A Reference Grammar of
Kunuz Nubian

By

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Appendix 1: Text

Appendix 2: Vocabulary

Appendix 3: KN affixes

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List of Abbreviations

Acc	Accusative
Adj	Adjective
Caus	Causative
Com	Comitative
Conc	Concessive
Cond	Conditional
Conseq	Consequential
cop	Copula
def	Definite
dem	Demonstrative
DI	Delayed Imperative
dim	Diminutive
dir	Directional
distrib	Distributive
dub	Dubitative
DO	Direct object
Eng	English
Foc	Focus
Fut	Future
Gen	Genetive
HI	Habitual Imperative
Hort	Hortative
Inch	Inchoative
Indef	Indefinite
Inf	Infinitive

Infer	Inferential
Intr	Interrogative
IO	Indirect object
KN	Kunuz Nubian
Loc	Locative
NA	Noun agent
M	Mood
neg	Negative
neu	Neutral Tense
Nom	Nominative
Nomin	Nominalizer
obj	Object
perf	Perfect
PI	Polite Imperative
pl	Plural
plimp	Plural Imperative
prog	Progressive
pst	Past
purp	Purpose
ref	Reference
Rel	Relative
sbj	Subject
sg	Singular
stat	Stative
T	Tense

Temp	Temporal
1	First
2	Second
3	Third
-	Morpheme boundary
+	Compound boundary
#	Word boundary
$	Syllable boundary
C	Consonant
V	Vowel
V	Voiceless vowel
*	Ungrammatical

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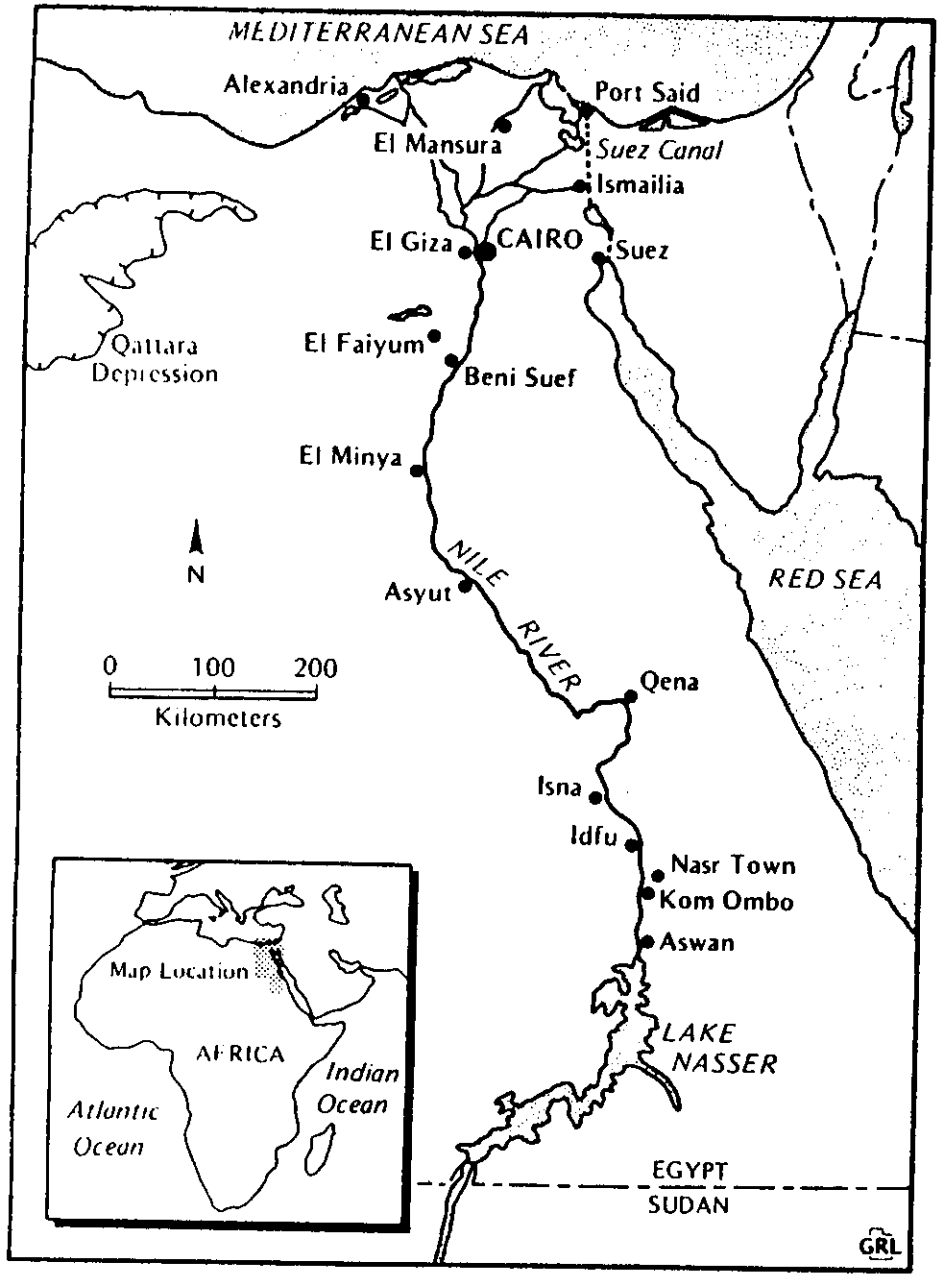


Figure 1. Map of the Nile River showing Lake Nasser.

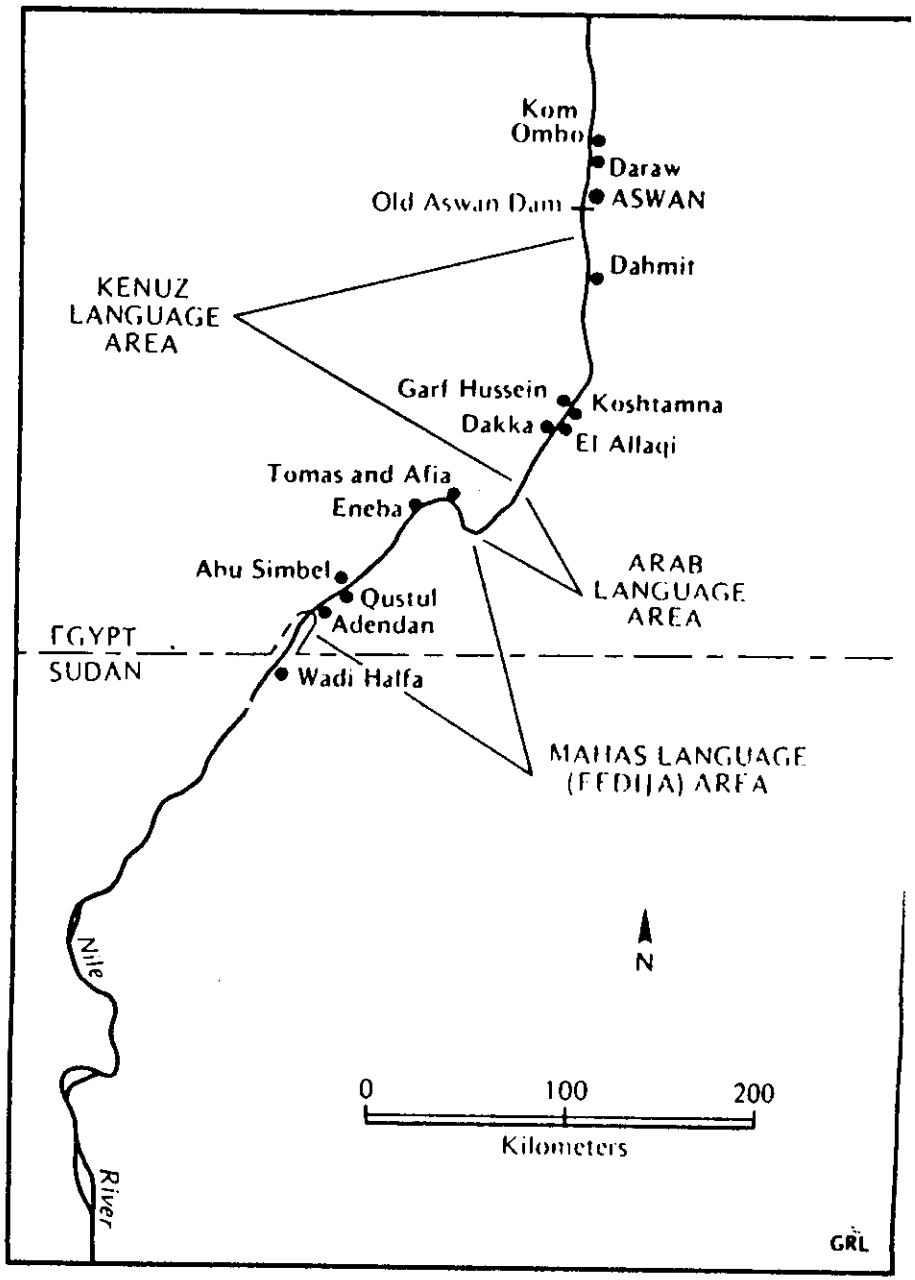


Figure 2. Map of Old Nubia showing locations of the Nubian groups.

1.0 Introduction

Kunuz Nubian (KN) belongs to the Nubian group of the Eastern Sudanic Family (Greenberg 1966; Trigger 1966). The Nubian languages are further divided into two groups (cf. Tucker and Bryan 1966: 314-328): Nile Nubian and Hill Nubian. The former (Nile Nubian) includes those languages or dialects that are spoken on the banks of the Nile. These are Mahas and Dongolese spoken in Sudan; Kunuz and Fadicca, which are spoken in Egypt. The latter group (Hill Nubian) includes Midob, Birgid, Dilling and Kadaru; they are all spoken in Sudan.

To the best of my knowledge, only two dialects of the Nubian group have been described in any length: Dongolese (Armbruster 1960) and Mahas (Ayyub 1968). Armbruster's work is a detailed description of the phonology, morphology and syntax of Dongolese and it is a good ground for further investigation and improvement (as he himself concedes (p.128)), especially in the area of morphology and syntax. Ayyub's description of Mahas would serve as a good background for writing a grammar for that language. The only material available on a Hill Nubian language is a short article on Meidob by Thelwall 1983. There is no evidence that either Kunuz or Fadicca has been described or studied in great detail.

No Nubian dialect has a writing system at the present time (cf. Armbruster 1960). However, there is good evidence

that Nubians possessed a peculiar system of writing called Meroitic, "Comprising twenty-three characters, as well as the world's first written punctuation marks" (Adams 1982:16). This is shown by the inscriptions collected by Lepsius in 1880 (Budge 1909:7). Meroitic is different from hieroglyphics, which was the writing system of the ancient Egyptians at that time, in that it employs alphabetic characters (cf. Budge 1909; Diop 1955). Meroitic inscriptions, which were found between Nubia and the Blue Nile, remain undeciphered to this day (Diop 1955:150; Shinne 1967:28; Adams 1982:16). The hieroglyphic system itself is claimed to have been used by the Nubians of Qustul several generations before the ancient Egyptians. This is shown by the inscriptions discovered in the 1960s (Williams 1980; Van Sertima 1983) of the tombs of a Nubian kingdom in Qustul (see the map).

Nubian (Budge 1909; Thelwall 1983) was also written in the Christian period (between 7th and 14th century A.D.). The writing system used was "the Coptic form of the Greek alphabet, introducing a few extra letters for sounds which did not exist in Coptic" (Shinnie 1966:272). Examples of this writing can be seen in Budge 1909.

KN is spoken in New Nubia, near Kom Ombo in Southern Egypt. The word kunuz (Budge 1909:10) is derived from the word Kenset, the ancient Egyptian name for Northern Nubia. The Kenuzi people (about 30,000; see Kennedy 1978)) are located between Daboud and Sebu'a (see the map). To the east

of Kunuz area are the Fadicca speakers, Fadicca being another member of the Nile Nubian Group. Fadicca, which is spoken from Korosko to Abu Simbil, is mutually unintelligible with Kunuz. Arabic is the means of communication between the two Nubian groups.

Nubians who settle in villages are bilingual: the younger generation are fluent in both Arabic and Kunuz. Older men and women's knowledge of Arabic is not perfect and they seldom use it in conversation unless they are speaking with a non-Nubian. Those Nubians who were raised in Nubia and now live in cities (mostly Alexanderia and Cairo) are able to use their language but they fail to transmit it to their children.

Arabic is the formal means of education in Nubian schools. Children start school (at the age of six) with little knowledge of Arabic. Although children are encouraged to become acquainted with the Qu'ran (the holy scripture) which is written in Classical Arabic, it is at school that they gradually learn how to speak, read and write Arabic.

1.1 Focus of Study

We are concerned here with the phonology, morphology and syntax of KN. Chapter 2 on phonology will describe the phonemic system and phonetic variation, the syllable structure, the phonological rules and the distribution of consonants (and consonant clusters) in the word. The approach taken in stating the phonological rules is closer

to the spirit of Natural Generative Phonology (NGP) (Vennemann 1974; Hooper 1976) than, say, to Chomsky and Halle (1968)'s transformational Generative phonology (TGP) in that abstract representation is avoided altogether (see Hyman 1970 where abstract underlying segments are posited to account for Nupe labialization and palatalization or Selkirk and Vergnaud 1973 who posit bstract segments for French phonology). Thus when we choose an underlying segment as being the basic we have to make sure that it is phonetically attested on surface. Furthermore, in most cases we do not need to show the order of the phonological rules. We could claim that such rules apply randomly, whenever the structural description (SD) of a rule is satisfied. It might be claimed that the obstruent assimilation rule (cf. section 2.6) needs ordering: the devoicing of the palatal spirant /j/ should precede the assimilation of the alveolar spirant /s/ to the preceding palatal spirant. This ordering of phonological rules is hardly necessary; the assimilation of the alveolar spirant /s/ will not apply first since its structural discription is not satisfied: the preceding spirant is not voiceless. Thus KN phonological rules to be described on the chapter on phonology will be left unordered.

The chapter on phonology is concerned with phonological rules. These are so general that they apply, without exception, to all cases that satisfy their

structural description; the environments needed for these rules (cf. Anderson 1975:42) refer to such facts as the phonological segments that under the rules. But the morphemes affected by the phonological rules need not be specified. Two other types of rules are further distinguished. The first type includes rules (morphophonemic) that are limited to a particular morphological environment (e.g. grammatical category). Such rules, unlike the phonological rules, have no phonetic motivation (cf. Anderson 1975:42). The other type -- morphological-spell out rules (Hooper 1976) or morpholexical rules (in the sense of Sommerstein 1975) -- involves alternations that need nothing but morphological information in their statement.

Rule ordering is not required for the phonological rules in KN. However, it is sometimes necessary to determine the ordering relation between a morphophonemic rule and a phonological rule; for example, KN has a phonological rule that devoices a stop that is followed by a voiceless obstruent (e.g. jod-me `Don't swear', jod-ki swear-cond jotki `if you swear'). It also has a rule that affects only the Accusative morpheme: the velar of the Accusative morpheme -ki completely assimilates to a preceding voiceless stop (e.g. id-re `Is it a man?', id-ki man-Acc itti `the man'; but jod-me `Don't swear' jod-ki swear-cond *jotti). Here the devoicing rule has to precede the morphophonemic rule. We can not apply the morphophonemic rule first: the

preceding segment (stop) would still be voiced (id-ki), thus blocking the velar assimilation. If we allow the devoicing rule to apply first, the Accusative morpheme will be provided with the right environment for the assimilation of its velar stop (underlying: /id-ki/ a) devoicing: it-ki b) Assimilation of the Accusative velar: it-ti c) surface: itti. Thus in KN phonological rules are to precede morphophonemic rules. Note however that we can analyze this data in a different way: we could claim (Bybee, p.c.) the voiceless velar stop (of the Accusative) assimilates in anteriority and coronality to the preceding voiced stop. This would be followed the devoicing rule. This analysis leads to conclude that the ordering relation between morphonemic and phonological rules depend on the analysis we adopt in analyzing the data.

There is no evidence that tone plays a part in distinguishing words in KN. As such KN is different from Mahas, a Nubian language spoken on the banks of the Sudanese Nile. According to Bell (1968:27), in Mahas tone is significant at the lexical level. He shows several words that are distinguished by tone. I was not able to find such phenomena in KN.

In the description of morphology (chapter 3), the purpose is to give a simple, but detailed description of the language in question. This work is not to show that a certain model of description (e.g. item and process) is

better or more competent than another (e.g. item and arrangement).

The description starts by identifying KN word classes. The following word classes have been recognized in KN: noun, verb, adjective, pronoun, adverb and postposition. All of them except adverbs and postpositions are capable of inflection, the verb being the most inflected. (Adverbs and postpositions are treated in the syntax section.) In addition, there are particles (e.g. copula ma) are dealt with in syntax. In order to classify KN words, we mainly use two criteria: morphological and syntactic.

The morphological criterion will help us distinguish nouns from verbs (e.g. nouns take Case and Number whereas verbs take Tense, Mood, Person/Number).[1] Adjectives and adverbs (discussed in the chapter on syntax) are identified by their syntactic function: an adjective modifies a noun whereas an adverb modifies a verb or a whole sentence. Thus both morphological and syntactic criteria are needed in assigning each word to its appropriate word class.

After identifying KN words we have to study the morphemes that are used with these words. These morphemes will then be classified into categories on the basis of semantic considerations (e.g. all (bound) forms that indicate time will be considered under Tense). An analysis that relies on the position of elements (in the stem) to determine their membership in a category will not be viable for KN since forms with related meanings are not necessarily

expressed in the same affixal position. Thus the adoption of such an analysis will separate the Future Tense from the other Tenses, e.g. Neutral or Past, since the Future is realized as a prefix on the verb stem (bi-) whereas the Neutral and the Past are expressed by suffixes (-r and -s, respectively) on the verb stem. In addition such an analysis will lead us to group such categories as the Future and the Progressive (which is expressed on the same affixal position a-). This, however, does not undermine the validity of describing the relative order of affixes as they occur on the verb stem.

Chapter 4 on syntax starts with KN sentence structure (4.11), phrase structure (4.12) and adverbs (4.13).[2] In section 4.2 I discuss the facts (agreement etc.) that are significant for the following section (4.3) where morphosyntactic rules are tackled. Examples of such rules include passive (4.31), advancements to direct object (4.32) and causative construction (4.33). Two types of passives are considered: personal passive and impersonal passive. Advancements to direct object involve an indirect object or a benefactive nominal that advances to direct object. As a result "the patient" nominal no longer maintains its grammatical relation (i.e. direct object). In a causative construction, the subject of a non-causative clause (e.g. intransitive or transitive) ends up as direct object in a causative. The direct object of a non-causative appears to

maintain its grammatical relation as direct object resulting in a double object construction. Section 4.4 deals with complements such as raising (section 4.44). It is shown that either a subject or direct object (of a complement clause) may raise to subject (Raising to Subject) or direct object (Raising to Object). Subordinate clauses (e.g. clauses of reason, purpose, concession etc.) are discussed in section 4.5. Both KN text and word list can be found in the appendix.

There are several reasons for our effort to describe KN. One reason is that KN is an understudied language. Some of KN vocabulary is used in Greenberg (1966) to establish its membership in the Eastern Sudanic family. Unlike Dongolese, which was given a general description by Armbruster (1960), KN, to the best of my knowledge, lacks a reference grammar.

Another equally important reason is that KN, which is now in greater contact with Arabic, faces the danger of complete replacement by Arabic in the near future. As one Kenuzi put it: "Nubian (referring to KN and Fadicca) might be ousted (by Arabic) in a period of less than fifty years". Old Nubia, located south of the High Dam in Aswan, was a somewhat isolated community: Nubians did not have much contact with Arabic-speaking population. However, after resettlment in New Nubia in 1963 (for further detail on the resettlment, see Kennedy 1978), contact with Arabic in all forms (spoken and written) have been extensive. The

importance of doing linguistic work on the Nubian languages in particular and the Eastern Sudanic languages in general was also pointed out by the report of the UNESCO symposium held in Cairo in 1974. These factors motivate our attempt to document KN.

1.2 Data

Both my wife and myself are native speakers of KN; we were raised in the same province. I, therefore, heavily relied on our speech for most of the data. Native speakers living in neighboring provinces might differ with us in their pronunciation of certain words; For example, people in a neighboring village would pronounce the following words with a nasal before /g/, dungu `money', dungur `blind' and ungu `night'. In our style of speech, the nasal would be dropped in the previous words, thus we will have dugu, dugur and ugu.

Notes

[1] Throughout the dissertation, I have made use of the convention initiated by Bernard Comrie (1976) in stating grammatical categories. Language-specific grammatical categories are indicated by a capital letter at the beginnning (e.g. Tense). When reference is made to a language independent grammatical category, a small letter is used instead (e.g. tense). The language-independent definition of grammatical categories adopted in this work are, unless otherwise indicated, based on the definitions devised by Joan Bybee for the Gramacat project.

[2] Abdel Hafiz's ms. is more detailed discussion of KN syntax written in the framework of Relational Grammar.

Chapter 2 Phonology

2.0 Introduction

In this chapter, the KN phonemic system will be analysed. I will present an inventory of KN consonants and vowels and will provide empirical evidence for their phonemic status. The distribution of consonants in the word (phonological) and the various phonotactic constraints will be tackled in subsequent sections (sections 2.4-2.5). I will also show KN syllable types (cf.2.2) and the principles that govern syllabification of words in this language. The phonological rules discussed are discussed in section 2.6.

2.1 Phonemic inventory[1]

2.11 Consonant inventory

The following represents basic Kunuz Nubian consonants:

Consonants

		Lab	Alv	Pal	Vel	Glot
Stops	Vless		t		k	
	Ved	b	d	j	g	
Nasal		m	n	ɲ		
Spirant		f	s	š		h
Liquids			l/r			
Glides		w		y		

Table 1: Consonant Inventory

Minimal pairs and near-minimal pairs provide the basis for the phonemes posited:

a) The stops /b/, /t/ and /d/ contrast as follows:

be `kill' tibil 'forehead' tobbe 'stroke' keri:t `yogurt'

de `give' idiw 'five' odde `illness' ki:d `bone'

te `grave' itil 'tree' bottir `chop' si:b `leave'

b) The velars /g/ and /k/ contrast as follows:

garri `bad' oro:kel `cold'

karri `female' do:gel `lover'

c) The nasals /m/, /n/ and /ɲ/ contrast in the following way:

me:r `what' kummi `touch' gumur `neck' kam `camel'

ne:r `lentil' kunni `hen-house' nenu `shadow' man `that'

guɲɲi `shake'

uɲɲi `increment'

d) The spirants /f/, /s/, /š/ and /h/ contrast as follows:

fu:kki `ask' affi `boy' tafil `mud'

sokke `lift' assi `grandson' kasir `turban' ka:s `bind'

šu:kki `wash' aššı `crocodile' ašir `pretty' ka:š `search'

e) The liquids /l/, /r/ and /d/ contrast as follows:

kulu `stone' kalli 'sweep' bel `go'

kuru `bird' karri 'female' ber `wood'

mudul `thumb' naddi 'bitter' ed `marry'

f) The glides /w/ and /y/ contrast as follows:

doyir `goat'  eyye 'neck'  a:y `live'

jawir `wet/soft'  ewwe 'call'  a:w `do/make'

The voiced labial stop /b/ is p (which does not function distinctively in KN sound system) before a voiceless obstruent (stops and spirants):

/aba/	aba	`gift to the bride'
/kob/	kob	`close'
/kabki/	kapki	`snatch'

[cc] is the geminate allophone of /j/ in the medial position:

jiddi	gijir	icci	egrij
`saliva'	`listen'	`milk'	`vomit'

The velar stops /k/ or /g/ is labialized before a back vowel (/u/, /o/):

/kerri/	kerri	`sty'
/kowalli/	kowalli	`mirror'
/gowwa:r/	gowwa:r	`pottery'

A stop that is followed by another stop is not exploded; this is indicated by [o] on the unexploded stop:

/kabki/	kap̚ki	`snatch'
/kudbe/	kud̚be	`okera'
/gedged/	ged̚ged	`shiver'

There is no contrastive velar nasal attested. The velar nasal [ŋ] exists as an allophone of /n/ before a velar consonant:

/se:n/	se:n	`navel'
/ungi/	uŋgi	`kneel'

In KN spirants do not have a voicing contrast (all phonemic spirants are voiceless). But there is an example of an allophonic voiced spirant: the alveolar spirant /s/ has the allophone [z] before a voiced stop (/b/ or /d/):

/kus/	kus	`open'
/kusme/	kusme	`Don't open.'
/kusbar/	kuzbara	`condiment'
/kusde/	kuzze	`Open for me.'

The liquid /l/ that is followed by a velar stop is velarized [ɭ] :

/eled/	eled	`pretext'
/kolod/	kolod	`seven'
/talge/	talge	`set free'
/elki/	elki	`find'

There are 18 consonants in KN

Stops

/t/ and /d/ are apico-alveolar, /c/ and /j/ are true palatals (rather than alveo-palatls), /k/ and /g/ are dorso-velars: ti `man', to `enter', itil `tree', katti `lamb', kerri:t `yogurt'; di `die', kade `dress', keddi `tear', ko:d `scratch'; icci `milk', occi `drag'; jom `hit', kaj `horse', ka `house', koris `shoe', ekki `you', ge:le `red', egir `ride' jeleg `wolf'

Nasal

/m/ and /n/ are bilabial and alveolar, respectively.[ŋ] is derived from the nasal by assimilating to a velar stop: mo:n `refuse', milli `bad', gumur `neck', kummi `touch', kam `camel'; no:ra `slowly', nalu `sleep', ka:narri `neighbor, kunni `hen-house', e:n `woman', aŋgi `uncle'. /n/ is palatal that is found only in the medial position of words: uɲɲi `increment', guɲɲi `shake', gaɲɲi `shave'.

Spirants

/f/ is labiodental, /s/ is alveolar, /š/ is palatal whereas /h/ is glottal, e.g. fogor `lame', afes `insect' affi `boy'; sa:wel `ugly' kasir `turban', kassi `paint' u:s `ba:d'; so:ra `light', ašir `pretty', tuššši `soft' ka:š `search'; hanu `donkey'.

Liquids

/r/ is apico-alveolar tap; /l/ is a lateral alveolar: kuru `pigeon', karri `female', ber `wood'; kulu `stone', kalli `sweep', wel , `dog', bel `go out', bel `go'

Glides

/w/ is a bilabial glide whereas /y/ is palatal glide, e.g. wel `dog', wigid `worm', awir `wing', uwwe `call', ge:w `blood'; doyir `ewe', kiyye `lead', tiyye `ape', go:y `blame'.

2.12 Vowel inventory

There are 5 short and 5 corresponding long vowels in KN.[3] They contrast in highness, lowness and backness.[4]

Vowels

	Front		Central		Back	
high	i	i:			u	u:
Mid	e	e:			o	o:
Low			a	a:		

Table 2: Vowels

2.121 Vocalic contrast

The vowels /i/, /u/, /e/, /o/ and /a/ contrast as follows:

/i/	ir	`you pl.'	tir	`they/give'	ti	`cow'
/u/	ur	`head'	tur	`dismiss'	tu	`belly'
/e/	er	`you sg.'	ter	`s/he'	te	`grave'
/o/	orri	`tear'	kore	`feast'	to	`enter'
/a/	ar	`we'	tarre	`load'	ta	`come'

Any prepausal vowel following a voiceless segment is devoiced (the diacritic [o̥] indicates voiceless vowels), as in the following examples:

/ti/	ti̥	`cow'
/tir/	tir	`they'
/tu/	tu̥	`belly'
/duru/	duru	`old'
/kikke/	kikke̥	`fit'
/sekme/	sekme	`chew'
/kassi/	kassi̥	`paint'
/kummi/	kummi	`touch'

A vowel acquires the value of the nasal feature of the consonant (e.g. /m/) it precedes:

/inji/	ĩnji	`lift'
/issi/	issi	`louse'
/umbud/	ũmbud	`salt'
/ugu/	ugu	`evening'
/uɲɲi/	ũɲɲi	`increment'
/ur/	ur	`head'
/eɲɲe/	ẽɲɲe	`fill'
/egir/	egir	`ride'
/ondi/	õndi	`male'
/oddi/	oddi	`sick'
/angi/	ãŋgi	`my uncle'
/adel/	adel	`good'

2.122 Length

Vowel length, which is represented by a colon, is significant in KN; it signals a semantic distinction only in initial and medial positions. Note that there are no long vowels in final position:

ir	`you pl'	ter	`s/he'
i:r	`count'	te:r	`plough'
kud	`insert'	gor	`acne'
ku:d	`fellow-wife'	go:r	`ant/gnaw'
er	`you sg.'		
e:r	`new'		

A few words on the constraints concerning vowels are in order. It should be noted that the clustering of vowels is not allowed in this language. That is, no vowel-vowel sequences will occur in KN. Whenever two vowels are adjacent, phonological rules (e.g. vowel deletion or r-insertion; such rules are called "conspiracies" by Kisseberth 1970) interfere to break up such combination. Moreover, there are no long vowels that are preceded by a consonant cluster or a geminate.

2.2 Syllable structure

KN's principal syllable structure can be represented as follows:

(C) V (C)

A KN syllable, which has to have a vocalic nucleus, can occur without an onset or a coda (e.g. a `heart', o `sing'). The nucleus can also be a long vowel (ti:w `empty', e:w `wash'). An onset, if there is one, can be a consonant or a glide (ugu, awir, o$yir). The coda also can be a consonant or gilde (od `cold', oy `cry').

There are four syllable types which can be given as follows (Note that nucleus can consist of a short or long voewl: V, VC, CV, CVC. Examples:

V o `sing', i `hand', a `lung', a$tum `drum'

VC ar `we', ur `head', ed `marry', um$bud `salt', ug$ros `day', ur$ti `animal'

CV be$ri `elbow', bu$ru `girl', ku$lu `stone', du$ gu `money

CVC a$gil `mouth', a$jin `leather', du$gur `blind' tuk$ki `beat', kas$si `paint'

The two syllable types that lack an onset -- V and VC -- do not occur in the final position position of a polysyllabic word (i.e. words with more than one syllable); in such cases they are restricted to the non-initial position. This seems to be a consequence of the onset-first principle (Clements and Keyser 1983) which requires the onset to take the maximum consonants allowed by the phonotactic constraints of

the language. and differs by the number and position of the consonants: the patterns V and VC only occur word initially. The other patterns (CV and CVC) may occur in any position:

The principles that govern the position of syllables (indicated by $) in this language are two: if a non-syllabic segment (e.g. a consonant) is both preceded and follwed by a syllabic segment (e.g. a vowel), the syllable boundary is after the preceding vowel (e.g. u$gu; a$gil; ka$lum). If, however, two non-syllabic segments occur in sequence, the syllable boundary falls between them (e.g. od$di; ur$ti; kul$ti; tuk$ ki). Thus KN syllabification is simple.

2.3 Stress

In KN stress is not phonemic; it does not show semantic contrast. All words are regularly stressed as follows: the stress falls on the first syllable of one-syllable words:

One-syllable words

jóm `hit'
íd `man'
nóg `go'

With two- and three-syllable words, (unless there is a long vowel) the stress falls on the penultimate.

two-syllable words		three-syllable words	
dógir	`devil'	kašránge	`a plant'
jágin	`push'	jagá:de	`wet'
térig	`deaf'	kilílle	`cry of joy'
gútti	`kick'	kanísse	`dough'

A long syllable is always stressed :

gilli:t `organ'

kerri:t `yogurt'

icci:n `scorpion'

There are a few bisyllabic words that are stressed on the final syllable rather than the penultimate as predicted; such words are marked for stress in the lexicon:

affi `boy'

kofre `a plant'

uffe `blow'

2.4 Distribution of consonants

In this section we will discuss the underlying sequences (rather than the surface sequences) of KN consonants We will investigate whether the occurrence of a certain sound is restricted to a particular position (e.g. initial).

Some sounds may not occur in word-initial position; for example, the liquids, the palatal nasal, and the voiceless palatal stop. Note that all other sounds occur in this position on the condition that they should be simple; no geminate may occur initially in the word.

In word-final position (in which geminates are not allowed), the voiceless palatal stop /c/ and the voiceless velar stop /k/ never occur. As for the other voiceless stop /t/, it is very rare in this position; actually there are only two examples (of final /t/) attested, e.g. gilli:t

`organ' and keri:t `milk'. Furthermore, the spirants /f/ and /h/ do not occur in this position. Nor does the nasal palatal /n/.

All consonants, without exception, can occur medially in the word. The medial position is the only position that allows the occurrence of geminates. Thus all consonants except /g/, /j/ and /h/ (egir `ride', dogir `devil'; ajin `leather', gijir `hear') can also occur geminated in the medial position. Some consonants (e.g. the voiceless stops) are geminate, never simple, in this position. Thus the medial position, unlike the initial or final position, plays host to all consonants, be they simple or geminated.

2.5 Consonant clustering

There are several phonotactic constraints on the clustering of consonants in KN. First, words may not end or begin with consonant clusters. Second, no more than two consonants may occur in a sequence. Third, if the first is a nasal, the second is a stop (e.g. ambes `brother', ondi `male', inji `carry', ongo `north'). Fourth, if the second is a liquid (that is, /l/ or /r/), first is obstruent (e.g. tobro `axe', widlag `rabbit', egrij `vomit', ja:kre `mimick', katre `wall', kofre `plant', kašrange `a type of plant'). A generalization that can be reached is that in KN clusters, a liquid is involved most of the time. The following table illustrates the possibility of coocurrence for consonants in the root.

C2 / C1	b	t	d	c	j	k	g	s	m	n	r	l	w
b	+										+		
t		+				+					+		
d	+		+				+					+	
c				+									
j													
g									+	+	+		
k						+							
s						+		+					
š						+		+			+		+
m	+					+			+				
n		+			+					+			
ɲ													
r	+	+	+		+	+	+	+	+		+		
l		+					+					+	
w						+					+		+

Table 3: Consonant clusters

Examples:

tabbe	`console'	uski	`deliver'	darbad	`chicken'
tobro	`axe'	essi	`water'	arte	`shadow'
atta	`bring'	kaški	`play'	urdi	`baggage'
katre	`wall'	kassi	`ache'	erje	`wait'
oddi	`sick'	kašrange	`plant'	erkene	`party'
gedged	`shiver'	ašware	`dower'	tirga	`cloth'

widlag	'rabit'	kombo	'thick'	kursel	'old'
acci	'bite'	kemkem	'shelter'	armossi	'tears'
takki	'plant'	kummi	'touch'	kulti	'flies'
ugme	'owel'	inji	'carry'	talge	'leave'
nugnug	'whisper'	kunni	'hen-house'	talle	'walk'
ugros	'day'	ondi	'male'	de:wka	'kitchen'
ewre	'goat'	uwwe	'call'		

2.6 Phonological rules

This section is concerned with phonological rules in KN.[5] Such rules are concerned with alternations that apply to all forms -- without exception -- that meet their structural description. In addition to this KN has two other phenomenon. The first type -- the morphophonemic one -- involves rules that are not general in that they do not apply to all cases that meet their structural description; they may be restricted to a particular grammatical category; for example, KN has a vowel harmony rule that only affects the Transitivizing suffix -ir. The vowel of this suffix harmonizes to the high-back vowel of the root (e.g. dab dab-ir `lose'; jug jug-ur `burn'; kuj kujur `put'). But this rule does not apply to other cases (e.g. plural object morpheme -ir): tur tur-ir `dismiss them'; kus kusir `open them' *tur-ur; *kusur). Another example: the deletion of the nasal of the Negative indicative or the Benefactive morpheme when it is followed by pause (e.g. jom-me:n-nu jom-me `don't hit'; ja:n-de:n-nu ja:n-de). This rule is so restricted to these morphemes that it can not apply to lexical roots, although its structural description is satisfied (e.g. ja:n *ja `buy'; e:n *e `woman'). The second type of alternation involves supplative cases; alternants of this type are not distributed on the basis of morphological considerations; for example, in KN the plural Imperative has two alternates (-we and -mi-). There is no way to explain the alternation here on phonological grounds. Only when we

refer to morphological facts can we realy account for their distribution: -mi- occurs only before the Polite Imperative suffix -nu (e.g. te:g-mi-nu `why don't you sit down'); -we occurs elsewhere (e.g.te:g-we `sit down'). These two types of alternations will be discussed in the sections in which the morphemes are presented.

Phonological rules (e.g. labial hardening), unless otherwise indicated, are assumed to apply only within words or across morpheme boundary. Such rules are blocked by word boundary. There are also rules -- nasal assimilation and nasal deletion -- that, in addition to applying within words. These rules would be served better if they are stated in terms of syllable boundary (indicated by $ in the environment). In such cases, the syllable boundary helps us capture generalizations concerning the position of the segment affected by the rule.

A further observation on the way rules are stated is in order. The alphabetic symbols are often used in the representation of sounds involved in the rules. The use of distinctive features (e.g. coronal , anterior , continuant etc.) might discourage the reader who has no experience or training in this area. My wish is to describe KN phonological processes in such a way that any person, with knowledge of English, would find this work easy to read. The distinctive features were used in restating the rules in the footnotes.

2.61 Obstruents

In this section I will describe alternations involving obstruents (stops and spirants). In KN an obstruent assimilates in voicing to the following obstruent. Also a voiceless stop totally assimilates to the preceding voiceless obstruent.

2.611 Non-voicing assimilation

An alveolar voiceless stop (/t/) becomes a spirant (/s/ or /š/) if it is preceded by a spirant. This is seen in verbs containing the Benefactive -tir. This alternation can be stated as follows:

$$t \longrightarrow \begin{bmatrix} s \\ š \end{bmatrix} / \begin{bmatrix} s \\ š \end{bmatrix} \_\_\_\_$$

o:tirsi
/o:-tir-s-i/
sing-Ben-pst-1sg
`I sang for the man.'

mertirsi
/mer-tir-s-i/
cut-Ben-pst-1sg
`I cut the wood for him/her.'

o:ssir
/o:s-tir/
take-out-Ben
`Take it out for him.'

kussirsi
/kus-tir-s-i/
open-Ben-pst-1sg
`I opened the door for him.'

ka:ššir
/ka:š-tir/
search-Ben
`Search for him/her.'

The voiceless alveolar stop (/t/) is a palatal if it is precdede by a voiceless palatal stop. This also seen in verbs containing the Benefactive -tir or the nominalizer -ti:

koptir
/kob-tir/
close-Ben
`Close it for him/her.'

ba:ti
/ba:n-ti/
dance-Nomin
`wedding'

ba:ccir
/ba:j-tir ---> ba:c-tir/
write-Ben
`Write for him/her.'

ba:cci
/ba:j-ti ---> ba:c-ti/
write-Nomin
`writing'

The rule for this alternation can be given as follows:

t ---> c / c ---

The rules for the assimilation of the voiceless alveolar stop can be grouped into a single rule:

$$t \quad \text{-----}> \quad \begin{bmatrix} s \\ \check{s} \\ c \end{bmatrix} \; / \; \begin{bmatrix} s \\ \check{s} \\ c \end{bmatrix} \text{———}$$

The alveolar spirant (/s/) is a palatal after a palatal spirant. This is clearly seen in verbs that have the past tense morpheme -s or nouns that contain the interrogative -se preceded by /s/. The rule that accounts for this alternation is as follows:[6]

s --- š / š ----

The following examples show the Past Tense and the interrogative with /s/:

bu:si
/bu:-s-i/
lie down-pst-1sg
`I was lying down.'

to:se ?
/to:-se/
boy-Intr
`Where is the boy?'

aširse?
/ašir-se/
beautiful-Intr
`Where is the beautiful (girl) ?'

jomsa
/jom-s-a/
hit-pst-3pl
`They hit (me).'

The following examples indicate that /s/ becomes s after /s/:

aka:šša
/a-ka:š-s-a/
prog-look for-pst-3pl
`They were looking for (the goat).'

do:šše ?
/do:š-se/
crazy-Intr
`Where is the crazy (girl) ?'

This rule --like the previous ones -- is blocked by the presence of a word boundary:

do:š sa:yerre ?
/do:s # sa:yyerre/
crazy where
`Where is the crazy (man)?'

2.612 Voicing assimilation

An obstruent is devoiced if it is followed by a voiceless segment. Thus the labial stop /b/ is voiceless before a voiceless consonant. This is seen in stem-final /b/:

```
kobme
/kob-me/
close-neg
`Don't close (the door).'

kopki
/kob-ki/
close-cond
`if you close'

kopsi
/kob-s-i/
close-pst-1sg
`I closed (the door).'
```

Also, a stem-final alveolar stop /d/ becomes voiceless if the following segment is voiceless:

```
jodnu
/jod-nu/
swear-PI
`Please, swear.'

jotti
/jod-ti/
swear-Nomin
`oath'

jotsi
/jod-s-i/
swear-pst-1sg
`I swore.'

idre ?
/id-re/
man-Intr
`Is it a man ?'

itse ?
/id-se/
man-Intr
`Where's the man?'
```

The labial and alveolar stops are not the only stops that are devoiced if the following segment is voiceless. The (stem-final) palatal stop /j/ and the velar stop (/g/) are also devoiced in this environment:

```
ba:jme
/ba:j-me/
write-neg
`Don't write.'

bito:gri
/bi-to:g+r-i/
fut-break-neu-1sg
`I will break.'

ba:ssi
/ba:j-s-i ---> ba:šši/
write-pst-1sg
`I wrote'

ba:cci
/ba:j-ti/
write-Nomin
`writing'

to:kkiri
/to:g-ki-r-i/
break-cond-neu-1sg
`if I break'

to:ksi
/to:g-s-i/
break-pst-1sg
`I broke'

i:gre ?
/i:g-re/
fire-Intr
`Is it fire ?'

i:kki
/i:g-ki/
fire-Acc
```

The following rule describes the alternations shown above:

C

[- sonorant] -----> [- voice] / --- [- voice]

An obstruent (/s/) is voiced before a voiced obstruent (/b/ or /d/). This can be observed in stems ending in /s/ followed by a voiced obstruent:

kusan
/kus-an/
open-Hort
`Let him/her open (the door).'

kuzbu
/kus-bu/
open-Stat
`It is open.'

kuzde:ssa
/kus-de:n-s-a/
open-Ben-pst-3pl
`They opened (the door) for me.'

ko:sossu
/ko:s-os-s-u/
be sour-def-pst-3sg
`It became sour.'

ko:zbu
/ko:s-bu/
be sour-Stat
`It is sour.'

ka:snu
/ka:s-nu/
wrap-PI
`Why don't you wrap (the turban).'

ka:zbu
/ka:s-bu/
wrap-Stat
`It is wrapped.'

ka:zde
/ka:s-de:n/
wrap-Ben
`wrap it for me.'

kisib
/kisib/
`bowl'

kizbi
/kisb-i/
bowl-pl
`bowls'

Note that /s/ is the only (voiceless) obstruent that occurs in the environment for voicing. There are no cases in which the other voiceless obstruents (/t/ or /c/) occur in an environment (stem-final followed by a voiced obstruent) that would motivate voicing. Therefore the rule should be given in the most general way, as in:

$$[-\text{ sonorant}] \longrightarrow [+\text{ voice}] \;/\; \underset{C}{\underline{\quad\quad}}\; [+\text{ voice}]$$

This rule (of voicing) can be combined with the previous rule (of devoicing) into one rule: (Note that the alpha notation (α) is used to indicate values.

$$[-\text{ sonorant}] \longrightarrow [\alpha\text{ voice}] \;/\; \underset{C}{\underline{\quad\quad}}\; [\alpha\text{voice}]$$

This rule reads: an obstruent (stops and spirants) is voiced before a voiced obstruent; an obstruent is voiceless before a voiceless obstruent.

2.62 Nasals

Two types of nasal assimilation may be distinguished: one occurs if a syllable-final alveolar nasal is followed by a voiced stop: the syllable-final alveolar nasal assimilates to the point of articulation of a following voiced stop (Note that a syllable-final alveolar nasal would be deleted if it is followed by a voiceless stop; see the rule of nasal deletion in section 2.623). The other is observed if a syllable-final (alveolar) nasal is followed by a continuant

(i.e. /s/, /s/, /h/, /f/ or /w/): the alveolar nasal would completely assimilate to the following continuant.

2.621 Nasal assimilation A

The nasal /n/ that is syllable final is assimilated to the articulatory features of the voiced stop it precedes. (/n/ is deleted before a voiceless stop; see nasal deletion.); for example, if the following segment is the labial stop /b/, the nasal is realized as labial (i.e. m).[7] This assimilation, which is observable in stem-final /n/, the Genitive morpheme -n and the Inchoative morpheme -an. In all these cases the nasal is in the syllable final position.

The following examples show the syllable-final /n/ as manifested in the stem, the Genitive and the Inchoative in /n/:

mo:nossa
/mo:n-os-s-a/
refuse-def-pst-3pl
`They refused to come.

e:no
/e:n-o/
woman-Q
`the woman'

ja:nar
/ja:n-ar/
buy-Nom
`buying'

ja:nde
/e:n-de:n/
buy-Ben
`Buy me.'

e:no ?
/e:n-o/
woman-Q

`The woman ?'

ti:nur
/ti:-na ur/
cow-Gen head
`the head of the cow'

essanossu
/essi-an-os-s-u/
water-Inch-def-pst-3sg
`It became water.'

If the following consonant is the labial stop (/b/), the alveolar nasal (/n/) becomes labial ([m]):

mo:mbu
/mo:n-bu/
refuse-stat
`S/he has refused'

e:mburu:g nalsu
/e:n buru-ki nal-s-u/
woman girl-Acc see-pst-3sg
`The woman saw the girl.'

ja:mbu
/ja:n-bu:/
buy-stat
`It is bought.'

essambu
/essi-an-bu:/
water-Inch-stat
`It has become water.'

If the voiced velar (/g/) is the following stop, /n/ assimilates by becoming a velar nasal [n]:

e:ngarrima
/e:n garri ma/
woman bad be
`The woman is bad.'

e:ngi
/e:n-ki/
woman-Acc

e:ngodon

/e:n-kodon/
woman-Com

ka:nid
/ka:-na id/
house-Gen man
`The man of the house'

ka:mber
/ka:-n ber/
house-Gen wood
`the wood of the house'

ka:ngir
/ka:-n gir/
house-Gen road
`the road to the house'

2.622 Nasal assimilation B

The alveolar nasal /n/ that is syllable final completely assimilates to the following continuant (i.e. /s/, /s/, /h/, /f/, /w/). This is seen in stem-final /n/, the Hortative -an and the Inchoative -an.[8]

The following are examples of syllable-final /n/ as can be seen in the stem, the Hortative and the Inchoative in /n/:

jagnos
/jagin-os/
push-def
`Push.'

ja:nde
/ja:n-de:n/
buy-Ben
`Buy me (the dress).'

e:no ?
/e:n-o/
woman-Intr
`The woman ?'

te:gannu
/te:g-an-nu/
stay-Hort-PI
`Let him/her stay.'

bessani
/bi-essi-an-i/

fut-water-inch-1sg
`(The milk) will become water.'

/n/ becomes a continuant (e.g. [s], [w]) if the following segment is a continuant (e.g. /s/, /w/):

jagissi
/jagin-s-i/
push-pst-1sg
`I pushed (the door).'

ja:ssi
/ja:n-s-i/
buy-pst-1sg
`I bought (the dress).'

e:sse ?
/e:n-se/
woman-Intr
`Where is the woman ?'

e:s sa:pki nalsu
/e:n sa:b-ki nal-s-u/
woman cat-Acc see-pst-3sg
`The woman saw the cat.'

jagiwwe
/jagin-we/
push-plimp
`Push, you.'

ja:wwe
/ja:n-we/
buy-plimp
`Buy, you.'

te:gawwe
/te:g-an-we/
stay-Hort-plimp
`Let him/her stay.'

e:wwe:r
/e:n-we:r/
woman-indef
`a woman'

e:w wissisu
/e:n wissi-s-u/
woman dance-pst-3sg
`The woman danced.'

essassu

/essi-an-s-u
water-Inch-pst-3sg
`It became water.'

2.623 Nasal deletion

A syllable-final alveolar nasal /n/ is deleted when it is followed by a voiceless stop (/t/ and /k/). This is noticeable in stems ending in /n/, the Inchoative -an-, the Hortative -an-, the Delayed Imperative -kan and the Habitual Imperative -ken.

The following examples show the stem, the Inchoative the Hortative, the Delayed Imperative and the Habitual Imperative in /n/:

aba:nda
/a-ba:n-r-a/
prog-dance-neu-3pl
`They are dancing.'

ja:nnu
/ja:n-nu/
buy-PI
`Please, buy.'

e:ngi
/e:n-ki/
woman-Ac

bessanna ?
bi-essi-an-na/
Fut-water-Inch-Intr
`Is it going to be water ?'

jomannu
/jom-an-nu/
hit-Hort-PI
`Let him/her hit.'

ta:-kan-nu
come-DI-PI
`Come (later).'

ta:-ken-nu
come-HI-PI

`Often come.'

/n/ is deleted if the following segment is a voiceless stop /t/ and /k/, as is shown in the following examples

ba:ti
/ba:n-ti/
dance-Nom
`wedding'

ja:tir
/ja:n-tir/
buy-Ben
`Buy for him/her.'

e:ka:r ma
/e:n ka-r ma/
woman home-loc cop
`The woman is at home.'

ba:ki
/ba:n-ki/
dance-Cond
`if s/he dances'

ja:kir
/ja:n-kir/
buy-Caus
`cause to buy'

essaki
/essi-an-ki/
water-Inch-Cond
`if it becomes water'

The rule for nasal deletion can be represented as in:[12]

$$n \longrightarrow \emptyset \; / \; \_\_\_\_ \; \begin{Bmatrix} t \\ k \end{Bmatrix}$$

2.63 Liquids

KN has both regressive liquid assimilation (RLA) and progressive liquid assimilation (PLA). The former (RLA) entails the complete assimilation of a liquid (/r/ and /l/) to a following alveolar nasal (i.e. /n/). The latter type (PLA) shows that a non-lateral liquid (i.e. /r/) assimilates to a preceding liquid (/l/) or alveolar nasal. A detailed description of both types (RLA and (PLA) will be presented in the following section(s).

2.631 Regressive liquid assimilation

Whenever the liquid /r/ and /l/ (that are syllable-final) are followed by the alveolar nasal /n/, they are realized as [n]. This is observable in stems ending in /r/ or /l/ and the Number morpheme -ir-.

The rule below describes the alternation:[9]

$$\begin{Bmatrix} r \\ l \end{Bmatrix} \text{----> n / --- n}$$

The following examples show that /r/ becomes [n] if it is followed by /n/. Before any other segment /r/ remains unchanged, e.g.

mersi
/mer-s-i/
cut-pst-1sg
`I cut (the rope).'

mennu
/mer-nu/
cut-PIMP
`Please, cut.'

```
tirme
/tir-me/
give-neg
`Don't give him/her.'

tinnu
/tir-nu/
give-PIMP
`Please, give (it to him or her).'

 jomirwe
 /jom-ir-we/
 hit-plobj-plsbj
 `Hit them, ye.'

  jominnu
  /jom-ir-nu/
  hit-plobj-PI
  `Hit them, please.'

  gunne:rbu
  /gur ne:r-bu/
  bull sleep-stat
  `The bull is asleep.'
```

Similarly /l/ is realized as [n] if the following segment is /n/, e.g.

```
 nalir
 /nal-ir/
 see-plobj
 `See them.'

 nalme
 /nal-me/
 see-neg
 `Don't look.'

 nannu
 /nal-nu/
  see+PIMP
  `Please, look.'

 wenne:rbu
 /wel ne:r-bu:/
 dog sleep-stat
 `The dog is asleep.'
```

2.632 Progressive liquid assimilation

If the liquid (/r/) is preceded by the lateral /l/, it is realized as [l]. If the preceding segment is the alveolar nasal (/n/), /r/ is realized as the voiced alveolar stop [d]. This is observable in nouns containing the interrogative -re, the Locative -ro or in verbs containing the Neutral Tense form -r. The rule that accounts for this alternation can be given as follows:[10]

$$r \longrightarrow \begin{bmatrix} l \\ d \end{bmatrix} / \quad \begin{bmatrix} l \\ n \end{bmatrix} \text{ ----}$$

The following examples show the interrogative, the Locative and the Neutral Tense in /r/:

ugu:re ?
/ugu:-re/
eve -Intr
`Is it evening?'

ti:re ?
/ti:-re/
cow-Intr
`Is it a cow?'

idre ?
/id-re/
man-Intr
`Is it a man ?'

kamre ?
/kam-re/
camel-Intr
`Is it a camel ?'

urro
/ur-ro/
head-Loc

jerro
/jer-ro/
back-Loc

ne:rbura
/ne:r-bu:-r-a/
sleep-stat-neu-3pl
`They are asleep.'

ka:gri
/ka:g-r-i/
have-neu-1sg
`I have (money).'

If the preceding segment is /l/, /r/ becomes [l], e.g.

welle ?
/wel-re/
dog-Intr
`Is it a dog?'

itille ?
/itil-re/
tree-Intr
`Is it a tree?'

agillo
/agil-ro/
mouth-Loc

itillo
/itil-ro/
tree-Loc

ago:lla
/a-go:l-r-a/
prog-dig-neu-3pl
`They are digging (the road).'

/r/ is realized as [d] if it is preceded by /n/:

e:nde ?
/e:n-re/
woman-Intr
`Is it a woman?'

se:nde ?
/se:n-re/
navel-Intr
`Is it a navel ?'

suwando
/suwan-ro/
Aswan-Loc
`at Aswan'

se:ndo
/se:n-ro/
navel-Loc

aja:ndi ?
/a-ja:n-r-i/
prog-buy-neu-1sg
`I'm buying (a house?).'

bimo:nda
/bi-mo:n-r-a/
Fut-reject-neu-3pl
`They will reject (the money).'

This rule does not apply across word boundary:

e:n ra:yigre ?
/e:n # ra:yig-re/
woman well-Intr
`How is the woman ?'

If it did, we would get the incorrect form:

*e:nda:yigre ?

2.64 Glides

2.64 Labial hardening

Whenever the glide /w/ is preceded by the labial stop /b/ or labial nasal /m/, it is realized as labial [b]. This can be seen in nouns that have the Indefinite suffix -we:r or in verbs containing the Plural Imperative -we.[11] The rule below describes the alternation:

$$w \text{ ---> } b \text{ / } \left\{ \begin{matrix} b \\ m \end{matrix} \right\} \text{ ---}$$

The following examples show the Indefinite and the Plural Imperative in /w/:

ka:we:k
/ka:-we:r-ki/
house-Indef-Acc
`a house'

welwe:r
/wel-we:r/
dog-Indef
`a dog'

ta:we
/ta:-we/
come-plimp
`Come (you plsbj.).'

o:we
/o:-we/
sing-plimp
`Sing (you)'

If it is preceded by /b/, /w/ becomes [b], e.g.

kubbe:ki
/kub-we:r-ki/
boat-indef-Acc
`a boat'

turubbe:ki
/turub-we:r-ki/
chisel-indef-Acc
`a chisel'

turubbe
/turub-we/
lie down-plimp
`Lie down ye.'

dabbe
/dab-we/
disappear-plimp
`Get lost.'

If the preceding segment is /m/, /w/ is realized as [b] :

kambe:ki
/kam-we:r-ki/
kamel-indef-Acc
`a camel'

elumbe:ki
/elum-we:r-ki/
crocodile-indef-Acc
`a crocodile'

jombe
/jom-we/
hit-plimp

`Hit ye.'

The labial-hardening rule does not apply if there is word boundary:

sa:b welgi jomsu
/sa:b # wel-ki jom-s-u/
cat dog-Acc hit-pst-3sg
`The cat hit the dog .'

kam welgi accisu
/kam # wel-ki acci-s-u/
camel dog-Acc bite-pst-3sg
`The camel bit the dog.'

2.65 Vowels

This section is concerned with alternations that involve vowels. These include r-insertion, vowel-gliding, vowel deletion and vowel devoicing. All these rules except vowel devoicing have a similar function (cf. Kisseberth 1970): they apply to break up the combination of two vowels on the surface. Such phenomena ("vowel clustering") is ruled out by KN phonological structure.

2.651 R-Insertion

Monosyllabic roots that end in a non-high vowel (/o/, /e/, /a/) receive [r] before a non-high vowel which can be seen in -an- `the Hortative, -os- `Definite', -el `relative' -e `the nominalizer').

$$\emptyset \text{ -----> } r \;/\; \# \; C_{\substack{1\\o}} \quad \overset{v}{-\text{high}} \text{ ----} \quad \overset{v}{-\text{high}}$$

The following examples show the cases in which the non-high vowels (/o/, /e/, /a/) of the Hortative morpheme -an, the relative morpheme -el and the Definite morpheme -os are preceded by a consonant and do not need /r/ to be inserted:

joman
/jom-an/
hit-Hort
`Let him/her hit.'

jomel
/jom-el/
hit-Rel
`the one who hit the man'

jomos
/jom-os/
hit-def
`Hit him/her immediately.'

te:gan
/te:g-an/
stay-Hort
`Let him/her stay.'

te:gel
/te:g-el/
stay-Rel
`the one who stayed'

te:gos
/te:g-os/
stsy-def
`stay.'

When any of these non-high vowels is preceded by a non-high vowel, [r] is inserted between the vowels, as in the following examples:

```
to:me
/to:-me/
enter-neg
`Don't enter.'

to:ran
/to:-an/
come-Hort
`Let him come in.'

to:rel
/to:-el/
come-Rel
`that who entered

to:ros
/to:-os/
come-def
`Come in.'

be:nu
/be:-nu/
kill-PI
`Please, kill.'

be:me
/be:-me:n/
kill-neg
`Don't kill.'

be:ran
/be:-an/
kill-Hort
`Let (him/her) kill.'

be:rel
/be:-el/
kill-Rel
`The one who killed.'

be:rossa
/be:-os-s-a/
kill-def-pst-3sg
`They have killed (him/her).'
```

ta
`Come.'

ta:me
/ta:-me/
come-neg
`Don't come.'

ta:rel
/ta:-el/
come-Rel
`the girl who came yesterday'

karsige
/karsig-e/
fight-Nom
`fight'

we
`Say.'

we:re
/we:-e/
say-Nom
`speech'

o
`Sing.'

o:rossa
/o:-os-s-a/
sing-def-pst-3pl
`They have sung.'

o:rel
/o:-el/
sing-rel
`the one who sang'

A root that has more than one syllable and contains a final non-high vowel will not have r-inserted before a non-high vowel. Such vowels are deleted (see vowel deletion in section 2.653):

tillesi
/tille-s-i/
perspire-pst-1sg
`I perspired.'

tillossi
/tille-os-s-i
perspire-def-pst-1sg
`I have perspired.'

Note that monosyllabic roots that end in a high vowel (/i/ or /u/) which is followed by a non-high vowel do not have r-insertion -- the high vowel is glided (cf. gliding (section 2.652)):

di
`die'

dyel
/di-el
die-rel
`the one who died'

dyossa
/di-os-s-a/
die-def-pst-3pl
`They have died.'

Another analysis might argue that [r] is part of the root (e.g. to:r `enter' rather than to) and is deleted before a consonant (e.g. to:me don't enter'). This analysis is not plausible since there are several roots (e.g. tur `fire') that end in /r/ but /r/ does not delete before a consonant-initial morpheme (e.g.turme `don't fire' *tu:me). Thus this analysis will treat forms such as `enter' as exceptions; they lose their /r/ before a consonant. The r-insertion analysis will not have such complications in KN grammar and, as such, is a superior analysis to this phenomena.

2.652 Gliding

These alternations can not be stated without prosodic conditioning: the high vowel (/i/ or /u/) of a monosyllabic or bisyllabic root contains no geminate or consonant clusters is glided if it is followed by a a non-high vowel (i.e. /e/, /o/ or /a/). The high vowel /i/ is realized as [y] in such an environment:

di:su
/di:-s-u/
`He died.'

dyar
/di:-ar/
die-Nom
`dying'

dyossu
/di:-os-s-u/
die-def-pst-3sg
`He has died.'

dyel
/di:-el/
die-Rel
`the one who died'

In these examples, /u/ is realized as [w] before non-high vowels:

duru:g
/duru:-ki/
old-Acc

durwanossa
/duru:-an-os-s-a/
old-Inch-def-pst-3pl
`They became old.'

usu:me
/usu:-me/
laugh-neg
`Don't laugh.'

uswar
/usu:-ar/
laugh-Nom

`laughing'

uswossu
/usu:-os-s-u/
laugh-def-pst-3sg
`S/he has laughed.'

uswel
/usu:-el/
laugh-Rel
`S/he who laughed.'

ju:sa
/ju:-s-a/
go-pst-3pl
`They went.'

jwan
/ju:-an/
go-Hort
`Let him/her go.'

jwel
/ju:-el/
go-Rel
`the one who went'

Verb roots that have a high vowel (/i/ or /u/) with a preceding geminate can not glide. Such vowels are deleted (cf. vowel deletion):

occisi
/occi-s-i/
drag-pst-1sg
`I dragged (him/her).'

occar
/occi-ar/
drag-Nom
`dragging'

occos
/occi-os/
drag-def
`Drag it.'

occel
/occi-el/
drag-Rel
`s/he who dragged'

kiddibu
/kiddi-bu/
drown-stat
`It is drowned.'

kiddar
/kiddi-ar/
drown-Nom
`drowning'

kiddossu
/kiddi-os-s-u/
drown-def-pst-3sg
`S/he has drowned.'

kiddel
/kiddi-el/
drown-Rel
`s/he who drowned'

As we have seen earlier (cf. r-insertion in section 2.651), non-high vowels that are followed by non-high vowels have r-insertion, as in this example:

torel
/to:-el/
enter-rel
`he who entered'

Note further that if the rightmost vowel is [+high] (e.g. /i/), the root-vowel will not be glided:

bijomil
/bi-jom-il/
fut-hit-Rel
`he who will hit'

bidi:l
/bi-di:-il/
fut-die-Rel
`he who will die'

busu:l
/bi-usu:-il/
fut-laugh-Rel
`he who will laugh'

The rules that describe these alternations are below:[13]

$$\begin{matrix} i \\ u \end{matrix} \quad \text{-----}> \quad \begin{matrix} y \\ w \end{matrix} \quad / \quad C \text{ -------- } \begin{matrix} V \\ [-\text{ high}] \end{matrix}$$

2.653 Vowel deletion

Two types of vowel deletion are differentiated: apocope and syncope.Apocope (section 2.6531) involves the loss of a segment at the end of a root or stem. Syncope (section 2.6532) describes the loss of a segment that is not at the end of word; for example, the loss of the high vowel in kasir. Both types are discussed in this section.

2.6531 Apocope

An vowel that is non-high is truncated (i.e. deleted) if it is followed by a vowel and preceded by a vowel separated from it by one consonant, as is shown in the following examples:[14]

ge:leg
/ge:le-ki/
red-Acc

ge:lassu
/ge:le-an-s-u/
red-Inch-pst-3sg
'It became red.'

doro:re ?
/doro:-re/
fat-intr
'Is it fat ?'

doranossu
/doro:-an-os-s-u/
fat-Inch-def-pst-3sg
'S/he has become fat.'

The rule that describes this alternation can be given as follows:

$$\begin{matrix} V \\ [-\text{ high}] \end{matrix} \quad \text{---> } \emptyset \quad / \quad V \quad C \quad \text{----} \quad V$$

Also, unstressed vowel that is preceded by a geminate or consonant cluster is deleted when followed by a vowel, as is clear from the following examples:

kanisseg
/kanisse-ki/
dough-Acc

kanissassu
/kanisse-an-s-u/
dough-Inch-pst-3sg
`It became dough.'

awiddime
/awiddi-me:n/
spread-neg
`Don't spread.'

awiddir
/awiddi-ir/
spread-plobj
`Spread them.'

dullokirsi
/dullo-kir-s-i/
thicken-Caus-pst-1sg
`I thickened it.'

dullassu
/dullo-an-s-u/
thick-Inch-pst-3sg
`It thickened.'

The rule expressing these facts can be given as follows:

$$V \text{ -----> } \emptyset \quad / \quad V \quad C \quad C \text{ ---} \quad V$$

The two rules given above can be combined into a single rule in the following way:

$$V \;\text{----->}\; \emptyset \;/\; \left\{ \begin{array}{l} V \quad C \;\; \text{--------} \\ \qquad\quad [\text{- high}] \\ V\,C\,C \;\; \text{--------} \end{array} \right\} V$$

2.6532 Syncope

A high vowel (/i/ and /u/) that is short is syncopated if it is both preceded and followed by a vowel that is separated from each by one consonant. The following examples will substantiate this claim:

kisibre
/kisib-re/
bowl-Intr
`Is it a bowl ?'

kisipki
/kisib-ki/
bowl-Acc

kizbi
/kisib-i/
bowl-pl
`bowls'

gijir
/gijir/
`listen'

gijirki
/gijir-ki/
hear-Cond
`if you hear ..."

gijrel
/gijir-el/
hear-Rel
`that who heard'

ašir
/ašir/
beautiful
`the beautiful (girl)'

ašri
/ašir-i/
beautiful-pl

`beautiful girls'

begirri
/bi-egir-r-i/
Fut-ride-neu-1sg
`I will ride the horse.'

egran
/egir-an/
ride-Hort
`Let him/her ride the horse.'

kujurme
/kujur-me/
put-neg
`Don't put here.'

kujrirsi
/kujur-ir-s-i
put-plobj-pst-1sg
`I put them there.'

elumbe:r
/elum-we:r/
crocodile-Indef
`a crocodile'

elumre ?
/elum-re/
crocodile-Intr
`Is it a crocodile ?'

elmi
/elum-i/
crocodile+pl
`crocodiles'

Vowel syncopation is blocked if /i/ or /u/ is long:

gili:ti * gilti
/gili:t-i/
organ-pl
`organs'

keri:tassu * kertassu
/keri:t-an-s-u/
yogurt-Inch-pst-3sg

No vowel that is preceded by a geminate or a consonant cluster can be syncopated:

akkir	*akkran
/akkir/	/akkir-an/
wean	wean-Hort
kurkum	*kurkmassu
/kurkum/	/kurkum-an-s-u/
a black substance	black substance-Inch-pst

Also, non-high vowels (/e/, /o/, /a/) which are followed by a consonant are not syncopated:

kogorassu	* kograssu
/kogor-an-s-u/	
hard-Inch-pst-3sg	
`It became hard.'	
adelan	* adlan
/adel-an/	
good	
`be good'	

The rule accounting for vowel syncopation is as follows:

$$V \longrightarrow \emptyset \;/\; V\ C \_\_\_ C\ V$$
$$\begin{bmatrix} +\text{high} \\ -\text{long} \end{bmatrix}$$

2.654 Vowel-shortening

A long vowel of a monosyllabic stem becomes short word-finally:

o:me
/o:-me/
sing-neg
`Don't sing'

o
`sing'

ju:si
/ju:-s-i/
go-pst-1sg
`I went.'

ju
`go'

ja:nde:nnu
/ja:n-de:n-nu/
buy-Ben-PI
`Please buy (it) for me.'

ja:nde
`buy (for me).'

talleme:nan
/talle-me:n-an/
go-neg-Hort
`Don't let him go.'

talleme
`Don't go.'

The rule for vowel shortening can be given as follows:

V: -------> V / ------- #

2.655 Vowel devoicing

A vowel becomes devoiced if it is preceded by a voiceless segment and followed by a pause.

If the prepausal vowel is preceded by a voiceless segment, it (the vowel) becomes voiceless (indicated by o under the vowel):

ka:tu:r
/ka:tu:-r/
room-loc
`in the room'

ka:tu̥
`room'

bija:ndi
/bi-ja:n-r-i/
fut-buy-neu-1sg
`I will buy.'

jomsi̥
/jom-s-i/
hit-pst-1sg
`I hit him/her.'

a:gra
/a:g-r-a/
stay-neu-3pl
`They stay.'

nalsḁ
/nal-s-a/
see-pst-3pl
`They saw him/her.'

nalkiri
/nal-ki-r-i/
see-cond-neu-1sg
`if I stay'

nalki̥
/nal-ki/
see-Cond
`if you see'

kajre
/kaj-re/
horse-Intr

`Is it a horse?'

kaš̌š̌e
/kaj-se/
horse-Intr
`Where is the horse?'

As the examples above show, a vowel is not devoiced if it is either preceded (bija:ndi) or followed (ka:tur) by a voiced segment.

The rule below describes the alternation:

$$V \longrightarrow [-\text{voice}] \;/\; \underset{[-\text{voice}]}{C} \text{ ---- pause}$$

Notes

1 The phonemes posited here are based on words in isolation. Phonemes in connected speech are not examined in this study. However, it is expected that the phonemic inventory based on isolated lexical items may not be the same as the one that is based on connected speech (Madeleine Mathiot, p.c.).

If we compare these phonemes with those reported for Dongolese (Armbruster 1960:37), we would find that there are many differences between the two dialects (Kunuz and Dongolese). First, Dongolese makes a distinction between a voiced labial stop /b/ and a voiceless labial stop /p/. /p/ occurs in KN as an allophone of /b/; it is not a phoneme. Dongolese (Armbruster 1960) is also claimed to have two stops that are not phonemically attested in KN /g/ and /z/.

2 Consonants that are not simple (e.g. /tt/ are treated as geminates rather than with the feature [+ long] (e.g. /t:/). The reason is that the latter approach will lead to the violation of KN syllable principles. In this language, the syllable type V can not occur in the final position of a polysyllabic word (u$gu, *ug$u). If a "geminate" is treated as if it were a long vowel, the final syllable of a word such as acci would contain the syllable type V (ac:$i) which is undesirable in this position.In order to avoid the violation, the long-consonant analysis would resort to a statement of this type: Syllable type V is allowed in the

final position of a polysyllabic word only if the preceding syllable contains a long consonant. Under the geminate analysis, no such statement is needed in KN grammar; the final syllable in a polysyllabic word such as acci would be syllabified as ac$ci, with no final syllable of the V-type.

3 These vowels are also attested in closely related languages such as Fadicca, Mahas (Tucker and Bryan 1966; Ayyub 1968) and Dongolese (Armbruster 1960).

The long vowels are not represented as a sequence of two vowels (e.g. /aa/) (see Thelwall 1983 for Meidob Nubian long vowels). Instead they are treated with the feature [+ long]. There are two reasons for this assumption. First, KN does not allow vowel-vowel sequences. Note that Meidob Nubian (Thelwall 1983) have dipthongs. Second, what we call a long vowel behaves as a unit as far as syllabification is concerned.

Note that Dongolese (Armbruster 1960:40) has eight vowels. It also has diphthongs such as ai, au, and oi. These are not attested in KN. They are eliminated by different strategies (i.e. r-insertion (section 2.651), glide (section 2.652) and vowel deletion (section 2.653).

4 Note that the feature round is redundant (i.e. it is predicted from the other features) in the classification of KN vowels. All back vowels are round--there are no non-back round vowels (e.g. /o/).

5
Unlike TGP, NGP (cf. Hooper 1976) distinguishes the following rule types: phonetically conditioned rules, morphophonemic rules (i.e. rules whose environment needs reference to morphological facts (e.g. identity of specific morphemes (Anderson 1975), morphological spell-out rules (abstract morphemes are given phonological substance) and via-rules (i.e. they show the relation between derivationally related words (e.g. ni `drink' and giddi `cause to drink' in KN).

6
The rule for the assimilation of the alveolar stop/alveolar spirant following spirant can be stated as follows:

$$\begin{bmatrix} -\text{ son} \\ -\text{ back} \\ -\text{ voice} \end{bmatrix} \text{ ----> } \begin{bmatrix} \alpha\text{ cont} \\ \beta\text{ pal} \end{bmatrix} / \quad \begin{bmatrix} -\text{ son} \\ -\text{ back} \\ -\text{ voice} \\ \alpha\text{ cont} \\ \beta\text{ pal} \end{bmatrix} \text{ ------}$$

7
The nasal assimilation rules can be stated with distinctive features in the following way: (The feature + voice is required in the following rule since voiceless stops lead to the deletion of the preceding nasal.)

$$[+\text{ nasal}] \text{ ----> } \begin{bmatrix} \alpha\text{ ant} \\ \beta\text{ cor} \end{bmatrix} / \text{ ---} \quad \begin{bmatrix} -\text{ son} \\ +\text{ voice} \\ \alpha\text{ ant} \\ \beta\text{ cor} \end{bmatrix}$$

This rule indicates that the nasal assimilates in anteriority and coronality to the following voiced stop. Thus if the stop is /b/, which is (a noncoronal) anterior,

the nasal is realized as (noncoronal) anterior m . The nasal is [n̄], which is coronal/anterior, if the following stop is a voiced coronal/anterior (/d/). Finally if the stop is neither anterior nor coronal, that is, the velar /g/, the nasal is also velar ([ŋ̄]) (which is neither anterior nor coronal). As we have noted the nasal assimilates to (the anteriority and coronality) of a following voiced stop.

8
This rule can be stated if we take the syllable into account; the alveolar nasal that undergoes this rule is syllable-final:

$$\begin{bmatrix} +\text{ nasal} \\ +\text{ cor} \end{bmatrix} \text{ -----> } [+\text{ cont}] \text{ / --- \$ } [+\text{ cont}]$$

9
Using distinctive features, we can restate this rule as follows:

$$\begin{bmatrix} +\text{ cons} \\ +\text{ son} \\ -\text{ nasal} \end{bmatrix} \text{ ---> } \begin{bmatrix} +\text{ nasal} \\ +\text{ cor} \end{bmatrix} \text{ / --- } \begin{bmatrix} +\text{ nasal} \\ +\text{ cor} \end{bmatrix}$$

This reads: a liquid is nasal before a nasal.

10
This rule (progressive liquid assimilation) can also be be stated with distinctive features:

$$\begin{bmatrix} +\text{ cons} \\ +\text{ son} \\ -\text{ nas} \end{bmatrix} \text{ -----> } \begin{bmatrix} [+\text{ lat}] \\ [-\text{ cont}] \\ [-\text{ nas}] \end{bmatrix} / \begin{bmatrix} [+\text{ lat}] \\ [+\text{ nasal}] \\ [+\text{ cor}] \end{bmatrix} \text{ -------}$$

11
This rule can be stated with distinctive features in the following way:

$$\begin{bmatrix} - \text{ cons} \\ - \text{ syll} \\ + \text{ ant} \end{bmatrix} \quad \text{----->} \quad [- \text{ cont}] \; / \; \begin{bmatrix} - \text{ cont} \\ + \text{ ant} \\ - \text{ cor} \end{bmatrix} \quad \text{-----}$$

Not that in Dongolese (Armbruster 1960) and Fadicca (Tucker and Bryan 1966), the /w/ of the Plural Imperative <u>-we</u> optionally assimilates to the preceding consonant:

a:gge	a:gwe
/a:g-we/	/a:g-we/
`sit'	
jomme	jomwe
/jom-we/	/jom-we/
`hit'	

12
A more general rule for the nasal deletion can be given in distinctive features:

$$\begin{bmatrix} + \text{ nasal} \\ + \text{ cor} \end{bmatrix} \text{----->} \not{\emptyset} \; / \; \text{-----} \; \$ \begin{bmatrix} - \text{ son} \\ - \text{ cont} \\ - \text{ voice} \end{bmatrix}$$

13
The gliding rule can also be stated as follows:

$$\begin{bmatrix} - & \text{cons} \\ + & \text{syll} \\ + & \text{high} \end{bmatrix} \quad \text{----->} \quad [- \text{ syll}] \; / \; \overset{V}{\#} \; C \; \text{-------} \; \overset{V}{[- \text{ high}]}$$

14
Note that high vowels /i/ or /u/ (cf. 2.652) are glided when followed by a non-high vowel (i.e. /e/, /o/ or /a/).

Chapter 3 Morphology

3.0 Introduction

This chapter is concerned with the morphology of Kunuz Nubian. Morphology (cf. Nida 1946) is the study of word structure. The morphological units that can be recognized in this language are roots, stems and affixes. KN roots are distinct from stems in that a root (e.g. jom `hit') is a monomorphemic base that is not susceptible to any further analysis. Stems in KN consist of a root plus one or more derivational morphemes (e.g. jom-eddi `stirring fork'; it consists of the root jom and the nominalizer -eddi). KN roots, however, can directly carry inflectional affixes, without being extended; for example, to `enter', ed `marry' and ka `house', which can also function as roots, are stems in to:-k `(boy-Acc)', ed-s-i `(marry-pst-1sg)', ka:-r `(house-Loc)'.

Affixes are morphemes which are bound. There are two main types of affixes in KN: prefixes and suffixes.[1] The majority of bound forms are suffixes, which are abundant in this language. As for prefixes, KN has only two instances used (inflectionally) with verb stems (no prefixes are used with noun stems) : bi- `Future' and a- `Progressive'. As an example, we have -i, which indicates Number (plural) in nouns (e.g. id `man', id-i `men'), and -a, which signals a third person plural subject (e.g. e:r-bu-r-a `They are asleep').

The word classes distinguished here are: noun, verb, adjective and pronoun. These are differentiated on the basis of morphological, sematic or syntactic facts. Nouns and verbs differ in the inflectional paradigm they take: the former use Case and Number where as the latter take, among others, Tense, Aspect and Mood. Adjectives are distinguished from nouns on the grounds of their behavior in compounding: when adjectives are combined with nouns no linker is needed. In contrast, noun-noun compounding usually requires a linking genitive to intervene between the two elements. Pronouns are set off from the rest of word classes by its peculiar number inflection: only pronouns take the plural number -gu.

The morphemes used with KN words (e.g. nouns) can be divided into two types: derivational morphology (e.g. nominalizing morphemes) and inflectional morphology such as Case, Number and Tense.

The criteria employed in discovering derivational categories (as opposed to inflectional categories) are four (a detailed discussion of the usefulness of such criteria in distinguishing derivational and inflectional morphology, see Bybee 1985; for their criticism see Anderson 1982): (a) generality or productivity (cf. Aronoff 1976). Derivational categories are not general in that they can not extend to all stems of the appropriate form-class; inflectional categories (e.g. Tense) apply to all forms (e.g. verbs). A counterexample to this is discussed by Dik 1981 concerning

the fact that the Dutch Diminutive, which is derivational, is shown to be so productive that native speakers apply them to nonce words. (b) They (derivational categories) are so relevant to the verb stem as to have a profound effect on the meaning of the stem: idiosyncracy or lexicalization result from derival (e.g. Causative) rather than inflectional categories. (c) Categories (e.g. Inchoative in KN) that change the lexical category of a stem (e.g. a noun can be changed into a verb) are to considered derivational rather than inflectional (cf. Anderson 1982:586). (d) only derivational morphemes can be part of the stem in word-formation rules. Anderson's claim (p.587) that inflectional categories are syntactically relevant accounts for the inflectional status of Person and Number in KN; they refer to syntactic elements (e.g. subject). However, this approach will wrongly label syntactically irrelevant categories such as Aspect in KN as a derivational category, which it is not.

The difference between inflectional and derivational morphemes is also attested in the order in which they occur. In the nominal and verbal system of KN, derivational morphemes are closer to the stem than inflectional morphemes; for example, the nominalizer -eddi (which derives nouns from verbs) is inside (i.e. precedes) Number and Case morphemes, as in tag-addi-cci-gi (cover-Nomin-pl-Acc) `lid'.

In section 3.11 nouns are discussed. Section 3.12 is concerned with adjectives whereas section 3.13 deals with

pronouns. Verbs are tackled in section 3.2.

3.1 Nominal morphology

In this section we will discuss KN nominal morphology; we are concerned here with nouns, adjectives and pronouns. We will examine the various morphemes that enter into the composition of KN words. Note that Case and Definiteness (discussed in 3.14 and 3.15, respectively) morphemes are suffixed to the last element of a noun phrase. As such it would be appropriate to treat them after nouns, adjectives and pronouns have been introduced.

3.11 Noun

KN nouns are idistinguished from other word classes by the inflectional paradigms they take: nouns take nominal morphology, e.g. Case or Number. Also the distinction between nouns and verbs can be made according to their position in a syntactic construction: only verbs occur in sentence-final position (in KN) whereas nouns occur in the subject/direct object slot.[2]

It is also possible to differentiate nouns from adjectives and pronouns on morphological grounds. Nouns are distinct from adjectives in that noun-noun compounds generally require a Genitive marker as linker (e.g. essinga:r `river' (essi+na+agr `water-Gen-place')). In contrast, adjective-noun compounds do not use a Genitive marker to serve as a linker of the two components (ko:kkinna `beatle' (ko:g `raven'+kinna `small')). Nouns are

distinguished from pronouns on the basis of the Number (plural) marker they use: nouns take the Plural Number morpheme -i or -cci (sa:b `cat' sa:b-i `cats'; widlag `rabbit' widlag-i `rabbits'; ossi `leg' oss-icci `legs'). Pronouns take the suffix -gu as a plural Number morpheme (man `this' man-gu `those'; sa:y `which (one)' sa:y-gu `which (ones)'. Thus these criteria are essential in identifying KN nouns.

Nouns to which inflectional morphemes are added are roots and derived stems. Many noun roots are stems that directly take inflectional morphemes (e.g. ossi `leg' oss-icci `legs'). KN also has derived noun stems, as discussed below.

3.111 Derivational morphology

In KN nouns may be derived from verbs and adjectives. KN has four sets of nominalizers:(1) -ar which is very productive and derives deverbal nouns that indicate the performance of an action. (2) -ti, -id, -e, which are restricted to certain lexical items and indicate the name of an event. (3) -eddi, which is restricted to some action verbs (e.g. jom) and is used to derive an instrumental noun. (4) -a:y, is used productively with process verbs to derive noun agents.

3.1111 Nouns derived from verbs[3]

Performance nouns

Nouns can be derived from the roots or stems of all verbs by means of the suffix -ar which expresses the performance of an action. (note that roots/stems are in the lefthand column):[4]

(1)

	Nominalizer
ta:j `ache'	ta:j-ar `aching'
jom `hit'	jom-ar `hitting'
ba:n `dance'	ba:n-ar `dancing'
jomtakki- `be beaten'	jomtakk-ar `being beaten'
dabir `lose'	dabr-ar `losing'
bogir `spill'	bogr-ar `spilling'

Name of event nouns

Nouns that indicate the name of an event are derived by the suffixation of -ti, -id or -e to a verb root. The roots that occur with each allomorph can not predicted; they have to be listed. The resulting noun does not indicate the performance of the action or situation described by the verb (cf. the forms with the suffix -ar). Rather, it denotes the name of the event. The distinction will be clearer when we compare the two types.

The suffix -ti has variants which are phonologically determined: -ci (after roots ending in /j/) and -atti (after roots ending in a vowel that is preceded by a geminate).

-ti occurs after a verb root that ends in any consonant except /j/:

(2)

	Nominalizer
ba:n `dance'	ba:-ti `wedding'
jod `swear'	jot-ti `oath'
bo:d `run'	bo:t-ti `running'
dol `love'	dol-ti `love'

The /t/ of the nominalizer combines with a preceding /j/ to yield cc :

(3)

	Nominalizer
ba:j `write'	ba:c-ci `writting'
goj `slaughter'	goc-ci `slaughtering'

Roots ending in a (post-geminate) vowel take -atti:

(4)

	Nominalizer
tuffi `spit'	tuff-atti `saliva'
gurre `be happy'	gurr-atti `happiness'
tille `perspire	till-atti `perspiration'

The suffix -id can be added to a small number of verb roots to derive noun stems:

(5)

	Nominalizer
terri `load'	terr-id `load'
ulli `light'	ull-id `light'
urub `puncture	urb-id `hole'
tissi `hate'	tiss-id `object of hatred'
ekki `urinate'	ekk-ed `urine'
orig `be hungry'	org-id `hunger'

Some verb roots take the suffix -e to derive noun stems:

(6)

	Nominalizer
oddi `be ill'	odd-e `illness'
karsig `fight'	karsig-e `fight'
bowwi `swim'	boww-e `bath'

The suffix -e is not productive; it is not used with such verbs as:

(7)

to:g
`break'

a:gi
`sit'

orig
`be hungry'

turub
`lie down'

talle
`walk'

Instrumental Nouns

There is a suffix -eddi which is used with some verb roots (that indicate an action) to derive an instrumental noun, for example

(8)	Nominalizer
ɟom `hit'	ɟom-eddi `hammar'
ɲob `stir'	ɲob-eddi `cooking spoon'
ʞalli `sweep'	ʞall-eddi `broom'
ʞomis `clean'	ʞoms-eddi `cleaner'
ʈag `cover'	ʈag-addi `lid'

Noun agent

A noun agent (with undesirable habits or traits) can be derived from some verb roots by the suffixation of -a:y:[6]

(9)	Nominalizer
bokki `hide'	bokk-a:y `hiding person'
sarki `fear'	sark-a:y `coward'
oddi `be ill'	odd-a:y `sickly'
ekki `urinate'	ekk-a:y `a person who often wets himself/herself'

3.1112 Nouns derived from adjectives

In the previous section, it has been shown that a noun can be derived from a verb by adding a suffix. The process is not limited to verbs. Noun stems can also be derived by the suffixation of -kene to the roots of all adjectives:[7]

(10)

	Nominalizer
dullo `heavy'	dullo:-kene `heaviness'
adel `good'	adel-kene `goodness'
u:s `bad'	u:s-kene `badness'
ašir `beautiful'	ašir-kene `beauty'
urtunna `short'	urtunna-kene `shortness'
noso `tall'	noso:-kene `tallness'
doro `fat'	doro:-kene `fatness'
ese `thin'	ese:-kene `thinness'
duru `old'	duru:-kene `oldness (in age)
kinna `young'	kinna-kene `childhood'

3.1113 Compounds[8]

Some noun stems have resulted from compounding two noun roots or a noun and an adjective root. This process, however, is no longer productive.

Noun + noun

In this type of compounding, two nouns are combined to derive a noun stem whose meaning sometimes can not be predicted from the two nouns, e.g.:

(11)

ka:tu
(ka+tu)
house-belly
`room'

essinga:r
(essi+na+agar)
water-Gen-Place
`river'

de:wka
(de:w+ka)
oven-house
`kitchen'

ka:narri
(ka+na+arri)
house-Gen-near
`neighbor'

kanisse
(ka+na+essi)
house-Gen-water
`dough'

darbanondi
(darbad+na+ondi)
chichen-Gen-male
`rooster'

The use of the Genitive in compounds might lead us to conclude that such examples are noun phrases rather than compounds. This, however, can not be the case for in the

genitive construction the meaning derived is predictable from the individual elements. Thus in:

(12) ka:-n essi
house-Gen water
`the water of the house'

the resulting meaning is taken from the two forms ka and essi. In contrast, the meaning of compounds is not always predictable on the basis of the individual elements, e.g.:

(13) ka:nisse
(ka+na+essi)
house-Gen-water
`dough'

Noun + adjective

Compounds consisting of a noun and an adjective are less common:

(14) koledu:l
(kole+du:l)
water-wheel big
`water-wheel'

essidu:l
(essi+du:l)
water-big
`sea'

ko:kkinna
(ko:g+kinna)
raven-small
`Beetle'

wissidugur
(wissi+dugur)
moth-blind
`udder'

As can be noted in these examples, there is no linker between the two elements. However, it is the second component that modifies the first.

3.112 Inflectional morphology

Nouns have an inflectional category : Number. Every noun has to be marked for this category. Note that Case and Definiteness, which are inflectional categories, are suffixed to the last element of the noun phrase, a noun phrase can be a pronoun, a single noun or a modified noun.

3.1321 Number

KN nouns are either singular or plural. The singular is distinguished by the absence of any number marking. The Plural is formed by suffixing -i or -cci to the roots or derived stems of all nouns. The choice of allomorph is phonologically determined since -i is used with roots or stems ending in a consonant whereas -cci occurs with roots or stems ending in a vowel, e.g.[9]

(15)

	Plural
wel `dog'	wel-i
id `man'	id-i
terrid `parcel'	terrid-i
urbid `hole'	urbid-i

The allomorph is -cci if the preceding segment is a vowel (note that a long vowel of a root is shortened before a word boundary):

(16)

	Plural
ti `cow'	ti:-cci
tu `stomach'	tu:-cci
sullu `ghost'	sullu-cci
kuru `bird'	kuru-cci
berti `goat'	bert-icci
maga `locust'	maga:-cci
tobro `axe'	tobro:-cci
ba:ti `wedding'	ba:ti-cci
kalleddi `brooms'	kalleddi-cci

The following nouns form plurality with -li (after a stem ending in bilabial stop /b/ or nasal /m/) or -ri (after a a non-high vowel /e/, /o/, /a/), e.g.

(17)

	Plural
kub `boat'	kub-li
kam `camel'	kam-li
nogo `F. slave'	nogo-ri
ambanna `my uncle'	ambanna-ri

A nouns which end in /u/ are irregular in that they form their plural by suffixing -i instead of -cci, as

expected.

(18)

	Plural
buru `girl'	burw-i
sulu `peddler'	sulw-i
kulu `stone'	kulw-i
hanu `donkey'	hanw-i

Finally, a few nouns are irregular:

(19)

	Plural
sorin `nose'	sorgi
to:d `boy'	toni
e:n `woman'	e:cci

2.113 Kinship possessors

KN has special prefixes for kinship terms. These prefixes are clearly related to the independent possessive pronouns (e.g. an `my', en `your', ten `his/her' etc.). They show person (i.e. first, second and third) distinction but no number is differentiated:

	Possessives	
1 sg/pl	an-	ann-
2 sg/pl	in-	inn-
3 sg/pl	tin-	tinn-

Table 4: possessive prefixes

Note that the choice of allomorphy is phonologically determined: the prefixe with double /n/ are only used before a vowel (e.g. ann-id `my husband'); the prefixe with single /n/ or one of its phonologically conditioned variants (this being the result of nasal assimialtion to a following obstruent ) occur elsewhere (e.g. am-bes `my brother').

The kinship terms associated with these possessive prefixes are dependent roots. They can not be used without a possessive prefix. These are nine such dependent roots:

(20)
-bes
`brother'

-issi
`sister'

-a:w
`grandmother'

-u
`grandfather'

-gi
`uncle (mother's brother)'

-banna
`uncle (father's brother)'

-kegid
`aunt (mother's sister)'

-ba:b
`father'

-ogo
`mother or father-in-law'

The noun for `aunt' (father's sister) consists of two dependent roots: -ba:b `father' and -issi `sister'. These two roots are linked by -na-, e.g.

(21) -ba:nissi
`aunt (father's sister)'

3.12 Adjectives

Adjectives modify a noun by defining its quality. KN adjectives can be distinguished from word classes such as nouns and verbs on the basis of morphological or syntactic facts. In compounding, adjectives directly combine with nouns (e.g. ko:kkinna `beetle' (ko:g `raven' + kinna `small/young); they do not need the Genitive (-na) to serve as linker. In contrast, nouns combine with nouns via the genitive (-na) (e.g. essinga:r `river' (essi `water'+na+agar `place'). In addition, a (syntactic) criterion can help us differentiate adjectives from nouns: adjectives that are capable of modifying nouns. Adjectives are different from verbs in that they can not be used without a noun which they modify. Also, adjectives do not directly take such grammatical categories as Mood, Aspect, Person etc. Thus there is justification for considering adjectives as a separate word classes of KN.

KN has adjective stems to which inflectional affixes are attached. Such stems are of two types: roots and derived stems. Many adjective roots are stems that can directly take inflections (e.g. du:l `big' du:li `big (ones).

3.121 Derivational morphology

New adjective stems can be derived from verb and noun stems by the use of derivational affixes.

3.1211 Adjectives derived from verbs

Adjectives can be derived from some verbs by the addition of the suffix -ri to the root.[10] This suffix is only used with the following roots; it is no longer productive:

(24)	Adjective
jug `burn'	jug-ri `hot'
bassi `leak'	bassa-ri `insipid'

3.1212 Adjective derived from nouns

Adjectives can also be formed by suffixing -ko:l `having' or -kinni `without' to roots or derived stems of most nouns. These suffixes are so productive that they can be used with any noun:[11]

(25)	Adjective
dugu `money'	dugu:-ko:l `rich'
	dugu:-kinni `poor'
jelli `job'	jelli-ko:l `worker'
	jelli-kinni `Jobless'
beti `dates'	beti-ko:l `(a palm tree) full of dates'

	beti-kinni `dateless (tree)'
tillatti `perspiration'	tillatti-ko:l `a person wet with perspiration'

Adjectives can also be derived from some noun roots by the suffixation of (the less productive) -katti, e.g. The use of this suffix is confined to the following noun roots):[12]

(26)

	Adjective
erig `intelligence'	erik-katti `intelligent'
so:r `contract'	so:r-katti `good at writing'
missi `eye	missi-katti `envious'

3.122 Inflectional morphology

3.1221 Number

Singular Number is unmarked in KN. The Plural is expressed by -i or -cci (after vowels) suffixed to the roots or derived stems of all adjectives:

(27)

	Plural
adel `good'	adel-i
ašir `beautiful'	ašr-i
dugu:ko:l `rich'	dugu:ko:l-i

Adjective roots or stems that end in a vowel take the ending -cci for plural formation, e.g.

(28)

	Plural
garri `bad'	garri-cci
esse `thin'	esse:-cci
noso `tall'	noso:-cci
so:rkatti `good at writing'	so:rkatti-cci

Some adjective roots that end in /o/ or /a/ take the plural ending -ri :

(29)

	Plural
dullo `heavy'	dullo-ri
šo:ra `light'	šo:ra-ri
no:ra `small'	no:ra-ri

There are, however, some adjective ending in /o/ or /a/ that take the regular marker, that is -cci, e.g.

(30)

	Plural
noso `long'	noso:-cci
fogo:ra `lame'	fogo:ra-cci

3.13 Pronouns

A pronoun is a word used instead of a noun. Pronouns in KN may by classified into the following kinds:

Pronouns are distinguished from the other word classes (e.g. nouns, adjectives, verbs etc.) in that they (pronouns) have a distinct marker for plurality -- the suffix -gu (e.g. in `this' in-gu these, man `that' man-gu `those'. Note that nouns express plurality by the suffix -i or -cci (after a vowel), as in wel `dog' wel-i `dogs', ossi `leg' oss-icci `legs'.

KN has independent personal pronouns as illustrated in Table 5. The pronouns given here are in the Nominative (see section 3.14 for discussion of Case).

	sg	pl
1st	ay	ar(gu)
2nd	er	ir(gu)
3rd	ter	tir(gu)

Table 5: personal pronouns

In addition, there are words such as the demonstratives (in `this' and man `that') and the interrogatives (ni `who' and sa:y `which') that can function as pronouns: in `this (one)', man `that (one); ni `who' sa:y `which (one).

Pronouns are inflected for Number. In such a case, the Number marker is -gu) rather than -i or -cci (used with nouns):[13]

(31)

	Plural
ar `we'	ar-gu
ir `you'	ir-gu
in `this'	in-gu
man `that'	man-gu
ni `who'	ni:-gu
sa:y `which'	sa:y-gu

3.14 Case

There are three cases for nominals in KN: the Nominative, the Accusative and the Genitive. In addition KN has Locative, Directional and Instrumental cases.[14] The Nominative is unmarked but the other cases take the form of suffixes that are attached to the (the last element of) a noun phrase (a single noun, a pronoun, a noun followed by a modifier).

3.141 The Nominative

The nominative indicates the subject of the action or situation described by the verb. It is expressed by a zero morpheme:

(32)

	Nominative
to `boy'	to
id `man'	id
buru `girl'	buru
duru `old'	duru

3.142 The Accusative

The accusative indicates the object or the entity that is acted upon. The Accusative suffix has the allomorphs -ki and -gi. The choice allomorph is phonologically conditioned: -ki occurs in all environments except after a sonorant other than /r/ in which case the allomorph is -gi. Note that -ki has two phonologically determined allomorphs: -ti and -ci. These occur if the preceding segment is a voiceless alveolar stop or a voiceless palatal stop, respectively; otherwise -ki is used. Note that the devoicing rule discussed in section 2.612 applies to the stem-vinal stop prior to the assimilation of the velar stop to the preceding segment:

(35)

	Accusative
keri:t 'milk'	keri:t-ti
id 'man'	it-ti
kaj 'horse'	kac-ci
og 'chest'	ok-ki
koris 'shoe'	koris-ki
ber 'wood'	ber-ki
ba:b 'door'	ba:p-ki
(e:n) do:s 'crazy (woman)'	(e:n) do:s-ki

Note that the allomorphs -ti and -ki are the product of an assimilation rule that applies only to the case morphemes in KN; this rule does not apply to other morphemes (e.g. causative -kir or conditional -ki: jod `swear', jotkir `cause to swear' but *jotti; jotki `if you swear' but *jotti.

The allomorph is -gi -g (after a vowel) after roots or stems ending in a sonorant (except /r/), that is, /l/, /n/, /m/, /w/, /y/ or a vowel, as is clear from the following examples:

(33)

	Accusative
ti `cow'	ti:-g
suru `seat'	suru:-g
tobro `axe'	tobro:-g
(id) noso `tall (man)'	(id) noso:-g
ka `house'	ka:-g
wel `dog'	wel-gi
u:l `thread'	u:l-gi
e:n `woman'	e:n-gi
atum-g `drum'	atum-gi
ge:w `blood'	ge:w-gi
sa:y	sa:y-gi

`which'	
nobeddi `spoon'	nobeddi:-g
kalleddi `broom'	kalleddi:-g
asirkene `beauty'	asirkene:-g

Note that the (vowel deletion) rule that is responsible for the allomorphs (-gi -g) is a morphophonemic rule (rather than a phonological rule) in that it is restricted to the Accusative morpheme when it is preceded by a vowel; it does not apply to the vowels of other morphemes (e.g. ti:-re but *ti:-r cow-Inter `Is it a cow ?'; ju:-ki `If you go' but *ju:-k go-Cond). Thus the rule that deletes the vowel of the Accusative morpheme is not a general rule, at least at the present synchronic stage.

If there is a Plural Number marker, the Accusative marker, (-ki) would follow this Plural Number marker:

(35)

	Plural	Accusative
id `man'	id-i-	id-i:-g
kub `boats'	kub-li-	kub-li:-g

3.143 The Genitive

The genitive case indicates the possessor. It is expressed by the suffix -na) or -n. The choice of allomorphs is phonologically conditioned: -na occurs if both the preceding and following segment is a consonant:

(36)

	Genitive
id `man'	id-na ka `man's house'
e:n `woman'	e:n-na berti `woman's goat'
(e:n) u:s bad (woman)	(e:n) u:s-na

The suffix -n or one of its phonologically conditioned allomorphs (/s/ etc; these result from the assimilation of the nasal to the following sonorant (see section 2.622 for the phonological rules responsible for these alternations) occur elsewhere. In the following examples -n is the allomorph since both following segment is a vowel:

(37)

berti-n ur
goat-Gen head
`the goat's head'

ti:-n ossi
cow-Gen leg
`the cow's leg'

essi-n idi
water-Gen man-pl
`the sea men'

hanu:-n degir
donkey-Gen back
`the back of the donkey'

id-n og
man-Gen chest
`the man's chest'

e:n-n agil
woman-Gen mouth
`the woman's mouth'

If the following segment is a consonant except a voiceless stop (/m/, /s/, /š/, /h/, or /f/), /n/ is then assimilated to that consonant, As such we get the following allomorphs: -m, -s, -š -f -h or -w pending on the following continuant:

(38) mona:-m mudul
Mona-Gen thumb
`Mona's thumb'

ti:-s si:r
cow-Gen hair
`the cow's hair'

berti-š šundi
goat-Gen lip
`the goat's lips'

buru:-f fa:l
girl-Gen luck
`the girl's luck'

ka:-h hannu
house-Gen donkedy
`the house donkey'

berti-n gumur
goat-Gen neck
`the goat's neck'

buru:-n ge:w
girl-Gen blood
`the girl's blood'

3.144 Other Cases

Other cases include Locative, Instrumental, and Directional. All these are expressed by suffixes attached to the stem. The reason for not treating these as postpositions (e.g. benefactive joro) is that KN postpositions (which are discussed in the chapter on syntax) have distinct properties: (a) Most postpositions are related to nouns, specifically body parts (e.g. tu `inside' (tu `stomach'). (b) Postpositions mark the noun they follow for case (e.g. ka:-n jer house-Gen behind `behind the house'; ka:-r to house-Loc from `from the house'). (c) Unlike Cases, postpositions do not manifest any fusion with the stem.

3.1441 Locative

The locative case indicates the location where an action or situation occurs or occurred. This is realized by -ir, -r or -ro. The choice of allomorph is phonologically determined: -ir occurs in all environments except after a vowel or a liquid where the allomorph used is -ro or a phonologically conditioned allomorph -lo after /l/ and -do after /n/(see section 2.63 for the rules that account for these alternations), respectively:

(39)

	Locative
asu:t `Asuite'	asu:t-ir
kub `boat'	kub-ir
(kub) korgos `yellow (boat)'	(kub) gorgos-ir

-r is used if the preceding segment is a vowel, e.g.

(40)

	Locative
ka `house'	ka:-r
ka:tu `room'	ka:tu:-r

-ro occurs with roots or stems ending in /r/. It has the variants -lo after roots or stems ending in /l/ and -do after those that end in /n/, as in:

(41)

	Locative
ur `head'	ur-ro
agil `mouth'	agil-lo
(ka) kuresel `old (house)'	(ka) kursel-lo
suwan `Aswan'	suwan-do

3.1442 Instrumental

The instrumental case indicates the means by which a specific action is carried out. It is expressed by the suffix -ken attached to the noun root or stem. Like the accusative marker -ki, -ken has phonologically determined variants: -ten, -cen or -gen (see the Accusative case):

(42)

	Instrumental
ber `wood'	ber-ken
karij `basket'	karic-cen

ṭi:l `rope'	ti:l-gen
iri `thread'	ir:-gen
(šarti) kuresel `old iron'	(šarti) kursel-gen
ǰomeddi `grinder'	jomeddi:-g

The Instrumental suffix expresses `via' as in the following examples:

(43) a. id gir-ke talle-s-u
man road-Ins go-pst-3sg
`The man went along the road.'

b. buru suwan-gen ta:-s-u
girl Aswan-Inst come-pst-3sg
`The girl came via Aswan.'

The Instrumental suffix is used to denote the type of vehicle used in transportation:

(44) a. hanu:-gen ta:-s-i
donkey-inst come-pst-1sg
I came on donkey back'

b. kac-cen ta
horse-instr come
`Come on horse back'

The Instrumental suffix is also used to denote the notion `full of', as in the following examples:

(45) a. barra:d essi-gen enne-bu
water-vessel water-Instr fill-stat
`The water-vessel is full of water.'

b. ka:tu esket-ten enn-os-s-u
room dust-Instr fill-def-pst-3sg
`The room is full of dust.'

It is also used to denote the agent (which is optional) in Passive:

46) a. e:n buru:-gen nal-takki-s-u
woman girl-Instr see-pass-pst-3sg
`The woman was seen (by the girl).'

b. ka (ogji:-gen) willi-takki-s-u
house man-pl-Instr destroy-pass-pst-3sg
`The house was destroyed (by the men).'

The Instrumental suffix is also used to indicate the inanimate agent which is viewed as the cause of the state or situation described by the verb:

(47) a. ot-ten ikke a:wi
cold-inst like this do-3sg
`S/he 's behaving like this because of cold.'

b. oy-gen missi-cci neyye-bu:-r-a
cry-inst eye-pl swollen-stat-neu-3pl
`The eyes are swollen because of crying.'

3.1442 Directional

The directional case indicates the location to which an action or event is directed. This is expressed by the suffix -kir or -kabir suffixed to a noun or a noun phrase.

(48)

	Directional
ka `house'	ka:-kir
	ka:-gabir
medi:ne `Cairo'	medi:ne-kir
	medi:ne-gabir
ba:ti `wedding'	ba:ti-kir

The suffix -kabir or its variant (-tabir -cabir or -gabir) but not -kir is used to show direction towards animate nouns or pronouns, e.g.:

(50)

	Directional
id `man'	it-tabir
	*it-kir
ay `I'	ay-gabir
	*ay-kir

In addition -kabir is used with adverbs of time to indicate the concept of `near' or `around':

(51)

	Directional
ugu `evening'	ugu:-gabir `around evening'
e:s `noon'	e:s-kabir `around noon'

3.15 Definiteness

In KN, nouns are either definite or indefinite. The Indefinite is indicated by the presence of a marker (e.g. -we:r) on the noun stem. The Definite is characterized by the absence any marker.

3.151 The Indefinite

The Indefinite in KN is expressed by the suffix -we:(r) (from the numeral we:r `one') or -be:r-. The choice of allomorph is phonologically determined (see 2.641) since -be:(r) is only used after /b/ or /m/; -we:r occurs elsewhere:

(52)

	Indefinite
kub `boat'	kub-be:r
sa:b `cat'	sa:b-be:r
kam `camel'	kam-be:r
elum `crocodile'	elum-be:r
ti `cow'	ti:-we:r
ka `house'	ka:-we:r
kaj `horse'	kaj-we:r

The indefinite marker is used only before singular countable nouns, as in the above examples.

3.152 The Definite

The definite denotes that the entity referred to is already known or old in the discourse; it is a shared knowledge between the speaker and the listener. In KN the Definite is unmarked; it is the absence of the Indefinite marker that indicates that the element is definite. Thus Definiteness is expressed by zero:

(53)

	Definite
id `man'	id
e:n `woman'	e:n
ti `cow'	ti

3.16 Order of nominal morphemes

In the previous sections, we have discussed KN nominal morphology. Two types of morphemes are identified: derivational morphemes and inflectional morphemes. Derivational morphemes were shown to change the word class of the stem to which they are affixed; for example the noun kall-eddi `broom' is derived from the verb kalli `sweep/clean' by the suffix -eddi. It was also shown that derivational morphemes (e.g. the adjective formative -ri) have limitations in their application. In contrast inflectional morphemes do not manifest such characteristics.

Table 6 clearly shows that derivational morphemes occur closer to the stem than any inflectional morpheme; for example, the noun formative -eddi precedes Number and Case morphemes: kall-eddi-cci-gi (sweep-Nomin-pl-Acc) `brooms'. Within the inflectional system, Number precedes Case, as in the example just cited. Some examples:

(54) a. kall-eddi-cci-g atta
sweep-Nomin-pl-Acc bring
`Bring the broom.'

b. terri-id-i:-g inji
load-Nom-pl-Acc take
`Take the parcels.'

c. ba:-ti-we:-k nal-s-i
dance-Nomin-Indef-Acc see-pst-1sg
`I saw a wedding (party).'

d. man-gu:-g
`that-pl-Acc
`those'

Morphemes of the same class are mutually exclussive:

(55) a. * kade:-gi-gen
dress-Acc-Inst

b. * ka:-gen-kir
house-Instr-dir

It should be noted that since Definiteness applies only in the singular, but not in the plural noun. Thus definiteness is compatible with Number:

(56) * id-i:-we:r
man-pl-Indef
`* a men'

Derivational		Inflectional			
Nominalizer		Number		Case	
-ar	-ti	ø	(Sing.)	ø	(Nom.)
	-id	-i	(pl.)	-ki	(Acc.)
	-e	-gu	(pronouns	-n(a)	(Gen.)
		Definiteness		-r	(Loc.)
				-ken	(Ins.)
				-kir	(Dir.)
		ø	(Def.)		
Adjectivizers		-we:r	(Indef.)		
-katti					
-ko:l					
-kinni					
-ri					

Table 6: Order of nominal morphemes

3.2 Verbal morphology

3.20 Introduction

In KN verbs to which inflectional morphemes are affixed are either roots or simple derived stems. Many verb roots function as stems to which inflectional morphemes are directly added (e.g. the verb roots jom `hit' and nal `see'; jomsi `I hit' and nalsa `they saw').

The verb is distinguished from the other major word classes (e.g. noun) by its inflectional paradigms. Only verbs in KN take such grammatical categories as Tense, Aspect, Mood and Person. The morphology used with verbs is divided into two types: derivational and inflectional (inflectional categories are discussed in section 3.22).

The morphosyntactic processes used in KN verbs are mainly two: suffixation and compounding. Suffixation is the most predominant process. Prefixation is only used inflectionally: the Progressive a- and Future Tense bi-. Compounding involves the combination of two independent elements to form a new stem.

3.21 Derivational morphology

KN has several derivational morphemes: Transitivizing Causative, Passive, Benefactive, Inchoative, Stative and Definite morphemes. All these morphemes will be shown to occur before any inflectional morpheme (e.g.Tense) which occur outside derivational morphemes. The derivational morphemes discussed below fall into two categories: those (e.g. Causative) that are concerned with valence (i.e the number of arguments a verb can take) and those (e.g. Inchoative) that are aspectual in nature. Valence morphology is discussed first since they (except the Benefactive suffix) occur first on the verb.

3.211 Transitivizing suffixes

Transitivizing indicates that there is a participant (besides the agent) involved in the performance of an action expressed by the verb root. In KN an intransitive verb root can be made transitive by means of suffixing -ir or -ur. The choice of allomorph is phonologically conditioned: -ur occur if the root contains a preconsonantal high-back vowel (/u/); -ir is used elsewhere (Note that rule 2.651 accounts for the deletion of root-final vowels):[15] (Note that the long vowel of the root is shortened as a result of the Transitivizing suffix -ir.)

(57)

	Transitive
kuj `climb'	kuj-ur
jug `burn'	jug-ur
bo:g `pour'	bog-ir
dab `disappear'	dab-ir
sa:w `mix'	saw-ir
bokki `hide'	bokk-ir
wacci `crack'	wacci-ir
bassi `leak'	bassi-ir

Note that the vowel harmony rule involved here applies to the Transitivizing suffix only. This rule is not general; it does not affect the vowels (high/back) of other morphemes; for example, it fails to harmonize the vowels of the relative or plural object morpheme even though its structural description is satisfied (kuj `climbe' kuj-il *kujul `the one who climbs'; kus `open', kus-ir *kus-ur `open them'.

3.212 Causative

The causative indicates that there is a participant (the causee) other than the agent that caused or will cause the action to come into effect. This is expressed by a suffix (-kir or -kiddi) on the verb root or stem.

-kir is used in deriving verbs out of all noun, adjective or numeral roots or stems.[16] The resulting forms can then take verb inflection, e.g. Tense, Mood or Person. It should be noted that -kiddi can not have such function, i.e. it can not be used with non-verbs.

With the roots or stems of nouns:

(58)

	Causative
essi `water'	essi-kir `cause it to be water'
icci `milk'	icci-kir `cause to be milk'
des `butter'	des-kir
esked `dust'	esked-kir
kalleddi `broom'	kalleddi-kir

Examples:

(58") a. icci-g essi-kir-s-i
milk-Acc water-caus-pst-1sg
`I caused the milk to be water.'

b. icci-g des-kir-s-a
milk-Acc butter-caus-pst-3pl
`They caused the milk to be butter.'

With the roots or stems of adjectives:

(59)

	Causative
kombo `thick'	kombo-kir
su:d `empty'	su:t-kir
adel `good'	adel-kir
ašir `beautiful'	ašir-kir
ge:le `red'	ge:le-kir
do:s `crazy'	do:s-kir
bassari `insipid'	bassari:-kir
jugri `hot'	jugri-kir

Examples:

(59") a. barat-ti su:t-kir-s-i
water-vessel empty-pst-1sg
`I caused the water-vessel to be empty.'

b. essi-g jugri-kir-s-a
water-Acc hot-caus-pst-3pl
`They caused the water to be hot.'

With the roots or stems of numerals:

(60)

	Causative
ṭoski `three'	toski-kir
kemis `four'	kemis-kir
dij `five'	dij-kir
ǧorij `six'	gorij-kir
dimnowwi `twenty'	dimnowwi-kir
dimitoski `thirty'	dimitoski-kir

-kir is not restricted to non-verb roots; it occurs with some verbs:[17]

(61)

	Causative
sowwi `dry'	sowwi-kir

The causative suffix -kiddi or -iddi is different from the suffix -kir in that it is used only with verb roots or stems but it never occurs with a non-verb root. The phonological environment determines the choice of -kiddi or -iddi: if the preceding segment is the velar stop /g/, then -iddi has to be used, otherwise -kiddi is used.[18]

(62)

	Causative
deg `cover'	deg-iddi
	*dek-kir
a:g `sit'	ag-iddi
	*ak-kir
digir `fall'	digir-kiddi
egir `ride'	egir-kiddi
uski `give birth'	uski-kiddi
atta `bring'	atta-kiddi
wa:r `uncover'	wa:r-kiddi
bo:r `destroy'	bo:r-kiddi
to:gij `break up'	to:gij-kiddi

Examples:

(62") a. e:n-gi ag-iddi-s-i
woman-Acc sit-caus-pst-1sg
`I caused the woman to sit down.'

b. katre-g bo:r-kiddi-s-a
wall-Acc destroy-caus-pst-3pl
`I caused the wall to fall down.'

3.213 Passive

The action is viewed from the perspective of the object of the verb; if the person or thing denoted by the subject of a sentence is the receiver or sufferer of the action, then that form of the verb is the Passive, which is expressed by the suffix -takki or -cakki which is attached to a verb root or stem.[19] The choice of allomorph is phonologically determined: -cakki is used afetr /c/; -takki is used elsewhere. (Note that the devoicing of the stem-final stop (before a voiceless segment) has to precede the assimilation of the alveolar stop /t/ to the preceding (voiceless stop).

(63)

	Passive
ba:j write	ba:c-cakki- `be written'
to:gij `break up'	to:gic-cakki-
to:g `break'	to:g-takki- `be broken'
jom `hit'	jom-takki- `be hit'

Passive is general in that it may occur with transitive verbs (as described above) and intransitive verbs:

(64)

	Passive
bo:d `run'	bo:t-takki- `be run'
te:b `stand'	te:p-takki- `be stood'
ne:r `sleep'	ne:r-takki- `be slept'

Examples:

(64") a. indo ne:r-takki-s-u
here sleep-pass-pst-3sg
`It was slept here.'

3.214 Benefactive

The benefactive indicates that the action expressed by the verb is for the benefit or detriment of someone. This is expressed by the suffixation of -tir or -de:n to a transitive verb root or stem. Like the Applicative suffix in Kxoe (Heine and Reh 1984) which is related to a verb meaning `give', KN Benefactive suffixes -tir and -de:n are possibly related to the verbs tir `give someone (other than the speaker)' and de:n `give (the speaker(s))', respectively. Person determines the choice of allomorphy: -de:n is used if the benefactor is first person; -tir occurs elsewhere. -de:n has several phonologically conditioned allomorphs such as -de:s- before /s/, -de:m before /m/ (also see rule 2.62 for the phonological rules) and -de before pause: (Note that Person for objects is not marked on the verb.)

(65)

	Benefactive
a:w `do'	a:w-de:n-nu
amin- `show'	ami-de:n-nu
sawir `mix'	sawir-de:n-nu
a:w `do'	a:w-de:s-s-
to:g `break'	to:g-de:-s-

do:y `rear'	do:y-de:m-m-
išin `send'	išin-de
to:g `break'	to:g-de

The Benefactive suffix -tir, which is the elsewhere form, has several phonologically conditioned allomorphs: -sir after /s/, -šir after /š/ and -cir following /c/. (Again the rule (see 2.61) that devoices an obstruent before a voiless obstruent has to apply prior to the assimilation of the /t/ of the Benefative to a preceding (non-back) voiceless obstruent):

(66)

	Benefactive
we `say'	we:-tir
amin- `show'	ami-tir
bogir `spill'	bogir-tir
kujur `put'	kujur-tir
kus `open'	kus-sir
ka:š `search'	ka:š-šir
noddij `tear'	noddic-cir

As in these examples we find that the Benefactive marker indicates that the benefactor of the action is first person (67a-b) or a non-first person (67c-d):

(67) a. id ay-gi ba:b-ki alle-de:n-s-u
man I-Acc door-Acc repair-Ben-pst-3sg
`The man repaired the door for me.'

b. e:n kade:-g sukki-de:s-s-u
woman dress-Acc wash-Ben-pst-3sg
`The woman washed the dress for me.'

c. id e:n-gi ba:b-ki kus-sir-s-u
man woman-Acc door-cc open-Ben-pst-3sg
`The man opened the door for the woman.'

d. it-ti ba:p-ki kop-tir-s-i
man-Acc door-Acc close-Ben-pst-1sg
`I closed the door for the man.'

The Benefactive suffix (-tir- or -de:n-) is also be used with malefactive meaning:

(68) a. e:n-gi kade:-g keddi-tir-s-a
woman-Acc dress-Acc tear-Ben-pst-3pl
`They tore the dress for the woman.'

b. ay-gi ir:-g noddi-de:s-s-a
me rope-acc cut-Ben-pst-3pl
`They cut the rope.'

However, the Benefactive is not compatible with all verbs: it can not be used with verbs whenever the actions described by intransitive verbs can be controlled. Such verbs indicate processes (e.g. dying) that can not be performed for others:

(69)

digir `fall'	di `die'
ajin `neeze'	bicci `wake up'

Nor can it occur with verbs that describe states:

(70)

birig `want	dol `love'	be:r `be full'
tissi `hate'	i:w `forget'	

3.215 Stative

The stative indicates the existence or presence of a state. This is expressed by the suffix -bu:- or -bu, which is related to the verb bu `rest or sleep'.[20] The allomorphs are chosen on phonological grounds: -bu:- is used in all environments (e.g. the neutral suffix -ir in the following examples) except before a word boundary in which case -bu occurs).

These forms are used with verbs denoting a state or a process or an action to indicate the presence of a state:

(71)

	Stative
oyir `know'	oyir-bu:-r-i
gurre `be happy'	gurre-bu:-r-a
jille `remember'	jille-bu
ko:s `be sour'	ko:z-bu
ne:r `sleep'	ne:r-bu
bicci `get up'	bicci-bu
to:gij `break up'	to:gij-bu

The suffix -bu on the verb root or stem in these examples indicates that the situation described by the verb is present as a state, (e.g. it indicates the state of hunger I am in at the present moment in (72a)):

(72) a. orig-bu:-r-i
I be hungry-stat-neu-1sg
`I am hungry.'

b. oyir-bu:-r-i
know-stat-neut-1sg
`I know (this).'

c. ogj-i gurre-bu:-r-a
man-pl be happy-neu-3pl
`The men are happy.'(i.e. They are in a state of happiness.)

The Stative form can be suffixed to the root or stem of an intransitive action verb to denote that the action expressed by the verb is on-going, e.g.

(73)

	Stative
bo:d `run'	bo:d-bu `be running'
talle `walk'	talle-bu `be coming'

-bu: used with a transitive verb root or stem denotes that the state is the result of a past action. In such a case the object of interest is the "patient" (rather than the "agent" (cf. Comrie 1981)). We know the result of the previous action by examining the "patient"; in the following example we know the damage that occurred by examining the condition of the door.

(74)

	Stative
to:g `break'	to:g-bu `be broken'
willi `destroy'	willi-bu `be destroyed'
dig `tie'	dig-bu `be tied'
battij	battij-bu

`scratch' `be scratched'

The Stative suffix, however, can not be used with all verbs; it is not compatible with the following verbs that indicate activity, process or state:

(75)

birig `want'	dol `love'	sunne `smell'
o `sing'	ko `owe'	tissi `hate'
ekki `urinate'	oy `cry'	ka:g `have'

3.216 Distributive

The distributive has the effect of spreading the action over time or space.[21] The type of action indicated by a verb may be slightly altered by the addition of the Distributive suffix -ij or -iš which is attached to the roots or stems of verbs. The surface form of the Distributive is determined by the phonological environment : -iš occurs if the following segment is a spirant:

(76)

	Distributive stem	Past
to:g `break'	to:g-ij-	to:g-iš-š-
orri `tear'	orri-ij-	orri-iš-š-
acci `bite'	acci-ij-	acci-iš-š-

(Note that the vowel deletion rule described in 2.653 accounts for the loss of the stem-final vowel in (76). Otherwise the allomorph is -ij

(77)

	Distributive
orri `tear'	orr-ij
gulli `throw'	gull-ij
batti `scratch'	batt-ij
dabir `lose'	dabr-ij
bogir `spill'	bogr-ij
tokke `snatch'	tokk-ij

Examples such as (78) show that the action described by the verb is distributed; for example, the verb orr-is-i in (78c) indicates that all parts of the dress were torn:

(78) a. dugu:-g gull-ij-os-s-u
money-Acc throw-dist-def-pst-3sg
`S/he threw the money here and there.'

b. katre malle:-g batt-ij-eda:g-r-a
wall all-Acc scratch-dist-perf-neu-3pl
`They have scratched the wall here and there.'

c. kade:-g orr-is-s-i
dress-Acc tear-dist-pst-1sg
`I tore the dress.'

d. wel buru:-g acc-is-s-u
dog girl-Acc bite-dist-pst-3sg
`The dog bit the girl (on several parts of her body.'

Moreover, the Distributive marker can indicate the intensity with which an action is performed:

(79) a. gur ba:b-ki to:g-is-s-u
bull door-Acc break-dist-pst-3sg
`The bull broke the door.'

b. e:n kanisse:-g jags-is-s-u
woman ferment-Acc mix-dist-pst-3sg
`The woman mixed the dough.'

Some of the activity verbs that do not take the Distributive suffix are:[22]

(80)

jom `hit'	ba:j `write'
be `kill'	kurri `wrap'
bottir `cut'	

The verbs in (80) indicate physical activity (e.g. jom `hit') that can not be carried out without distributing the action. Thus they do not need any further modification.

3.217 Inchoative

The inchoative signals the beginning of a state or becoming. The Inchoative in KN is a verbalizer for nouns, adjectives and numerals; the derived form is a verb and is inflected as such. The Inchoative is expressed by the suffix -an or one of its phonologically conditioned allomorphs: -as before an alveolar spirant /s/, -am before a labial nasal /m/ and -a before a voiceless stop (see also 2.62 for the rules that account for these alternation). This shown by the following examples in which the inchoative occurs with a noun root:

(81)

	Inchoative
essi `water'	essi-an-
des `butter'	des-an-
agissi `food'	agiss-an-
ekked `urine'	ekked-an-
kalleddi `broom'	kalledd-an-

Examples:

(81") a. icci ess-as-s-u
milk water-Inch-pst-3sg
`The milk became water.'

b. icci bi-des-an-na ?
milk fut-butter-Inch-Inter
`Will the milk be butter ?'

The allomorph is -as before the /s/:

(82)

	Inchoative stem	Past
essi `water'	essi-an- `become water'	essi-as-s-
esked `dust'	esked-an- `become dust'	esked-as-s-
keri:t `cheese'	keri:t-an- `become cheese'	keri:t-as-s-

The allomorph is -am- before a suffix-initial /m/:

(83)

	Inchoative	Negation
essi `water'	essi-an- `become water'	ess -am-min-
icci `milk'	icci-an- `become milk'	icc -am-min-

-a is the allomorph before a suffix-initial voiceless stop:

(84)

	Inchoative	Conditional
des `butter'	des-an- `become dust'	des-a-ki-
icci `milk'	icc-an- `become milk'	icc-a-ki-
essi `water'	ess-an-	ess-a-ki-

The Inchoative is also used with the roots or stems of all adjectives, as in the following:

(85)

	Inchoative
ge:le `red'	ge:l-an-
me:w `pregnant'	me:w-an-
adel `good'	adel-an-
garri `bad'	garr-an-
korgos `yellow'	korgos-an-
duguko:l `rich'	duguko:l-an-
missikatti `envious'	missikatt-an-

Roots or stems of all numerals also take the Inchoative:

(86)

	Inchoative
owwi `two'	oww-an-
toski `three'	tosk-an-
kemis `four'	kems-an-
dij `five'	dij-an-
dimnowwi `twenty'	dimnoww-an-
dimitoski `thirty'	dimitosk-an-
dimikemis `forty'	dimikemis-an-

3.218 Definite

The definite indicates a definite or particular (as opposed to a general) object that is known to both the speaker and the hearer. This is expressed by the suffix -os- on the verb root or stem:[24]

(87)

	Definite
kal `eat'	kal-os-
ni `drink'	ny-os-
to:gij `break up'	to:gij-os-
dabir `lose'	dabr-os-
bogir `spill'	bogr-os-

Some examples:

(88) a. kal-s-i
eat-pst-1sg
`I ate (in general).'

b. kal-os-s-i
I eat-def-pst-1sg
`I ate (something definite).'

c. ny-os-s-i
I drink-def-pst-1sg
`I drank (it).'

Example (88a) can be a general answer to a question such as `Did you eat/drink ?'; (88b-c) can not serve as an appropiate answer to this question (this question does not ask whether I ate/drank something particular). The examples (88b-c) with the Definite marker on the verb is used if the situation requires an answer to a question of the following type: "Who ate the chicken? /Who drank the milk ?". That is, the object (the chicken) is a shared knowledge between the speaker and the hearer.

3.219 Compounding

Compounds of two verb roots consist of one of the following verbs as a first member: imbel `stand', ju `go' or ta `come'. The second verb indicates purpose or goal for `standing', `going' or `coming'. ju and imbel can also be referred to as Andative and Venitive, respectively. Evidence for compounding is provided by the fact that (a) No open class element (e.g. a noun) is allowed to intervene between the two components. (b) Prefixes (cf. Future suffix bi-) are attached to the first component whereas suffixes are added

to the second one:

(89)
imbeljom
(imbel+jom)
stand hit
`stand to hit'

bimbennalla
(bi-imbel+nal)
Fut-stand see
`will stand to see'

jukarsig
(ju+karsig)
go fight
`go to fight.'

june:r
(ju+ne:r)
go sleep
`go to sleep.'

tane:rsi
(ta+ne:r-pst-1sg)
come sleep)
`I came to sleep.'

tanal
(ta+nal)
come see
`come to see'

Verb compounds can also consist of a verb indicating action and the verb undur `put', as a second member.

(90)
ullundur
(ulli+undur)
set fire put
`Set on fire.'

bidettundur
(bi-detti+undur)
fut-gather put-pst-3pl
`will collect'

bo:gundur
(bo:g+undur)
pour put-pst-1sg
`pour over'

Note that the second member (undur) indicates that a locative argument (katre:-r `wall' in the following example) has been added:

(91) a. wel katre:-r ekk+undur-s-u
dog wall-Loc urinate put-pst-3sg
`The dog urinated on the wall.'

cf. wel ekki-s-u
`The dog urinated.'

In the previous sections it has been shown that in KN derivational morphemes are determined on several grounds. First, derivational morphemes (e.g. Inchoative -an and the Causative -kir) change the word class of the stem to which they are affixed. Second, the suffixation of a derivational morpheme (e.g. Definite -os) to a stem may result in an unpredictable meaning. Third, some forms with derivational morphemes (causative -(g)iddi) are shown to be lexicalized.

3.220 Order of derivational morphemes

As the following table shows, derivational morphemes which constitute a semantic class (e.g. Valence) do not necessarily fit into a structural class. Thus the Transitivizing morpheme, which constitutes a semantic class with the Causative and the Passive morphemes, is followed by an Aspectual morpheme, the Distributive morpheme. Thus (derivational) morphemes can not be grouped into discrete categories on the basis of their structural properties (e.g. position on the stem).

The maximum of three derivational morphemes can occur in this language.In a compound derivation of three morphemes, we have two cases:

(a):	Transitivizing	Distributive	Causative or Benefactive or definite
(b)	Distributive	Passive	definite

Examples:

(92)

a. bog-r-ij-kiddi-s-i
pour-tr-dist-caus-pst-1sg
'I caused him to spill (water).'

b. bog-r-ic-cir
pour-tr-dist-Ben
'Spill for him.'

c. bog-r-ij-os
pour-tr-dist-def
'Spill this (water).'

d. to:g-ic-cakk-os-s-u
break-dist-pass-def-pst-3sg
'It has been broken to pieces.'

In compound derivations of two, the Transitivizing morpheme cooccurs with any derivation morpheme except the Ichoative, the Passive and the Stative. Examples:

(93) a. dab-r-ij
disappear-tr-dist
'lose'

b. bog-ir-kiddi-s-i
pour-tr-caus-pst-1sg
'I caused (him/her) to throw (water).'

c. bog-ir-tir-s-i
pour-tr-Ben-pst-1sg
'I poured (it) for him/her.'

d. dab-r-os-s-i

disappear-tr-def-pst-1sg
`I lost it.'

The Distributive also cooccurs with any morpheme except the Inchoative:

(94) a. to:g-ic-kiddi-s-i
break-dist-caus-pst-1sg
`I caused him/her to break it.'

b. to:g-ic-cir
break-dist-Ben
`Break it for him/her.'

c. to:g-ij-bu
break-dist-stat
`It is broken.'

d. to:g-ij-os-s-a
break-dist-pst-3pl
`They broke it.'

The Passive cooccurs only with all except the stative and the Inchoative:

(95) a. bo:d-kiddi-takki-s-u
run-Caus-pass-pst-3sg
`S/he was caused to run.'

b. ka:-g goy-tir-takki-s-u
house-Acc build-Ben-passive-pst-3sg
Lit. `The woman was built the house.'

c. jom-takk-os-s-u
hit-pass-def-pst-3sg
`S/he was beaten.'

Co-occurrence restrictions mainly involve Transitivizing, Inchoative and Stative morphemes. Table 8 below shows the morphemes that do not occur with the Transitivizing, the Inchoative and the Stative morphemes. The Inchoative and the Stative morphemes co-occur; the Transitivizing morpheme co-occurs with neither.

Transitivizing	Inchoative	Stative
Passive -takki	Passive -takki	Transitivizing -ir
Inchoative' -an	Transitivizing -ir	Benefactive -tir/-de:n
Stative' -bu	Distributive -ij	Definite -os
	Causative -kiddi/-kir	Causative -kiddi/-kir

Table 7: Co-occurrence restrictions

Examples:

(96) a. * essi bog-ir-takki-s-u
pour-tr-pass-pst-3sg
'The water was spilled.'

cf. essi bo:g-takki-s-u
'The water was poured.'

b.* essi-ir-as-s-u
water-tr-inch-pst-3sg

c. * wacc-ir-bu
crack-tr-stat
'(the wall) is cut into a half.'

cf. wacci-bu
'(the wall) is cracked.'

d. * ess-a-takki-s-u
water-Inch-pass-3sg
Lit. 'It was become water.'

e. * ess-ij-am-bu
water-dist-Inch-stat
'It has become water.'

f. * ess-a-kir-s-i
water-Inch-Caus-pst-1sg
'I caused it become water.'

g. * jom-kiddi-bu
hit-caus-stat

`S/he is caused to be beaten.'
cf. jom-bu
hit-stat
`S/he is beaten.'

h. * bo:g-tir-bu
pour-Ben-stat
`It was poured for him/her.'

i. * to:g-os-bu
break-def-stat

j. *to:g-bu-os

A few words on the non-co-occurring morphemes are in order. The Inchoative morpheme is not compatible with the Distributive morpheme since they constitute a semantic class; both are aspectual. The Inchoative morpheme is mutually exclusive with the Transitivizing morpheme since the former is only used with non-verb roots whereas the latter is used with intransitive verb roots. Thus they have different structural properties that make them incompatible.

The Transitivizing morpheme is not compatible with the Passive and Stative morphemes. This is probably because the former increases the valence of the verb whereas the Stative and the Passive decreases the valence of the verb. The following table shows all derivational morphemes.

Tr.	Dist	Inch	Caus	Ben	Passive	Stat	Def
-ir	-ij	-an	-kiddi -kir	-tir -de:n	-takki	-bu	-os

Table 8: Order of derivational morphemes

3.22 Inflectional morphology

A KN verb takes five grammatical categories: Mood, Tense, Number, Person and Aspect.

KN uses two inflectional processes: prefixation and suffixation. Prefixes precede verb stems and are used only to mark Future Tense (e.g. bi-jom-r-i Fut-hit-neu-1sg `I 'll hit') and Progressive Aspect (e.g. a-jom-r-i prog-hit-neu-1sg `I am hitting).

Suffixation is used to mark all other categories. For example, Past Tense is expressed by a suffix (-s), (e.g. nal-s-i see-pst-1sg `I saw him/her'). Equally, (Plural) Number is expressed by a suffix (e.g. jom-ir hit-plobj `hit them'

3.221 Tense

Tense, which is a deictic category (Lyons 1968), establishes the temporal setting of the situation with regard to the moment of speech. KN has four Tenses: Neutral, Past, Future and Perfect.

3.2211 Neutral Tense[25]

The Neutral Tense (-r Ø) may refer to present, past or future time. The choice of allomorph is morphologically conditioned; it depends on a following Negative marker and/or Person marker.

If the following morpheme is the Negative Indicative or second/third person singular, the Neutral Tense suffix is zero.

(97)

	Neutral	Negative/ 2/3 person sing.
ɟom 'hit'	jom-r-	jom-Ø-min-
ɳal 'see'	nal-r-	nal-Ø-i
ka:g 'have'	ka:g-r-	ka:g-Ø-i
ʂawir 'mix'	sawir-r-	sawir-Ø-i

The Neutral suffix -r or one of its variants (-l or -d) occurs elsewhere. Here the choice is phonologically determined: the Neutral suffix -l and -d occur with stems ending in /l/ and /n/ respectively; -r occurs elsewhere (see section 2.63 for the phonological rule that is responsible for this).

(98)

	Neutral
ʈal 'eat'	ʈal-l-
go:l 'dig'	go:l-l-
ɟa:n 'buy'	ɟa:n-d-
ba:nde:n 'dance'	ba:n-de:n-d-
ɟom 'hit'	jom-r-
ɖakki 'milk'	ɖakki-r-

Some examples:

(99) a. e:n dugu:-g ka:g-i
woman money-Acc have-3sg
`The woman has money.'

b. berti-g a-dakki-r-a
goat-Acc prog-milk-neu-3pl
`They are milking the goat.'

c. ka:we:-k a-ja:n-d-i
house-indef-Acc prog-buy-neu-1sg
`I am buying a house.'

d. burw-i a-ba:n-d-a
girl-pl prog-neu-3pl
`The girls are dancing.'

The examples above show that the situations (described by the verb) are simultaneous with the moment of speech: the woman has money; they are milking the goat at the present moment. Compare this to:

(100) a. e:n buru:-g jom-s-u
woman girl-Acc hit-pst-2sg
`The woman hit the girl.'

b. berti-g dakki-s-a
goat-Acc milk-pst-3pl
`They milked the goat.'

here, the situations described by the verbs (`hitting' and `milking') are properties of the Past; they are not occurring at the present moment: the woman is no longer hitting the girl; they are not milking the goat now.

The Neutral Tense is also used to express a fact:

(101) a. indo a:g-r-i
I here stay-neu-1sg
`I live here.'

b. e:n-na ka mando te:b-i
woman-Gen house there stand-3sg
`The woman's house stands there.'

The Neutral Tense does not necessarily express an action taking place at the present time. The Neutral in the first person is used to express the future:

(102) a. kac-ci atta-r-i-ya ?
horse-Acc bring-neu-1sg-Intr
`Should I bring the horse?'

b. ka:-g ja:n-d-i-ya ?
house-Acc buy-neu-1sg-Intr
`Should I buy the house?'

c. ti:-g ja:nos-r-u-wa ?
cow-Acc sell-neu-1pl-Intr
`Shall we sell the cow?'

d. mine kinisse:-g o:s-r-u ?
how thorn-Acc take out-neu-1pl
`How can we take out the thorn ?'

In these examples, the situations or events (e.g.`bringing', `buying', `selling' or `taking out') are not taking place now but are to occur subsequent to the speech moment.

Similarly, the Neutral is used with the Conditional in a protasis referring to a future time:

(103) a. buru:-g asalgi nal-ki te:g-an we:-tir
girl-Acc tomo-Acc see-Cond stay-Hort say Ben
`If you see the girl tomorrow, tell her to stay.'

b. dugu:-g asalwe:ka:kki isim-me:-
money-Acc day after tomorrow send-neg-
-ki-r-a
Cond-neu-3pl
am-ba:b-ki bi-we:-tir-i
my-father-Acc Fut-say-Ben-1sg
`Unless they send the money by the day after tomorrow, I will tell my father.'

c. burw-i ka:-n owollo te:b-ki-r-a
girl-pl house-Gen front stand-Cond-neu-3pl
to-os-an-we/
enter-def-Hort-plsbj
`If the girls are standing in front of the house, ask them to come in.'

The Neutral Tense can also be used to denote past time (i.e. express an action that took place in the past). The presence of adjacent Past Tense forms indicates that (though the Neutral Tense form is used), the past time is implied:

(104) a. buru-i-gi jom-ir-s-i dugu-gi
girl-pl-Acc hit-plobj-pst-1sg money-Acc
ma:g-r-a-n-ga/
steal-neu-3pl-sub-Conseq
`I beat the girls because they stole the money.'

b. ogj-i affi-cci-g su:g-ir-s-a
man-pl boy-pl-Acc dismiss-plobj-pst-3pl
ber-gi to:g-ij-r-a-n-ga
wood-Acc break-dist-neu-3pl-sub-Conseq
`The men dismissed the boys because they broke the wood here and there.'

The verbs in the Neutral Tense (`steal'and `break') do not refer to situations or actions happening in the present time. Rather, they refer to past events. It should be noted that we come to this conclusion by examining the verbs in the main clause (e.g.jom `hit' or su:g `dismiss'). These verbs, which are in the past, indicate events that occurred after the events or situations expressed by the Neutral tense form. Thus beating the girls is the result of their stealing the money.

3.2212 Past Tense

The past tense is used in describing an event that occurred before the moment of speech. This Tense is realized by the suffix -s (or its phonologically conditioned allomorph: -s after /s/ or /j/), 0 or -ko attached to the verb root or stem. The choice of allomorph (-s, ø or -ko) depends on the morphological environment: -s (or -š) occurs in all environments except with the Interrogative morpheme -ma, the Negative Indicative -min and the Conditional -ki:

(105)

	Past
bo:d `run'	bo:t-s-
nalli `injur'	nalli-s-
jom `hit'	jom-s-
be `kill'	be:-s-
bogir `spill'	bogir-s-
sowwikir `dry'	sowwikir-s-
essan- `become water'	essas-s-
ka:š `look for'	ka:š-š-
ba:s `finish'	ba:š-š-
goj `slaughter'	goš-š-
to:gij `break'	to:giš-š-

The Past Tense suffix is zero if the Interrogative morpheme is -ma:

(106)

	Past	Interrogative -ma
jom 'hit'	jom-s-	jom-Ø-ma
tolle 'pull'	tolle-s-	tolle-Ø-ma
jagin 'push'	jagis-s-	jagin-Ø-ma
essan- 'become water'	essas-s-	ess-Ø-ma

If, however, the following morpheme is Negative (-min), -ko has to occur:

(107) a. nalli-ko:-mn-i
injure-pst-neg-1sg
'I did not injure (myself).'

b. jom-ko-mn-u
hit-pst-neg-2sg
's/he did not hit (the man).'

-ko also occurs with the Conditional, as in the following examples:

(108) a. nal-ko:-ki-r-i
see-pst-Cond-neu-1sg
'if I saw him/her'

b. ne:r-ko:-ki-r-a
sleep-pst-Cond-neur-3pl
'if they slept'

Note that -ko is a Perfect marker (see section 3.2214). It seems that the Perfect marker is gradually replacing the Past Tense marker -s: the Past Tense form -s can no longer be used with the Negative or the Conditional. This is not surprizing since there are several languages (e.g. French, Fleischman 1983; some varieties of German, Comrie 1976:53)

in which the Perfect has developed into Past Tense, thus totally replacing the old form. Some Examples:

(109) a. jawa:b-ki ba:š-š-i
letter-Acc write-pst-1sg
`I wrote the letter.'

b. ti:-g goš-š-a
cow-Acc slaughter-pst-3pl
`They slaughtered the cow.'

c. id buru:-g ed-s-u
man girl-Acc marry-pst-3sg
`The man married the girl.'

These examples show that the verbs in the Past describe situations or events that happened (or did not happen) prior to the moment of speech. If the events were to occur subsequent to the moment of speech, the verbs would have to take the Future (rather than Past) Tense marker bi-. Observe the following:

(110) a. jawa:p-ki bi-ba:j-r-i
letter-Acc fut-write-neu-1sg
`I will write the letter.'

b. ti:-g bi-goj-r-a
cow-Acc fut-slaughter-neu-3pl
`They will slaughter the cow.'

The Simple Past is usual with adverbs of time, i.e. words or expressions that indicate time (e.g. wi:l `yesterday', kamis `the day before yesterday', nisid `last year'):

(111) a. id wi:lgi ta:-s-u
man yest. come-pst-3sg
`The man came yesterday.'

b. buru kamisk talle-s-u
girl day before yest. travel-pst-3sg
`The girl travelled the day before yesterday.'

3.2213 Future Tense

The simple future tense expresses a situation that will take place at a time subsequent to the moment of speech. The Future Tense is realized in KN by combination of the prefix bi- or b- (before vowels) and the suffix -r attached to the verb stem.[26]

(112)

	Future
ta `come'	bi-ta
to `enter'	bi-to
bo:d `run'	bi-bo:d
nal `see'	bi-nal
el `find'	b-el
o `sing'	b-o
essan- `become water'	b-essan-

The Future Tense is used to express futurity; it is often the case that (in addition to futurity) some other modality such as intention, promise, prediction are also indicated.

(113) a. asalgi bi-ju:-r-i
tomorrow Fut-go-1sg
`I will go tomorrow.'

b. in-iss-ig b-ed-r-i
your-sister-Acc Fut-marry-1sg
`I will marry your sister.'

c. am-ba:b asalg bi-ta
my-father tomorrow Fut-come

`My father will come tomorrow.'

d. inongu essi bi-šug-r-i
today rain Fut-fall-1sg
`It will rain today.'

e. er asalgi dugu:-g be-li
you tomorrow money-Acc Fut-find-1sg
`You will find moeny tomorrow.'

These examples show that the events described by the verb will occur later or subsequent to the moment of speech. Now compare:

(114) a. mando ju:-s-i
there go-pst-1sg
`I went there.'

b. am-ba:b ta:-s-u
my father come-pst-3sg
`My father came.'

The verbs here refer to events that occurred in the past; for example, the event of my going there or my father's arrival is now over.

The Future is not used with the Conditional in a protasis that refers to a future time. Instead the Neural Tense is used, as shown in section (3.2211).

The Future is compatible with adverbs of time that refer to a time subsequent to the moment of speech: asal `tomorrow', asalwe:ka:kki `the day after tomorow', jeta:lgi `next year'; it is not used with adverbs that denote past time (wi:l `yesterday'):

(115) a. id asalgi bi-ta
man tomorrow fut-arrive
`The man will arrive tomorrow.'

b. e:n asalwe:ka:kki bi-talle
woman day after tomorrow fut-travel
`The woman will travel the day after

tomorrow.'

c. *id e:n-gi wi:lgi be-di
man woman-Acc yesterday fut-marry-3sg
'* The man married the woman tomorrow.'

3.22141 Present Perfect

The perfect is used to denote a situation or event that precedes another situation or event and is relevant to it. The Present Perfect Tense is formed by the suffix -ko:- or -ko[27] and the neutral tense marker (-r-, -l-, or -d-) attached to the roots or stems of all verbs. The choice of allomorph is phonologically conditioned since -ko:- (which also replaces the Past Tense marker -s (3.2212) in the Conditional and in Negation) is used in all environments (e.g. before the neutral suffix in the following examples) except before a word boundary; -ko is the appropriate form in this case:

(116)

	Perfect
bo:d 'run'	bo:t-ko:-r-a
isin 'send'	isi-ko:-r-a
ja:n 'buy'	ja:-ko
to 'enter'	to:-ko
essan- 'become water'	essa-ko
iccikir 'cause to be milk'	iccikir-ko
jomtakki- 'be beaten'	jomtakki-ko

The following examples show that the verbs in the Perfect (e.g. kop-ko; ni:-ko) signal situations that occurred in the past but whose result is still present:

(117) a. ter ba:b-ki kop-ko
s/he door-Acc close-perf
`S/he has closed the door.'

b. sa:b icci-g ni:-ko
cat milk-Acc drink-perf
`The cat has drunk the milk.'

c. ba:b-ki kob-ko:-r-a
door-Acc close-perf-neu-3pl
`They have closed the door.'

This use should be distinguished from a Simple Past in which the verb simply denotes a past event without emphasizing its relevance to the present:

(118) a. ter ba:p-ki kop-s-u
s/he door-Acc close-pst-3sg
`S/he closed the door.'

b. sa:b icci-g ni:-s-u
cat milk-Acc drink-pst-3sg
`The cat drank the milk.'

In these examples, the verb form is in the Past (e.g. kop-s-u; ni:-s-u). This indicates that the events described (`closing' or `drinking') are past situations, with no emphasis on their present relevance. For example, the verb form ni:su does not tell whether there is milk (in the bowl) or not. It just tells us the event of `drinking the milk' took place.

The Present Perfect can also be used for the absence of an action begun in the past and continuing into the present, as is clear from the following examples:

(119) a. nisid-ir to tekki nal-ko:-mn-i
last year-Loc-since him/her see-perf-neg-1sg
`I have not seen him since last year.'

b. wi:l-lo to buru ta:-ko:-mn-u
yest.-Loc since girl come-perf-neg-3sg
`The girl has not come since yesterday.'

3.22142 Past Perfect

Past perfect indicates a past event that is relevant to some other past event. It is expressed by the combination of the Perfect marker -ko:- or -ko and the Past Tense form -s

This Tense is used to show that one action concluded before the time of the occurrence of another action (indicated by the Past Tense from) and yet continuing into it, e.g.:

(120) a. nokko:si tir ta:-s-a-n na:watigi
go-perf-pst-1sg they come-pst-3pl-sub when
`I had gone when they came.'

b. to:d ingli:zi:-g ku:r-e-ko:-s-u tekki
boy English-Acc learn-def-perf-pst-3sg him
nal-s-i-n na:watigi
see-pst-1sg-sub when
`The boy had learnt English when I met him.'

The verbs nok-ko:-s-i and ku:-r-e-ko:-s-u denote that the situations or events (`going' or `learning') took place before the events expressed in the Past Tense, namely, before `before they came' and before `I saw the boy'

3.222 Aspect

Aspect expresses the different ways of viewing the internal temporal constituency of a situation (Comrie 1976:3).

3.2221 Progressive

Progressiveness is defined (Comrie 1976:35) as the combination of progressive meaning and non-stative meaning. The Progressive in KN is indicated by the prefix a- attached to the verb stem.[28] It cooccurs with the Neutral Tense marker (-r) or the Past Tense marker (-s).

(121)

	Progressive
bo:d `run'	a-bo:d-
kal `eat'	a-kal-
ni `drink'	a-ni-
dakki `milk'	a-dakki-
jom `hit'	a-jom-
sowwikir `fry'	a-sowwikir-

The verb forms a-ni:-r-a and a-jom-r-a describe situations that started in the past, may terminate in the future but at the moment of speech are incomplete and are continuing:

(122) a. iskarti-cci sa:y-g a-ni:-r-a
guest-pl tea-Acc prog-drink-neu-3pl
`The guests are drinking tea.'

b. burw-i e:n-gi a-jom-r-a
girl-pl woman-Acc prog-hit-neu-3pl
`The girls are beating the woman.'

Thus the verb forms in (122) indicate that `drinking tea' and `beating the woman' started in the past but are now in progress. Without the Progressive, these verbs would not refer to actions or events that are going on or continuing. Rather, they would denote generic or habitual actions that are not necessarily happening at the moment of speech, c.f.

(123) a. iskarti-cci sa:y-g ni:-r-a
guest-pl tea-Acc drink-neu-3pl
`The guests drink tea.'

b. burw-i e:n-gi jom-r-a
girl-pl woman-Acc hit-prs-3pl
`The girls hit the woman.'

Thus in the first example the guests are claimed to be in the habit of drinking tea or perhaps this is the custom in this part of the world. In the latter example, the girls are used to (or in the habit of) hitting the woman.

Progressive is used to describe actions happening at present but may not necessarily be literally continuous at the moment of speech:

(124) a. id ka:-g a-goy-i
man house-Acc prog-build-3sg
`The man is building the house.'

b. we:r jelli-g a-ka:š-i owwitti-go:n
one work-Acc prog-look for-3sg two-ord-conj
ingli:zi-ki a-ku:r-i
English-Acc prog-learn-3sg
`One of them is looking for a job, the other is learning English.'

In these examples, the Progressive does not necessarily denote actions that are on-going at the moment of speech.

Thus the man may not be building the house at that particular moment but in general `he is working or building the house'.

When combined with the Past Tense, the Progressive indicates that an action was going on (like a background) at a time when something else, more important or more dramatic (foreground action) happened. The new action is expressed by Simple Past, as in:

(125) a. affi-cci holli-g a-kaški-s-a ba:b-ki
boy-pl ball-Acc prog-play-pst-3pl door-Acc
to:g-s-a-n na:watig
break-pst-3pl-sub when
`The boys were playing football when they broke the door.'

b. ay fatu:r-k a-kal-s-i id-i
I breakfast-Acc prog-eat-pst-1sg man-pl
nog-s-a-n na:watig
go-pst-3pl-sub when
`I was eating breakfast when the men left.'

c. jawa:b-ki a-ba:š-š-i ton-i ta-s-a-n na:watig
I letter-Acc prog-write-pst-1sg boy-pl
ta+s+a+n na:watig
come-pst-3pl-sub when
`I was writing the letter when the boys came.'

In these examples, the verb forms a-kaški-s-a, a-kal-s-i and a-ba:š̌-š̌-i indicate that the action of `playing', `eating' or `writing' were in progress when a more important action happened (e.g. `they broke the door'; `the men went'; `the boys came'). Compare this with the non-progressive:

(126) a. fatu:r-ki kal-s-i id-i nog-s-a-n
breakfast-Acc eat-pst-1sg man-pl go-pst-3pl
na:watig
when
`I ate breakfast when the men went out.'

b. jawa:b-ki ba:s-s-i ton-i ta-s-a-n
letter-Acc write-pst-1sg boy-pl come-pst-3pl-
`I wrote the letter when the boys came.'

In each example here, the actions, which are in the Simple Past (e.g. kal-s-i `I ate' and nog-s-a `they left'), are successive. One action starts after the completion of the other. It is also appropriate to claim that, unlike the forms in the Progressive, the verbs in the Past Tense indicate that the action (`eating' or `writing') was deliberate. For example, I deliberately waited for the men to leave to start eating; I waited for the boys to come before I wrote the letter.

Some stative verbs in KN can be used in the Progressive: dol `love', tissi `hate', sunne `smell':

(127) a. buru:-g a-dol-l-i
girl-Acc prog-love-neu-1sg
`I love the girl.'

b. id-i e:n-gi a-tissi-r-a
man-pl woman-Acc prog-hate-neu-3pl
`The men hate the woman.'

Other stative verbs are not used in the Progressive:

(128)

a:y	`live'	satte	`shut up'
ka:g	`have'	i:w	`forget'
ko	`owe'	orig	`be hungry'
oyir	`know'		

The continuity of such stative verbs can be expressed by the Stative marker -bu (section 3.215) suffixed to the verb:

(129) a. oyir-bu:-r-i
know-stat-neu-1sg
`I know.'

b. * a-oyir-r-i
prg-know-neu-1sg

c. i:b-bu:-r-i
forget-stat-neu-1sg
`I forget.'

d. * a-i:w-r-i
prog-forget-neu-1sg

With some verbs, the Progressive indicates, not the continuity but the inception of a situation, e.g.:

(130) a. buru a-ne:r-i
girl prog-sleep-3sg
`The girl is falling asleep.'

b. ogj-i a-tille-r-a
man-pl prog-perspire-neu-3pl
`The men are beginning to perspire.'

c. e:n i:k-ki a-ull-i
woman fire-Acc prog-set
`The woman is beginning to make fire.'

The verb forms a-ne:r-r-i and a-tille-r-a point out to the beginning of the event of `sleeping' and `perspiring', respectively. If the `girl' or the `men' were already in the middle of the situation described by the verb, the speaker would not use the Progressive. Instead, s/he would use the Stative form -bu:

(131) a. buru ne:rbu
girl sleep-stat
`The girl is sleeping.'

b. ogj-i tille-bu:-r-a
man-pl prespire-stat-neu-3pl
`The men are perspiring.'

c. i:g ulli-bu
fire burn-stat
`The fire is burning.'

3.223 Person

Person (Lyons 1968) indicates the (deictic) roles of the participant(s) in the speech event, at the time of utterance, e.g. whether the participant is first person (the speaker), the second person (the addressee) or third person (someone spoken about).

In KN, verbs are obligatorily inflected for the Person/Number of the subject. Person/Number markers of the subject are fused in a single expression:[29]

Singular	1st	-i
	2nd/3rd	(-i ∅)/ -u
Plural	1st/2nd	-u
	3rd	-a

Table 9: Person/Number markers

As can be seen in Table 9 the marker for the first person singular is -i. This suffix is attached to the Neutral or Past rather than the stem:

(132)

	Neutral/Past	1st person sing.
a:g 'sit'	a:g-r-	a:g-r-i
birig 'want'	birig-r-	birig-r-i
bo:d 'run'	bo:d-s-	bo:d-s-i
nal 'see'	nal-s-	nal-s-i

The choice of allomorph (-i ∅) or -u) in the second and third person singular depends on the morphological environment determined since -u occurs after the Past Tense morpheme (-s-) or the Negative (-min-); -i or ∅ occurs elsewhere.

(133)

	Past/Negative	2nd/3rd p. singular
ka:g `have'	ka:k-s-	ka:k-s-u
bo:d `run'	bo:t-s-	bo:t-s-u
ka:g `have'	ka:g-min-	ka:g-min-u
bo:d `run'	bo:d-min-	bo:d-min-u

The second or third person singular is the suffix -i or 0 occurs elsewhere. Here the choice of allomorph is phonologically determined: the second or third person singular is zero if the preceding segment is vowel; otherwise -i:

(134)

	Non-past/non-Negative	2nd/3rd p. singular
a:g `stay'	a:g-	a:g-i
ka:g `have'	ka:g-	ka:g-i
jom `hit'	jom-	jom-i
isin `send'	isin-	isin-i
ni `drink'	ni-0	ni-∅

to `enter'	to-	to-0
tillebu- `perspire'	tillebu-	tallebu-

In the Plural, the first and the second person have the marker -u in all cases whereas the third person has the suffix -a. Note that these suffixes are attached to the Neutral or Past morpheme.

(136)

	Neutral/ Past	1st/2nd pl.	3rd person pl.
te:b `stand'	te:b-r-	te:b-r-u	te:b-r-a
oy `cry'	oy-r-	oy-r-u	oy-r-a
a:g `stay'	a:g-r-	a:g-r-u	a:g-r-a
kal `eat'	kal-l-	kal-l-u	kal-l-a
mo:n `refuse'	mo:n-d-	mo:n-d-u	mo:n-d-a
jom `hit'	jom-s-	jom-s-u	jom-s-a
ne:r `sleep'	ne:r-s-	ne:r-s-u	ne:r-s-a
ka:š `search'	ka:š-š-	ka:š-š-u	ka:š-š-a

3.224 Number

Number denotes or is concerned with the number of participants (subjects or objects) in a speech situation. As we have seen, the number of subject participant(s) is fused with the Person markers; it does not have a separate expression. However the number of object participant (s) is expressed on the verb; but no person distinction is made here.

The object is either singular or plural. Singular object is indicated by the absence of any marker (zero marked):

(137)

	Number
ǰom 'hit'	ǰom-Ø
ṇal 'see'	ṇal-Ø
ṇoddij 'tear'	ṇoddij-Ø
ǰa:nos 'sell'	ǰa:nos-Ø

Plurality of object is expressed by -ir or -ccir attached to a verb root or stem. As will be shown below, the choice of allomorph is morphologically determined -- there is nothing phonological about it: -ccir- is the variant following the Benefactive:

(138)

	Benefactive stem	Number
ja:n `buy'	ja:n-tir-	ja:n-ti-ccir
atta `bring'	atta-tir-	atta-ti-ccir
goy `build'	goy-tir-	goy-ti-ccir
kob `close'	kob-de:n-	kob-de:-ccir
išin `send'	išin-de:n-	išin-de:-ccir

The (plural object) Number suffix is -ir elsewhere:

(139)

	Number
jom `hit'	jom-ir
ed `marry'	ed-ir
nal `see'	nal-ir
acci `bite'	acci-ir
agiddi `seat'	agiddi-ir
to:gij `break up'	to:gij-ir

3.225 Mood

Mood is a grammatical category that that signals how the speaker places the proposition in the speech context. It takes the whole proposition in scope, e.g. expressing a statement, a command, etc.

All verb forms can take mood inflection. The independent Moods -- Indicative, Interrogative, and Imperative -- occur on a verb in independent clauses. The dependent Moods -- Conditional, Concessive, Temporal and Cosequential -- occur on verbs in subordinate clauses. We will also discuss Evidentials (e.g. Dubitative and Inferential) whose meaning indicates the degree of commitment the speaker has to the truth of the proposition. It should be noted that Agent-oriented Modalities (e.g. desire and ability) have syntactic (rather than morphological) expressions (e.g. birig `want'; eske `can').

Note that Negation (which is handled in a separate section (3.226)) is not considered a Mood. There are several grounds for this assumption. First, other members of the Mood category never cooccur; for example, a proposition is either Interrogative or Imperative; it can not be both. Given this, if Negation were Mood, then it would not be expected to occur with the other members of Mood (Imperative etc.). As we will see later (3.226), Negation is perfectly compatible with all Moods (e.g. Interrogative, Imperative, Indicative, Conditional, Concessive and Consequential).

Second, unlike members of Mood, which take the whole proposition in their scope, Negation can focus on one part of the proposition (see Bybee 1985 for a detailed discussion of negation), say, the verb. Thus the behavior of KN Negation suggests that it is not a member of Mood.

3.2251 Indicative Mood

The indicative mood, which is unmarked, is by far the most commonly used. It is used in expressing simple statements, e.g.:

(140) a. ne:r-bu:-r-a
sleep-stat-neu-3pl
`They are sleeping.'

b. bo:d-os-s-u
girl run-def-pst-3sg
`The girl has run.'

c. a-ni:-r-i
I water-Acc prog-drink-neu-1sg
`I am drinking water.'

d. jom-ir-s-i
hit-plobj-pst-1sg
`I hit them.'

3.2252 Interrogative Mood

KN has two types of questions: yes/no questions and wh-questions. Wh-questions are introduced by questions words (e.g. ni `who', me:r `what'). The Interrogative suffix (see table below) is attached to Person/Number suffixes except in the second/third person singular where the Interrogative suffix is attached to a verb root or stem.

		Past	elsewhere
singular	1st	-re	-ya
	2nd/3rd	-ma	-na
plural	1st/2nd	-re	-wa
	3rd	-nde	-na

Table 10: Interrogative markers[30]

As the table shows, the choice of allomorph is dependent upon Tense and Person. Note that the Person markers occur after the Neutral and Past Tense markers. In the first person singular, the Interrogative suffix is -re if the Tense is Past -s:

(141)	Past	1st sg	Interrogative
jom 'hit'	jom-s-	jom-s-i	jom-s-i-re
nal 'see'	nal-s-	nal-s-i	nal-s-i-re
ne:r 'sleep'	ne:r-s-	nal-s-i	ne:r-s-i-re
ja:n 'buy'	ja:s-s-	ja:s-s-i	ja:s-s-i-re
ja:tir 'buy for'	ja:tir-s-	ja:tir-s-i	ja:tir-s-i-re
essikir 'cause it to be water'	essikir-s-	essikir-s-i	essikir-s-i-re

Otherwise, the Interrogative suffix is -ya:

(142)

	Neutral	1st sg	Interrogative
ǰom 'hit'	jom-r-	jom-r-i	jom-r-i-ya
ŋal 'hit'	nal-l-	nal-l-i	nal-l-i-ya
ǰa:n 'buy'	ja:n-d-	ja:n-d-i	ja:n-d-i-ya
ǰa:tir 'buy for'	ja:tir-r-	ja:tir-r-i	ja:tir-r-i-ya

In the second or third person singular, the Interrogative marker is -ma if the Tense is Past:

(143)

	Past	Interrogative
ǧoj 'slaughter'	goj-s-	goj-ma
ŋal 'see'	nal-s-	nal-ma
to 'enter'	to:-s-	to:-ma
ɨccikir 'cause it to be milk'	iccikir-s-	iccikir-ma

The Interrogative suffix is zero elsewhere:

(144)

	Neutral	Interrogative
ǧoj 'slaughter'	goj-0	goj-na
a:g 'stay'	a:g-0	a:g-na
ɨsin 'send'	isin-0	isin-na
ŋal 'see'	nal-0	nan-na
ɛssikir 'cause it	essikir-0	essikin-na

to be water'

In the first or second person plural, the Interrogative suffix is -re if the Tense is Past:

(145)	Past	2nd/3rd sg	Interrogative
ta 'come'	ta:-s-	ta:-s-u	ta:-s-u-re
nal 'see'	nal-s-	nal-s-u	nal-s-u-re
jom 'hit'	jom-s-	jom-s-u	jom-s-u-re
essikir 'cause it to be water'	essikir-s-	essikir-s-u	essikir-s-u-re

Otherwise the Interrogative suffix is -wa:

(146)	Neutral	2nd/3rd pl	Interrogative
a:g 'stay'	a:g-r-	a:g-r-u	a:g-r-u-wa
te:b 'stand'	te:b-r-	te:b-r-u	te:b-r-u-wa
ka:g 'have'	ka:g-r-	ka:g-r-u	ka:g-r-u-wa
jagin 'push'	jagin-d-	jagin-d-u	jagin-d-u-wa
noddij 'tear'	noddij-r-	noddij-r-u	noddij-r-u-wa

In the third person plural, the marker is -nde if the the Tense is Past:

(147)	Past	3rd pl	Interrogative
nog 'go'	nok-s-	nok-s-a	nok-s-a-nde
di 'die'	di:-s-	di:-s-a	di:-s-a-nde
ja:n 'buy'	ja:s-s-	ja:-s-a	ja:-s-a-nde
nal 'see'	nal-s-	nal-s-a	nal-s-a-nde
amitir 'show'	amitir-s-	amitir-s-a	amitir-s-a-nde

The Interrogative is expressed by -na elsewhere:

(148)	Neutral	3rd pl	Interrogative
bicci 'wake up'	bicci-r-	bicci-r-a	bicci-r-a-na
te:b 'stand'	te:b-r-	te:b-r-a	te:b-r-a-na
a:g 'stay'	a:g-r-	a:g-r-a	a:g-r-a-na
goj 'slaughter'	goj-r-	goj-r-a	goj-r-a-na
bogir 'spill'	bogir-r-	bogir-r-a	bogir-r-a-na

3.2253 Imperative Mood

KN has several types of Imperatives: the Plain Imperative, the Delayed Imperative, the Habitual Imperative, the Polite Imperative and the Hortative.[31] Two of these Imperatives -- the Delayed Imperative and the Habitual Imperative -- need special attention since the former type -- Delayed Imperative (section 22531) -- refers to an act that is expected to occur in a future time. The Habitual Imperative (section 22532) is concerned with an habitual occurrence of an act.

The imperative (Lyons 1968:307) is the form of the verb used in giving directions, orders or commands. KN Imperative Mood is distinguished from the Indicative Mood (section 3.2251) in several ways: First, the Negative marker (-min) used with the Indicative Mood is different from the marker (-me:n) used with other Moods (Imperative etc.). Second, it (Imperative) does not take Tense. Third, the Person/Number markers (e.g. -a) used with the Indicative do not appear in the Imperative which has a special marker in the plural (-we/-mi-).

In KN, the verb is unmarked for the Singular Imperative:

(149)

	Singular Imperative
te:g 'sit down.'	te:g
imbel 'stand up.'	imbel
ju 'go'	ju
esskir 'make it water'	essikir
noddij 'tear'	noddij

Plural Imperative is formed by suffixing -we or -mi- to the root or stem of all verbs. -mi- occurs if the following morpheme is the Polite Imperative -nu:

(150)

	Plural Imperative	Polite
te:g 'stay'	te:g-mi-	te:g-mi-nu
jom 'hit'	jom-mi-	jom-mi-nu
nal 'see'	nal-mi-	nal-mi-nu
dabir 'lose'	dabir-mi-	dabir-mi-nu
ja:tir 'buy for'	ja:tir-mi-	ja:tir-mi-nu

-we or a phonologically conditioned variant -be is used elsewhere: -we occurs with all stems except those ending in a labial consonant (/b/ or /m/) where the allomorph to be used is -be (see section 2.64 for the phonological rule):

(151)

	Plural Imperative
te:g `stay'	te:g-we
ju `go'	ju:-we
ta `come'	ta:-we
nal `look'	nal-we
a:r `take'	a:r-we
sawir `mix'	sawir-we
agiddi `seat'	agiddi-we
turub `lie down'	turub-be
jom `hit'	jom-be

The Imperative indicates that the speaker is giving orders or commands to the addressee who has to perform these actions:

(152) a. buru:-g ed
girl-Acc marry
`Marry the girl.'

b. in-gi a:r
this-Acc take
`Take this.'

c. ber-ki inji-we
wood-Acc carry-plimp
`Take the wood.'

3.22531 Delayed Imperative

Delayed imperative indicates that the action of the command is to be carried out in the future rather than at the moment of speech. This is expressed by -kan (or one of its phonologically determined allomorphs, -kam, -kaw or -ka) suffixed to the root or stem of all verbs: The allomorphs -kam and -kaw occur before a labial nasal and a labial glide, respectively (see also section 2.62):[32]

(153)

	Delayed Imperative/Neg/Pl Imp
ǰom `hit'	ǰom-kam-me
ṇal `see'	ṇal-kam-me
ṭa `come'	ṭa:-kaw-we
ǰu `go'	ǰu:-kaw-we
agiddi `seat'	agiddi-kaw-we

The allomorph is -ka before a pause:

(154)

	Pause
issig `ask'	issik-ka
ḳa:š `search'	ḳa:š̌-ka
ḳal `eat'	ḳal-ka
suguddi `bring down'	suguddi-ka

The Delayed Imperative suffix is -kan elsewhere:

(155)

	Delayed Imperative/Polite Imp
ju `go'	ju:-kan-nu
ta `come'	ta:-kan-nu
te:g `stay'	te:k-kan-nu
jom `hit'	jom-kan-nu
agiddi `seat'	agiddi-kan-nu
essikir `make it water'	essikir-kan-nu

Some examples:

(156) a. asalgi ju:-ka
tomorrow go-DI
`Go tomorrow.'

b. asalwe:kka:kki ta:-ka
day after tomorrow come-DI
`Come tomorrow.'

c. mando te:k-ka
there stay-DI
`Stay there.'

d. asalgi it-ti jom-ka
tomorrow man-Acc hit-DI
`Hit the man tomorrow.'

e. asalgi kade:-g atta-ka
tomorrow dress-Acc bring-DI
`Bring the dress tomorrow.'

These examples show that there is no demand or obligation on the part of the addressee to execute the order promptly; s/he may carry it out in the future: e.g. the addressee is asked to `come', `stay there' or `bring the dress'. These are not to occur now but sometime in the future. Compare

this with the Plain Imperative (3.2253):

(157) a. ta
`come'

b. mando te:g
there sit
`sit there'

c. kade:-g atta
dress-Acc bring
`bring the dress'

Unlike the examples with the Delayed Imperative, here the addressee has no choice but to carry out the act described by the verb at the present moment: the addresse is ordered to `come', `sit there' or `marry the girl'. Each act is to be carried out now, not in the future.

3.22532 Habitual Imperative

Habitual imperative indicates that the action ordered is to occur habitually (i.e. in a regular basis). (This marker should not be confused with the Delayed Imperative marker -ka (see 3.22531)). It is exprssed by -ken suffixed to the verb root or stem. There are several phonologically determined allomorphs for the Habitual suffix. These are -kem, -kew and -ke. The allomorphs -kem and -kew occur before a labial nasal /m/ and the glide /w/, respectively (see 2.62 for the phonological rules responsible for this alternation):

(158)

	Habtual Imperative/Neg/Plural Imp
nal `see'	nal-kem-me
ja:n `buy'	ja:-kem-me
bogir `pour'	bogir-kew-we
degiddi	degiddi-kew-we

The allomorph is -ke before a pause:

(159)

	Pause
ne:r `sleep'	ne:r-ke
išin `send'	iši-ke
ja:nos `sell'	ja:nos-ke
ja:tir `buy for'	ja:tir-ke

-ken occurs elsewhere:

(160)

	Habitual Imperative/Polite Imp
atta `bring'	atta-ken-nu
jom `hit'	jom-ken-nu
sawir `mix'	sawir-ken-nu
kujur `put'	kujur-ken-nu
bowwiddi `bathe'	bowwiddi-ken-nu
bogir `spill'	bogir-ke

The Habitual Imperative indicates that the addressee is not required to perform the actions described by the verb (`coming' and `seeing the woman') immediately. Rather, s/he is asked to perform these actions in a regular or habitual way:

(161) a. ta:-ke
come-HI
`(Always) Come.'

b. e:n-gi nal-ke
woman-Acc see-HI
`(Always) see the woman.'

If the instant performance of the actions were required, we would have the following:

(162) a. ta
`Come.'

b. e:n-gi nal
woman-Acc see
`See the woman.'

Here the actions (`coming' and `seeing the woman') are not to occur in a habitual way (e.g. everyday).

Notice that the Habitual Imperative is different from the Delayed Imperative in that the latter is concerned with a single occurrence of the action or situation described by the verb. Observe the following:

(163) a. ta:-ka
come-DI
`Come.'

b. e:n-gi nal-ka
woman-Acc see-DI
`See the woman.'

in which the actions or situations of `coming' or `seeing the woman' are not to occur customarily. Instead, one single (future) occurrence would be sufficient. This is not the case with the Habitual Imperative which indicates that such situations or actions are to occur in a habitual way. Thus, the Delayed Imperative but not the Habitual Imperative is compatible with such an adverb as asalgi `tomorrow':

(164) a. asalgi ta:-ka
tomorrow come-DI
`Come tomorrow.'

b. asalg e:n-gi nal-ka
tomorrow woman-Acc see-DI
`See the woman tomorrow.'

c. * asalgi ta:-ke
tomorrow come-HI
? `Always come tomorrow.'

e. * asalg e:n-gi nal-ke
tomorrow woman-Acc see-HI
? `Always see the woman tomorrow.'

3.22533 Polite Imperative

Polite imperative indicates that the order is conveyed in a polite way. KN polite commands are expressed by the Polite Imperative suffix -nu attached to the roots or stems of all verbs:

(165)

	Polite Imperative
te:g `stay'	te:g-nu
ta `come'	ta:-nu
to `come in'	to:-nu
jom `hit'	jom-nu
nal `see'	nan-nu
bogir `spill'	bogin-nu
agiddi `seat'	agiddi-nu
imbelkiddi `raise'	imbelkiddi-nu

Here -nu indicates that the command carries an air of politeness. Without the Polite form -nu, the order or command is not considered polite and is inappropriate to be used with strangers or old people.

3.22534 Hortative

Hortative signals a speech act by which the speaker grants permission to a first or third person as in "let him cook".[33] KN has singular and plural Hortative: the former is expressed by the -an, -am or -aw suffixed to the verb root or stem. The choice of allomorphs is phonologically determined (see 2.62 for the phonological rules); they result from the assimilation of the nasal to the following labial: -am before the labial nasal (/m/ which is mainfested in the Negative non-Indicative), -aw before the labial glide (/w/ which is manifested in the Plural Imperative marker -we):

(166)

	sg Hortative	Negative/Plural Imp
bo:d 'run'	bo:d-an	bo:d-am-me
jom 'hit'	jom-an	jom-am-me
oy 'cry'	oy-an	oy-am-me
go:l 'dig'	go:l-an	go:l-aw-we
bogir 'pour'	bogr-an	bogr-aw-we

The Singular Hortative is -an elsewhere:

(167)

	Sg Hortative
bo:d 'run'	bo:d-an
te:g 'stay'	te:g-an
nal 'see'	nal-an

The Plural Hortative is expressed by the suffix -wan which is attached to the verb root or stem:

(168)

	Plural Hortative
jom `hit'	jom-wan
sawir `mix'	sawir-wan
digiddi `cover'	degidd-wan

In this section, Imperatives have been discussed. It has been shown that KN has for types of Imperatives: the Plain Imperative, the Delayed Imperative, the Habitual Imperative, the Polite Imperative and the Hortatives.

3.22535 Morphemes in the Imperative

All the morphemes (except the Plural Imperative -we and the Polite Imperative -nu; the Delayed Imperative and the Habitual Imperative) that are discussed in the Imperative can cooccur. Thus an order or demand for a delayed or habitual act can be conveyed in a polite way. Examples:

(169) a. jom-ir-kan-aw-we
hit-plobj-DI-Hort-plimp
`Let him/her hit them.'

b. jom-ir-ken-aw-we
hit-plobj-HI-Hort-plimp
`Let him/her always hit them.'

c. ta:-kam-mi-nu
hit-DI-plimp-PI
`Please, come.'

d. a:w-kem-mi-nu
make-HI-plimp-PI
`Please, always make (dinner).'

c. jom-ir-am-mi-nu
hit-plobj-Hort-plimp-PI
`Let him/her hit them, please.'

d. jom-ir-aw-we
hit-plobj-Hort-plimp
`Let him/her hit them.'

The Plural Imperative morpheme -mi- can not occur without the Polite Imperative morpheme -nu but the Polite Imperative can occur without the Plural Imperative -mi-:

(170) a. te:g-mi-nu
stay-plimp-PI
`Please, stay (you pl.).'

b. * te:g-mi
cf.te:g-we

c. te:g-nu
stay-PI
`Please, stay (you sg.).'

d. * te:g-we-nu
stay-plimp-PI

The Delayed Imperative and the Habitual Imperative are mutually exclusive. It is not difficult to explain the reason: a single act that is to be performed in a future time can be expected to be habitual:

(171) *ta:-ka-ke
come-DI-HI
`come next time customarily.'

*ta:-ke-ka
come-HI-DI
`Come customarily, next time.'

The morphemes described for the Imperative Mood and their relative order as they occur on the verb stem can be given in the following table. This table shows that the Polite Imperative marker occurs outside all other markers. The Hortative follows the Delayed and Habitual Imperative.

The Plural Imperative marker follows all other morphemes except the Polite Imperative.

1	2	3	4
stem	Delayed Imp.	Hortative	PlImp	PI
	-ka	-an/-wan	-mi-/-we	-nu
	Habitual Imp.			
	-ke			

Table 11: Morphemes occurring in the Imperative

3.2254 Subordinating Moods

KN has several Subordinating Moods such as the Conditional, the Concessive and the Consequential. These are expressed by suffixes which are attached to a subordinating morpheme (except for the Conditional which precedes the Person marker).

3.22541 The Conditional Mood

The conditional mood denotes an action or state upon which the occurrence or realization of another action is dependent. It is expressed by the suffix -ki- or -k- (if it preceded by a long vowel and followed by a consonant) added to the roots or stems of all verbs:

(172)

	Conditional
bo:d 'run'	bo:t-ki
ta 'come'	ta:-ki
nal 'see'	nal-ki
išin 'send'	iši-ki
bogir 'spill'	bogir-ki
suguddi 'bring down'	suguddi-ki
agiddi 'seat'	agiddi-ki
iccikir 'make it milk'	iccikir-ki

The Conditional is used to refer to an action that is likely to be fulfilled:

(173) a. tekki nal-ki-r-i bi-jom-r-i
him/her see-Cond-neu-1sg Fut-hit-neu-1sg
'If I see him/her, I will hit him/her.'

b. it-ti urri-ki-r-i bi-be:-r-i
man-Acc catch-Cond-neu-1sg Fut-kill-neu-1sg
'If I catch the man, I will kill him.'

All these examples show verb forms that contain a condition that may or may not be fulfilled. Thus I may or may not see him; I may catch the man or I may not.

Conditional Mood can also express hypothetical situations or conditions, in which case the Present Perfect -ko- precedes the Conditional marker -ki:

(174) a. dugu:-g ka:k-ko:-k-r-i in ka:-gi
money-Acc have-perf-Cond-neu-1sg this house-Acc
bi-ja:n-s-i
Fut-buy-pst-1sg
'If I had money, I would buy this house.'

b. id a:k-ko-ki buru:-g b-ed-s-u
man stay-perf-Cond girl Fut-marry-pst-3sg
'If the man were here, he would marry the girl.'

The Conditional may also refer to a past condition that can no longer be fulfilled:

(175) a. ogj-i ta:-ko-ki-r-a i:-g ka:-gi
man-pl come-perf-Cond-neu 3pl fire- house-Acc
bi-kal-ko-mn-u
Fut-eat-perf-neg-3sg
'If the men had come, the fire would not have destroyed the house.'

3.22542 Concessive

The Concessive is expressed by the suffix -go which is the attached to the stem:

(176)	Subordinate	Concessive
ka:g `have'	ka:gran-	ka:gran-go
a:g `sit'	a:gran-	a:gran-go
te:b `stand'	te:bran-	te:bran-go

The Concessive on the verb stem indicates parallel simultaneous occurrence :

(177) a. burw-i a-kaski-r-a-n-go ta:-s-i
girl-pl prog-play-neu-3pl-conc come-pst-1sg
`While the girls were playing, I came.'

b. affi-cci-g a-jom-r-a-n-go id ta:-s-u
boy-pl-Acc prog-hit-neu-3pl-conc man
`While they were beating the boys, the man came.'

The Concessive also indicates a counterindication with what is stated in the other clause:

(178) a. oddi-r-i-n-go ta:-s-i
be sick-neu-1sg-sub-conc come-pst-1sg
`Although I was sick, I came.'

b. dugu:-g ka:g-i-n-go id ka:-g
money-Acc have-3sg-sub-conc man house-Acc
ja:-ko:-mn-u
buy-pst-neg-3sg
`Although he had money, the man did not buy the house.'

3.22543 Consequential

The Consequential, which indicates reason for the situation in the other clause, is expressed by the suffix -ga which is attached to the stem:

(179)

	Subordinate	Consequential
bo:d `run'	bo:dran-	bo:dran-ga
ta `come'	ta:ran-	ta:ran-ga
jom `hit'	jomran-	jomran-ga
dabos `disappear'	dabosin-	dabosin-ga
ma:g `steal'	ma:gran-	ma:gran-ga

The only Tenses used with the Consequential are the Neutral and Future. The past interpretation of the Neutral is obtained by reference to the Tense of the verb in the main clause: if the main clause verb has a Past Tense, the Neutral (in the subordinate) is taken as referring to past time, as in:

(180) a. am-ba:b ay-gi jom-s-u dugu:-g ma:g-r-i-
my-father me hit-pst-3sg money-Acc steal-neu-
-n-ga
sub-consq
`My father beat me because I stole money'

b. am-bes-kodon bayig-min-i inn-issi-g
my-brother-with speak-neg-1sg your-sister-Acc
b-ed-i-n-ga
fut-marry-3sg-sub-consq
`I don't speak my brother because he will
marry your sister'

3.2255 Evidentials

Evidentials signal the source of information in the proposition.[34] KN has two Evidential suffixes: -ege `Dubitative' and -tera `Inferential'. These suffixes are attached to the Person/Number.

3.22651 Dubitative

The dubitative indicates possibility or probability for the occurrence of an event. It is expressed by the suffix -ege which is attached to a Person/Number morpheme:

(181)

	Person	Dubitative
oddi `be sick'	oddir-a	oddira-ge
a:g `stay'	a:gr-a	a:gra-ge

The Dubitative indicates that the occurrence of the situation described by the verb is probable:

(182) a. id to:-ki a-jakki-r-ege
man boy-Acc prog-beat-neu-prob
`The man may be beating the boy.'

b. e:n it-ti jom-ko-r-ege
woman man+Acc hit-perf-neu-prob
`The woman might have hit the man.'

c. a:g-me:n-d-ege
stay-neg-neu-prob
`He might not be at home.'

The use of -ege suggests that the speaker is not totally sure of the truth of the information s/he is giving, though s/he believes it to be probable. This contrasts with sentences without the Dubitative:

(183) a. id to:-ki a-jakki
man boy-Acc prog-beat
'The man is beating the boy.'

Here, the speaker is sure (s/he must have witnessed) that the situation (beating the boy) is going on at the present moment.

3.22652 Inferential

This implies a logical conclusion, a strong likelihood, something that seems the only reasonable explanation. It is expressed by -tera attached to person/number morpheme:

(184)

	Person	Inferential
ka:g 'have'	ka:g-i	ka:gi-tera
nalli 'injure'	nallibu:r-a	nallibu:ra-tera
bicci 'wake'	biccibu:r-a	biccibu:ra-tera
ma:g 'steale'	ma:ges-a	ma:gesa-tera

The Inferential indicates that the speaker uses inference to describe a situation:

(185) a. buru bicci-bu:-tera
girl awake-stat-inf
'The girl must be awake.'

b. ogj-i ne:r-bu:-r-a-tera
man-pl sleep-stat-neu-3pl-inf
'They must be asleep.'

In (185a), for example, bicci-bu:-tera means that the speaker is certain that the girl is now awake. This does not indicate that the speaker has witnessed the event; rather, s/he relies on his or her knowledge of the person (the

girl): the speaker probably knows that at this hour of the day the girl is never asleep. If this statement were based on eyewitness, we would find the following statement without Evidentials:

(186) buru bicci-bu
girl awake-stat
`The girl is awake.'

In the following examples, a present deduction about a past action is made, e.g.

(187) a. e:n oddi-s-i-tera
woman be sick-pst-3sg-inf
`The woman must have been sick.'

b. orig-bu:-s-a-tera
be hungry-stat-pst-3pl-inf
`They must have been hungry.'

Again the speaker makes a deduction of an unwitnessed (by the speaker) past event. The deduction is based on the experience the speaker has had with the actors (e.g. e:n) or the traces/consequences of a certain action: the girl is known to be punctual and enthusiastic about the party. There is no food left in the refrigrator.

3.226 Negation

Negation is realized by suffixing the Negative marker -min or -me:n to the verb. The form -min- or -mn- (between vowels) occurs in the Indicative Mood whereas -me:n is used elsewhere: Imperative, Interrogative, Conditional, Consequential, Concessive etc.[35]

3.2261 Negative Indicative Mood

The suffix -min- or -mn- is used in the Negative Indicative Mood. It is attached to the roots or stems of all verbs. The allomorph is phonologically conditioned: -mn occurs if the preceding segment is a vowel; -min- occurs elsewhere.

(188)

	Negative
ta `come'	ta:-mn-
to `enter'	to:-mn-
ne:rbu `be asleep'	ne:rbu:-mn-
ka:g `have'	ka:g-min-
nal `see'	nal-min-
essan- `become water'	essam-min-
iccikir `make it water'	iccikir-min-

Examples of the Negative Indicative are shown in (190):

(189) a. buru:-g b-ed-min-i
girl-Acc Fut-marry-neu-neg-1sg
'I will not marry the girl.'

b. ba:b-ki bi-kus-sir-min-i
door-Acc Fut-open-Ben-neg-1sg
'I will not open the door for him/her.'

c. dugu:-g ka:g-min-a
money-Acc have-neg-3pl
'They do not have money.'

d. itta:mbokodon jawa:b-ki ba:j-ko:-mn-a
now untill letter-Acc write-perf-neg-3pl
'They have not written the letter yet.'

3.2272 Negative non-indicative

Nonindicative Moods (i.e. Imperative, Interrogative, Conditional, Concessive, Conseqential and evidentials) can also be negated. The negative suffix, which is attached to a verb root or stem, has several phonologically conditioned allomorphs (see also 2.62 for the phonological rules that are responsible for these allomorphs):

(190)

Negative allomorphs	before
-me:s-	/s/
-me:w-	/w/
-me:m-	/m/
-me:-	/k/
-me	pause
-me:n-	elsewhere

Examples involving non-Indicative Negation are given in (191):

(191) a. ed-me:s-s-a-n-de ?
marry-neg-pst-3pl-Intr
`Didn't they marry ?'

b. jom-me:w-we
hit-neg-plimp
`Don't hit (him/her)'

c. jom-me:m-mi-nu
hit-neg-plimp-PI
`Don't hit him/her, please.'

d. nal-me:-ki
see-neg-Cond
`If you don't see him/her'

e. oddi-me:n-d-a-n-go
be ill-neg-neu-3pl-sub-Conc
`Although they are not ill, ...'

f. kal-me:n-i-n-ga
eat-neg-3sg-sub-Consq
`Because they did not eat'

3.227 Order of Inflectional morphemes

In the previous section (3.22), inflectional morphemes were discussed. Here we are concerned with the order in which these morphemes can co-occur. As table 12 shows, the morpheme for Number is the inflectional morpheme closest to the stem. All Mood morphemes (except the Conditional) are outside Person morphemes.

Neg 1, which occurs only in the non-Indicative Mood, precedes any morpheme other than the Number morpheme which is the closest inflectional morpheme to the verb stem:

(192) a. jom-ir-me:n-nu
hit-plobj-neg-PI
`Please, don't hit them.'

b. to:g-ij-ir-me
break-dist-plobj-neg
`Don't break them.'

The Perfect morpheme precedes the Conditional morphemes whereas the Neutral and the Past morphemes follow it:

(193) a. nal-me:-ko-ki-r-i
see-neg-perf-cond-neu-1sg
`If I didn't see (it).'

b. ta:-me:-ko-ki-r-a
come-neg-perf-cond-neu-3pl
`If they didn't come.'

Neg 2, which occurs in the Indicative Mood, follows Tense:

(194) a. atta-ko:-mn-i
bring-perf-neg-1sg
`I didn't bring (it).'

b. ta:-ko-mn-a
come-perf-neg-3pl
`They didn't come.'

Person morphemes, follow Negation (Neg 1 or Neg 2) and Tense morphemes:

(195) a. bo:t-ko-mn-i
run-perf-neg-1sg
`I didn't run.'

b. nal-me:-ki-r-i
see-neg-cond-neu-1sg
`If I don't see (him/her).'

Mood morphemes other than the Conditional follow Person morphemes:

(196) a. nal-me:-s-a-nde ?
see-neg-pst-3pl-Inter
`Didn't they see (him/her) ?'

b. ju:-s-u-re ?
go-pst-2sg-Inter
`Did you go ?'

The constraints on the co-occurrence of morphemes will be handled here. Morphemes of the same structural class do not co-occur; for example, members of T2 do not cooccur:

(197) a. * ka:g-r-s-i
have-neu-pst-1sg

b. * ka:g-s-r-i

Likewise, Person morphemes do not co-occur. Nor do M2 morphemes occur in the same construction:

(198) a. *ja:s-s-i-a
buy-pst-1sg-3pl
`I-they bought (it).'

b. * ma:g-r-a-ga-nde
come-neu-3pl-conseq-Inter
`Because they stole ?'

There are also restrictions on the co-occurrence of the morphemes that are not of the same structural class. thus Moods other than the Indicative are not compatible with Neg 2:

(199) a. * te:k-ki-min-a
stay-cond-neg2-3pl
`If they don't stay'

b. * ka:g-min-a-na ?
have-neg2-3pl-Inter
`Don't they have'

M1 and M2 may not co-occur:

(200) a. *nal-ko:-ki-r-a-nde
see-perf-cond-neu-3pl-Inter
`If they saw (him/her).'

b. *ta:-ki-r-u-n-ga
come-cond-neu-2sg-sub-consq
`Lit.Because if they come.'

Neg 1 and Neg 2 do not co-occur:

(201) a.*ni:-me:-ko-mn-a
drink-neg-perf-neg-3pl

b. *kal-me:n-min-nde ?
eat-neg-neg-Inter

Finally, Neg 2 does not occur in the Indicative Mood:

(202) a.*a-goj-me:n-d-a
prog-slay-neg-neu-3pl
'They are not slaying the cow.'

b.* wa:w-me:s-s-a
cross-neg-pst-3pl
'They did not cross the river.'

The following table shows the inflectional morphemes described in the previous sections.

Number	Neg1	T1	M1	T2	Neg2	Pers	M2
-ir	-me:n	Perf -ko	Cond -ki	Neu -r	-min	-i	Inter -na
				Past -s		-u	-ma
						-a	-re
							Conc -go
							Consq -ga
							Evid -ege -tera

Table 12: Order of inflectional morphemes

3.23 Conclusion

The order of verbal morphemes in KN is summarized in table 13. Derivational morphemes are closer to the stem than inflectional morphemes. Number is closer to the stem than Negation, Conditional, Tense, Mood or Person/Number. Person/Number, which follows Tense, precedes Moods other than Conditional which it has to follow. Note also that in some cases (involving Negation) the order of morphemes depends on Mood. Negation, which has two forms, -min for Indicative Mood and -me:n elsewhere, follows Tense in the Indicative Mood and precedes it in non-Indicative environments (e.g. Conditional).

Examples:

(203)

a. bogr-ij-kiddi-s-i
pour-tr-dist-caus-pst-1sg
'I caused him/her to throw water.'

b. jom-takk-os-s-a
hit-pass-def-pst-3pl
'They have been beaten.'

c. isin-os-sic-cir-s-i
send-def-Ben-plobj-pst-1sg
'I have sent it to them.'

d. nal-os-ir-ko-ki-r-i
see-def-plobj-perf-cond-neu-1sg
'If only I have seen them.'

e. išin-os-sir-ko-ki-r-a
send-def-Ben-perf-cond-neu-3pl
'If they sent it to him/her.'

f. jom-ko:-mn-a
hit-perf-neg-3pl
'They didn't hit (him/her).'

g. a-jakki-r-a-na ?
prog-beat-plobj-neu-3pl-Intr

`Are they beating them?'

h. nal-ir-ma ?
see-plobj-Inter
`Did you see them?'

i. to:g-ij-os-r-a-n-ga
break-dist-def-neu-3pl-sub-Conseq
`Because they broke the door'

j. te:g-me:n-d-a-n-ga
stay-neg-neu-3pl-sub-Consq
`Because they did not stay'

k. dy-os-s-i-tera
die-def-pst-3sg-infer
`s/he must have died.'

l. ta:-me:s-s-a-tera
come-neg-pst-3pl-infer
`They could not have come.'

It should be noted that elements of the same position are mutually exclusive:

(204) a. *jom-s-i-a
hit-pst-1sg-3pl

b. *nog-ma-nde ?
go-Intr-Intr
`Did he go ?'

Some morphemes that are not in the same position are mutually exclusive; for example, the Negative (-min-) does not cooccur with either Neutral Tense marker -r- or Past Tense marker -s- :

(205) a. *ka:g-r-min-i
have-neutral-neg-1sg
`I do not have.'

b. *nog-s-min-a
leave-pst-neg-3pl
`They did not leave.'

Also, the Past Tense marker -s-, which cooccurs with the Interrogative Mood, is not compatible with such Moods as

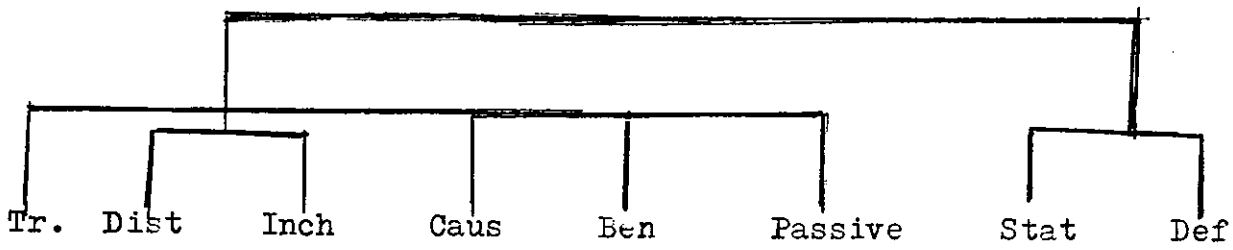
the Conditional, the Consequential and the Concessive :

(206) a. nal-ir-s-a-nde ?
see-plobj-pst-3pl-Inter
`Did they saw them.'

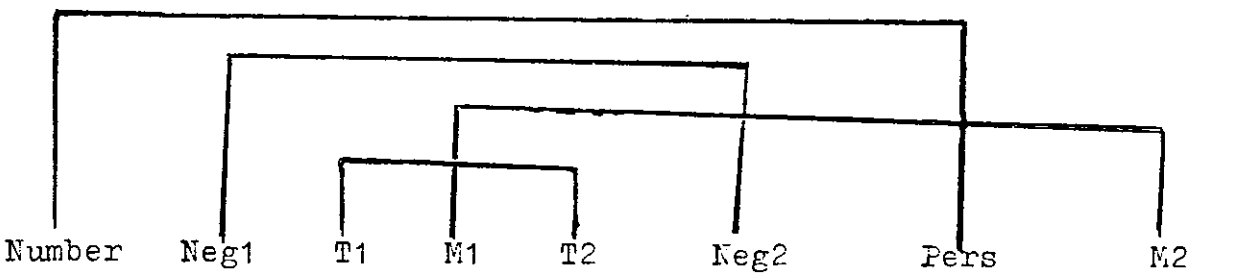
b. *ja:n-ki-s-i
`buy-Cond-pst-1sg
`If I bought the cow.'

c. *ma:g-s-a-n-ga
money-Acc steal-pst-3pl-sub-Consq
`Because they stole the money.'

The two tables (table 8 and table 12) that were shown in the previous sections are brought together here, in a single table which clearly illustrates the relation between derivational and inflectional morphemes.



-ir	-ij	-an	-kiddi -kir	-tir -de:n	-takki	-bu	-os



		Perf	Cond	Neu			Inter
-ir	-me:n	-ko	-ki	-r	-min	-i	-na
				Past			
				-s		-u	-ma
						-a	-re
							Conc
							-go
							Consq
							-ga

Table 13: order of inflectional/derivational morphemes

Notes

[1] Since KN is an SOV language (cf. Greenberg 1966), suffixation should be the predominant process (see Greenberg 1966 for the nature of SOV languages). There are only two examples of prefixation in KN: the Future marker bi- and the Progressive marker a- but no cases of infixation are ever found. In contrast, Dongolese (Armbruster 1960) has several prefixes that are not attested in KN. Ayyub (1968) shows that Mahas has infixes, in addition to prefixes and suffixes. Here also suffixes are more abundant than prefixes or infixes.

[2] See Lyons (1968, 1977) for discussion of syntactic criteria.

[3] Lexicalized items are also attested: their roots do not occur alone:

erkeddi
`head-cover'

nibid
`mate'

nawid
`axe'

It may also result in idiosyncratic meaning, as in:

kusar `open'	(kus) `open'
jakkar `hook'	(jakki) `beat'
belti	(bel)

`pimple'	`go'
jugutti	(jug)
`grudge'	`burn'

4
Dongolese (Armbruster 1960:141) and Fadicca (Tucker and Bryan 1966:317) have the noun formative -ar.

5
Like KN, Dongolese (Armbruster 1960:145-146) has the suffix -id which derives nouns from verbs. But this is very productive in Dongolese; it can be used with almost any verb. Mahas (Tucker and Bryan 1966:317), a Nile Nubian language spoken in Sudan, has the suffix -e which derives noun stems from verbs.

6
Noun agent makers are not attested in either Mahas or Dongoles.

7
Related suffixes are also attested in other family members: Dongolese -kane (Armbruster 1966:148); Mahas -kenne; kadaru -kine (Tucker and Bryan 1966:318).

8
Compounding is also used to derive verb stems, adjective stems and numeral stems.

9
Mahas (Tucker and Bryan 1966:319) has two markers for Plural Number: -i for nouns. According to Armbruster

(1960:132), Dongolese has the following Plural Number allomorphs: -i, -c(i) which is suffixed to Genitive -n (before a vowel-final stem.

10
Some forms have been lexicalized; their roots do not occur alone or in other combinations

ingiri
`sweet'

digri
`many'

dolli
`deep'

11
Fadicca (Tucker and Bryan 1966:318) has these two suffixes (-kinny `without' and -ko:l `with/having'); they are used in deriving adjectives from nouns

12
The suffix -katti is a Passive marker in dongolese a Nile Nubian language (Armbruster 1960; Tucker and Bryan 1966:315). Passive is expressed by -dakki in Mahas (Ayyub 1968:109).

13
All Nile Nubian languages exhibit the Plural Number -gu for pronouns.

14
In Dongolese (Armbruster 1966:132), Instrumental is formed by adding the suffix -ed to "the objective case" (e.g. kusar-k-ed `with the key'). It should also be noted

that verb stems in the Causative in Dongolese can take Case (cf. Tucker and Bryan 1966:320).

15 Note how the Transitivizing suffix affects the stem; the stem vowel is shortened. Not also that some resulting forms have been lexicalized:

bottir
`cut'

egir
`ride'

tagir
`cover'

The Transitivizing suffix has also produced idiosyncratic meaning:

kujur `put'	(kuj) `climb'
oyir `know'	(oy) `cry'
ewir `irrigate'	e:w `wash'

This suffix is also attested in Hill Nubian languages (Tucker and Bryan 1966:316): -iir and -i in Kadaru.

16 The suffix -kir as a Causative is also attested in Mahas (Ayyub 1968:108). In Dongolese (Armbruster 1960:193), Causative is formed by the suffixation of -ir to the Accusative Case; for example the numeral in the accusative (toski-g would take -ir (toski-g-ir `make three').

17
Some resulting forms with -kir have been lexicalized; their roots do not occur alone:

akkir `wean'

nu:kir `to make roof'

18
Some resulting forms in -(k)iddi have been lexicalized:

abiddi `meet'

giddi `cause to drink'

noddi `cut'

suguddi `bring down'

awiddi `spread'

19
Both Kunuz and Mahas (cf. Tucker and Bryan 1966:315) have identical Passive markers (-takki). Dongolese (Armbruster 1960; Tucker and Bryan 1966:315) has the suffix -katti for passive which is claimed to be related to the verb katti `wrap'.

20
The Stative suffix -bu is also attested in Dongolese (Armbruster 1960). Mahas (Ayyub 1968:107) has the suffix o:s as a Stative morpheme. (Note that this suffix denotes definiteness in KN).

21
Dongolese has the suffix -k, -ig which indicates intensity (Armbruster 1960:192:193).

22
Some forms with the Distributive have become so lexicalized that they do have roots that do not occur alone:

egrij
`vomit'

awij
`make basket'

ewrij
`cry'

warij
`jump'

gergij
`roll over'

23
The Inchoative -an is also attested in Dongolese (Tucker and Bryan 1966:316) but it is not known whether the other members of the group have a similar marker.

24
This suffix, which is also attested in Dongolese (but with more uses; cf. Armbruster 1960) is probably related to the verb o:s `take out'

Some of the resulting forms are idiosyncratic in meaning:

ja:nos `sell'

ja:n `buy'

25
In Dongolese, the Tenses ("Present") are claimed (Armbruster 1960:195) to be set off by the person/number markers, as in the following:

		Present
	1	-d
sg	2	-n
	3	-n
	1	-du
pl	2	-du
	3	-dan

26 The Future marker bi- is probably related to the verb birig `want'. This is not surprising since there are many African languages (e.g. Swahili) in which the Future (e.g. -taka) is related to a desiderative verb such as taka`want' in Swahili (Heine and Reh 1984:131). The source of the Future is not necessarily a desiderative or motion verb (cf. Heine and Reh 1984). Mahas (Ayyub 1968:52) has a Future prefix fa- f- (before a vowel) which is claimed to be related to the verb root fiyy `to sleep/lie down'.

Note that Dongolese (Armbruster 1960:199; Tucker and Bryan 1966:325) has bi- and bu- (before stems with /u/) for Future (ay bi-kabis `I will eat'). This marker can be separated from the stem, as in bi ay kabis `I will eat'. KN Future prefixes can not be separated from the stem (ay bi-jom-r-i but not *bi ay jom `I will hit).It seems that the Dongolese Future marker, which must be a particle, is in an earlier stage of development than the KN marker which is an affix.

27
Note that Perfect is treated as a memeber of Tense (cf. Bybee 1985) rather than Aspect (cf. Comrie 1976) because perfect is not concerned with the internal temporal constituency of a situation (e.g. progressive). Rather, it temporally relates the situation or event described by the verb to a given reference point, usually the moment of speech (Mourelatoes 1981; Bybee 1985). Thus it is proper to discuss KN Perfect as part of Tense category.

28
The Progressive morpheme a- is attested in none of the Nubian languages except KN

29
Person/Number markers are possibly related to such pronouns (see 3.13) as ir `you'; ar `we'. In Dongolese (Tucker and Bryan 1966; Armbruster 1960) and Mahas (Ayyub 1968) Person suffixes are confused with Tense suffixes; for example, the first person in Mahas (Ayyub 1968:84) is analysed as -ri or -si.

30
Dongolese (Armbruster 1960:298; Tucker and Bryan 1966:327) has two suffixes for Interrogatives: -d and -a.

er tan-a `Do you come ?'

toskin-a `Do you cough ?'

jomran-d `Do they hit ?'

31
The Singular Imperative is unmarked in all the languages of the Nubian group. All of them have a suffix for Plural Imperatives (Tucker and Bryan 1966:324). Meidob (Thelwall 1983:107) has the suffix -yic as a Plural Imperative marker. Dongolese has the suffix -we for Plural Imperative. The /w/ of the suffix -we optionally assimilates to a preceding consonant:

stem	Plural Imperative		
a:g	a:g-we	a:g-ge	`sit'
bo:d	bo:d-we	bo:d-de	`run'
mer	mer-we	mer-re	`cut
jom	jom-we	jom-me	`hit'

In contrast, in KN the /w/ of the plural Imperative suffix -we is obligatorily hardened before a labial consonant (see 2.64 for the rule that is responsible for this alternation):

	Plural Imperative	
a:g	a:g-we	*a:g-ge
bo:d	bo:d-we	*bo:d-de
mer	mer-we	*mer-re
jom	jom-be	*jom-me/*jom-we

But none was shown to have Delayed Imperative, Habitual Imperative or Polite Imperative.

32
This suffix is probably related to the verb ka:g `have/keep' (e.g. ekkodo ka:g `Keep it with you')

33
When the suffix -an is preceded by a monosyllabic verb stem ending in a non-high vowel (i.e. /e/, /o/ and /a/), the liquid [r] is inserted to eliminate the vowel clustering (see section 2.651 for the rule that accounts for this).

34
Evidentials in other Mahas and Dongolese languages have not been discussed.

35
The Negative marker is possibly related to mo:n `refuse'. Note that /m/-initial Negative suffixes are prevelant in Nilo-Saharan languages; for example, Dongolese (Armbruster 1960:298; Tucker and Bryan 1966:327) has two allomorphs for Negation: -munan with third person plural and -munun elsewhere. In Mahas (Ayyub 1968:90), the Person morphemes are analysed as part of the Negative morpheme. As such it was wrongly claimed that Negative morphemes are determined on the basis of Person. The Nilotic languages kalenjin and Datooga (Rottland 1981:11) have the Negative prefix m(a)- (e.g. ka-ma-ke-nam-en `I was not taken').

Chapter 4 Syntax

4.0 Introduction

KN sentence structure is handled in section 4.1. This is followed by the basic facts (section 4.2) that will be needed in the discussion of morphosyntactic rules (section 4.3). These rules include passive which is tackled in section 4.31. There it is shown that KN has two types of passives: personal passive and impersonal passive. Advancements to direct object are discussed in section 4.32. Causative constructions are handled in section 4.33. In section 4.4 complementation (including raising and equi) is discussed. Raising, for example, is shown to involve a complement clause subject or direct object that raises to subject (raising to subject) or direct object (raising to object). The chapter concludes with a discussion of subordinate clauses (section 4.5).

4.1 Sentence structure

This section discusses KN sentence structure. In order to achieve this goal, I will present word order within the sentence. This would be followed by the phrase structure. This section will conclude with a discussion of adverbs in KN, the types of adverbs it has and their interaction in a clause.

4.11 Verbal sentences

KN's basic or unmarked word order is SOV.[1] In a one-nominal sentence, the subject precedes the predicate.

1) a. wel bo:d-bu
dog run-stat
'The dog is running.'

b. e:n dy-os-s-u
woman die-def-pst-3sg
'The woman died.'

c. buru ne:r-os-s-u
girl sleep-def-pst-3sg
'The girl has fallen asleep.'

If there is a locative (2a), directional (2b)) or instrumental the subject normally precedes the oblique, e.g.

2) a. buru ka:-r te:k-s-u
girl house-loc stay-pst-3sg
'The girl stayed at home.'

b. to suwa-kir talle-s-u
boy Aswan-dir go-pst-3sg
'The boy went to Aswan.'

c. e:n ossi-gen ta:-s-u
woman leg-Instr come-pst-3sg
'The woman came on foot.'

If there is a direct object in the sentence, the subject would normally precede the object. nominals such as locatives and instrumentals would follow the object, e.g.

3) a. sa:b ka:re-g kal-s-u
cat fish-acc eat-pst-3sg
'The cat ate the fish.'

b. ay ti:-g ja:s-s-i
I cow-Acc buy-pst-1sg
'I bought the cow.'

c. id buru:-g et-s-u
man girl-Acc marry-pst-3sg
'The married the girl.'

d. to harami:-g gani:r-ken jom-s-u
boy thief-Acc knife-Inst hit-pst-3sg
'The boy hit the thief with the knife.'

In complex sentences, the subordinate clause normally precedes the main or matrix clause, e.g.

4) a. (dugu:-g ma:g-r-a-n-ga) tirgi jom-ir-s-i
money-Acc steal-neu-3pl-sub them hit-plobj-pst-1sg
'Because they stole the money, I hit them.'

b. (buru:-g ed-i kirigi) to ta:-s-u
girl-Acc mary-3sg purp boy come-pst-3sg
'The boy came in order to marry the girl.'

However, the order of the non-verb elements, which is quite flexible, often depends on pragmatic factors. If the speaker wants to give prominence to the object, the object will precede the subject, as in the following examples:

5) a. berti-g id goš-š-i
goat-Acc man slaughter-pst-1sg
'The man slaughtered the goat.'

b. ka:-g e:n goy-s-u
house-Acc woman build
'The woman buit the house.'

c. sa:p iskitte-g urri-s-u
cat mouse-Acc catch-pst-3sg
'The mouse caught the cat !'

Clauses like (5a) indicate that the speaker is giving prominance to berti-g rather than id, or it might be that berti-g is the new information -- an answer to a question such as me:k id gojma 'What did the man slaughter?'; in this case, it would be quite natural to place the object (berti-g) before the subject as in (5a).

4.111 Copular sentences

In a copular sentence, the subject precede the predicate noun or adjective; the copula is ma, which occupies the last position in the clause:

6) a. id effendi ma
man teacher cop
'The man is a teacher.'

b. e:n da:ya ma
woman midwife cop
'The woman is midwife.'

c. buru ašir ma
girl beautiful cop
'The girl is beautiful.'

d. to garri ma
boy bad cop
'The boy is bad.'

As can be noted the copula is sentence-final; no element can follow the copula:

7) a. *id ma effendi
man cop teacher
'The man is a teacher.'

b. *e:n ma da:ya
woman cop midwife
'The woman is midwife.'

c. *buru ma ašir
girl cop beautiful
'The girl is beautiful.'

d. *to ma garri
boy cop bad
'The boy is bad.'

The existential (cf.there is/are in Eng.) is expressed by da, which like the copula, occupies the sentence-final position. These sentences must have a locative nominal which must precede the predicate nominal:

8) a. ess-ir elum da
water-Loc crocodile exist
'There is crocodile in the river.'

b. ka:-r essi da
house-Loc water exist
'There is water in the house.'

If we allow the predicate nominal (elum and essi in (8a-b), respectively, to follow the locative nominal we will have a new reading':

9) a. elum ess-ir da
crocodile river-loc exist
'The crocodile is at the river.'

4.12 Noun phrases

In a noun phrase, the noun can be modified by a genitive, a demonstrative, an adjective, a quantifier or a relative clause.[2] In addition a noun phrase can consist of a (single) noun, a pronoun, a demonstrative alone or a quantifier alone.

4.121 Genitives

Only genitives (10) and demonstratives (see below) precede the head noun. All other modifiers (adjectives, numerals, quantifiers and relative clauses) follow their head noun. The following examples show the genitive preceding the noun:

10) id-na ka
man-Gen house
`the man's house'

buru:-n ur
girl-Gen head
`the girl's head'

e:n-n agil
woman's mouth
`the woman's mouth'

4.122 Demonstratives

Demonstrative in KN are in `this' and man `that'. What is distinguished is the distance from the speaker: in is used for entities near (to the speaker) whereas man is used for far or distant ones. Demonstratives precede the head noun. Note that when the demonstrative cooccurs with the genitive the demonstrative precedes:

11) in id
'this man'

man id
'that man'

man id-n ur
that man-Gen head
'that man's head'

in ti
'this cow'

man ti
'that cow'

The demonstrative adjective must be repeated before each noun (cf. Fadicca, Tucker and Bryan 1966):

12) a. in it-to in e:n-go
this man-and this woman-and
'this man and this woman'

b. *in it-to e:n-go
this man-and woman-and
'this man and woman'

c. maw wel-go mas sa:p-ko
that dog-and that cat-and
'that dog and that cat'

d.* maw wel-go sa:p-ko
that dog-and cat-and
'that dog and cat'

The demonstrative can be used without a following head noun:

13) a. ni buru:-g nal-ma ?
who girl-Acc see-Intr
'Who saw the girl ?'

b. in nal-s-u
this see-pst-3sg
'This (one) did.'

c. man nal-ko:-mn-u
that see-pst-neg-3sg
'That (one)' didn't.'

4.123 Adjectives

The position of adjectives in a noun phrase is after the head noun. If there is a relative clause, the adjective must follow it:

14) id adel
man good
`the good man'

buru ašir
girl beautiful
`the beautiful girl'

e:n duru [to:-k jom-el]
woman old boy-Acc hit-Rel
`the old woman who hit the boy'

Note that adjectives precede all other modifiers except the demonstratives and genetives which precede the head noun. If there is an adjective expressing color (e.g. `red') and an adjective of quality (e.g. `fat'), the color adjective has to precede:

15) ka e:r toski
house new three
`three new houses'

id doro ge:le kemis
man fat red four
`four fat red men'

id duru (e:n-gi nal-el)
man old woman-Acc see-Rel
`the old man who saw the woman'

4.124 Numerals

Numbers from 1-10 are simple forms; numbers beyond that are compounds of the existing ones.

The numbers 1-10 have distinct forms, e.g.

(16)

we:r	1
owwi	2
toski	3
kemis	4
dij	5
gorij	6
kolod	7
idiw	8
isko:d	9
dimin	10

The numbers 11-19 are compounds of the number dimin `ten' plus -de and the other numbers (1-10), examples:

17)

diminde we:r	11
diminde owwi	12
diminde toski	13
diminde kemis	14

The numbers 20, 30, 40, 50, 60, 70, 80 and 100 are expressed by dimin `ten' plus the other number (2-10), e.g.

18)

dimnowwi	20
dimitoski	30
dimikemis	40
dimindij	50
dimingorij	60

Like adjectives, the numerals follow the head noun:

19) id owwi
man two
'two men'

buru toski
girl three
'three girls'

e:n kolod
woman seven
'seven women'

buru owwiti
girl second
'the second girl'

If the noun is already modifed by an adjective, the numeral would then follow the adjective:

20) buru asir kemis
girl beautiful four
'three beautiful girls'

ka ge:le dij
house red five
'five red houses'

Note that numerals precede other quantifiers:

21) ka toski kiri
house three any
'any three houses'

berti kemsin ga:r
goat four all
'all the four goats'

Numerals can also occur without a preceding noun:

22) kemis-k atta
four-Acc bring
'Bring four.'

toski-g a:r
three-Acc take
'Take four'

4.125 Quantifiers

The position of quantifiers (in a noun phrase) is after the noun or noun phrase they modify. Quantifiers include digri `much/many', to:d `some'(ony with uncountable nouns), we:ri `some' (only with countable nouns) kiri `any', and malle `all'.

23) burwi digri
girl-pl many
'many girls'

essi to:de
water some
`some water'

weli we:ri
dog-pl some
`some dogs'

kita:b-i kiri
book-pl any
any books?'

affi-cci malle
boy-pl all
`all the boys'

All quantifiers (except to:de and kiri which are always preceded by a noun) can be used without a preceding noun:

24) a. digri:-g ka:g-i
much-Acc have-3sg
`S/he has much (money).'

b. we:ri ta:-s-a
some come-pst-3pl
`Some came.'

c. malle ta:sa
`All came.'

d. * to:dek attade
`Bring me some.'

e. * to:deki bini:ri
`I will drink some.'

f. * kiri:g tirma ?
`Did you give him/her any ?'

g. * kiri:g ka:gna ?
`Do you have any ?'

4.126 Relative Clause

Like adjectives and numerals, the relative clause follows the head noun, e.g.

25) to bo:d-el
boy run-rel
`the boy who ran'

id buru:-g jom-el
man girl-Acc hit-Rel
`the man who hit the girl'

to dugu:-g ma:g-el
boy money-Acc steal-REl
`the boy who stole the money'

wel buru:-g acc-el
dog girl-Acc bite-Rel
`the dog that bit the girl'

4.13 Adverbs

Adverbs, like adjectives, are modifiers; generally they modify or add to the meaning of verbs, adjectives or other adverbs.

Adverbs can be classified as to the meaning they convey. We can recognize three types: adverbs of manner, time and place. Note that the adverbs can occur in any position in the clause except in the post-verbal position.

4.131 Adverbs of manner

Adverbs of manner are used to indicate the way an action is or was performed. Such adverbs include gowan `quickly' and no:ra `slowly'

26) a. e:n gowwa:n ta:-s-u
woman quickly come-pst-3sg
`The woman came quickly.'

b. ton-i no:ra talle-bu:-r-a
boy-pl slowly walk-stat-neu-3pl
`The boys are walking slowly.'

4.132 Adverbs of time

Adverbs of time express when an action is or was made. Adverbs of time include: wi:l `yesterday', asal `tomorrow', kamis `the day before yesterday' and asalwe:kka:kki `the day after tomorrow'.

27) a. id wi:tu:r-ki ta:-s-u
man last night-Acc come-pst-3sg
`The man came last night.'

b. burw-i asaltu:r-ki bi-talle-r-a
girl-pl tomorrow-Acc Fut-travel-neu-3pl
`The girls will travel tomorrow night.'

c. kade:-cci-g wi:l-gi su:kki-s-i
dress-pl-Acc yest.-Acc wash-pst-1sg
`I washed the clothes yesterday.'

d. e:n asal-gi bi-ta
woman tomorrow-Acc Fut-come
`The woman will come tomorrow.'

4.133 Adverbs of place

An adverb of place is used to express where an action is or was done. Such adverbs of place includes indo `here' and mando `there':

28) a. e:n indo a:gi
woman here stay
`The woman is staying here.'

b. sa:b indo ne:r-bu
cat here sleep-stat
`The cat is asleep here.'

c. ogj-i mando ne:r-bu-r-a
man-pl there sleep-stat-neu-3pl
`The men are sleeping there.'

d. e:n mando a:g-i
woman there stay-3sg
`The woman stays there.'

The adverbs described so far have a narrow scope in that they modify one element (e.g. the predicate) in the sentence. KN has adverbs that are used to modify the whole sentence. Such adverbs include kinne:kabir `suddenly' and ser:ga:wirgi `fortunately'.

29) a. affi-cci holli-gi a-kaŝki-s-a
boy-pl football-Acc prog-play-pst-3pl
kinne:kabir a:y-we:r bel-ta-s-u
suddenly snake-Indef come-pst-3sg
sere:ga:wirgi zo:lkiri:-g acci-ko-mn-u
fortunately anyone-Acc bite-perf-neg-3sg
`The boys were playing soccer. Suddenly, a snake came into the scene. Fortunately, it did not bit anyone.'

4.134 Interrogative adverbs

Interrogative adverbs are used to ask where, how or why an action was performed. These adverbs include the following: sa:yer `where'; mine `how', mina:y `why':

30) a. sa:yer a:g-r-a ?
where stay-neu-3pl
`Where do they live?'

b. sa:yer ne:r-bu-s-a-n-de ?
where sleep-stat-pst-3pl-sub-Intr
`Where were they sleeping?'

c. mine ta:-s-u-re ?
how come-pst-3sg-Intr
`How did you come?'

d. mine ba:b-ki kus-s-a-n-de ?
how door-Acc open-pst-3pl-sub-Intr
`How did they open the door?'

e. mina:y agu:den a:g-i ?
why alone sit-2sg
`Why are sitting alone?'

f. mina:y buru:-g jom-ma?
why girl-Acc hit-Intr
`Why did you hit the girl?'

The expression `how are you' is normally expressed as follows:

31) a. mine bu
how lie down
`How are you ?'

b. mine bu:-r-a
how lie down-neu-3pl
`How are they.'

The interrogative words (e.g. sa:yer `where' or mina:y `how') described above can be used to introduce indirect questions, e.g.

32) a.buru:-g issig-s-i sa:yer id ju:-s-i-n-gi
girl-Acc ask-pst-1sg where man go-pst-3sg-sub-Ac
`I asked the girl where the man went.'

b. e:n oyir-bu burw-i sa:yer a:g-r-a-n-gi
woman know-stat girl-pl where stay-neu-3pl-acc
`The woman knows where the girls are.'

c. e:n-:g issig-s-i mina:y tenn-it-ti ma:g-s-a-
woman-Acc ask-pst-1sg why her-man-Acc rob-pst-3pl
n-de
sub-Intr
`I asked the woman why they robbed her husband.'

d. to:d jille-bu me:na:y e:n ta:-me:s-s-i-n-gi
boy remember-stat why woman come-neg-pst-3sg
`The boy remembers why the woman didn't come.'

4.2 Basic facts

4.20 Introduction

In this section, I will discuss some facts about KN that are relevant for the discussion of the syntactic constructions in section 4.2. These include verb agreement, pronoun drop, case marking and reflexives.

4.21 Verb agreement

The verb agrees with both subject and direct object.[3] The verb must agree with its subject in person and number. If there is no agreement or the wrong agreement, the clauses are not grammatical, e.g.

33) a. ay ne:r-bu-r-{i / *a}
I sleep-stat-prs-1sg/*sg
'I am sleeping.'

b. er ti:-g ja:nos-s-{u / *i}
you cow-Acc sell-pst-2sg/*1sg
'You sold the cow.'

c. tir ne:r-bu-r-{a / *i}
they sleep-stat-neu-3pl/*1sg
'They are asleep.'

Unlike the subject which agrees in person and number with the verb, the object agrees only in number with the verb, as in the following:[4]

34) a. ay buru:-g nal-(*ir)-s-i
I girl-Acc see-pst-(plobj)-1sg
'I saw the girl.'

b. tir to:-k jom-(*ir)-s-a
they boy-Acc hit-pst-(plobj)-3pl
'They hit the boy.'

c. burw-i:-g isig-*(ir)-s-i
girl-pl-acc ask-plobj-pst-1sg

`I asked the girls.'

d. kulw-i:-g inj-*(ir)-s-a
stone-pl-acc carry-plobj-pst-3pl
`They carried the stones.'

Nominals other than subject or direct object can not agree with the verb. In the following examples such nominals as locational (35a), instrumental (35b), directional (35c) or benefactive (35d)) can not agree with the verb:

35) a. id e:n-gi ossi-cci-n dogor jom-(*ir)-s-u
man woman-Acc leg-pl-Gen on hit-plobj-pst-3sg
`The man hit the woman on the legs.'

b. tir ti:-g kulw-i:-gen jom-(*ir)-s-a
they cow-Acc stone-pl-Inst hit-plobj-pst-3pl
`They hit the cow with stones.'

c. buru kacci-cci-kir nog-(*ir)-s-a
girl house-pl-Dir go-pst-3pl
`The girl went to the houses.'

d. kade:-g burw-i:-n joro ja:n-(*ir)-s-i
dress-Acc girl-pl-Gen for buy-plobj-pst-1sg
`I bought the dress for the girls.'

4.22 Pro-drop

In KN, only emphatic subject or object pronouns show in a simple sentence; non emphatic pronouns are not allowed to surface.[5] Accordingly, the non-emphatic equivalents of (36-38a) would be (36-38b), respectively

36) a. tekki dugu:-g tir-ko:-mn-a
him/her money-Acc give-perf-neg-3pl
`They did not give him/her money.'

b. dugu:-g tir-ko:-mn-a
money-Acc give-perf-neg-3pl
`They did not give him/her money.'

37) a. ay tirgi jom-ir-s-i
I them hit-plobj-pst-1sg
`I hit them.'

b. jom-ir-s-i
hit-plobj-pst-1sg
`I hit them.'

38) a. tir argi nal-ir-s-a
they us see-plobj-pst-pst-3pl
`they saw us.'

b. nal-ir-s-a
see-plobj-pst-3pl
`They saw us.'

These examples show that the presence of subject and object markers on the verb make it possible to recover the meaning of dropped pronoun(s).

4.23 Case marking

KN has Nominative, Accusative, Locative, Directional, and Instrumental cases. The subject is in the nominative case (cf.39a). The object is in the accusative (cf.39b):

39) a. buru bo:t-s-u
girl run-pst-3sg
'The girl ran.'

b. id nok-s-u
man go-pst-3sg
'The man left.'

c. buru it-ti nal-s-u
girl man-Acc see-pst-3sg
'The girl saw the man.'

The nominal buru is subject in both clauses as seen by the the fact that it is in the nominative. In contrast the nominal it-ti must be an object as shown by the accusative marker -ti in (39c).

KN also has Direction (40a), Locative (40b), Instrumental (40c) and the Comitative Cases:

40) a. id jama-kir talle-s-u
man mosque-Dir go-[st-3sg
'The man went to the mosque.'

b. e:n ka:-r a:g-i
woman home-loc stay-3sg
'The woman is staying at home.'

c. id ti:-g kanni:r-ken gos-s-u
man cow-Acc knife-Instr slay-pst-3sg
'The man slaughtered the cow with the knife.'

d. it-todon ta:-s-i
man-com come-pst-1sg
'I came with the man.'

Thus KN case marking can be summarized as follows:

41) The subject is in the nominative.

The direct object is in the accusative.

The locative nominal is in the locative case.

The instrumental nominal is in the instrumental case.

The directional nominal is in the directional case.

4.24 Postpositions

Postpositions show the relation a form has to other elements in the sentence. Most KN postpositions have their source in body parts. Postpositions case mark the nouns they follow; nouns, which are governed by postpostions, are in the genitive, as in:

42)

agil
(mouth)
'in front of'

jer
(back)
'behind'

tu
(stomach)
'inside'

selle
(center)
'between/among'

dogo
(head)
'above'

Examples:

43) a. ka:-n agillo a:gi
house-Gen in front of sit
'S/he 's sitting in front of the house.'

b. ka:-n jerro a:gi
house-Gen behind sit
S/he sitting behind house.'

c. ja:ma tu:r nal
mosque inside see
`Look for (him) inside mosque.'

d. burw-i-n seller bokki
girl-pl-Gen among hide
`Hide among girls.'

e. ka:-n dogo:r te:g
house-Gen above stay
`Stay on the house.'

Some postpositions apparently do not have any association with body parts. These are jo:rro `for' and ton `from'. It should be noted that ton also differs from the pospositions described so far in that it assigns Locative Case (rather than Genitive Case) to the noun it follows:

44) a. buru:-n jo:rro ta:-s-i
girl-Gen for come-pst-1sg
`I came for the girl.'

b. id-na jo:rro kade:-g ja:s-s-i
man-Gen for dress-acc buy-pst-1sg
`I bought the dress for the man.'

c. ka:-r ton talle-bu:-r-i
house-loc from come-stat-neu-1sg
`I am coming from home.'

d asuwan-do ton talle-bu:-r-a
Aswan-loc from come-stat-neu-3pl
`They are coming from Aswan.'

In KN postpositions are distinguished from cases (e.g. Accusative etc.) on several grounds. First, unlike Locative or Directional forms, pospositions do not show any phonological interaction with the stem. Second, most postpositions orginate in body parts (e.g. agil (mouth) `in front of'). Third, postpositions case-mark (e.g. Genitive)

the nouns they govern (e.g. ka:-n agil house-Gen in front of).

4.25 Reflexive

In KN, reflexives are realized by newerti `self' to which the possessive forms are attached. The reflexive (e.g. an-newerti `my self') has to have an antecedent (e.g. ay `I') with which it agrees in number and person. Consider, for example, (45a-c)

45) a. ay {an-newerti-g / *ten-newerti-g} nalli-s-i
I {my-self-Acc / *himself} injure-pst-1sg
`I injured myself.'

b. er {en-newerti-g / *an-newerti-g} jom-s-u
you {your-self-Acc / *myself} hit-pst-3sg
`You hit yourself.'

c. ogj-i {tin-newerti-g / *en-newerti-g} dol-ir-s-a
man-pl {them-self-Acc / *yourselves} love-plobj-pst-3pl
`The men loved themselves.'

In these examples the reflexive agrees with its antecedent. In (45c), for example, the reflexive tin-newerti-g `themselves' agrees in number and person with a third person plural subject (ogj-i `men'). If, however, there is no agreement between the reflexive and the antecedent, the clauses are ungrammatical.

The antecedent of a reflexive can be a subject as in (45a-c) above. In addition, the antecedent can also be a direct object, as in (46a-b); for example, in (46b), the

nominal affi-cci:-g, which is a direct object antecedes the reflexive tin-newerti-n.

46) a. buru:-g ten-newerti-n dogo:r we:-tir-s-i
girl-Acc her-self-Gen about say-Ben-pst-1sg
'I told the girl about herself.'

b. id affi-cci:-g kita:b-be:-k tin-newerti-n dogo:r
man boy-pl-Acc book-Indef-Acc them-self-Gen about
ti-ccir-s-u
give-plobj-pst-3sg
'The man gave the boys a book about themselves.'

Nominals such as benefactives (cf.47) can not antecede reflexives:

47) a. * to:-na jo:ro jawa:b-be:-k ten-newertin
boy-Gen about letter-Indef-Acc him-self
dogo:r ba:s-s-i
about write-pst-1sg
'I wrote a letter for the boy about himself.'

b. * burw-i-n jo:ro kita:b-ki tin-newerti-n
girl-pl-Gen for book-Acc them-self-Gen
dogo:r ja:-ti-ccir-s-i
about give-Ben-plobj-pst-1sg
'I bought a book for the girls about themselves.'

Possessors also can not antecede reflexives, as in *(48a-b):

48) a. ann e:n {ten-newerti-g / *an-newerti-g} nalli-s-u
her-self-Acc
my wife my-self-Acc injure-pst-3sg
'My wife injured herself /*myself.'

b. timburu {ten-neweri-g / *tin-newerti-g} be:-s-u
her-self-Acc
their daughter *them-self-Acc kill-pst-3sg
'Their daughter killed herself/*themselves.'

There is a clausemate condition on reflexives in KN: the antecedent and the reflexive must be members of the same

clause as (49a-b) show:

49) a. burwi {tin-newert-ig / *ten-newert-ig} esket-ten a-toyiddi-r-
them-self-Acc
girl *him-self-Acc dust-Inst prog-throw-neu-
-a-n-go id ta:+s+u
3pl- sub-Temp man come-pst-3sg
'The man came while the girls were putting dust on themselves/*himself.'

b. id ton-i-g jehd-ir-s-i {tin-newerti-g / *ten-newert-ig} nalli-r-
boy-Acc rebuke-pst-1sg them-self injure-neu-
a-n-go *him-self
3pl-sub-Consq
'The man rebuked the boys because they injured themselves/*himself.'

Clauses like (49a-b) are ungrammatical if the reflexive and its antecedent do not share the same clause.

Thus we have seen that the antecedent of a reflexive should be a clausemate subject or object with which it agrees in number and person.

4.3 Morphosyntactic rules

4.30 Introduction

All the constructions described in this section have three properties: (a) They change the grammatical relations of the nominals involved. (b) The verbs take morphology that reflects the syntacic construction. (c) Their surface form is a single clause. Such constructions include passives, advancements to direct object and causatives.

4.31 Passive

KN has two types of passives: personal passive (4.311) and impersonal passive (4.312)

4.311 Personal passive

Personal passives are illustrated by (50-53b):

50) a. ay ka:-g goy-s-i
I house-Acc slaughter-pst-1sg
'I built the house.'

b. ka (ay-gen) goy-takki-s-u
house I-Instr build-pass-pst-3sg
'The house was built (by me).'

51) a. buru e:n-gi nal-s-u
girl woman-Acc see-pst-3sg
'The girl saw the woman.'

b. e:n (buru:-gen) nal-takki-s-u
woman girl-Instr see-pass-pst-3sg
'The woman was seen (by the girl).'

52) a. id ti:-icci-g goj-ir-s-u
man cow-pl-Acc slaughter-plobj-pst-3sg
'The man slaughtered the cows.'

b. ti-icci (it-ten) goc-cakki-s-a
cow-pl man-Instr slaughter-pass-pst-3pl
`The cows were slaughtered (by the man).'

53) a. e:n kade:-g su:kk-os-s-u
woman dress-Acc wash-def-pst-3sg
`The woman washed the dress.'

b. kade (e:n-gen) su:kki-takk-os-s-u
dress woman-Instr wash-pass-def-pst-3sg
`The dress has just been washed (by the woman).'

What distinguishes the passive sentences (i.e. 50-53b) from the corresponding active ones (50-53a) is that the object of the active sentences is subject in the passive sentence. The presence of the passive agent is optional in the above examples; normally, the passive agent is omitted.

Nominals such as e:n (51b) and ti:-cci (52b) are subjects in a passive; they are in the nominative case (4.23). They also must agree (4.21) with their verb; if they do not, the clauses are ungrammtical:

54) a. e:n nal-takki-s- {u / *i}
woman see-pass-pst-3sg
`The woman was seen.'

b. ti-icci goc-cakki-s- {a / *u}
cow-pl slaughter-pass-pst-3pl
`The cows were slaughtered.'

Thus the direct object ends up as subject under passive as shown by case marking and verb agreement[6]

In the previous examples (50-53b) it has been shown that a direct object may be a subject in a passive. Nominals that are not direct objects can not become subjects in KN :

55) a. ay e:n-gi ka:-r el-s-i
I woman-Acc home-Loc find-pst-1sg
'I found the woman at home.'

b. * ka e:n-gi el-takki-s-u
house woman-Acc find-pass-pst-3sg
'The house the woman was found in.'

56) a. id ti:-g kandi-ge gos-s-u
man cow-Acc knife-Inst slay-past-3sg
'The man slaughtered the cow with the knife.'

b. * kandi ti:-g goc-cakki-s-u
knife cow-Acc slay-pass-pst-3sg
'The knife the cow was slaughtered with.'

In *(55-56b) the locative and instrumental nominals, respectively can not become subject.

4.312 Impersonal passive

Impersonal passives are different from personal passives (cf.4.311) in that impersonal passives are based upon only a special class of intransitive verbs (Perlmutter 1978, 1983). Also impersonal passives in KN do not contain a (visible) final subject while personal passives always do. (57-58b) are examples of impersonal passives:

57) a. buru indo wissi-s-u
girl here dance-pst-3sg
'The girl danced here.'

b. indo wissi-takki-s-u
here dance-pass-pst-3sg
'It was danced here.'

58) a. to:d indo bo:d-s-u
boy here run-pst-3sg
'The boy ran here.'

b. indo bo:t-takki-s-u
here run-pst-pass-3sg
'It was run here.'

c.*to:-ken indo bo:t-takki-s-u
boy-Instr here run-pass-pst-3sg
`It was run here by the boy.'

In (57-58b), the subject is omitted. Also the verbs with which impersonal passives occur are intransitives.

Impersonal passive does not, however, apply to all types of intransitives. The Two types of intransitive verbs -- those that allow impersonal passive and those that do not -- are differentiated on the basis of their semantics: intransitive verbs (e.g.bo:d `run') that indicate willed or volitional acts, that is, acts over which we have control. The second type includes intransitive verbs (e.g. tille `sweat') that refer to involuntary acts, acts we can not control. Only the former type is compatible with impersonal passives, e.g.

59) a. e:n angare:n dogo:r turup-s-u
woman bed on sleep-pst-3sg
`The woman slept on the bed.'

b. angare:n dogo:r turup-takki-s-u
bed on sleep-pass-pst-3sg
`The bed was slept on.'

60) a. ogj-i nibid dogo:r te:k-s-a
man-pl carpet on sit-pst-3pl
`The men sat on the carpet.'

b. nibid dogo:r te:k-takki-s-u
carpet on sit-pass-pst-3sg
`The carpet was sat on.'

61) a. affi-cci indo kaski-s-a
boy-pl here play-pst-3pl
`The boys played here.'

b. indo kaski-takki-s-u
here play-pass-pst-3sg
`It was played here.'

62) a. burw-i mando wissi-s-a
girl-pl there dance-pst-3pl
`The girls danced here.'

b. mando wissi-takki-s-u
there dance-pass-pst-3sg
`It was danced there.'

In the actions expressed by such verbs (e.g. wissi), normally the agent has control, namely, s/he can choose to perform or refuse to perform the action. Such intransitive verbs include :

63)	bo:d	`run'
	ne:r	`sleep'
	wissi	`dance'
	te:g	`sit down'
	oy	`cry'
	bayig	`speak'
	talle	`walk'
	te:b	`stand'
	firri	`fly'
	kaski	`play'
	bokki	`hide'

However, intransitive verbs that describe involuntary acts, i.e. actions upon which no control can be excercised, can not be the basis for impersonal passives, e.g.[7]

64) a. indo digir-s-i
here fall-pst-1sg
`I fell down here.'

b. *indo digir-takki-s-u
here fall-pass-pst-3sg
`It was fallen here.'

65) a. buru essi-r kiddi-s-u
girl see-loc drown-pst-3sg
`The girl drowned in the see'

b. *ess-ir kiddi-takki-s-u
sea-loc drown-pass-pst-3sg
`It was drowned in the sea.'

66) a. urtiwe:k sunne-s-a
something smell-pst-3pl
`They smelled something.'

b. *sunne-takk-s-u
smell-pass-pst-3sg
`It was smelt.'

Impersonal passive is not possible here since the intransitive verbs express acts that one can not control. For example, one normally does not voluntarily drown or breathe: such acts occur involuntarily. Such intransitive verbs (that indicate actions over which we have no control) include:

77) tille `sweat'
digir `fall'
toske `cough'
sunne `breathe'
gunni `shake'
bicci `wake up'
a:y `live'
di `die'
kerker `shiver'
gedeged `tremble'
sibsib `stir'
jugjug `burn'
wil:kke `feel sick'

kiddi `drown'

orig `be hungry'

wacci `crack'

Thus impersonal passive has been shown to apply to intransitive verbs, particularly those intransitive verbs that denote voluntary acts.

4.3 Advancements to direct object

This section discusses the advancement of an indirect object ("the recipient") to direct object (4.321) and the advancement of a benefactive to direct object (section 4.322).

4.321 Indirect object-to-direct object advancement

In KN, a recipient nominal is a direct object, as in (68a-c):

68) a. ay it-ti ka:-g tir-s-i
I man-Acc house-Acc give-pst-1sg
`I gave the man the house.'

b. buru aygi kita:p-ki de:s-s-u
girl me kita:b-Acc give-pst-3sg
`The girl gave me eggs.'

c. ogj-i kam-gi kal-gi tir-s-a
man-pl camel-Acc food-Acc give-pst-3pl
`the men gave the camel food'

In clauses like (68a-c) the nominals it-ti, aygi and kam-gi, respectively are direct objects. As a result "the patient nominal" (i.e. ka:-g (68a), kita:p-ki (68b) or kal-gi (68c)) does not behave as an object. Although in each example (68) the two non-subject nominals are morphologically marked

alike, their syntactic distribution shows that they do not have the same relation. The following examples show the properties of a direct object: it passivizes, cues agreement on the verb, and antecedes reflexives.

We know that the recipient nominal is direct object in clauses like (68a-c) because it can be subject in a passive (69a-c). It also agrees (in number) with the verb (70a-c) and it can antecede a reflexive (71a-b):

69) a. id ka:-g tir-takki-s-u
man house-Acc give-pass-pst-3sg
`The man was given the house.'

b. ay kita:p-k de:-takki-s-i
I book-Acc give-pass-pst-1sg
`I was given the book.'

c. kam kal-gi tir-takki-s-u
camel food-Acc give-pass-pst-3sg
`The camel was given food.'

70) a. ogj-i-gi ka:-g ti-*(ccir)-s-i
man-pl-Acc house-Acc give-Ben-pst-1sg
`I gave the men the house.'

b. buru argi kita:p-ki de:-*(ccir)-s-u
girl us book-Acc give-plobj-pst-3sg
`The girl gave us the book.'

c. ogj-i kam-li:-gi kal-gi ti-*(ccir)-s-a
man-pl camel-pl-Acc food-Acc give-plobj-pst-3pl
`The men gave the camels food.'

71) a. buru aygi kita:b-be:-ki{an-newertin / *tin-newertin} dogor de:s-s-u
girl me book-Indef-Acc my-self on give-pst-3sg
*themselves
`The girl gave me a book about myself/*themselves.'

b. e:n-gi kita:b-be:-k{ten-newertin / *tin-newertin} dogor tir-s-i
woman-Acc book-Indf-Acc {her-self on / *themselves} give-pst-1sg
`I gave the woman a book about herself/*themselves.'

4.312 Patient

Having established that nominals such as it-ti, aygi and kam-gi are direct objects in clauses like (68a-c), we next examine the "patient" (e.g.ka:-g, kita:p-ki and kal-gi) in such clauses. It will be shown that the patient no longer maintains its status as direct object: it can not passivize (72a-b) and does not determine verb (number) agreement (73a-b):

72) a. *ka it-ti tir-takki-s-u
house man-Acc give-pass-pst-3sg
`*The house was given the man.'

b. *kita:b aygi de:-takki-s-u
book me give-pass-pst-3sg
`*The book was given me.'

73) a. ay it-ti kacci-cci-g ti-(*ccir)-s-i
I man-Acc house-pl-Acc give-plobj-pst-1sg
`I gave the man the houses.'

b. buru aygi kita:b-i:-g de:-(*ccir)-s-u
girl me book-pl-Acc give-plobj-pst-3sg
`The girl gave me the books.'

The failure of kacci-cci and kita:b-i:-g to be subjects in passives or agree with the verb indicates that the "patient" is no longer a direct object in clauses like (68a-b).

4.322 Benefactive-to-direct object advancement

If we compare the (a) clauses in (74)-(75) with the (b) ones, we find that the (b) clauses involve the advancement of the benefactive nominal (e.g. e:n-gi and aygi) to direct object; the verbal suffix -tir- or -de:n- appears in such clauses (but not in the (a) clauses):

74) a. ay e:n-na jo:ro ka:-g goy-s-i
I woman-Gen for house-Acc open-pst-1sg
'I built the house for the woman.'

b. ay e:n-gi ka:-g goy-tir-s-i
I woman-Acc house-Acc build-Ben-pst-1sg
'I built the house for the woman.'

75) a. e:n an-na jo:ro kal-gi atta-s-u
woman my-Gen for food-Acc bring-pst-3sg
'The woman brought food for me.'

b. e:n aygi kal-gi atta-de:s-s-u
woman me food-Acc bring-Ben-pst-3sg
'The woman brought food for me.'

We can see that the benefactive nominals (e:n-gi and ay-gi) are direct objects in clauses like (74-75b) because they are in the accusative (4.23). Also, these nominals determine object agreement:[4]

76) a. ay e:-cci:-g ka:-g goy-ti-*(ccir)-s-i
I woman-pl-Acc house-Acc build-plobj-pst-1sg
'I built the house for the women.'

b. e:n argi kal-gi atta-de:-*(ccir)-s-u
woman us food-Acc bring-Ben-plobj-pst-3sg
'The woman brought us food.'

Furthermore, these nominals (e:n-gi and aygi in clauses like (74b) and (75b), respectively) manifest other properties of direct objects -- they can be subjects under passive as in (77a-b) and they can antecede reflexives (78b):

80) a. e:n-gi ka:cci-cci-g goy-ti-(*ccir)-s-i
woman-Acc house-pl-Acc build-Ben-plobj-pst-1sg
'I built the woman the houses.'

b. e:n aygi kita:b-i:-g atta-de:-(*ccir)-s-u
woman me book-pl-Acc bring-Ben-plobj-pst-3sg
'The woman brought me the books.'

Thus such syntactic properties as passive and agreement show that the "patient" (e.g. ka:-g and kal-gi in (74-75b, respectively) is no longer a direct object in clauses with benefactive-to-direct object advancement.

4.33 Causatives

A causative construction has greater valence by one than its non-causative counterpart; for example, when an intransitive verb which allows only one argument -- usually the subject -- is in a causative, it is then able to take a direct object. The KN causative is expressed by the verbal suffix -kiddi, i.e.

81) a. burw-i ne:r-s-a
girl-pl sleep-pst-3pl
'The girls slept.'

b. id burw-i:-g ne:r-kiddi-ir-s-u
man girl-pl-Acc sleep-Caus-plobj-pst-3sg
'The man caused the girls to sleep.'

82) a. to:d buru:-g et-s-u
boy girl-Acc marry-pst-3sg
'The boy married the girl.'

b. id to:-k buru:-g et-kiddi-s-u
man boy-Acc girl-Acc marry-Caus-pst-3sg
'The man caused the man to marry the girl.'

An intransitive clause (83-84a) can be the basis for a causative clause (83-84b):[8]

83) a. to bo:t-s-u
boy run-pst-3sg
`The boy ran.'

b. to:-k bo:t-kiddi-s-a
boy-Acc run-Caus-pst-3pl
`They caused the boy to run.'

84) a. id mando te:b-i
man there stand-3sg
`The man is standing there.'

b. it-ti mando te:p-kiddi-s-a
man-Acc there stand-Caus-pst-3pl
`I caused the man to stand there.'

The causative can also be based on a transitive or ditransitive clause. The former type is shown by the following examples:

85) a. e:n it-ti jom-s-u
woman man-Acc hit-pst-3sg
`The woman hit the man.'

b. e:n-gi it-ti jom-kiddi-s-i
woman-Acc man-Acc hit-Caus-pst-1sg
`I caused the woman to hit the man.'

86) a. buru kac-ci egir-s-u
girl horse-Acc ride-pst-3sg
`The girl rode the horse.'

b. id buru:-g kac-ci egir-kiddi-s-u
man girl-Acc horse-Acc ride-Caus-pst-3sg
`The man caused the girl to ride the horse.'

The latter type of clauses are cases in which the embedded clause undergoes an advancement to direct object (85-86d). Note that the verbal suffix used with ditransitives is -an, not -kiddi.

87) a. it-ti buru:-n joro kede:-g ja:n-as-s-
man-Acc girl-Gen for dress-Acc buy-caus-pst-
-i
1sg
`I caused the man to buy the dress for the girl.'

b. id buru:-g kade:-g ja:-tir-s-u
man girl-Acc dress-Acc buy-Ben-pst-3sg
`The man bought the girl the dress.'

c. it-ti buru:-g kade:-g ja:-tir-as-
man-Acc girl-Acc dress-Acc buy-Ben-caus-
-s-i
pst-1sg
`I caused the man to buy the girl the dress.'

4.331 The complement clause dependents in the union Clause

Perlmutter and Postal 1974 claim that the causee in the union clause is predicted to have a grammatical relation according to the transitivity of the embedded clause: The subject of an intransitive clause is direct object in the union clause. The subject of a transitive clause is an indirect object in the union clause.[9]

KN causative construction does not conform to Perlmutter and Postal (1974)'s proposal in that the causee, irrespective of its status in the embedded clause or the type of clause (intransitive etc.) that is embedded, is always a direct object in the union clause.[10] This is shown to be true since the causee in clauses like (85-86b) manifests direct object properties: it can be subject under passive (88), it is in the accusative (88-90c), it agrees with verb in number (89a-c) and it antecedes reflexives (90)

88) a. e:n it-ti jom-kiddi-takki-s-u
woman man-Acc hit-caus-pass-pst-3sg
`The woman was caused to hit the man.'

b. buru kac-ci egir-kiddi-takki-s-u
girl horse-Acc ride-Caus-pass-pst-3sg
`The girli was caused to ride the horse.'

c. to:-k jom-takk-as-i
boy-Acc hit-pass-caus-1sg
`I caused the boy to be hit.'

89) a. e:-cci-g it-ti jom-kidd-*(ir)-s-i
woman-pl-Acc man-Acc hit-Caus-plobj-pst-3sg
`I caused the women to hit the man.'

b. id burw-i-g kac-ci egir-kiddi-*(ir)-s-u
girl-pl-Acc horse-Acc ride-Caus-plobj-pst-3sg
`The man caused the girls to ride the horse.'

c. ogj-i-g e:n-g ka:-g ja:-tir-
man-pl-Acc woman-Acc house-Acc buy-Ben-
-*(w)-as-s-i
plsbj-caus-pst-1sg
`I caused the men to buy the woman the house.'

90) a. e:n-gi ten-newerti-n dogo:r bayik-
woman-Acc her-self-Gen about speak
kiddi-s-i
Caus-pst-1sg
`I caused the woman to speak about herself.'

The facts (passive, verb agreement and reflexives) presented in this section clearly indicate that the causee, irrespective of the transitivity status of the complement clause, shows up as direct object in the union clause, thus violating Perlmutter and Postal's universal proposal.[11]

A complement clause nominal other than a subject is not revalued in the union clause; for example, the direct object of a transitive clause that is embedded in a causative maintains its grammatical relation in the union clause.

Since the causee shows up as direct object, the result is that we have two objects in the union clause. In KN this nominal (e.g. kac-ci in (86b) keeps its direct object properties in spite of the fact that the subject of the clause (the transitive clause) is realized as direct object: it can be subject in a passive (91a), it agrees in number with the verb (91b) and it can raise to subject or direct object (91c):

91) a. kaj buru:-g egir-kiddi-takki-s-u
horse girl-Acc ride-Caus-pass-pst-3sg
Lit.the horse was caused the girl to ride it.'

b. id buru:-gi kaj-i:-g egir-kidd-ir-
man girl-Acc horse-pl-Acc ride-Caus-plobj
s-u
pst-3sg
'The man caused the girls to ride the horses.'

c. kac-ci hesbe-s-i (id buru:-g (tekki) egir-
horse-Acc believe-pst-1sg man girl-Acc it ride-
kiddi-s-u)
Caus-pst-3sg
'I believed the horse the cause the girl to ride it.'

(91a-c) show that in (causative) clauses like (86b) the causee (e.g. buru:-g) and the object of the transitive clause that is embedded in a causative (e.g. kac-ci) are all direct objects, indicating that such clauses involve doubling on the direct object position.

Thus it has been shown that in KN causative clause union, the causee ends up as direct object whether the embedded clause is intransitive, transitive or ditransitive. This was shown to be a violation of Perlmutter and Postal

(1974)'s union rule and Comrie (1976)' paradigm case. Both proposals predict that the grammatical relation of the causee in the union clause will vary in accordance with the transitivity of the complement clause: if the complement clause is intransitive, the causee will be a direct object in the union clause. If the complement clause is transitive, the causee will be an indirect object in the union clause.

4.4 Complementation

4.40 Introduction

The complement constructions to be discussed in this section include complement clauses (4.41), raising (4.42), equi (4.43), relative clauses (4.44) and comparative clauses (4.45).

4.41 Complement clauses

A complement clause of verbs such as oyir `know', nal `see', gijir `hear' may be a tensed clause or a gerund. The suffix -n appears on the verb in a tensed complement clause:

92) a. (id buru:-g jom-s-i-n)-gi oyir-s-i
man girl-Acc hit-pst-3sg-sub-Acc know-pst-1sg
`I knew that the man hit the girl.'

b. (e:n sa:b-ki be:-s-i-n)-gi nal-s-i
woman cat-Acc kill-pst-3sg-sub-Acc see-pst-1sg
`I saw the woman kill the cat.'

c. (ni buru:-g nal-s-i-n)-gi oyir-bu:-r-a
who girl-Acc see-pst-3sg-sub-Acc know-stat-neu-3pl
`They know who saw the girl.'

d. (sa:yer burw-i a:g-r-a-n)-gi oyir-bu:-r-i
where girl stay-prs-3pl-sub-Acc know-stat-neu-1sg
`I know where the girls live.'

e. (buru sa:y-gi b-ed-r-i-n)-gi
girl which-Acc fut-marry-neu-1sg-sub-Acc
isig-s-a
ask-pst-3pl
`They asked which girl I would marry.'

Gerunds are indicated by -ar. When used as a subject, gerunds do not need a verb to follow them. Nor do they require a subject to precede them:

93) a. (tall-ar) adel ma
walk-Nom learn-Nom good Cop
`Walking is good.'

b. (ne:r-ar) adel ma
sleep-Nom good Cop
`Sleeping is good.'

As a direct object, gerunds are followed by an inflected (transitive) verb:

94) a. (it-ti jom-ar)-ki ma:ros-s-i
man-Acc hit-Nom-Acc could not-pst-1sg
`I couldn't hit the man.'

b. (buru jom-takk-ar)-ki birg-i
girl beat-pass-Nom-Acc want-3sg
`The girl wants to be beaten.'

c. (e:n-gi nal-ar)-ki beske-r-i
woman-Acc see-Nom-Acc can-neu-1sg
`I will be able to see the woman.'

d. (nobi:-g bayg-ar)-ki ku:r-s-i
Nubian-Acc speak-Nom-Acc learn-pst-1sg
Lit. `I learnt speaking Nubian.'

Note that in these examples, the gerund that is derived from a transitive verb (`learn' in (94d) requires a direct object (e.g. nobi:-g in (94d)). As such gerunds keep some of their verbal properties. A verbal property that is not kept is the ability to take verbal inflection such as Tense, Mood or Person.

Gerunds can also function as a head of a genitive construction:

95) a. (buru:-n dy-ar)-ki gijir-s-i
girl-Gen die-Nom-Acc hear-pst-1sg
`I heard the girl' s dying.'

b. (tin dab-ar)-ki gijir-ko-mn-i
their disappear-Nom-Acc hear-pst-neg-1sg
Lit. `I heard their disappearing.'

They can also be objects of pospositions:

96) a. buru:-n dy-ar na:joro ta:-s-i
girl-Gen die-Nom for come-pst-1sg
'I came because of the girl's death.'

b. e:n-na usk-ar dogo:r bayig-s-a
woman-gen give birth about talk-pst-3pl
'They spoke about the woman's giving birth.'

4.42 Raising

4.40 Introduction

In the following section(s) two types of raising in KN will be discussed: raising to subject and raising to direct object. The former type involves the raising of a complement clause subject or direct object to subject in the main clause. The latter type is concerned with raising a subject or direct object (of a complement clause) to object in the main clause.

4.421 Raising to subject

Raising to subject is lexically governed: predicates governing this type of raising include bine 'seem', imkin 'probable', aki:d 'certain' and labud 'bound'.

In raising to subject, the subject of a complement clause can raise to subject in the main clause, as seen in (97-98)

97) a. imkin (usta:z-i midrasa-kir bi-ju:-r-a)
probable teacher-pl school-Dir Fut-go-neu-3pl
'it is probable that the teachers will go to the school.'

b. usta:-i imkin ((tir) midrasa-kir bi-
teachers-pl probable (they) school-Dir Fut-
ju:-r-a)
go-neu-3pl
lit.'The teachers are probable they will go to the school.'

98) a. bine:-s-u (ogj-i ton-i:-g jom-ir-s-a)
seem-pst-3sg man-pl boy-pl-Acc hit-plobj-pst-
`It seemed the men hit the boys.'

b. ogj-i bine:-s-a ((tir) ton-i:-g jom-
man-pl seem-pst-3pl (they) boy-pl-Acc hit-
-ir-s-a)
pl-pst-3pl
`The men seemed to have hit the boys.'

In (97b) and (98b) the complement clause subjects raise to subject in the main clause. In (98b), for example, ogji, which is subject of the complement clause, raises to subject in the main clause.

In KN, complement clause direct objects can also raise to subject in the main clause, id in (99b) and e:n in (100b):

99) a. aki:d (wel it-ti acci-s-u)
certain dog man-Acc bite-pst-3sg
`It is certain the dog bit the man.'

b. id aki:d (wel (tekki) acci-s-u)
man certain dog (him) bite-pst-3sg
Lit.`The man is certain the dog bit him.'

100) a. bine:-s-u (id-i e:n-gi wel-gi tir-
seem-pst-3sg man-pl woman-Acc dog give-
-s-a)
pst-3pl
`It seemed the men gave the woman the dog.'

b.e:n bine:-s-u (id-i (tekki) wel-gi
woman seem-pst-3sg man-pl (her) dog-Acc
tir-s-a)
give-pst-3pl
Lit. the woman seemed the man gave her
the dog.'

However, nominals other than subject or direct object can not raise to subject.[12] Clauses such as *(101b-c) are ungrammatical since nominals that are neither subject nor direct object raise to subject.

101) a. bine:-s-u (tajir e:cc-i:-g kade:-cci-g
seem-pst-3sg merchant woman-pl-Acc dress-pl-Acc
ka:-r tij-ir-s-u)
`It seemed the merchant gave the women the dresses at the house.'

b. *kade:-cci bine:-s-a (tajir e:cc-i:-g
dress-pl see-pst-3pl merchant woman-pl-Acc
(tirgi) ti-ccir-s-u)
them give-plboj-pst-3sg
`The dresses seemed to have been given the women at the house'
Lit.`The dresses seemed the merchant gave them to the women at the house.'

c. *ka bine:-s-u (tajir e:cc-i:-g kade:-cci-g
house seem-pst-3sg merchant woman-pl-Acc dress
ti-ccir-s-u)
give-plobj-pst-3sg
`The house seemed the merchant gave the woman the dresses at it.'

In (101b), a "patient" kade:-g raises to subject in the main clause. In (101c) the raised nominal is a locative in the complement clause. Thus in KN only a subject or direct object can raise.

It has been claimed that above either a subject or a direct object in the complement clause may raise to subject in the main clause. In order to substantiate this claim, we need to establish independent evidence for the position of the raised element in the complement clause.

4.4211 The raised nominal in the complement clause

The raised nominal is either subject or direct object in the complement clause. This is indicated by several facts. First, the raised nominal agrees with the complement verb (102a-b):

102) a. id-i bine:-s-a ((tir) ton-i:-g jom-ir-s-{*i / a})
man-pl seem-pst-3pl they boy-pl-Acc hit-plobj
'The men seemed to have hit the boys.'

b. burw-i bine:-s-a (to (tirgi) nal-*(ir)-s-u)
girl-pl seem-pst-3pl boy them see-(plobj)-pst-3sg
Lit. 'The girls seemed the boy saw them.'

In (102a-b) the main clause subject cues agreement on the complement clause predicate; For example, in (102a) the third person plural nominal id-i agrees with the complement clause predicate. In (102b) burw-i, which is subject in the main clause, agrees (in number) with the verb nal-ir-s-a. Since verb agreement occurs in a clause internal structure, there is no way for a nominal to cue agreement on a verb that is located in another clause. The only way to correctly account for clauses such as (102a-b) is to say that the raised nominal originates in the complement clause.

Second, the raised nominal antecedes reflexives as in (103a-b):

103) a. askar bine:-s-u ((ter) ten-newerti-g nalli-s-
soldier seem-pst-3sg he him-self-Acc injure-pst-
-u)
3sg
'The soldier seemed to have injured himself.'

b. ton-i bine:-s-a (usta:z (tirgi) tin-newerti-n
boy-pl seem-pst-3pl teacher them them-self-
dogor we:-tij-ir-s-u)
about say-Ben-plobj-pst-3sg
'The boys seemed to have been told about themselves by the teacher'
Lit.The boys seemed the teacher told them about themselves.'

As can be observed in (103a-b), the nominals askar and ton-i, which are subjects in the main clause, antecede the reflexives, as shown by the coreferentiality between the reflexive and its antecedent. Since the antecedent is to share the same clause with the reflexive, clauses like (103a-b) would be erroneously expected to be ungrammatical since in each case the antecedent is in one clause (i.e. main clause) and the reflexive in another (i.e. complement clause). Such a mistaken conclusion can be avoided if we assume that the antecedent (of the reflexive) originates in the complement clause, antecedes the reflexive and then raises to subject in the main clause.

Third, in section 4.421 it was pointed out that the raised nominal may leave a pronominal copy in the complement clause. This can shown as in (104a-b):

104) a. harami:-cci bine:-s-a ((tir) ka:-g ma:g-
thief-pl seem-pst-3pl (they) house-Acc rob-
-s-a)
pst-3pl
'The thieves seemed to have robbed the house.'

b. dokor bine:-s-u (e:n (tekki) uwwe-s-u)
doctor seem-pst-3sg woman (him) call-pst-3sg
'The doctor seemed to have been called by the woman.'
Lit.The doctor seemed the woman called him.

In (104a-b) the pronominal copies tir and tekki are coreferential with the raised nominal harami-cci and doktor, respectively. Thus in (104a-b), the pronominal copies tir, a subjective pronoun, and tekki, which is an objective one, indicate that the respective raised nominals are subject and direct object in the complement clause.

In the previous section we established the relation of the raised nominal in its original clause, the complement clause. In the following section we will discuss the relation of the raised nominal --subject--in the main clause.

4.412 The raised nominal in the main clause

So far it has been shown that in this type of raising (i.e. raising to subject) the raised nominal ends up as subject in the main clause. We know this from word order, case marking and verb agreement.

The raised nominal, being subject in the main clause, is clause initial. In other words, it precedes the predicate (of the main clause) in clauses like (105a-b):

105) a. ton-i bine:-s-a ((tir) wi:tu:r-ki o:-
boy-pl seem-pst-3pl they last night-Acc sing-
-s-a)
pst-3pl
'The boys seemed to have sung last night.'

b. harami:-cci bine:-s-a (askar-i (tirgi) urri-
thief-pl seem-pst-3pl police-pl them arrest-
ir-s-a)
plobj-pst-3pl
'The thieves seemed to have been arrested'
Lit.The thieves seemed the police arrested them.

As noted earlier (section 4.23) a subject would be in the nominative case whereas a direct object is in the accusative case. That the raised nominal (ton-i and harami:-cci in (105a-b),respectively) is in the nominative case establishes that it is the main clause subject in these clauses.

In section 4.21 it has been pointed out that a subject can cue agreement on the predicate. The fact that the raised nominal agrees with the main clause predicate (106) shows that it is subject and this is the case as seen in (106):

106) a. e:n bine:-s-{*a / u} ((ter) ka:-g ja:nos-s-u)
woman seem-pst-3sg (she) house-Acc sell-pst-3sg
'The woman seemed to have sold the house.'

b.ogj-i bine:-s-{*i / a} ((tir) medi:ne-kir ju:-s-a)
man-pl seem-pst-3pl (they) Cairo-Dir go-pst-3pl
'The men seemed to have gone to Cairo.'

In (106a), the raised nominal e:n, which is the subject in the main clause, cues agreement on the predicate bine:-s-u. In (106b) the raised nominal ogj-i, which is also subject in the main clause, cues agreement on the main clause predicate bine:-s-a. Such facts show that the raised nominal is subject in the main clause.

In the foregoing sections we have dealt with one type of raising, namely raising to subject. In the following section, raising to direct object will be analysed.

4.422 Raising to direct object

This section, discusses raising to object. Either a complement clause subject or direct object can raise to direct object in the main clause.

This type of raising is also lexically governed: some of the predicates that trigger raising to object include hesbe `believe'; nal `see'; oyir `know'; erje `expect'; jille `remember'; i:w `forget' and gijir `hear'.

In raising to object, a complement clause subject can raise to object in the main clause as in (107-109b):

107) a. ay hesbe:-s-i (to wari:-kir bo:t-s-
I believe-pst-1sg boy far-Dir run-pst-
-u)
3sg
`I believed the boy ran away.'

b. ay to:-k hesbe:-s-i ((ter) wari:-kir bo:t-
I boy-Acc believe-pst-1sg he afr-Dir run-
-s-u)
pst-3sg
`I believed the boy to have run away.'

108) a. ay oyir-s-i (buru wi:l-gi ba:tti-r o:-s-
I know-pst-1sg girl yest-Acc wed-Loc sing-pst-
-u)
3sg
`I knew that the girl sang at the wedding yesterday.'

b. ay buru:-g oyir-s-i ((ter) wi:l-gi ba:tti-r
I girl-Acc know-pst-1sg (she) yest.-Acc wed-Loc
o:-s-u)
sing-pst-3sg
`I knew the girl to have sung yest. at the wedding.'

109) a. ay jille-s-i (ogj-i hara:mi:-g jom-s-a)
I remember-pst-1sg man-pl thief-Acc hit-pst-3pl
`I remembered the man hit the thief'

b. ay ogj-i-g jille-s-i ((tir) harami:-g
I man-pl-Acc remember-pst-1sg (they) thief-Acc
jom-s-a)
hit-pst-3pl
`I remembered the men to have hit the thief.'

In (107-109b) the subjects of the complement clause raise to object in the main clause; for example, in (109b) the nominal ogj-i-g, which is the complement clause subject, raises to object in the main clause.

Raising is not restricted to a compelement clause subject. A direct object in the complement clause can also raise to object. This is seen in (110-111b)

110) a. ay hesbe-s-i (wel-i e:n-gi acci-s-a)
I believe-pst-1sg dog-pl woman-Acc bite-pst-3pl
`I believed the dogs bit the woman.'

b. ay e:n-gi hesbe-s-i (wel-i (tekki) acci-s-a)
I woman-Acc believe-pst-1sg dog-pl her bit-pst-3pl
`I believed woman to have been bit by the dogs'
Lit.I believed the woman the dogs bit her.'

111) a. ay hesbe-s-i (ta:jir burw-i-g kade:-cci-g
I believe-pst-1sg merchant girl-pl-Acc dress-pl-Acc
tij-ir-s-u)
give-plobj-pst-3sg
`I believed the merchant gave the girls the dresses.'

b. ay burw-i-g hesbe-ir-s-i (tajir (tirgi)
I girl-pl-Acc believe-plobj-pst-1sg merchant them
tij-ir-s-u)
give-plobj-pst-3sg
`I believed the girls to have been given the dresses by the merchant.'
Lit.I believed the girls the merchant gave them the dresses.'

However, nominals other than subject or direct object (e.g. locatives) can not raise to object. In clauses like *(112b-c), a "patient" and a locative respectively can not raise:

112) a. ay hesbe-s-i (ali to:-ki dugu:-g ja:ma-r
I believe-pst-1sg Ali boy-Acc money-Acc mosque-Loc
tir-s-i)
give-pst-1sg
'I believed Ali gave the boy the money at the mosque'

b. * ay dugu:-g hesbe-s-i (Ali to:-k (tekki)
I money-Acc believe-pst-1sg Ali boy-Acc it
ja:ma-r tir-s-u)
mosque-Loc give-pst-3sg
Lit.I believed the money Ali gave the boy
(it at the mosque.

c. *ay ja:ma-g hesbe-s-i (Ali to:-k dugu:-g
I mosque-Acc believe-pst-1sg Ali boy-Acc money-Acc
tir-s-u)
give-pst-3sg
Lit.I thought the mosque Ali gave the boy the
money at it.

The foregoing discussion has noted that a subject or direct object in the complement clause may raise to object in the main clause. We have also noted that the raised nominal leaves a copy pronoun in the complement clause. Thus raising to object is claimed to involve two clauses: the source or complement clause and the target or main clause. The raised nominal is subject or direct object in the complement clause

4.421 The raised nominal as complement clause subject or direct object

We realize that the raised nominal is a subject or direct object in the complement clause can be seen from such facts as verb agreement (113), reflexive (114) and pronominal copy (115):

113) a. ay buru:-g hesbe-s-i ((ter) ten it-ti
I girl-Acc believe-pst-1sg she her husband
mug-(*ir)-s-u)
leave-pst-3sg
`I believed the girl to have left her husband.'

b. affi-cci-g hesbe-ir-s-i (doktor (tirgi)
boy-pl-Acc believe-plobj-pst-1sg doc them
nal-*(ir)-s-u)
see-plobj-pst-3sg
`I believed the boys to have been visited by the doctor.'
Lit.I believed the boys the doctor visited them.

114) a. it-ti nal-s-i ((ter) {ten-newerti-gi / *tin-newerti-gi} be:-s-u)
man-Acc see-pst-1sg (he) him-self-Acc kill-pst-3sg
*them-self-Acc
`I saw the man kill himself/*themselves.'

b. tilmi:z-i:-g hesbe-ir-s-i (usta:z
student-pl-Acc believe-plobj-pst-1sg student
{tin-newerti-n / *in-newerti-n} dogo:r we:-tij-ir-s-u)
them-self-Gen about say-Ben-plobj-pst-3sg
your-self-Gen
`I believed the students to have been told about themselves/*yourselves by the teacher.'

(ter)
115) a. at-ti hesbe-s-i ((*tir) e:n-g do:g-s-u)
man-Acc believe-pst-1sg he woman-Acc kiss- pst-3sg
*they
`I believed the man to have kissed the woman.'

(tirgi)
b. burw-i:-g hesbe-ir-s-i (e:n (*tekki)
girl-pl-Acc believe-plobj-pst-1sg woman them
nal-ir-s-u) *him/*her
see-plobj-pst-3sg
`I believed the girls to have been seen by the woman'
Lit.I believed the girls the woman saw them.

Thus the fact that the raised nominal agrees with the verb, antecedes a reflexive nominal and leaves a matching copy pronoun in the complement clause indicates the grammatical relation of the raised nominal had prior to

raising.

4.422 The raised nominal
as direct object in the main clause

The raised nominal is direct object in the main clause; this is shown by verb agreement, case marking, reflexive and passive. A raised nominal must agree with its verb (cf. 4.21), be it in the complement clause or main clause

116) a.nu:nu:-g hesbe-(*ir)-s-i ((ter) a-ne:r-s-u)
baby-Acc believe-pst-1sg s/he prog-sleep-pst-3sg
`I thought the baby to have been falling asleep.'

b. burw-i-gi hesbe-*(ir)-s-i (affi-cci
girl-pl-Acc believe-plobj-pst-1sg boy-pl
jom-ir-s-a)
hit-plobj-pst-3pl
`I believed the girls to have been hit by the boys.'
lit., I believed the girls the boys hit them.

The raised nominal in clauses like (116) has another property of direct objects. That is, it is in the accusative case. Finally we know that the raised nominal is a direct object in clauses like (117-118a) because it can be subject under passive (117-118b) and it can antecede reflexives (118c-d):

117) a. ay to:-k hesbe-s-i (buru:-g nal-s-u)
I boy-Acc believe-pst-1sg girl-Acc see-pst-3sg
`I believed the boy to have seen the girl.'

b.to hesib-takki-s-u (buru:-g nal-s-u)
boy believe-pass-pst-3sg girl-Acc see-pst-3sg
`The boy was believed to have seen the girl.'

118) a. ay hara:mi:-cci-g hesbe-ir-s-i (askar-i
I thief-pl-Acc believe-plobj-pst-1sg police-pl
urri-ir-s-a)
arrest-plobj-pst-3pl
`I believed the thieves to have been arrested.'

Lit. I believed the theieves the police arrested them.

b. hara:mi:-cci hesib-takki-s-a (askar-i
thief-pl believe-pass-pst-3pl police-pl
urri-ir-s-a)
arrest-plobj-spt-3pl
`The thieves were believed to have been arrested.'
Lit.The thieves were believed the police arrested them.

c. ay an-newerti-g hesbe-s-i (buru:-g nal-s-i)
I myself-Acc believe-pst-1sg girl-Acc see-pst-1sg
`I believe myself to have seen the girl.'

d. id ten-newerti-g hesbe-s-u (dy-os-s-i)
man himself-Acc believe-pst-3sg die-def-pst-1sg
`The man believed himself to have died.'

Thus it has been shown that in KN a nominal has to be a complement clause subject or direct object in order to raise to a position (subject in raising to subject; object in raising to object) in the main clause.[13]

4.43 Equi

Equi in Kunuz Nubian is lexically governed by predicates such as we:tir `tell', beddi `beg'; uwe `call'. Equi deletes a complement clause subject (119a-c) or direct object (119d-e) that is identical with a main clause direct object (the Equi controller):

119) a. am-ba:b it-ti we:tir-s-u ((*ter) ta:-ran)
my-father man-Acc tell-pst-3sg (he) come-Inf
`My father asked the man to come.'

b. askar-i ton-i-g we:ti-ccir-s-a ((*tir)
police-pl boy-pl-Acc tell-plobj-pst-3pl (they)
dab-w-an)
disappear-plsbj-Inf
`The police told the boys to disappear.'

c. ay buru:-g beddi-s-i ((*ter) te:g-an)
I girl-Acc beg-pst-1sg (he) stay-Inf
`I begged the girl to stay.'

d. e:n it-ti we:tir-s-u ((*tekki) kal-g a:w-
woman man-Acc tell-pst-3sg him food-Acc do-
-tir-an)
Ben-Inf
`The woman told the man to make her food.'

e. ogj-i dokto:r-ki uwe-s-a ((*tirgi) nal-ir-
man-pl doc.-Acc call-pst-3pl them see-plobj-
-an
Inf
`The men called the doctor to see them.'

In (119a-e) the deleted nominal does not leave a pronominal copy in the complement clause (Compare this with raising constructions in which the moved or raised element may leave a matching copy pronoun in the complement clause.).

In (119a-e) the equi controller is a direct object (e.g. it-ti (119a)). However, KN does not have subject controlled equi, as *(120a-b) show:

(120) a. * ogj-i e:n-gi we:tir-s-a ta:-wan
man-pl woman-Acc tell-pst-3pl come-Inf
'The men told the woman to come.'

b. * burw-i it-ti beddi-s-a e:n-gi nal-wan
girl-pl man-Acc beg-pst-3pl woman-Acc see-Inf
'The girls begged the man to see the woman.'

Thus, although a subject or a direct object can be an equi victim, only a direct object can control equi.

The equi construction is apparently distinct from raising (section 4.42). In equi, nothing moves or raises from one clause to the other; a complement clause subject (119a-c) or direct object (119d-e) is totally deleted (without leaving a copy pronoun) if it is identical with a main clause direct object). In contrast, raising involves the raising of a complement clause subject or direct object to a position in the main clause as in (109-110b). The raised nominal may optionally leave a copy pronoun behind in the complement clause.

4.72 Relative clauses[14]

KN has restrictive relative clauses, which qualify the noun or the noun phrase they follow. There are no non-restrictive relative clauses.[15] KN relativizes on all positions: all nominals (e.g. subject, direct object, obliques, possessor NPs and objects of comparison) are relativizable. Two strategies are involved in the relative clause formation : deletion and pronoun copy. The type of strategy chosen is determined by the relation of the relativized element in the relative clause: When a subject or direct object is relativized, it is completely deleted from the relative clause. If a nominal other than subject or DO is relativized, a pronominal copy (of the relativized nominal) should be left in the relative clause

Subject of an intransitive or transitive verb:

121) a.to bo:t-s-u
boy run-pst-3sg
`The boy ran.'

b. (to ((*ter) bo:d-el) ka:tu-r bu)
boy run-Rel room-Loc sleep
`The boy who ran is sleeping in the room.'

122) a. id kuttete:b-i
man stand-3sg
`The man is standing.'

b. id ((*ter) kuttete:b-il) ba:t-ti-r da:-s-u)
man stand-Rel dance-Nom-Loc Be-pst-3sg
`The man who is standing was at the party.'

123)a. to:d mando a:g-i
boy there sit-3gs
`The boy is sitting there.'

b. to:d ((*ter) mando a:g-il)-gi oyir-bu:-
boy there sit-Rel-Acc know-stat-
-r-i
neu-1sg
`I know the boy who is sitting there.'

124) a. to buru:-g jom-s-u
boy girl-Acc hit-pst-3sg
`The boy hit the girl.'

b.to ((*ter) buru:-g jom-el)-gi urri-s-a
boy girl-Acc hit-Rel-Acc arrest-pst-3pl
`They arrested the boy who hit the girl'

125) a. wel to:-k acci-s-u
dog boy-Acc bite-pst-3sg
`The dog bit the boy.'

b. wel ((*ter) to:-k acc-el) dy-os-s-u
dog boy-Acc bite-Rel die-def-pst-3sg
`The dog that bit the boy has died.'

Direct Object:

126) a. e:n buru:-g jom-s-u
woman girl-Acc hit-pst-3sg
`The woman hit the girl.'

b. buru (e:n (*tekki) jom-s-i-n) dy-os-s-u
girl woman hit-pst-3sg-Rel die-def-pst-3sg
`The girl whom the woman hit has died.'

127) a. wel-i ogj-i acci-ir-s-a
dog-pl man-pl bite-plobj-pst-3pl
`The dogs bit the men.'

b. ogj-i (wel-i (*tirgi) acci-ir-s-a-n)
man-pl dog-pl bite-plobj-pst-3pl-Rel
ka:-r a:g-s-a]
house-Loc stay-pst-3pl
`The men whom the dogs bit were staying at
home.'

In the above examples either the subject or the direct object is relativized. It should be noted that there is no pronominal copy (of the relativized nominal) in the relative clauses in (121)-(127).

In the following examples instrumental, locative, possessor nominals and objects of comparison will be shown to leave a resumptive pronoun when they are relativized:

Instrumental:

128) a. ay it-ti gayyi:r-ken jom-s-i
I man-Acc knife-Inst hit-pst-1sg
`I hit the man with the knife.'

b. gayyi:r (ay it-ti *(tek-ken) jom-s-i-n)
knife I man-Acc it-Inst hit-pst-1sg-Rel
dab-os-s-u
disappear-def-pst-3sg
`The knife that I hit the man with is lost.'

129)a. ka:-g kulu:-gen goy-s-a
house-Acc stone-Instr-pst-3pl
`I built the house with bricks.'

b.kulu (ka:-g *(tek-ken) goy-s-a-n)-gi
stone house-Acc it-inst build-pst-3pl-Rel-Acc
ja:nos-s-i
sell-pst-1sg
`I sold the stone with which they built the house.'

Locative:

130) a. id ka:tu:-r ne:r-bu-s-u
man room-Loc sleep-stat-pst-3sg
`The man was sleeping in the room.'

b. ka:tu (id *(ten-der) ne:r-bu:-s-i-n)
room man it-Loc sleep-stat-pst-3sg-Rel
bo:r-os-s-u
fall down-def-pst-3sg
`The room in which the man was sleeping has fallen down.'

16

Possessor:

131) a. id-na wel am-bes-ki acci-s-u
boy-Gen dog my-brother marry-pst-3sg
`The man's dog bit my brother.'

b. id (*(tew) wel am-bes-ki acci-s-i-n)
boy his-dog my brother-Acc bit-pst-3sg-Rel
dy-os-s-u
die-def-pst-3sg
'The man whose dog bit my brother died.'

Object of comparison:

132) a. buru e:n dogo:r adel-kir wissi-s-u
girl woman above good-manner dance-pst-3sg
'The girl danced better than the woman.'

b. e:n (buru *(ten) dogo:r adel-kir wissi-s-i-n)
girl woman her-above better dance-pst-3sg-Rel
ne:r-bu
sleep-stat
Lit. 'The woman who the girl danced better than is sleeping.'

All these examples show that a non-subject/non-direct object, when relativized, leaves a pronominal copy behind in the relative clause.

As the discussion above shows, KN relative clause formation adheres to the universal proposal postulated by Keenan and Comrie (1977) who propose the Accessibility Hierarchy (AH) for relative clause formation as follows:[17]

133) Accessibility Hierarchy

subject

direct object

nondirect object

possessor NP

object of comparison

The AH principle predicts that if a language can relativize a certain noun phrase (e.g. direct object), it should then be able to relativize all NPs higher in the hierarchy (e.g. subject) and conversely if a language can

not relativize on a certain position (e.g. direct object), it should not be able to relativize on all NP positions lower in the hierarchy (e.g. Locative). Thus, since KN can relativize possessor NPs (cf. (131)), it is predicted that it would relativize on all higher (NP) positions in the hierarchy, that is, oliques, direct objects and subjects are to be able to relativize. Clauses like (121-127) show that this is the case.

4.441 Cleft construction

In cleft constructions, any NP can function as the focal nominal which is indicated by the particles -tera and -ma: -tera is used for (focused) definite entities whereas ma is used for indefinite ones. Thus a subject, an object or an oblique nominal can function as the focal element

134)a.e:-tera buru:-g jom-el
woman FC girl-Acc hit-Rel
`It is the woman who hit the girl.'

b. e:m-ma buru:-g jom-el
woman FC girl-Acc hit-Rel
`It is a woman who hit the girl.'

135)a. id duru:-tera buru:-g ed-el
man old-FC girl-Acc marry-Rel
`It is the old man that married the girl.'

b. id duru:-ma buru:-g ed-el
man old-FC girl-Acc marry-Rel
`It is an old man who married the girl.'

In the above examples a subject is being focused. An object can also be focused:

136)a. buru:-k-tera id jom-s-i-n
girl-Acc-FC man hit-pst-3sg
`It is the girl that the man hit.'

b. buru:-ma id jom-s-i-n
girl-FC man hit-pst-3sg
'It is a girl that the man hit.'

Nominals such as instrumental (137a), directional (137b), locative (137c) or comitative (137d) can be focused:

137)a. gani:r-ke-tera id e:n-gi jom-s-u
knife-Instr-FC man woman-Acc hit-pst-3sg
'It is with the knife that the man hit the woman.'

b. ka:-kir-tera id ju:-s-u
house-Dir-FC man go-pst-3sg
'It is to the house that the man went.'

c. ka:tu:-r-tera id ne:r-bu
room-Loc-FC man sleep-stat
'It is in the room that the man is sleeping.'

d. buru:-godo-tera e:n ta:-s-u
girl-Com-FC woman come-pst-3sg
'It is with the girl that the woman came.'

It seems that cleft constructions are based upon relative clauses. As has just been pointed out all NP positions that can be relativized can also be focused in cleft constructions. In one case the same strategy is used: deletion. If the relativized nominal (121-125) or the focal nominal (133)-(135) is subject or direct object, deletion is applied, that is, the position of the relativized nominal is totally deleted in the relative clause. One difference between the two types is that whenever an element other than a subject or direct object is the focal nominal (e.g.136) copying strategy is not used, that is, a copy pronoun of the relativized nominal is not placed in the position from which the nominal in the relative clause.

4.45 Comparartive clauses

This is used to compare or contrast something or someone with another. Such clauses express the idea of superiority. Note that the nominal that is considered less superior is followed by the postposition dogo:r `on/above':

(138) a.ti berti-n dogo:r doro ma
cow goat-Gen on fat Cop
`The cow is bigger than the goat.'

b.ahemed ali:-n dogo:r noso ma
Ahmed Ali-Gen on/above tall Cop
`Ahmed is taller than Ali.'

4.46 Coordination

Coordination, which is expressed by -go:n, is used to join words, phrases or sentences.[18] It has to be repeated after each element. In the follwing examples, two nouns phrases are joined:[19]

139)a. it-to:n buru:-go:n ta:-s-a
man-and girl-and come-pst-3pl
`The man and the girl came.'

b. id duru:-go:n e:n duru:-go:n bel-s-a
man old-and woman old-and go out-pst-3pl
`The old man and the old woman went out.'

The coordinating conjunction can also be used to coordinate two clauses by following each clause, e.g.

140) a. kal-l-a-n-go:n ni:-r-a-n-go:n
eat-prs-3pl-sub-and drink-prs-3pl-sub-and
a:g-r-a
sit-neu-3pl
`They are eating and drinking.'

b. burw-i o:-r-a-n-go:n wissi-r-a-n-go:n
girl-pl sing-neu-and dance-neu-3pl-and
a:g-s-a
sit-pst-3pl
`The girls were singing and dancing.'

Any grammatical relation can be coordinated: they may be subjects as in (139a-b) or direct objects as in the following examples:

141)a. am-ba:b am-bes-ko:n an-issi-go:n jom-
my father my brother-and my sister-and hit
-ir-s-u
plobj-pst-3sg
`My father hit my brother and my sister.'

b.e:n egit-to:n berti-go:n ja:nos-ir-s-
woman sheep-and goat-and sell-plobj-pst-
-u
3sg
`The woman sold the sheep and the goat.'

Note that the coordinating conjuction -go:n seems to be related to the comitative:

142) a. it-todo:n ta:-s-i
man-com come-pst-1sg
`I came with the man.'

b. e:n duru:-godon bel-s-i
woman old-com go-pst-1sg
`I went out with the old woman.'

4.5 Subordinates

4.50 Introduction

In this section, I will describe the clauses that are subordinate. These include such as adverb clauses as manner (section 4.511), place (section 4.512), time (section 4.513), reason (4.514), purpose (section 4.515), concession (section 4.516) and conditional clauses (section 4.517).

4.51 Adverb Clauses

4.511 Manner [20]

A manner clause indicates how an action is/was done. It is indicated by the complimentizer nawite, e.g.

143)a. ku:r-s-i-n nawite b-a:w-r-i
learn-pst-1sg/sub as fut-do-neu-1sg
`I will do as I learnt.'

b. bo:r-kiddi-s-i-n nawite bi-goy-r-i
destroy-caus-pst-1sg-sub as fut-build-neu-1sg
`I will build as I destroyed'

4.752 Place

Clauses of place which denote where an action is or was done are indicated by sa:yer `where', e.g.

144)a. buru sa:yer ju:-s-i-gi oyir-bu:-mn-i
girl where go-pst-1sg-Acc know-stat-neg-1sg
`I do not know where the girl went.'

b. e:n-gi sa:yer occu-s-a-n-gi nal-ma ?
woman-Acc where take-pst-3pl-sub-Acc see-Intr
`Did you see where they took the woman?'

4.513 Time

Time clauses, which denote when an action is to be or was done are indicated by na:watig `when', go `while', godon `as soon as', bokodon `untill' and deton `since' [21]

145)a.id ta:-s-i-n na:watig ay ne:r-bu:-s-i
man come-pst-3sg-sub when I sleep-stat-pst-1sg
I was asleep when the man came.'

b. burw-i a-kaski-r-a-n go e:n ta:-s-u
girl-pl prog-play-neu-3pl-sub when woman come-pst-3sg
`The girls were plying when the woman came.'

c.ogj-i o:-g ku:r-s-a indo ta:-me:n-d-a-n go
man-pl song-Acc learn-pst-3pl here come-neg-neu-3pl-sub before
`The men learnt how to sing before they came here.'

d. to to:-s-i-n godo buru bel-s-u
boy enter-pst-3sg-sub as soon as girl go out-pst-3sg
`As soon as the boy enetered the girl went out.'

e. am-bes aygi erje-s-u ta:-r-i-n bokodo
my brother me waite-pst-3sg arrive-neu-1sg-sub till
`My brother waited for me untill I came.'

f. ann-issi-g nal-ko:-mn-i ed-s-i-n deto
my-sister-Ac see-perf-neg-1sg marry-pst-3sg-sub since
`I have not seen my sister since she got married.'

4.514 Reason

Reason clauses indicate why an action was done; they take the verbal suffix -ga:

146)a. ay ka:-g bi-ja:nos-r-i dugu:-gi ka:g-me:n-
I house-Acc Fut-sell-neu-1sg money-Acc have-neg-
d-i-n-ga
neu-1sg-sub-Consq
`I will sell the house because I don't have money.'

b. ay ton-i:-g jakk-ir-s-i dugu:-g
I boy-pl-Acc beat-plobj-pst-1sg money-Acc
ma:g-r-a-n-ga
steal-neu-3pl-sub-Consq
`I beat the boys because they stole the money.'

4.515 Purpose

Clauses of purpose, denoting the purpose for the occurrence of an event are indicated by kirrigi:[22]

147)a. to ta:-s-u buru:-gi ed-i kirrigi
boy come-pst-3sg girl-Acc marry purp
`The boy came in order to marry the girl.'

b. id-i suwan-do ju:-s-a ti:-g ja:n-d-a kirrigi
man-pl Aswan-Loc go-pst-3pl cow-Acc buy-prs-3pl
`The men went to Aswan to buy the cow.'

c. e:n no:ra bayig-s-u id gijir-me:n-i kirrigi
woman slowly speak-pst-3sg man hear-neg-3sg
`The woman spoke slowly so that the man should not hear.'

4.516 Concession

This type of clauses indicates that the event described is not compatible with the situation in the main clause verb. These clauses are marked by -go (`Eng. although')

148)a. e:n ori-bu:-n-go ta:-s-u
woman be hungry-stat-sub-Conc come-pst-3sg
`The woman came although she was hungry.'

b.dugu:-g ka:g-r-a-n-go ka:-g ja:nos-s-a
money-Acc house-neu-3pl-sub-Conc sell-pst-3pl
`Although they have money they sold the house.'

In (148a-b) the subordinate clauses describe situations (e.g.`she was hungry'; `they have money') that are not contradictory with the situations in the main clause (e.g. `the woman came'; `they sold the house'). Put differently, the event of (the woman's) coming' is/was not expected by the speaker; the woman should have come after eating. Equally, the event of `selling the house (by them) is not justified since they are not in need of money'.

In clauses of Concession, only the Neutral or the Future is used:

149)a. bi-kal-me:n-d-a-n-go ta:-s-a
fut-eat-neg-neu-3pl-sub-Conc come-pst-3pl
`They came although they will not eat.'

b. buru:-g abirg-i-n-go ta:-rar-ki mo:nos-s-u
girl-Acc want-3sg-sub-Conc come-Nom-Acc refuse-pst-3sg
`Although he wants the girl, he refused to come.'

4.517 Conditional Clauses

Three types of conditional clauses --real, hypothetical and counterfactual -- are distinguished.[23]

Real conditional clauses contain a condition that may or may not be fulfilled.

150)a. buru ta:-ki dugu:-g bi-tir-r-i
girl come-Cond money-Acc Fut-give-neu-1sg
`If the girl comes, I will give her money.'

b. affi-cci te:k-ki-r-a kal-gi a:w-ticc-ir
boy-pl stay-Cond-neu-3pl food-Acc make-Ben-plobj
`If the boys stay, make them food.'

151)a. beske ta:-me:-ki we:-de
can come-neg-Cond say-Ben
`Tell me if you can not come.'

Here the sentences do not say that the condition will or will not be realized; they do not state that `the girl will come', `the boys will stay' or that you can't come'. The conditions are open: they may or may not occur. `The girl may or may not come'; `the boys may or may not stay'; `you may or may not come'.

Hypothetical conditional clauses express a proposition about an unreal or imagined situation. This is indicated by the use of the Present Perfect:

152)a. ay dugu:-g ka:k-ko:-ki-r-i ka e:r-we:-ki
I money-Acc have-perf-Cond-neu-1sg house new-Indef-Acc
bi-ja:s-s-i
Fut-buy-pst-1sg
`If had money I would buy a new house.'

b. id ku:r-bu-ko:-ki ten dogo:r beske b-usu:-
man lean-stat-perf-Cond him about can Fut-cheat-
ko:-mn-a
perf-neg-3pl
`If the man was educated, they would not be able to cheat him.'

Such clauses make a hypothesis which may be contrary to the facts or just something not thought of as a fact. Thus `if I had money...' implies that `I do not have money'; `if the man were educated' tells us that `the man is uneducated'.

Counterfactual conditional clauses, which indicate past conditions, are also expressed in the same way:

153)a. dugu:-g ka:k-ko:-ki-r-i bi-ja:s-s-i
money-Acc have-perf-Cond-neu-1sg Fut-buy-pst-1sg
`If I had had money, I would have bought it.'

b. aygi we:-de:m-me:-ko-ki ay b-oyir-ko:-mn-i
me say-Ben-neg-perf-Cond I Fut-know-perf-neg-1sg
`If you hadn't told me (about it), I wouldn't have known.'

Notes

[1] Word order in all Nubian languages (Tucker and Bryan 1966:327) is S-O-V. This is also reported for Mahas (Ayyub 1968: 25); Dongolese (Armbruster 1960:318); Meidob (Thelwall 1983:109).

[2] According to Greenberg (1966), languages with SOV word order are expected to have the governing noun precede all modifiers (e.g. adjective, demonstrative, genitive, etc). In KN only the genitive and the demonstrative precede the head noun.

In all languages of the Nubian group (Tucker and Bryan 1966:328) the head noun follows all elements except the demonstrative and the genitive (see also Armbruster 1960:320 for Dongolese; Ayyub (1968:37) for Mahas; Thelwall 1983:109 for Meidob.

[3] In Mahas (Ayyub 1968:94) the subject and object cue agreement on the verb.

[4] The asterisk inside the bracket (e.g. (*ir)) indicates that the bracketed element is not possible in the clause; the asterisk outside the bracket (e.g. *(ir)) indicates that the clause is ungrammatical without the bracketed entity.

[5] Non-emphatic subject or object pronouns are dropped in Dongolese (Armbruster 1960:318).

[6] Passive is also discussed in the sections concerning advancements (section 4.3) and raising (section 4.4).

[7] The impossibility of impersonal passive with such clauses as (64)-(66) is predicted (cf.Perlmutter & Postal 1984:100) by an RG law -- 1 Advancement Exclusiveness Law (1AEX) which prohibits more than one advancement to subject. Thus clauses like (64)-(66) have a nominal (which is an initial direct object) that has advanced to subject; here the application of impersonal passive, which involves the insertion of a dummy (cf. Perlmutter & Postal 1984:106) as a direct object that advances to 1 subject, would definitely violate 1AEX. Thus impersonal passive is not possible in clauses like (64-66b).

[8] Unlike Italian (Rosen 1983), KN lacks complement clause subject freeze; a clause that involves passive can be the basis for causative constructions. The verbal suffix expressing causative in such clauses is <u>-an</u>:

(i) a. buru to:-k jom-s-u
girl boy-Acc hit-pst-3sg
'The girl hit the boy.'

b. to jom-takki-s-u
boy hit-pass-pst-3sg
'The boy was hit.'

c. to:-k jom-takk-as-s-i
boy-Acc hit-pass-caus-pst-1sg
'I caused the boy to be hit.'

9 Languages that conform to this include Turkish, French (Aissen 1974; Comrie 1976); Arabic (Salih 1985).

10 The fact that KN causee shows up as direct object without regard to the transitivity of the embedded clause is a counter-example to Comrie (1976)'s proposal -- the paradigm case, which predicts that the subject of an intransitive clause is a direct object in the clause union; the subject of a transitive clause is an indirect object in the causative clause union.

11 A counter-proposal to the analysis adopted here is that KN causative constructions do not involve doubling in the direct object position. Rather, the subject of an emebedded transitive clause ends up as indirect object in the union clause, the indirect object being indistinguishable from a direct object. I do not have any argument against such a proposal. If KN had a peculiar marker for indirect objects, that is if indirect objects and direct objects were formally differentiated, we would be able to make a choice between the two proposals.

12 A direct object that is subject in a passive can be raised in KN:

14
Greenberg (1966) claims that in S O V languages, the modifiers precedes the head noun. However, this claim is not true of KN in which the relative clause follows the noun, e.g.

(iv) e:n it-ti jom-el
woman man-Acc hit-Rel
'The woman who hit the man.'

Note that is true of all members of the Nubian group (Tucker and Bryan 1966).

15
Relative clause in Dongolese (Armbruster 1960, Tucker and Bryan 1966:325) are marked by a series of Tenses in both Aspects: Imperfect and Perfect.

16
It might be claimed that the possessor, prior to relativization, raises to subject. If this were the case, we would not expect the relativized element, being a subject, to leave any pronominal copy in the relative clause. Since a copy (e.g. tin) is left behind, clauses like (131b) can not be regarded as examples of (final) subject relativization.

17
Since relative clauses are considered complex noun phrases, they are expected to obey the island constraints (posited by Ross (1967)) which claims that no element can be moved out of an island (e.g. relative clause). That they do can be seen in clauses like (vb) where no nominal can be moved out of a relative clause. wh-movement is not expected to apply to relative clauses:

(v) a. e:n (it-ti ganni:r-ken) jom-el
woman man-Acc knife-Instr hit-Rel
'the woman who hit the man with the knife.'

b. * ni:-g e:n (--- ganni:r-ken jom-el
who-Acc woman knife-Instr hit-Rel
lit.'Who the woman who hit with the knife.'

18
In Mahas (Tucker and Bryan 1966, Ayyub 1968:41) coordination is expressed by -go:n which must follow each noun:

vi) kaj co:n ti: go:n-gi f-ekk-c-ir
'I shall bring the donkey and the cow.'

This is also the case in Dongolese (Armbruster (1960:432), Tucker and Bryan 1966:320); in this language the conjunction is -onon.

19
Two comitative nominals can be coordinated with -go:n. In such a case both the comitative marker and the coordinating go:n are repeated after nominal:

(vii) it-todo:n-go:n e:n-godo:n-go:n ta:-s-i
man-com-and woman-com-and come-pst-1sg
'I came with the man and the woman.'

20
Adverb clauses of manner are marked by eg in Dongolese (Armbruster 1960: 434).

21
Dongolese (Armbruster 1960:430) has bokkon which marks adverbs of time.

22
Adverbs of purpose are marked in Dongolese (Armbruster 1960:434) by eg (e.g. kabitti nall et kusran `They went to see the man')

23
Dongolese (Armbruster 1960:436) and Mahas (Ayyub 1968:152) have conditional clauses marked by kiram:

(Dongolese) (viii) `tirgo nalkiram bokkiran
`If they see them, the hide.'

(Mahas) (ix) `ay on ju:kayyiga tor
`If I go, he will come.'

Conclusion

This work is a general description of Kunuz Nubian (KN), an Eastern Sudanic language of the Nubian group. The discussion of phonology of KN starts with the inventory of consonants (2.11) and the vowels (2.13), the syllable structure (2.2) and consonant clustering (2.3). No more than two consonants in a sequence are permitted. The permitted consonant clusters are further restricted to the word-medial position. A sequence of two vowels which would result from morphological rules is avoided. In such a case, different phonological rules (r-insertion, vowel deletion or gliding) will conspire (Kisseberth 1970) to eliminate the resulting combination. Other phonological rules include assimilation which is the most predominant process. There is also a rule that devoices a vowel that is preceded a pause or is surrounded by voiceless consonants.

In the chapter on morphology, I discuss nominal morphology (3.1) and verbal morphology (3.2). The morphemes used with KN words (e.g. nouns or verbs) are grouped as a class on the basis of semantic rather than structural facts. These morphemes have also been classified as either derivational or inflectional; the former always precede the latter.

The morphology chapter also discusses Tense (e.g. Neutral, etc.), Aspect (i.e. Progressive) and Mood (e.g. Imperative etc.). These categories are expressed by affixes

on the verb stem. KN is peculiar in that it has several types of Imperatives (3.2253) that are expressed inflectionally: the Plain Imperative, the Hortative, the Polite Imperative, the Delayed Imperative and the Habitual Imperative. The last two types -- the Delayed Imperative and the Habitual Imperative -- are worth commenting on; they are inflectionally expressed in few languages. The former refers to an act that is to be carried out in the future. The latter indicates an act that is to occur customarily. The order in which the various morphemes of the Imperative occur is also considered (3.22535): the Polite Imperative is shown to be the last element on the verb root or stem. The Hortative follows the Delayed Imperative and the Habitual Imperative.

The chapter on syntax deals with KN sentence structure (4.1). It was shown that KN is an S O V language. The structure of its noun phrase (4.12) is also discussed. All elements except demonstratives and genitives follow the head noun. Section 4.2 handles KN basic facts such as verb agreement, pro-drop, case marking and reflexives. Only a (final) subject or a (final) direct object agrees in number with the verb. The subject agrees with the verb in number and person whereas the direct object agrees only in number. A non-emphatic subject or object pronoun can be dropped from the sentence in KN. Case marking is expressed by suffixes for all cases except the nominative which is unmarked. Reflexives can be anteceded only by a subject or a direct

object. These facts are separately treated since they are needed for the discussion of morphosynactic rules.

The morphosyntactic rules, which are tackled in section 4.3, include passives, advancements to direct object and causative constructions. Passives (4.31) were shown to be of two types: personal passives and impersonal passives. The former is based on a transitive clause whereas the latter is based on a special type of intransitives (i.e. psychological verbs). Two types of advancements to direct object are discussed: indirect object-to-direct object advancement and benefactive-to-direct object advancement. Causative constructions (discussed in 4.33) show that KN has no restriction on what type of clause can be the basis for a causative construction. It can be based on an intransitive, a transitive or a ditransitive clause. The status of the causee in the union clause is the same (i.e. direct object) irrespective of the type of clause that is embedded (e.g. transitive clause). A direct object of an embedded clause maintains its grammatical relation in the union clause even though the causee shows up as direct object. This is shown to violate Perlmutter and Postal (1974)'s union rule and Comrie (1976)'s paradigm case. Both proposals predict that the subject of an embedded transitive clause would be an indirect object in the union clause.

Section 4.4 is concerned with complement constructions such as raising. It is shown that a subject or direct object

in the complement clause can raise to subject (raising to subject) or direct object (raising to direct object). KN raising violates a claim held by (Postal 1974) that raising is restricted to subjects.

The final section (4.5) discusses subordinates in KN. Subordinates include adverb clauses such as reason, concession and conditional clauses. All these are indicated by subordinating conjunctions.

Appendix 1: Text 1

esey kursel-lo uski-takki-s-i. ar-gu ka metar dogo:r
village old-Loc be born-pst-1sg we-pl house hill on

te:b-s-u. e:s-we:-ki amba:b ay-gi essi-r
stand-pst-3sg noon-indef-Acc my father I-Acc river-Loc

occu-s-u. mando ju:-s-u-n godo ter ay-gi we:-
take-pst-3sg there go-pst-3sg-sub as soon as he I-Acc say

-de:-s-u itil-na togo:r te:g-an.
Ben-pst-3sg tree-Gen under sit-Inf

"essi-r wa:yda:g sugur-me", amba:b ay-gi we-de:-s-u.
river-Loc don't go into-neg my father I-Acc say-Ben-pst-

ter wide essi-r sugur-s-u ka:re-n jo:ro. itil-na
he then river-Loc go down-pst-3sg fish-Gen for tree-Gen

togo:r agu:de te:g-ar-ki ma:ros-s-i; ay sarki-s-i
under alone sit-nom-Acc couldn't-pst-1sg I fear-pst-1sg

urtiwe:r ay-gi we:-de:-s-u, "me:r ek-ki bi-kal-os-s-i
something I-Acc say-Ben-pst-3sg what you-Acc fit-eat-pst-1sg

essi-r bowwi-ki ?". wide kade:-cci:-g dukk-os-s
river-Loc swim-Cond then clothes-Acc take off-def-pst

essi-gabir ju:-s-i. kine:k adel-kir bowwi-ed
river-Dir go-pst-1sg after awhile good-manner swim-consec

bel-s-i; sarki-s-i amba:b ay-gi
leave-pst-1sg be afraid-pst-1sg my father I-Acc

bi-nal-os-s-i-n-gi. kade-cci:-gi undur-ed itli:-n
fut-see-def-pst-3sg-sub-Acc clothes-Acc put on-consec trees-

barre:r gri:dde-s-i. i:g-we:r warri:-r ton bine:-s-u.
among wander-pst-1sg fire-Indef distance-Loc from appeared

I:k-kabir talle-ju-s-i. e:n duru-we:r ne:r-bu-
fire-Dir walk-go-pst-1sg woman old-Indef sleep-stat-

-s-u (i:g-na ke:llo). burw-i-go:n a-wissi-s-a tonno:ra-
pst-3sg fire-Gen beside girl-pl-and prog-dance-pst-3pl boy-

-cci-go:n a-o:s-s-a. kinne:kabir a:ya du:l-we:r bel-ta:-s-u.
pl-and prog-sing-pst-3pl suddenly predator huge go-come-pst

ay-gi nal-os burw-i-go tonno:ra-cci-go bo:dik-s-a.
I-Acc see-consec girl-pl-and boy-pl-and run-pst-3pl

e:n duru imbel-ar-ki ma:r-os-s-u. a:y tek-kabir
woman old stand-nom-Acc couldn't-3sg predator her-Dir

do:r-ju:-s-u e:n si:kki-s-u. (e:n-na si:kk-ar-
crawl-go-pst-3sg woman shriek-pst-3sg woman-Gen shriek-nom

-kodon) id-we:r bo:t-ta:s-u. wide a:y-g tobro:-ge
com man-Indef run-come-pst-3sg then predator axe-Instr

be:-s-u
kill-pst-3sg

Translation:

" I was born in an old village. Our house used to stand on a hill. One afternoon, my father decided to take me to the river (the Nile). As soon as we arrived there, he demanded that I sit under (an oak) tree and keep off the river. He then went to catch fish. I was afraid of sitting alone. So, I said (to myself), "What will happen to you if you go swimming". Having taken off my clothes, I went into the river. I enjoyed swimming. Then I left water before my father saw me. I put on my clothes in a hurry and wandered into the trees. From a distance I saw a fire burning.

I went towards the fire. An old woman was sleeping by it. Girls were dancing and boys were singing. Suddenly, a huge predator came into the scene. The girls and boys took to their heels. But the old woman was too tired to stand up and run. The predator slowly moved towards her. The woman shrieked fiercely. A man heard her crying. He came running and killed the predator with an axe".

Text 2

id-we:r esey du:l-lo da:-s-u ten jitta gallik nal-ko:-
man-indef village old be-pst-3sg his body like see-perf

mn-i. ogj-i malle tekki sarki-s-a inne:n owwollo we:-k
neg-1sg man-pl all him fear-pst-3pl once someone-Acc

mittar-ro luff-undur-s-u ten e:n-godon bayg-i-n-
well-loc throw-put-pst-3sg his wife-with speak-1sg-sub-

-ga. ugu-we:-k kac-ci egr-ed ba:-ti-
-conseq night-indef-Acc horse-Acc ride-consec party-nomin-

-we:-ro da:-s-u. ba:-ti-r ton talle-bu:-n-
-indef-loc be-pst-3sg party-nomin-loc from walk-stat-sub-

-go erkene eccel-we:-k nal-s-u. ogj-i keffi-g
-while party another-Acc see-pst-3sg man-pl clapping-Acc

a-jom-s-a. tir-gabir talle-ju:-s-u. ogj-i-godon a-ba:n-
prog-pst-3pl they-dir walk-go-pst-3sg man-pl-with prog-dance

-i-n-go tem missi-g togo:-gabir suguddi-s-u.
-1sg-sub-while his eye-Acc down-dir bring down-pst-3sg what

me:-k nal-ma hanw-i:-n ossi-cci ma:sir. ingodo ter oyir-
what-Acc see donkey-pl-Gen leg-pl but then he know

-s-u sulu:-cci-godon a-wissi-i-n-gi. koy dogo:r digir-
-pst-3sg ghost-pl-with prog-dance-3sg-sub-Acc face on fall-

-s-u sake:-ge. wide kac-ci egr-ed esey-gabir ju:-s-
-pst-3sg fear-Instr then horse ride-conc village-dir go-pst-

-u. gir dogo:r wel-i we:ri howwi-r-a-n-go te:b-s-a.
-3sg road on dog-pl some bark-neu-3pl-sub-while keep-pst-3pl

id wel-i:-g su:g-ir-s-u. wel-i usu:-s-a. id
man dog-pl-Acc dismiss-plobj-pst-3sg dog laugh-pst-3pl man

kerker-i-n-go te ka:-g du:r-s-u. mando malle:-g
shiver-3sg-sub his house-Acc get to-pst-3sg there all-Acc

we:-ti-ccir-s-u ter nal-s-i-n-gi.
say-Ben-plobj-pst-3sg see-pst-3sg-Acc

Translation

"Once upon a time there was a strong man in the village. He had tremendous power. All men were afraid of him. He once threw a man in the ditch because he made passes at his wife.

One night he went to a (wedding) party. On his way back, he saw another party; men were clapping their hands. He wanted to share with them the happy occasion. He took part in the dancing ceremony. While dancing, he looked down. To his surprise, he noticed that he was dancing with ghosts; the men had donkey's feet. He was so scared that he fell on his face. He then hit the road for the village. Another surprise was waiting for him on the road: there were dogs barking on the road. He started shouting at them to clear the road. To his dismay, the dogs laughed. Never before had he heard a dog laugh !. When he arrived at the village, he told his story to all people.

Appendix 2: KN vocabulary

KN vocabulary is presented here in the alphabetical order. This is not meant to be an exhaustive list of KN vocabulary but I only included the most common ones.

A)

a	heart
aba	dowary
abag	a type of cloth
abacce	a game
abiddi	meet
abre	oatmeal
acci	bite
adel	good
adir	winter
affi(icci)	boy(s)
a:gi	sit, stay
agar	place
aga:b	behind, bottom
agis	wake
agišši	food obtained from goat milk
agu:de	alone
ajin	sneeze
ajin	leather
akkade	first-born (baby)
akkir	wean
ama:cce	wrap

ambanna(ri)	my uncle(s) (father's brother)
ambanna-mburu	my cousin (my uncle's daughter)
ambanna-to	my cousin (my uncle's son)
amba:nissi	my ant (my father's sister)
ambes	my brother
ambes-buru	my niece (my brother's daughter)
ambes-to	my niece (my brother's son)
amburu	my daughter
andi	mine
anjar	large bowl
anna:w	my grandma'
anne:kegid	my ant
anne:kegid-buru	my cousin (may ant's daughter)
anne:kegid-n-id	my ant's husband
anne:kegid-to	my cousin (my ant's son)
anne:n	my wife
angare	bed
ar	we
arbir	bind
aricci	ornament
armossi	tears
aro	white
arte	shade
asal	tomorrow
asaltu:r	tomorrow night
asalwe:kka:kki	the day after tomorrow
assi	grandchild

ašir	beautiful
ašši	baby crocodile
ašware	gifts carried to the bride
atta	bring
atum	drum
a:w	do
awir	wing
awirte	material for making baskets

B)

ba	acre
ba:g	divide
ba:j	write
bakke	open wide (esp. mouth)
bale	wedding day
ba:n	dance
batti	scratch
barra:d	a large mug
barassi	measuring instrument
barsi	twin
bassari	tasteless
bassi	leak
baskal	tweezers
be	kill
be:d	protract
beddi	beg
bekki	clean (v.)

bel	go out
belti	pimp
ber	wood
be:r	plant (v.)
be:r	become full
beri	twisted
berti	goat
betti	dates
beyye	necklace
beyyi	spend the night
bicci	wake up
bida	arrive
bille	onion
birig	want
biššši	peel off
bo:d	run
bo:tti	(the concept of) running
bo:g	pour
bogir	throw
bogon	summer
bokki	hide
bokki	miscarry
bokkir	hide (something)
bottir	cut (esp. meat)
bu	rest/sleep
buru	girl
burukki	rat

buttul	he-goat

D)

dab	disappear
dabir	lose
darbad	chicken
darbadnaondi	hen
darri	mount
dawil	spread
deg	cover
degiddi	cover
de:g	water (v.)
degir	saddle
dehle	grow old
de:n	give (the speaker(s))
denji	have sex
derti	fasting
des	animal shortening
desse	green
dessi	soft; unripe
detti	pick up
de:w	oven
de:wka	kitchen
di	pertaining to ...
di	die
dibitte	mug
dig	tie

digir	fall down
dij	five
ɗiminde	ten
ɗo:g	kiss
ɗogir	ghost-like
ɗogo	above
ɗol	love (v.)
ɗolti	love (n.)
ɗorki	mix
ɗoro	fat
ɗo:r	creep
ɗo:s	crazy
ɗo:y	bring
ɗoyir	ram
ɗugu	money
ɗugur	blind
ɗugus	stomach
ɗukki	take off (clothes)
ɗu:l	big; old
ɗullo	heavy
ɗumma	prayer
ɗuru	old
ɗu:r	catch

E)

ebette	vagina
eccel	else; another one
ed	marry

eddi	hyena
eged	sheep
egiddi	vomit
egir	ride
egrij	vomit
ekked	urine
ekki	you (sg.)
ekki	urinate
el	find
eled	pretext
elekked	now
elum	crocodile
endi	yours
e:n	woman
enne	fill
er	you (sg.)
erit	hippo
erkeddi	head cover
erkene	wedding
erri	name
erti	breast
e:r	new
eske	can
esked	dust
essi	water
essi-du:l	see

essi-n-ga:r	river
e:s	afternoon
esey	home land
ewir	exchange
ewir	plant (v.)
e:w	tail
e:w	wash (body)
ewre	goat

F)

farracce	a type of fish
fa:la	good
facci	glue
fatti	wallow
fi:cci	tread
findi	scratch
fogor	go lame
fogo:ra	alme
fu:kki	clean nose
fu:kkid	mucus

G)

gabbi	collar
gandire	brag
ganni	shave
garri	bad
garub	screen (v.)
ga:r	wrap/ bind
gaɲɲi	cut (hair)

ganni:r	knife
gaskatti	egg
ga:si	skillful
ga:y	lick
geda	errand/favor
gedged	shiver
gen	better
gendi	reconcile
gendar	reconciliation
gere	food
ge:le	red
ge:w	blood
giddi	cause to drink
giddos	deny; refuse
gijir	listen/hear
gila	instr. for sailing
gilli:t	male organ (penis)
gir	road
giri:de	loiter
gissi	peel off
goj	slay
golli	swallow
go:l	dig
gor	pimple
go:r	ant
go:r	gnaw

go:s	throat
gowwa:la	gossip
gowwar	vessel
gowwa:n	quickly
goy	build
go:y	blame
gu:b	deny (refuse to admit)
guffi	swallow
gulud	vessel
gumur	neck
guɲɲi	shake
gur	bull
gurratti	happiness
gurre	be happy
gu:ra	forehead
gusutti	smoke
gutti	attack or gore

H)

hanu	donkey
harub	break off relationship
ho:j	heat

I)

i	hand
icci	milk
icci:n	scorpion
id	man

idiw	seven
igitti	near
i:g	fire
ille	barely
imbel	stand up
in	this
indi	yours
indo	here
ingiri	sweet
inji	carry
inongu	today
ir	you (plural)
i:r	count
irig	stir
iskitte	mouse
issi	lice
išin	send
iškarti	guest
itil	type of tree
ittille	needle
ittu:r	tonight
i:w	forget
i:w	corn
i:w	feed sheep

J)

ja:b	eavesdrop
ja:ba	thigh

ja:be	massage
jaddi	alum
jaga:de	soften
jahal	young man
jahde	shout
ja:kre	imitate
jakkar	hook
jakki	beat
jakkud	a type of vegetable
jakum	cheek
ja:n	buy
ja:nos	sell
jarum	bind
jawir	wet
jelli	job
jen	year
jer	back
jertu	farmyard
jiddi	saliva
jigid	scratch (e.g. eyes)
jille	forget
jitta	body
jod	swear
jom	hit
jondo	okra
jo:g	grind

jo:r	tread
jo:re	cry
jugjug	burn
jugri	hot
jugur	burn
jumbud	saliva

K)

ka	house
kapkab	cold
kapki	snatch
ka:b	mix
kade	dress
kaga	first-child
ka:g	have
kaj	horse
kakke	warm up
kakke:n	baby scorpion
kal	eat
kalal	ring
kalli	sweep
kalum	North
kam	camel
kamis	day before yesterday
kanarri	neighbor
kandi	dagger
kanisse	flour
karab	stretcher

karij	basket
karjij	cook
karre	gift for wedding
ka:re	fish
karsig	fight
karsige	fight (n.)
karum	a type of herb
kasir	turban
ka:s	to wrap turban around head
kassi	lick; mud-paint
ka:š	look for; search
kaški	play
kaššši	throb
kašrange	a type of vegetables
katre	wall
ka:tu	room
kawirte	house-bird
ka:y	sharpen
kebe	gourd
kecci	peel off
keddi	tear out
ke:llo	beside
kemkem	withdraw
kemis	four
kenkin	hesitate
keri:t	yogurt

kerker	shake
kerri	farm
kiddi	drown
ki:d	bone
kikke	to do one's duty
kikke	fit
kilillatti	cry of joy (n.)
kilille	cry (of joy)
kilkil	fondle
kinna	young
kinisse	thorn
kirig	animal waste
kisib	a large plate
kisir	lute
kissor	scissors
kiššši	shrink
kiyya	Instrument for lifting water
kiyye	lead
ko	owe
kob	close
kocci	edge
kodde	warm (food)
kodo:s	pipe
ko:d	scratch
kofre	hina
kogor	hard
ko:g	raven

kojir	stick
ko:kkinna	beetle
kokki	knock
kole	water-wheel
kolle	stir fight
kolli	stick
kolod	seven/week
kombo	strong
komis	erase or clean
kore	feast
korgos	yellow
koris	shoes
ko:s	stale
ko:sori:d	food
koški	to make basket
kowalli	mirror
koy	face
kub	boat
kuba:s	wrestling
kud	insert
kudbe	okra
ku:d	fellow-wife
kuffe	cover
kujur	bury
kujur	put
ku:j	untie

ku:kki	crotch
kulti	flies
kulu	stone
kulul	hip
kumma	old wife's tale
kummi	touch
kunni	hen-house
kurkum	a stone
kurri	wrap up
kurrid	parcel; baggage
kursel	old
kurti	knee
ku:r	learn
ku:rti:t	a kind of food
kuru	pigeon
kuruka	a bird
kus	open
kusu	meat
kutte	come down

L)

lowwa:y	a cloth placed on head

M)

maga	locust
magas	thief
ma:g	steal
malle	all
malti	east; turkey

man	that
mando	there
mare	corn
maris	get tired
marsigid	being tired
ma:ros	couldn't
marri	splash
masil	sun
ma:sir	without
masse	whisper
maski	long for
ma:yge	brag
me:nna:y	why
mer	cut
me:r	what
me:w	pregnant
mine	how
minne	pigeon
mi:r	prevent; deter
miš̌ki	murmur
mittar	well
moj	style hair
mog	shake
mudul	thumb
mug	leave
mukki	ache

mukkotti	how much
mursi	lie

N)

nabu:t	stick
naddi	bitter
naffa:da	cold
naga:ra	gossip
nakki	drop
nal	see
nalli	injure
narre	luck
nawid	axe
ned	tongue
nelli	fuel
nennu	shade
ne:mbarte	a type of herb
ne:cce	cloud
ne:r	lentil
ne:r	sleep
newerti	self
ne:we	breathe
ni	who
nibid	mat
ni:g	whom
ni:ndi	whose
nij	sew
nisid	year before last year

nob	cook
nobeddi	cooking instrument
nog	go
nogo	slave (female)
nogori	slaves (female)
no:rti	flour
noso	tall
nu:d	every
nugud	slave (male)
nugnug	murmur
nu:kir	make roof
numme	fragrant

O)

o	sing (v.)
o	song (n.)
occi	drag
od	cold
odde	sickness
oddi	sick
odod	shivering
og	chest
ogij	man; invite people for wedding
ogir	lap
olli	pile
ondi	male
ongo	south

orgid	hungar
orig	be hungery
oris	praise
oro:kel	cold
orri	tear
ossi	leg
o:s	take out
owwi	two
oyir	know
o:y	stew

S)

sa:b	cat
sabagitti	sometimes
sabre	wait
sa:y	which
sa:me	beard
samil	village chief
sarki	be afraid
sarki	coward
sarkid	fear
sa:yer	where
satte	shut up
sa:w	mix (socially)
sa:wir	mix (e.g. food)
sa:wwel	not beautiful
sekke	hiccup
sekke	creep

selle	middle
se:n	navel
serin	cud
sib	fly
sibir	feather
sipsib	stare
sibbakinni	without reason
sibe	mud
si:tki	be disgusted
sig	diarrhoea
sigid	scorpion's tale
si:cca	game
silti	cud
singir	sweet (man/woman)
si:r	hair
si:rsi:r	dirt (from sweating)
sitta:k	when
si:w	sand
si:w	be numb
siyye	go rotten
siyyel	rotten
sokke	lift
sollir	hang
sorgi	noses
sorin	nose
so:r	contract (marriage)

so:rkatti	clerk
soros	ill-mannaered woman
sowwi	dry
sowwi	be shy
su:d	empty
su:g	fire
sullu	ghost
sulukki	punch
sunne	smell/sniff
suriyye	bow
suru	seat (made from bricks)
sutti	nail
sutti	mucus

S)

šalla:ta	industrious woman
ša:rti	iron
sa:y	which
šekma	smokeless cigarette
šekeme	chew (cigarette
sere	yes; O.K.
šerkine	choke
šibir	basket
šo:la:g	(hanging) basket
šo:ra	light (not heavy)
šo:ra	loose morally
šugga	cloth wrapped around body
šugum	rinse

šugur	climb down
šuguddi	cause someone to come down
šundi	lips
šu:kki	wash

T)

ta	come
tabbe	dip
tabbe	offer sympathy
taffi	get; contract
tagaddi	cover for dishes
tagir	cover
ta:ga	window
tahle	cajole
ta:j	be in labor
takki	plant
tala:yye	cross
talge	set free
talle	walk
ta:wa	saucepan
te	grave
te:bi	stand
tebte	be patient
te:g	sit down
tekki	him/her
te:l	heat (v.)
tendi	his/her

terri	load
terrid	load (n.)
terig	deaf
te:r	plant seeds
ti	cow
tibil	temple of face
tibis	a kind of vegetable
ticce	brother/sister-in-law
tillatti	perspiration
tille	perspire
tindi	theirs
tinga:r	west
tir	they
tir	give
tirga	cloth
tirt	owner
tissi	hate
ti:w	emptty
tiyye	ape
to	boy
to	enter
tobro	axe
to:d	boy
to:de	some
toffi	feel one's way; walk awkwardly
togir	bucket
togo	under

to:g	break
tokke	snatch
tolle	pull
tommi	cut a marsel
tonjil	good
toske	sneeze
toski	three
to:y	to dirt oneself
toyiddi	throw dust at someone
tu(bos)	belly
tugur	coffin
tukki	beat
tur	dismiss
turub	lie down
turub	sickle
turug	wind
tusse	wind (v.)
tu:s	perjer
tussi	fragile
tu:tte	fart

U)

uburti	ashes
uffe	throw away
uffi	blow
ugme	a bird
ugros	day

ugu	night
ugud	beans
ulli	light (v.)
ullid	fuel
ulug	ear
ulud	fuel
u:l	thread
umbud	salt
undur	put on
undur	insert
ungi	kneel
unni	increment
ur	head
urbid	hole
urdi	baggage
urri	catch
urri	arrest
urrij	fondle
urbir	puncture; consumate marriage
urti	animal
urum	black substance
urumme	black
ussi	empty bowels
uski	deliver (baby)
uskur	put down
u:s	bad
usu	laugh

usud	bottom
uwwe	call

W)

waga	pad
wacci	crack
wakke	slip over
wa:l	calf
warbel	jump
warij	jump several times
wa:rbu	uncovered
wa:rkiddi	uncover
warri	far
wa:w	cross river
wa:wir	rope for wet clothes
wa:yeda:g	watch
we	say
wel	dog
we:r	one
we:re	speech
wesse	ask
we:tir	tell
widlag	rabbit
wigid	worm
wicci	mucus
wi:l	yesterday
wil:ke	feel sick

willi	destroy
wirij	go naked
wissi	star
wissi	dance
wissi	moth
wissidugur	udder
wi:ttu:r	last night

Appendix 3: KN affixes

KN affixes are presented here in the alphabetical order.

a-	progressive
-an	inchoative
-an	hortative
-an(n)	possessive adj.
-ar	nominalizer
-(a)r	locative
bi-	future
-bu:	stative
-de:n	benefactive
-do	locative
-el	relative marker
-ga	consequential
-gen	instrumental
-gi	accusative
-go	concessive
-go:n	coordinate `and'
-gu	plural Number (for pronouns)
-i	plural Number (for nouns)
-i	person marker
-id	noun formative
-iddi	noun formative
-il	relative marker
-ir	(plural) object marker
-ir	transitivizing

-ka	delayed imperative
-ke	habitual imperative
-ki	conditional
-kiddi	causative
-kinny	adjective formative
-kir	causative
-ko:	perfect
-ma	interrogative
-me:(n)	negative maker
-n-	dependent clause marker
-n(a)	genitive marker
-nu	polite imperative
-o(s)-	definite
-r-	neutral tense
-re	interrogative
-r(o)	locative marker
-s-	past tense morpheme
-takki	passive
-itti	noun formative
-tir-	benefactive
-ti	noun formative
-we	plural imperative
-we:r	indefinite marker

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