i-abúm poró.*
 man_i 3S/P=PERF:kill lion himself_i for-woman in-forest yesterday
 ‘The man killed *the lion* (not someone else) for the woman in the forest yesterday.’
- (3) *icóɔ ɔ=neko enú né-dákó ikom-é í-abúm poró.*
 man_i 3S/P=PERF:kill lion for-woman himself_i in-forest yesterday
 ‘The man killed the lion for *the woman* (not someone else) in the forest yesterday.’
- (4) *icóɔ ɔ=neko enú né-dákó i-abúm ikom-é póró.*
 man_i 3S/P=PERF:kill lion for-woman in-forest himself_i yesterday
 ‘The man killed the lion for the woman in *the forest* (not somewhere else) yesterday.’
- (5) *icóɔ ɔ=neko enú né-dákó i-abúm poro íkom-é.*
 man_i 3S/P=PERF:kill lion for-woman in-forest yesterday himself_i
 ‘The man killed the lion for the woman in the forest *yesterday* (not sometime else).’

When subjects are brought into contrastive focus, cleft constructions are used. The subjects occupy the slot for clefted NPs and are followed by the intensive reflexive pronouns. Since NPs marked with the intensive reflexive pronouns are focalized in sentences, they may not occupy the slot for topics. The sentence initial position is the slot for topics in sentences.

For example, the sentence in (7) is not grammatical because the focalized NP *icóɔ* ‘man’ occupies the topic slot. As discussed in Section 3.5, the sentence initial position in cleft construction is not the slot for simple topics. The cleft construction in (6) is grammatical because the NP marked with the intensive reflexive pronoun *ikom-é* ‘himself’ does not occupy

⁶⁴ When the preceding NPs are human, it is ambiguous whether intensive pronouns are coreferential with subjects or with the preceding NPs in sentences.

the slot for a simple topic.

(6) $\text{ikó}\omega$ ikom-é én á !ó=neko $\text{e}\eta\acute{\text{u}}$ né-dákó i-abúm poró .
man_i himself_i 3SG REL 3S/P=PERF:kill lion for-woman in-forest yesterday
'The man (not someone else) is the one who killed the lion for the woman in the forest yesterday.'

(7) * $\text{ikó}\omega$ ikom-é ó=neko $\text{e}\eta\acute{\text{u}}$ né-dákó i-abúm poró .
man_i himself_i 3S/P=PERF:kill lion for-woman in-forest yesterday
'The man (not someone else) killed the lion for the woman in the forest yesterday.'

Intensive reflexive pronouns that function as contrastive focus markers may not be preceded by verbs. Gerund forms of verbs are added after VPs, when predicates are brought into contrastive focus in sentences⁶⁵.

(8) $\text{ikó}\omega$ $\omega=neko$ $\text{e}\eta\acute{\text{u}}$ á-nék-á né-dákó i-abúm poró .
man 3S/P=PERF:kill lion GER-kill-GER for-woman in-forest yesterday
'The man killed the lion (not did something else) for the woman in the forest yesterday.'

The NPs marked with intensive reflexive pronouns as contrastive focus marker (CFM) are focalized in sentences. The speaker intends that the NPs marked with CFM convey new information to the hearer. The other constituents in the sentences are understood to be presuppositions. Moreover, sets of possible entities to which the NPs marked with CFM belong are also presupposed. The NPs marked with CFM are focalized by contrast with other members of the sets.

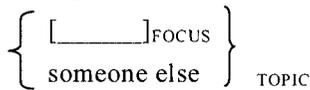
For example, the direct object *eηú* 'lion' is followed by the intensive reflexive pronoun *ikom-é* 'himself' in (9). The sentence in (9) presupposes that the man killed something for the woman in the forest yesterday. Moreover, it presupposes the set of entities that the man was able to kill in the forest. The speaker considers that the information about the set of possible entities is stored in the hearer's background knowledge. The speaker considers that the hearer knows that the man killed a member of some group in the forest. It is assumed that the hearer does not know what it is, so the speaker gives new information that the lion was killed by the man for the woman in the forest.

⁶⁵ Gerund forms are derived from verb stems by attaching the gerund prefix *a-* and the suffix *-a*. The focus construction is called verbal focus by Jacob (2010).

- (9) $\text{ic}^{\text{c}}\text{o}$ $\text{c}=\text{neko}$ en^{u} $\text{ikom-}\acute{\text{e}}$ $\text{n}\acute{\text{e}}\text{-d}\acute{\text{a}}\text{k}\acute{\text{o}}$ $\text{i-ab}\acute{\text{u}}\text{m}$ $\text{no!r}\acute{\text{o}}$.
 man_i 3S/P=PERF:kill lion himself_i for-woman in-forest yesterday
 ‘The man killed the lion (not someone else) for the woman in the forest yesterday.’

Similarly, the sentence in (3) presupposes a set of possible entities for which the man killed the lion in the forest yesterday. The speaker considers that the hearer knows that the man killed the lion for some member of this set. The sentence in (4) presupposes the set of places in which the man was able to kill the lion. The speaker considers that the hearer knows that the man killed the lion in one of those places. The sentence in (5) presupposes the set of possible times when the man killed the lion. The speaker considers that the hearer knows that the man killed the lion at some time. The sentence in (6) presupposes the set of possible entities that killed the lion. The speaker considers that the hearer knows that a member of the set killed the lion for the woman in the forest yesterday. The intensive reflexive pronouns function to bring the preceding NPs into focus by contrast with other members of the sets in which the NPs are included. Contrastive focalized NPs marked with intensive reflexive pronouns are pragmatically formalized in (10). The sets of possible entities as a whole are old information. The contrastive focalized NPs are new information. The other constituents and sets of possible entities which include the focalized NPs are old information.

(10) Pragmatic structure of contrastive focus NP



Sentences with contrast focus on predicates presuppose that there are other constituents than the predicates in sentences. They presuppose sets of possible actions or events that are performed by subjects. For example, the sentence in (8) presupposes that the man did something for the woman in the forest yesterday. Moreover, it presupposes sets of actions or events that the man was able to do. The speaker considers that the hearer knows that the man did something for the woman in the forest yesterday. He considers that the hearer have knowledge about the set of actions or events that were possible to be done by the man. The speaker gives new information about what the man did.

Intensive reflexive pronouns as CFM are available in subordinate clauses. When subordinate clauses constitute hypotactic constructions, subjects in subordinate clauses control the intensive reflexive pronouns in the subordinate clauses.

When subjects have contrastive focus, cleft constructions are used. For example, the subject *okélo* ‘Okelo’ in the subordinate clause has contrastive focus in (11). The intensive reflexive

pronoun *ikom-é* ‘himself’ is preceded by the subject that occupies the slot for a clefted NP.

- (11) a=tá!mó !bé okélo ikom-é, én á !ó=wɪɔ né-á!tín riŋó.
 1SG=PERF:think COMP Okelo_i himself_i 3SG REL 3S/P=PERF:buy for-child meat
 ‘I thought that *Okelo* is the one who bought the meat for the child.’

The benefactive NP *atín* ‘child’ has contrastive focus in the subordinate clause in (12). The direct object *riŋó* ‘meat’ has contrastive focus in the subordinate clause in (13). The locative NP *atá!lé* ‘market’ has contrastive focus in the subordinate clause in (14). The time adverbial *jóró* ‘yesterday’ has contrastive focus in the subordinate clause in (15).

- (12) a=tá!mó !bé ó!kélo ɔ=wɪɔ né-á!tín ikom-é rí!ŋó.
 1SG=PERF:think COMP Okelo_i 3S/P=PERF:buy for-child himself_i meat
 ‘I thought that Okelo bought the meat for *the child*.’
- (13) a=tá!mó !bé ó!kélo ɔ=wɪɔ né-á!tín riŋo ikom-é.
 1SG=PERF:think COMP Okelo_i 3S/P=PERF:buy for-child meat himself_i
 ‘I thought that Okelo bought *the meat* for the child.’
- (14) a=tá!mó !bé ó!kélo ɔ=wɪɔ riŋo í-atá!lé ikom-é.
 1SG=PERF:think COMP Okelo_i 3S/P=PERF:buy meat at-market himself_i
 ‘I thought that Okelo bought the meat at *the market*.’
- (15) a=tá!mó !bé ó!kélo ɔ=wɪɔ riŋo jóro ikom-é.
 1SG=PERF:think COMP Okelo_i 3S/P=PERF:buy meat yesterday himself_i
 ‘I thought that Okelo bought the meat *yesterday*.’

When subordinate clauses constitute ‘paratactic’ constructions, subjects in main clauses control the intensive reflexive pronouns in subordinate clauses. For example, the sentence in (16) is not grammatical because the subject *okélo* ‘Okelo’ in the ‘paratactic’ complement clause controls the intensive reflexive pronoun *ikom-é* ‘himself’ in the subordinate clause. The sentence in (17) is grammatical because the 1st person singular subject in the main clause controls the intensive reflexive pronoun *ikom-á* ‘myself’ in the subordinate clause.

- (16) *a=né!nó okélo kwáló gwen ikom-é
 1SG=PERF:see Okelo_i 3SG:IMPERF:steal chickens himself_i
 ‘I saw Okelo stealing the chickens.’
- (17) a=né!nó okélo kwáló gwen ikom-á
 1SG_i=PERF:see Okelo 3SG:IMPERF:steal chickens myself_i

‘I saw Okelo stealing the chickens.’

4.2.3.1 Contrastive focus and scope of negation

The scope of negation is limited to NPs marked with the intensive reflexive pronouns. The negative particle *líká* ‘NEG’ is always followed by predicates. The scope of negation extends to whole sentences in pragmatically unmarked sentences, where there is no NP marked with the intensive reflexive pronouns. For example, because the sentence in (1) contains no NP marked with an intensive reflexive pronoun, the scope of negation extends to the whole sentence. The interpretations from (2a) to (2g) are allowed for the sentence shown in (1).

- (1) $\text{icóó líká ó=neko eḡú né-dákó i-abúm poró.}$
man NEG 3S/P=PERF:kill lion for-woman in-forest yesterday
‘The man did not kill the lion for the woman in the forest yesterday.’

- (2a) The man did not kill the lion. Someone else killed it.
(2b) The man did not kill the lion. He killed something else.
(2c) The man killed the lion not for the woman. He killed it for someone else.
(2d) The man killed the lion not in the forest. He killed it somewhere else.
(2e) The man killed the lion not yesterday. He killed it at some other time.
(2f) The man did not kill the lion. He did something else.
(2g) The man did nothing.

The direct object *eḡú* ‘lion’ is followed by the intensive reflexive pronoun *ikom-é* ‘himself’ in (3). The interpretation in (2b) only is allowed for the sentence in (3). As discussed in the preceding section, the constituents other than NPs marked with intensive reflexive pronouns in affirmative sentences are presupposed. Sets of possible entities to which NPs marked with intensive reflexive pronouns belong as members are also presupposed. The presupposition in negative sentences is the same as in affirmative sentences.

For example, the negative sentence in (3) presupposes the constituents other than the NP *eḡú* ‘lion’ marked with the intensive reflexive pronoun *ikom-é* ‘himself’. The speaker considers that the hearer knows that the man killed something for the woman in the forest yesterday. The speaker gives new information to the hearer that it is not the lion that the man killed. The scope of negation is limited to the direct object NP *eḡú* ‘lion’ marked with the intensive reflexive pronoun *ikom-é* ‘himself’.

(3) ἰϙᵛᵛ ḻíká ᵛ=neko eḻú ἰkom-ḗ né-dákó i-abúm ḵoró.
 man_i NEG 3S/P=PERF:kill lion himself_i for-woman in-forest yesterday
 ‘The man did not kill the lion for the woman in the forest yesterday.’

The sentence (4) gives only the interpretation shown in (2c). The benefactive NP *dákó* ‘woman’ receives contrastive focus because it is followed by the intensive reflexive pronoun *ikom-é* ‘himself’. The constituents other than the benefactive NP *dákó* ‘woman’ are presupposed. The sentence in (4) presupposes that the man killed the lion for someone in the forest yesterday. The speaker gives new information that it is not the woman for whom the man killed the lion. The sentence in (4) negates only the benefactive NP *dákó* ‘woman’.

(4) ἰϙᵛᵛ ḻíká ᵛ=neko eḻú né-dákó ikom-ḗ í-abúm ḵoró.
 man_i NEG 3S/P=PERF:kill lion for-woman himself_i in-forest yesterday
 ‘The man did not kill the lion for the woman in the forest yesterday.’

The locative NP *abúm* ‘forest’ is followed by the intensive reflexive pronoun *ikom-é* ‘himself’ in (5). The sentence in (5) only has the interpretation shown in (2d). The speaker considers that the hearer knows that the man killed the lion for the woman at somewhere yesterday. The speaker provides new information to the hearer that it is not the forest where the man killed the lion. The constituents other than the locative NP *abúm* ‘forest’, including the set of possible entities in which the focalized NP belongs, are presupposed. Therefore, the scope of negation is limited to the locative NP *abúm* ‘forest’.

(5) ἰϙᵛᵛ ḻíká ᵛ=neko eḻú né-dákó i-abúm ikom-ḗ ḵó!ró.
 man_i NEG 3S/P=PERF:kill lion for-woman in-forest himself_i yesterday
 ‘The man did not kill the lion for the woman in the forest yesterday.’

The time adverbial *ḵoró* ‘yesterday’ is followed by the intensive reflexive pronoun *ikom-é* ‘himself’ in (6). The sentence in (6) only has the interpretation shown in (2e). The sentence in (6) negates only the time adverbial *ḵoró* ‘yesterday’. The other constituents are presupposed. The speaker considers that the hearer knows that the man killed the lion for the woman in the forest at some time. The speaker gives new information that it was not yesterday when the man killed the lion. The scope of negation is limited to the time adverbial *ḵoró* ‘yesterday’ marked with the intensive reflexive pronoun *ikom-é* ‘himself’.

(6) ɪcɔɔ líká ɔ=neko eɲú né-dákó i-abúm ɲoro íkom-é.
 man_i NEG 3S/P=PERF:kill lion for-woman in-forest yesterday himself_i
 ‘The man did not kill the lion for the woman in the forest yesterday.’

When the verb *neko* ‘to kill’ receives contrastive focus by adding the gerund form after the VP, the negative sentence in (7) has interpretation such as (2f) and (2g). The sentence in (7) presupposes that the man did some action or event to the lion for the woman in the forest yesterday. The speaker gives new information that it was not killing that the man did to the lion. The scope of negation is limited to the verb when it receives contrastive focus in the negative sentence.

(7) ɪcɔɔ líká ɔ=neko eɲú á-nék-á né-dákó i-abúm ɲoró.
 man NEG 3S/P=PERF:kill lion GER-kill-GER for-woman in-forest yesterday
 ‘The man did not kill the lion for the woman in the forest yesterday.’

4.2.3.2 Contrastive focus and illocutionary scope

Cross-linguistic data show that illocutionary scope is not necessarily consistent with the scope of negation. However, Kumam shows that the illocutionary scope of interrogation is consistent with the scope of negation to some extent in sentences with contrastive focus. Kumam distinguishes interrogative sentences from affirmative ones only by intonation. It has no morphological or syntactic device for constructing yes-no questions.

Illocutionary scope of interrogatives extends to whole sentences in pragmatically unmarked sentences that have no intensive reflexive pronoun. For example, because the interrogative sentence in (1) has no intensive reflexive pronoun, the illocutionary scope extends to the whole sentence. It gives rise to the interpretations from (2a) to (2e).

(1) okélo ɔ=neko eɲú né-jó i-abúm ɲoró?
 Okelo 3S/P=PERF:kill lion for-people in-forest yesterday
 ‘Did Okelo kill the lion for the people in the forest yesterday?’

(2a) The speaker knows that someone killed the lion for the woman in the forest yesterday. He wants to know if it was Okelo who killed the lion.

(2b) The speaker knows that Okelo killed something for the woman in the forest yesterday. He wants to know if it was the lion that Okelo killed for the woman.

(2c) The speaker knows that Okelo killed the lion for someone in the forest yesterday. He wants to know if it was the woman for whom Okelo killed the lion in the forest.

- (2d) The speaker knows that Okelo killed the lion for the woman somewhere yesterday. He wants to know if it was in the forest where Okelo killed the lion for the woman yesterday.
- (2e) The speaker knows that Okelo killed the lion for the woman in the forest at some time. He wants to know if it was yesterday when Okelo killed the lion.

The direct object *eyú* ‘lion’ is followed by the intensive reflexive pronoun *ikom-é* ‘himself’ in (3). The direct object *eyú* ‘lion’ has contrastive focus. The interrogative sentence in (3) has the interpretations shown in (2a) and (2b).

- (3) okélo ɔ=neko eyú ikom-é né-jó í-abúm joró?
 Okelo, 3S/P=PERF:kill lion himself_i for-people in-forest yesterday
 ‘Did Okelo kill the lion for the people in the forest yesterday?’

The benefactive NP *jɔ* ‘people’ is followed by the intensive reflexive pronoun *ikom-é* ‘himself’ in (4). The benefactive NP *jɔ* ‘people’ receives contrastive focus. The interrogative sentence in (4) has the interpretations shown in (2a) and (2c).

- (4) okélo ɔ=neko eyú né-jó ikom-é í-abúm joró?
 Okelo, 3S/P=PERF:kill lion for-people himself_i in-forest yesterday
 ‘Did Okelo kill the lion for the people in the forest yesterday?’

The locative NP *abúm* ‘forest’ is marked with the intensive reflexive pronoun in (5). The locative NP *abúm* ‘forest’ has contrastive focus. The interrogative sentence in (5) has the interpretations shown in (2a) and (2d).

- (5) okélo ɔ=neko eyú né-jó í-abúm ikom-é jóró?
 Okelo, 3S/P=PERF:kill lion for-people in-forest himself_i yesterday
 ‘Did Okelo kill the lion for the people in the forest yesterday?’

The time adverbial *joró* ‘yesterday’ is marked with the intensive reflexive pronoun in (6). The time adverbial *joró* ‘yesterday’ has contrastive focus. The interrogative sentence in (6) has the interpretations shown in (2a) and (2e).

- (6) okélo ɔ=neko eyú né-jó í-abúm joro ikom-é?
 Okelo, 3S/P=PERF:kill lion for-people in-forest yesterday himself_i
 ‘Did Okelo kill the lion for the people in the forest yesterday?’

The subject *okélo* ‘Okelo’ is followed by the intensive reflexive pronoun in (7). When subjects receive contrastive focus, cleft constructions are used. The interrogative sentence in (7) has only the interpretation shown in (2a).

(7) *okélo ikom-é én á ló=neko eju né-jó í-abúm joró?*
 Okelo, himself, 3SG REL 3S/P=PERF:kill lion for-people in-forest yesterday
 ‘Did Okelo kill the lion for the people in the forest yesterday?’

From the observation cited above, we can summarize the illocutionary scope of interrogation as follows. The illocutionary scope of interrogation is limited to NPs marked with CFM and to subjects when sentences have NPs marked with the intensive reflexive pronouns.

As discussed before, the constituents other than NPs marked with the intensive reflexive pronouns, including sets of possible entities to which the NPs belong, are presupposed.

For example, the interrogative sentence in (3) presupposes that Okelo killed something for the people in the forest yesterday. The speaker wants to know if it was Okelo who killed the lion. Similarly, the interrogative sentence in (4) presupposes that Okelo killed the lion for someone in the forest yesterday. The interrogative sentence in (5) presupposes that Okelo killed the lion for the people somewhere yesterday. The speaker wants to know if it was the forest where Okelo killed the lion. The interrogative sentence in (6) presupposes that Okelo killed the lion for the people in the forest at some time. The interrogative sentence in (7) presupposes that someone killed the lion for the people in the forest yesterday. The illocutionary scope of interrogation is limited to NPs marked with CFM.

The illocutionary scope is also limited to subjects when sentences have NPs marked with intensive reflexive pronouns. The intensive reflexive pronouns are always coreferential with subjects in sentences even though they can be preceded by any NPs⁶⁶. Therefore, the illocutionary scope of interrogation may extend to subjects in interrogative sentences.

The scope of negation does not extend to subjects when sentences have NPs with intensive reflexive pronouns. The negative particle *liká* ‘NEG’ is always followed by predicates. It is always preceded by subjects. Therefore, subjects are not within the scope of negation when NPs other than subjects are focalized in sentences. When sentences have intensive reflexive pronouns, the negative particle *liká* ‘NEG’ negates the following constituents in the sentences as follows.

⁶⁶ When the intensive reflexive pronouns are preceded by human NPs, it is ambiguous whether they are coreferential with subjects or the preceding NPs.

- (8) okélo líká [ǒ=neko eǵú íkom-é né-jó í-abúm ǵoró.]
 Okelo_i NEG 3S/P=PERF:kill lion himself_i for-people in-forest yesterday
 ‘Okelo did not kill *the lion* for the people in the forest yesterday.’

Interrogative sentences are distinguished from affirmative ones only by intonation. The interrogative sentences have no morphological device similar to the negative particle *líká* ‘NEG’. Therefore, whole sentences are within the illocutionary scope of interrogation, such as in (9) even though sentences have NPs marked with CFM. The illocutionary scope is limited to NPs marked with CFM and subjects in sentences when sentences have NPs marked with intensive reflexive pronouns.

- (9) [okélo ǵ=neko eǵú íkom-é né-jó í-abúm ǵoró?]
 Okelo_i 3S/P=PERF:kill lion himself_i for-people in-forest yesterday
 ‘Did Okelo kill the lion for the people in the forest yesterday?’

4.2.4 Wh-questions and focus

Kumam has three types of wh-questions. The first type is in situ wh-questions that have wh-words in situ position. The second type is wh-questions consisting of relative constructions. The third type is wh-questions consisting of cleft constructions. Kumam speakers prefer wh-questions with relative constructions or wh-questions with cleft constructions to in situ wh-questions. In particular, when wh-words are subjects, Kumam speakers do not usually allow in situ wh-questions, though some speakers reluctantly accept them.

The wh-question in (1) is an in situ wh-question where the wh-word *ǵáí* ‘who’ is located in the same position as the subject is in an affirmative sentence. The wh-question in (2) consists of a relative clause. The wh-question in (3) is a wh-question with a cleft construction where the wh-word *ǵáí* ‘who’ occupies the slot for a clefted NP.

- (1) */ǵáí ǵ=dipo okélo? (In situ)
 who 3S/P=PERF:hit Okelo
 ‘Who hit Okelo?’
- (2) ǵáí á !ǵ=dipo okélo? (Relative)
 Who REL 3SG=hit Okelo
 ‘Who hit Okelo?’
- (3) ǵáí, én á !é=!dí!pó okélo? (Cleft)
 Who 3SG REL 3SG=PERF:hit Okelo

‘Who hit Okelo?’

Wh-questions in relative constructions and wh-questions in cleft constructions follow the rules of pronominal copies in relativization and clefting, respectively. When human direct objects are relativized, the pronominal elements are left in the original position. When human direct objects are clefted, no pronominal element is left in the original position. For example, the 3rd person singular object suffix *-é* ‘3SG’ is added to the verb *diipo* ‘to hit’ as the pronominal copy in the wh-question consisting of a relative construction in (5). No pronominal copy is left in the wh-question consisting of a cleft construction in (6).

- (4) okélo ɔ=dipo ŋáí? (In situ)
Okelo 3S/P=PERF:hit who
‘Whom did Okelo hit?’
- (5) ŋáí á!mé okélo ɔ=dip-é? (Relative)
who REL Okelo 3S/P=PERF:hit-SG
‘Whom did Okelo hit?’
- (6) ŋáí, én á!mé okélo ɔ=dipo? (Cleft)
who 3SG REL Okelo 3S/P=PERF:hit
‘Whom did Okelo hit?’

When non-human direct objects are relativized or clefted, no pronominal element is left in the original position. For example, no pronominal copy is left in the original position in the wh-question with a relative construction in (8) and in the wh-question with a cleft construction in (9).

- (7) okélo ɔ=wɪɔ né-át!ín !jó? (In situ)
Okelo 3S/P=PERF:buy for-child what
‘What did Okelo buy for the child?’
- (8) jó á!mé okélo ɔ=wɪɔ né-át!ín? (Relative)
what REL Okelo 3S/P=PERF:buy for-child
‘What did Okelo buy for the child?’
- (9) jó, én á!mé okélo ɔ=wɪɔ né-át!ín? (Cleft)
what 3SG REL Okelo 3S/P=PERF:buy for-child
‘What did Okelo buy for the child?’

When objects of prepositions are relativized or clefted, whether they are human or not, the

pronominal elements are left in the original position. For example, the 3rd person singular inalienable possessive suffix *-é* ‘3SG’ is attached to the preposition *né-* ‘for’ in the wh-question consisting of a relative construction in (11) and in the wh-question consisting of a cleft construction in (12).

- (10) *okélo ɔ=wɪɔ itabɔ né-ŋáí?* (In situ)
 Okelo 3S/P=PERF:buy book for-who
 ‘For whom did Okelo buy the book?’
- (11) *ŋáí á!mé okélo ɔ=wɪɔ n:é ítabó?* (Relative)
 who_i REL Okelo 3S/P=PERF:buy for:3SG_i book
 ‘For whom did Okelo buy the book?’
- (12) *ŋáí, én á!mé okélo ɔ=wɪɔ n:é ítabó?* (Cleft)
 who_i 3SG REL Okelo 3S/P=PERF:buy for:3SG_i book
 ‘For whom did Okelo buy the book?’

When the wh-word *itúai/túai/ai* ‘where’ is relativized or clefted, the 3rd person singular inalienable possessive suffix *-é* ‘3SG’ as the pronominal copy is added to the preposition *ɪ-* ‘in’ that is located in the original position of the wh-word *itúai/túai/ai* ‘where’.

- (13) *okélo ɔ=wɪɔ itabɔ túai?* (In situ)
 Okelo 3S/P=PERF:buy book where
 ‘Where did Okelo buy the book?’
- (14) *túai amé okélo ɔ=wɪɔ itabɔ í-!é?* (Relative)
 where_i REL Okelo 3S/P=PERF:buy book in-3SG_i
 ‘Where did Okelo buy the book?’
- (15) *túai, én á!mé okélo ɔ=wɪɔ itabɔ í-!é?* (Cleft)
 where_i 3SG REL Okelo 3S/P=PERF:buy book in-3SG_i
 ‘Where did Okelo buy the book?’

When the wh-word *wene/awene* ‘when’ is relativized or clefted, the 3rd person singular inalienable possessive suffix *-é* ‘3SG’ as the pronominal copy is added to the preposition *kede-* ‘with’ that is located in the direct postverbal position.

- (16) *okélo ɔ=wɪɔ itabɔ wéne/áwene?* (In situ)
 Okelo 3S/P=PERF:buy book when
 ‘When did Okelo buy the book?’

(17) wene/awene amé okélo ɔ=wɪlo ked:é ítabó? (Relative)
 when_i REL Okelo 3S/P=PERF:buy with:3SG_i book
 ‘When did Okelo buy the book?’

(18) wene/awene, én á!mé okélo ɔ=wɪlo ked:é ítabó? (Cleft)
 when_i 3SG REL Okelo 3S/P=PERF:buy with:3SG_i book
 ‘When did Okelo buy the book?’

When wh-words are subjects, wh-questions with relative constructions or wh-questions with cleft constructions are preferably used by Kumam speakers.

When wh-words are subjects, only the cleft sentences are used as responses to the wh-questions. For example, the response in (21) is grammatical, but not appropriate as an answer to the wh-question.

(19) ɲáí, én á !é=!dí!pó okélo? (Cleft)
 who 3SG REL 3SG=PERF:hit Okelo
 ‘Who hit Okelo?’

(20) ɲáí, én á !é=!dí!pó okélo? (Cleft)
 who 3SG REL 3SG=PERF:hit Okelo
 ‘Who hit Okelo?’

dákó, én á !é=!dí!pó okélo. (Cleft)
 woman 3SG REL 3SG=PERF:hit Okelo
 ‘It is the woman who hit Okelo.’

(21) ɲáí, én á !é=!dí!pó okélo? (Cleft)
 who 3SG REL 3SG=PERF:hit Okelo
 ‘Who hit Okelo

#dákó ɔ=dipo okélo. (In situ)
 woman 3S/P=PERF:hit Okelo
 ‘The woman hit Okelo.’

Corresponding NPs to the wh-words cannot occupy sentence initial position in sentences that function as answers. For example, the direct object *cám* ‘food’ corresponding to the wh-word *nó* ‘what’ in the wh-question cannot be located in the sentence initial position of the response in (23). NPs corresponding to wh-words are focalized in sentences. The speaker uses wh-questions in order to get unknown information about entities. NPs corresponding to wh-words represent new information. Since sentence initial position is reserved for topics, NPs corresponding to wh-words cannot be located in sentence initial position. If

topicalization is applied to wh-questions, constituents corresponding to wh-words must be located in the contrastive focus position in wh-questions. Moreover, if topicalization is applied to sentences that function as answer to wh-questions, constituents corresponding to wh-words must be located in the contrastive focus position in those sentences. For example, the wh-word *ɲó* ‘what’ and the corresponding NP *cám* ‘food’ occupy the slot for contrastive focus in (22)⁶⁷. Cleft constructions are used to serve this pragmatic demand.

- (22) *ɲó, én á!mé !dákó ɔ=tedo ɲoró?* (Cleft)
 what 3SG REL woman 3S/P=PERF:cook yesterday
 ‘What did the woman cook yesterday?’
cám, én á!mé !dákó ɔ=tedo ɲoró. (Cleft)
 food 3SG REL woman 3S/P=PERF:cook yesterday
 ‘It is the food that the woman cooked yesterday.’

The response in (23) is not appropriate as an answer to the wh-question because the corresponding NP *cám* ‘food’ occupies the slot for a topic.

- (23) *ɲó, én á!mé !dákó ɔ=tedo ɲoró?* (Cleft)
 what 3SG REL woman 3S/P=PERF:cook yesterday
 ‘What did the woman cook yesterday?’
 #*cám, dákó ɔ=tedo ɲoró.* (Topicalization)
 food woman 3S/P=PERF:cook yesterday
 ‘The food, the woman cooked yesterday.’

4.2.4.1 Wh-questions and information structure

Wh-words cannot occupy topic slots. Wh-words are pragmatically preferred to be located in the unmarked focus position in sentences. When wh-questions do not consist of relative or cleft constructions, wh-words occupy the slot for unmarked focus in postverbal position. Wh-words in wh-questions consisting of relative constructions always occupy the position for complements in predicate nominal constructions, which is the slot for foci. Wh-words in wh-questions consisting of cleft constructions always occupy the slot for clefted NPs, which is the slot for contrastive focus.

The final position of the core is the slot for unmarked focus in the core of sentences, and the final position of periphery is the slot for unmarked focus in the periphery of sentences.

⁶⁷ Cf. Section 3.5.

Sentence initial position is the slot for topics. Therefore, when wh-words are subjects, wh-questions consisting of relative or cleft constructions are preferably used.

When wh-words are elements other than subjects, they may be located in the unmarked focus position postverbally. Direct objects constitute the core, but benefactive NPs sometimes behave as core elements, sometimes as peripheral elements. For example, the benefactive NP *atín* ‘child’ is regarded as peripheral in (1). The wh-word *nó* ‘what’ functions as the direct object and is located in the final position of the core, which is the slot for unmarked focus. The benefactive NP *atín* ‘child’ behaves as a core element in (2). The wh-word *nó* ‘what’ functions as the direct object and is located in the final position, which is the slot for unmarked focus.

(1) *dákó* *ɔ=wɪɔ* *nó* *né-á!tín* *i-atá!lé* *nó!ró?*
 woman 3S/P=PERF:buy what for-child at-market yesterday
 ‘What did the woman buy for the child at the market yesterday?’

(2) *dákó* *ɔ=wɪɔ* *né-á!tín* *!nó* *í-atá!lé* *nó!ró?*
 woman 3S/P=PERF:buy for-child what at-market yesterday
 ‘What did the woman buy for the child at the market yesterday?’

The wh-word *ɳái* ‘who’ is a benefactive NP that behaves as a core element in (3) and (4). Since the wh-word *ɳái* ‘who’ is located in the final position of the core, namely the slot for unmarked focus core elements, the wh-question in (3) is appropriate pragmatically. However, the wh-question in (4) is not appropriate because the direct object *ítabɔ* ‘book’ occupies the unmarked focus position for core elements. Wh-words must occupy the unmarked focus position because they are new information.

(3) *dákó* *ɔ=wɪɔ* *ítabɔ* *né-ɳái* *í-atá!lé* *nó!ró?*
 woman 3S/P=PERF:buy book for-who at-market yesterday
 ‘For whom did the woman buy the book yesterday?’

(4) #*dákó* *ɔ=wɪɔ* *né-ɳái* *ítabɔ* *í-atá!lé* *nó!ró?*
 woman 3S/P=PERF:buy for-who book at-market yesterday
 ‘For whom did the woman buy the book at the market yesterday?’

Because locative NPs and time adverbials are members of peripheral elements, wh-words for locative NPs and time adverbials are always located in the final position of the periphery, which is the unmarked focus position for peripheral elements.

- (5) *dákó* *ɔ=wɪɔ* *ɪtabʊ* *né-á!tín* *ɲoro* *túái?*
 woman 3S/P=PERF:buy book for-child yesterday where
 ‘Where did the woman buy the book for the child yesterday?’
- (6) *dákó* *ɔ=wɪɔ* *ɪtabʊ* *né-á!tín* *i-atá!lé* *wéne/áwene?*
 woman 3S/P=PERF:buy book for-child at-market when
 ‘When did the woman buy the book for the child at the market?’

When wh-questions consist of relative or cleft constructions, the position of wh-words is invariable in sentences. Wh-words occupy the unmarked focus position in wh-questions consisting of relative constructions, because they are located in the position for complements of the predicate nominal constructions. Wh-words occupy the position for clefted NPs in wh-questions consisting of cleft constructions, which is the slot for contrastive focus⁶⁸. For example, the wh-words *ɲái* ‘who’ and *ɲó* ‘what’ occupy the slot for clefted NPs in (7) and (8).

- (7) *ɲái,* *én* *á* *!é=!wí!lós* *ɪtabʊ* *né-á!tín* *i-atá!lé* *ɲó!ró?* (Cleft)
 who 3SG REL 3SG=PERF:buy book for-child at-market yesterday
 ‘Who bought the book for the child at the market yesterday?’
- (8) *ɲó,* *én* *á!mé* *!dákó* *ɔ=wɪɔ* *né-á!tín* *i-atá!lé* *ɲó!ró?* (Cleft)
 what 3SG REL woman 3S/P=PERF:buy for-child at-market yesterday
 ‘What did the woman buy for the child at the market yesterday?’

The position of the pronominal elements that are left by wh-words is variable, though it is determined by pragmatic factors. When wh-words are human direct objects, however, object suffixes are added to verbs as the pronominal copies. When wh-words are objects of prepositions or adverbials, the pronominal elements are left in postverbal position.

For example, the wh-word *ɲái* ‘who’ is clefted from the slot for the object of the preposition *né-* ‘for’ in (9) and (10). The wh-question in (9) is not appropriate pragmatically because the direct object *ɪtabʊ* ‘book’ occupies the unmarked focus position. The pronominal copy attached to the preposition *né-* ‘for’ does not occupy the unmarked focus position. The wh-question in (10) is appropriate because the 3rd person singular inalienable possessive suffix *-é* ‘3SG’ as the pronominal copy is attached to the preposition *né-* ‘for’ and occupies the unmarked focus position.

⁶⁸ Cf. Section 3.5.

- (9) #ηáí, én á!mé !dákó ρ=wíλó n:é ítáβυ í-atá!lé nó!ró?
 who_i 3SG REL woman 3S/P=PERF:buy for:3SG_i book at-market yesterday
 ‘For whom did the woman buy the book at the market yesterday?’
- (10) ηáí, én á!mé !dákó ρ=wíλó ítáβυ n:é í-atá!lé nó!ró?
 who_i 3SG REL woman 3S/P=PERF:buy book for:3SG_i at-market yesterday
 ‘For whom did the woman buy the book at the market yesterday?’

The wh-question in (11) is not appropriate pragmatically because the time adverbial *noró* ‘yesterday’ occupies the unmarked focus position. The preposition *i-* ‘in’ attached to the 3rd person singular inalienable possessive suffix *-é* ‘3SG’ as the pronominal copy does not occupy the unmarked focus position. The wh-question in (12) is appropriate because the preposition attached to the 3rd person singular inalienable possessive suffix *-é* ‘3SG’ as the pronominal occupy occupies the unmarked focus position. The wh-question in (13) is ungrammatical syntactically because the preposition *i-* ‘in’ attached with the pronominal element *-é* ‘3SG’ intervenes between core elements. The locative NP *i-é* ‘in-3SG’ should not intervene between core elements.

- (11) #túai, én á!mé !dákó ρ=wíλó né-á!tín ítáβυ í-!é nó!ró?
 where 3SG REL woman 3S/P=PERF:buy for-child book at-3SG yesterday
 ‘Where did the woman buy the book for the child yesterday?’
- (12) túai, én á!mé !dákó ρ=wíλó né-á!tín ítáβυ nóro í-!é?
 where 3SG REL woman 3S/P=PERF:buy for-child book yesterday at-3SG
 ‘Where did the woman buy the book for the child yesterday?’
- (13) *túai, én á!mé !dákó ρ=wíλó né-á!tín i-é ítáβυ nó!ró?
 where 3SG REL woman 3S/P=PERF:buy for-child at-3SG book yesterday
 ‘Where did the woman buy the book for the child yesterday?’

The examples cited above are typical sentences that strictly follow the pragmatic convention that new information should occupy the unmarked focus position. The order of constituents within the periphery is relatively free. The position of constituents attached with pronominal elements within the periphery is determined according to the pragmatic purpose of the utterances.

For example, the wh-question in (14) is appropriate if the time adverbial *noró* ‘yesterday’ represents new information. If the time adverbial is not focalized, the wh-question in (15) is preferable according to the pragmatic convention.

(14) túai, én á!mé okélo ɔ=wɪɔ itabɔ í-!é jó!ró?
 where 3SG REL Okelo 3S/P=PERF:buy book at-3SG yesterday
 ‘Where did Okelo buy the book yesterday?’

(15) túai, én á!mé okélo ɔ=wɪɔ itabɔ jóro í-!é?
 where 3SG REL Okelo 3S/P=PERF:buy book yesterday at-3SG
 ‘Where did Okelo buy the book yesterday?’

When the wh-word *wéné/awéné* ‘when’ is relativized or clefted, the preposition *kede-* ‘with’ attached to the 3rd person singular inalienable possessive suffix *-é* ‘3SG’ as the pronominal copy should be located in the direct postverbal position. Otherwise, wh-questions consisting of the wh-words *wéné/awéné* ‘when’ are not grammatical. The position of the preposition *kede-* ‘with’ attached to the 3rd person singular suffix *-é* ‘3SG’ is determined by lexical reason.

(16) wene/awene, én á!mé !dákó ɔ=wɪɔ ked:é né-á!tín itabɔ í-atú!lé?
 when 3SG REL woman 3S/P=PERF:buy with:3SG for-child book at-market
 ‘When did the woman buy the book for the child at the market?’

When wh-questions consist of cleft constructions, the pronominal elements occupy the postverbal unmarked focus position. This is also the case with wh-questions consisting of relative constructions.

4.2.4.2 Answers to wh-questions

Answers to wh-questions maintain the order of constituents in the corresponding wh-questions whether they are wh-questions consisting of relative or cleft constructions.

When wh-words are subjects, wh-questions preferably consist of relative or cleft constructions. Answers to wh-questions must consist of relative or cleft constructions, though cleft constructions are preferred by Kumam speakers. Sentences that do not consist of relative or cleft constructions are not appropriate pragmatically as answers to wh-questions. They are strongly avoided by Kumam speakers as answers to wh-questions where wh-words are subjects. For example, the sentence in (3) is grammatical but not appropriate as an answer to the wh-question in (1).

(1) ɲái, én á !é=!té!dó !cám né-ó!kélo joró? (Cleft)
 who 3SG REL 3SG=cook food for-Okelo yesterday
 ‘Who cooked food for Okelo yesterday?’

(2) *dákó, én á !é=!té!dó !cám né-ó!kélo poró. (Cleft)*
 woman 3SG REL 3SG=PERF:cook food for-Okelo yesterday
 ‘It is the woman who cooked food for Okelo yesterday.’

(3) #/**dákó ɔ=tedo cám né-ó!kélo poró.*
 woman 3S/P=PERF:cook food for-Okelo yesterday
 ‘The woman cooked food for Okelo yesterday.’

Sentences that do not consist of relative or cleft constructions are strongly avoided by Kumam speakers as answers to *wh*-questions when *wh*-words are subjects. When topicalization is not applied to sentences, subjects occupy sentence initial position, which is the slot for topics. The sentence in (3) violates the pragmatic convention that corresponding constituents should not occupy the slot for topics. On the other hand, sentences that do not consist of relative or cleft constructions are acceptable as answers to *wh*-questions when *wh*-words are direct objects. Direct objects do not occupy the slot for topics.

When *wh*-words are direct objects, cleft constructions are preferred as answers to *wh*-questions. However, sentences that do not consist of cleft or relative constructions are also accepted as answers to *wh*-questions by Kumam speakers. For example, the response in (5) is not appropriate because it does not maintain the order of constituents in the *wh*-question. The original position of the *wh*-word *jó* ‘what’ is preceded by the benefactive NP *okélo* ‘Okelo’ in the *wh*-question, though it is not segmentally articulated. Moreover, the response in (5) is pragmatically inappropriate because the benefactive NP *okélo* ‘Okelo’ conveys old information and occupies the unmarked focus position.

The response in (6) is appropriate as an answer to the *wh*-question and pragmatically appropriate because the direct object *cám* ‘food’ conveys new information and occupies the unmarked focus position.

(4) *jó, én á!mé !dákó ɔ=tedo né-ó!kélo poró? (Cleft)*
 what 3SG REL woman 3S/P=PERF:cook for-Okelo yesterday
 ‘What did the woman cook for Okelo yesterday?’

cám, én á!mé !dákó ɔ=tedo né-ó!kélo poró. (Cleft)
 food 3SG REL woman 3S/P=PERF:cook for-Okelo yesterday
 ‘It is the food which the woman cooked for Okelo yesterday.’

(5) *jó, én á!mé !dákó ɔ=tedo né-ó!kélo poró? (Cleft)*
 what 3SG REL woman 3S/P=PERF:cook for-Okelo yesterday
 ‘What did the woman cook for Okelo yesterday?’

#dákó ɔ=tedo cím né-ó!kélo poró.
 woman 3S/P=PERF:cook food for-Okelo yesterday
 ‘The woman cooked food for Okelo yesterday.’

- (6) jó, én á!mé !dákó ɔ=tedo né-ó!kélo poró? (Cleft)
 what 3SG REL woman 3S/P=PERF:cook for-Okelo yesterday
 ‘What did the woman cook for Okelo yesterday?’
 dákó ɔ=tedo né-ó!kélo cím jó!ró.
 woman 3S/P=PERF:cook for-Okelo food yesterday
 ‘The woman cooked food for Okelo yesterday.’

When wh-words are objects of prepositions, the pronominal elements are left in the original position of wh-questions consisting of relative or cleft constructions. Though cleft sentences are preferable as answers to wh-questions, sentences that do not consist of relative or cleft constructions are acceptable. For example, the response in (7) is not acceptable as an answer to the wh-question. The response does not maintain the order of constituents in the wh-question. Moreover, it does not follow the pragmatic convention that the unmarked focus position should be occupied by new information.

- (7) jáí, én á!mé okélo ɔ=wilo itabɔ n:é í-atá!lé? (Cleft)
 who 3SG REL Okelo 3S/P=PERF:buy book for:3SG in-market
 ‘For whom did Okelo buy the book in the market?’
 #okélo ɔ=wilo né-á!tín itabɔ í-atá!lé.
 Okelo 3S/P=PERF:buy for-child book in-market
 ‘Okelo bought the book for the child in the market.’

The response in (8) is appropriate as an answer to the wh-question because it maintains the order of constituents in the wh-question. Moreover, it follows the pragmatic convention because the benefactive NP *atín* ‘child’ is new information and occupies the unmarked focus position.

- (8) jáí, én á!mé okélo ɔ=wilo itabɔ n:é í-atá!lé? (Cleft)
 who 3SG REL Okelo 3S/P=PERF:buy book for:3SG in-market
 ‘For whom did Okelo buy the book?’
 okélo ɔ=wilo itabɔ né-á!tín í-atá!lé.
 Okelo 3S/P=PERF:buy book for-child in-market
 ‘Okelo bought the book for the child in the market.’

The response in (9) is more preferable than that in (8). It consists of a cleft construction.

(9) ἡáí, én á!mé okélo ρ=wílo itabυ n:é í-atá!lé? (Cleft)

who 3SG REL Okelo 3S/P=PERF:buy book for:3SG in-market

‘For whom did Okelo buy the book?’

atín, én á!mé okélo ρ=wílo itabυ n:é í-atá!lé. (Cleft)

child 3SG REL Okelo 3S/P=PERF:buy book for:3SG in-market

‘It is the child for whom Okelo bought the book.’

The pragmatic convention of the order of constituents is not strict for peripheral elements in wh-questions. Some Kumam speakers accept wh-questions in which the pronominal copies do not occupy the unmarked focus position when wh-words are functioning as peripheral elements. For example, the wh-question in (10) is acceptable, though the time adverbial *ḡoró* ‘yesterday’ occupies the unmarked focus position. The wh-question in (11) is perfectly appropriate because the preposition *í-* ‘in’ attached to the pronominal element *-é* ‘3SG’, which is left by the wh-word, occupies the unmarked focus position.

(10) /#túai, én á!mé okélo ρ=wílo itabυ í-!é ḡó!ró? (Cleft)

where_i 3SG REL Okelo 3S/P=PERF:buy book in-3SG_i yesterday

‘Where did Okelo buy the book yesterday?’

(11) túai, én á!mé okélo ρ=wílo itabυ ḡóro í-!é? (Cleft)

where_i 3SG REL Okelo 3S/P=PERF:buy book yesterday in-3SG_i

‘Where did Okelo buy the book yesterday?’

Some Kumam speakers reluctantly accept the response in (12). It is not appropriate as an answer to the wh-question because it does not maintain the order of constituents in the wh-question. Moreover, it does not follow the pragmatic convention that the unmarked focus position should be occupied by new information. The response in (13) is appropriate as an answer to the wh-question.

(12) túai, én á!mé okélo ρ=wílo itabυ ḡóro í-!é? (Cleft)

where_i 3SG REL Okelo 3S/P=PERF:buy book yesterday in-3SG_i

‘Where did Okelo buy the book yesterday?’

#okélo ρ=wílo itabυ í-atá!lé ḡó!ró.

Okelo 3S/P=PERF:buy book in-market yesterday

‘Okelo bought the book at the market yesterday.’

- (13) túai, én á!mé okélo ɔ=wɪɔ itabʊ joro í-!é? (Cleft)
 where_i 3SG REL Okelo 3S/P=PERF:buy book yesterday in-3SG_i
 ‘Where did Okelo buy the book yesterday?’
 okélo ɔ=wɪɔ itabʊ joro í-atá!lé.
 Okelo 3S/P=PERF:buy book yesterday at-market
 ‘Okelo bought the book at the market yesterday.’

The response in (15) is appropriate as an answer to the wh-question. It maintains the order of constituents in the wh-question. Moreover, it follows the pragmatic convention because the preposition *i-* ‘in’ attached to the pronominal copy *-é* ‘3SG’ which is left by the wh-word occupies the unmarked focus position. The response in (14) is acceptable because it consists of a cleft construction. The pragmatic convention is not strictly applied to peripheral elements in wh-questions consisting of relative or cleft constructions.

- (14) túai, én á!mé okélo ɔ=wɪɔ itabʊ joro í-!é? (Cleft)
 where_i 3SG REL Okelo 3S/P=PERF:buy book yesterday in-3SG_i
 ‘Where did Okelo buy the book yesterday?’
 /#atá!lé, én á!mé okélo ɔ=wɪɔ itabʊ í-!é joró. (Cleft)
 market 3SG REL Okelo 3S/P=PERF:buy book at-3SG yesterday
 ‘It is the market where Okelo bought the book yesterday.’
- (15) túai, én á!mé okélo ɔ=wɪɔ itabʊ joro í-!é? (Cleft)
 where_i 3SG REL Okelo 3S/P=PERF:buy book yesterday in-3SG_i
 ‘Where did Okelo buy the book yesterday?’
 atá!lé, én á!mé okélo ɔ=wɪɔ itabʊ joro í-!é. (Cleft)
 market 3SG REL Okelo 3S/P=PERF:buy book yesterday at-3SG
 ‘It is the market where Okelo bought the book yesterday.’

When wh-words are time adverbials, the preposition *kede-* ‘with’ attached to the 3rd person singular inalienable possessive suffix *-é* ‘3SG’ as the pronominal copy is always located in direct postverbal position in wh-questions⁶⁹. If responses maintain the order of constituents in wh-questions, they are not grammatical syntactically because time adverbials corresponding to wh-words are located in direct postverbal position. They violate the syntactic constraint that peripheral elements should not intervene between core elements. For example, the preposition *kede-* ‘with’ attached to the 3rd person singular inalienable possessive suffix *-é*

⁶⁹ The preposition *kede-* ‘with’ has another function to connect NPs as a coordinator. If it is located in direct postverbal position, it is easily interpreted as the accompaniment.

'3SG' is located in direct postverbal position in the wh-question consisting of a cleft construction in (16). The response in (16) maintains the order of constituents in the wh-question. It breaks the syntactic restriction that peripheral elements should not intervene between core elements, because the time adverbial *ɲoró* 'yesterday' intervenes between core elements. Though time adverbials are freely located in sentences, the response in (16) is not allowed by Kumam speakers as an answer to the wh-question.

- (16) *wene/awene, én á!mé okélo ɔ=wɪɔ ked:é ítabɔ í-atá!lé?* (Cleft)
 when 3SG REL Okelo 3S/P=PERF:buy with:3SG book at-market
 'When did Okelo buy the book at the market?'
 **okélo ɔ=wɪɔ ɲoro ítabɔ í-atá!lé.*
 Okelo 3S/P=PERF:buy yesterday book at-market
 'Okelo bought the book at the market yesterday.'

The responses in (17) and (18) do not maintain the order of constituents in the wh-question; though they do follow the syntactic constraint that peripheral elements should not intervene between core elements. The response in (17) is not pragmatically appropriate because the locative NP *atá!lé* 'market' conveys old information and occupies the unmarked focus position. The response in (18) is pragmatically appropriate because the time adverbial *ɲoró* 'yesterday' conveys new information and occupies the unmarked focus position.

- (17) *wene/awene, én á!mé okélo ɔ=wɪɔ ked:é ítabɔ í-atá!lé?* (Cleft)
 when 3SG REL Okelo 3S/P=PERF:buy with:3SG book at-market
 'When did Okelo buy the book at the market?'
 #*okélo ɔ=wɪɔ itabɔ ɲoro í-atá!lé.*
 Okelo 3S/P=PERF:buy book yesterday at-market
 'Okelo bought the book at the market yesterday.'
- (18) *wene/awene, én á!mé okélo ɔ=wɪɔ ked:é ítabɔ í-atá!lé?* (Cleft)
 when 3SG REL Okelo 3S/P=PERF:buy with:3SG book at-market
 'When did Okelo buy the book at the market?'
okélo ɔ=wɪɔ itabɔ í-atá!lé ɲó!ró.
 Okelo 3S/P=PERF:buy book at-market yesterday
 'Okelo bought the book at the market yesterday.'

The second cleft sentence in (19) is more preferred than that in (18) as an answer to the wh-question. It maintains the order of constituents in the wh-question. The preposition *kede-*

'with' attached to the pronominal element -é '3SG' is located in the direct postverbal position.

- (19) wene/awene, én á!mé okélo ɔ=wɪɔ ked:é ítabɔ í-atá!lé? (Cleft)
when 3SG REL Okelo 3S/P=PERF:buy with:3SG book at-market
'When did Okelo buy the book at the market?'
- poró, én á!mé okélo ɔ=wɪɔ ked:é ítabɔ í-atá!lé. (Cleft)
yesterday 3SG REL Okelo 3S/P=PERF:buy with:3SG book at-market
'It is yesterday when Okelo bought the book at the market.'

We can conclude the relation between wh-questions and information structure as follows. When wh-questions do not consist of relative or cleft constructions, wh-words occupy the unmarked focus position. When wh-questions consist of relative or cleft constructions, the pronominal elements that are left by wh-words occupy the unmarked focus position. Corresponding constituents to wh-words occupy the unmarked focus position in the sentences that function as answers. Moreover, corresponding constituents to wh-words do not occupy the slot for topics.

Wh-words are characterized by contrastive focus. Wh-words occupy the contrastive focus position in wh-questions consisting of cleft constructions. Otherwise, wh-words occupy the unmarked focus position in wh-questions with relative constructions or in situ wh-questions.

Kumam speakers prefer wh-questions consisting of relative or cleft constructions to in situ wh-questions. Wh-questions presuppose definite sets of possible entities with which the speaker refers to a particular entity in contrast. Kumam speakers prefer wh-questions in cleft construction, because the cleft constructions are familiar syntactic devices to express contrastive focus in Kumam. Acooli has a morphological device to express contrastive focus, namely the contrastive focus marker ayé. It functions to mark contrastive focus without changing the order of constituents in sentences. Kumam has a similar morphological device to the Acooli contrastive marker; however, it is not frequently used by the speakers. Acooli speakers prefer in situ wh-questions with the contrastive focus marker to wh-questions consisting of cleft of constructions. Acooli uses a morphological device, the contrastive focus marker, while Kumam uses a syntactic device, clefting to express contrastive focus.

5 Concluding remarks

The purpose of this book is to provide a descriptive grammar of Kumam, specifically on the interaction between syntax and pragmatics. Other theoretical frameworks are not discussed here. We have observed many linguistic phenomena that are explained not only by syntactic but also pragmatic factors. The word order in postverbal position is determined by syntactic

and pragmatic factors. Kumam has two types of topics that restrict the application of topicalization. It has at least two types of focus, namely contrastive focus and unmarked focus. However, this book does not propose a method for defining a topic or focus. Moreover, no previous research has offered a satisfying definition of focus. This book contributes linguistic data for the ongoing discussion of how topics or foci play a role in languages.

What is the nature of the interface between syntax and pragmatics? Some researchers consider information structure as part of phonology while others integrate topic and focus features into grammar. Many African languages, including Kumam, are tone languages. They distinguish lexical meanings as well as grammatical relations by tone. However, they do not make use of stress to express information structure in most cases. Given the heavy load that phonetic devices of languages already bear, perhaps word order serves to express information structure even though phonological factors might cause traction of rearrangement of word order.

There is very little published work on Nilotic languages that discusses the interaction between syntax and pragmatics. This book is the first step in addressing this gap in the literature.

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