A grammar of Lumun : a Kordofanian language of Sudan

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Acknowledgements

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Abbreviations and symbols

NB: Abbreviations used in interlineair glosses are in small capitals.

1	first person singular
12	first and second person singular
1A	first person plural exclusive
12A	first person plural inclusive
2	second person singular
2A	second person plural
3	third person singular
3A	third person plural
a.o.	amongst others
ABS	absolute form
adj.	adjective
ASS	associative element
ALLOW	particle expressing allowance (-**na**)
app.	appendix
ATT	particle claiming the attention of the hearer (-**a**)
BEN	benefactive suffix
C	concord
C	consonant
CAUS1	causative suffix -**ɛ**
CAUS2	causative suffix -**ɪɛ**
cf.	compare with (confer)
COMPL	completive TAM-stem
CONJ	conjunctive partice (**á**-)
COP	copula (C-**á**)
DEP	dependent verb form
DEPCOMPL	dependent completive TAM-stem
DEPINCOMPL	dependent incompletive TAM-stem
DEPPRFV	dependent perfective TAM-stem
DIM	diminutive prefix (**ŋa**-)
DIST	distal
e.g.	for example (Latin: exempli gratia)
e.o.	each other
excl	exclusive
fr.	from

g.	gemination
HRT12	hortative pronoun, first and second person singular
HRT12A	hortative pronoun, first person plural inclusive
i.e.	that is (Latin: id est)
IMP	imperative TAM-stem
incl	inclusive
INCOMPL	incompletive TAM-stem
intr.	intransitive
INTS	intensifying
IRR	irrealis
IT	itive
ITVEN	itive or ventive (depending on context)
k.o.	kind of
lit.	literally
LOC	pragmatic locative proclitic (**cík**-)
LOCAPP	locative applicative suffix
n.	noun
N	nasal consonant
NEARSP	near speaker
NEARADDR	near addressee
NEG	negation marker
NOM	nominalization
NP	noun phrase
num	numeral
O1	first person singular object
O12 (etc.)	first and second person singular object
$O_2$2 (etc.)	second person singular as second object
obj.	object
PASS1	passive suffix -(**a**)**kɔ**
PASS2	passive suffix -(**V**)**tta**
PASS3	passive suffix -(**ʊ**)**ra**
PCL	pronoun clitic
PERS	persona prefix (**ɔ́**-)
pl.	plural
PL	plural suffix (-**ŋɔ̂n**)
PLC	plural noun class prefix
PLR	plural agreement marked through reduplication
PLUR	pluractional

POSS1	first person possessor
POSS12 (etc.)	first and second person singular possessor
PPC	prepositional proclitic
PR	present TAM-stem
p.redup	partial reduplication
PRO	common noun subject pronominal clitic
PROBS	pronominal base
PROP	particle expressing proposal (-**mɛ́**)
PST	past TAM-stem
Q	polar question particle (-**ɪ**)
QW	question word marker (-**e̱a**)
REC1	reciprocal suffix -(**a**)**rɔ**
REC2	reciprocal suffix -**ttɔ**
RECOV	information recovery particle (-**a**)
RECOVINF	informal information recovery particle (-**ɛ**)
REDUP	reduplication
REL	relative word
RES	restrictor (**í**-)
sg.	singular
SGC	singular noun class prefix
sp.	species
SUBJ	subjunctive particle (**â**-)
subj.	subject
Sud. Ar.	Sudanese Arabic
TAM	tense, aspect, mood
tr.	transitive
UNCERT	interjection expressing uncertainty (**cʊŋ**)
URG	particle expressing urgency (-**mɛ**)
v.	verb
V	vowel
VEN	ventive
VREF	vague reference particle **cɪk**
vs.	versus

/ /	phonemic presentation
[ ]	phonetic presentation
< >	orthographic presentation
*	ungrammatical; unattested item; item in protolanguage

XXVIII

Some further explanation about glossing conventions is provided in chapter 1.13.

Maps

Fig. 1 Map of Sudan. Source: Google Maps (accessed 7 June 2017).

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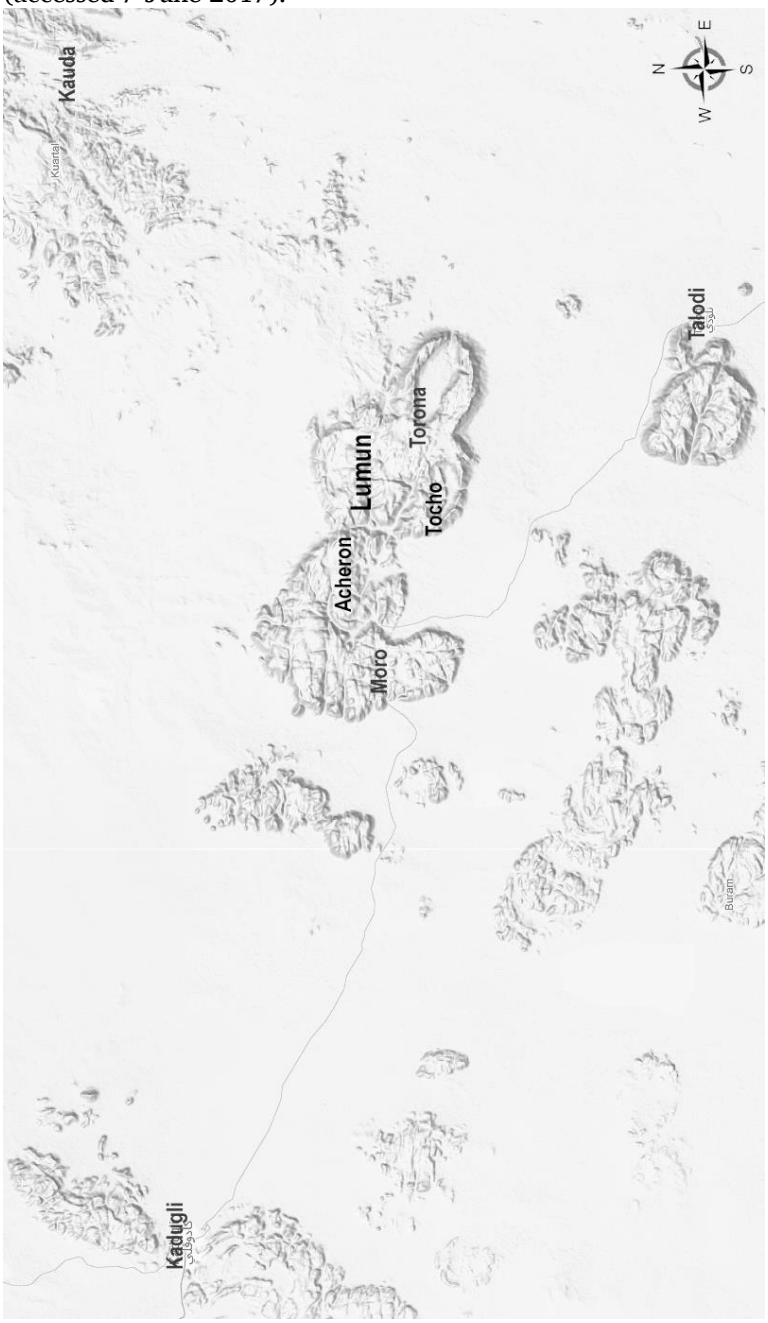
Fig. 2 Southern Nuba Mountains. Source: http://elevationmap.net (accessed 7 June 2017).



1. Introduction

Lumun is spoken in the Nuba Mountains in the Republic of the Sudan by the Lumun people and is classified as Niger-Congo/Kordofanian/ Talodi group. This chapter introduces the Lumun and their language. It also provides information about the research for this book.

1.1. The Lumun people

The Lumun number an estimated 20,000 people, of which ca. 15,000 speak the language (Lewis et al. 2016). An earlier figure is provided by Stevenson (1984, p. 28), who mentions an estimated number of 5,000 Lumun speakers around 1960.[1] The Lumun live on and near Mount Lumun (in Arabic *Jebel Lumun*), which is located in the southern part of the Nuba Mountains in the Republic of Sudan, approximately between 10° 91' 00'' to 10° 84' 00'' latitude and 30° 23' 00'' to 30° 32' 00'' longitude. Mount Lumun forms the northern part of a mountainous range called the Limon Hills. Mount Lumun is not actually one mountain, but a constellation of hills, valleys and plateaus. The Limon Hills, together with the Moro Hills to their west, are surrounded by vast and flat lowland area.

Part of the Lumun community resides nowadays in the greater Khartoum area, where people took refuge after the second Sudanese civil war (1983-2005) reached the Nuba Mountains and the Lumun area. After a short interval of peace, the Nuba Mountains came under attack again in June 2011; military actions against the area continue up to today. Many Lumun, and particularly young men, have since crossed the border to South Sudan.

In their own language, the Lumun refer to themselves as **arrô**, singular **parrô**, and to their home area as **tɔrrô**, literally 'Up at the Lumun people'. As mentioned in Smits (2007a), **arrô** is not, in origin, a proper name, but probably means something like 'our people'. A

[1] The number of Lumun speakers is mentioned under 'Mesakin', 'Settlements in Lumun' (p. 28). As sources for his information about the size of Nuba peoples, Stevenson used the 1955/56 Sudan Census and some reports published no later than 1963.

cognate term **arra** refers to **darra**-speaking people, in the literature referred to as Masakin Tuwal (Vanderelst 2016, p. 4). **parra**/**arra** is also mentioned in Tucker & Bryan (1966, p. 286): **arra kaɲi** 'we are Masakin'. The origin of the (non-indigenous) name 'Lumun' is not clear.

1.2. Lumun and Tira Lumun

The eastern part of the Lumun home area has a mixed population of Lumun speakers and speakers of Tira, a language of the Heiban group of Kordofanian. The speakers of Tira in the Lumun area are referred to in the literature as Tira Lumun[2], and form part of the Lumun community[3]. Several Tira Lumun, however, and particularly of the younger generations, do not speak Lumun, or only very little[4]. Some settlements in the Lumun area are predominantly Tira Lumun, in particular Kərəkkər, which is located on the plains at the north-east side of the Limon Hills. The Tira people themselves live in an area north east of the Lumun area. In the literature, the Lumun speakers are sometimes referred to as Kuku Lumun[5], as opposed to the Tira Lumun. In this study, I use Lumun for both the language and the speakers of the Lumun language.

1.3. Settlements on and around Mount Lumun, and neighbouring peoples

The Lumun heartland and the place where the Lumun people consider themselves to originate from is Tɔɽəmaṯ̂ɔ̂n, in the western part of Mount Lumun. Oral history tells that, from there, people moved south-west to (inner) Ṯaɽʊ (also called Cangaro) after finding a large water place there. This wet area is still there, allowing, amongst others, the cultivation of lime trees and banana plants.

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[2] Also Tira Luman, Tira Limon.

[3] Stevenson (1984, p. 27) provides a number of 12,661 Tira Lumun, mentioned as 'Lumun' under 'Koalib-Moro peoples'.

[4] Information by John Shakir.

[5] Several variants are used: Kuku Lumun, Kuku-Luman, Koko-Luman (Stevenson 1956); Koko Limon (Roden 1972).

The northern boundary of Mount Lumun is marked by a rather steep descent onto the flat plains. The valley of Ṯɔʈî forms the southern boundary of Mount Lumun; beyond Ṯɔʈî to the southern edge of the Limon Hills is Tocho territory. In the west, the Lumun border on the Acheron community, who live in the north-western part of the Moro Hills. The Torona people were the (south-)eastern neighbours of the Lumun in the Limon Hills. Some time after end of 1930-beginning of 1931, during which period language data were collected among Torona people by Donald and Phoebe MacDiarmid (MacDiarmid & MacDiarmid 1931), the Torona have ceased to exist as a community dispersing and integrating into other communities (Norton & Kuku Alaki 2015, p. 65), particularly into the Tira Lumun community. According to Lumun oral history this was due to a conflict with the Lumun over the cutting of **ṯupú**, a kind of bamboo[6].

Lumun people are also living in the surroundings of Mount Lumun. The market town of Saraf Jamous (lit. 'drinking of the buffalo', from Sudanese Arabic *sharaab* 'drinking' and *jaamuus* 'buffalo') lies south-west of Mount Lumun and is the main entry point to the Limon Hills from the south. Here, Lumun live together with (mainly) Moro, Tocho and Acheron. Coming from Umm Dorein, cars don't usually go beyond Saraf Jamous, though it is possible for a car to reach up to the beginning of the valley of Ṯɔʈî.

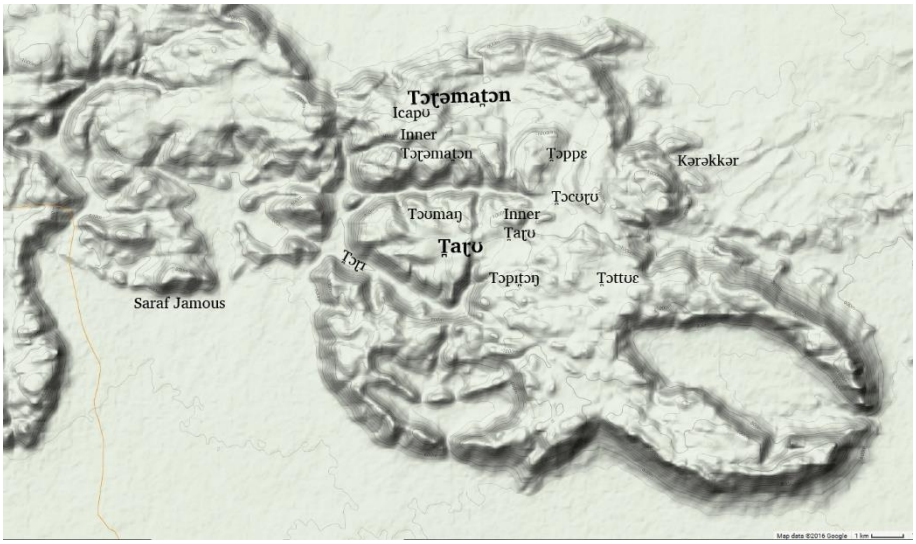
Lumun have further settled on the plains north of Mount Lumun, mixing there (mainly) with Moro and Acheron. In southern direction, away from Mount Lumun, they can be found in Ramla and on Jebel Ṯabuli (north-eastern part). Settlement outside of Mount Lumun seems to be of fairly recent date. Roden (1972, p. 80) reports that, in the early seventies, the Lumun, unlike many other Nuba groups, were still exclusively living and cultivating on their mountain.

Administratively the Lumun area is divided into Tɔʈəmaṯ̂n and Ṯaʈʊ. Tɔʈəmaṯ̂n and Ṯaʈʊ both have an area chief, who is the highest administrative authority. Tɔʈəmaṯ̂n is entirely Lumun-speaking and

[6] Oral history as told by Osman Alope (born around 1940), recorded in September 2012 in Omdurman and summarized by John Shakir.

comprises the north-western part of Mount Lumun; Ṯaɽʊ includes entirely Lumun-speaking areas such as 'inner' Ṯaɽʊ (where the water place is and Ṯɔparəṯêŋ, the place where I made two of the recordings in the appendices), Tɔʊmâŋ, Tɔpɪṯɔŋ and Ṯɔɽî, as well as areas with a mixed Lumun and Tira Lumun population. In mixed areas, which include Ṯɔcʊɽʊ, Ṯɔppê and Ṯɔttʊé, Lumun is spoken, but also Tira. Kərəkkər, also called Ṯɔmpɔrɛ in Tira Lumun, is a mainly Tira Lumun settlement on the plain east of Mount Lumun. Fig. 1 shows a map of the Limon Hills, to which I have added some place names on the basis of information provided by Thomas Kuku Alaki, Luka Kamsur and John Shakir.

Fig. 3 Map of the Limon Hills. Source: http://elevationmap.net (accessed 15 Dec 2016), with added place names.



1.4. Livelihood

The Lumun are subsistence farmers. Their crops include sorghum (in different varieties), groundnuts, sesame, beans, maize, pumpkin, onions and tomatoes. People have fields both directly around their house and further away. Many have a few chickens and several have some livestock (goats, sheep and/or cows); some also have a pig. Edible roots, leafy vegetables, berries and fruits regularly add to the

diet, as may sometimes birds and rodents, trapped in the wild, and, in the wet season, fish. The staple food is a stiff sorghum porridge called **ŋuɽû**, translated in this book with the term 'asida', from Sudanese Arabic *ʿaṣiida*. Relatively few food items come from outside, most importantly salt (though in times of need there is an indigenous replacement), sugar and tea. Some foodstuffs are produced in surplus of private use and sold in the local markets, such as onions; some other products are collected in the wild especially for selling (such as tamarind fruits).

Towards the end of the dry season (March, April) water tends to become scarce in several places and women may have to walk far to get water. In general, the rhythm of life on Mount Lumun is based on the agricultural cycle. Descriptions of the agricultural year in other communities in the Nuba Mountains can, a.o., be found in Meerpohl (2012, about Tima) and Ille (2013, about Miri, Krongo, Moro, Tira and Abol); no studies, however, exist of (aspects of) Lumun society, whether relating to the agricultural cycle and livelihoods, social organization, religious beliefs, cultural practices, material culture, or any other subject. In Nadel's study of Nuba peoples (1947) the Lumun are not mentioned.

1.5. Language situation

Among Lumun on Mount Lumun monolingualism is not at all uncommon, and especially not in the area of inner Tɔɽəmaṯ̪ôn. In other places on Mount Lumun, especially men may have some competence in a neighbouring language such as Tocho and/or Moro, due to their greater mobility as compared to women. Arabic seems to play little role in the Lumun community om Mount Lumun, though particularly men may have (some) competence in it. Knowledge of English is rare among Lumun residing in the home area, but not entirely absent.

In the lowland areas surrounding Mount Lumun, people often have competence in one or more neighbouring languages; they may also have (some) competence in Arabic. In the Arab-dominated and otherwise mixed-language environment of greater Khartoum,

language loss in favour of Arabic proceeds rapidly. Generations born in or near the capital often have little competence in Lumun. Regular visits to people in the home area and vice versa, which used to give important boosts to the language competence of those living outside, have since 2011 again come to a halt.

1.6. Sources on Lumun

The earliest published Lumun data are eighteen words collected by Brenda Seligman during an ethnographical expedition in South Kordofan in 1910. The expedition did not venture into the Limon Hills, but Seligman found speakers of Lumun in Talodi, a town to the south-east of the Limon Hills (Seligman 1910/1911).

The next language data come from a missionary couple from New Zealand, Phoebe and Donald MacDiarmid, who went on a three-months linguistic survey expedition in the Nuba Mountains in 1930-1931. They did not include their Lumun data in the article that appeared in 1931, but the data were made available to missionary and linguist Roland C. Stevenson who mentions them as his main source for Lumun and incidentally provides some examples (Stevenson 1956, p. 142, 145).

In the mid-nineties, after a Lumun refugee community had taken root in greater Khartoum, community members engaged in designing an alphabet, the development of literacy materials and Bible translation. Unpublished notes on phonology were drafted by, amongst others, Jacob (1996) and Kutsch Lojenga (2004); on morphology, amongst others, by Spronk (2000), Yip (2003), Kutsch Lojenga (2004), Smits (2007a and 2007b), Goff (2010), and Lalu Balati, Tager Arkatha, Kabjan Kapija & Shakir Kilia (2015). Unpublished wordlists were compiled by, amongst others, Kuku, Shakir, Kamsur & Tager (2006), unpublished notes on orthography by the Lumun Language Team (2010). Published work on Lumun includes Spronk (2004) on orthography as part of a description of Talodi orthographies, Smits (2011, 2012 and 2013) on morphology, and Stirtz (2012) on narrative discourse. Norton & Kuku Alaki (2015) include Lumun data in their comparative-historical analysis of Talodi languages.

1.7. Classification

In 1981 Schadeberg published three studies on three of the five groups of Kordofanian, a language family originally posited in 1950 by Joseph Greenberg as part of his Niger-Kordofanian phylum (later renamed Niger-Congo) and presented more elaborately in Greenberg's 'Languages of Africa' (1963). Schadeberg's surveys of the Heiban group and Talodi groups (1981a and 1981b), based on data collected during his field trip from October 1974 to January 1975, established these groups as coordinated clusters within the Kordofanian family; his article on the Kadugli (Kadu) group (called Tumtum in Greenberg's work) proposed the —widely accepted— exclusion of these languages from Kordofanian (Schadeberg 1981c). Since 1981 the Kordofanian family has generally been regarded as consisting of the four remaining groups: Heiban, Talodi, Rashad and Katla: '[the] one level of classification within Kordofanian that is unambiguous and non-controversial' (Schadeberg 1989). However, with more data on different languages having become available in recent years, new questions have arisen. Both Dimmendaal and Blench consider Katla (or Katloid) and Rashad a genetic unit within Niger-Congo, but not together with Talodi and Heiban (Dimmendaal 2009a, 2015 (a.o.), Blench 2013). According to Dimmendaal, Katloid-Rashad is more closely related to Benue-Congo than to Talodi and Heiban (2015, p. 59). The issue of whether Lafofa is indeed part of Talodi (supported in Schadeberg 1981b) is also still not settled (Blench 2013, p. 580; Dimmendaal 2015, p. 29), not in the least because sufficient language data are still lacking. A different type of critique on the Kordofanian grouping is Hammerström (2013).

Apart from the case of Lafofa, the internal consistence of the Talodi group has not been contested. Internal subclassification, however, is 'a less clear matter' (Schadeberg 1981b, p. 92); this includes the position of Lumun within the group. In MacDiarmids' (1931) survey Lumun (Luman) had been grouped together with Tocho (Tacho), Acheron (Achron) and Torona; Stevenson (1956-1957) has the same grouping, calling it "Moro Hills dialect cluster". Schadeberg, who did not have access to the unpublished notes of the MacDiarmids, only to Seligman's eighteen words, confines himself to confirming that

Lumun belongs to the Talodi group (p. 12). Recently Norton and Kuku Alaki (2015) have proposed an internal classification of Narrow-Talodi (that is, the Talodi languages except Lafofa) that deviates from Schadeberg's structuring of the Narrow-Talodi languages included in his survey. Schadeberg proposed a cluster of Ngile and Dengebu in coordination with Tocho, Jomang and Nding; Norton and Kuku Alaki, identifying nine Talodi language varieties, posit an initial split between Lumun-Torona and the other seven: Nding, Tasomi-Tata (Jomang), Dagik (Dengebu), Tuwal, Daloka-Aheimar (Ngile), Acheron and Tocho.

The data of Lumun, Tocho, Acheron and Dagik in the table below illustrate the close genetic relations between these languages. The table lists the first ten items of the Leipzig-Jakarta list of basic vocabulary (Haspelmath & Tadmor 2009).

Table 1 Basic vocabulary

		Lumun	*Tocho*[7]	*Acheron*[8]	*Dagik*[9]
1	fire	**ʈ̪ĭk/lĭk**	**ʈ̪îk**	**ɖ̪ik/rik**	**ðɪ** [F]
2	nose	**kɲcɛ/ɲcɛ**		**gɜnze/nɜnze**	
3	to go	**ɛ̃ɔ̃** ; IMP: **ŋ́gɔ**	IMP: **ŋ́gɔ**		**taw** ; IMP: **agʊ**
4	water	**ŋəɽĭ/ɲəɽĭ**	**ŋí**	**ŋɪr; ŋɪrɜk**	**ŋɛr** [FF][10]
5	mouth	**ʈ̪ɔn/lɔn**	**ʈ̪ɔ̂ŋ/lɔ̂ŋ**	**ɖ̪ɔŋ**	**ðʊgəʈɔ/rʊgəʈɔ** [LLL]
6	tongue	**ʈ̪ʊɽɛ/lʊɽɛ**	**ʈ̪ʊ́ɽʊ́ŋɛ/ lʊ́ɽʊ́ŋɛ**	**ɖ̪ʊrɜŋɛ/ rʊrɜŋɛ**	**ðʊləŋɛ/rʊləŋɛ** [LLL]
7	blood	**ŋʊccôk/ ɲʊccôk; ŋɪccôk/**	**ŋícɔk**	**ŋissok**	**ŋeru** [HH]

[7] Data from Schadeberg (1981b).

[8] Data from Norton (2000). Tone is not written on these data.

[9] Data from Vanderelst (2015). The tone class is mentioned between brackets. The tonal realization of the isolated noun may be different (p. 41).

[10] There is a deleted underlying sequence [əkˀ], hence the two tones (Vanderelst 2016, p. 24-25).

		ɲɪccôk			
7	bone	**cʊmɪan/ mʊmɪam**	**cíɲaŋ/ məɲaŋ**	**zɜmaɲɲaŋ/ ðɜmaɲɲaŋ; zɜmbʈɔr/ mɜmbʈɔr**	**səmɛ/məmɛ** [LL]
9	2SG	**ɔúŋ**	**ŋʊʊŋ**		**aŋa** [FF]
9	root	**t̪əka/ləka**	**t̪ʊʊgak/ ləgak**	**d̪uwak/ ruwak**	**ðʊga/rəga** [LL]

1.8. Published sources on other Talodi languages

MacDiarmid & MacDiarmid (1931) and Stevenson (1956-1957) are early sources on Talodi languages. Schadeberg (1981b) provides word lists of six Talodi languages: Ngile (Daloka), Dengebu (Masakin Tuwal), Tocho, Jomang (Talodi), Nding (Eliri) and Tegem (Lafofa), and presents reconstructions of Proto-Talodi nouns and noun classes. Norton (2000) is a study on Acheron nouns; Spronk's overview of Talodi orthographies (2004) was already mentioned above. Vanderelst (2013) is a study on Dagik personal pronouns, Kuku Alaki & Norton (2013) is about Tocho phonology and orthography, and Norton (2013) deals with the Acheron vowel system. Norton & Kuku Alaki (2015) offers a historical-comparative analysis of Talodi languages, including amongst others, Torona data. The authors obtained these data from a last known speaker in her eighties, who was interviewed in Khartoum in 2012, and who passed away in 2014 (Norton & Kuku Alaki 2015, p. 62). Vanderelst's 'A grammar of Dagik' (2016) is the first published grammar of a Talodi language. Vanderelst's book has been available to me while writing this introduction; the manuscript of the main text, however, had already been finished.

1.9. Some sources on Heiban, Rashad and Katla languages

Some studies have recently appeared on languages of the Heiban, Rashad and Katla groups as well. The following is not an exhaustive listing. A phonology of Koalib (Heiban) was published by Quint (2006), as well as some articles, a.o. on benefactive and malefactive verbs (Quint 2010) and loans (Quint 2013). There were articles on

various issues of phonology and tone in Moro (Heiban); recent publications include Rose & Piccinini (2016), Jenks & Rose (2015) and Ritchart & Rose (2015). Articles on other topics deal, a.o., with noun classes and noun phrases, verbal morphology and wh-questions (a.o. Gibbard et al. (2009), Rose (2013), Jenks (2013), Ackerman & Moore (2013), Rose et al. (2014)). Abdalla Kuku published on vowel harmony and on locatives in Laru (Heiban) (2012, 2015) and articles appeared on participant reference in verbs and on comparative constructions in Ebang (Heiban) (Schadeberg & Kossmann 2010; Schadeberg 2013). The manuscripts were published of Stevenson's grammars of two languages of the Heiban group, Tira and Otoro (Schadeberg 2009). On Tima, a language of the Katla group, there were several studies on various topics of phonology and grammar, a.o. on vowels and on morpho-phonology (Bashir 2013, 2015), on nouns (Schneider-Blum 2011, 2012; Dimmendaal 2014), on nominal and verbal morphology and on adjectives (Alamin 2012, 2013), on participant marking and on ditransitive constructions (Dimmendaal 2009b, 2010). There was an article on sociolinguistics (Mugaddam & Abdelhay 2013), and Schneider-Blum produced an illustrated dictionary (2013). Hellwig published on Katla (2013). A survey article of Rashad research data was published (Schadeberg 2013) as well as an article on the pronominal system of Tagoi (Rashad) (Alamin 2015). Lafofa remained the most understudied group, no new language data became available.

An overview of older linguistic and anthropological research in the Nuba Mountains can be found in Schadeberg & Blench (2013); a bibliography of Nuba Mountains research is Dabitz (1985).

1.10. The research for this study

My first introduction to members of the Lumun community was in 2004, when I was in Khartoum to attend the Nilo-Saharan Conference organized by prof. Amin Abu Manga of the University of Khartoum and dr. Leoma Gilley. Afterwards I took part in language workshops by dr. Constance Kutsch Lojenga of Leiden University, amongst others with the Lumun language team. My MA-thesis (2007)

resulted from this, as well as a paper on Lumun locative constructions (2007).

The research for the current study started in September 2007, in the framework of a PhD position at the Leiden University Centre for Linguistics (LUCL). In order to collect language data, I made shorter and longer trips to Sudan, respectively in 2008, 2008-2009, 2010 and 2012; these periods together added up to fifteen months. I travelled to the Lumun area four times, altogether staying there about three and a half months (in 2008, 2009 and 2010); the rest of my fieldwork time was spent in Khartoum and Omdurman. In 2015 I went back to Khartoum for a visit to the Lumun team and the Linguistics Department of the University of Khartoum.

In the initial stages of the research in Khartoum/Omdurman in 2008, my language consultant was Nimeri Alemin from Tɔʊmâŋ, then ca. 30 years old, who was visiting family in Omdurman and who had been trained as a health worker during the war by Doctors Without Borders. The purpose of my first trip to the Nuba Mountains in 2008, undertaken together with John Shakir, was to be introduced to leaders and other community members in Kadugli and the Lumun area, and to explain about the research I planned to do. The stories in appendix I and II were recorded in (inner) Ṯaɽʊ during this first visit.

During my second visit to Mount Lumun I stayed with Nasra, sister of Appanco, in Icapô (Tɔɽəmaṯ̈ôn). She and Risala Abdullai, also from Icapô, were my main language consultants during this visit. Both were then around 20 years old. After Nimeri had returned to the Nuba Mountains, my main consultant in Khartoum became Risala's younger sister Nafisa, who was staying in the capital for some months. During my third and longest visit (two months, early 2009) I was a guest of the Abdullai family in Icapô, working with both Nafisa and Risala. The texts in the appendices II and III were recorded during this period. In 2010, I went on a short trip to the Lumun area on the occasion of a celebration in Ṯaɽʊ.

From the very beginning of my fieldwork in the capital, I had been welcome in the office of the Lumun language team in Omdurman,

consisting of Lukka Kamsur from Ţɔppɔ́ (Tocho area), whose family came from Ţɔpaɽǒ (Ţaɽʊ), Lotti Tager, born in Tɔţəraŋkâŋ (Tɔɽəmaţ̂n), Markos Lalu from Ţɔɽəmʊ (Ţaɽʊ) and team leader John Shakir from Ţɔɽî. Born between 1970 and 1977, three of these men had come to Omdurman as adolescents/young men and had been in the capital for many years. Only Markos Lalu was living in Ţaɽʊ during my first fieldwork periods; he sometimes travelled to Omdurman. All team members had, for shorter or longer periods, been back to Mount Lumun since the war had ended.

Several times I sat in on working sessions and language discussions of the team, and we made recordings of Lumun words and stories. After the initial years, John Shakir became my most important language consultant. Following on the 1st Nuba Mountain Languages Conference in Leiden in September 2011 he stayed a further three weeks in Leiden and during my (one-month) visit in 2012 he was my main language consultant. The rest of the time, we mostly worked through the internet while I was in the Netherlands.

1.11. Language examples in this study

Example sentences in this book come from different sources. A first source are the recordings. Six texts by three different speakers were recorded in Ţaɽʊ and Tɔɽəmaţ̂n and fully transcribed with the help of Nafisa Abdullai and John Shakir (in total 22 minutes of spoken text). Four of these texts are included in the appendices. The other two, by Nafisa Abdullai, are an instruction how to make a dish of groundnuts and vegetables called **pacıkkôt** and an animal story, 'The story of the jackal'.[11] Another source were written texts. These include stories and other texts written by members of the Lumun language team and by others during language workshops organized by the language team on Mount Lumun. Some of these texts were checked and revised by John Shakir together with the authors during a later visit to the area. Furthermore, Nafisa Abdullai wrote some short essays and stories when I worked with her in Khartoum, one in

[11] Both were recorded in Tɔɽəmaţ̂n in February 2009.

the form of a dialogue. She also wrote a letter. Of some of these written texts recordings were made.

I further used translated Bible portions in different stages of checking and correction, in particular the gospels and the Acts of the Apostles. Publication of the New Testament in Lumun is foreseen in 2018. Parts of the Old Testament have been translated as well, or are in the process of being translated. Versions of the books of Genesis, Exodus, Ruth and Jonah have been available to me.

Several examples were taken from these various written sources. All examples were checked with a language consultant, also because tone is not part of the Lumun orthography. In the case of examples from translated Bible parts, I mention the book and verse. In the case of examples from other written texts I mention the type of text between parentheses, for example 'fr. written story'. Apart from 'The story of the jackal' by Nafisa Abdullai, the story 'A boy and a goat' by John Shakir is explicitly mentioned whenever an example is taken from it, because this story has been published in Stirtz (2012)[12]. A source has not been mentioned in case of variations on a phrase, clause or sentence from a text.

Examples were also obtained through elicitation, which was often informed and inspired by constructions found in written or recorded texts or in pieces of conversation. Examples also came about through trial of constructions produced by myself —typically variations on attested constructions— and variants and alternatives volunteered by consultants.

It must be remarked that writing (and reading) Lumun is by no means easy for most members of the Lumun community. Literacy in the community is low, and among women even extremely low. Lumun as a written language only began to be introduced in the home area after the cease-fire of 2002, when members of the team were able to travel to the Lumun area for the first time after many years, and some of them could stay there for several months. Before

[12] Tone has not been marked in Stirtz (2012).

that, as far as people had learned to read and write, this was in Arabic rather than in the Roman script used for Lumun. During the short years of peace before June 2011, Kenyan teachers came to the area introducing the Kenyan school curriculum and using the Roman script. It was typically students of this generation who picked up on reading and writing Lumun. Opportunities to practice writing and spelling, however, remained limited, also because of the scarcity of paper and the absence of electricity and/or a mobile phone network in the area.

1.12. Orthography

The orthography I use is partly the same and partly different from the orthography as used by the Lumun team. Where the Lumun orthography writes a single consonant with a digraph or a combination with a diacritic, I use IPA-symbols (**th** vs. **t̪**, **ny** vs. **ɲ**, **ng** vs. **ŋ** and **'r** vs. **ɽ**). However, I use **kw** for the labialized velar oral consonant, just as in the Lumun orthography. The ATR-contrast between vowels is signalled in the Lumun orthography by the presence or absence of two dots over the vowel (**i** vs. **ï** and **u** vs. **ü**). I write **i̱**, **u**, **ɪ**, **ʊ**, **ɛ**, **ɔ**, **a** and an eighth vowel **ə**, which is an additional vowel as compared to the Lumun alphabet. Where I use **ə**, the Lumun team either writes no vowel (this practice is of fairly recent date), uses **a**, or uses the vowel with which **ə** is coarticulated. I write **i̱** instead of **i** because, when marked for tone, **i** is hardly distinguishable from **ɪ**.

Table 2 Orthography: consonants

Lumun orthography	**p**	**t**	**th**	**c**	**k**	**kw**	**m**	**n**	**ny**	**ng**	**l**	**r**	**'r**	**w**
This book	**p**	**t**	**t̪**	**c**	**k**	**kw**	**m**	**n**	**ɲ**	**ŋ**	**l**	**r**	**ɽ**	**w**

Table 3 Orthography: vowels

Lumun orthography	**ï**	**ü**	**i**	**u**	**e**	**o**	**a**	
this book	**i̱**	**u**	**ɪ**	**ʊ**	**ɛ**	**ɔ**	**a**	**ə**

I basically use phonemic spelling, but at word-internal morpheme boundaries apply 'surface' spelling rather than 'deep' spelling. That is, in case of word-internal change to a different phoneme (due to assimilation or neutralization), I write this different phoneme. For example:

pɪɽɪmampíɽɪman paát 'the spider has come' (<**pɪɽɪman-píɽɪman paát**)

In connected speech, both (underlying) **n**'s in 'spider' change to **m** before **p**, which, like **n**, exists as a phoneme. I write **m** instead of **n** word-internally, but not at the word boundary.

Sudanese Arabic words are cited, where possible, from Tamis & Persson (2011), otherwise from Hillelson (1930). I give the terms only in Roman script, using the transcription as in Tamis & Persson.

1.13. Glossing

The glossing in this book is based on the Leipzig glossing rules, with some deviations. My way of glossing is as follows:

A hyphen indicates separable morphemes within a Lumun word; no distinction is made between affixes and clitics. A hyphen in a Lumun word corresponds with a hyphen in the English gloss. A tilde (~) in a Lumun word marks a separable reduplicated part that is glossed with a grammatical meaning (either PLR (plural) or INTS (intensifying)). A tilde in a Lumun word corresponds with a tilde in the gloss.[13] In the absence of a (clear) grammatical meaning, a reduplicated part is just glossed with REDUP and a hyphen.

A dot in a Lumun word signifies a separable morpheme or a historical formative that is left unglossed. One specific use of the dot is in inflected verbs, separating its marking for tense/aspect/mood from the lexical stem. In such cases the dot relates to a colon in the gloss, but the two are not aligned (unless coincidentally). In the

[13] Elsewhere in the text, the tilde indicates forms in free variation.

Lumun word the tense/aspect/mood marking may precede or follow the lexical stem; in the gloss the lexical meaning of the verb is always mentioned first, followed by the colon, after which the tense/aspect/mood meaning of the verb is indicated. For example:

ʊkʊl w-a.llɔ̂
child C-run:INCOMPL
the child will run

A dot between two lexical and/or grammatical meanings in the gloss is used in case of a portemanteau morpheme in Lumun (i.e. two morphemes that have fused in an inseparable way).

Except in a few special cases, noun class prefixes are not glossed, nor separated from the nominal stem by a dot. Verbal derivational suffixes are only glossed in chapter 14 on verbal derivation.

An underscore is used in the gloss when the English needs two words to express one meaning. Clarifying remarks in the English translations are put between parentheses.

1.14. Organization of the book and descriptive approach

This descriptive grammar of Lumun starts out with issues of phonology, turning then to parts of speech and morphology. The chapters 2 and 3 provide inventories of the distinctive consonants, vowels and tones, their distribution and realization in different environments. Some cases of morpheme-specific behaviour have been included as well. I use the notion of 'tone pattern', considering segments and tone as partly independent, as in auto-segmental phonology (Goldsmith 1976). The next chapters deal with morphology: parts of speech (i.e. words with certain grammatical functions) as well smaller morphological units, i.e. clitics and affixes (for example 'concords' (chapter 5), the 'restrictor' (chapter 9), verbal inflection (chapter 12) and verbal derivation (chapter 14). The chapters on morphology make use of and are informed by linguistic concepts and descriptions as found in Payne (1997) and Dixon (2010a, 2010b, 2012). Addressing a certain morpheme, I typically

first describe its form, including its tonal characteristics, then its meaning and its use in context. The latter provides an opportunity to include remarks on syntax. Issues of syntax are in particular offered in chapter 14 on derivation, including a statement on basic word order. The morphological description is guided by form units with certain meanings as present in the language. Just occasionally will I take meaning as point of departure, in particular when a specific form is common in other languages but lacking in Lumun (e.g. Lumun has no reflexive pronoun(s)). This description is synchronic, i.e. it describes what is there in the language at this point in time. On a few occasions I, nevertheless, propose what may have happened historically, with the aim to clarify the current phenomena.

2. Phonology

This chapter presents the Lumun phonemes and their distribution and realization, as well as processes of assimilation and elision across morpheme boundaries within the phonological word and across word boundaries. The term 'phonological word' refers here to a lexical root which may be (partially) reduplicated and to which one or more affixes and/or clitics may be added. Phonological rules typically apply within this domain. In connected speech, the same phonological rules may also apply post-lexically. The notions 'word-initial' and 'word-final' therefore refer to the position of a phoneme in an isolated word.

Specific morphemes may interact with an adjacent phoneme or morpheme in a specific way. Such morpho-phonological processes are mentioned in the chapter or section concerned with the morpheme, but in some cases also (briefly) noted here.

Make-up of phonological words

Verbal affixes comprise the concords and derivational and inflectional affixes. Concords on verbs are markers of agreement with the subject (pro)noun. Clitics to the verb are the subject and object pronominal clitics and the relative clitic (**ɪ-**). Certain auxiliaries form a phonological word together with the verbal stem. Affixes and clitics to adjectives comprise the concords, subject pronominal clitics and the relative clitic.

Nominal affixes are the noun class prefix, the persona prefix (**ɔ́-**) and the plural suffix (**-ŋɔ̂n**). The prepositional elements **ɪ-** 'in', **nɔ-** 'on, at', **tɔ-** 'up on, up at', **ʈɔ-** 'at' and **ń-** 'with, by, (away) from' are adnominal clitics, as is connexive C-**ɔ-** 'of' (where C stands for concord). The locative focus pro-clitic **cík-** can precede a locative prepositional proclitic (PPC).

Other word categories are, or can be, morphologically complex as well: modifiers such as pronominal possessors and demonstratives contain a concord that marks agreement with the noun they modify;

the independent pronouns contain the persona prefix; absolute prepositions contain a prepositional proclitic; adverbs can involve reduplication; and question words may have the suffix -**t̪a**.

Some enclitic particles are not restricted to a certain word category. The question clitics -**ɪ**, -**a** and -**ɛ** (chapter 20.2) and the discourse clitics -**a**, -**tɪ**, -**mɛ́** and -**na** (chapter 17.2) are attached at phrase or clause level.

The observations in this chapter are primarily based on the speech of one speaker, John Shakir (JS), who was born in the valley settlement T̪ɔʈî. Some additional remarks are made on the basis of the speech of Nafisa Abdullai (NaA) from Tɔʈəmaṯ̪ô̪n, and Nimeri Alemin (NiA) from Tɔʊmâŋ, both uphill settlements. Nimeri Alemin speaks with more lenition, assimilation and elision than Nafisa Abdullai, both within phonological words and across word boundaries. The speech of John Shakir can be placed somewhere in between. According to JS the differences between the speech of NaA and NiA represent general differences between the speech of inhabitants of Tɔʈəmaṯ̪ô̪n on the one hand, and Tɔʊmâŋ and T̪aʈʊ on the other hand. Inhabitants of Tɔʊmâŋ and T̪aʈʊ typically speak very fast, while several of the speakers from Tɔʈəmaṯ̪ô̪n speak somewhat slower and more articulated. It appears that there is no stereotypical picture of the speech of T̪ɔʈî, possibly due to its more heterogeneous population: Lumun people from different uphill places have settled in T̪ɔʈî.

In this chapter I have added several phonetic transcriptions, which aim to approximate actual pronunciations of the segments. Pitch is indicated on these transcriptions by an acute accent (high pitch), circumflex accent (falling pitch) or macron (slightly raised pitch). The slightly raised pitch corresponds to a rising toneme in prepausal position (see chapter 3). Low pitch is left unmarked in these phonetic transcriptions.

2.1. Consonants

The consonant phonemes of Lumun are presented in the following table. The parentheses around **ŋ**$^{\mathbf{w}}$ indicate its marginal status.

Table 4 Consonant phonemes

	bilabial	*dental*	*alveolar*	*retro-flex*	*palatal*	*velar*	*labialized velar*
obstruents	p	t̪	t		c	k	k^w
nasals	m		n		ɲ	ŋ	(ŋ^w)
rhotics			r	ɽ			
lateral			l				
approxi-mant							w

An overview of the phonetic consonants follows here. Sounds which are infrequent are presented between parentheses. Some very incidental sounds are not included in the table, but will be mentioned in this chapter. Not explicitly mentioned in the table are unreleased **t** [tˀ] and **k** [kˀ]. Notably, Lumun lacks voiceless fricatives.

Table 5 Phonetic consonants

	bilabial	*dental*	*alveolar*	*retroflex*	*palatal*	*velar*	*labialized velar*
voiceless plosives	p	t̪	t		c	k	k^w
voiced plosives	b	d̪	d		ɟ	g	g^w
voiced fricatives	β	ð			ʝ		
approxi-mants					(j)	ɰ	ɰ^w w
nasals	m, mː	n̪	n, nː		ɲ, (ɲː)	ŋ, (ŋː)	(ŋ^w)
rhotics			ɾ, r, rː	ɽ			
lateral			l, lː				

2.1.1. The phonemes **p**, **t̪**, **t**, **c**, **k** and **k^{w}**

The phonemes **p**, **t̪**, **t**, **c**, **k** and **k^{w}** each represent a series of allophones which are fully conditioned by their position in the isolated word and, word-medially, by adjacent sounds. Table 6 presents the realizations in different positions in the isolated word, table 7 the realizations in additional environments that occur across word boundaries. The parentheses around the realization of the phoneme **t̪** in word-final position indicate that the phoneme is rare in that position.

Table 6 Allophones and distribution of **p**, **t̪**, **t**, **c**, **k** and **k^{w}** in isolated words

	/p/	/t̪/	/t/	/c/	/k/	/k^{w}/
word-initial and as geminate	[p]	[t̪]	[t]	[c]	[k]	[k^{w}]
word-final		([t̪ˀ])	[tˀ]		[kˀ]	
after a nasal	[b]	[d̪]	[d]	[ɟ]	[g]	[g^{w}]
between vowels	[β]	[ð]	[ɾ]	[j̰]	[ɯ]	[ɯ^{w}]
before a nasal			[N]*		[N]*	

*This occurs only before a morpheme boundary, in practice before a suffix or enclitic particle. In such cases **t** and **k** fully assimilate to the nasal. The resulting geminate is then shortened. Before the clitics -**na** and -**mέ** (see 17.2.2 and 17.2.4), however, **t** and **k** become nasal, but retain their place of articulation. Some examples follow later in this section.

Table 7 Realization of **p**, **t̪**, **t**, **c**, **k** and **k^{w}** in additional environments in connected speech across word boundaries

	/p/	/t̪/	/t/	/c/	/k/	/k^{w}/
before certain nasal-initial words			[r]		[ɯ]	
after **l** or **r**	[β]	[ð]	[ɾ], [r]	[j̰]	[ɯ]	[ɯ^{w}]

Articulation of dental and alveolar stops

The difference between [t̪] and [t], [t̪ˀ] and [tˀ], and [d̪] and [d], respectively, is a difference of both the active articulator and the target area. [t̪], [t̪ˀ] and [d̪] are lamino-dental: they are articulated with the blade of the tongue touching the teeth but not becoming visible, whereas [t], [tˀ] and [d] are apico-alveolar: articulated with the tip of the tongue touching the alveolar ridge.

For ease of reference, I refer to the phoneme series **p**, **t̪**, **t**, **c**, **k** and **k^{w}** as the 'obstruent phonemes', though some of the intervocalic allophones are not obstruents.

Obstruent phonemes in word-initial position

The following series substantiate the phonemic status of **p**, **t̪**, **t**, **c**, **k** and **k^{w}**[14], and illustrate their pronunciation as voiceless stops in initial position of isolated words.

paman	[paman]	'tree (sp.)'
t̪amít	[t̪amítˀ]	'healing'
tamʊt	[tamʊtˀ]	'rat (sp.)'
caman	[caman]	'fruit of paman-tree'
kamʊ́r	[kamʊ́r]	'sand'
kwanɔ̂k	[k^{w}anɔ̂kˀ]	'moon'

A further series shows that **kw** is different from a sequence **kʊ** or **ku**:

kwa	'chaff'
kʊâ	'digging tool (k.o.)' (plural: **ʊâ**)
kʊá	'trees (sp.); sticks for beating' (singular: **pʊá**)
kʊá	'fruit of *pʊa*-tree' (plural: **ʊá**)
kua	'strand of hair' (plural: **tua**)

[14] I use **kw** (geminated: **kkw**) for the labialized velar oral consonant in the orthography.

Obstruent phoneme in word-final position

Obstruents in final position of isolated words are pronounced unreleased. They are restricted to **t** and **k** in words of Lumun origin.

ci̯t	[cít˺]	‘eye’
cǐk	[cīk˺]	‘place(s)’

Unreleased **p** and **t̪** sometimes occur word-finally in loans. Final **t̪** corresponds to different sounds in the source words.

ɔcâp	[ɔʝâp˺]	‘friend’	(< Sud. Ar. *ṣaaḥib*)
aləpaccût̪	[al^{ə}βacût̪˺]	‘jackal’	(< Sud. Ar. *al-baʕshoob*)
mʊ́ccʊt̪	[mʊ́cʊt̪˺]	‘comb’	(< Sud. Ar. *mushuṭ*)
mʊ̂t̪	[mʊ̂t̪˺]	‘bananas’	(< Sud. Ar. *mooz*)
alə́pɪrít̪	[al$^{ə́}$βɪɾít̪˺]	‘prayer mat’	(< Sud. Ar. *al-birish*)

Obstruent phoneme after a nasal

After a nasal, the phonemes **p**, **t̪**, **t**, **c**, **k** and **k**^{w} are realized as voiced stops. These clusters are always homorganic:

t̪ʊmpîl	[t̪ʊmbîl]	‘rainbow’
ɔnt̪ɛ̂	[ɔn̪d̪ɛ̂]	‘wash’
ɔcíntɔ	[ɔʝíndɔ]	‘wrestle’
kɪɲcɛ	[kɪɲɟɛ]	‘nose’
ci̯ŋki̯	[ciŋgi]	‘sun’
t̪ʊŋkwat	[t̪ʊŋg^{w}at˺]	‘sheep’

The same applies across a word-internal morpheme boundary and across word boundaries in connected speech: nasal and voiced stop are homorganic clusters.

Some examples follow here with an obstruent phoneme after the (moraic) prepositional proclitic (PPC) **ń-** ‘with, by, (away) from’. The PPC assimilates for its place of articulation to the following stop:

n-tacɔ́k	[n-daɟɔ́kˀ]	‘on foot’ (lit.: with the legs)	(< **ń-** + **tacɔ́k**)
ɲ-caún	[ɲ-ɟaún]	‘with the finger’	(< **ń-** + **caún**)

Also across word boundaries it is the preceding nasal that, if necessary, adapts its place of articulation to the following obstruent (third example):

təllɔun tɛ̂t	[tʰlːɔun dɛ̂tˀ]	‘the caterpillar (sp.) has gone’
kəmaráŋ kɔpʊl	[kʰmaɾáŋ gɔβʊl]	‘the shield of the person’
cakkɔ́ŋ cɪn	[cakɔ́ɲ ɟɪn]	‘my calabash (k.o.)’

I analyse root-internal sequences of a nasal and a stop as consonant sequences, not as prenasalization. Evidence for this is that there are no morpheme-initial nasal-and-stop sequences, for which reason syllable-initial nasal and stops are not expected either.[15] Word-initial nasal and stops sequences do occur (some examples were given above), but they result from attachment of a nasal morpheme (**ń-** ‘with, by, (away) from’, or a nasal personal subject pronoun clitic). Such sequences are realized differently by different speakers. In the example below, some tend to pronounce a very short vowel **ɪ** [ᶦ] before the nasal, others a sequence **mb**, again others pronounce the sequence very much as a single unit.

m-paîk	[ᶦmbaîkˀ]	[mbaîkˀ]	[ᵐbaîkˀ]	‘I am’

If root-internal nasal and stop clusters were typically preceded by a long vowel, this would traditionally have been seen as pointing towards prenasalization (causing compensatory lengthening) rather than towards an analysis as nasal and stop sequence (but see Downing 2005 for an alternative view).· In Lumun, however, long vowels are not attested before nasal and stop clusters – on the

[15] I rarely use the notion ‘syllable’ since it plays no part in my analysis. I nevertheless did some syllabification exercises with some consultants, but these had inconsistent outcomes, also with one and the same speaker. Outcomes would sometimes go against syllabification principles: a few times a break was made between a consonant and a following vowel. JS tended to syllabify a nasal and stop sequence as an onset-cluster, both word-initially and word-medially.

contrary, the nasal of a nasal and stop sequence in some cases functions as the nucleus of the syllable that precedes the stop:

cʊrənt̪ʊk [cʊrᵊnðʊkˀ], [cʊrn̩ðʊkˀ] ‘small bell’

Obstruent phoneme between vowels

Between vowels, non-geminated **p**, **t̪**, **c**, **k** and **kw** are phonetically realized as weakly articulated voiced fricatives ([β], [ð], [ʝ]) and approximants [ɰ] and [ɰʷ]).

kapık	[kaβıkˀ]	‘rain’
ɔt̪ô	[ɔðô]	‘pull’
tacɔ	[taʝɔ]	‘grass’
ıkɛ	[ıɰɛ]	‘giraffe’
ɔkwô	[ɔɰʷô]	‘blow’

The friction of especially [ʝ] is very light, almost absent, still there is clearly obstruction.

Intervocalic realization as voiced fricatives or approximants is also evidenced across morpheme and word boundaries. Some examples with the prepositional proclitic **ı-** ‘in’:

ı-parantáŋ	[ı-βaɾandáŋ]	‘in the calabash (k.o.)’
ı-cakkôŋ	[ı-ʝakôŋ]	‘in the calabash (k.o.)’
ı-kwôk	[ı-ɰʷôkˀ]	‘in the shoe’

Some examples with the enclitic question particle **-ı**:

aləpaccút̪-ı	[alᵊβacúð-ı]	‘a jackal?’
tʊk-ǐ	[tʊ̄ɰ-ī]	‘a dog?’

Processes across morpheme-boundaries show that word-internally the phoneme **t** is realized as **ɾ** between vowels. Note that, in the spelling, I use **r** for the intervocalic allophone of **t**.

tʊ́	[tʊ́]	‘river’
ɪ-rʊ́	[ɪ-ɾʊ́]	‘in the river’
kɪ̌t	[kɪ̄tˀ]	‘wild chicken’
kɪr-ɪ̌	[kɪ̄ɾ-ɪ̄]	‘a wild chicken?’

In the speech of JS, t and r are neutralized between (full) vowels. In that environment both are realized as [ɾ]. For NaA, however, this seems to be different (see further in 2.1.5 about rhotics).

Root-internal geminates

There are also root-internal voiceless stops between vowels. They are analysed as geminates. Some examples:

kappəʈí	[kapˈʈí]	‘spoon’
caṯṯak	[caṯakˀ]	‘bowl’
tuttû	[tutû]	‘dung’
cakkɔ̂ŋ	[cakɔ̂ŋ]	‘calabash (k.o.)’
kʊkkwâ	[kʊkʷâ]	‘tool for threshing sorghum’

Evidence for an analysis as geminates comes from behaviour across morpheme boundaries, as exemplified below.

Adjacency of two identical or different obstruent phonemes across a morpheme boundary

Adjacency of two **t**’s or of two **k**’s results in a voiceless stop. The sound is underlyingly a geminate, but is pronounced short.

kwímmát tón	[kʷím:á tón]	(< **kwímmat tón**)	‘s/he saw us’
kaṯʊk kîn	[kaðʊ kîn]		‘my spear’

Since **p**, **ṯ**, **c** and **kʷ** do not occur word-finally (with a few exceptions for **p** and **ṯ**) the adjacencies **p**-**p**, **ṯ**-**ṯ**, **c**-**c** and **kʷ**-**kʷ** are not attested across morpheme boundaries.

Adjacencies of **t** or **k** and another obstruent phoneme across a word-internal morpheme boundary or a word boundary in connected speech are realized as short voiceless stops. As a rule, such stops are articulated at the place of articulation of the second composing phoneme. Word-internally, I write adjacent obstruent phonemes as geminates.

t + p > pp
mpɪmmát paʊn [mbɪmːá paʊn] ‘I saw a rat’

t + t̪ > t̪t̪
ɪt̪t̪aîk (< **ĭt- t̪aîk**) [ɪt̪aîkˀ] ‘you and I are’

t + c > cc
cɔkɔccɔkɔt (< **cɔkɔt cɔkɔt**) [cɔɰɔcɔɰɔtˀ] ‘quickly’

t + k > kk
mpɪmmák kɪn (< **mpɪmmât kɪn**) [mbɪmːá kɪn] ‘I saw them’

t + kw > kkw
mpɪmmát kwa [mbɪmːá kʷa] ‘I saw the chaff’

k + p > pp
mpaɪk paɛ̃̊ [mbaɪ pajɔ̃̊] ‘I am going’

k + t̪ > t̪t̪
t̪akkəɽʊt̪-t̪ákkəɽʊk (< **t̪akkəɽʊk t̪ákkəɽʊk**
[t̪akᵘɽʊ-t̪ákᵘɽʊkˀ] ‘butterfly’

k + t > tt
cɪt-tɔ́kɟt (< **cík- tɔkɟt**) [cɪ-tɔ́ɰítˀ] ‘firstly, at first’

k + c > cc
cɪk caɪk cíɽɪma [cɪ caɪ cíɽɪma] ‘it is getting dark’

Upon attachment of the phrasal enclitic **-tɪ** ‘you know’ (see also 17.2.3) a specific morphophonological rule applies. It is now the

place of articulation of the first composing phoneme that is dominant:

k + **t** > **kk**

m-p-ɔká.t	**cık**	**a-n-ɟcat**	**cık-kı**	(< **cık** + **tı**)
1-C-be:COMPL	VREF	CONJ-1-lie_down:DEPINCOMPL	VREF-you_know	

I was lying down, you know

Geminates in word-initial position

Geminates also occur in word-initial position, but result then from concatenation of two morphemes: a common noun pronominal clitic and a concord. While in the following sentence **p** of **pɔŋɔt̪ê** and **k** of **kəpá** are realized as [β] and [ɯ] respectively, the initial consonant of **ppáɽəkɔ** 'he (the cat) will eat' is realized as [p]. For this reason I write double **p**:

pəlla	**p-ɔŋɔt̪.é**	**ıttı**	**p-p-á.ɽə́kɔ́**	**kə́pá**
cat	C-like:COMPL	that	PRO-C-eat:INCOMPL	meat

the cat wants to eat meat

Obstruent phoneme before a nasal

Across a morpheme boundary, an obstruent phoneme can precede a nasal. With a few exceptions, such sequences are pronounced as nasals which are articulated at the place of articulation of the nasal. Though geminates underlyingly, they are pronounced short. That they are underlyingly geminated is evidenced by the fact that the initial velar of the morpheme **-ŋɔ̂n** (the plural marker of nouns with the persona prefix, discussed in 4.10.3) is not elided. If a preceding **t** or **k** would have been completely elided and **ŋ** would be a singleton, it would undergo elision itself (see also under 2.1.3). Since word-internal intervocalic length of **ŋ** is attested (though rarely) I write **ŋ** as a singleton within the word:

ɔpɪ-ŋɔ̂n (< ɔpɪŋ-ŋɔ̂n < **ɔpít -ŋɔ̂n**) ‘servants, masters’
ɔcɔ́kkárɔ́-ŋɔ̂n (< ɔcɔ́kkárɔ́ŋ-ŋɔ̂n < **ɔcɔ́kkərɔk -ŋɔ̂n**) ‘Hunchback and his companions’

A word-internal case that, in analogy to sequences **t-ŋ** and **k-ŋ**, can be regarded as full assimilation of an obstruent phoneme to a nasal across a morpheme boundary follows here. Here too, the resulting geminated nasal is pronounced short. Since there is an intervocalic length contrast for **n** (see 2.1.3), the resulting nasal is represented as a singleton.

cɪ-nɔ́-cʊn̪t̪ʊ́n (**cík- nɔ- cʊn̪t̪ʊ́n**) ‘(right) at the meeting circle’

Across word boundaries full assimilations of **t** or **k** to a following nasal followed by shortening of the nasal when the nasal-initial element is a noun (first and second example below), a pronoun (ex. 3), a question word (ex. 4), the concord **n-** (ex. 5), the prepositional proclitic **nɔ-** ‘on, at’ attached to a common noun (ex. 6-7), or the absolute preposition **nán** ‘on, at’ (ex. 8):

m-p-ɪmmá.t	**mən̪ɔt**	[mbɪmːá məðɔtˈ]
1-C-see:COMPL	stars	

I saw the stars

m-p-ɪmmá.t	**ɲura**	[mbɪmːá ɲuɾa]
1-C-see:COMPL	bulls	

I saw the bulls

m-p-ɪmmá.t	**nɔ́n**	[mbɪmːá nɔ́n]
1-C-see:COMPL	O2A	

I saw you (PL)

ŋ-kw-ɔllíné.t	**ŋín-n̪a**	[ŋgʷɔlːíné ŋínn̪a]
2-C-run_for:COMP	what-QW	

why did you run?

nɔk	**n-ɔ́-ʊl**	[nɔ nɔ́ʊl]
waterplaces	C-of-people	

the waterplaces of the people

a-kw-ákkakat **nɔ-ppăn** [aɰʷákāɰą nɔ̄pān]
CONJ-3-come:DEPPRFV on-room

and s/he came into the room (the speaker is in the room)

m-p-ɪmmáṯ-ɔk **nɔ-cɔɽŏŋ** [mbɪmːáðɔ̄ nɔ̄ɟɔ̄ɽɔ̄ŋ]
1-C-see_at:COMPL-O3 on-mountain

I saw him/her on the mountain

ṯʊɽít **ṯ-á.rəttakɔt** **nán** [ṯárʾtaɰɔ nán]
food C-be_added:INCOMPL on:ABS

the food will be added to it

What happens to **t** or **k** followed by **m**, **n** or **ɲ** could actually also be regarded as elision of **t** or **k** before **m**, **n** or **ɲ**. As explained above, this is not possible for **t** or **k** followed by **ŋ**. In analogy to the latter case, I regard all these cases as involving full assimilation followed by shortening. There is, moreover, one case in which (possible) **t**-nasal sequences tend to be realized with some length. It concerns the construction **at**-C-**ʊt** (or **át**-C-**út**) + C-numeral 'both', 'all three' (etc.) (see 10.4.2). Since some length tends to be pronounced, I write geminates:

namʊt án-n-ún-néɽá 'both rats (sp.)'

t* and *k* realized as [r] and [ɰ] before *n

t and **k** are, however, realized differently before a word that starts with (an allomorph of) the prepositional clitic **ń-** 'with, by, (away) from', before **ná** 'where', and before **nɔ**- 'on, at' when it is attached to a (pro)noun or question word that has the persona prefix **ɔ́**-. In these environments **t** and **k** are realized respectively as trill [r] and [ɰ]. What causes these different realizations is not clear.

***t* and *k* before *ń-* 'with, by, (away) from'**

Examples follow here with **t** realized as [r] before **ń-** 'with, by, (away) from'. In the first to third examples **t** is (part of) a verbal

inflection marker, in the last example **k** is the final consonant of an object pronominal clitic.

a-kw-ákkakat **n-úɣʊpa** [auɥʷákaɯar núɣʊβa]
CONJ-3-come:DEPPRFV with-spirits

and s/he came with the spirits

a-kw-ákkakat **n-tacɔ́k** [auɥʷákaɯar ndaɟɔ́kˀ]
CONJ-3-come:DEPPRFV with-legs

and s/he came on foot

a-kw-ákkakat **n-nɔ-ppǎn** [auɥʷákāɯār nɔ̄pān]
CONJ-3-come:DEPPRFV with-on-room

and s/he came out of the room (the speaker is outside the room)

ɔllɛ́ **p-ɔkiccɛ́.r-ɔk** **n-tʊǎn** [ɔlːɛ́ βɔɯicérɔ̄ɯ̄ n̄dʊ̄ān]
husband C-chase:COMPL-O3 with-home

the husband has chased her out of the house

*Before the locative relative **ná** 'where'*

Examples of **t** before **ná** 'where' follow here. It is unclear how **ná** should be analysed, as discussed in 11.3.

ant-ɔkwárɪkɔt **na** [andɔɯʷáɾɪɯɔr na]
can:DEPINCOMPL-recall:DEPINCOMPL where:REL

ŋ-kw-ɔnəkkɛ́ṭ.ɛ́ **kúrrɔ̂ŋ**
2-C-put_down:COMPL stick

please recall where you have put your stick

m-p-a.nɛ́kɔ **kərɛt** **na-kakkâ** [kᵊrɛr naɯakâ]
1-C-take:INCOMPL cloth where:REL.PERS-Kakka

I will take the cloth to where Kakka is

*Before **nɔ-** 'on, at' when attached to a noun or pronoun with the persona prefix **ɔ́-** or to the question word **ɔ́n̈n̈a** 'who':*

maɪt	**m-a.ɪk**	**m-ɛkkɔ́t**	**n-a-kʊkkʊ̂**	[mɛkɔ́r nauɥʊkʊ̂]
beans	C-be:PR	C-enough	on-PERS-Kʊkkʊ	

the beans are enough for Kʊkkʊ

maɪt	**m-a.ɪk**	**m-ɛkkɔ́t**	**n-a-nîn**	[mɛkɔ́r nanîn]
beans	C-be:PR	C-enough	on-PERS-1A	

the beans are enough for us

maɪt	**m-a.ɪk**	**m-ɛkkɔ́t**	**n-á-t̪t̪a**	[mɛkɔ́r náṯa]
beans	C-be:PR	C-enough	on-PERS-who:QW	

for whom are the beans enough?

By contrast, there is assimilation and shortening of the resulting geminate when **t** and **k** precede **nɔ-** ‘on, at’ or the absolute preposition **nán** ‘on, at’. Examples of this were given earlier in this section. What brings about the difference is not clear.

Obstruent phoneme preceded by a lateral or rhotic: realization as voiced fricative/approximant

After **l** or **r** obstruent phonemes undergo lenition in the same way as between vowels. Evidence comes from across word boundaries. In word-final position **l** and **r** are attested. A very short schwa may be inserted between the lateral or rhotic and the following voiced fricative/approximant, except in a sequence **r-t**, which is realized as a (slightly longer, but not clearly long) trill (last example below).

pʊl	**p-ɛ̂.t**	[pʊl ᵊβɛ̂tˈ]
person	C-go:COMPL	

the person has left

kaṯər	**k-ápɛ**	[kaðər ᵊɯ́áβɛ]
road	C-wide	

the road is wide

tɔr	**t-ɔ-kəpá**	[tɔr ɔɯəβá]
appetite	C-of-meat	

appetite for meat

Obstruent phoneme followed by l

In connected speech an obstruent phoneme is fully assimilated to **l** across a word boundary. Like nasals resulting from an obstruent-nasal sequence, the resulting lateral is realized short:

lʊŋkwat lɛ̂t [lʊŋgʷa lɛ̂tˈ] ‘the sheep (PL) have gone’
lį̈cɔk lɛ̂t [lico lɛ̂tˈ] ‘the goats have gone’

Full assimilation of **k** before **l** is also attested in the following reduplication, again **l** is realized short. Since there is an intervocalic length contrast for **l**, the resulting lateral is represented as a singleton:

lakkəɽʊlákkəɽʊk (< **lakkəɽʊk-lákkəɽʊk**) ‘butterflies’

/t/ is, however, realized as a trill before **l** as allomorph before an **l**-initial noun of **ń**- ‘with, by (away) from’, as in the example below. The sequence of **l**’s can be realized here with a little length, but not necessarily so.

a-kw-ákkakat **l-lį̈cɔ́k** [aɯʷákaɯar lːiɟɔ́kˈ]
CONJ-3-come:DEPPRFV with-goats
and s/he came with the goats

*Obstruent phoneme followed by **w***

Across a word boundary, a final phoneme **t** or **k** can be followed by **w**. In connected speech **t** and **k** are then realized as between vowels and **w** is deleted at the surface:

į̈mį̈t **w-în** [imiɾ în]
goat C-POSS1
my goat

wɔk **w-ɔ-ʊl** [wɔɯ ɔʊl]
shoes C-of-people
the shoes of the people

Word-internally these sequences are very rare. A sequence **t**-**w** occurs in the reduplicated form of the adjective C-**ûkwĵt** 'long' when the concord is **w**:

aɪʧí **w-ûkwĵr-ûkwĵt** [wûɯʷírûɯʷîtˀ] (< **wûkwĵt wûkwĵt**)
nails C-long-(C).long

the nails are long

2.1.2. Remarks on **kʷ**

*Variation **kʷ** ~ **k** after a high back vowel (**u** or **ʊ**)*

In word-medial position there is neutralization between **kʷ** and **k** after **ʊ** or **u**, irrespective of whether the velar consonant is realized as a voiceless stop (when it is geminated), a voiced stop (after a nasal), or an approximant (between vowels). Some speakers pronounce the labialized velar, others the non-labialized. NaA used the variants with **kʷ**, NiA the variants with **k**. JS tended to use the variants with **k**, but would, upon reflection, often prefer **kʷ**. Some examples:

pʊrʊkô	vs.	**pʊrʊkwô**	'friend'
ɔrúkɔ	vs.	**ɔrúkwɔ**	'hide'
tʊkɪă	vs.	**tʊkwɪă**	'head pad' (for carrying heavy things)
ʊkka	vs.	**ʊkkwa**	'become old' (of people and animals)
ɔt̪órʊkkɛ	vs.	**ɔt̪órʊkkwɛ**	'swallow'
t̪ʊŋkat	vs.	**t̪ʊŋkwat**	'sheep'
t̪uŋkɛ	vs.	**t̪uŋkwɛ**	'liver'

The same is found in a borrowed word:

cúkkar vs. **cúkkwar** 'sugar' (< Sud. Ar. *sukkar*)

Some Pluractional verbs are formed through insertion of **ʊkk** or **ʊkkw** before the final or last vowel (see chapter 13):

apɔ 'fall' **apʊkkwɔ** or **apʊkk(w)ɔ** 'fall with several bumps'

An exception is the adjective -**ûkwi̱t** 'long, tall, deep'. Though the labialized velar is preceded by **u**, there is no alternative pronunciation without labialization.

Only in a few cases **kw** and **kkw** are root or stem-internally preceded by another vowel than **ʊ** or **u**. In these cases no alternative pronunciation with a non-labialized velar is available (unless in the incidental case that the labialized velar is followed by **ʊ** or **u**, see further below). Examples:

cɔkwâ	'breath'
ɔkwɔ́nɔ	'produce'
akwa	'okay'
aɪkkwɔt	'drive (animals) in different direction'
(also: **aʊkkwɔt** or **aʊkkɔt**	'drive (animals) in different direction')
ɔíkkwɔ	'stir to solve lumps'

In the following words, with the vowel **ɔ** preceding, **kkw** and **kk** are contrastive:

ɔkkwɔ̂	'hit'	**ɔkkɔ̂**	'pass'
ɔkkwɔ̂t	'kill'[16]	**ɔkkɔ̂t**	'do, make'

There seem to be no cases of **ŋkw** preceded root-internally by another vowel than **ʊ** or **u**. The vowel **ɪ** precedes **ŋkw** in **ɪŋkwɛ̂l** 'in the hunting party' and **ɪŋkwâk** 'in the beer', but these words are contractions of **ɪ-** 'in' and **kəmɛl** 'hunting party' and **ŋəpak** 'beer' (see chapter 4.4).

[16] In the speech of NiA there was lenition also in the words **ɔkkwɔ̂** 'hit' and **ɔkkwɔ̂t** 'kill'. They were pronounced as [ɔ^{ɯ}βɔ̂] and [ɔ^{ɯ}βɔ̂t$^{˺}$] respectively, with very weakly articulated ^{ɯ}β, whereas they were pronounced as [ɔk^{w}ɔ̂] and [ɔk^{w}ɔ̂t$^{˺}$] by NaA and JS. No information is available about the pronunciation by NiA of other words with **kk^{w}** between vowels.

***kʷ** before a high back vowel (**u** or **ʊ**)*

For some speakers there is a phonological restriction against a labialized velar consonant preceding **ʊ** or **u**, but not for all. JS and NiA did not produce sequences **kʷ-ʊ** or **kʷ-u**, and JS rejected the combination, but in the speech of NaA it is attested. There is, for example, speaker variation in the pronunciation of **ʊ** or **u**-initial verbs preceded by the 2nd person singular pronoun clitic + concord (**ŋ-kw-**), the third person pronoun clitic (**kw-**), and the third person pronoun clitic + concord (**kkw-**):

ŋ-kw-ómmɔ	vs.	**ŋ-k-ómmɔ**	‘you will take’
a-kw-úrəkɔ	vs.	**a-k-úrəkɔ**	‘and/while s/he gets up’
k-kw-úrəkɔ	vs.	**k-k-úrəkɔ**	‘s/he will get up’

Variation was also found in a few lexical items:

ɔkúʈɔt	vs.	**ɔkwúʈɔt**	‘move up’
akúccį	vs.	**akwúccį**	‘money’ (< Sud. Ar. *al-guruush*)
kucúl	vs.	**kwucúl**	‘back’

*Origins of **kʷ***

kʷ has different origins in different words. In nouns, **kʷ** as a noun class prefix may originate from reanalysis of a proto-Talodi plural noun class prefix **w** before **ɔ** as part of the stem, and, in a less consistent manner, before the vowels **a**, **ɪ** and **ɛ** (see chapter 4.3.1).

In words with stem-internal **kʷ** preceding **ʊ** or **u**, such as **pʊrʊkwɔ̂** ‘friend’ (see above), the labialization of **k** may historically be a continuation of the preceding **ʊ** or **u**. This is suggested by the relatively few cases with other stem-internal preceding vowels, while (seemingly) all cases of non-final (**ŋ**)**k**(**k**) preceded by **ʊ** or **u** allow for a labialized pronunciation (though not all speakers actually do this).

kʷ incidentally arises from phenomena across morpheme boundaries. The 2nd person singular pronoun clitic **ŋ́** + concord **p** combine to

ŋkw (see chapter 6.2.1). A labialized velar can also arise from prefixation of the prepositional clitics **ɪ-**, **nɔ-**, **tɔ-** or **t̪ɔ-** to a noun with initial **k** and a labial consonant as onset of its second syllable, for example: **ɪkkwɔ̂n** 'in the field' (< **ɪ** + **kəpɔn**), and **ɪŋkwɛ̂l** 'in the hunting party' (< **ɪ** + **kəmɛl**) (see chapter 4.4 for a list of nouns that are contracted upon attachment of a PPC).

Other cases of labialization

The other obstruent phonemes do not occur labialized, or only rarely. **tʷ** is attested as a variant of **tʊ** in just two items, at least one of which is probably not originally Lumun.

ɪttʊ̆ŋ ~ **ɪttwă̆ŋ** very (also **ɪttɪ̆ŋ**)
attʊak ~ **attwak** all, whole (probably a loan from Tocho)

2.1.3. The phonemes **m, n, ɲ** and **ŋ**

The distribution of **m, n, ɲ** and **ŋ** is presented in table 8. Parentheses signify that attestations in a certain position are rare. As with the obstruents, only the alveolar and velar phonemes occur word-finally in originally Lumun words.

Table 8 Distribution of nasal phonemes in words

	m	n	ɲ	ŋ
word-initial	+	+	+	+
word-final	(+)	+	–	+
before an obstruent phoneme	+	+	+	+
between vowels	+	+	+	+

Word-initial position

Series which substantiate the nasal phonemes and illustrate their distribution follow here. All nasals are found in initial position:

mɔpô̱k	‘arrows’
nɔʈi̱	‘cobras’
ɲɔpă̱r	‘partridges’
ŋɔrɛ	‘laziness’

Initial **ŋ** is elided after a vowel. This can be seen across word-internal morpheme boundaries as well as, in connected speech, across word boundaries:

ɔkʊkkó-ɔ̂n	(< **ɔkʊkkô** + **-ŋɔ̂n**)	‘Kʊkkʊ and his companions’
akka-în / **aka-în**	(< **akkă̱** + **ŋɪn**)	‘why?’
a-úra …	(< **á-** + **ŋura**)	‘and the bull …’
lɪpɪl lɔ́-ura	(< **lɔ-** + **ŋura**)	‘the horns of the bull’
ŋura ŋɛ̂ɔt	[ŋʊra ɛ̂ɔtˀ]	‘the bull has gone’

Initial **ŋ** is not elided when preceded by a nasal or obstruent phoneme. It is pronounced short, but considered underlyingly geminated, as explained in 2.1.1 Because there is a word-internal length contrast of **ŋ** (though rarely attested, see 2.1.3), the resulting nasal is written as a singleton:

ɔcɔ́-ŋɔ̂n (< ɔcɔ́ŋ-ŋɔ̂n < **ɔcɔ̂n** + **-ŋɔ̂n**)	[ɔɟɔ́-ŋɔ̂n]	‘John and his companions’
ŋɪttɪpɪt ŋɪn	[ŋɪtɪβɪ ŋɪn]	‘my billy goat’
mpɪmmát ŋura	[mbɪmːá ŋʊra]	‘I saw the bull’

Initial **m**, **n** and **ɲ** are not elided between vowels. For example:

nʊʈʊpa nɛɔ̂t	[nʊʈʊβa nɛɔ̂tˀ]	‘the lizards (sp.) have gone’

Word-final position

Word-final nasals are restricted to **n** and **ŋ**:

kaʈan	‘place’
kanáŋ	‘wind’

Final **m** just occurs in a few loans, for example:

kálam ‘pen’ (< Sud. Ar. *galam*)

Unlike initial **ŋ**, final **ŋ** is not deleted between vowels:

ɔkʊmáŋ-ɪ	[ɔɯʊmáŋ-ɪ]	(< **ɔkʊmâŋ** + **-ɪ**)	‘(is/was it) Kʊmaŋ?’
ɔkʊmáŋ ɛ́mpí	[ɔɯʊmáŋ ɛ́mbí]		‘this Kʊmaŋ’

A nasal before an obstruent phoneme

All nasals can precede a phoneme **p**, **ʈ**, **t**, **c**, **k** or **kw**. Such clusters, whether root-internal, word-internal across morpheme-boundaries or across word boundaries in connected speech, are realized as a homorganic nasal + a voiced stop:

cɪnʈâŋ	[cɪɳɖâŋ]	‘bird (sp.)’
m-pʊ̂l	[mbʊ̂l]	‘with the person’ (< **ń-** + **pʊl**)
parantaŋ pîn	[parandam bîn]	‘my gourd’

Assimilation of the nasal for place of articulation to the following stop can also be seen in nouns with reduplication:

pɪɽɪmam-píɽɪman	[pɪɽɪmambíɽɪman]	‘spider’
cɪaɲ-cɪan	[cɪaɲɟɪan]	‘seed (sp.)’
kərɪŋ-kərĭn	[kᵊɾɪ̄ŋgᵊɾɪn]	‘musical instrument (k.o.)’
takkʊn-tákkʊŋ	[takʊndákʊŋ]	‘mosquito’

Between vowels

Between vowels, all nasals are attested:

ɪama	[ɪama]	‘be(come) hungry’
ana	[ana]	‘and’
aɲɔ	[aɲɔ]	‘open’
ɔŋɔt	[ɔŋɔtˈ]	‘like, want, love’

A labialized velar nasal

Between vowels [ŋʷ][17] is attested in three verbs (as well as in some of their derivations): **aŋwɔt** 'keep', **ɔŋwɔ̂** 'sing' and **ɔŋwɔ̂** 'kill (PLUR)'. The verbs with velar nasal form near-minimal pairs with the following verb:

ɔŋɔt [ɔŋɔtˀ] 'like, want, love'

In table 4, I have therefore mentioned ŋʷ as a phoneme, but one with marginal status.

One word may seem to have [ŋʷ] as initial sound: the singular of **ŋʊ́** /**ɲʊ́** 'milk' ([ŋʊ́], [ŋᵘ́], [ŋʷí]). However, between vowels **ʊ** remains, so that a sequence **ŋ**-**ʊ** is the better analysis:

ɪ-ʊ́ 'in the milk' (< **ɪ** + **ŋʊ́**)

Moreover, **ŋʊ́** is pronounced with a L and H tone, irrespective of whether the initial consonant sounds like a labialized velar nasal. L + H tones are not attested on nouns with a single vowel. Also for this reason it is better to analyse the initial consonant as **ŋ**, not **ŋ**ʷ.

Other labialized nasals are not attested.

Geminated nasals

There is root-internal intervocalic nasal length contrast for **m** and **n** as evidenced in some (near) minimal pairs. In such pairs, when pronounced next to each other, the length differences were clear. There may be root-internal length also for **ɲ** and **ŋ** (not **ŋ**ʷ) as well. In general, however, it seems that length is not necessarily realized. Length decisions were often difficult to make. A geminate was chosen if it was possible to hold the nasal a little longer and when speakers

[17] I use **ŋw** for the labialized velar nasal consonant in the orthography.

judged that the word fitted in better with words with a clearly long nasal than with words with a clearly short nasal.[18]

Some examples of root-internal long nasals follow here. They are contrasted with word with short nasals, whether root-internally or across a morpheme boundary.

*Short versus long **m***

ɔmmɛ̂	'move asida' (bring to mouth or pour on a plate)
ɔmɛ̂	'tattoo' (verb)
ɪmma	'see'
ɪ-má	'in heads'
ɪmɛ	'wash'
C**-ǰmmi̧n**	'heavy'
i̧mǰt	'goat'
ʊmmɔ	'take, pick (up)' (one item)
ɔcʊ́mɔ	'take, pick (up) one by one' (scattered items)

*Short versus long **n***

ɔnnɛ	'help put a load on the head several times'
ɔnɛ̂	'help put a load on the head'
ɔnnɛ́	'your mother'
ɔnâ	'bring'
ɔnna	'habitually bring'
ɔnnân	'(his/her) mother'
kunnûr	'fruit of *punnur*-tree'
kunú	'ear'
cannán	'very'
kanáŋ	'wind'

[18] Decisions are in most cases based on the speech and judgements of JS.

Short versus long ɲ

Whether or not there is an intervocalic length distinction for **ɲ** in roots was particularly difficult to establish, also because there are not many cases of intervocalic **ɲ**, whether singletons or geminates. In unpublished wordlists[19], the words for 'shoulder blade', 'wound' and 'singer' are written with double **ɲ**, but contrasting them with similar words with short **ɲ** did not yield a length difference, except perhaps in the word 'singer'.

cɪɲâ	'shoulder blade'
-ɪɲâ	'secrete itching fluid (poison)'
mɪɲâ	'shoulder blades'
mɪɲâ	'speed'
kɪɲɪ	'wound'
pɪɲɪl	'snake'
? **pɪɲɲît**	'singer'
kʊɲɪt	'rib'

In the adverb **aɲɲərɪŋ** 'totally' length of the palatal nasal **ɲ** is (probably) a matter of expressivity. **ɲ** can furthermore be pronounced with some length in the spatial demonstratives **ɛɲɲí** 'this, these' (near speaker), **ɛɲɲərík** 'this, that, these, those' (near addressee) and **ɛɲɲəʈê** 'that, those' (away from the speaker and the addressee). In these words, however, the long nasal is not root-internal but goes across a morpheme boundary (**ɛɲɲí** is an assimilation product with format **ɛn**-C-**í**, where the concord (C) is **ɲ**; **ɛɲɲərík** has the format **ɛn**-C-**ərík**, and **ɛɲɲəʈê** the format **ɛn**-C-**əʈê** (see chapter 8.1)). Some nasal length can also be realized in **aɲ-ɲ-ʊɲ-ɲɛʈá** 'both' modifying a noun of the **ɲ**-class, and other modifiers based on the format **at**-C-**ʊt**-C-numeral (**át**-C-**ʊ́t**-C-numeral) (see 10.4.2).

[19] Kuku et al. (2006) and Lumun wordlist 25 February 2004.

Short versus long ŋ

There seems to be no root-internal length contrast of **ŋ** between vowels. In **aŋŋəna** 'very' the velar nasal has (or can have) length, but, like in **aŋɲərɪŋ** 'totally', nasal length is (probably) due to expressivity. As discussed earlier, geminates caused by adjacency of an obstruent phoneme and a velar nasal do not result in nasals that are realized long (though underlyingly geminates). Moreover, in an item such as **ɔpaŋ̂n** 'siblings' (< **ɔpáŋ** + **-ŋ̂n**), too, the velar nasal across the morpheme boundary is realized short.

It is, however, possible to realize length of adjacent velar nasals across a word-internal morpheme boundary in the demonstratives **ɛŋ-ŋ-í** 'this, these' (near speaker), **ɛŋ-ŋ-ərík** 'this, that, these, those' (near addressee) and **ɛŋ-ŋ-əɽê** 'that, those' (away from the speaker and the addressee). Notably, **at**-C-**ʊt**-C-numeral (**át**-C-**ʊ́t**-C-numeral) (see 10.4.2) is not attested with the concord **ŋ** since this concord does not occur on plural nouns.

Word-initial nasal length

There is nasal length in word-initial position, due to attachment of the prepositional clitic **ń**- 'with, by, (away) from'. In these cases length tends to be realized, especially in isolated words.

m-máẗ̪t̪ak	'with bowls'
n-naẗ̪ám	'with books'
ɲ-ɲaẗ̪t̪ɔkkɔ̂l	'with calabashes (k.o.)'
ŋ-ŋaẗ̪t̪ɔkkɔ̂l	'with a calabash (k.o.)'

Some speakers realize a short vowel **ɪ** before the clitic instead:

m-máẗ̪t̪ak	[mːáẗ̪akˀ], [ˈmáẗ̪akˀ]	'with bowls'
ŋ-ŋɪn	[ŋːɪn], [ˈŋɪn]	'with, by' (absolute preposition, see 16.6)

By contrast, a combination of a nasal common noun pronominal clitic (see 6.3) + concord (see 5.1), i.e. PRO-C, is pronounced without

length. In the first example below the common noun pronominal clitic **n-** pronominalizes, for example, **namʊt** ‘rats (sp.)’. The velar nasal in the second example is realized without length as well. At the word boundary I write the underlying form there (with a doubled velar nasal), in order to avoid the suggestion that the velar nasal can be deleted after a preceding vowel-final word.

n-ɔ́ɽəkɔ́.t [nɔ́ɽᵊɯɔ́tˈ]
PRO.C-eat:COMPL

they (the rats, sp.) have eaten it

ʊkʊl **w-ɔnɛkɔ́.t** **ŋəɽɪ** **ána** **ŋ-ŋ-ɟ́mmɟ́n**
child C-take:COMPL water and PRO-C-heavy

the child carried the water and it was heavy

*Nasals preceded by **l** or **r***

In connected speech, **ŋ** is typically elided after **l** or **r** across a word boundary. The other nasals can be elided in this position as well.

mʊpúl mɪn	[mʊβúl mɪn], [mʊβúl ɪn]	‘my hats’
naɽaŋkal nîn	[naɽaŋgal nîn], [naɽaŋgal în]	‘my beds’
ɲʊkʊl ɲɪn	[ɲʊɯʊl ɲɪn], [ɲʊɯʊl ɪn]	‘my children’
ŋʊcʊl ŋɪn	[ŋʊcʊl ɪn]	‘my sauce’

mɔɽár mɪn	[mɔɽár mɪn], [mɔɽáɾ ɪn]	‘my young female goats/cows’
nɔr naîk	[nɔr naîkˈ], [nɔɾ aîkˈ]	‘there is appetite’
ŋar ŋaîk	[ŋar aîkˈ]	‘there is mud’

Nasal after an obstruent phoneme

In the section on obstruent phonemes it was shown that, as a rule, a nasal causes full assimilation of a preceding obstruent phoneme, after which the geminated nasal is realized short. However, upon attachment of the enclitic discourse particles **-na** and **-mɛ́** (see 17.2.2 and 17.2.4), a preceding obstruent phoneme assimilates only partially to the nasal: it becomes nasal but retains its place of articulation in the result. In both cases the resulting nasal is

pronounced short. Since there is word-internal length contrast of **n** and **ŋ**, I write the nasals as singletons.

i̯ɽi̯k.i̯ **kɪ-nâ** (< **kǐt -na**)
tie:IMP wild_chicken-ALLOW

okay, but (then) tie the wild chicken (first)! (for example in response to "let's go to the shop!")

i̯ɽi̯k.i̯ **t̪akəɽʊ-ŋâ** (< **t̪akəɽúk -na**)
tie:IMP chicken-ALLOW

okay, but (then) tie the chicken (first)! (for example in response to "let's go to the shop")

ana **ɔ-rɪt** **t̪-a.rɛ́kɔ** **ŋə́ré** **ŋ-ɔ́ttɛ́-ɪ-ŋɛ́** (< **ŋɔttɛ́ɪk -mɛ́**)
and PERS-12 C-work:INCOMPL work C-little-VREF-PROP

okay, shall we do a little work?

Nasal before l

Word-internally, no sequences of nasal + **l** are attested. Upon prefixation of **ń-** 'with, by, (away) from' to an **l**-initial noun, the nasal assimilates to **l**. The lateral can be pronounced with some length.

l-lɔ̂n 'with words' (< **ń-** + **lɔn**)

In the example below, the final nasals (**n** and **ŋ**) of the first and second word tend to be elided before the following **l**:

lɔn **l-aŋ** **l-ɔpərɔ̂t** [lɔ la lɔβᵊɾɔ̂tˉ]
words C-POSS2 C-good

your words are good

2.1.4. The lateral phoneme **l**

l is articulated with the tip of the tongue against the alveolar ridge. The table gives its distribution in isolated words:

Table 9 Distribution of **l** in isolated words

	l
word-initial	+
word-final	+
between vowels	+

l occurs contrastively in word-initial and word-final position:

lɔn ‘words, matters, mouths’
ṭ̈ɔn ‘mouth’

cîl ‘grain of sorghum’
cíṭ ‘eye’

Geminated l

Root-internally there are length differences, but it was often difficult to decide, also for the speakers, between single and geminated **l**. Geminated **l** can be pronounced short, but can also be held a little longer; it appears to be more common between vowels than short **l**.

Some words with short **l**:

cələk ‘neck’
cakkálɔ́k ‘calabash (k.o.)’
kəlɔ́k ‘first stage of what becomes a fruit’
kʊlʊra ‘shelter for goat’
kwalílín ‘centipede’
ɔcála ‘become tasteless’
aləkɔt ‘surpass, defeat’
apəɽılakɔ ‘hang (intr., from the hands)’

Some words with geminated **l**:

pəlla ‘cat’
callɛ ‘ball’
kəllân ‘old woman’

kɪllôk ‘skin of sugarcane’
təllapɔ̂k ‘frog’
cəllakkér ‘roof skeleton’
cəʈɛllɛ́ ‘hip’
cɔʈɔllă̱n ‘calf (part of leg)’
cʊ̀rəllúpa ‘sorghum stem’
ɛlla ‘be absent’
ɔllɔ̂ ‘run’

Word-initially there is geminated **l**, resulting from attachment of the prepositional proclitic **ń-** ‘with, by (away) from’ (realized as **l**) before an **l**-initial noun, or from the common-noun pronominal proclitic **l** followed by concord **l**. Geminated **l** resulting from attachment of **ń-** ‘with, by, (away) from’ can be pronounced with some length. It contrasts with short **l** in word initial position:

l-ly̨cɔ́k ‘with the goats’
ly̨cɔ́k ‘goats’

Geminated **l** resulting from attachment of the common-noun pronominal proclitic **l** + concord **l** is pronounced short. Without antecedent, pronominal **l** is understood to refer to **lɔn** ‘words, matters’:

l-ɔ́pərɔ̂t (< **l-l-ɔ́pərɔ̂t**) [lɔ́βᵊɾɔ̂tˀ] ‘it is good’

In other cases, too, underlying gemination across a morpheme boundary does not lead to the realization of length. The first example has a common noun pronominal proclitic (for example referring to **lɔn** ‘words, matters’) and concord:

ly̨pi̱l lîn [lipi lîn] ‘my horns (musical instrument)’

A case in which length may (but needs not) be pronounced is demonstrative **ɛllí** ‘these’, in which the second **l** is the concord, while the first **l** is underlyingly **n** (the frame is **ɛn**-C-**í**).

In two lexemes, **l** becomes **ɽ**, or can become **ɽ**, in intervocalic position across a morpheme boundary:

lɪccît	'threshing floor'
ɪ-ɽɪccît	'on the threshing floor'
tɔ-ɽɪccît	'on the edge of the threshing floor'

lɔn	'words, matters'
nɔ-lɔ̂n ~ **nɔ-ɽɔ̂n**	'about matters'

In the word 'put down' there is free variation between **ɽ**, **l** and **n**:

ɔɽə́kkɛt ~ **ɔlə́kkɛt** ~ **ɔnə́kkɛt** 'put down'

In the verb 'close' **l** varies with **n**:

ʊlʊkkwɔ ~ **ʊnʊkkwɔ** 'close'

l is robust when adjacent to another consonant. Examples were given under obstruent phonemes (2.1.1) and nasals (2.1.3). Also when adjacent to a rhotic, **l** does not change, rather a very short schwa may be inserted:

lar l-în [lar ᵊlîn] 'my storage net'

2.1.5. The rhotics phonemes **r** and **ɽ**

Table 10 and 11 present the distribution and realization of the rhotics. The phoneme **t** is included because it has rhotic allophones. As exemplified in section 2.1.1 the rhotic allophone of **t** before certain nasal morphemes across a word boundary is different from the intervocalic allophone of **t** (table 11).

Table 10 Rhotics: distribution and realization in isolated words

	/r/	/ɽ/	/t/
word-inital	–	–	[t]
word-final	[r] ~ [rː]	–	[tˀ]
between vowels	[ɾ], [r]	[ɽ]	[ɾ]

Table 11 Rhotics: realization across a morpheme or word boundary

	r	ɽ	t
before certain nasal morphemes	[r]	–	[r]

Geminated rhotics

Word-medially **r** can be geminated. It is then realized as a long trill.

There is no geminated retroflex flap. **ɽ** tends to geminate to **ll**, but gemination to **rr** is also attested. This can be seen in Pluractional verbs involving gemination, or partial reduplication and gemination (see also 13.1):

aɽɔ cık	'sleep, spend night'	**allɛ cık**	'habitually sleep, habitually spend night'
ʊɽɛ	'graze (animals)'	**ʊɽəllɛ**	'habitually graze (animals)'
ıɽɛ	'say'	**ıɽıllɛ**	'habitually say'
ɔkəɽɔ̂	'bite'	**ɔkáɽɛllɔ**	'habitually bite'
ɔɽátta	'be eaten'	**ɔrrátta**	'be eaten (pl. subj. participants)'

Word-initial position

Rhotics do not occur in initial position in isolated words. A rhotic is always preceded by a vowel, if only a very short schwa:

ərét	[ᵊɾétˉ]	'cloths'
ərrɔ	[ᵊr:ɔ]	'push'
əɽa	[ᵊɽa]	'refuse'

Word-initially there seems to be one exception to the restriction that **r** does not occur in initial position, since there is a word with an initial long trill:

rrəppɛ 'illness caused by somebody who has twins'

However, this word appears to be underlyingly **t**-initial, since it takes **t**-concord:

rrəppɛ **t-ɔ-kəllán** **t-ɔ́kíṭak** [r:əpɛ ɾɔɯᵊl:án dɔ́ɯíðakˀ]
ilness(k.o.) C-of-old_woman C-bad
the illness of the old woman is bad

For comparison, words with initial **ə** have the concord **w**- of vowel-initial nouns:

ərɛt w-ɔ-kakkâ 'the cloths of Kakka' [ᵊɾɛɾ ɔɯakâ]

Word-final position

In word-final position only **r** is attested. In isolation the final rhotic can alternatively be pronounced long:

kaṭ́ər [kaðə́r], [kaðə́r:]

Rhotics between vowels

Between vowels all rhotics occur. Some words contrasting **r** and **r:** intervocalically follow here:

kara	'tick'	**karrə̆**	'lie'
kəmarâŋ	'shield'	**karraŋ**	'wall'
cʊrúcúrô	'fruit (k.o.)'	**arrô**	'Lumun people'
cɪrɪ	'wrist'	**cį̈rrį́t**	'tick (sp.)'
ɔrâ	'cultivate'	**ɔrra**	'habitually cultivate'
kʊrɛ̂	'left side'	**kʊrrɛ́t**	'line'

However, there are differences between the speech of JS and NaA. For NaA there was a contrast between intervocalic [ɾ] and [r] in certain words in which JS did not perceive a contrast. In these words JS tended to pronounce [ɾ].

Table 12 Pronunciation of intervocalic rhotics

NaA		*JS*	
[ɾ]	**carə́k** 'belly, stomach'	[ɾ]	**carə́k** 'belly, stomach'
	ŋura 'bull'		**ŋura** 'bull'
	pɪra 'tree'		**pɪra** 'tree'

[r]	**ŋʊrak** ‘monkey (sp.)’	[ɾ]	**ŋʊrak** ‘monkey (sp.)’
	kɪrɛ́k ‘hoe’		**kɪrɛ́k** ‘hoe’
	pɛrʊ̌ ‘tree (sp.)’		**pɛrʊ̌** ‘tree (sp.)’

In the writing in this book, I do not represent the intervocalic rhotic contrast [ɾ] - [r] of NaA. The contrast was generally difficult to distinguish for me (both often sounded like a short trill to me) but appears to be supported by the following Pluractionals which involve gemination. The first case has the phoneme **r**, the second case, apparently, the intervocalic allophone of **t** ([ɾ]). For JS the **r**’s in **ɔrâ** ‘cultivate’ and in **ɔkérɔ** ‘trade’ are not different. Whether or not they are different for NaA I do not know.

ɔrâ ‘cultivate’ **ɔrrɛ** ‘habitually cultivate’
ɔkérɔ ‘trade’ **ɔkéttɛ** ‘trade (several objects)’

Notably, an intervocalic contrast between tap and trill as found in the speech of NaA is also reported for the closely related language Dagik (Vanderelst, personal communication). In the speech of NiA, like in the speech of JS, the contrast appears to be absent.

JS, however, does have a root-internal intervocalic trill which is not, or at least not clearly, a geminate. These cases have in common that they are preceded and/or followed by schwa. In slow speech, the schwas are more audible and the rhotic is no longer clearly a trill (as in the alternative phonetic transcription of the second and third example below):

kurə̪ut	[kurᵊðutˀ]	‘bed plank (k.o.)’
ɔkkápərəttakɔ	[ɔkáβɾ̥tauɥɔ], [ɔkaβᵊɾᵊtauɥɔ]	‘return’
pərɛ́	[pɾ̥ɛ́], [pᵊɾɛ́]	‘monitor lizard’

In these cases it seems that the moraicity of schwa can (partly) be transferred to **r**. This does not happen in **carə́k** ‘belly, stomach’, a word with schwa as its last vowel and no schwa preceding **r**: here the rhotic is only pronounced as a tap.

*Realization of **r** across a morpheme boundary*

It is recalled here that, in connected speech, an obstruent phoneme is realized as a voiced fricative/approximant after **r**, while **r** is realized as short trill and a transitory schwa is inserted:

kaṯər	**k-ápɛ**	[kaðᵊr-ᵊɰáβɛ]
road	C-wide	

the road is wide

Upon attachment of a (full) vowel to a word with final **r**, **r** is realized as a tap in the speech of JS[20]:

kaṯər-î	[kaðər-î]	‘the road?’

Flap

The retroflex flap **ɽ** has a very limited distribution. It occurs root-internally between vowels. Some words in order to substantiate phonemic status of **ɽ** are given below. **ɽ** is contrasted with **l**, **ṯ**, and **r**.

C-**əɽɛk**	‘some’
cələk	‘neck’
kəṯát	‘door’
kərét	‘cloth’

ɽ is sometimes interchangeable with **r**:

ɲıɽé ~ **ɲıré**	‘young girls’ (but in SG only **ıɽé** ‘young girl’)
ɔcáɽɔ ~ **ɔcárɔ**	‘peel’

[20] There may be differences between speakers in the realization of final **r** before an enclitic vowel. I have, however, no information about the pronunciation of NaA and NiA in such cases.

2.1.6. The phoneme **w**

The distribution of **w** is presented in the table below. **w** occurs predominantly in word-initial position. In word-final position it is not attested. Except in some loans, it does not occur root-medially. At a morpheme boundary, its behaviour depends on its morphological status. As a concord (see chapter 5.1), **w** is typically elided between vowels at a word-internal morpheme boundary, just like **w** as a common noun subject pronominal clitic (chapter 6.3). As a noun class prefix, however, some speakers (among whom JS) retain **w** between vowels at a word-internal morpheme boundary, while others delete it.

The table below gives the distribution of **w** and its occurrence at a morpheme boundary upon attachment of a vowel-final prefix or clitic.

Table 13 Distribution of **w** and occurrence after a vowel-final prefix or clitic

	word-initial	*word-internally between vowels*	*word-final*
w	+	–: not in roots, except in some loans +/–: as noun class prefix after a vowel at a morpheme boundary: not elided by some speakers, for others elision is possible –/(+): as a common noun subject pronominal clitic after a vowel at a morpheme boundary: commonly elided –/(+): as a concord after a vowel at a morpheme boundary: commonly elided	–

Word-initial position

The following contrastive series substantiate the phonemic status of **w.** Some of the nouns with initial **w** have an alternative form without it (more examples are provided in chapter 4.3.1 on nouns). **w** as a noun class prefix can be pronounced as a consonantal glide, but also very vowel-like, as in the speech of NaA. Moreover, a word such as **wɛ́k** tends to be whistled as bimoraic (LH), though not necessarily so. Even in the speech of NaA, however, there remains a difference between a vowel-like realization of the class-prefix **w** (phonetically represented as a vowel in superscript) and a full vowel **ʊ** (or **u**) as found in verbal stems or nominal roots. **w** as a concord (or a pronominal clitic) is pronounced as a consonantal glide.

ʊɛt	[ʊɛtˀ]	‘make accept’
wɛ́t	[wɛ́tˀ] ~ [ᵘɛ́tˀ]	‘bamboo circles of roof’
wɛ́k	[wɛ́kˀ] ~ [ᵘɛ́kˀ]	‘leg’
ʊɛ	[ʊɛ]	‘undress’
wɛ̂	[wɛ̂] ~ [ᵘɛ̂]	‘calabash(es) or pot(s) for fermenting flour and water’
pɛ́	[pɛ́]	‘gum tree’
ʊá	[ʊá]	‘fruits of *pʊa*-tree’
waǰ	[wāī] ~ [ᵘ̄āī]	‘cow’
wanɔ̂k	[wanɔ̂kˀ] ~ [ᵘanɔ̂kˀ]	‘moons’ (also **anɔ̂k**)
w-aîk	[waîkˀ]	‘C-is/are’
p-aîk	[paîkˀ]	‘C-is/are’
ʊɔ	[ʊɔ]	‘descend’
w-ɔ	[wɔ]	‘C-of’
wɔk	[wɔkˀ] ~ [ᵘɔkˀ]	‘shoes’
pɔ́k	[pɔ́kˀ]	‘foam’

Root-internal intervocalic w

Root-internal **w** is only attested in a few loans from Arabic:

aláwa ‘sweets’ (< Sud. Ar. *ḥalaawa*)
alawîr ‘bush (sp.)’ (< Sud. Ar. *al-ʾawiir* ‘the stupid’)
aṯṯáwa ‘medicine’ (< Sud. Ar. *ad-dawa*)

w after a vowel or nasal across a word-internal morpheme boundary

As a noun class prefix **w** is not elided in intervocalic position across a morpheme boundary by some speakers:

ɪ-waǰ / ɪ-waî ‘in the cow’
ɪ-wɛ́t ‘between the bamboo circles of the roof’
cɪrɪ cɔ-wɛ́k ‘the ankle (lit.: the joint of the leg)’

Reportedly, however, other speakers would elide noun class prefix **w** between vowels, for example:

ɪ-aǰ / ɪ-aî ‘in the cow’

Some **w**-initial nouns have an alternative form without **w**. In such nouns, **w** is commonly absent when word-internally preceded by a vowel, but not necessarily:

ɪ-allĭr / ɪ-allîr ‘in the gazelle’
ɪ-wallĭr / ɪ-wallîr ‘in the gazelle’

The nouns **waǰ** ‘cow’, **wɛ́t** ‘bamboo circles of roof’ and **wɛ́k** ‘leg’ do not have an alternative form without **w**. Upon prefixation of **ń-** ‘with, by, (away) from’ to these nouns, **w** fully assimilates, resulting in a nasal which can be pronounced with some length:

n-naǰ / n-náį ‘with the cow’
n-nɛ́k ‘with the leg’

The pronoun clitic **w-** is commonly elided word-internally between vowels, unless in careful speech:

aʊn	**w-ɔká.t**	**cɪk**	**áɽəkɔ**	**kəpá**	(< **a-w-ɔ́ɽəkɔ**)
rats	C-be:COMPL	VREF	CONJ.(PRO-)eat:DEPINCOMPL	meat	

the rats were eating meat

The concord **w**- is commonly elided word-internally between vowels, though in carefully articulated speech it may be pronounced:

aʊn	**ɪ-ɛ̂.t**	(< **ɪ-w-ɛ̂t**)
rats	RES-(C-)go:COMPL	

the rats which have gone

*Noun class prefix **w** and concord **w** across word boundaries*

In the speech of JS, **w** as a noun class prefix remains unaffected by a preceding vowel across a word boundary (first example below) and causes a preceding **t** or **k** to elide in connected speech (second example below):

mpakə́n̪a waį̆	'I will look at/after the cow'	
mpɪmmát wɛ́k	'I saw the leg'	[mbɪm:á wɛ́kˀ]

Reportedly, in the speech of others, **t** before **w** may be realized as [ɾ] while **w** is deleted:

mpɪmmát wɛ́k	'I saw the leg'	[mbɪm:áɾ ɛ́kˀ]

As a concord, **w** tends to be elided in connected speech across a word boundary after a vowel, as well as after **n**, **ŋ**, **l** and **r**:

waį̆ w-aát	[wai aátˀ]	'the cow has come'
wan w-ɔkakkâ	[wan ɔɯakâ]	'the hair of Kakka'
ʊn̪tɔŋ w-ɛɽá	[ʊnðɔŋ ɛɽá]	'two walls'
ʊl w-ɛɽá	[ʊl ɛɽá]	'two persons'
aṯər w-ɛɽá	[aṯəɾ ɛɽá]	'two roads'

In connected speech, the concord **w** causes a preceding **t** to be realized as its intervocalic allophone [ɾ] and a preceding **k** to be

realized as its intervocalic allophone [ɰ]. After [ɾ] **w** is elided, whereas after [ɰ] it can be elided but not necessarily so:

ɪt	**w-a.ɪk**	**w-ímma**	[ɪɾ aɪɰ wím:a], [ɪɾ aɪɰ ím:a]
wild_chickens	C-be:PR	C-see:INCOMPL	

the wild chickens are seeing it

In general, elision of the concord **w** across the word boundary is common, but does not seem to be obligatory for the speech to sound natural.

*Geminated **w***

Geminated **w** is not attested in roots, but can result, across a morpheme boundary, from a combination of common-noun pronominal **w** and concord **w**. The sequence is realized short. There is no elision between vowels, apparently not even before an **ʊ**- or **u**-initial stem.

ʊkʊl	**w-ɔŋɔt̪.é**	**ɪttɪ**	**w-úkkwɔ**	[ʊɰʊl ɔŋɔðɛ ɪtɪ wúkʷɔ]
child	C-like:COMPL	that	PRO.C-dance:INCOMPL	

the child wants to dance

Two different w's?

The different intervocalic behaviour of the noun class prefix **w-** on the one hand, and the common noun subject pronominal clitic **w-** and concord **w-** on the other hand, suggests that they do not have the same phonological status. **w** as a noun class prefix can perhaps be interpreted as the realization of a vowel **ʊ** or **u** that was considered part of the nominal root in a preceding stage, and became reanalysed (again) as a consonantal prefix (compare chapter 4.3.1). **w** as a concord patterns with the other concords, which are all consonants. The behaviour of **w** as a noun class prefix would be largely in line with the behaviour of high back vowels, which do not elide under the influence of a preceding sound, while the behaviour of **w** as a concord would be more in line with the behaviour of consonants, several of which are susceptible to (partial) assimilation or elision

(and particularly **ŋ** between vowels). However, a noun with an initial vowel would not undergo a change from prefixation of **ń-** 'with, by, (away) from', but a noun with initial **w** does. As shown above, **w** assimilates to proclitic **ń-** 'with, by, (away, from). How the differences can be explained would need further investigation.

2.1.7. The palatal glide [j]

The word for 'my mother' has two variants: with [ʝ] and with [j]. The latter realization is spelled as <ɪ>. In this case, [j] is a further lenition of the intervocalic allophone of **c (**[ʝ].

ɔcáca	[ɔʝáʝa]	'my mother'
ɔɪáɪa	[ɔjája]	'my mother'

[j] is in some cases the realization of a vowel. In a sequence of three vowels **aɛɔ**, **ɛ** is realized as [j], though in careful speech it can be realized as **ɛ**. The verb in the first example below is related to the noun **ŋaɛ** 'urine'. The second example is the (irregular) Incompletive TAM of the verb **ɛ̰̃** 'go'.

ɔŋ́aɛ̃	[ɔŋ́ajɔ̃]	'urinate'
m-p-aɛ̰̃	[mbajɔ̰̃]	'I will go'

2.1.8. Rare sounds

Sibilants and voiceless fricatives do not belong to the regular sound inventory of Lumun. NiA nevertheless pronounced [s] in the word 'green':

kərɛt	**k-íccí**	[kící], [kísí]
cloth	C-green	

the cloth is green

Sibilants are also found in some words used for chasing away or calling animals. An example is **sɪla**, which is used for calling a dog. A few more examples with sibilants used for the calling or chasing away of specific animals can be found in chapter 17.3. There is

furthermore an animal call with [ʕ] (**ʕên**, for calling a pig), and a word with [h] (**haʊ**) for chasing away a dog. [θ] occurs in a sound symbolic word expressing the sudden appearance of something, **attôθ**.

2.1.9. Consonant clusters

As mentioned earlier, Lumun has nasal-stop clusters:

mp [mb], **n̈ẗ** [n̈d̈], **nt** [nd], **ɲc** [ɲj], **ŋk** [ŋg] and **ŋkw** [ŋg^{w}]

Nasal-stop clusters occur word-initially and word-medially. A word-medial example:

kɪɲcɛ ‘nose’

In word-initial position they result from attachment of one of the nasal proclitics **ń**- ‘with, by, (away) from’, **ń**- ‘I’, **ŋ́**- ‘you (SG)’, **ń**- ‘you (PL) or **n̂**- ‘they’ to a word with an initial obstruent phoneme. These nasals can be moraic. Some speakers tend to pronounce a short **ɪ** [^{ɪ}] before the cluster, others realize it rather like a prenasalized consonant, particularly when there is no tonal difference between the proclitic and the following mora, as in the first example below. Phonetic approximations accompany the examples below.

m-p-ɪmmâ.t [^{m}bɪm:ât$^{˥}$], [mbɪm:â$t^{˥}$], [^{ɪ}mbɪm:â$t^{˥}$]
1-C-see:COMPL
I saw (it)

m-pôl [mbôl], [^{ɪ}mbôl]
with-person
with the person

Seeming consonant clusters: separated by ə

In other cases, consonants sequences may sound like a cluster, but I analyse them as separated by schwa because they always involve a tone-bearing unit, as appears from tone whistling. Schwa is

sometimes audible, sometimes hardly so. The following types of near-clusters occur word-initially. Preceding a geminated rhotic, lateral or nasal, the moraicity of **ə** can be transferred to this rhotic, lateral or nasal.

obstruent and lateral:

pəlla	[pᵊlːa], [pl̩ːa]	'cat'
kəllân	[kᵊlːân], [kl̩ːân]	'old woman'

obstruent and rhotic:

pəɽɪn	[pᵊɽɪn], [pɽɪn]	'finally'
kərét	[kᵊɾétˀ], [kɾétˀ]	'cloth'

obstruent and nasal:

pənân	[pᵊnân]	'woman without children'
kəmɛl	[kᵊmɛl]	'hunting party'

nasal and rhotic:

ŋəɽĭ	[ŋ̍ɽī], [ŋɽī]	'water'

nasal and lateral:

məlɛməla	[mᵊlɛmᵊla]	'a little'
ŋəlləkkôr	[ŋᵊlːɔkôr], [ŋl̩ːɔkôr]	'sorghum (k.o.)'

Tone movements also show that these consonants do not form consonant clusters, but are separated by **ə**. Upon prefixation of **ń-** 'with, by, (away) from' a High tone is realized on the first mora of a word to which it is attached, unless the second mora has itself a High tone. Upon prefixation of **nɔ-** 'on, at' or **ɪ-** 'in' a High tone is realized on the second mora, unless there is a third mora which itself has a High tone. The example below shows that **pr** is not a consonant cluster, but contains a moraic element.

pərɛ	[pᵊɾɛ], [prɛ]	‘monitor lizard’
mpə́rɛ	[m̩bʱɾɛ]	‘with the monitor lizard’
nɔpərɛ̂	[nɔβᵊɾɛ̂], [nɔβrɛ̂]	‘on the monitor lizard’

There are some further near consonant clusters that occur in word-medial position. In some of these cases, the moraicity of schwa may be transferred to the preceding **l** or rhotic, which is not necessarily geminated. In some cases schwa is more audible than in others. Some of these words with near consonant clusters are Arabic loans which include the article **al**-.

lateral and voiceless stop:

ɔlə́kkɛt	[ɔlʱkɛt̚]	‘put down’
aləppéra	[alᵊpéɾa], [al̩péɾa]	‘flag’ (< Sud. Ar. *al-beerag*)

rhotic and voiceless stop:

ɔrrə́tta	[ɔrːʱta], [ɔr̩ːta]	‘be eaten (plural subject)’

lateral and voiced fricative or approximant:

aləpaccû̩	[alᵊβacû̩̚], [al̩βacû̩̚]	‘jackal’ (< Sud. Ar. *al-baᶜshoob*)
aləkaɪrɛ̂	[alᵊɰaɪɾɛ̂], [al̩ɰaɪɾɛ̂]	‘old coin of ten piasters’

rhotic and voiced fricative or approximant:

ɔɣəkɔ̂	[ɔɣᵊɰɔ̂]	‘eat’

lateral and nasal:

aləmʊ́ntʊ	[alᵊmʊ́ndʊ], [almʊ́ndʊ]	‘gun’ < Sud. Ar. *al-bundugiyya*

rhotic and nasal:

mɔrəmɔr	[mɔrᵊmɔr], [mɔrmɔr]	‘eight’
cʊrəntʊk	[cʊɾᵊndʊk̚], [cʊr̩ndʊk̚]	‘small bell’

rhotic and lateral:

cʊrəllúpa [cʊrʷlːúβa], [cʊrlːúβa] ‘sorghum stem’

2.2. Vowels

Lumun has eight vowel phonemes: **į**, **ɪ**, **u**, **ʊ**, **ɛ**, **ɔ**, **a**, **ə**.[21]

2.2.1. Contrastive series

Minimal pairs and near minimal pairs provide evidence for the contrastive status of **į, ɪ, ɛ, a, ɔ, ʊ** and **u**.

į versus **ɪ**

kį́t	[kį́tˀ]	‘eyes’
kɪ̌t	[kɪ̄tˀ]	‘wild chicken’
įɽįkɔ	[iɽiɯo]	‘tie’
ɪɽɪkɔ	[ɪɽɪɯo]	‘enter’
ɔkįɔ	[oɯio]	‘drive together (of cattle)’
ɔkɪɔ	[ɔɯɪɔ]	‘cut’

u versus **ʊ**

kua	[kua]	‘strand of hair’
kʊâ	[kʊâ]	‘digging tool’
ŋuɽû	[ŋuɽû]	‘asida’
ŋʊɽʊ	[ŋʊɽʊ]	‘dirt’
unɔ	[uno]	‘pour’
ʊnɔ	[ʊnɔ]	‘build’

[21] Kutsch Lojenga also analysed eight vowel phonemes (unpublished notes of 2004).

ɛ versus **ɪ**, **ɨ** and **ɔ**

cên	[cên]	‘palm fruit’
cîn	[cîn]	‘egg’
cɨ̂n	[cîn]	‘thigh’

ɛ̃̂	[ɛ̃̂]	‘go’
ɪɔ	[ɪɔ]	‘die’
ɨɔ	[io]	‘set fire to’

cɛɽêŋ	[cɛɽêŋ]	‘middle of body’
cɔɽɔ̌ŋ	[cɔ̄ɽɔ̄ŋ]	‘mountain, hill’

ɔ versus **ʊ**

kəpɔn	[kəβɔn]	‘farming field’
k-ɔpún	[kɔβún]	‘bitter’

ɔrâ	[ɔɾâ]	‘cultivate’
ʊra	[ʊɾa]	‘escape’

a versus **ɛ** and **ɔ**

măn	[mān]	‘house’
mên	[mên]	‘palm fruits’

ʊra	[ʊɾa]	‘escape’
ʊrɛ	[ʊɾɛ]	‘forget’

ṯăr	[ṯār]	‘net for storage’
tɔr	[tɔr]	‘appetite’

ɔllâ	[ɔlːâ]	‘wipe away’
ɔllɔ̂	[ɔlːɔ̂]	‘run’

Contrastive series involving ***ə***

The vowel **ə** is contrasted with **i̯**, **ɪ**, **u**, **ʊ**, **a**, **ɛ**, **ɔ** and zero in the examples below. **ə** is often realized very short and is often co-articulated with an adjacent vowel (more details are given in 2.2.3). **ə** contrasts with zero only word-initially, but not before a rhotic sound, because rhotics do not occur word-initially.

ərrɔ	[ᵊrɔ]	‘shoot’
i̯rrɔ	[irɔ]	‘jump’
ŋəɽǐ	[ŋᵊ̄ɽī]	‘water’
ŋɪlî	[ŋɪlî]	‘leadership’
cəmmɔ́n	[cᵊmːɔ́n]	‘caterpillar (sp.)’
cummûn	[cumːûn]	‘owl’
cəpú	[cᵊβú]	‘hole in the ground’
cʊpû	[cʊβû]	‘fruit of *pʊpû*-tree’
capú	[caβú]	‘ground’
əpa	[ᵊβa]	large bowl for preparing beer
paa	[paː]	grapevine
pərɛ́	[pᵊɾɛ́]	‘monitor lizard’
pɛrɛ́	[pɛrɛ́]	‘chest’
ə̪t̪ên	[əðên]	‘wild felines (sp.)’
ɔ̪t̪én	[ɔðén]	‘baskets (k.o.)’
kəɽan	[kᵊɽan]	‘name’
kaɽan	[kaɽan]	‘place’
t̪ɔɽák	[t̪ɔɽákˀ]	‘rope’
t̪ɔɽák	[t̪ɔɽákˀ]	‘war’

2.2.2. ATR (Advanced tongue root)

In minimal pairs the difference between **ʊ** and **u** and particularly between **ɪ** and **i̱** is clearly distinguishable. In their production in minimal pairs, JS perceives a clear difference as well, describing the articulation of **i̱** and **u** as involving a 'kind of pushing from the throat' and 'tension in the head', in general requiring some special effort as compared to the articulation of **ɪ** and **ʊ**. The same contrast exists between the allophonic variants of **ɛ** and **ɔ**: [ɛ] and [ɔ] on the one hand, and [e] and [o] on the other hand. This suggests a kind of tense/lax opposition, with **i̱**, **u,** [e] and [o] having a tense articulation, and **ɪ**, **ʊ**, [ɛ] and [ɔ].

There are, furthermore, some vowel harmony effects that are typical for advanced tongue root (ATR) systems. As shown in this chapter, roots contain only vowels from one set, while at least in some affixes, **ɪ**, **ʊ**, **ɛ** and **ɔ** tend to be raised, at least a little, towards **i̱**, **u,** [e] and [o] by **i̱** or **u** in the root. This is precisely compatible with a so-called 8-vowel 2IU- ATR harmony system (Casali 2008). In Lumun the vowel **a** is not involved in vowel harmony, which is attested in some other 7 or 8-vowel 2IU languages as well. **ə** is a special case since it is realized in different ways in different environments, due to co-articulation.

The vowel harmony effects point towards advanced tongue root (+ATR) articulations of **i̱** and **u**, and [e] and [o], though there seems to be no clear association between +ATR and 'tense', and –ATR and 'lax' (Ladefoged & Maddieson 1996); in some Nilotic languages there is even rather the opposite association (Tucker 1970). In western Nilotic languages there is, moreover, an association of +ATR with breathy voice (Hall & Creider 1998, p. 47-48), which is not found in Lumun.

How the high and mid vowels are precisely articulated in Lumun remains somewhat unclear, but it seems accurate to describe them in terms of ATR.

However, except in ATR-minimal pairs, the contrast seems to be on its way out. For several words, though articulated laxed rather than tensed, it was difficult to decide whether the vowels would best be qualified as –ATR or as +ATR. They seemed kind of "in-between": +ATR as compared to clear –ATR examples, but –ATR as compared to clear +ATR examples. In addition, judgments could also be inconsistent, not only between speakers, but also by one and the same speaker. Cases which were not really clear but which I decided to represent as +ATR, because they seemed to be articulated more towards +ATR than towards –ATR include the following:

kucúl 'back', **mucúk** 'ashes', **cərúk** 'opening', **kunú** 'ear', **kunû** 'scorpion', C-**ullúk** 'only, just', C-**əruk** 'only, just', **cuccû** 'bead', **waǰ** 'cow' and C-**ɔɲîʂ** 'black'.

2.2.3. Phonetic realizations of **ə**

The vowel **ə** (schwa) is characterized by its variety in surface appearances. Its length varies from ultra-short to normal vowel-length, its quality from a schwa-like central vowel to the colour of a vowel in an adjacent syllable, often the following.

length of ə

ə can often be realized as ultra-short, so that consonants surrounding it nearly form a consonant cluster (see 2.1.9). It was also shown that the moraicity of **ə** can be realized on an adjacent lateral, rhotic or nasal. Between a voiceless plosive and a rhotic the vowel tends to be less audible than between a voiced fricative/approximant and a rhotic. Compare:

kappəɽí	[kapˈɽí], [kapɽí],	'spoon'	L.L.H
kapəɽal	[kaβᵊɽal]	'apron'	L.L.L

In initial position it is short but clearly audible:

ərɪt	[ˈrɪtˈ]	'granaries'
əɽan	[ᵊɽan]	'names'

In a closed final syllable, **ə** often sounds like a full vowel, particularly when the final consonant is an obstruent:

carə́k	[caɾə́kˈ]	'belly, stomach'	
cakə́t	[caɯ́təˈ]	'toe'	(also: **cakát** [caɯ́atˈ])

quality of ə

In the absence of other vowels, **ə** is realized as a central mid vowel:

t̪əpə́k	[t̪əβə́kˈ]	'forked stick'
əttəŋ	[ᵊtəŋ]	'again'
təmmə̂k	[tᵊmːə̂kˈ]	'bark of tree'

ə also has a central quality if it occurs in a root-final syllable. In such cases, root-internally preceding vowels are, if not **ə** as well, **a** or **ɔ**:

cakə́t	[caɯ́təˈ]	'toe'
carə́k	[caɾə́kˈ]	'belly, stomach'
kaɽən	[kaɽən]	'place'
kat̪ə́r	[kaðə́r]	'road'
cɔɽə̂r	[cɔɽə̂r]	'young goat'

When preceded by a syllable containing **u** or **ʊ**, **ə** adopts the quality of this preceding vowel:

kʊɽət̪ɪ	[kʊɽᵘðɪ]	'leaf of *pʊpʊ*-tree'
kʊrə́t̪a	[kʊrʷə́ða]	'bamboo needle'
ʊɽəllɛ	[ʊɽᵘlːɛ]	'habitually graze (animals)'

If not preceded by **u** or **ʊ**, **ə** adapts to the vowel in the stem-internal following syllable when this is high vowel (**i̧, ɪ, u, ʊ**):

p-ərî̧k	[pʲrîkˈ]	'big, important'
ŋarəkkʊk	[ŋaɾᵘkʊkˈ]	'baby'

In case of a following mid-vowel (**ɛ**, **ɔ**), **ə** can take on the quality of this vowel, but also be realized as a central vowel:

ərrɔ	[ᵊrːɔ], [ᵊrːɔ]	‘shoot’
ərɛ́t	[ᵋɾɛ́tˀ], [ᵊɾɛ́tˀ]	‘cloths’

With **a** in the stem-internal following syllabe, **ə** is realized as a central vowel:

əlla	[ᵊlːa]	‘cats’

When the following syllable contains a vowel sequence, **ə** tends to adapt to the second vowel of the sequence, though not necessarily always:

cəmmɔ́ún	[cᵘmːɔ́ún]	‘caterpillar (sp.)’
ɔpə́llɪɛ	[ɔpᵋlːɪɛ], [ɔpᵊlːɪɛ]	‘frighten’
ɔkə́ɽɪɔt	[ɔkʲɽɪɔtˀ], [ɔkʲɽɪɔtˀ]	‘squeeze’

2.2.4. Distribution of **ə**

The distribution of **ə** is different from the distribution of the other vowels. It is absent from monomoraic words, does not occur word-finally and is not part of root-internal vowel sequences. No sequences **kwə** are attested.

Another observation is that many longer words (four or more morae) contain a schwa. It seems that, in longer words, vowel reduction is at play. Vowel reduction can be witnessed in derivations with a combination of the Reciprocal suffix -**arɔ** and the Benefactive suffix (**ɪ**)**nɛ**. The initial vowel of the Benefactive suffix, realized as **ɪ** when attached to a verb with final or last vowel **ɔ**, is now reduced to **ə**:

ɔkkôt ‘do, make’ + **arɔ** + **ɪnɛ** > **ɔkkárənn̪ɛt** ‘do for e.o., make for e.o.’

A case which suggests reduction is the verb **ɔkə́n̪a** ‘look at’ vs. its Imperative **kan̪a** ‘look!’.

In (indirect) loans from Arabic which are borrowed together with the Arabic article *al*, schwa is an inserted vowel solving a consonant

cluster that is not allowed. This means that schwa is inserted between **l** and any following consonant, except when this is another **l**. For example:

aləkkúppa 'basket' (< Sud. Arabic *al-guffa*)
aləmʊ́ntʊ 'gun' (< Sud. Arabic *al-bundugiyya*)

2.2.5. Co-occurrence restrictions of vowels in roots

The same vowels can co-occur in a root, but there are some restrictions to the co-occurrence of different vowels. Root-internally **ị** and **u** can co-occur, and **ɪ** and **ʊ** (irrespective of which vowel comes first), but not **ị** and **ɪ**, **ị** and **ʊ**, **u** and **ʊ**, or **u** and **ɪ** (irrespective of which vowel comes first). The vowels **a** and **ə** can co-occur with all other vowels (**ị**, **ɪ**, **u**, **ʊ**, **ɛ** and **ɔ**), but in the case of **ə** this is not vice versa: the high vowels and **ɛ** do not precede **ə** root-internally. [e] and [o] do not occur in roots unless **ị** or **u** is present in the root as well.

Combinations of vowels in roots with two morae are presented in the table below. The first vowels are set out on the vertical axis, the second on the horizontal axis. (-) means that a combination was not attested, but that this does not seem structural, occurrences would in principle be possible.

Table 14 Vowel combinations in lexical roots

	ị	**ɪ**	**u**	**ʊ**	**ɔ**	**ɛ**	**a**	**ə**
ị	+	-	(-)	-	+	+	+	-
ɪ	-	+	-	+	+	+	+	-
u	+	-	+	-	+	+	+	-
ʊ	-	+	-	+	+	+	+	-
ɔ	+	+	(-)	+	+	+	+	+
ɛ	(-)	+	+	+	+	+	+	-
a	+	+	+	+	+	+	+	+
ə	+	+	+	+	+	+	+	+

2.2.6. Harmony effects across morpheme boundaries

ɛ, **ɔ** and **ɪ** in affixes tend to (somewhat) harmonize with a +ATR lexical root, being realized as, or towards, [e], [o] and [i] respectively. No cases are attested of a +ATR lexical root and **ʊ** in an affix. **a** in an affix is not affected by a +ATR lexical root. As far as **ə** occurs in affixes, it is typically realized very short, such as in the allomorph **-ənɛ** of the Benefactive suffix **-ɪnɛ** (see 14.1). As far as there would be some colouring of **ə** this will be determined by an adjacent vowel, irrespective of its ATR-quality.

Some examples of verb stems follow here. They consist of a root and final vowel. The final vowel is –ATR by default, but harmonizes with a +ATR value of the verbal root:

ɔɾékɔ	[ɔɾéɯɔ]	'work'
ɪɽɪkɔ	[ɪɽɪɯɔ]	'enter'
i̱ɽi̱kɔ	[iɽiɯo]	'tie'
ɪɽɛ	[ɪɽɛ]	'say'
i̱ɽɛ	[iɽe]	'thresh'

Harmonization of affix vowels has in particular been observed in derivational suffixes, for example in Causative **-ɪɛ**:

ɪɽɪk-ɪɛ	[ɪɽɪɯɪɛ]	'make enter'
i̱ɽi̱k-i̱ɛ	[iɽiɯie]	'make tie'
ʊn-ɪɛ	[ʊnɪɛ]	'make build'
un-i̱ɛ	[unie]	'make pour'

The Passive morpheme **-ak** does not block harmonization of the final vowel, nor of the vowels of the Benefactive suffix **-(ɪ)nɛ**. The derivations below are based respectively on **ʊnɔ** 'build' and **unɔ** 'pour':

ʊn-akɔ	[ʊnaɯɔ]	'be built'
ʊn-ak-ɪnɛ	[ʊnaɯɪnɛ]	'be built for'
un-akɔ	[unaɯo]	'be poured'
un-ak-i̱nɛ	[unaɯine]	'be poured for'

Verbal inflectional suffixes tend to have variable realization. There can be (some) harmonization to +ATR root vowels, but not necessarily so. [ɪ], [i] and qualities in-between were found as realizations of the Imperative suffix **-ɪ** attached to a +ATR verbal root. The Completive suffix -ɛ of t-final verbs tended to be realized as [ɛ] irrespective of the ATR quality of the verbal root.

The adnominal prefix **ɔ-** (the persona prefix) and the plural suffix **-ŋɔ̂n** tend to harmonize (somewhat) upon attachment to a +ATR element.

Clitics such as the prepositional proclitics, connexive (C-**ɔ**) and the restrictor (**ɪ-**) seem to undergo little or no change under influence of a +ATR lexical root. The same goes for the enclitic question marker (**-ɪ**) and the enclitic discourse markers -**tɪ** and -**mɛ́**.

Two clitics have themselves +ATR vowels: the 1PL exclusive subject pronominal pro-clitic (**i̧n-**) and the 1PL exclusive object pronominal enclitic (**-i̧n**). Both do not influence the vowel(s) of the verbal roots or stems to which they are attached.

One verb has +ATR mid-vowels though neither **i̧** nor **u** is present. This verb has a labialized velar (**kw**). The +ATR realization of **ɔ** in 'fetch' can be explained from the labialization being the realization of an underlying (+ATR) vowel **u**.

ɔkkwɔ̂	[ɔkʷɔ̂]	'hit'
ɔkkwɔ̂	[okʷô]	'fetch'

The picture of the Lumun vowel system is that of a +ATR root-dominant 8-vowel harmony system with ATR contrast only in the high vowels - but a system in which the ATR-factor is on the retreat. Though the contrast remains clear in minimal pairs, it was difficult in several other cases to decide upon the ATR-qualities of the vowels. Harmonizing effects were found, but could be weak in some cases, or also absent.

Like Lumun, the Talodi languages Tocho, Acheron and Dagik have 8-vowel systems with (ATR-)contrast in the high vowels (**ɪ** vs. **i̱** and **ʊ** vs. **u**), as did the probably extinct language Torona (Tocho: Kuku Alaki & Norton (2013); Acheron: Norton (2013); Dagik: Vanderelst (2013); Torona: Norton & Kuku Alaki (2015). Norton and Kuku Alaki remark that in Torona, like in Lumun, there is tendency for loss of the +ATR value in the high vowels (p. 103).

2.2.7. Vowel sequences

Long vowels: sequences of identical vowels

Root-internal long vowels are rare. The following nouns have a long vowel, which may have arisen from loss of a consonant (**ŋ**?) in between:

ŋaák/ɲaák	'oil'
t̪aák/laák	'sesame paste'
ŋɛɛ/ɲɛɛ	'poison'
tʊô̱n/nʊô̱n	'shovel (k.o.)'
paa/kaa	'grape (plant sp.)'
caa/maa	'fruit of *paa*'

There is one case in a longer noun:

t̪ʊʊlí/lʊʊlí	'hyena'

One adjective (possibly) has a long vowel:

C-**ɛɛná**	'such, like this/that'

In the case of **i̱i̱** 'yes' (answer to a polar question), length can be explained from avoidance of words that consist of just a single vowel.[22]

[22] Probably for the same reason, **ka** 'body' does not have a plural *__a__ 'bodies' in the plural ∅ class.

Non-derived verbs with a long vowel are **ɛɛ̂** ‘stab, blow’ and **ɔɔ** ‘cry’. **ɔɔ** ‘cry’ can be analysed as consisting of a root (the first vowel) and a final vowel (the second) which is not part of the root, just like other verbs ending in **ɔ** (see 12.4.1). Some Pluractionals have a long initial vowel as compared to their non-Pluractional counterparts, for example:

ʊɔ ‘descend’ **ʊʊɔ** ‘habitually descend’

Vowel length generally results from two vowels coming together across a morpheme boundary. These vowels may have been the same in the first place, or one has assimilated to the other. In the following example a long vowel results from attachment of the Benefactive morpheme **-ɪnɛ** which replaces the final vowel **ɔ**:

ɪ-ɔ ‘die’ **ɪ-ɪnɛ** [ɪːnɛ] ‘die for’

Long **a** is further attested in some inflected forms of the verb **aɔ** ‘come’. The Completive of **aɔ** with proclitic third person singular pronoun + concord forms a minimal pair with the noun ‘stranger’:

kkwáát ‘s/he has come’ **kwát** ‘stranger’

A morpheme that gives rise to a long vowel in a word is the irrealis marker **â,** which is attached between the concord and the —always vowel-initial— verb stem:

ʊl **w-á-aná.t** **ŋəpak**
people C-IRR-bring:COMPL beer
the people would have brought beer (but now they did not)

In combination with the Completive of ‘come’ an extra-long vowel results:

kkw-á-aát ‘s/he should have come’

Attachment of vowel-final proclitics may result in an (underlyingly) long vowel, as may attachment of vowel-initial enclitics. In the first

example, there is elision of noun-initial **ŋ** upon prefixation of **ɪ** 'in'. I write double vowels in the cases below, though length is not necessarily realized.

ɪ-ɪkə̂ (< **ɪ** + **ŋɪkɛ**)
in-flood

in the flood

pʊl **ɪ-p-ɔ́parí-ɪ** (< **ɪpɔ́parí** + **-ɪ**)
person RES-C-female-Q

(is / was it) a woman?

Though there are actually a few cases of true minimal pairs in roots (**kaa** 'grapes' versus **ka** 'body, bodies'; **caa**/**maa** 'fruit(s) of *paa*' versus **cá**/**má** 'head(s)), I do not consider long vowels as monophonemic units in Lumun. In the great majority of cases, long vowels can be analysed as a vowel sequence caused by adjacent morphemes, and an analysis of the long vowel as a sequence of two identical phonemes is therefore preferred.

Length of a sequence of identical vowels is often hardly or not audible unless in slow or carefully articulated speech. The vowels of some prefixes and suffixes tend to remain more audible than the vowel of other prefixes and suffixes, for which reason I write some sequences with a long vowel, and others with a short vowel.

Diphthongs: sequences of different vowels

Root-internal diphthongs are not frequent. The table below presents the cases attested in nouns, including borrowed nouns. The first vowels are set out on the vertical axis, the second on the horizontal axis. The attestations vary from 1 (**aį**, **ʊɪ**, **ɛɪ**, **aɛ**, **ɛɔ**, **aɔ**), to 10 (**aɪ**) and 16 (**ɪa**). The separate vowel qualities are largely retained.

Table 15 Diphthongs in nominal roots

	į	**ɪ**	**u**	**ʊ**	**ɛ**/[e]	**ɔ**/[o]	**ə**	**a**
į		–	–	–	**įɛ**	–	–	–
ɪ	–		–	–	**ɪɛ**	**ɪɔ**	–	**ɪa**

u	–	–		–	–	–	–	**ua**
ʊ	–	**ʊɪ**	–		**ʊɛ**	–	–	**ʊa**
ɛ/[e]	–	**ɛɪ**	–	–		**ɛɔ**	–	–
ɔ/[o]	–	–	–	**ɔʊ**	–		–	–
ə	–	–	–	–	–	–		–
a	**aį**	**aɪ**	–	**aʊ**	**aɛ**	**aɔ**	–	

Examples:

įɛ	**kį́** ‘cows’	**ɪɛ**	**tʊkʊŋkíɛŋ** ‘bee (sp., small)’
ɪɔ	**mɪɔ̌** ‘spell’	**ɪa**	**cʊmɪan** ‘bone’
ua	**tua** ‘hair (of animal)’	**ʊɪ**	**ŋʊí** ‘milk’
ʊɛ	**tʊ́** ‘river	**ʊa**	**cʊân** ‘rat (sp.)’
ɛɪ	**ɔpɛí** ‘child (of X)’	**ɛɔ**	**ʈɛ̆ŋ** ‘beard’
ɔʊ	**təllɔ́n** ‘caterpillar (sp.)	**aį**	**waǐ** ‘cow’
aɪ	**kaɪʈî** ‘nail, claw, louse’	**aʊ**	**paʊn** ‘rat’
aɛ	**ŋaɛ́** ‘urine’	**aɔ**	**paɔ́** ‘tree (sp.)’

Just as I analyse long vowels as sequences of identical vowels, I analyse dipthongs as sequences of different vowels.

2.2.8. Vowel sequences across morpheme boundaries

Across morpheme boundaries and in connected speech there can be coalescence between adjacent vowels. There are general coalescence tendencies, but if and how coalescence takes place depends on the morphemes involved. Coalesced vowels often result in a short vowel, but generally also allow for a pronunciation with some length. This also goes for adjacent same vowels.

In some cases there is little to no shortening. The vowel resulting from attachment of prepositional proclitic **ɪ-** to an **ɪ** (or **į**) -initial noun typically retains length, as do vowels resulting from attachment of the question markers **-ɪ**, **-a** and **-ɛ** (chapter 20.2) and the discourse marker **-a** (chapter 17.2.1). In those cases, I write a double vowel word-internally. In other cases, I write a single vowel word-internally, though realization with some length is generally possible.

Sequences **ɔ-ɛ**, **ɔ-a** and **a-ɔ** typically coalesce across a word-internal morpheme boundary as well as across a word boundary in connected speech, while sequences involving a high vowel (**i̧**, **u**, **ɪ**, **ʊ**) or schwa (**ə**) often (but not always) result in a diphthong. Some examples of coalescence as well of absence of coalescence will be given here, involving sequences **ɔ-a** and **a-ɔ**. Details are further found in the sections discussing the morphemes involved.

ɔ-a

Attachment of the connexive marker C-**ɔ** to an **a**-initial noun results in a vowel **a**. The vowel will generally be realized short, but can in careful speech be pronounced with some length.

karró **k-árrô** (< **k-ɔ** + **arrô**)
mother_tongue C-of.Lumun_people

the mother tongue of the Lumun people

The same happens with **nɔ** 'on, at' followed by an **a**-initial noun. The resulting vowel **a** tends to be pronounced with some length (see also 16.3.2).

ɔt̪t̪ɛ **na-apê** (< **nɔ** + **apê**)
leave:IMP on-fish(PL)

leave the fish(PL) behind!

Also the persona prefix **ɔ́**- before an **a**-initial noun results in (short) **a**:

ámra 'Red' (< **ɔ-** + **ámra**)

In connected speech verb-final **ɔ** followed by an **a**-initial noun is realized as **a**:

k-kw-á.ŋwɔ́ **ápê** [kwáŋʷ-áβê]
3-C-kill.PLUR:INCOMPL fish(PL)

s/he catches fish (lit. s/he kills fish)

A word-internal sequence **ɔa** is, however, attested in the Past and Dependent Perfective of the verb **ɔɔ** 'cry':

… akwɔ́-at '… and s/he cried'

Coalescence is absent upon attachment of the question particle -**a** and the discourse particle -**a**. An example of the latter follows here:

m-p-ɛ́í	**p-á.ɛ́ɔ̋-a**
1-C-be_NEARSP	C-go:INCOMPL-ATT

I am going!

In the word for the Lumun homeland coalescence of **ɔ** + **a** has resulted not in **a** but in **ɔ**:

tɔrrû (< **tɔ-** 'up on, up at' + **arrû** 'Lumun people')

a-ɔ

a-ɔ becomes **a** upon attachment of the proclitic conjunctive particle **á** to a noun with initial **ɔ**:

… a-lalʊ́	**ɔmɛntɛt**	**ʊ́l**	**ɪttĭ …**	(**á** + **ɔlalʊ̂**)
CONJ-Lalʊ	tell.PLUR:DEPINCOMPL	people	that	

… and Lalʊ was always saying to people …

When an **a**-final verb is followed by an **ɔ**-initial noun, irrespective of whether this **ɔ** is the persona prefix or belongs to the nominal root, **ɔ** results in connected speech:

m-p-a.ɪk	**p-a.kétta**	**ɔ-kʊkkʊ́**	**ŋ.ŋɪŋ**	[paɰét-ɔɰʊkʊ́]
1-C-be:PR	C-be_shaved:INCOMPL	PERS-Kʊkkʊ	with:ABS	

I am being shaved by Kʊkkʊ

ŋ-kw-ímma	**ɔcáŋ**	[ŋgʷím:-ɔɟáŋ]
2-C-see:INCOMPL	lizards	

you will see the lizards

The sequence **aɔ** is attested in the verb **aɔ** ‘come’, which consist of a root **a** and final vowel **ɔ**.

Some further details of vowel coalescence across morpheme boundaries are found in the chapters and sections describing specific morphemes.

2.2.9. Nasalization

In some words the vowels are or can be nasalized. In the verbs **ɛ̂ɛ̂** ‘stab, blow’, **ɛ̂ɔ̂** ‘go’ and **ɔŋ́ɛɔ** ‘urinate’ the vowels can be pronounced nasalized, in certain TAMs of the verb ‘go’ this is even generally the case. When a word is pronounced nasalized, the nasalization spreads over the immediately preceding vowel(s). No or little nasalization seems to take place if the vowels are not in word-final position, as, for example in **ɛ́ɛ́tta** ‘be stabbed’ and **mpɛ̂ɔ̂t** ‘I am gone’.

A noun which is nasalized is **mɪ̃ɔ̃** ‘spell’. **ã́ ã** [ʔã́ʔã] ‘no’ is also nasalized.

3. Tone

3.1. General facts

This first paragraph establishes some general facts of the Lumun tonal system: its tonemes, the tone-bearing unit, and the distribution of tones.

3.1.1. Four tonemes

Lumun can be analysed as having four tonemes: high (H), low (L), falling (HL) and rising (LH). These tones are contrastive in prepausal positions, cf. the following words. Low tone is unmarked. Notably, the words with a rising tone are not actually pronounced with a contour, but —as a whole— at a pitch that remains level (see 3.2.2). When in non-prepausal position it becomes clear that a high tone is underlyingly involved here (see 3.3.1).

L vs. **H**

kərək	‘farming field’	**kərák**	‘bellies’
ŋərɛ	‘work’	**ŋərɛ́**	‘honey’
kəpa	‘bowl (k.o.)’	**kəpá**	‘meat’
paʊn	‘rat’	**maún**	‘fingers’

L vs. **HL**

aʊn	‘rats’	**aûn**	‘bees’
cɪpɪt	‘edge’	**cɪpît**	‘ant’
t̪ʊllɛʈak	‘lightening’	**t̪ʊllɛʈâk**	‘lizard (sp.)’
ɔllɔ	‘step aside’	**ɔllô**	‘run’

L vs. **LH**

kʊʈɪ	‘family member’	**kʊʈǐ**	‘branch (of tree)’
ɛrɛ	‘speak’	**ɛrě**	‘(just) like’
t̪ʊʈan	‘theft’	**t̪ʊʈăl**	‘animal (sp., rodent?)’

H vs. **HL**

kunú	‘ear’	**kunû**	‘scorpion’
parí	‘wife’	**parî**	‘tree (sp.)’
aʈaŋkál	'bed’	**əʈaŋkâl**	'name-sharers’

H vs. **LH**

kɻ̩t	‘eyes’	**kǐt**	‘wild chicken’
tɔ́k	‘waterplace’	**ʈ̪ŭk**	‘dog’
ʈ̪ɪ́ɾé ‘art of being a young woman’		**ʈ̪ɪʈɛ̆**	‘saying (verbal noun)’
nán	‘on (it), at (it)’	**măn**	‘room, house’

HL vs. **LH**

ʈ̪ɛɾêt	‘corn cob’	**ʈ̪ɛɾɛ̆t**	‘talking about (verbal noun)’
cɔrrâ	'needle of hedgehog'	**karră**	'lie’
pɔcâŋ	'lizard (sp.)’	**cɔʈ̆ŋ**	'mountain’
ɪʈ̪ûn	'in the onion(s)'	**ɪʈ̪ŭn**	'together’

3.1.2. Tones on vowel sequences: counting morae

On diphthongs, it is possible to have more complex tonal contours, in which a low tone on the first part of the diphthong is followed by a falling tone, or by a rising tone, e.g.,

cʊân	‘rat (sp.)’
cʊâl	‘sack’
kʊâ	‘digging tool’
kaôn	‘bee’
ɛ̃̊	‘go’

tʊăn	‘(at) home’
ʈ̪ɛ̆ŋ	‘beard’
tʊkɪă	‘head pad’
mɪ̆̃	‘spell, disease’
waɻ̆	‘cow’
ɪttʊăŋ / **ɪttɪăŋ**	‘very (modifying **ɕ-ɔʈɛ̆** ‘red’ or **ɔʈɪa** ‘become red’)’

The words with a rising tone (always in final position) are not pronounced with a contour but at a slightly raised pitch that remains level.

There are also some examples of complex tonal contours on long vowels:

tʊô̌n	‘cultivating tool’
ɛɛ̂	'stab, blow'
ɔɔ̂k	's/he'
naâk	'on him/her'

C-**a-ăr**	‘muddy’ (< C-**ɔ-** ‘of’ + **ŋăr** ‘mud’)

Words with a low-falling tone on a diphthong or long vowel can be opposed to words with a high-low tone on a diphthong or long vowel (the derivation between parentheses is explained further below):

kʊâ	‘digging tool’
ŋkúa	‘with the strand of hair’ (< **ŋ-kûa** < **ń-** ‘with’ + **kua** ‘strand of hair’)

Words with a low-rising tone on a diphthong or long vowel can be opposed to words with low-high on a diphthong or long vowel:

C-**aăr**	‘muddy’
ŋaák	‘oil’

waǰ	‘cow’
paí	‘tamarind tree’

The oppositions show that it is useful to take the mora, not the syllable as the unit on which a toneme —low, high, rising or falling— is realized. If the syllable were taken as the counting unit, **ŋkúa** could be regarded as having a falling tone realized on a syllable, but for words like **kʊâ** a more complex LHL contour would have to be posited. Likewise could the tones on **ŋaák** and **paí** be regarded as realizations of the rising tone on a syllable, but then the tones on **c-aăr** and **waǰ** (realized at a slightly raised level pitch) would have to be posited as single more complex tones**.** The mora as the counting unit offers the possibility of regarding the diphthong of **ŋkúa** as underlyingly falling + low (realized as high + low) and **kʊâ** as low + falling. With the mora as counting unit **ŋaák** and **paí** are not seen as realizations of a rising tone on a long vowel or

diphthong, but as low + high, whereas **ɕ-ăăr** and **waĭ** both have a low + rising tone.

The mora as the unit on which a toneme is realized raises the expectation that on a diphthong or long vowel also high-falling and high-rising sequences might be possible (contours on single morae are always in pre-pausal position). High-falling sequences indeed occur, but only due to tone bridge (tone-bridge will be discussed in 3.5, the tonal derivations between parentheses show the application of the Tone Shift Rule and the Contour Simplification Rule, see 3.3.1 and 3.3.2):

ca cɔ́-cúân 'the head of the rat (sp.)'
(< ca cɔ́-cuân < ca cɔ̂-cuân < **cá** 'head' + **ɕ-ɔ-** 'of' + **cuân** 'rat (sp.)')

High-rising sequences on a diphthong or long vowel are not attested.

Further arguments for the mora as counting unit

The tonal phenomena upon attachment of the prepositional proclitics **ɪ-** 'in', **nɔ-** 'on, at', **tɔ-** 'up on, up at' and **ṭɔ-** 'at' provide a further argument for the mora as counting unit (or the unit of attachment for the toneme). Upon prefixation of **ɪ-** 'in', **nɔ-** 'on, at', **tɔ-** 'up on, up at' and **ṭɔ-** '(down) at' to a low-toned noun, the second mora of the noun becomes falling. If, however, the noun has only one mora, this mora becomes falling. If the noun has more than two morae, the falling tone on the second mora is simplified and realized as high (Contour Simplification Rule, see 3.3.2). Examples:

ɪ-kwâ	(< **ɪ-** + **kwa** 'chaff')	'in the chaff'
nɔ-pəllâ	(< **nɔ-** + **pəlla** 'cat')	'on the cat'
ɪ-narúŋkwaŋ	(< **ɪ-narûŋkwaŋ** < **ɪ-** + **narʊŋkwaŋ** 'grasshoppers (sp.'))	'between the grasshoppers (sp.)'

Diphthongs count as two morae:

ɪ-ʈɪâk (< **ɪ-** + **ʈɪak** ‘suffering’) ‘in suffering’
ɪ-aûn (< **ɪ-** + **aʊn** ‘rats’) ‘among the rats’

Also the next example shows that the mora rather than the syllable is the carrier of tone. A word-final high tone becomes low in non-prepausal position and can reappear on the first mora of a following word (see the rules of Tone Shift and Contour Simplification, 3.3.1 and 3.3.2). The first noun in the example below has high-toned diphthong. When something follows, it is only the high tone on the last mora that becomes low (and reappears on the first mora of the following word):

kapíɛt k-ɔ́-pʊl ‘the jaw of the person’
(< kapíɛt k-ɔ̂-pʊl < **kapíét** ‘jaw’ + **ɔ-ɔ-** ‘of’ + **pʊl** ‘person’)

Mora-counting is, however, not without problems. Long vowels behave differently from diphthongs upon attachment of one of the prepositions **ɪ-** ‘in’, **nɔ-** ‘on, at’, **tɔ-** ‘up on, up at’ and **ʈɔ-** ‘(down) at’. They pattern with short vowels, and not with diphthongs, e.g.,

ɪ-cáa ‘in the grape’ (instead of ***ɪ-caâ**)
(< ɪ-câa < **ɪ-** ‘in’ + **caa** ‘grape’)

ɪ-ɛ́ɛ ‘in the poison’ (instead of ***ɪ-ɛɛ̂**)
(< ɪ-ɛ̂ɛ < **ɪ-** ‘in’ + **ŋɛɛ** ‘poison’)

And in (at least) one case of a diphthong, there are alternative tonal realizations:

ɪ-maît / ɪ-máɪt (< **ɪ-** ‘in’ + **maɪt** ‘beans’) ‘in the beans’

In some items with a low + falling or a low + rising tone on a long vowel or diphthong it is clear that this long vowel or diphthong comes from loss of a velar nasal between vowels belonging to adjacent morphemes. Examples are **ɔ-ɔ̂k** ‘s/he’ (< **ɔ́-** + **ŋɔk**), **na-âk** ‘on him/her’ and **ɪ-aâk** ‘in him/her’, which apart from, respectively, the prepositional proclitic **nɔ-** ‘on, at’ and **ɪ-** ‘in’, contain the 3rd person singular formative **ŋɔk** (see also the chapter on pronouns).

ᴄ-a-ăr ‘muddy’, from ᴄ-**ɔ** ‘of’ + **ŋăr** ‘mud’ is another example of loss of a velar nasal. **ᴄ-a-ăr**, however, is not pronounced with a (complex) contour, but at a slightly raisedpitch which remains level, and can also be pronounced with a short vowel (**ᴄ-ăr**). In the case of ᴄ-**aîk** ‘be’ the diphthong with low + falling tone comes from historical loss of an oral palatal between vowels (< ᴄ-**á** ‘be’ + the vague reference particle **cık**). ᴄ-**aîk** ‘be’ and **cık** are discussed in chapters 12.7.1 and 15.2.1, respectively.

Long vowels in (real) roots are rare. And also in such cases, the long vowel may well stem from historical loss of a consonant (a velar nasal?) in between. In (real) roots the long vowel may function as a single tone bearing unit.

In view of the opposition on diphthongs and long vowels between H.L and L.HL patterns on the one hand, and L.H and L.LH patterns on the other hand, and in view of the occurrence of cases like **ı-ṯıâk** ‘in suffering’ with the second low mora of a diphthong becoming falling, and **kapíɛt k-ɔ́-pʊl** ‘the jaw of the person, with the high tone on the second mora of diphthong becoming low (and reappearing on the next word), the mora as counting unit offers an easier way to describe the tonal phenomena in the language than the syllable.

3.1.3. Tone on nasals

Proclitics that consist of only a nasal can carry a tone. These proclitics are the subject pronominal clitics **ń**- ‘I’, **ŋ́**- ‘you (SG)’, **ń**- ‘you (PL) and **n̂-** ‘they’, and the prepositional clitic **ń**- ‘with, by, (away) from’. In the examples below, the nasal proclitics are also marked for tone in case of a low tone (in the other examples in this book the nasal proclitics are only marked for tone when they have a high tone). Notably, the clitics with high tone of their own are realized low in context, due to Tone Shift (see 3.3.1); the clitic with falling tone is realized high in context due to Contour Simplification (see 3.3.2).

m̀-p-a.îk
1-C-be:PR

I am

ǹ-n̰-ímma
2A-C-see:INCOMPL

you (PL) see (it)

ń-n̰-ímma
3A-C-see:INCOMPL

they see (it)

k-kw-á.at	**m̀-pól**	**p-ɛn**
3-C-come:COMPL	with-person	C-DEM

s/he has come with that person

m̀-p-a.kóɣɛ	**man**	**ɲ́.cık**
1-C-start:INCOMPL	house	from_VREF

I will start building the house from the beginning

In the chapter on segmental phonology it was shown that a tone on the very short vowel **ə** may rather be realized on an adjacent (geminated) sonorant or on the nasal part of nasal and stop cluster.

3.1.4. Distribution in other than prepausal position

In other than prepausal position, the distribution of the tones is different. Contour tones are in principle not allowed on a non-prepausal short vowel (a single mora). When, due to phonological and morphological concatenations, a falling tone is expected to appear on a non-prepausal single mora, it is simplified; for more details see 3.3. Rising tones on a (underlyingly) single mora occur only in prepausal position.

On long vowels and diphthongs, contour tones are found in all positions. In other than word-final position these contours generally arise from a morpho-phonological process. Under the mora-approach, I do not analyse such tones as falling or rising tones on a long vowel or diphthong, but as resulting from the combination of two tonemes.

E.g., in the first example below the falling surface tone on the long vowel can be regarded as a sequence of a falling (realized as high) and a low tone underlyingly. The rising surface tone on the diphthong in the second example can be analysed as consisting of a low and a falling (realized as high) tone underlyingly:

ɔt̪ʊ́ʊlí 'Hyena (as a nickname)' (< ɔt̪ʊ̂ʊlí < **ɔ́-** + **t̪ʊʊlí** 'hyena')
ɔ́ínɛ 'go to' (< **ɛɔ̂̂** 'go' + **-ɪnɛ**)

Long vowels that arise across morpheme boundaries are often shortened phonetically; under such circumstances a sequence of high and low can give rise to a falling tone on a phonetically short vowel. Thus, for example, when the proclitic subjunctive particle **â-** is attached to a following **a-**initial element, the result is a long vowel with a contour tone, which, consequently, tends to be pronounced shortened:

ámmá k-kw-áá.t á-ant-ɛɔ̂̂ / ânt-ɛɔ̂̂ (< **â- ant-ɛɔ̂̂**)
if 3-C-come:COMPL SUBJ-(2-)can:DEPINCOMPL-go:DEPINCOMPL
when she arrives, you can go

In fast speech, falling contours arising from morphological processes, can be simplified to a high tone on a short vowel. In the example above **ânt-ɛɔ̂̂** 'you can go' can also become **ánt-ɛɔ̂̂**.

Notably, also before other consonants than nasals (and the lateral) a falling tone on a short vowel can arise from morpheme attachment. **âcɔ** in the example below results from **â-** + **ŋ́-** + **ɔcɔ̂**.

â-cɔ muccú m-ɔt̪ʊ́kkwakɔ.t cakərʊ́k
SUBJ-(2-)string:DEPINCOMPL beads C-be_coloured:COMPL also
you (must) also string beads of different colours (App. III, 16)

Similarly, when the proclitic conjunctive particle **ǎ-** becomes adjacent to another **a** (or to a vowel that assimilates to it) a long vowel with a rising contour tone may result. The long vowel tends to be pronounced shortened, in which case the rising contour may be simplified to high:

a-á̰tərəpɛ̂ / **á̰tərəpɛ̂** … ‘and the rabbit …’
(< a-â̰tərəpɛ̂ < **ă-** + **ŋaa̰tərəpɛ̂**)

A rising contour is further found on the verbal negation marker **ănn-**. Here, however, no rising toneme is involved. The element **ănn-** is a shortened form of **akə́nn**-, which itself is a shortened form of **akə́rənnɔ**. Apparently, **ănn** is underlyingly a diphthong (**aə́nn**) with a low + high tone, but shortened phonetically. Notably, the rising tone on the shortened negation marker **ănn** cannot be simplified to just a high tone.

ʊkʊl	**w-ănn-ɔ́llɔ̂**
child	C-NEG-run:DEPCOMPL

the child did not run

3.2. The phonetic realization of the tones

This section gives an idea of the phonetic realization of the tones. The transcriptions between square parentheses are based on whistling by the consultants.

3.2.1. Prepausal low tone

A prepausal mora with low tone is pronounced with a slight downglide. Some words follow here which have this final downglide in prepausal position.

kat	‘grasshopper(s)’	[˩]
pəlla	‘cat’	[˧˩]
akkarɔ	‘call’	[˧˧˩]
cʊmɪan	‘bone’	[˧‿˩]
apəɽɪlakɔ	‘hang (with hands)’	[˧˧˧˧˩]

When a high tone precedes a single prepausal low tone within the word, downglide is difficult to hear (first example below). It is more clearly audible in case of more prepausal low-toned morae preceded by a H-tone within the word (second example below).

mpímma pə́lla	‘I will see the cat’	[_/ _ ¯ _\] or [¯ _ ¯ _\]
mpímma ʈ̪ɔ́mɔccɔ	‘I will see the old man’	[_/ _ ¯ _ _\] or [¯ _ ¯ _ _\]

3.2.2. Rising tone on short (prepausal) vowels

A rising tone on a (underlyingly) single prepausal mora is never pronounced as rising. Unlike the falling tone in prepausal position, the rising contour cannot as a whole be realized on one mora: in prepausal position the high part of the contour remains unrealized (NB: in context it becomes clear that this tone involves a high part, see 3.3.1).

A couple of phonetic cues make the contrast between the rising and the low tone in prepausal position. In the first place, unlike in prepausal low tones, there is no downglide. In the second place, isolated nouns with a rising tone are, as a whole, realized at a slightly raised pitch as compared to all-low nouns. The differences are clearly audible in the following pairs (though the initial pitch difference, tends to be somewhat smaller than in the transcriptions below):

kat	‘grashopper’	[_\]
kĭt	‘wild chicken’	[−]
pɛɽɔŋ	‘palm tree’	[_ _\]
cɔɽɔ̆ŋ	‘mountain’	[− −]
ʈ̪ɔmɔccɔ	‘old man’	[_ _ _\]
ʈ̪ɔmɛkɔ̆	‘scarification’	[− − −]

The difference between rising and low tones is consistent when words are given in isolation. However, when such nouns occur in sentences (but still before a pause), it is often possible to pronounce the rising tone in the same way as a low tone, i.e. with low pitch and slight downglide. In isolation the words **ʈ̪ɔ̆k** ‘dog’ and **kəɽi̯ttăŋ** ‘knife’ have a rising tone.

mpɛt̪ɛt kəllán t̪ʊ̌k ‘I will give the old woman the dog’ [– – – ¯ –]
mpɛt̪ɛt kəllán t̪ʊk ‘I will give the old woman the dog’ [– – – ¯ –ˎ]

kərɛt kaík nɔ-pǔŋ ‘the cloth is on the rack’ [– – –⁄ – –]
kərɛt kaík nɔ-puŋ ‘the cloth is on the rack’ [– – –⁄ – –ˎ]

Also in the following cases, there are two possibilities for the realization of the rising tone in prepausal position: as a rising tone (there is a smaller pitch interval with the preceding high tone and no downglide) and as a low tone (there is a bigger pitch interval with the preceding high tone and some downglide). The noun **t̪ɔrǎ** ‘cultivating’ has a rising tone in isolation, the proclitic connexive particle **kɔ** ‘of’ is realized high due to preceding **kɪrɛ́k** ‘hoe’:

kɪrɛk k-ɔ́-t̪ɔrǎ ‘a hoe for cultivating’ [– – ¯ – –]
kɪrɛk k-ɔ́-t̪ɔra ‘a hoe for cultivating’ [– – ¯ – –ˎ]

The two realizations are equivalent in the sense that they raise no expectation of anything following, and that no specific emotion is conveyed. Nevertheless, it is well possible that in certain pragmatic contexts the one tends to be used rather than the other. Physical distance is also a factor that may be of influence. According to one of the consultants (JS), when speaking to somebody who is at a distance, the variant with the rising tone is more likely to be used than the variant with low-tone realization.

The exact conditions of the neutralization of low and rising tones in prepausal position are not clear, and would need further investigation.

When a word with a rising tone follows one or more all low words (or words realized as such), these low tones and the following word with rising tone are pronounced at the same pitch level. This pitch level is (often) not the level of an isolated low word (such as **pʊl** ‘person’ in the first example below) or of the initial mora of a word that is low + high in isolation (such as **aʈík** ‘come!’ in the second example), but the slightly raised pitch level of isolated words with a rising tone:

pʊl ɪ-p-ɪpʊkɪppŏk	‘a very white person’	[– – – – –]
aʈɪk nɔppăn	‘come inside!’	[– – – –]

cịməntɛrį̣	**c-aat**	**n-t̪ɛ-t̪t̪ŭk**	[– – – – – – – –]
hedgehog	C-come:COMPL	with-at-fenced_place_for_livestock	

the hedgehog came out of the animal shelter

3.2.3. High and falling tones

A falling tone is initiated at a somewhat lower pitch than a high tone (but at a higher pitch than an item with a rising tone). This can, for example, be observed in the following pairs:

cį́t	‘eye’	[¯]
cên	‘palm fruit’	[◝]

kunú	‘ear’	[– ¯]
kunû	‘scorpion’	[– ◝]

3.2.4. Downdrift and downstep

Within a clause there can be some downdrift: a high tone following a low tone can be realized at a slightly lower pitch than a preceding high tone, and a low tone following a high tone at a slightly lower pitch than a preceding low tone. Word-internally this is possible as well. Downdrift effects tend to be light and do not continue over long stretches of speech.

In the following sentence there is some downdrift. The high tone on ‘four’ is realized at a slightly lower pitch than the preceding stretch of high tones, while ‘cows’ is realized a little lower than the initial low tone, and the low tones on ‘four’ a little lower than those on ‘cows’**:**

kəllán **éŋ-k-í** **k-ɔ́nó** **kịɛ** **k-ɔ́cɔɣɪn** [–⁻⁻⁻⁻⁻⁻–⁻–⁻–]
old_woman DEM-C-NEARSP C-have cows C-four

this old woman has four cows

There is no downstep in Lumun. A downstep effect might be expected in cases of a word-final falling contour tone which is directly followed by an item with an initial high or falling tone. In such cases, the contour tone becomes high (see the Contour Simplification Rule, 3.3.2), but it does not influence the pitch-level of the following high tone, which is on the same level. Some examples:

kəllán **k-érɛ** (< **kəllân kérɛ**) [–⁻⁻¬]
old_woman C-speak

the old woman will speak

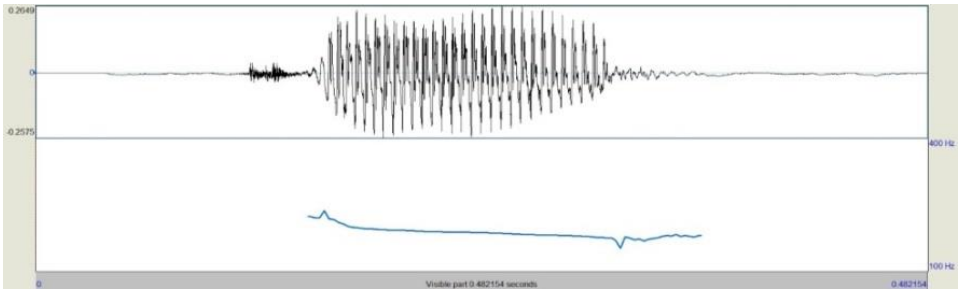
ɔ-kʊkkʊ́-ɔ̂n (< **ɔ́-** + **kʊkkʊ̂** + **-ŋɔ̂n**) [––¯]
PERS-Kʊkkʊ-PL

Kʊkkʊ and his group

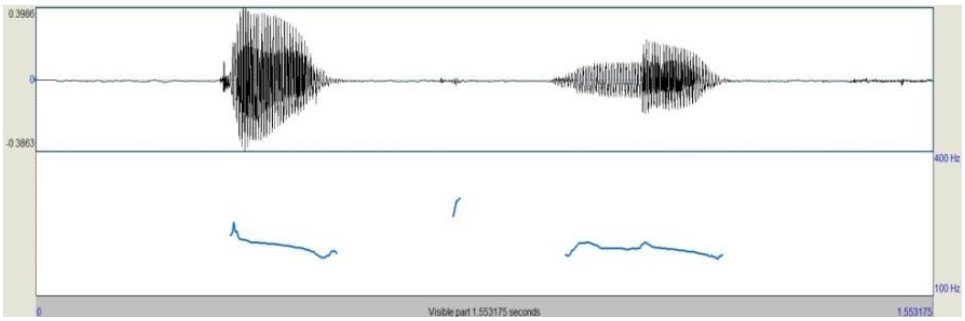
3.2.5. Graphs of phonetic realisations

A few graphs showing phonetic realizations of the four tone patterns on monosyllabic nouns are presented here, as well as a clause. The nouns and the clause are produced by Nafisa Abdullai (at the time ca. 19 years old). In each picture, the second representation is set out on a vertical scale ranging from 100 to 400 Hrz.

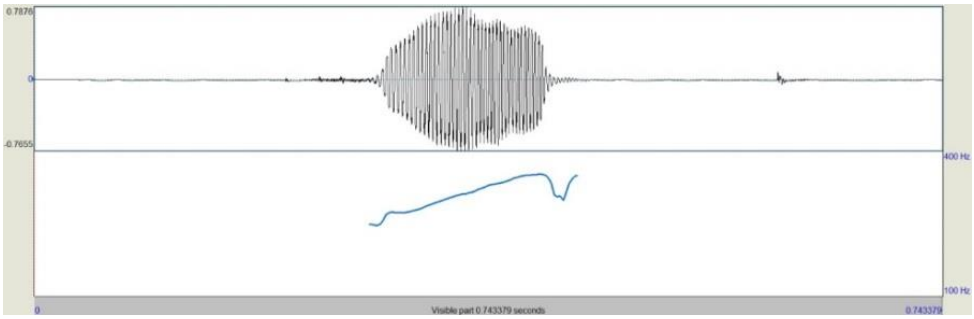
Graph 1. **kat** ‘grasshopper(s)’



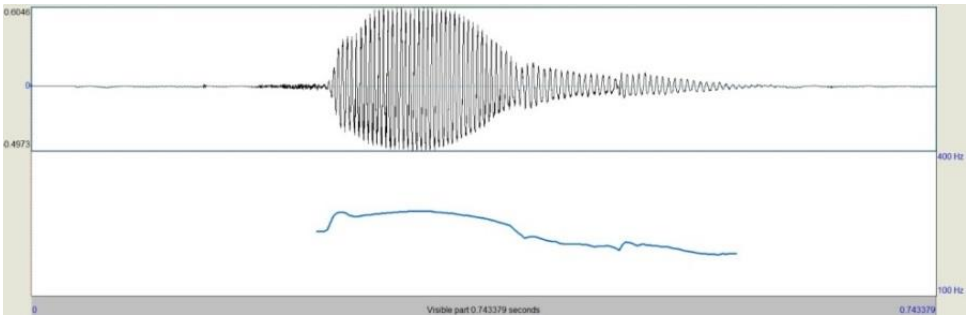
Graph 2. **ṭŏk** ‘dog’, **lŏk** ‘dogs’



Graph 3. **cịt** ‘eye’



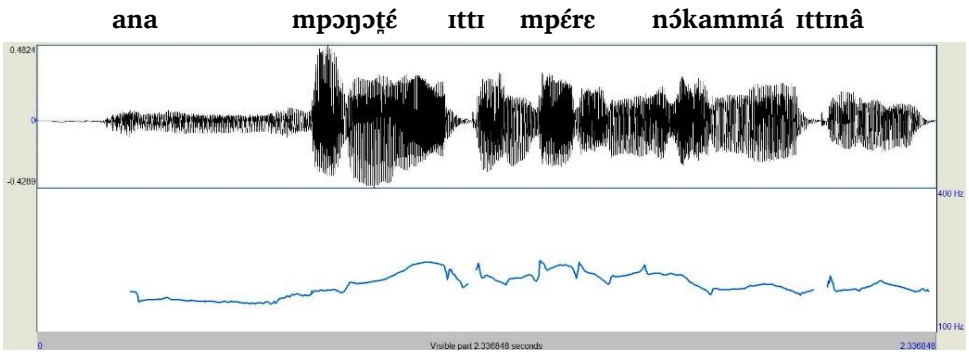
Graph 4. **cịl** ‘grain of sorghum’



Graph 5. ‘and I like to talk about the singing whip like this’

ana	**mpɔŋɔ̱t́é**	**ɪttɪ**	**mpére**	**nɔ́-kammɪá**	**ɪttɪnâ**
and	I like	that	I talk	on-singing_whip	like_this

and I like to talk about the singing whip like this (App. II, 30)



3.3. Tone rules

There are a number of tone rules that apply within the sentence (or in a smaller domain before a pause).

3.3.1. Tone shift

Word-final high and rising tones in non-prepausal position undergo specific changes.

Tone Shift Rule: When a word with a (underlying) final high tone is followed by another word, the final high tone becomes low. The high tone reappears on the first mora of the following word if this mora is low (this can be called tone shift), leading to a HL contour. The same behaviour is found with the high part of a rising tone (as mentioned earlier, rising tones (on a single mora) only occur word-finally).

m-p-ɔʈəkɔ.t	**kât**	(< **mpɔʈəkɔ́t kat**)
1-C-eat:COMPL	grasshopper(s)	

I have eaten grasshoppers

ṭ̪-ɔʧəkɔ	**kât**	(< **ṭ̪ɔʧəkɔ̆ kat**)
NOM-eat	grasshopper(s)	

eating grasshoppers

Certain grammatical words as well as words containing certain grammatical morphemes have a floating high tone. These words have a final low tone in isolation but bring a high tone to the first mora of a following word if this mora is low, leading to a HL contour. These words thus behave in accordance with the Tone Shift Rule. In non-prepausal position their final mora is realized low (as it would be, in these cases, in prepausal position as well), while their floating high tone appears on the first mora of the following word if this mora is underlyingly low, leading to a HL contour.

The following example with the Incompletive verb **mpakə́ṭ̪a** 'I will look' illustrates the effect of application of the Tone Shift Rule. This verb, which is based on the verb **ɔkə́ṭ̪a** 'look at/after' (see 12.4 for the segmental and tonal shape of verbs), has a final low tone in isolation, but when followed by a low-toned word, it imposes a high tone on the first mora of that word, leading to a HL contour:

m-p-a.kə́ṭ̪a	**pôl**	(< **mpakə́ṭ̪a** H **pʊl**)
1-C-look:INCOMPL	person	

I will look at/after the person

An example is also the conjunction word **ana** 'and'. In isolation it is pronounced as all-low, but a high tone appears on the first mora of a following low noun, leading to a HL contour:

papɔkıra	**ana**	**kât**	(**papɔkıra ana** H **kat**)
leopard	and	grasshopper	

the leopard and the grasshopper

3.3.2. Simplification of a falling (HL) contour

On a single mora, a falling contour only occurs in prepausal position (this can be different in case of shortened long vowels). The following tone rule applies:

Contour Simplification Rule: A falling contour (on a single mora) is realized as a high tone, except in prepausal position.

Contour Simplification applies after Tone Shift.

The Contour Simplification Rule predicts that there are no falling tones on short vowels in any but prepausal position. In isolation, the word **kəllân** 'old woman' has a final falling tone, **kwɔk** 'shoe' has a low tone. In context, the contour tone of **kəllân** becomes high:

m-p-ɛt̪ɛt	**kəllán**	**kwɔk**
1-C-give:INCOMPL	old_woman	shoe

I will give the old woman the shoe

The non-prepausal falling tone is realized as high, irrespective of the tones of the following item:

mpɛt̪ɛt kəllán t̪í̪ 'I will give the old woman the thorn'
mpɛt̪ɛt kəllán t̪ŏk 'I will give the old woman the dog'
mpɛt̪ɛt kəllán cên 'I will give the old woman the palm fruit'

Tone Shift leads to a HL contour on the first mora of the following word if this mora is low. If this mora is not in prepausal position, Contour Simplification applies. Some further examples follow here. The first two below involve the connexive proclitic C-**ɔ**- 'of' (see 7.1).

ca	**c-ɔ́-pəlla**	(< ca cɔ̂-pʊl < **cá cɔ- pəlla**)
head	C-of-cat	

the head of the cat

kəʈ̪ittaŋ	**k-ɔ́-pʊl**	(< kəʈ̪ittaŋ kɔ̂-pʊl < **kəʈ̪ittăŋ kɔ- pʊl**)
knife	C-of-person	

the knife of the person

m-p-a.kə́t̪a	**túṯ̪̪təruk**	(< **mpakə́t̪a** H **tuṯ̪̪təruk**)
1-C-look:INCOMPL	pig	

I will look at/after the pig

papɔkıra **ana** **pálla** (**papɔkıra ana** H **pəlla**)
leopard and cat

the leopard and the cat

In the next example, the first word has two high tones, the first of which stays in place, while the last mora becomes low. The high tone of this last mora reappears on the initial mora of the next word:

aləpırıt̪ **w-ɔ́-pʊl** (< aləpırıt̪ wɔ̂-pʊl < **aləpırít̪ wɔ- pʊl**)
prayer_mat C-of-person

the prayer mat of the person

Tone Shift applies first, then Contour Simplification. This is illustrated by the following example, which shows that a high tone derived from a falling contour does not shift further (irrespective of whether the falling tone belongs to the lexical item (first example below, with **pəɣɛmê** 'Acheron person') or is generated by the preceding item (second example below, with **pʊl** 'person'.) In the first example only Contour Simplification applies, in the second first Tone Shift, then Contour Simplification).

m-p-ét̪ɛt **pəɣɛmé** **kʊmmʊk** (< **mpét̪ɛt pəɣɛmê kʊmmʊk**)
1-C-give:COMPL Acheron_person pot

I have given the pot to the Acheron person

m-p-a.nékınɛ **pʊ́l** **kʊmmʊk** (< **mpanékınɛ** H **pʊl kʊmmʊk**)
1-C-take_for:INCOMPL person pot

I will take the pot to the person

3.3.3. More details on Tone Shift: Tone Reappearance sub-Rules

While the lowering of the non-prepausal final high or rising tone is general, its (re)appearance on the following word is only found in a subset of contexts. The high tone will reappear on the initial mora of a following word that is (underlyingly) all-low, irrespective of its length. Examples of this were given above. However, in certain cases in which the following word contains a (underlying) high or falling

tone, the high tone will not reappear. It will also not reappear if the following word contains a rising tone.

The circumstances will be specified in four Tone Reappearance sub-Rules.

sub-Rule 1: When the following mora is already high, there is no change to this word. In the examples below, **pəʈá** has a final high tone, **ʈŭk** 'dog' and **pʊcŭŋ** 'barren woman' have a final rising tone in isolation. The nouns **wék** 'leg' and **kálam** 'pen' have an initial high tone in isolation.

mpɛʈɛt pəʈa wék 'I will give the Tira person the leg'
mpɛʈɛt ʈʊk wék 'I will give the dog the leg'

mpɛʈɛt pəʈa kálam 'I will give the Tira person the pen'
mpɛʈɛt pʊcʊŋ kálam 'I will give the barren woman the pen'

sub-Rule 2: When the following word has an initial mora with a low tone, immediately followed by a vowel with a high tone or falling tone, it remains the same. The nouns in the examples have, in isolation, the following tones:

pəʈá 'Tira person', **pʊcŭŋ** 'barren woman', **ɟmíʈ** 'goat' and **apê** 'fish'

mpɛʈɛt pəʈa ɟmíʈ 'I will give the Tira person the goat'
mpɛʈɛt pʊcʊŋ ɟmíʈ 'I will give the barren woman the goat'

mpɛʈɛt pəʈa apê 'I will give the Tira person the fish'
mpɛʈɛt pʊcʊŋ apê 'I will give the barren woman the fish'

sub-Rule 3**:** When the following word has a final or last vowel with a rising tone, this word remains the same, irrespective of the number of low-toned vowels in the word. The nouns in the examples have, in isolation, the following tones:

pəʈá 'Tira person', **pʊcŭŋ** 'barren woman', **ʈŭk** 'dog', **kəʈɟittăŋ** 'knife', **ʈɛnnəkkɛttă** 'testing, test'

mpɛt̪ɛt pəɽa t̪ŏk ‘I will give the Tira person the dog’
mpɛt̪ɛt pɒcɒŋ t̪ŏk ‘I will give the barren woman the dog’

mpɛt̪ɛt pəɽa kəɽi̪ttăŋ ‘I will give the Tira person the knife’
mpɛt̪ɛt pɒcɒŋ kəɽi̪ttăŋ ‘I will give the barren woman the knife’

mpɛt̪ɛt pəɽa t̪ɛnnəkkɛttă ‘I will give the Tira person the test’
mpɛt̪ɛt pɒcɒŋ t̪ɛnnəkkɛttă ‘I will give the barren woman the test’

sub-Rule 4: When the following word starts in a number of vowels with a low tone and has a high tone or falling tone later on in the word, it depends on the word whether or not the first low becomes high (i.e. becomes a falling tone, after which the contour is simplified to high). In some words, the first mora becomes high when there is only one low mora separating it from the high or falling tone of the word itself, in other words, there must be two low morae in between.

All examples below are given with **pəɽá** ‘Tira person’, but could also be given with a noun with a rising tone such as **pɒcŏŋ** ‘barren woman’. The second nouns are, in isolation, **t̪ʊʊlí** ‘hyena’, **ŋʊmpərúŋ** ‘calf (in sucking stage)’ and **t̪akəɽúk** ‘chicken’, all of which have 3 morae (a final high tone preceded by two low morae). Note that in the example with **t̪akəɽúk** ‘chicken’, the first mora does not become high.

mpɛt̪ɛt pəɽa t̪úʊlí ‘I will give the Tira person the hyena’
mpɛt̪ɛt pəɽa ŋúmpərúŋ ‘I will give the Tira person the calf’
mpɛt̪ɛt pəɽa t̪akəɽúk ‘I will give the Tira person the chicken’

Examples with **pʊɽʊpê** ‘bird’, **ŋaṯərəpê** ‘rabbit’ and **aləmúntʊ** ‘gun’ follow here. In the example with **pʊɽʊpê** ‘bird’, the first mora does not become high.

mpɛt̪ɛt pəɽa pʊɽʊpê ‘I will give the Tira person the bird’
mpɛt̪ɛt pəɽa ŋáṯərəpê ‘I will give the Tira person the rabbit’
mpɛt̪ɛt pəɽa áləmúntʊ ‘I will give the Tira person the gun’

There are a few exceptions to these rules. In the first place, counter to sub-Rule 2, **cɪttín** ‘bird (sp.)’ changes its initial tone into a falling contour.

mpɛt̪ɛt pəɽa cîttín ‘I will give the Tira person the *cɪttɪn*-bird’

As this also runs counter to Contour Simplification, one may assume that the underlying form of **cɪttín** is **cɪɪttín** with a long vowel. However, in this lexeme, the vowel is always pronounced short.

Another case running counter to sub-Rule 2 (but not to Contour Simplification) is **paɽák** ‘fly’, the initial low tone of which becomes high:

mpɛt̪ɛt pəɽa páɽák ‘I will give the Tira person the fly’

The examples above involve nouns with a final high or rising tone. Examples with words with a floating high tone give precisely the same results, for example:

m-p-a.kə́t̪a	**ŋúmpəɽúŋ**
1-C-look:INCOMPL	calf

I will look at/after the calf

mpakə́t̪a t̪úʊlí ‘I will look at/after the hyena’
mpakə́t̪a t̪akəɽúk ‘I will look at/after the chicken’
mpakə́t̪a pʊɽʊpê ‘I will look at/after the bird’

This includes the exceptions to the rules, such as:

mpakə́t̪a cîttín **‘**I will look at/after the *cɪttɪn*-bird’

When the sentences are further extended, final high, rising and falling tones undergo the same phonological development. Compare:

m-p-ɛt̪ɛt	**pəɽa**	**wɛ́k**
1-C-give:INCOMPL	Tira_person	leg

I will give the Tira person the leg

m-p-ɛn̪ɛt	**pəʔa**	**wɛk**	**w-ɔ́-n̪akəʔúk**
1-C-give:INCOMPL	Tira_person	leg	C-of-chicken

I will give the Tira person the leg of the chicken

Repeated application of Tone Shift goes from left to right: first the final high tone of **pəʔá** is lowered and will not reappear on **wɛ́k** because that word has an (initial) high tone itself. Then the high tone of **wɛ́k** is lowered and realized as a falling tone on the connexive element **w-ɔ-**, after which the contour is simplified to a high tone.

3.4. Deviations from the tone rules

There are more tone changes that do not follow from the tone rules established above. Those that seem to be specific to certain morphological and morphosyntactic constellations will be treated in the respective chapters on morphology. Morphemes/words with specific tonal effects include the non-personal proclitic subject pronouns and the 3rd person singular and plural (3 and 3A) proclitic subject pronouns (chapter 6.2), four out of five prepositional proclics (chapter 16.1), the 1st and 2nd person singular possessor (chapter 7.3.1) pronouns and the vague reference particle **cɪk** (chapter 15-2). Conjunctions display tonal properties that do not fully comply with the tone rules (chapter 18).

In general, in situations of vowel coalescence and shortening of an underlyingly long vowel, (non-prepausal) low + high, or high + low tone combinations can be simplified to a high tone; some examples of this with the conjunctive particle **á**- and the subjunctive particle **â**- are presented in chapter 18.2. Examples of this simplification can also be found in 7.1.1 on the connexive. The falling tone of the irrealis morpheme (**â**), on the other hand, cannot be simplified to a high tone in case of coalescence and shortening (chapter 12.8).

The deviating tonal behaviour of certain verb forms with a final falling contour is described here.

3.4.1. Deviation from Contour Simplification: lowering of a final falling tone

Against the expectation raised by Contour Simplification, namely that the high part of a falling contour always remains in place, there are falling tones in word-final position that are, in certain contexts, realized as low, not as high. One such example are the tense-aspect-mood forms (TAMs) of verbs of tone class IIB (i.e. of verbs with a final falling contour) which have a final falling contour, notably the Dependent Incompletive (the stem form itself) and the Incompletive (see chapter 12 for the tone patterns of verbal stems and verbal TAMs).

Examples follow here with the stems of the tone class IIB-verbs **ɔkkɔ̂t** 'do, make' and **ɔcɔ̂** 'string'. When these verbs are followed by an all-low noun such as **lɔn** 'words, matters', their falling tone becomes high, as expected according to Contour Simplification:

ɔkkɔ́t lɔn 'to do things'
ɔcɔ́ lɔn 'to string things'

When the underlying falling tone is followed by an element with an initial high or falling tone or by an element with a high or falling tone on its second mora, the falling contour becomes low:

ɔkkɔt lú	'to make steam'	**lú** 'steam'
ɔcɔ mɛ̂n	'to string palm fruits'	**mɛ̂n** 'palm fruits'
ɔkkɔt kərɛ́t	'to make a cloth'	**kərɛ́t** 'cloth'
ɔkkɔt cʊccû	'to make a necklace'	**cʊccû** 'necklace'
ɔcɔ mɔrə́ʈ̪ɪ	'to string goatskin bracelets'	**mɔrə́ʈ̪ɪ** 'goatskin bracelets'

If the following element has a high or falling tone on its third mora, the falling tone can become high or low. It becomes high here:

ɔkkɔ́t kappəʈí	'to make a spoon'	**kappəʈí** 'spoon'
ɔkkɔ́t ŋaʈ̪ʈ̪ɔkɔ̂l	'to make a gourd'	**ŋaʈ̪ʈ̪ɔkɔ̂l** 'gourd (k.o.)'

In the following example, **nɛɔ̂** becomes low:

n-ɛ̃ɔ̃ **n-ɔ-kakkâ**
2A-go:DEPINCOMPL 2A-PERS-Kakka
go with Kakka! (to plural addressee)

In case of a following word with a final rising contour, there are two options for the realization of the verb: the falling tone may become high or low. Recall that the utterances without a high tone realized on the verb, are entirely pronounced at a slightly raised pitch, i.e., the whole stretch is pronounced according to the phonetic realization of the final rising tone.

ɔkkɔ́t n̰ḭ̆k / ɔkkɔt n̰ḭ̆k 'to make a fire' **n̰ḭ̆k** 'fire'
ɔkkɔ́t tʊkɪă / ɔkkɔt tʊkɪă 'to make a bracelet' **tʊkɪă** 'bracelet'

These phrases allow for a third tonal realization: after a final high tone on the verb, the noun can be realized as all-low (see 3.2.2).

In case of a following underlyingly low + high word which is itself followed by another word so that the final high is realized as low, the verbal contour may be realized as high but also as low. The contour thus shows the same behaviour here as when it is followed by a word with a rising tone. Examples of this were the earlier given sentences with the verb **mpɛn̰ḛ̂t** 'I will give' followed by **pəʈá** 'Tira person' and an object noun. Though only one tonal realization was presented in the earlier given examples (the one deviating from Contour Simplification), there are actually two possibilities:

m-p-ɛn̰ɛt / m-p-ɛn̰ét **pəʈa** **wék**
1-C-give:INCOMPL Tira_person leg
I will give the Tira person the leg

The lowering of a falling tone that is found with verb forms with a final falling contour of tone class IIB does not occur in comparable tonal constellations involving two adjacent nouns. An earlier given example for Contour Simplification is repeated here. The contour of **mpɛn̰ḛ̂t** 'I will give' is lowered before the contour or **kəllân** 'old woman' (which is realized as a high tone), but the contour of **kəllân** is not lowered before the contour of **cên** 'palm fruit'.

mpɛ̰tɛt kəllán cên ‘I will give the old woman the palm fruit’

Lowering of a falling contour does not occur in verbs from other tone classes. The examples below have the Completive form **mpɪmmât** of the verb **ɪmma** ‘see’ of tone class I (see chapter 12.4.2 for the tone classes). The verb is followed by the nouns **lú** ‘steam’, **mên** ‘palm fruits’ and **kərét** ‘cloth’. The contour is simplified, leaving its high part in place, in accordance with tone Contour Simplification:

mpɪmmát lú ‘I saw the steam’
mpɪmmát mên ‘I saw the palm fruits’
mpɪmmát kərét ‘I saw the cloth’

Lowering of a final falling contour is, however, found in constructions with the Present of the verb **ɔkâ** ‘be’, C**-aîk** (containing the formative **ɪk** (< **cɪk**)). Compare the following examples with the noun **kwɔk** ‘shoe’. In the fourth case, the prepositional proclitic **ɪ-** ‘in’ causes the contour to lower (see also 16.1).

kwɔk kaîk ‘the shoe is present; there is a shoe’
kwɔk kaík karə̰ta ‘where is the shoe?’
kwɔk kaík nɔ́-wɛ́k ‘the shoe is on the foot’
kwɔk kaɪk ɪ-wɛ́k ‘the shoe is on the foot’

There are some other cases in which, against the expectation raised by Contour Simplification, word-final falling tones are realized as low in non-prepausal position, instead of as high. These include the 3rd person singular and plural (3 and 3A) personal subject pronouns if preceded by the clitic subjunctive particle **â-**: **â-** + **ɔ̂k** > **áɔk** and **â-** + **ɔkîn** > **ákɪn**.

3.5. Tone bridge

In certain contexts, a stretch of low tones becomes high between an underlyingly falling or a non-final high tone and a later falling or non-final high tone, cf.

kəllán **k-á.ɽə́kɔ̂** (< kəllán kaɽəkɔ̂ < **kəllân kaɽəkɔ̂**)
old_woman C-eat:INCOMPL
the old woman will eat it

cullúkkúr **c-á.ɽə́kɔ̂** (< **cullúkkur caɽəkɔ̂**)
bird(sp.) C-eat:INCOMPL
the bird (sp.) will eat it

kəllán **k-á.kə́n̪a** (< kəllán kakə́n̪a < **kəllân kakə́n̪a**)
old_woman C-look:INCOMPL
the old woman will look

cullúkkúr **c-á.kə́n̪a** (< **cullúkkur cakə́n̪a**)
bird(sp.) C-look:INCOMPL
the bird (sp.) will look

Tone bridge occurs less commonly before a final high tone. In the following case there is tone bridge between the underlyingly falling tone on C-**ɔ-** 'of' (received from **caɽĭ** 'day' and simplified to a high tone) and **kíʆt** 'eye'. The derivation between parentheses is given under the gloss line.

caɽı **c-ɔ́-rɔ́-kíʆt**
day C-of-up_on-eyes
(< caɽı cɔ́- tɔ- kíʆt < caɽı cɔ̂- tɔ- kíʆt < **caɽĭ cɔ- tɔ- kíʆt)**
the first day

A rising tone cannot function as the end of tone bridge:

kəpa **k-ɔ́-nɔ-n̪ĭ̂k / k-ɔ́-nɔ-n̪ık**
meat C-of-on-fire / C-of-on-fire
(< kəpa kɔ̂- nɔ- n̪ĭ̂k < **kəpá kɔ- nɔ- n̪ĭ̂k)**
boiled meat (lit.: meat of on the fire)

kəpa **k-ɔ́-waǰ / k-ɔ́-waiǰ**
meat C-of-cow
(< kəpa kɔ̂ waǰ < **kəpá kɔ waǰ**)
the meat of a cow

There can be no tone bridge between two high/falling tones that occur in the same root. This is irrespective of whether both high/falling tones underlyingly belong to that root or one high tone (the initial one) comes from a preceding element. The latter is the case in the second example below: the high tone on ‘rabbit’ comes from **pəɽá** ‘Tira person’. Thus, the mora between the high tones in ‘lizard (sp.)’ cannot become high since they both belong to the root, nor can there be tone bridge on ‘rabbit’:

kapə́ɽɛnt̪ʊ́ŋ	‘lizard (sp.)’
mpɛt̪ɛ́t/mpɛt̪ɛt pəɽa ŋát̪ərəpɛ̂	‘I will give the Tira person the rabbit’

There can, however, be tone bridge when one of the high/falling tones occurs on a clitic or affix. Question words with the suffix **-t̪a** allow for tone bridge. In the example below, **karət̪â** has received a high tone on its initial mora from **ń-** ‘with, by, (away) from’ and there is tone bridge:

ɔ-kín	**t̪-aa.t**	**ŋ́.ŋɪn**	**ŋ-kárə́-t̪â**
PERS-3A	C-come:COMPL	with:ABS	with-where-QW

(< ŋkárət̪â < ŋkârət̪â < **ń- karət̪â**)
from where did they come with it?

Tone bridge applies after the other tone rules. In certain constellations it is obligatory, in others optional, in again others impossible. The following cases suggest that, at least in some environments, the number of low morae between two high/falling tones plays a role. In the first example, tone bridge is obligatory, in the second it is impossible.

ŋkwɔnʊ́ pápɛ́-ɪ (< **ŋkwɔnʊ̂ papɛ̂ -ɪ**)	‘do you have a fish?’
ŋkwɔnʊ́ pʊɽʊpɛ́-ɪ (< **ŋkwɔnʊ̂ pʊɽʊpɛ̂ -ɪ**)	‘do you have a bird?

The exact conditions under which tone bridge must, can or cannot be applied have not been fully clarified.

In the following, two common situations of tone bridge are studied, first tone bridge between a subject and an Incompletive verb; second in connexive constructions.

Tone bridge between subject nouns and verbs

A standard situation of tone bridge is found when a subject noun which itself has a final falling contour is followed by an Incompletive verb with a high tone on a non-initial vowel, as in the earlier mentioned examples:

kəllán **k-á.ɽə́kɔ̂** (< kəllán kaɽəkɔ̂ < **kəllân kaɽəkɔ̂**)
old_woman C-eat:INCOMPL

the old woman will eat it

kəllán **k-á.kə́n̪a** (< kəllán kakə́n̪a < **kəllân kakə́n̪a**)
old_woman C-look:INCOMPL

the old woman will look

The possibility of tone bridge depends on the aspectual form of the verb. There is no tone bridge when the verb is a Completive with a final falling contour (first example below) or a Past with a non-final high tone (second example below), nor when it is a Completive with a final high tone (third example below)

kəllán **k-ɔkən̪â.t** (< **kəllân kɔkən̪ât**)
old_woman C-look:COMPL

the old woman has looked

kəllán **k-ɔkən̪á.kaṇɛ** (< **kəllân kɔkən̪ákaṇɛ**)
old_woman C-look:PST

the old woman looked

kəllán **k-ɔɽəkɔ́.t** (< **kəllân kɔɽəkɔ́t**)
old_woman C-eaten:COMPL

the old woman has eaten it

Tone bridge does, however, occur between a subject with a final falling contour and a Completive verb with a final falling contour

preceded by the 'restrictor' (see chapter 9). The high tone of the restrictor cannot reappear on the Completive verb **kɔkən̰̤ât**.

kəllán **í-k-ɔ́kə́n̰̤â.t**
old_woman RES-C-look:COMPL

(< kəllán ɪkɔkən̰̤ât < kəllán í- kɔkən̰̤ât < **kəllân í- kɔkən̰̤ât)**
the old woman who has looked

Verb forms of tone class IIB and tone bridge

As discussed earlier, a non-prepausal final contour of verb forms of tone class IIB will be realized as high in certain circumstances and as low in others. It is realized as low in the first example, and as high in the second and third. There is tone bridge between the subject and the verb in the third example. Notably, verbs with an (underlying) final falling tone do not have a floating high tone.

m-p-a.ɽəkɔ **n̰̤ʊɽît** (< **mpaɽəkô n̰̤ʊɽît**)
1-C-eat:INCOMPL food

I will eat the food

m-p-a.ɽəkɔ́ **pacɪkkôt** (< **mpaɽəkô pacɪkkôt**)
1-C-eat:INCOMPL mashed_groundnut_dish

I will eat *pacɪkkɔt*

kəllán **k-á.ɽə́kɔ́** **pacɪkkôt**
old_woman C-eat:INCOMPL mashed_groundnut_dish

(< kəllán kaɽəkɔ́ pacɪkkôt < kəllán kaɽəkô pacɪkkôt < **kəllân kaɽəkô pacɪkkôt**)
the old woman will eat *pacɪkkɔt*

In the example below, where the verb has become all-low because of the process described under 3.4.1, tone bridge spans from the subject noun all the way to the object noun:

kəllán **k-á.ɽə́kɔ́** **n̰̤ʊ́ɽît**
old_woman C-eat:INCOMPL food

(< kəllán kaɽəkɔ n̰̤ʊɽît < kəllán kaɽəkô n̰̤ʊɽît < **kəllân kaɽəkô n̰̤ʊɽît**)
the old woman will eat the food

This works also when the noun at the end has a final high tone:

kəllán	**k-á.ɽəkɔ́**	**kə́pá**
old_woman	C-eat:INCOMPL	meat

(< kəllán kaɽəkɔ kəpá < kəllán kaɽəkɔ̂ kəpá < **kəllân kaɽəkɔ̂ kəpá**)
the old woman will eat the meat

Tone bridge can even extend further, as will be exemplified using the expression **caɽı cíáâ̱** 'on which day'. In the first example below, the final high tone of **kəpá** 'meat' has become low, without causing a high tone on the following word because of Tone Reappearance sub-Rule 2 (the next word has itself a rising tone). As a result a long stretch of low tones appears. Note in the tonal derivation presented between parentheses, that in **caɽı cíáâ̱** the final rising tone of **caɽǐ** 'day' has become low, and caused the heightening of the initial vowel of **cıaâ̱** 'which', after which the two high tones formed a tone bridge: **cíáâ̱**. The second example, with a low-toned subject is given for comparison.

kəllán	**k-á.ɽəkɔ́**	**kə́pá**	**cáɽí**	**c-íá-â̱**
old_woman	C-eat:INCOMPL	meat	day	C-which-QW

(<˛ kəllán k-aɽəkɔ kəpa caɽı cíaâ̱ < kəllán kaɽəkɔ kəpa caɽı cíaâ̱ <˛ kəllán k-aɽəkɔ kəpa caɽǐ cıaâ̱ <˛ kəllán kaɽəkɔ kəpá caɽǐ cıaâ̱ <˛ kəllán kaɽəkɔ̂ kəpá caɽǐ cıaâ̱ < **kəllân kaɽəkɔ̂ kəpá caɽǐ cıaâ̱**)

on which day will the old woman eat meat?

ʊkʊl	**w-a.ɽəkɔ**	**kəpa**	**caɽı**	**c-íá-â̱**
child	C-eat:INCOMPL	meat	day	C-which-QW

(< ʊkʊl waɽəkɔ kəpa caɽı cíaâ̱ < ʊkʊl waɽəkɔ kəpa caɽǐ cıaâ̱ < ʊkʊl waɽəkɔ kəpá caɽǐ cıaâ̱ < **ʊkʊl waɽəkɔ̂ kəpá caɽǐ cıaâ̱**)

on which day will the child eat meat?

The next case is given for comparison as well. The verb is not lowered before **maıt** 'beans', so that there is no uninterrupted stretch of low tones between **kəllán** and **cíáâ̱**. There is tone bridge, but not all the way to the question word.

kəllán **k-á.ɽə́kɔ́** **maɪt** **caɽɪ** **c-íá-t̪̂**
old_woman C-eat:INCOMPL beans day C-which-QW

(< kəllán káɽə́kɔ́ maɪt caɽɪ cíat̪̂ < kəllán kaɽəkɔ́ maɪt caɽɪ cíat̪̂ < kəllán kaɽəkɔ́ maɪt caɽɪ̌ cıat̪̂ < kəllán kaɽəkɔ̂ maɪt caɽɪ̌ cıat̪̂ < **kəllân kaɽəkɔ̂ maɪt caɽɪ̌ cıat̪̂**)
on which day will the old woman eat beans?

In the examples above with tone bridge spanning over the verb, the verbs have lowered before they are bridged. The (underlying) final falling tone of a verb of tone class IIB can also function as the left boundary of a tone bridge, as in the next example:

t̪ʊra-t̪ʊ́ra **t̪-ɛɔ́.r-ín** **t̪ɔ́-unú**
insect(sp.)-REDUP C-go:COMPL-O1 at-ears

(< t̪ɛɔ́r-ın t̪ɔ́-unú < t̪ɛɔ́r-ın t̪ɔ̂-unú < **t̪ɛɔ̂t -ín t̪ɔ- unú)**
a *t̪ʊrat̪ʊra*-insect went into my ear (lit.: went me at the ears)

Tone bridge in connexive constructions

In constructions with the connexive marker C**-ɔ-** 'of', tone bridge is applied when C**-ɔ-** has a high tone (always because of Tone Shift followed by Contour Simplification), while the following noun (the possessor) has a final falling contour or a non-final high tone.

kəpa **k-ɔ́-kə́llân**
meat C-of-old_woman

(< kəpa kɔ́-kəllân < kəpa kɔ̂-kəllân < **kəpá kɔ- kəllân**)
the meat of the old woman

kɨ̨t **k-ɔ́-cúllúkkur**
eyes C-of-bird(sp.)

(< kit kɔ́-cullúkkur < kit kɔ̂-cullúkkur < **kít kɔ- cullúkkur**)
the eyes of the bird (sp.)

Tone bridge does not apply when the possessor noun has a final high tone, e.g.,

kəpa **k-ɔ́-ɟmít** (< kəpa kɔ̂-ɟmíʃt < **kəpá kɔ- ɟmíʃt**)
meat C-of-goat

the meat of the goat

In a construction where the connexive marker does not become underlyingly falling because it is preceded by a noun with an (underlying) final falling contour, there is no tone bridge between this underlying contour of the possessed noun and a final falling tone of the possessor noun:

ʈʊrít **ʈ-ɔ-kəllân** (< **ʈʊrît ʈɔ- kəllân**)
food C-of-old_woman

the food of the old woman

cʊɽé **c-ɔ-ʈûn** (< **cʊɽê cɔ- ʈûn**)
bulb C-of-onion

the bulb of the onion

Cf. also the following examples. In the first case below, the connexive has not become underlyingly falling either, but is preceded by an all-low noun which is itself preceded by a verb with (underlyingly) a final falling contour. There is tone bridge spanning over the low noun and the connexive particle to the noun with final falling contour:

m-p-ɔnó **ʈíák** **ʈ-ɔ́-úɽû**
1-C-have appetite C-of-asida

(< mpɔnó ʈɪak ʈɔuɽû < **mpɔnô ʈɪak ʈɔ- ŋuɽû**)
I long for asida

There is, however, no tone bridge when the final noun has a high tone:

m-p-ɔnó **ʈɪak** **ʈ-ɔ-kəpá** (< **mpɔnô ʈɪak ʈɔ- kəpá**)
1-C-have appetite C-of-meat

I long for meat

There is also no tone bridge in the following case, in which the connexive has become high but is followed by a verbal noun with an underlying rising tone:

kɪrɛk	**k-ɔ́-ṯ-ɔra**	**mîl**
hoe	C-of-NOM-cultivate	sorghum

(< kɪrɛk kɔ́-ṯɔră mîl < kɪrɛk kɔ̂-ṯɔră mîl < **kɪrɛ́k kɔ- ṯɔră mîl)**
a hoe for cultivating sorghum

The precise circumstances under which connexive constructions in larger contexts undergo, or do not undergo, tone bridge have not been clarified.

Optional tone bridge

In some contexts tone bridge is optional. Some examples follow here. Note that it concerns verbs with an underlyingly falling contour followed by more than one element: tone bridge spans from the high tone of the verb to the high tone of the second following element.

pʊl	**p-ɔkkínṯɛt**	**ʊkʊl**	**kurrɔ̂ŋ**
pʊl	**p-ɔkkínṯét**	**ʊ́kʊ́l**	**kúrrɔ̂ŋ**
person	C-do_for:COMPL	child	stick

the man has made a stick for the child

ɔ-nnán	**p-ɔnɛk.áṯɛ**	**ʊkʊl**	**a-kw-ɟcɛ.kat**	**cɪk**	**ná-aɽaŋkál**
ɔ-nnán	**p-ɔnɛk.áṯé**	**ʊ́kʊ́l**	**á-kw-ɟcɛ.kat**	**cɪk**	**ná-aɽaŋkál**
PERS-mother	C-take:PST	child	CONJ-3-lay_down:DEPPRFV	VREF	on-bed

the mother picked up the child and laid it down on the bed

In the following sentence there is obligatory tone bridge between the high tone of **pɔpərɔ́t** (underlyingly **pɔpərɔ̂t**) and the falling contour of **papɔttê** (realized as **pápɔ́ttê)**, which is a contraction of **papʊ pɔttê**. Tone bridge between **ŋkwɔṯəkkát** (underlyingly **ŋkwɔṯəkkât**) and **pɔpərɔ́t** is optional. The more common variant in connected speech is with tone bridge.

attɪ	**ŋ-kw-ɔt̪əkká.t**	**p-ɔpərɔ́t**	**pá-p-ɔ́ttɛ̂**
attɪ	**ŋ-kw-ɔt̪əkká.t**	**p-ɔ́pɔ́rɔ́t**	**pá-p-ɔ́ttɛ̂**
I_hope_that	2-C-become:COMPL	C-good	thing-C-little

I hope you feel a little better?

When **papɔttɛ̂** is omitted and **pɔpərɔ̂t** is in prepausal position, there cannot be tone bridge between **ŋkwɔt̪əkkát** and **pɔpərɔ̂t**:

attɪ	**ŋ-kw-ɔt̪əkkát**	**p-ɔpərɔ̂t**
I_hope_that	2-C-become:COMPL	C-good

I hope you feel better?

In some cases, tone bridge is a marked intonation, used for covering distance across a valley (people typically communicate over large distances, from one mountain slope to another, shouting with a particular, far-reaching voice). The following phrase (for an example as an answer to 'where are you going', or 'what is going on' is an example:

t̪ɪpa	**t̪-ɔ-kʊkkʊ́**	**ɔ-kín**	**ɔ-kakkâ**	
t̪ɪpa	**t̪-ɔ-kʊkkʊ́**	**ɔ́-kín**	**ɔ́-kákkâ**	(distance covering)
marriage	C-of-Kʊkkʊ	PERS-3A	PERS-Kakka	

the marriage of Kʊkkʊ and Kakka

3.6. Clause-final boundary tone with pragmatic function

In situations of clause chaining, a first clause can take a final high tone. This high tone is an intonational tone; it is independent from tonal properties of the clause-final element or its preceding element. It conveys that the sentence is not finished yet and creates an expectation that something interesting is going to follow in the next clause. It is typically followed by a small pause.

Clauses that start with the conjunction word **ámma** +H 'if, when' or **akka** +H 'when, because', or a compound conjunction containing **ámma** +H or **akka** +H, and that are followed by a clause starting with **ana** +H 'and', the conjunction particle **á** or the subjunctive particle **â**, creating a construction such as 'if/when …, then …', 'as soon as …, x must …' often take the boundary tone.

In the following sentence the word **mpántɔkə̱́ta̱k** ‘I can see him’, which has a final low tone in isolation, has a final high tone and precedes a small pause. **mənákka** ‘when, as soon as, even as’ is a compound conjunction of **məná** ‘even’ and **akkă** ‘when, because’.

mən.ákka	**m-p-aa.t**	**ɪ.ccík**	**k-ɔ́ŋ**	**ɪttɪ**
when	1-C-come:COMPL	near	C-POSS3	that

m-p-ánt-ɔkə̱́tá-k	**ana**	**k-kw-íŗr.á̱tɛ**
1-C-can:INCOMPL-look_at:DEPINCOMPL-O3	and	3-C-jump:PST

when I had come near him so that I could see him, he jumped(written story)

In the next example with **akka**, there is a high tone on the 3SG object pronoun attached to the verb ‘turn’ that would otherwise not be there. This tone causes tone bridge over the entire verb. In isolation, the verb would be realized as **kkwɔ́pərə́ttɔrɔk** ‘s/he has turned him/her’.

akka	**k-kw-ɔ́pə́rə́ttɔ́.r-ɔ́k**
that	3-C-turn:COMPL-O3

ăccịk.at	**a-k-kw-ɔ́llʊkkwɔ́.t**
CONJ.(2.)hear:DEPPRFV	CONJ-3-C-slip:COMPL

when he (the bird) turned him (to his other wing), you could hear that he (the tortoise) slipped (away) (App. IV, 126-127)

An example with an **ámma** +H clause and a clause-final high tone (on the anaphoric demonstrative **cɛn**, see 8.2) follows here. Note also that Contour Simplification was not applied to the word ‘rock’ (underlyingly **cʊŗ̂l**). This may have to do with the ability of **l** (and also the nasals) to carry part of the preceding tone.

ámmá	**á-kkɔ́**	**nɔ́-cʊ́ŗ̂l**	**c-ɛ́n**
if	CONJ-(2-)reach:DEPINCOMPL	on-rock	C-DEM

ŋ-kw-a̱t-ɪɔt	**cɪk**	**c-ɔkəŗíakɔ̱.ɛ**
2-C-IT:INCOMPL-find:DEPINCOMPL	place	C-be_squeezed:COMPL

á-ppɔ	**tɪt**	**ka̱ta**	**ka̱tər**	**k-ɛ̂n**
SUBJ-(2-)pass:DEPINCOMPL	in:ABS	look:IMP	road	C-DEM

when you reach that rock, you will find a narrow space, you must pass there, look, it is that road (i.e. the road you need to take) (fr. written text)

The clause final high tone is not part of these constructions *per se*. In the previous example, **cɛn** 'that' could also be realized with its own low tone. In the next sentence it is possible to realize **apɔ** 'fall' with a final high tone (and a pause), but a low realization of **apɔ** is actually somewhat more natural, since no expectation or "suspense" is involved. It is just a description of what happens under a certain circumstance:

ámmá	**á-kápık**	**apɔ**	**a-kw-íkkɔ**	**cık**	**ı-kəɽúk**	**k-ɛn**
if	CONJ-rain	fall:DEPINCOMPL	CONJ-3-sit:DEPINCOMPL	VREF	in-sheltered_spot	C-of:ABS

when the rain falls, he sits in its shelter (in the shelter of a wall) (App. I, 18)

Other clause chaining constructions can also have this high tone. The final high tone on **púccʊk** 'for some time' in the example below is such a tone:

a-kw-ɔ́cca.kat	**ŋuɽú**	**ı-carək**	**púccʊ́k**
CONJ-3-scoop:DEPPRFV	asida	in-belly	for_some_time

a-kw-ɔ́t̪əka.kat	**a-kw-ɔ́mɛ.kat**	**ıttĭ …**
CONJ-3-become_satisfied:DEPPRFV	CONJ-3-say:DEPPRFV	that

and he scooped the asida into his stomach for some time and he got satisfied and he said … (App. IV, 29-30)

To the same effect the underlying final Falling tone on the last mora of the first **ákka** clause in the example below is realized as high before a small pause (i.e. **ŋuɽú** instead of **ŋuɽû**). In the second clause with **ákka** there is again a final high tone on **pʊccʊk**

akka	**k-kw-ɔ́ɽəkɔ.t**	**ŋuɽú**
that	3-C-eat:COMPL	asida

akka	**ɔ-kín**	**t̪-ɔɽəkɔ.t**	**ŋuɽú**	**púccʊ́k**
that	PERS-3A	C-eat:COMPL	asida	for_some_time

a-kw-ɔ́mɛ.kat̪-ɔ́k	**ıttĭ …**
CONJ-3-tell:DEPPRFV-O3	that

when he had been eating the asida, when they had been eating the asida for some time, he (the bird) said to him: … (App. IV, 24-26)

3.7. Intonation effects in isolated nouns

Intonation effects exist in isolated nouns. If, in answer to a question, a single noun is uttered with annoyance or impatience its tones may be realized slightly differently. An all-low noun may be realized at level pitch (without final downglide) and a final high tone may be realized at a somewhat lower pitch than usual.

There also seem to be intonation effects depending on whether an utterance is an 'out-of-the-blue' remark or provides information that was solicited (typically an answer to a question). In the example below, a final high tone suggests that the information was solicited, a final low tone that it is a thetic remark.

ɔ-paŋ-k-ín	**p-á-nȷ̨́n**	**t̪-á.ík**	**ȷ̨́n-át̪t̪ʊ́t / ȷ̨́n-át̪t̪ʊt**
PERS-sibling-C-POSS1	C-be:PERS-1A	C-be:PR	1A-with_person

my brother is with me

3.8. Tonal properties and representation of affixes, clitics, conjunctions and **cɪk**

Affixal and clitic elements can cause the same tonal changes (or the same lack of change) to their environment as nouns and other words. As already exemplified in this chapter, there are also clitic elements that have tonal implications different from the general ones, such as the prepositional proclitics **ɪ-**, **nɔ-**, **tɔ-**, and **t̪ɔ-** and the 3rd person subject and non-human subject proclitics. It is difficult to give the citation form of such elements a satisfactory tonal representation. In some cases I have chosen not to represent tone on these items, though, unlike the orthography might suggest, these item do not behave as low-toned items, but do have tonal effects on their environment.

There are also affixes and clitics that seem to fit into the system set out by the tone rules, but nevertheless do not have an obvious tonal representation. This concerns prefixes and pro-clitics that bring a high tone to a next element, but being prefixal or pro-clitic, have no prepausal realization. It is precisely the prepausal realization of a

word that easily enables us to distinguish between a final high tone, a final rising tone, and a floating high tone.

Looking at other tonal properties of words with a final high tone, a final rising tone, or a floating high tone shows that the prepausal realization of these words is not their only difference. There is also a difference as to the capacity of words with these patterns to receive a high tone from a preceding element.

As can be seen from the examples given earlier in this chapter:

1. words with a rising tone cannot receive a high tone (unless through tone bridge), irrespective of their number of morae;
2. monomoraic words with a high tone cannot receive a high tone (unless through tone bridge), but longer words with a final high tone in principle can, even though many need a (lexically-determined) minimum space between their first mora (the potential receiver of a preceding high tone) and their own high tone;
3. words with a floating high tone can receive a high tone from a preceding element, though it is unclear if this also holds for monomoraic elements. Verbs, especially Dependent Incompletives and Dependent Perfectives of low-toned verbs, are the best model for this type of tone pattern since they have 1) a prepausal realization, 2) the floating high tone, 3) lack other tones that may influence their ability to receive a preceding tone. There are, however, no monomoraic verbs of this type. The only monomoraic verb is the copula (C-**á**), but the copula cannot occur in prepausal position, so that it is itself a 'problem' case with respect to its tonal representation. For the sake of distinguishing, and because it is certainly not unlikely, we will assume that, unlike monomoraic high and rising elements, a monomoraic element with floating high tone is able to receive a preceding high tone. This then excludes this tone pattern for the copula, since, unless through tone bridge, it cannot receive a high tone itself.

The tonal representation of a mono-moraic element without prepausal realization will thus be determined as follows:

1. Can it generate a high tone on a next element?
   No: low tone; yes: high tone, floating high tone or rising tone
2. Can it receive a high tone itself?
   No: rising or high tone; yes: low tone or floating high tone

This shows that for monomoraic items without prepausal realization and which are unable to receive a high tone, a choice between rising and high remains. In such cases I choose a representation as high, the advantage of which is perhaps that any suggestion of historical loss of a mora —which may be associated with a rising tone— is avoided. The persona prefix (**ɔ́**-), the restrictor (**í**-) and prepositional proclitic **ń**- 'with, by, (away) from' are therefore represented with a high tone (as is the Present of 'be' (C-**á**)).

Conjunctions pose problems in a comparable way: though they are words and can thus be realized alone, in context they are never prepausal so that their isolated tonal realization is not actually trustworthy. Their typical tonal behaviour is to bring a high tone to a next element, while they tend to be realized in isolation with a low tone. Moreover, in some cases their own tonal realizations in context can be rather unpredictable. Though problems remain, I propose a tonal representation for most conjunction words (see chapter 18).

Some of the suffixes and enclitics are less problematic as to tonal representation since they have a prepausal realization and behave regularly. Some of the personal object clitics, however, display irregular behaviour. I nevertheless propose a tonal representation, to avoid confusion with L-toned elements (see chapter 6.4).

The 1SG and 2SG possessor pronouns and the so-called vague reference particle **cık** display tonal properties that deviate from the tone rules. I represent the 1SG and 2SG possessor pronouns as having two tonal alternatives, apparently in free variation, while showing at the same time that some unexpected tonal behaviour remains (see chapter 7.3.1). The irregular behaviour of **cık** does not allow for assignment of an underlying tone. Though its notation may suggest otherwise, I do not regard it as an item with low tone (chapter 15.2).

4. Nouns

This chapter presents the segmental shape and tone patterns of nouns and their morphological make-up. It describes the noun class system and discusses issues of number and meaning relating to the noun classes and noun class pairs. It deals with nominal derivation, complex nouns, descriptive constructions expressing nominal concepts, and nouns with the so-called 'persona prefix' and their plural formation.

4.1. Phonological shape

Nouns can start with all consonants that occur word-initially (i.e. all except the rhotics) and with any of the vowels. They can end with all consonants that can occur word-finally (i.e. **t**, **k**, **n** and **ŋ**) and with any of the vowels that can occur in that position (all except **ə**). In nouns borrowed from Arabic some further consonants are found word-finally (i.e. **p**, **t̪** and **m**).

Out of the 921 nouns in my database, 51 are monomoraic, more than half (490) bimoraic, 285 trimoraic, 85 have four morae and 10 five. Virtually all those with five morae either involve reduplication or are loans from Arabic. Vowels are commonly short (involving one mora), but there are also diphthongs and in a few cases long vowels (involving two morae). Nouns with a diphthong or long vowel are often monosyllabic. Disyllabic words with a diphthong mostly have the diphthong in the second syllable. Long vowels are not attested as second syllables, but there is one case with a long vowel in the first syllable (**t̪ʊʊlí** 'hyena'). Longer nouns do not have diphthongs or long vowels, unless across a morpheme boundary due to reduplication. The shortest nouns consist of two segments, either CV or VC.

4.2. Tone patterns

For nouns in isolation, there is a strong tendency to have tonal contrasts only on the last vowel. All other vowels are low. In the tone pattern formulas, L* represents the low vowels preceding the last one

that carries the tonal contrast (and * can be zero). These patterns are the four main tone patterns:

Final low tone (L*.L, also called all-low)

ka	'body'	L
ʊkʊl	'child'	L.L
cʊmɪan	'bone'	L.L.L
kəʈəmɛkkʊ	'bat (sp.)'	L.L.L.L

Final high tone (L*.H)

cá	'head'	H
capʊ́	'ground'	L.H
kappəʈí	'spoon'	L.L.H
təʈɪkɪáŋ	'caterpillar larva'	L.L.L.H

Final rising tone (L*.LH)

ʈŭk	'dog'	LH
cɔʈŏŋ	'hill'	L.LH
tʊkɪă	'head pad'	L.L.LH
ʈɛnnɛkkɛttă	'to be tested'	L.L.L.LH

Final falling tone (L*.HL)

ʈûn	'onion'	HL
cʊân	'rat (sp.)'	L.HL
cɔʈɪ̂	'shell'	L.L.HL
pɔʈɪɔmpô̰ŋ	'plant (sp.)'	L.L.L.HL

Some words have a high tone on the pre-final vowel. This pattern can be represented as L*.L.H.L (where, as in the other patterns, * can be zero). Some examples:

cɔrə́ʈɪ	'goatskin bracelet'	L.H.L
ŋalə́nʈʊŋ	'k.o. basket (small size)'	L.H.L
tappəránʊ	'worm (sp.)'	L.L.H.L
ʈaləkíkkɪk	'dodging behaviour'	L.L.H.L
ŋɛɪʈía	'k.o. watery root'	L.L.H.L

Two more patterns are found on simple nouns of (presumably) Lumun origin: L.H.H and L.H.L.H. These patterns have only few attestations, respectively 11 and 5 (in my database).

L.H.H

cakkə́lɔ́k	‘gourd (k.o.)’
cʊmpúráŋ	‘monkey (sp.)’
kapíét	‘jaw’

L.H.L.H

cakkúʈʊpíl	‘bird (sp.)’
kapə́ʈɛn̪t̪óŋ	‘lizard (sp.)’
kwɔʈə́t̪ɔt̪t̪ɔ́l	‘plant (edible sp.)’

One loan word from Arabic has this pattern as well:

alə́pɪríṯ̪	‘prayer mat’	(< Sud. Ar. *al-birish*)

Originally Lumun nouns with more than one vowel do not have a high tone on the first vowel. The following noun may (or may not) be borrowed from Tira:

H.L

ŋáppɔ	‘hunt’[23]

An initial high tone on a simple noun with more than one vowel is found in several Arabic loans. The tone mimics the stress placement in the Arabic item. Some examples:

páka	‘jerrycan’	(< Sudanese Arabic *baagha*)
mʊ́ccʊṯ̪	‘comb’	(< Sudanese Arabic *mushuṭ*)
cɛ́rəṯ̪ɛl	‘bucket’	(< Sudanese Arabic *jerdal*)

[23] Tira has a verb **apɔ** ‘take’ and abstract nouns in its **ŋ**-class. (Schadeberg 2009, p. 21, 112).

4.3. Noun classes

Lumun has a fully functioning noun class system. Common nouns consist of a consonantal or ∅ noun class prefix and a stem, and always belong to a noun class. Nouns with the so-called persona prefix are a special case (see section 4.10). Nouns most often occur in pairs, differing from each other only as to the noun class. Paired nouns typically signal singular versus plural reference, for example:

ṯ-ŭk/l-ŭk ‘dog/-s’

Adjectives, including some numerals, demonstratives, possessor pronouns and the connexive agree with the noun class of the noun that they modify. There is also agreement between the subject noun and some but not all TAM-forms of verbs. The agreement markers on modifiers and verbs will be called concords. Concords are typically alliterative in Lumun; in most cases the concord is identical to the class prefix. The exception are the concords of vowel-initial nouns (with ∅ prefix) and nouns with the class prefix **kw**-. These nouns have **w**- and **k**-concord, respectively.

An example to illustrate agreement between a noun (**lɔn** ‘words’) and its modifiers, and the subject marking on the verb follows here. Instances of the concord (**l**-) are underlined.

lɔn	**l̲-aŋ**	**él-l̲-í**	**l̲-á.kórrakɔt**	**ɪ-aṯám**
words	C-POSS2	DEM-C-NEARSP	C-be_written_at:INCOMPL	in-book

these words of yours will be written in a book

I define Lumun noun classes in the first place on the basis of the concord they induce. In a few cases, basically singular or plural reference is used as an additional criterion to distinguish between noun classes. Occasional deviations of number reference (a noun of a singular class that functions on the plural side in an irregular class pair, or a noun of a plural class that functions on the singular side in an irregular class pair) are not interpreted as different noun classes.

A third criterion, which is used in some cases, is the prefix itself. It distinguishes between differently shaped prefixes which have the same concord and the same type of number reference (singular or plural). Such cases are considered subclasses of one and the same noun class. The singular noun classes are presented in table 16, the plural noun classes in table 17.

Table 16 Singular noun classes

noun class	*concord*	*prefix*	*example*
p	**p-**	**p-**	**p-ıra** ‘tree’
ṭ	**ṭ-**	**ṭ-**	**ṭ-ɔɽák** ‘rope’
t	**t-**	**t-**	**t-əŋək** ‘worm’
c	**c-**	**c-**	**c-á** ‘head’
k, **kw** subclass **k** subclass **kw**	 **k-** **k-**	 **k-** **kw-**	 **k-əɽô̰l** ‘tortoise’ **kw-ɔɽɔl** ‘cheek’
ŋ	**ŋ-**	**ŋ-**	**ŋ-aṭ̰ṭ̰ɔkkɔ̂l** ‘calabash (k.o.)’
∅, **w** subclass ∅ subclass **w**	 **w-** **w-**	 ∅ **w-**	 **aṭ̰ám** ‘book’ **w-aḭ̆** ‘cow’

Table 17 Plural noun classes

noun class	*concord*	*prefix*	*example*
k	**k-**	**k-**	**k-ıra** ‘trees’
m	**m-**	**m-**	**m-á** ‘heads’
n	**n-**	**n-**	**n-əŋək** ‘worms’
ɲ	**ɲ-**	**ɲ-**	**ɲ-aṭ̰ṭ̰ɔkkɔ̂l** ‘calabashes (k.o.)’
l	**l-**	**l-**	**l-ɔɽák** ‘ropes’
∅, **w** subclass ∅ subclass **w**	 **w-** **w-**	 ∅ **w-**	 **əɽô̰l** ‘tortoises’ **wɔk** ‘shoes’

4.3.1. Classes consisting of two subclasses

*The singular **k, kw** class*

The examples below illustrate that nouns with initial **k** and nouns with initial **kw** (/kʷ/, pronounced [kʷ] in the isolated word) have the same concord. Both nouns have singular reference. On the basis of the first two criteria (concord and singular/plural reference) they belong to the same noun class:

kapə́ɽɛnn̪ʊŋ k-aát 'the lizard (sp.) has come'
kwalílɪn k-aát 'the centipede has come'

The labialization in the second case is part of the class prefix, as can be seen when the noun is put in another noun class in order to express the plural. The plural forms shows that the labialization of **k** is not part of the stem, but belongs to the class prefix:

k-apə́ɽɛnn̪ʊ́ŋ/apə́ɽɛnn̪ʊ́ŋ 'lizard (sp.)/-s'
kw-alílín/alílín 'centipede/-s'

My database has 24 singular or unpaired nouns with **kw** and ca. 175 with **k**. Both forms occur before a vowel **ɪ**, **ɛ** and **a**. **kw** is not attested before **i̱**, but this is probably a coincidence because cases of singular **k** before an **i̱**-initial root are also only few (just three). Otherwise, however, there are significant differences in the distribution of the subclasses. Unlike **k**, **kw** is not attested before **ə** and at least for some speakers (including JS) there is a phonological restriction against **kw** before **u** or **ʊ**. A variant **kwucúl of kucúl** 'back' is nevertheless attested (see also chapter 2.1.2). There is no phonological restriction against **k** preceding **ɔ** —there are, for example, nouns with initial stem vowel **ɔ** in the plural **k**-class—, but no cases of the singular subclass **k** before **ɔ** are attested in pairs, while there are seven cases of the subclass **kw** before an **ɔ** in pairs. Combinations attested in pairs of the subclasses **k** and **kw** and stem-initial vowels are listed here:

Table 18 Combinations of singular **k** and **kw** with initial stem vowels

stem-initial vowel	*subclass k*	*translation*	*subclass kw*	*translation*
i̱	**k-i̱ci̱t**	fruit of *picit*-tree		

ɪ	**k-ɪɲcɛ**	nose	**kw-ɪra**	small piece of wood or grass
u	**k-unú**	ear	(**kwucúl**)	back
ʊ	**k-ʊɽǐ**	branch		
ɛ	**k-ɛɽʊ**	black spot from burning	**kw-ɛɽé**	pointed stick
ɔ			**kw-ɔk**	shoe
ə	**k-ərét**	cloth		
a	**k-aɽʊk**	goatskin bag	**kw-aɽɛ**	marking line on the ground

In unpaired nouns there is just one case of **k** before **ɔ** (**kɔrəkkɔ̂r** 'prison') against two cases of **kw** before **ɔ** (**kwɔɲí** 'residue of beer' and **kwɔrɔk** 'guarding a field against animals'.

It is unclear how the lack of singular nouns with initial **kɔ** can be explained. Perhaps, in a historical ***k**/***w**-pair[24], the plural class prefix ***w** was reanalysed before stem-initial **ɔ** as part of the stem, resulting in singular nouns with an initial sequence **k-wɔ** instead of **k-ɔ**, which was later on reanalysed as **kw-ɔ**. Subsequent loss of initial **w** in some of the plural nouns may have led to the current pairs which have **kw**/∅. The process may have happened also in plural ***w** class nouns with stem-initial **a, ɪ** and **ɛ**, but more incidentally so, especially in case of stem-initial **ɪ** and **ɛ.**[25]

*The singular ∅, **w** class*

The next examples illustrate that nouns with initial **w** and vowel-initial nouns have the same concord. Both have singular reference. On the basis of the first two criteria (concord and singular/plural reference) they belong to the same noun class:

[24] A proto-Talodi pair ***g**-/**w**- was proposed by Schadeberg (1981b, 113).

[25] There are just two nouns with **kw** before **ɪ** and three with **kw** before **ɛ**. There are ten nouns of **kw** before **a**, however, two of these are unpaired.

waį w-aát ‘the cow has come’
ılí w-aát ‘the leader has come’

I consider nouns such as **ılí** as having a ∅ prefix, because a ∅ prefix paradigmatically relates to class prefixes (always consonants) of other nouns. The singular ∅ subclass contains several loans (see 4.3.5). The nouns that are not (or not clearly) loans have plurals in different classes and some of the plurals are (partially) suppletive (see 4.3.5). The singular **w**-subclass has only two members, both have suppletive plurals:

waǰ/kįé ‘cow/-s’
wɛ́k/tacɔ́k ‘leg, foot/legs, feet’

In the case of **waǰ** and **wɛ́k**, it is not clear from the singular/plural opposition, nor from the concord (**w**-) what constitutes the class prefix and what the stem. However, because other initial consonants are always class prefixes, while nominal stems are always vowel-initial, I consider **w** as a class prefix. Notably, **wɛ́k** can alternatively be pronounced with an initial vowel: **ʊɛ́k**. It is then assigned to the singular ∅ subclass.

*The plural ∅, **w** class*

Concords of the plural ∅, **w** class are illustrated here. **wăn** ‘hair of a human’ is a plural noun with collective meaning. It occurs next to a singular noun denoting ‘a strand of hair’.

wan w-ıpúk ‘the hair is white, blond’
ərɛt w-ıpúk ‘the cloths are white’

Plural nouns in the ∅ subclass are considerably more numerous than plural nouns in the **w**-subclass.

Plurals with ∅, **w** pair up regularly with singulars in the **k**, **kw** class. As in both cases there is variation between a prefix with a labial element and a prefix without, it is interesting to see the distribution of the variants in the class pairs.

In the first place, singular **k** pairs up with plural ∅ (numbers of attestations are given for all pairs in tables 19 and 20):

k/∅ **k-apə̀ɽɛnn̪ə́ŋ/apə̀ɽɛnn̪ə́ŋ** ‘lizard (sp.)/-s’

kw corresponds both to **w** and to ∅ in the plural:

kw/∅ **kw-alílín/alílín** ‘centipede/-s’
kw/**w** **kw-ăn/w-ăn** ‘strand of human hair/human hair’

In addition, in some cases the plural noun fluctuates between being **w**-initial and vowel-initial:

kw/**w** ~ ∅ **kw-anə̂k/w-anə̂k**, **anə̂k** ‘moon/-s’

It is lexically determined whether a plural comes in the ∅ or **w**-subclass or in both. Nevertheless, the list below suggests that monomoraic nouns tend to come in the **w**-subclass (but there is **ɔk** as a variant of **wɔk** ‘shoes’).

kw-ɛn/w-ɛn ‘line of stones marking the boundary of a field’
kw-ét/w-ét ‘circle of roof skeleton’
kw-ăn/w-ăn ‘strand of human hair/hair (of human)
kw-ıra/w-ıra, **ıra** ‘small piece of wood or grass’
kw-ɔk/w-ɔk ‘shoe’
kw-ɔɽə̀n̪ɔn̪n̪ɔ́l/w-ɔɽə̀n̪ɔn̪n̪ɔ́l, **ɔɽə̀n̪ɔn̪n̪ɔ́l** ‘k.o. vegetable’
kw-anə̂k/w-anə̂k, **anə̂k** ‘moon, month’
kw-ɛɽé/ɛɽé ‘pointed stick’
kw-ɔɽék/ɔɽék ‘black ant’
kw-ɔɽɛn/ɔɽɛn ‘piece of firewood/firewood’
kw-ɔɽíkwɔ́ɽî/ɔɽíɔ́ɽî ‘plant (sp., edible)’
kw-ɔɽɔl/ɔɽɔl ‘cheek’
kw-alílín/alílín ‘centipede’
kw-amɛ/amɛ ‘tendon’
kw-aɽɛ/aɽɛ ‘marking line on the ground’
kw-an̪n̪ára/an̪n̪ára ‘k.o. dance’

4.3.2. Noun class pairs[26]

A singular noun class may form a pair with more than one plural noun class, and vice versa. A table of pairs with many members is given first, then a table of pairs with less than six members. The last column gives the number of pairs in my database. Pairs with (partially) suppletive stems have not been included, nor have cases in which there was doubt about the acceptability of a number-related counterpart.

Table 19 Noun class pairs with 6 or more members

(sub)class pair	*example*	*translation*	*#*
p/∅	**p-ʊl/ʊl**	person/-s	64
p/k	**p-ɪra/k-ɪra**	tree/-s	45
c/k	**c-ɟt/k-ɟt**	eye/-s	11
c/m	**c-á/m-á**	head/-s	163
t̪/l	**t̪-ɔɽə́k/l-ɔɽə́k**	rope/-s	85
t/n	**t-əŋək/n-əŋək**	worm/-s	70
∅/**n**	**at̪ám/n-at̪ám**	book/-s	18
k/∅	**k-əɽə̂l/əɽə̂l**	tortoise/-s	143
kw/∅	**kw-anə̂k/anə̂k**	moon/-s	12
kw/w	**kw-anə̂k/w-anə̂k**	moon/-s	6
ŋ/ɲ	**ŋ-at̪̪ɔkkə̂l/ɲ-at̪̪ɔkkə̂l**	k.o. calabash/-es	83
			700

Rarely occurring noun class pairs, with less than six attested cases, follow here. In a few cases a noun class that is associated with singular reference functions on the plural side in a pair, notably **p**, **t̪**, and **t**, and in one case a noun class that is associated with plural reference functions on the singular side (**l**).

Table 20 Noun class pairs with less than 6 members

(sub) class pair	*pair of nouns*	*translation*	*#*
p/t̪	**p-ɛrŭ/t̪-ɛrŭ**	tree (sp.)/-s	2

[26] The class pairs are also listed in Smits (2011).

	(PL also **k-ɛrŏ**) **p-əkí/p̪-əkí**	 ancestor, descendant/-s	
p/m	**p-ət̪ɔk/m-ət̪ɔk** **p-əʈá/m-əʈá**	stone/-s Tira person/-s	2
p/ɲ	**p-akkí/ɲ-akkí**	Nuba person from areas south-west of Lumun, across the plains (incl. Dagik, Katcha, Krongo)/-s	1
p/l	**p-əmpərən/** **l-əmpərən**	Moro person/-s	1
kw/p	**kw-ɪan/p-ɪan**	small piece of firewood/small firewood	1
k/p̪	**k-upú/p̪-upú** **k-amʊr/p̪-amʊr** **k-ʊllĭn/p̪-ʊllĭn** **kw/p̪** **kw-ɔcán/p̪-ɔcán**	piece, pole of bamboo /bamboo (grain of) sand/sand blade of grass (sp.)/grass (sp.) leaf of edible plant (sp.) /edible plant (sp.)	3 1
k/t **kw/t**	**k-ua/t-ua** **kw-acɔ/t-acɔ**	strand of hair/hair blade of grass/grass (generic)	1 1
k/ɲ	**k-ʊkkʊ́/ɲ-ʊkkʊ́**	unripe groundnut/-s	1
ŋ/p̪	**ŋ-ʊmăr/p̪-ʊmăr**	relative of father's side, enemy, murder[27]/-s	1
l/ɲ	**l-ɔpăr/ɲ-ɔpăr**	partridge/-s	1
∅/k **w/k**	**ɪkɛ/k-ɪkɛ** **wallĭr**[28]**/kallĭr**	giraffe/-s gazelle/-s	1 1
∅/l	**ut̪̪uʈu/l-ut̪̪uʈu**	Otoro person/-s	1
∅/ɲ	**ʊkʊl/ɲ-ʊkʊl**	child/children	1
			20

[27] The term refers to those relative(s) to whom a man owes revenge, i.e. for which one must kill and for which one must risk to be killed: this is the group of family members on the father's side. The term can also refer to the people on whom revenge must be carried out (the enemy). It can also denote 'revenge killing'.

[28] Also **allĭr**.

There are a few pairs in which the stems of the singular and plural nouns are not the same. In some cases the difference is very small, in others the stems are completely suppletive.

Table 21 (Partly) suppletive pairs

(partly) suppletive pair	*(sub)class pair*	*translation*
p-apʊ/aɽəpʊ	**p**/∅	thing/-s
c-arək/k-ərək	**c**/**k**	belly, stomach, /bellies, -s
c-ɨkɨ́t/m-əkɨ́t **c-əpʊ́/m-ʊpʊ́**	**c**/**m**	heart/-s hole in the ground
k-ʊpír/ṯ-əpír	**k**/**ṯ**	sorghum stock/-s
ɔpá/k-əpá	∅/**k**	piece of meat/meat[29]
w-aɨ̌/k-ɨ́é	**w**/**k**	cow/-s
ɨmɨ́t/l-ɨcɔ́k	∅/**l**	goat/-s
w-ék/t-acɔ́k	**w**/**t**	leg, foot/-s, feet
ʊkʊ́n/ɲ-aʊ́n	∅/**ɲ**	hand/-s, forearm/-s
ɪɽé/ɲ-ɪré (also regular: **ɲ-ɪɽé**)	∅/**ɲ**	adolescent girl/-s

Two more irregular pairs follow here:

cəmaɪt/maɪt ‘bean/-s’
măn/kəmán ‘room/house, house/-s’

One possibility is that these are **m-**initial stems with have, respectively, a **cə** and a ∅ prefix, and a ∅ and a **kə**-prefix. However, the **m**-initial forms take **m**-concord, which means that **m** functions as a noun class prefix. Moreover, the semantics of ‘beans’ is typically associated with the (plural) noun class prefix **m**-, namely numerous roundish items. It seems much more likely that **cəmaɪt**, denoting a single bean, is a case of a double prefix (**cə-m-aɪt**). Also **kəmán** may have a double prefix (**kə-m-án**) rather than a stem that vacillates between an **m**-initial and a vowel-initial form. **k**- is not only a singular prefix, but also a plural prefix in the **c**-/**k**- class, a class in

[29] **ɔpá/kəpá** can refer to the meat of both domestic and wild animals, but also to ‘game’: larger wild animals that are hunted for meat.

which some paired body parts are found. The notion of a unit consisting of composing parts may have played a role in the pair **măn/kəmə́n**. **kəmə́n** can refer to plural houses, but also to the constellation of buildings or rooms that together form the typical Lumun homestead.

4.3.3. Unpaired nouns

All prefixes, with the exception of **ɲ**, are found on unpaired nouns nouns as well, and no other class prefixes than those found in the pairs are attested on unpaired nouns.

Some examples of unpaired nouns follow here. The number of attestations of unpaired nouns with a certain prefix is given in the last column. Locative nouns (with various prefixes) and unpaired nouns with the **n̪**-prefix that are derived from verbs and adjectives have not been counted. Denominal derivations in the **n̪**- and **k**-classes (abstractions and languages) have been included, as well as loans. Cases in which there was doubt or difference of opinion about the noun being unpaired have not been included.

Table 22 Unpaired nouns

(sub)class	*unpaired noun*	*translation*	*#*
p	**pʊrʊcɛ̂**	fog	14
n̪	**n̪ɪak**	suffering	18
t	**tî̱**	(period(s) of) hunger	2
c	**capʊ́**	ground	7
k	**ka**	body, bodies	15
kw	**kwa**	chaff	5
m	**mɪɽʊ̌k**	bush, uncultivated land	10
n	**nunn̪ʊ́**	fine-grained soil	6
ŋ	**ŋɪlî**	leadership	1
l	**lɪccɪt**	threshing floor(s)	3
w	**wɛ̂**	calabash(es) or pot(s) for fermenting flour and water	1
Ø	**accáɪ**	tea	7
			89

For several unpaired nouns a singular/plural opposition is not particularly relevant in view of their semantics; an example of such a case is **pʊrʊcə̂** 'fog'. Some other cases are loans which have resisted singular or plural formation in another class (see section 4.9). In the case of **ka** 'body' absence of a noun ***a** 'bodies' could be explained from a phonological restriction: there are no nouns consisting of just a single vowel. In an incidental case, the noun is easily countable but lacks a singular/plural opposition. An example is **lʊmúttʊ** 'bull(s) with very short horns'. A possible explanation is that this word with noun class prefix **l**, a prefix that is associated with plural reference, is a loan from an unidentified language that has resisted singular formation in the **n̪**-class (the pair **n̪**-/**l**- being associated with long shape).

There is no particular reason to regard the classes of unpaired nouns as different from those figuring in the pairs. In general, noun classes are able to host nouns with deviating number-related semantics, as will be exemplified in section 4.3.4.

In some cases there was doubt whether or not a number-related counterpart could be formed according to a certain class pair, and sometimes there was difference of opinion about this between speakers. In some cases a consultant said that it would in principle be possible to make a plural but that people did not use that form. Some examples follow here:

kənáŋ/?**ənáŋ** 'wind'
ŋəmɛ/?**ɲəmɛ** 'sound of crying, tear(s)'
n̪ʊʈît/?**lʊʈît** 'food'

4.3.4. Nouns and number[30]

Nouns in class pairs basically signal singular versus plural reference of the noun. In some cases the singular has an additional meaning that refers to an entity that contains plural units of the item:

[30] Nouns and number are more extensively discussed in Smits (2011).

cuccû/muccû ‘bead, necklace/beads, necklaces’
pəʈ̪ɔk/məʈ̪ɔk ‘stone, country/stones, countries’

In the next case, it is the plural that also denotes an object that contains plural units of the item:

kərɪŋkərĭn/ərɪnərĭn ‘bell/bells, musical instrument made of bells (row of bells on a bow)’

For some foodstuffs that consist of discrete items the plural is used to denote the foodstuff as a semantic collective, for others the singular. Some examples:

SG/PL, COLL

cį̂l/mį̂l	‘grain of sorghum/sorghum’
kaləppaʈ̪úra/aləppaʈ̪úra	‘tomato/tomatoes’ (< Sud. Ar. *al-banaḍoora*)
ɔpá/kəpá	‘piece of meat/meat’ (also: ‘animal hunted for meat/game’)

The case of ‘beans’ is recalled here (mentioned in 4.3.2), in which the singular noun class prefix **c** is attached before the plural prefix **m**-, with inserted **ə** to solve the disallowed consonant cluster:

cəmaɪt/maɪt	‘bean/beans’

SG, COLL/PL

ʈ̪ûn/lûn	‘onion(s) (unit or collective)/onions (units or amounts)’
cʊkʊʈ́í/mʊkʊʈ́í	‘edible plant (sp., unit or collective)/edible plant (sp., units or amounts)
kɛpɪn/ɛpɪn	‘edible plant (generic, unit or collective)/ edible plants (units or amounts)

The sentence below illustrates that some food items are referred to by the singular in a pair, others by the plural. In the following

examples, the class prefixes of these food items have been explicitly glossed as singular noun class (SGC) or plural noun class (PLC):

kɛccúk	**k-ɔ́nú**	**aʏəpʊ**	**w-ɔppɔ́t**	**ámm.akka**
market	C-have	things	C-many	like

ṭ-ún	**ana**	**l-umú**	**ana**	**k-əpá**
SGC-onion	and	PLC-*lumu*_roots	and	PLC-meat

the market has many things such as onions, *lumu*-roots and meat

In cases in which the singular not only refers to a single unit but also to the items as a group, the plural can denote not only a number of separate units, but also a number of amounts, and it can be used in order to refer to different kinds of the foodstuff.

In the following examples, the plural of 'onion' (**lûn**) is preferred:

lún	**m-mʊ́ál**	**m-ɛʏá**
onions	with-sacks	C-two

two sacks of onions

mʊ́ál	**m-ɛʏa**	**m-ɔ́-lûn**
sacks	C-two	C-of-onions

two sacks of onions

lún	**l-ɛʏa**	**tít**
onions	C-two	in:ABS

the onions are of two kinds (or: there are two kinds of onions)

In the case of 'sand' both the singular and the plural can refer to 'sand' as a collective entity. The plural can also denote amounts of sand.

kamór/ṭamór 'grain of sand, sand/sand, amounts or kinds of sand'

Nouns referring to cohesive substances (liquid, semi-liquid and mashed substances) are typically denoted by singulars. Some examples from different noun classes follow here. In the translations,

the mass noun-meanings are underlined. The plurals can refer to amounts of the mass, or different kinds of the mass.

cəkal ‘grain of sesame, sesame plant, sesame paste’
məkal ‘sesame (seeds or plants), amounts or kinds of sesame paste’

kappɛn̪tína ‘groundnut, groundnut tree, groundnut paste /
appɛn̪tína ‘groundnuts, groundnut trees, amounts or kinds of groundnut paste’

(Semi-)liquid substances very often come in the class pair **ŋ/ɲ**. A plural can virtually always be formed and refers to amounts (portions) or different kinds of the substance.

ŋəʈĭ/ŋəʈĭ ‘water/amounts, kinds of water’
ŋʊcʊl/ŋʊcʊl ‘sauce/amounts, kinds of sauce’
ŋəpak/ŋəpak ‘beer/amounts, kinds of beer’
ŋʊccôk, **ŋɪccôk/ŋʊccôk**, **ŋɪccôk** ‘blood/amounts, kinds of blood’
ŋuʈû/ɲuʈû ‘asida/amounts, kinds of asida’

Nouns referring to non-cohesive substances with discrete small and roundish particles tend to come in the class pair **c/m**. The noun in the **c**-class refers to a single unit, the noun in the **m**-class to a larger amount (a non-cohesive mass).

cį̂l/mį̂l ‘sorghum seed, sorghum plant/sorghum (seeds or plants)’
cɔrɛ/mɔrɛ ‘seed/-s’

Unit/collective pairs are also found in the **k**/∅ and in the **kw**/∅ pairs, for example:

kakúccį/akúccį ‘coin/money’
kwɔʈɛn/ɔʈɛn ‘piece of firewood/firewood’

In some of the class pairs with less than six members (table 20) the basically singular classes **p**, **t̪**, and **t** refer to non-cohesive masses or collectives with discrete particles, while a single unit comes in one of the subclasses **k** or **kw.** It seems that the singular subclasses **k** and

kw, more than other singular classes, have the ability to denote a single unit from a collective outside the context of the class pairs in which they normally occur (**k**/∅ and **kw**/∅). Formation of a unit noun in these cases gave rise to the irregular pairs. Examples include:

kwɪan/pɪan 'small piece of firewood/small firewood'
kamór/ṯamór 'grain of sand/sand'
kwacɔ/tacɔ 'blade of grass/grass'

The language does not usually apply a specific word for a typical grouping of certain items. Mostly, just the plural (or in some cases the singular) is used and the grouping is inferred from the context or understood from what is usually the case.

English expression	*Lumun*	*class pair*
a bundle of firewood	**ɔɽɛn**	**kwɔɽɛn/ɔɽɛn** 'piece of firewood/firewood'
a flock of goats	**lịcɔ́k**	**ịmíṯ/lịcɔ́k** 'goat/-s'
a swarm of bees	**aʊn**	**kaʊn/aʊn** 'bee/-s'

Typical groups can nevertheless be stated, at least in some cases. Some examples:

cuŋkut **c-ɔ-ʊl**
crowd C-of-people
a crowd of people

kʊṯʊk **k-ɔ-kịɛ́**
fenced_place_for_livestock C-of-cows
a herd of cows (not necessarily within the fence)

ca **c-ɔ́ɽɛn**
head C-of.firewood
a bundle of firewood (lit.: a head of firewood)

Abstract nouns in the **ṯ**-class (most often but not always derived from verbs) are typically unpaired, but abstract nouns in other classes tend to have a singular/plural opposition. In the case of **ŋɔrɛ**, 'laziness',

the singular noun is used when the abstraction is associated with just one person, the plural when it is associated with plural persons:

ŋ-ɔrɛ	**ŋ-ulluk**	**éŋ-ŋ-í**	**ŋ-á-kk-w-ɔ́nʊ**
SGC-laziness	C-only	DEM-C-NEARSP	C-COP-3-C-have

this is just laziness of his, hers (lit.: laziness only this is (which) s/he has)

ɲ-ɔrɛ	**ɲ-ulluk**	**éɲ-ɲ-í**	**ɲ-á-ń-t̪-ɔ́nʊ**
PLC-laziness	C-only	DEM-C-NEARSP	C-COP-3A-C-have

this is just laziness of theirs (lit.: laziness only this is (which) they have)

In the case of **tɔr**, 'appetite', the singular and the plural noun are both possible when the abstraction is associated with just one person:

t-ɔr	**t-ɔkkwɔt̪-ín**	**éré**	**m-p-á.ɽə́kɔ́**	**kə́pá**
SGC-appetite	C-kill:COMPL-O1	like	1-C-eat:INCOMPL	meat

I am craving for meat (lit.: appetite has killed me as if I will eat meat)

n-ɔr	**n-ɔkkwɔt̪-ín**	**éré**	**m-p-á.ɽə́kɔ́**	**kə́pá**
PLC-appetite	C-kill:COMPL-O1	like	1-C-eat:INCOMPL	meat

I am craving for meat (lit.: appetite has killed me as if I will eat meat)

However, when the appetite is associated with more than one person, only the plural of 'appetite' can be used:

kəpa	**k-ípıɛ**	**ól**	**n-ɔr**
meat	C-make_obtain:INCOMPL	people	PLC-appetite

meat makes people have appetite (for it) (i.e. makes people want to eat it)

4.3.5. Noun class pairs and semantics

Certain semantic notions tend to be concentrated in specific class pairs. This section gives an overview of clusters of semantic content found in the frequently occurring class pairs. These semantic notions will be mentioned in italics and exemplified. All pairs except the strongly semantically specialized **p**/**k** class pair (trees and shrubs) contain items with miscellaneous semantics as well - examples of such items are provided also. Some special attention is given to nouns denoting people (including ethnonyms), animals, body parts,

and abstract nouns. The ∅/**n** class pair lacks semantic clustering. Most of its members are loans, assigned to this pair on phonological grounds. The semantic clusters found in the Lumun pairs have clear similarities with those observed in Acheron (Norton 2000).

p/∅
people, miscellaneous

The pair contains several nouns denoting people, including generic **pʊl/ʊl** 'person' and the ethnonyms for the Lumun (**parrô/arrô**) and some neighbouring Nuba peoples (**pappɔ́/appɔ́** 'Tocho', **pəʈɛmɛ̂/əʈɛmɛ̂** 'Acheron'). Other words for people in this class pair include: **pʊʈît/ʊʈît** 'young man', **pʊcŭŋ/ʊcŭŋ** 'barren woman', **pənân/ənân** 'adult woman without children', **pɪak/ɪak** 'orphan, poor person', **pəʈan/əʈan** 'name sharer', **paʈən̰an/aʈən̰an** 'wealthy person', **pamít/amít** 'traditional healer', **pɪɲɲît/ɪɲɲît** 'singer/composer', **pʊrʊkɔ̂/ʊrʊkɔ̂** 'friend', **pəʈɛ/əʈɛ** 'husband', **parí/arí** 'wife', **pʊʈʊkôn/ʊʈʊkôn** 'co-wife'. Kinship terms have the persona prefix **ɔ́**- and form plurals through a process of suffixation: they are not members of a class pair, see section 4.10. The vocatives of these nouns, however, lack the **ɔ́**-prefix and are in most cases **p**-initial.

The pair includes the general word for 'thing' **papʊ/apʊ**, which denotes objects but can also be used for animals, plants and fruits. It further contains several words for animals, including some generic animal terms: **papɛ̂/apɛ̂** 'fish', **pʊʈʊpɛ̂/ʊʈʊpɛ̂** 'bird', **paʊn/aʊn** 'rat' and **pɪɲɪl/ɪɲɪl** 'snake'. Other animals include **pəʈəpɛ̂l/əʈəpɛ̂l** 'ape (gorilla?)', **pəlla/əlla** 'cat', **pi̱mən/i̱mən** 'porcupine', **pərút/ərút** 'ostrich', **pɔcáŋ/ɔcáŋ** 'lizard (sp.)', **pɪʈɪmampíʈɪman/ɪʈɪmaníʈɪman** 'spider', **paʈák/aʈák** 'fly', some further insects and also some species of birds.

The class pair **p**/∅ contains the (central) body parts **pɛré/ɛré** 'chest' and **pəʈút/əʈút** 'waist'. It also contains **pʊrən̰ôt/ʊrən̰ôt** 'area between the buttocks'. It further has some miscellaneous items such as **pərɪt/ərɪt** 'granary', **pərrɔk/ərrɔk** 'chair', **pakkuk/akkuk** 'hiccup', **pərrən/ərrən** 'stick (of shovel)', **pŭŋ/ŭŋ** 'storage rack', **pɔn̰én/ɔn̰én**

'k.o. basket', **parantáŋ/arantáŋ** 'k.o. calabash', **paṯəkkara/aṯəkkara** 'k.o. pumpkin', **pərɛ́mpərɛ̂n/ərɛ́nərɛ̂n** 'lyre' and **pɔkkərɪ/ɔkkərɪ** 'sorghum (sp.)'.

p/k
trees and shrubs

The class pair **p/k** is semantically strongly specialized. All words but one refer to species of woody plants (trees, shrubs) and it has the generic word for 'tree' **pɪra/kɪra**. Some examples of species of trees and bushes are: **pɔrɔ/kɔrɔ** 'tree (sp.), **pəɽɔmɔ́/kəɽɔmɔ́** 'tree (sp.)', **pakɛk/kakɛk** 'bush (sp., poisonous, with bright pink flowers)'. Some more examples are given in 4.3.6. The only word in this pair with a somewhat different meaning is **pʊá/kʊá** 'stick, cane (used for beating)', denoting an item cut from a shrub. Virtually all attested trees and shrubs come in this class. One tree, **p-ɛrŏ**, can have its plural not only in the **k**-class but also in the **ṯ**-class (**k-ɛrŏ** or **ṯ-ɛrŏ**).

c/k
body parts

This class pair has only eleven members. Six denote body parts: **carə́k/kərə́k** 'belly, stomach', **cimmik/kimmik** 'breast', **cəmən/kəmən** 'arm', **cələk/kələk** 'neck', **ciɲít/kiɲít** 'tooth', **cít/kít** 'eye'. The pair also contains **cəna/kəna** 'grinding table', **cɛ́/kɛ́** 'stone for grinding', and **cərúk/kərúk** (sometimes **cərʊ́k/kərʊ́k**) 'opening, hole'. Similar to Acheron (Norton 2000), the word 'opening, hole' concerns openings or holes in structures such as a wall or a cloth, or in the ear, nose or lip, but not holes in the ground. The variant **cərʊ́k** is used in the expression that refers to the anus: **cərʊk cɔ́-pʊrəṯôt**, lit. 'hole of the area between the buttocks'). The pair furthermore has **cɪnṯâŋ/ kɪnṯâŋ** 'bird(sp.)' and **cʊlʊ́/kʊlʊ́** 'part of sorghum stock (without top) with sweet taste (like sugar cane)'.

c/m
round or roundish items, sometimes in combination with being numerous, miscellaneous

Round or roundish items include **cîn/mîn** ‘egg’, **callɛ/mallɛ** ‘ball’, **cɪrɪâ/mɪrɪâ** ‘bracelet’, **cʊmpʊ́raŋ/mʊmpʊ́raŋ** ‘ring in the top of the roof’, **cʊɽʊkʊl/mʊɽʊkʊl** ‘gathering of people in a circle’, **cịŋkị/mịŋkị** ‘sun’, **cəllakkɛ́r/məllakkɛ́r** ‘skeleton of the roof’, **cʊɽʊl/mʊɽʊl** ‘big stone, rock’, **cattak/mattak** ‘middle size stone’. The general term ‘stone’ has its plural in the **m**-class, but the singular comes in the **p**-class (**pəṯɔk/məṯɔk**). Some round(ish) calabashes are found in this pair (**cakkɔ́lɔ́k/makkɔ́lɔ́k**, **cakkɔ̂ŋ/makkɔ̂ŋ**, **caṯṯak/maṯṯak**), but also a type of calabash with a long neck: **cʊɽʊ/mʊɽʊ**. This word is also used for ‘bottle’. The pair includes (roundish) fruits and seeds, and food stuffs that consist of numerous roundish items such as **cî̩l/mî̩l** ‘grain of sorghum’, **cəmaɪt/maɪt** ‘bean’ (irregular pair, see 4.3.2, 4.3.4), **cəkal/məkal** ‘sesame’, **cɔrɛ/mɔrɛ** ‘seed as stored for the next season’. It also has some edible plants and some kinds of roots. A non-food item which shares the notion of being roundish and numerous is **cəṯɔt/məṯɔt** ‘star, hail stone’.

Several body parts occur in this class pair, not all of them (clearly) sharing the property of roundness. They include **cá/má** ‘head’, **cịkí̩t/məkí̩t** ‘heart’, **cəkɛn/məkɛn** ‘lower back’, **cʊɽê/mʊɽê** ‘buttock’, **carró/marró** ‘kidney’, **cʊmɔ́n/mʊmɔ́n** ‘womb’, **cị̩ɽí̩/mị̩ɽí̩** ‘vagina’, **cʊɽʊk/mʊɽʊk** ‘penis’, **cʊmɪan/mʊmɪan** ‘bone (generic)’, **cɛɽɛ̆ŋ /mɛɽɛ̆ŋ** ‘chest bone’, **cɪɲɲâ/mɪɲɲâ** ‘shoulder blade’, **cəṯɪṯɪ/məṯɪṯɪ** ‘pelvic joint’, **capərʊ̆t/mapərʊ̆t** ‘knee cap’, **cəɽɛllɛ́/məɽɛllɛ́** ‘hip’, **cîn/mîn** ‘thigh’, **cəɽɔllăn/məɽɔllăn** ‘calf’, **caún/maún** ‘finger’.

This class pair contains some ethnonyms and nouns for people: **cʊṯṯô/mʊṯṯô** ‘Arab’, **cɛŋkɛ́/mɛŋkɛ́** ‘Dinka’, **cʊrʊmâ/mʊrʊmâ** ‘person without a spouse’, **cɔkəntă/mɔkəntă** ‘supporting girl (in initiation ceremonies)’. It also has some animals: some birds, some rat species, some insects, **cʊmpʊ́ráŋ/mʊmpʊ́ráŋ** ‘monkey (sp.)’, **cɪpâ/mɪpâ** ‘feline (sp., lynx?)’ and **cị̩mənterí̩/mị̩mənterí̩** ‘hedgehog’. It also has the word for the needles of the hedgehog: **cɔrrâ/mɔrrâ**.

Miscellaneous items include: **cɔɽɔ̆ŋ/mɔɽɔ̆ŋ** ‘mountain’, **caɽĭ/maɽĭ** ‘day, time’, **cəɽɔntɔ̂ŋ/məɽɔntɔ̂ŋ** ‘vertical pole in the roof’, and **cɔpɔ̂k/mɔpɔ̂k** ‘arrow’.

ʈ̪/l
elongated objects, miscellaneous

Single **ʈ̪-**class: *disgusting things* (in some cases **ʈ̪/l** pair)*, abstractions (relations between people, behaviour*)

The pair contains several words for elongated objects or items such as **ʈ̪ɔɽák/lɔɽák** ‘rope’, **ʈ̪ʊpəɽŭ/lʊpəɽŭ** ‘valley’, **ʈ̪ʊmpîl/lʊmpîl** ‘rainbow’, **ʈ̪əka/ləka** ‘root (generic term), muscle’, **ʈ̪ɔntərɔ/lɔntərɔ** ‘type of calabash with a long neck’, **ʈ̪ɪpíl/lɪpíl** ‘horn (body part of animal), **ʈ̪i̪pi̪l/li̪pi̪l** ‘horn (musical instrument)’.

Body parts found here include **ʈ̪ʊllôŋ/lʊllôŋ** ‘throat’, **ʈ̪ʊɽɛ/lʊɽɛ** ‘tongue’, **ʈ̪əŋkɛt/ləŋkɛt** ‘erected penis’, **ʈ̪ʊʈ̪ʈ̪ê/lʊʈ̪ʈ̪ê** ‘navel, umbilical cord’, **ʈ̪aɽʊmɔ́n/laɽʊmɔ́n** ‘chin’, **ʈ̪ʊŋkwɛ/lʊŋkwɛ** ‘liver’, and **ʈ̪ɔn/lɔn** ‘mouth, word’. An elongated shape is not evident in all of them.

Animals include some with an elongated shape such as **ʈ̪ʊllŏr/lʊllŏr** ‘mudfish (sp.)’ (dangerous, potentially lethal animal, can be eaten) and **ʈ̪ʊllɛɽák/lʊllɛɽák** ‘lizard (sp., with stripes)’, but lizard species are also found in other class pairs. The pair contains several animals where elongated shape does not seem to play a role, including: **ʈ̪ʊŋkwat/lʊŋkwat** ‘sheep’, **ʈ̪ərɔ́ma/lərɔ́ma** ‘ram’, **ʈ̪ɛpa/lɛpa** ‘lion’ **ʈ̪akkəɽʊʈ̪ʈ̪ákkəɽʊk/lakkəɽʊllákkəɽʊk** ‘butterfly’, **ʈ̪amúʈ̪ʈɛ/ʈ̪amúʈ̪ʈɛ** ‘bat (sp.)’**, ʈ̪akəɽók/lakəɽók** ‘chicken’, **ʈ̪əkkɔʈ̪ak/ləkkɔʈ̪ak** ‘rooster’, **ʈ̪ŭk/lŭk** ‘dog’, **ʈ̪ʊʊlí/lʊʊlí** ‘hyena (?, sp.)[31].

The class pair has some nouns for people: **ʈ̪ɔmɔccɔ/lɔmɔccɔ** ‘old man’, **ʈ̪ɔmɔɽé/lɔmɔɽé** ‘transvestite’ and **ʈ̪arɔ/larɔ** ‘one person of twins/twins’**.**

Miscellaneous items include **ʈ̪ĭk/lĭk** ‘fire’, **ʈ̪ɪpa/lɪpa** ‘marriage’, **ʈ̪ʊpʊt/lʊpʊt** ‘year’, **ʈ̪ɔrák/lɔrák** ‘war’, **ʈ̪ʊrʊpă /lʊrʊpă** ‘mixture of flour and water left to ferment (for the preparation of beer)’,

[31] Possibly a hyena species, but less clearly so than **ŋaŋkôr**, which was described as a dog-like scavenger, spotted and with short hind legs.

ṯapəɽɪttínak/lapəɽɪttínak ‘mixture of water and ground groundnuts, resulting from cleaning the grinding table’, **ṯɪran/lɪran** ‘flour (k.o.)’.

Some words in the **ṯ**-class refer to ‘slimy, disgusting things’. At least some of them have sound symbolic value. **ṯəllɛr** ‘egg yolk, chicken shit’ and **ṯəllâ** ‘slime from the lungs, lung disease’ (words lacking a singular/plural opposition) were described as **ṯəll** ‘yuck!, ich!’, an ideophonic word combined with a facial expression expressing a feeling of disgust. Other words referring to ‘slimy, disgusting things’ and involving long **l** are **ṯʊllâ** ‘messed-up food, food eaten in a dirty way’ and the earlier mentioned mudfish **ṯʊllŏr/lʊllŏr**. Though eaten and appreciated as a delicacy by some, many regard it as disgusting. Some slimy, disgusting things involve a rhotic sound: **ṯʊrrô̂t** ‘rotten smell’, **ṯɪrŏ̂t** ‘mould’, **ṯʊṯúr/lʊṯúr** ‘stomach content’.

Apart from the ‘disgusting items’, there are some further (non-derived) unpaired nouns in the **ṯ**-class. Some of these refer to behaviour and emotions. Examples: **ṯʊkkĭ** ‘hiding in ambush’, **ṯaɽə́r** ‘behaviour and occupations associated with men’, **ṯəɽî̂t** ‘joy’, **ṯʊkʊŋkô̂n** ‘trouble making’, **ṯaləkíkkɪk** ‘dodging behaviour’, **ṯaɽɔ́k** ‘working party of grown up people’, **ṯaṯóma** ‘ritual, traditional procedure’, **ṯʊkʊkkʊr** ‘dirt on top of water’.

The **ṯ**-class also contains some nouns that bear a relationship to kinship terms with the persona prefix (see 4.10). These nouns refer to the type of relationship or to people standing in a type of relationship, not to specific individuals. An example is **ṯəkí** ‘grandparent and grandchild (i.e. kind of relationship), ancestry, descendance’. Further examples are given in 4.3.6. These nouns are basically unpaired, but may allow for the formation of a singular(!) in the **p**-class. [32]

Verbs allow for the derivation of a verbal noun in the **ṯ**-class, as do several adjectives (see 4.6.1 and 4.6.3). Such nouns are unpaired.

[32] See also Smits (2012).

t/n
grasses and wiry materials, miscellaneous

The pair contains the generic term **taṯa/naṯa** 'leaf' and a few grass species. It also has some words that relate to (wiry) plant materials: **təmmâk/nəmmâk** 'bark', **tʊŋkwaŋ/nʊŋkwaŋ** 'dress made of bark', **tarətta/narətta** 'remaining fibres of sorghum (traditionally used for cleaning calabashes)', **tɪccît/nɪccît** 'husk of sesame', **tị̈ca/nị̈ca** '(heap of) plant waste', **təŋák/nəŋák** 'fibres for chewing (of sugarcane or tobacco), also: 'honeycomb', **tʊnê/nʊnê** 'bird's nest', **tuttû/nuttû** 'dung', **təmama/nəmama** 'material inside of a pumpkin'.

Some items seem to share a notion of hollow space: **tʊpó/nʊpó** 'hole in the ground, grave', **tŭŋ/nŭŋ** 'space under the granary'.

Body parts include **təṯṯák/nəṯṯák** 'placenta', **tɛɽɪmak/nɛɽɪmak** 'tooth gum', **təmaṯé/nəmaṯé** 'upper part of the foot'.

Terms for people are not attested in this pair. Animals found here include **tuṯṯəruk/nuṯṯəruk** 'pig', **təŋək/nəŋək** 'worm (generic)', **təllɔún/nəllɔún** 'caterpillar (sp.)', **təllapôk/nəllapôk** 'frog (generic)', **taŋkɛɽɔŋ/naŋkɛɽɔŋ** frog (sp.), **tɛŋkɪ/nɛŋkɪ** 'eagle', **tɔɽị̆/nɔɽị̆** 'cobra', **tɔrɔpă/nɔrɔpă** 'lizard (sp.)', **tamʊt/namʊt** 'rat (sp.)' and **takkʊntákkʊŋ/nakkʊnnákkʊŋ** 'mosquito'.

Abstract nouns include **təɽê/nəɽê** 'fear', **tɔr/nɔr** 'appetite', **tɔɽĕ/nɔɽĕ** stinginess, **tamət/namət** 'sexual desire'. **tî** 'hunger, period(s) of hunger' is an unpaired noun in the **t**-class.

Other words include **tʊɽɔt/nʊɽɔt** 'upright edge of the grinding table', **tʊṯṯɛ/nʊṯṯɛ** 'cloud', **tʊé/nʊé** 'stream, river', **tɔ́k/nɔ́k** 'waterplace', **tʊpɛt/nʊpɛt** 'terrace (in agriculture)', **tərənék/nərənék** 'shade', **tɛmɛ/nɛmɛ** 'hook', **tʊkıă/nʊkıă** 'head pad (for carrying heavy loads on the head)'.

∅/**n**
loans

This class pair contains mainly loans from Arabic that have been borrowed together with the definite article **al**- (see section 4.9).

Two items are probably loans from Tira: **ılî/nılî** 'leader' and **ʊrıl/nʊrıl** 'deaf person'. Tira has **eli/neli** 'chief' and the adjective **-urúril** 'deaf, dumb (Schadeberg 2009, p. 109). Three further items in this pair are **ɪɽılla/nıɪɽılla** 'person with both legs paralysed', **ʊmaṯ̱ôn/nʊmaṯ̱ôn** 'elephant' and **ʊrɛn/nʊrɛn** 'necklace'. They may be borrowings as well.

k/∅
tools and instruments, language names, miscellaneous

Language names all come in this pair (see section 4.3.6). It has several tools and instruments including **kırék/ırék** 'hoe', **kərέ/ərέ** 'tool for the removal of sorghum stocks', **kaṯ̱ók/aṯ̱ók** 'spear', **kəɽi̱ttăŋ /əɽi̱ttăŋ** 'knife', **kappəɽí/appəɽí** 'spoon', **kʊmmʊk/ʊmmʊk** 'pot', **kapí/apí** 'cooking pot'.

Body parts include **kucúl/ucúl** 'back', **kunú/unú** 'ear', **kɪɲcɛ/ɪɲcɛ** 'nose', **kʊṯ̱ôt/ʊṯ̱ôt** 'lip', **kıcɔ/ıcɔ** 'pubic area', **kʊŋkʊ/ʊŋkʊ** 'knee', **kʊɲıt/ʊɲıt** 'rib', **kərıkı/ərıkı** 'upper arm'. Some animal body parts: **kʊɽəccô/ʊɽəccô** 'wing', **kuṯ̱ṯ́ḵ/uṯ̱ṯ́ḵ** 'tail'.

Animals tend to be lower species, including some insects for example **kara/ara** 'tick' and **kərέ/ərέ** 'bedbug'. The pair also includes **kapáɽɛnṯ̱óŋ/apáɽɛnṯ̱óŋ** 'lizard (sp.)', **kunû/unû** 'scorpion', **kəɽəmɛkkʊ/əɽəmɛkkʊ** 'bat (sp.)', **kəɽôl/əɽôl** 'tortoise', **kĭt/ĭt** 'wild chicken'.

Nouns for people are **kəllân/əllân** 'old woman', **kurê/urê** 'left-handed person' (also 'left side'), **kıcôk/ıcôk** 'person with one functioning eye', **kımıcô/ımıcô** 'person with one functioning leg'.

Food items include **kappɛn̪tína/appɛn̪tína** ‘groundnut’, **kɛpʊ/ɛpʊ** ‘mushroom’, **kɛpɪn/ɛpɪn** ‘edible plant (generic)’.

Miscellaneous items include **kəɽɪmɨ̌/əɽɪmɨ̌** ‘large, flat stone’, **karraŋ/arraŋ** ‘wall’, **kərét/ərét** ‘cloth’, **kapɪk/apɪk** ‘rain, God’, **kuɲé/uɲé** ‘song’, **kʊɽâ/ʊɽâ** ‘open space for dancing, dancing party’.

kw/∅ and **kw/w**
miscellaneous, some body parts, some insects

The nouns in this pair were listed in section 4.3.1. Body parts are **kwăn/wăn** ‘strand of human hair’**, kwɔɽɔl/ɔɽɔl** ‘cheek’ and **kwamɛ/amɛ** ‘tendon’. Two insects are found in this pair: **kwalílín/alílín** ‘centipede’ and **kwɔɽék/ɔɽék** ‘black ant’. It also has the moon **kwanɔ̂k/(w)anɔ̂k**. No language names or nouns referring to persons are attested here.

ŋ/ɲ
liquids, young or small animals, small-sized items, intangibles, miscellaneous

Most liquids are found here: **ŋəɽɨ̌/ɲəɽɨ̌** ‘water’, **ŋôn/ɲôn** ‘dew’, **ŋacɔ́k/ɲacɔ́k** ‘mud’, bodily fluids such as **ŋʊccû̂k/ɲʊccû̂k** (also **ŋɪccû̂k/ɲɪccû̂k**) ‘blood’, **ŋʊttɛtta/ɲʊttɛtta** ‘sweat’, **ŋaé/ɲaé** ‘urine’, **ŋɪpərɪk/ɲɪpərɪk** ‘diarrhea’, **ŋŏ̰k/ɲŏ̰k** ‘saliva’, **ŋi̪mmi̪k/ɲi̪mmi̪k** ‘human milk’, and liquid food and beverages such as **ŋʊ́í/ɲʊ́í** ‘milk’, **ŋəpak/ɲəpak** ‘beer’, **ŋucʊl/ɲucʊl** ‘sauce’, **ŋəré/ɲəré** ‘honey’, **ŋaák/ɲaák** ‘oil’ and **ŋɛɪɽía/ɲɛɪɽía** ‘k.o. watery root (eaten raw)’. The pair contains **ŋuɽû/ɲuɽû** ‘asida’, the stiff sorghum porridge that constitutes the local staple food, and also **ŋaṯəɽê/ɲaṯəɽê** ‘brain’.

Several words, particularly with an initial sequence **ŋa**- (plural **ɲa**-), convey a notion of smallness. There is no doubt a connection to the diminutive morpheme **ŋa**- (see 4.5.1), but the words listed below lack a corresponding noun without **ŋa**.

ŋarəkkʊk/ɲarəkkʊk[33]	‘baby, young child’
ŋaṯʊʈík/ɲaṯʊʈík, **ŋarəṯʊʈík/ɲarəṯʊʈík**	‘piglet (with stripes)’
ŋalı/ɲalı	‘fish (sp., small size)’
ŋapərı/ɲapərı	‘ant (sp., small size)’
ŋarəkɔttôŋ/ɲarəkɔttôŋ	‘ant (sp., small size)’
ŋaʈəkâŋ/ɲaʈəkâŋ	‘bird (sp., small size)’
ŋaṯṯəṯṯápɛ/ɲaṯṯəṯṯápɛ	‘bird (sp., small size)’
ŋacəkkîk/ɲacəkkîk	‘lizard (sp., small size)’
ŋaṯṯɔkkôl/ɲaṯṯɔkkôl	‘k.o. calabash (small size)’
ŋalántʊŋ/ɲalántʊŋ	‘k.o. basket (small size)’
ŋaləmpərara/ɲaləmpərara	‘k.o. axe (small size)’
ŋalləcácca/ɲalləcácca	‘magician’s stick (short)’

Some words for young animals do not have an initial sequence **ŋa/ɲa**:

ŋʊmɔ́n/ɲʊmɔ́n	‘young goat’
ŋʊmpəʈúŋ/ɲʊmpəʈúŋ	‘calf at the stage of sucking’

Other animals in the **ŋ/ɲ** class pair (not all of them small) include: **ŋʊrăŋ/ɲʊrăŋ** ‘rat (sp.)’, **ŋaṯərəpê/ ɲaṯərəpê** ‘rabbit’, **ŋʊrak/ɲʊrak** monkey (sp.), **ŋaŋkôr/ɲaŋkôr** ‘hyena’ (sp., spotted), **ŋıttıpıt/ɲıttıpıt** ‘billy goat’, **ŋɛʈıŋkâ/ɲɛʈıŋkâ** ‘donkey’, **ŋura/ɲura** ‘bull’. Small-sized animals are also found in other class pairs.

The pair also has intangible/abstract nouns such as **ŋɔrɛ/ɲɔrɛ** ‘laziness’, **ŋərɛ/ʔɲərɛ** ‘work’, **ŋʊrĕ/ɲʊrĕ** ‘joking, mockery’, **ŋi̯ca/ɲi̯ca** ‘dance (generic term)’, **ŋəmɛ/ʔɲəmɛ** ‘cry, tear, sound (of animal)’, **ŋaramâ/ɲaramâ** ‘prayer’, **ŋáppɔ/ɲáppɔ** ‘hunt (of one person with dog or of small party)’[34] and the unpaired noun **ŋılî** ‘leadership’.

Miscellaneous items are relatively few in this pair, but include **ŋʊʈʊ/ɲʊʈʊ** ‘dirt’, **ŋɛntəra/ɲəntəra** ‘drum’, **ŋʊmat/ɲʊmat** ‘thorny

[33] According to JS not an originally Lumun word.
[34] **ŋáppɔ/ɲáppɔ**, with its unusual tone pattern, may be borrowed from Tira, which has abstract nouns in the **ŋ**-class and a verb **apɔ** ‘take’ (Schadeberg 2009, p. 21, 112).

bush', **ŋʊmʊrra/ɲʊmʊrra** 'arm shield held, for protecting arm and head'.

*Singular **w** and singular ∅*
Edible animals

One more semantic cluster is worth mentioning, though the nouns are few, divided over the singular **w** and ∅ classes, and have (suppletive) plurals in different classes. It concerns wild and domestic edible animals. Four of them have a plural in the **k**-class:

i̧mít/li̧cɔ́k 'goat/-s'
ʊmaṯ̂n/nʊmaṯ̂n 'elephant/-s'
ɪkɛ/kɪkɛ 'giraffe/-s'
ɔpá/kəpá 'piece of meat, animal hunted for meat/meat, game'
waǐ/ki̧é 'cow/-s'
wallĭr, allĭr/kallĭr 'gazelle/-s'

This small group is interesting in view of Schadeberg's (1981b, p. 119) reconstruction of the items 'cow', 'goat' and 'meat' in a proto-Talodi class pair ***w**/***g**, and his remark that Stevenson's (1957, p. 134-135) data suggest that there were still other (edible) animals in this class pair. Norton (2000) lists some cognate (edible) animals in the class pairs **w**/**g** and **w**/**n** of Acheron.

4.3.6. Class prefixes as derivational tools

Trees or shrubs and their fruits

Virtually all trees occur in the class pair **p**/**k**. Their fruits have the same root, but go to different noun classes. Many occur in the pair **c**/**m**, others in the pair **k**/∅ (the plural of the tree and the singular of the fruit are thus homonyms). One fruit comes in the pair **ṯ̈**/**l** and one in **t**/**n**. The fruits in the class pair **c**/**m** are typically round or roundish, the one in the pair **ṯ̈**/**l** has a longitudinal shape. The fruits in the pair **k**/∅ do not seem to share specific properties. The pair contains fruits that are small and numerous, but also bigger ones.

tree (or shrub or woody vine)[35]	*fruit*
pəɽɔt/kəɽɔt ‘baobab’	**cəɽɔt/məɽɔt**
pʊpô/kʊpô ‘tree (sp.)’	**cʊpô/mʊpô**
pɔɽɪɔmpôŋ/kɔɽɪɔmpôŋ ‘vine (sp.)’	**cɔɽɪɔmpôŋ/mɔɽɪɔmpôŋ**
pi̱t̪i̱ŋkî̱l/ki̱t̪i̱ŋkî̱l ‘tree (sp.)’	**ci̱t̪i̱ŋkî̱l/mi̱t̪i̱ŋkî̱l**
pərut/kərut ‘tree (sp.)’	**cərut/mərut**
paman/kaman ‘tree (sp.)’	**caman/maman**
paí/kaí ‘tamarind’	**t̪aí/laí**
parət̪ên/karət̪ên ‘tree (sp.)’	**karət̪ên/arət̪ên**
punnûr/kunnûr ‘tree (sp.)’	**kunnûr/unnûr**
pi̱ci̱t/ki̱ci̱t ‘tree (sp.)’	**ki̱ci̱t/i̱ci̱t**
pʊá/kʊá ‘tree (sp.)’	**kʊá/ʊá**
pʊɽʊpǒ/kʊɽʊpǒ ‘tree (sp.)’	**tʊɽʊpǒ/nʊɽʊpǒ**

In the following case the word for the (edible) leaf has the same root as the word for the tree. The word for the leaf lacks a singular/plural opposition:

tree	*leaf*
pɔɽât/kɔɽât ‘tree (sp.)’	**t̪ɔɽât**

Another case in which tree (and fruit) and leaf are clearly related is the following:

pəɽɔt/kəɽɔt ‘boabab tree’	**kʊɽɔt**

kʊɽɔt ‘leaf, leaves of baobab’ suggests a development from ***kw-əɽɔt** or ***kw-ɔɽɔt.**[36]

Sometimes the word for the tree is used when reference is made to the whole of the fruits that are still on the tree, as in the second

[35] Some species that are translated as ‘tree (sp.)’ may rather be shrubs.

[36] Sequences **kwə** are not attested. A sequence **kwɔ** can alternatively be pronounced as **kʊ**.

example below. In the first example, in which the word for the fruit is used, reference is made to a specific fruit.

caman	**c-ɔʈɛ**	**ána**	**c-ɟ́kkakɔ**
*caman*_fruit	C-red	and	C-be_drunk:INCOMPL

the caman-fruit is ripe and can be eaten

paman	**p-ɔʈɛ**	**ána**	**p-ɟ́kkakɔ**
*paman*_tree	C-red	and	C-be_drunk:INCOMPL

the fruits of the paman-tree are ripe and can be eaten

People and abstractions in the ṯ-class

Some nouns that refer to people (mostly but not exclusively in the **p**/∅ class pair), and abstract nouns in the **ṯ**-class share the same roots. These abstract nouns are unpaired. Whether or not there is an abstraction next to a paired noun that refers to a kind of person is lexically determined. Attested cases:

ɪʈé/ɲɪɾé, ɲɪʈé	‘adolescent girl’
ṯɪɾé	‘behaviour and occupations associated with girls’ (i.e. making oneself pretty, making one’s room look nice, etc.)
parí/arí	‘wife’
ṯarí	‘behaviour and occupations associated with women’ (i.e. keeping the house clean, cooking food, etc.)
pamít/amít	‘traditional healer’
ṯamít	‘traditional healing’
paɽəṯan/aɽəṯan	‘rich person’
ṯaɽəṯan	‘wealth’
pʊrʊkɔ̂/ʊrʊkɔ̂	‘friend’
ṯʊrʊkɔ̂	‘friendship’

pɪak/ɪak ‘orphan, poor person’
ṭ̱ɪak ‘suffering’

There are also cases of kinship and relational nouns that share their root with an abstract noun. Kinship and relational terms have the persona prefix **ɔ́-** when denoting specific persons (unless in the vocative), and form plurals through suffixation instead of through change of noun class (see 4.10). In several kinship and relational nouns the class prefix **p** can be recognized. The same roots with the **ṭ̱**-prefix (instead of the **p**-prefix) refer to the kind of relationship. Nouns with the **ṭ̱**-prefix do not have the persona prefix **ɔ́-.**

ṭ̱əkí ‘grandparent and grandchild (i.e. kind of relationship in which people stand to each other), ancestry, descendance’
ɔ-pəkí (PL **ɔ-pəkɪ-ɔ̂n**) ‘grandparent, grandchild, ancestor, descendant (i.e. a specific person)’

ṭ̱ɪṭ̱é ‘in-laws of different generation (kind of relationship)’
ɔ-pɪṭ̱é (PL **ɔ-pɪṭ̱ɛ-ɔ̂n**) ‘in-law of different generation (specific person)’

ṭ̱ɔrɛn ‘maternal uncle and nephew or niece of maternal uncle (kind of relationship)’[37]
ɔrɛ̂n ‘maternal uncle, nephew or niece of maternal uncle (specific person)’

ṭ̱ɔʧ̱i̱n ‘in-laws of same generation (kind of relationship)’
ɔʧ̱î̱n ‘in-law of same generation (specific person)’

An example follows here with a kinship noun that refers to a specific person, then an example with the noun that refers to the relationship:

[37] In this case and the next, the difference in tone between the nouns in the **ṭ̱**-class and the **ɔ**-initial kinship terms reveal that the persona prefix **ɔ́**, which brings a high tone, is present in the nouns denoting a specific person but absent from the noun denoting the relationship. The shared roots have an initial **ɔ** (as is apparent from the vocative forms) and low tones.

ɔ-kín	**ɔ-pəkɪ**	**p-ɪŋ-ŋ̂n**
PERS-3A	PERS-grandparent	C-POSS1-PL

they are my grandparents

ɔ-kín	**t̪əkí**
PERS-3A	grandparent_and_grandchild

they are grandparent and grandchild to each other

Peoples and languages

Languages are productively derived in the **k**-class, irrespective of the class pair of the ethnonym. The autonym of the Lumun comes in the **p**/∅ class pair, as do the ethnonyms for the immediate and linguistically closely related neighbours Tocho, Acheron and Torona. Other peoples come in other class pairs.

person / people	*language*	
parrô/arrô	**karrô**	‘Lumun, mother tongue’
	karrú k-árrô	‘mother tongue of the Lumun people’
pappɔ́/appɔ́	**kappɔ́**	‘Tocho’
pəɽɛmɛ̂/əɽɛmɛ̂	**kəɽɛmɛ̂**	‘Acheron’
paɽɔnɔ/aɽɔnɔ	**kaɽɔnɔ**	‘Torona’
pəɽá/məɽá	**kəɽá**	‘Tira Lumun and Tira’
pəmpərən/ləmpərən	**kəmpərən**	‘Moro’
u̪t̪uɽu/lu̪t̪uɽu	**ku̪t̪uɽu**	‘Otoro’
pakkí/ɲakkí	**kakkí**	‘Nuba peoples south and south-west of the Lumun, across the plain (amongst others Dagik, Katcha, Krongo)’
cɛŋkɛ́/mɛŋkɛ́	**kɛŋkɛ́**	‘Dinka’
cʊ̪t̪̂ʊ/mʊ̪t̪̂ʊ	**kʊ̪t̪̂ʊ**	‘Arab Sudanese’

Other nominal roots occurring in more than one singular/plural pair, or in a singular/plural pair and as unpaired noun

Further examples of roots that occur in noun classes that change the meaning of the word in a way that is not number-related follow here.

cɟmmɟk/kɟmmɟk	'breast'
ŋɟmmɟk/ɲɟmmɟk	'human milk'

ṯaák/laák	'sesame paste' (after the oil has been pressed out)
ŋaák/ɲaák	'oil/amounts, kinds of oil' (not necessarily sesame oil)

ılî/nılî	'leader'
ŋılî	'leadership'

kʊpó/ʊpó	'hole in rock where water gathers'
tʊpó/nʊpó	'hole in the ground, grave'
cəpó/mʊpó	'hole in the ground (not big) to keep a small child safely in place, or for a large calabash of beer to stay upright'

capó	'ground'
kapó/apó	'small hole for planting the sorghum'

pıra/kıra	'tree'
kwıra/ıra, wıra	'small piece of wood or grass'

kucúk	'smoke'
mucúk	'ashes'

taṯa/naṯa	'leaf (generic term)'
kwaṯa	'edible leaves of beans'

pərımpərĭn/kərıŋkərĭn	'tree (sp.)'
cərıɲcərĭn/mərımmərĭn	'fruit of *pərımpərın*-tree'
kərıŋkərĭn/ərınərĭn	'bell of seeds of the *cərɲcərın*-fruit'

cəmarâŋ	‘free fight for competition’
kəmarâŋ/əmarâŋ	‘shield’
n̪ərɔ́ma/lərɔ́ma	‘ram’
ŋərɔ́ma/ɲərɔ́ma	‘young ram’

Replacing the original noun class prefix of an animal term by the class prefix **ŋ-**, as in the example above, is not a regular way of diminutive formation. Instead, there are diminutive morphemes **ŋa-/ɲa-** and **ŋaŋa-/ɲaɲa-** which can be applied productively (see 4.5.1). Nevertheless, it seems that nouns denoting animals can be assigned to the **ŋ**-class in a creative way. In the sentence below, which is from a story, the animal character **kəɽôl** ‘tortoise’ is referred to as **ŋəɽôl,** which is not a regular word for ‘small tortoise’. The **ŋ**-class gives a flavour to the word here that is related to the notion of smallness, but expresses something like ‘nasty little tortoise’**.** The speaker in the example is a malicious creature who is after the tortoise. He asks the animals to drink all the water from the stream so that he can catch the tortoise, who is in the water.

n-ánt-áṯ-ɟkkɟn-ɪn				**ŋəɽɪ**
2A-can:DEPINCOMPL-VEN:DEPINCOMPL-drink_for:DEPINCOMPL-O1				water
ákka	**ŋəɽɔl**	**ŋ-əɽɛk**	**ŋ-apɔṯ.é**	**cəné**
that	little_tortoise	C-some	C-fall_at:COMPL	here

please come and drink the water for me, because some nasty little tortoise has fallen here (App. IV, 138-139)

A singular noun which has a variant in another noun class is **cakkə́lɔ́k** ‘calabash (k.o.)’. There is only one plural:

cakkə́lɔ́k, **pakkə́lɔ́k/makkə́lɔ́k** ‘calabash (k.o.)’

4.4. Contracted forms with gemination

In some individual cases, nouns can occur in a changed phonological shape when preceded by one of the prepositional proclitics **ɪ-** ‘in’, **nɔ-** ‘on’, **tɔ-** ‘up on, up at’ or **n̪ɔ-** ‘at’, or the connexive C-**ɔ** ‘of’. In isolation these nouns have the shape $(C_1)V_1C_2V_2(C_3)$. In most cases both C_1 and

C_2 are obstruents. V_1 is deleted after **ɪ-**, **nɔ-**, **tɔ-**, **ʈɔ-** and C-**ɔ-**, while C_1 and C_2 form a geminated consonant at the place of articulation of C_2 (recall that the intervocalic allophone of **t** is **r**). C_2 geminates also if C_1 is absent. The result is thus CLITIC-$C_2C_2V_2(C_3)$.

The examples with prepositional proclitics presented below were found in texts or obtained through elicitation. Note that in some cases which involve a low-toned noun, a rising tone results.

tʊpó 'hole in the ground, grave'	**ɪ-ppó**, **nɔ-ppó**, **ʈɔ-ppó**
tʊpan 'room'	**nɔ-ppăn**
pəʈɔk 'stone'	**ɪ-ʈʈŏk**, **nɔ-ʈʈŏk**
kʊʈʊk 'fenced place for livestock'	**ɪ-ʈʈŏk**, **tɛ-ʈʈŏk**[38]
pərɪt 'granary'	**ɪ-ttĭt**, **nɔ-ttĭt**, **tɔ-ttĭt**
kərək 'farming field'	**ɪ-ttô̂k**
kucúl 'back'	**ɪ-ccúl**, **nɔ-ccúl**, **tɔ-ccúl**, **ʈɔ-ccúl**
kʊcó 'shed'	**ɪ-ccó**, **nɔ-ccó**, **tɔ-ccó**
ʊkún 'hand, forearm'	**ɪ-kkún**, **nɔ-kkún**, **ʈɔ-kkún**
ʊkʊl 'child'	**ɪ-kkô̂l**, **nɔ-kkô̂l**, **tɔ-kkô̂l**

However, if C_1 is **k** and C_2 is **p**, the geminate adopts the place of articulation of C_1 (CLITIC-$C_1C_1V_2(C_3)$). In the third example, C_2 **p** is reflected in the labialized articulation of the velar geminate:

kupú 'hole in rock where water gathers'	**ɪ-kkú**, **nɔ-kkú**, **tɔ-kkú**
kʊpó 'deep crack in rock'	**ɪ-kkó**, **nɔ-kkó**, **ʈɔ-kkó**
kəpɔn 'farming field'	**ɪ-kkwô̂n**, **nɔ-kkwô̂n**, **ʈɔ-kkwô̂n**

There is also a form **tɔpô̂n**, which probably derives from **tɔ** + **əpɔn** instead of from **tɔ** + **kəpɔn**, though —synchronically— it does not convey a notion of plurality of the fields.

If C1 is a nasal, a nasal and stop sequence results at the place of articulation of C2, but not when C_1 is **ŋ** and C_2 is **p**. In that case the place of articulation of C_1 is adopted, retaining the labialized articulation of **p** (third example below):

[38] **tɔ** is realized here as **tɛ**.

məṯɛ́ ‘sleep’ **ɪ-nṯɛ́**
ŋʊcʊl ‘sauce’ **ɪ-ɲcʊ̌l**

ŋəpak ‘beer’ **ɪ-ŋkwă̌k**

One case has a nasal (**m**) at C2. Like C1 **ŋ** – C2 **p**, C1 **k** – C2 **m** results in **ŋkw**:

kəmɛl ‘hunting party’ **ɪ-ŋkwɛ̂l**

Finally, there is a comparable case of gemination (+ labialization) of a CV noun: **ɪ-** ‘in’ + **ka** ‘body’ > **ɪkkwâ** ‘in the body’. This change, however, only occurs with proclitic **ɪ-**, not with any other prepositional proclitic, nor with the connexive.

In most cases, regular forms of the combinations listed above are possible as well, but less commonly used. In some cases, the form with gemination and the regular form have different meanings. Examples of this are given in 16.3.1 and 16.3.2 (dealing with the PPCs **ɪ-** ‘in’ and **nɔ-** ‘on’). In other cases there is no difference, as for example in:

tɔ-ccúl ‘between the shoulder blades’
tɔ-kucúl ‘between the shoulder blades’

ɪ-kkú ‘in the hole in the rock where water gathers’
ɪ-kupú ‘in the hole in the rock where water gathers’

4.5. Complex nouns

4.5.1. Diminutive nouns

Diminutives are derived by means of attachment of the SG/PL morphemes **ŋa-/ɲa-** or **ŋaŋa-/ɲaɲa-** before the singular or plural noun. The diminutive prefixes are typically used with animals to denote young animals, but are also applied for small versions of objects. The reduplicated prefix expresses a stronger notion of being young and/or small than **ŋa-/ɲa-**. Some examples:

ŋa-ʈərɔ́ma/ɲa-lərɔ́ma, ŋaŋa-ʈərɔ́ma/ɲaɲa-lərɔ́ma, ‘young ram’
< **ʈərɔ́ma/lərɔ́ma** ‘ram’

ŋa-ʈŏk/ɲa-lŏk, ŋaŋa-ʈŏk/ɲaɲa-lŏk, ‘young dog, puppy’
< **ʈŏk/lŏk** ‘dog’

ŋa-pəlla/ɲa-əlla, ŋaŋa-pəlla/ɲaɲa-əlla ‘young cat, kitten’
< **pəlla/əlla** ‘cat’

ŋa-rəʈʈəruk/ɲa-nəʈʈəruk, ŋaŋa-rəʈʈəruk/ɲaɲa-nəʈʈəruk ‘young pig (but no longer striped)’
< **tuʈʈəruk/nuʈʈəruk** ‘pig’

ŋa-pʊʈît/ɲa-ʊʈît, **ŋaŋa-pʊʈît/ɲaɲa-ʊʈît,** ‘little young man’ (a boy that does not yet have the age of a young man but that behaves as if he already were)
< **pʊʈît/ʊʈît** ‘young man’

ŋa-kwɔʈɛn/ɲa-ɔʈɛn, ŋaŋa-kwɔʈɛn/ɲaɲa-ɔʈɛn, ‘small piece of firewood’
< **kwɔʈɛn/ɔʈɛn** ‘piece of firewood’

ŋa-kʊmmʊk/ɲa-ʊmmʊk, ŋaŋa-kʊmmʊk/ɲaɲa-ʊmmʊk ‘small pot’
< **kʊmmʊk/ʊmmʊk** ‘pot’

The following case has the long prefix in the singular (**ŋaŋa** + **ŋɛntəra** > **ŋaŋ-ɛntəra**) and the short prefix in the plural:

ŋaŋ-ɛntəra/ɲa-ɲɛntəra ‘k.o. drum (small size)’
< **ŋɛntəra/ɲɛntəra ‘**k.o. drum’

When **ŋa**- or **ŋaŋa**- is prefixed to **ʊkʊl** ‘child’, **k** geminates:

ŋa-kkʊl/ɲa-ɲʊkʊl, ŋaŋa-kkʊl/ɲaɲa-ɲʊkʊl ‘baby, small child (up to about four years old)’
< **ʊkʊl/ɲʊkʊl** ‘child’)

The diminutive **ŋaɽəkaṭṭak/ɲaɽəkaṭṭak** ‘small calabash for sauce’ is derived from **caṭṭak** ‘k.o. calabash’ (*__kaṭṭak__ does not exist on its own). Initial **ŋa/ɲa** is found in several other nouns referring to small items but those cases lack underived counterparts. Examples can be found under in section 4.3.5 under the noun class pair **ŋ-/ɲ-**.

4.5.2. Complex nouns in the **ṭ**-class

The complex nouns in the **ṭ**-class listed below are abstractions related to nouns that refer to people. They are different from earlier mentioned cases in the **ṭ** class that relate to nouns denoting people as they contain additional formatives: **a** (first two cases), probably from the copula ‘be’ (C-**á**), and **ɔ** (last case), probably from the connexive element C-**ɔ** ‘of’. Notably, *__kʊɽît__ is not attested as a noun by itself, but shares its root with **pʊɽît/ʊɽît.**

ṭ.a-ɪɽé ‘style of an adolescent girl’ < **ɪɽé** ‘adolescent girl’
ṭ.a-k.ʊɽît ‘style of a young man’ < **p.ʊɽît/ʊɽît** ‘young man’
ṭ.ɔ-p.ít ‘master and servant (kind of relationship)’ < **p.ít** ‘master, servant’

The nouns **ṭaɪɽé** and the earlier mentioned **ṭɪɽé** do not have exactly the same meaning. The former refers to the way or style in which a girl presents herself, the latter refers to behaviours typical for girls in general.

4.5.3. Complex nouns: reduplication

Several insects are denoted by fully reduplicated nouns. In most cases, the nouns are not attested in a non-reduplicated form. In the singular both parts take a singular noun class prefix, in the plural they both take a plural noun class prefix. Regular processes of assimilation take place across the reduplication boundary.

takkʊn-tákkʊn/nakkʊn-nákkʊn ‘mosquito’
pɪɽɪmam-píɽɪman/ɪɽɪman-íɽɪman ‘spider, spiderweb, spiderrag’

kʊɽʊməl-kkúɽʊməl[39]**/ʊɽʊməl-úɽʊməl** ‘snail’
kərí-kárî/ərí-árî ‘large wasp-like insect’
ʈakkəɽʊʈ-ʈákkəɽʊk/lakkəɽʊl-lákkəɽʊk ‘butterfly’
kaʈʊk-káʈʊk/aʈʊk-áʈʊk ‘grasshopper (sp.)’ (< **kaʈúk** ‘spear’)
carɪɲ-carĭŋ/marɪm-marĭŋ ‘millipede’
cərəmaɲ-cárəman/mərəmam-márəman ‘maggot (sp.)’
pɪp-pɪt (no plural) ‘k.o. insect’
ʈʊra-ʈúra/lʊra-lúra ‘k.o. insect’
pɛrém-pérên/ɛrén-érên ‘k.o. insect’

Some trees and their seeds or fruits involve reduplication, as well as an edible plant:

pɪam-pɪan/kɪaŋ-kɪan ‘tree (sp.)’
cɪaɲ-cɪaŋ/mɪam-mɪan ‘seed of *pɪampɪan*-tree**,** necklace of seeds of *pɪampɪan*-tree’

pʊrú-púrû/kʊrú-kúrû ‘tree (sp.)’
cʊrú-cúrû/mʊrú-múrû ‘fruit of *pʊrʊpʊrʊ*-tree’

pərɪm-pərĭn/kərɪŋ-kərĭn ‘tree (sp.)’
cərɪɲ-cərĭn/mərɪm-mərĭn ‘fruit of *pərɪmpərɪn*-tree’
kərɪŋ-kərĭn/ərɪn-ərĭn ‘bell made of seeds of the *cərɲcərɪn*-fruit’

kwɔʈí-kwɔ́ʈî/ɔʈí-ɔ́ʈî ‘plant (sp., edible)’

The words for ‘lyre’ and ‘twilight’ also involve reduplication. They suggest sound symbolic value, as does the word for ‘light rain’, which contains a partial reduplication.

pərém-párên/ərén-árên ‘lyre’ (traditional instrument)
kɪr-əkkɪr ‘twilight’
pɪcɪ-cî ‘light rain’

[39] In this word, there is no lenition of **k** after **l**, nor does there seem to be an inserted schwa. Hence the spelling with <**lkk**>.

The following nouns are probably related to each other through partial reduplication, though they have different tone patterns:

ŋaɽa/ɲaɽa	'gum arabic'
ŋaɽá-ɽâ/ɲaɽá-ɽâ	'rheum (in the eye, after sleep)'

4.6. Nouns derived from other word categories.

4.6.1. Verb-to-noun derivation

Except for a small set of defective verbs, all verbs allow for nominalization. Deverbal nominalizations are formed in the **ʈ̪**-class. They have a L*.LH tone pattern, irrespective of the tones of the verb stem.

ʈ̪ʊnǩ	'to build, building'	< **ʊnɔ**	'build'
ʈ̪ɔrɛkǩ	'to work, working'	< **ɔrɛ́kɔ**	'work'
ʈ̪ɔɽəkǩ	'to eat, eating'	< **ɔɽəkɔ̂**	'eat'

Verbal nouns do not have a singular/plural opposition: they allow, if necessary, for both singular and plural reference:

ʈ̪ɛnnɛkkɛttă 'to be tested, being tested, test(s) (< **ɛnnɛkkɛtta** 'be tested')

ʈ̪ɛnnɛkkɛtta ʈ̪ullukkû 'one test'
ʈ̪ɛnnɛkkɛtta ʈ̪ɛɽá 'two tests'

Verbal nouns have characteristics of both nouns and verbs. They are nouns because they can function as arguments in a clause. Their modifiers agree with them, and so do verbs to which they function as the subject. Some examples:

ʈ̪-ɔŋwɔ	**ʈ̪-ɔ́-píɲɲít**	**ʈ̪-ɔccíkákɔʈ̪.ɛ**	**ɲ-cɪʈ̪.ʈ̪án**
NOM-sing	C-of-singer	C-be_heard:COMPL	with-far

the singing of the singer is heard from far

n̪-ɪkkɔ	**cɪk**	**kárən̪t̪úm**	**n̪-ɔpərɔ́t**	**ana**	**n̪-n̪-ɔ́kɪn̪ak**
NOM-sit	VREF	Khartoum	C-good	and	PRO-C-bad

staying in Khartoum is good and bad

Verbal nouns are verb-like because they can take a direct object:

n̪-ɪɔt	**âkúccį́**	**tɔ́rrû**
NOM-find	money	Lumun_country

earning (lit.: finding) money in Lumun country (fr. written essay)

n̪-ʊpɔt̪ɔ	**ɲúkʊl**
NOM-take_care_of	children

taking care of the children

Other nouns do not take direct objects; rather they need the connexive element C-**ɔ** 'of'. Nominalized verbs allow not only for a direct object construction, but also for a modifying construction with the connexive, as in the second example below:

n̪-ɔkkwɔt	**pá-p-əɽɛk**	**n̪-akə́nn-ɔká**	**nʊn̪ʊk**
NOM-kill	thing-C-some	C-NEG-be:DEPINCOMPL	for_no_reason

killing an animal will not be for nothing

n̪-ɔkkwɔt	**n̪-ɔ́-pa-p-əɽɛk**	**n̪-akə́nn-ɔká**	**nʊn̪ʊk**
NOM-kill	C-of-thing-C-some	C-NEG-be:DEPINCOMPL	for_no_reason

the killing of an animal will not be for nothing

Verbal nouns can be modified by an adverb:

n̪-ʊkkwɔ	**ɪkkín̪ɛn̪t̪ak**	**n̪-ɔpərɔ̂t**
NOM-dance	badly	C-good

dancing seriously is good

4.6.2. Other nouns and verbs sharing the same root or stem

There are no other productive ways to derive a noun from a verb or vice versa. Apart from the verbal nouns, instances of nouns and verbs sharing the same root or stem are few. The attested cases are listed

below. ‘Swelling on the skin’ is probably based on the Completive verb form, since it has its final **t** and the Completive tone pattern.

ɔŋáɛ̃	‘urinate’
ŋaɛ́/ɲaɛ́	‘urine’
ɔpɔ́rɛ	‘have diarrhea’
ŋɪpərɪk/ɲɪpərɪk	‘diarrhea’
ɔrə́ṯa	‘begin to have fruits’
cɔrəṯ̂t/mɔrəṯ̂t	‘swelling on the skin’
ɪpɔ	‘obtain, marry’
ṯɪpa/lɪpa	‘marriage’

4.6.3. Nouns derived from adjectives

The same process that derives verbal nouns from verbs (see 4.6.1) derives nouns from adjectives. Examples:

ṯərǰk	‘being big’	< C-**ərî̧k** ‘big’
ṯukwǰt	‘length, depth’	< C-**ûkwî̧t** ‘long, deep’
ṯɔpərɔ̌t	‘goodness’	< C-**ɔpərɔ̂t** ‘good’
ṯɔkɪṯăk	‘badness’	< C-**ɔkíṯak** ‘bad’
ṯɔppɔ̌t	‘being plenty’	< C-**ɔppɔ́t** ‘many’
ṯɔɲǰ	‘blackness’	< C-**ɔɲî̧** ‘black’
ṯɔʈĕ	‘redness, ripeness’	< C-**ɔʈĕ** ‘red, ripe’
ṯɔṯɛrĕt	‘being spotted’	< C-**ɔṯɛrĕt** ‘spotted’
ṯǰmmǰn	‘heavyness’	< C-**ǰmmǰn** ‘heavy’
ṯɔrrŏ	‘bluntness’	< C-**ɔrró** ‘blunt’
ṯɪppă	‘heat’	< C-**íppá** ‘hot’
ṯɪrrŏk	‘cold, coolness’	< C-**írrók** ‘cold’
ṯɔparǐ	‘being female’	< C-**ɔparí** ‘female’

The following noun has a different tone pattern:

ṯɔcʊra	‘being male’	< C-**ɔcʊra**

An example with a nominalized adjective:

n̪-ɔpərɔt	**én-n̪-í**	**í-n̪-á**	**ŋ́-kw-ɔ́kkínn̪-ín**	**n̪-íttîk**
NOM-good	DEM-C-NEARSP	RES-C-COP	2-C-do_for:COMPL-O1	C-big

this loyalty that you showed me is big (lit.: this goodness that you did for me …) (Ruth 3:10)

Adjectives which contain the copula C-**á** 'be', such as C-**acɔ́kɔccɔkɔt** 'fast' and C-**arʊrɔ̌ŋ** 'colour of snake (sp.)', do not allow for nominalization through addition of the **n̪-** prefix and a tone pattern.

4.6.4. Adverbs functioning as nouns

An example of an adverb that can function as a noun is **cɔkɔccɔkɔt** 'quickly':

cɔkɔc-cɔkɔt	**ɛŋ-c-ɪ**	**c-ɔkín̪ak**
quickly-REDUP	DEM-C-NEARSP	C-bad

this rushing is bad

4.7. Place names and other locative nouns

Indigenous proper place names consist of two formatives: a prepositional proclitic and a nominal element. Most often the prepositional formative is **tɔ-** 'up on, up at' or **n̪ɔ-** 'at'. The nominal element is in several cases (the remnant of) a noun attested on its own. Some examples follow here, some more are listed in 16.3.5, including some examples with other prepositional formatives.

tɔɽəman̪ɔ̂n
tɔʊmâŋ
tɔpɪn̪tɔŋ
n̪aɽʊ
n̪ɔɽî (< **n̪ɔ-** + **ŋəɽɨ̌** lit.: 'At the water')
n̪ɔttʊé (< **n̪ɔ-** + **tʊé** lit. 'At the river')
n̪ɔmantît (< **n̪ɔ-** + **manɪ̀t** lit. 'At the *mantɪt*-snakes')

The names for the homelands of the Lumun and neighbouring peoples are (historically) made up of **tɔ**- 'up on, up at' or **t̪ɔ**- 'at' and the (plural or singular) name of the people. In the case of Lumun, Tocho, Acheron and Torona it is likely that the plurals have served as formative and that **ɔ** and **a**, respectively **ɔ** and **ə**, have coalesced to **ɔ**. The plural name of the people has also served as formative for the name of the Moro homeland and for places where "Arab" Sudanese are living, but for the Tira and Otoro areas the singular (the name for one person) is involved. In the case of Dagik, Katcha and Krongo it is difficult to say whether **pakkí** or **ɲakkí** has served as formative, because either way, the noun class prefix has been deleted.

person/people	*homeland*
parrû/arrû 'Lumun'	**tɔrrû**
pappɔ́/appɔ́ 'Tocho'	**t̪ɔppɔ́**
pəɽɛmɛ̂/əɽɛmɛ̂ 'Acheron'	**tɔɽɛmɛ̂**
paɽɔnɔ/aɽɔnɔ 'Torona'	**tɔɽɔnɔ̂**
pəmpərən/ləmpərən 'Moro'	**tɔləmpə́rən**
cʊt̪̪û/mʊt̪̪û 'Arab Sudanese'	**t̪ɔmʊt̪̪û**
pəɽá/məɽá 'Tira Lumun and Tira'	**tɔpəɽá**
ut̪̪uɽu/lut̪̪uɽu 'Otoro'	**tɔut̪̪úɽu**
pakkí/ɲakkí 'Nuba peoples south and south-west of the Lumun, across the plain, a.o. Dagik, Katcha and Krongo'	**tɔkkí**

Place names can function as subject (or object) in a clause. The prepositional formative no longer functions as a preposition but has become part of the place name, as is shown by the concord **t̪**- on the verb in the next example:

t̪ɔmantít	**t̪**-ɔnʊ	**mantɪt**	**m-ɔppɔ́t**
T̪ɔmantɪt	C-have	snake(sp.)	C-many

T̪ɔmantɪt has many *cantɪt*-snakes

Place names, including foreign place names such as **karət̪̪ôm** 'Khartoum' or **kat̪̪úkəlɪ** 'Kadugli', are not used in combination with one of the prepositional proclitics **tɔ**-, **t̪ɔ**-, **nɔ**- or **ɪ**-. The absence of these proclitics from foreign place names also points at prepositional

formatives in indigenous place names no longer being perceived as prepositions. Instead, the whole name functions as a locative noun:

m-p-a.ɪk	**p-a.ɛ́ɔ́**	**n̪ɔmantît/**	**karən̪n̪ôm**
1-C-be:PR	C-go:INCOMPL	N̪ɔmantît /	Khartoum

I am going to N̪ɔmantît / to Khartoum

For comparison, a sentence follows here with a building, **man mɔ́kapɪk** ‘church’ (lit. house of God), instead of a place name. A prepositional proclitic must be used here:

m-p-a.ɪk	**p-a.ɛ́ɔ́**	**n̪ɔ-man**	**m-ɔ́-kapɪk**
1-C-be:PR	C-go:INCOMPL	at-house	C-of-God

I am going to the church

In the case of the **tɔn̪ɪɣ̂t** ‘sky, heaven’ both **t-** and **n̪-** concord are acceptable. **n̪ɪɣ̂t** ‘sky, heaven’ exists as a noun by itself. Apparently **tɔn̪ɪɣ̂t** ‘sky, heaven’ can be interpretated as a place name (a locative noun), but also as a prepositional proclitic and noun, in which case agreement goes with the noun:

tɔn̪ɪɣɔ́t	**t-íntat**	**cɪk**	**n-n̪úllɛɣak**
sky	C-disappear:INCOMPL	VREF	with-lightening

the sky will disappear with lightening

tɔ-n̪ɪɣɔ́t	**n̪-íntat**	**cɪk**	**n-n̪úllɛɣak**
up_on-sky	C-disappear:INCOMPL	VREF	with-lightening

the sky will disappear with lightening

n̪ɔn̪əpʊ́t ‘(at the) place outside for use as toilet’ (lit.: at outside) is commonly used as a locative noun:

n̪ɔn̪əpʊt	**n̪-a-ík**	**karə-n̪a**
at_place_used_as_toilet	C-be-VREF	where-QW

where is the place for use as a toilet?

An unusual case of a prepositional proclitic (**tɔ-**) and a noun (**cá/má** ‘head’) is **tɔcá/tɔmá** ‘face’. On the one hand, the clitic has become a

part of these nouns because their concord is **t**, on the other hand pluralization involves a change of **cá** to **má**:

tɔma	**t-ɔ́-ʊl**
faces	C-of-people

the faces of people

Another unusual case is **ŋkɔʈâ** '(in the) night'. The word can function as a noun, as in the following example:

ŋkɔʈá	**ŋ-ɪʈɪmáṭ̈.ɛ**
night	C-become_dark:COMP

the night is dark

ŋkɔʈá must have developed from the prepositional proclitic **ń**- 'with, by, (away) from' and a synchronically not attested noun ***kɔʈá**, because nasal + stop clusters in initial position are not attested in Lumun nouns.

A loan word that functions as a locative noun is **kɛccôk** 'market' (< Sudanese Arabic *suug*). It is generally used as a locative noun. However, in some contexts, proclitic **ɪ**- 'in' can be used alternatively:

lɔn	**l-ɛn**	**l-ɔkkəttá.ṭ̈ɛ**	**kɛccôk** /	**ɪ-kɛccôk**
words	C-DEM	C-be_done:COMPL	market	in-market

those things happened in the market

4.8. Descriptive constructions expressing nominal concepts

4.8.1. Agent nouns

Lumun has no way to derive agentive nouns from verbs. Instead, the language makes use of descriptions: 'person' (or 'child') and a relative construction, involving the restrictor **í**-, the concord that agrees with the noun, and a verb (noun **ɪ**-C-verb). In the examples below, the concord **w** of vowel-initial nouns is deleted between vowels.

pʊl ɪ-p-âŋkɛnɛ/ʊl ɪ-âŋkɛnɛ 'teacher' (person who shows) < **ɔŋkənɛ**
pʊl ɪ-p-arékɔ/ʊl ɪ-arékɔ 'worker' (person who works) < **ɔrékɔ**
ʊkʊl ɪ-úʈɛ/ɲʊkʊl ɪ-ɲ-úʈɛ 'herds boy' (child that grazes the cows or goats) < **ʊʈɛ**

Other agentive expressions consist of 'person' (or 'child') followed by the connexive + noun, or the connexive, a prepositional proclitic and a noun (noun C-**ɔ**-noun, or: noun C-**ɔ**-PPC-noun). Examples:

pʊl p-ɔ-t̪ɔʈak/ʊl w-ɔ-t̪ɔʈak 'warrior' (lit. 'person of war')
pʊl p-ɔ-t̪ɪpa/ʊl w-ɔ-t̪ɪpa 'negatioter of marriage' (lit. 'person of marriage')
pʊl p-ɔ-t̪ʊʈan/ʊl w-ɔ-t̪ʊʈan 'thief' (lit. 'person of theft')
pʊl p-ɔ-kəmɛl/ʊl w-ɔ-kəmɛl 'person who calls for a hunting party, performs the rituals and leads it' (lit. 'person of the hunting party')
pʊl p-ɔ-rɪ-ŋkwêl/ʊl w-ɔ-rɪ-ŋkwêl[40] 'person who joins in a hunting party' (lit. 'person of in the hunting party')
< **pʊl** + **p-ɔ** + **ɪ** + **kəmɛl/ʊl** + **w-ɔ** + **ɪ** + **kəmɛl**
pʊl p-ɔ-rį̵-i̵mɔ̂n/ʊl w-ɔ-rį̵-i̵mɔ̂n[41] 'person who is hunting porcupines' (lit.: person of in porcupines)
< **pʊl** + **p-ɔ** + **ɪ** + **i̵mɔ̂n/ʊl** + **w-ɔ** + **ɪ** + **i̵mɔ̂n**

4.8.2. Other examples of descriptive constructions

The same descriptive constructions (noun **ɪ**-C-verb, noun C-**ɔ**-noun and noun C-**ɔ**-PREP-noun), and in particular those involving the connexive, are used for a variety of other nominal concepts. A descriptive construction involving a relative construction can also contain an adjective instead of a verb (noun **ɪ**-C-adj). Modification of a noun through direct juxtaposition is not possible except with nominalized verbs that can take an object (see 4.6.1).

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[40] The allomorph **rɪ**- of prepositional proclitic **ɪ**- 'in' is used here (see 16.2). **kəmɛl** takes on its contracted shape after **ɪ**- 'in' (see 4.4) but not after connexive C-**ɔ**.

[41] In case of direct adjacency of **ɪ**- (here: **rɪ**-, see 16.2) 'in' to a +ATR vowel, the resulting vowel will be articulated as +ATR.

Some further examples of descriptive constructions follow here.

Examples of 'noun C-**ɔ**-noun':

Plural formation always concerns not only the class prefix of the first noun, but also the agreement marker of the connexive or the relative. If the second noun involved is not already a plural, plural formation will often also involve pluralization of the second noun, as in the first example below.

kwɔɽɛn kɔ-wɛ́k/ɔɽɛn wɔ-tacɔ́k 'shin bone' (lit.: piece of firewood of the leg)

In a few cases, phonological changes have taken place.

pa-pɔ-kɪra/aɽəp-ɔ-kɪra 'leopard' (lit.: thing of the trees)
< **papʊ** + **pɔ** + **kɪra/aɽəpʊ** + **wɔ** + **kɪra**

pa-pɔ-rua/aɽəp-ɔ-rua 'livestock animal' (lit.: thing of hair)
< **papʊ** + **pɔ** + **tua/aɽəpʊ** + **wɔ** + **tua**

ŋʊcʊl-ɔ-ṯṯô/ɲʊcʊl-ɔ-ṯṯô 'salt/amounts of salt' (lit.: sauce of the Arabs)
< **ŋʊcʊl** + **ŋɔ** + **mʊṯṯô/ɲʊcʊl** + **ɲɔ** + **mʊṯṯô**

cį̨l-ɔ-ṯṯô/mį̨l-ɔ-ṯṯô 'grain of maize/maize' (lit.: sorghum of the Arabs)
< **cį̂l** + **cɔ** + **mʊṯṯô**

Examples of noun C-**ɔ**-PPC-noun:

papʊ p-ɔ-rɪ-kɪra/aɽəpʊ w-ɔ-rɪ-kɪra[42] 'wild animal' (lit.: thing of among the trees)
< **papʊ** + **pɔ** + **ɪ** + **kɪra/aɽəpʊ** + **wɔ** + **ɪ** + **kɪra**

caʊn c-ɔ́-ṯɔ́-kúɽûk/maʊn m-ɔ́-ṯɔ́-úɽûk 'little finger' (lit.: finger of at the corner)

[42] The allomorph **rɪ-** of prepositional proclitic **ɪ-** 'in' is used here (see 16.2).

kuppəʈuŋ k-ɔ-nɔ-əʈĭ/uppəʈuŋ w-ɔ-nɔ-əʈĭ ‘boat’ (lit.: bedplank of on water)

Examples of noun I-C-adjective:

ŋuʈú ɪ-ɔʈər/ɲuʈú ɪ-ɲ-ɔʈər ‘sour asida/portions of sour asida’ (lit.: asida which is sour)

caʊn ɪ-c-ərịk/maʊn ɪ-m-ərịk ‘thumb’, ‘middle finger’ (lit.: finger which is big)

The nouns for ‘woman’ and ‘man’ have this pattern as well. The adjectives themselves consist of a connexive and a nominal element (see also 10.2.4):

pʊl ɪ-p-ɔ́.parí/ʊl ɪ-á.arí ‘woman’ (lit.: person who is female)
pʊl ɪ-p-ɔ́.cʊra/ʊl ɪ-ɔ́.mʊra ‘man/men’ (lit.: person who is male)

Example of ‘noun I-C-verb’:

tɔk ɪ-r-apáŋka/nɔk ɪ-n-apáŋka ‘sea’ (lit.: waterplace which makes waves)

Relative constructions may also involve a passive verb, often in combination with an ‘absolute preposition’ (see chapter 16.6):

kwɔk ɪ-k-allóra ŋŋɪn/wɔk ɪ-allóra ŋŋɪn ‘running shoe’ (lit.: shoe which is run with)

Some comparable examples can be found in chapter 14.4 on passive derivation.

Noun complexes, though they may have fused together, do not function as single units, as could already be seen from their plural formation: not just their (initial) noun class marker varies for singular and plural, but also the concords involved, and in some cases the class marker of a noun that is part of the modifying element.

Tonally, noun complexes do not function as single units either. If they did, a complex such as **kuppəɽuŋ kɔnɔəɽ̌** 'boat' would behave as a noun with a rising tone and not receive a high tone from a prepositional proclitic (see 16.1). This, however, is not the case. Upon attachment of a prepositional proclitic, a high tone appears on **kuppəɽuŋ,** just as it would in the absence of **kɔnɔəɽ̌**:

ɪ-kuppə́ɽuŋ kɔnɔəɽ̌ 'in the boat'

ŋʊcʊl-ɔ-t̪t̪ô/ɲʊcʊl-ɔ-t̪t̪ô 'salt/amounts of salt' and **cį̣lɔt̪t̪ô/mį̣lɔtt̪ô** 'grain of maize/maize', however, seem to function as one word, having lost the concord before the connexive, and in the case of **cį̣lɔt̪t̪ô/mį̣lɔtt̪ô** also the high tone on the first mora (< **cį̂l/mį̂l**).

4.9. Loans

Loans are incorporated into the noun class system according to their initial sound. Arabic nouns are often borrowed together with the article **al-**; in such cases the initial sound is a vowel, and the noun with Arabic article goes into the ∅/**n** class pair. Borrowed nouns sometimes have a final consonant that is not found in final position in genuinely Lumun items (**p**, **t̪** or **m**), and some of them have an otherwise (virtually) unattested tone pattern with an initial H-tone.

It is in general uncertain if an Arabic loan is borrowed directly from Arabic or rather through another Nuba language. Moreover, the Arabic spoken in the region, whether as first or as second language, is not of one variety. In the town of Kadugli, some 40 miles west-west-north of the Lumun area, Manfredi (2013) discerns four varieties of Arabic: the prestigious and influential urban "koiné": the variety spoken in Khartoum and other cities in northern and central Sudan; Baggara Arabic: the variety spoken by Arab cattle herders in the 'Baggara belt', an area which runs from Lake Chad through South Kordofan to the Blue Nile; Emerging Kadugli Arabic: a mother tongue variety spoken by non-Arabs born in Kadugli; and Non-native Arabic: varieties of Arabic spoken by bilingual or trilingual non-Arabs in Kadugli. When citing Arabic items, I use forms in the urban "koiné" of Sudanese Arabic. They are just presented in order to show the

relationship between the Lumun items and the Arabic items; no claim is made about the way in which an item may have entered the Lumun language, i.e. which variety of Arabic has been involved or through which other Nuba-language an Arabic item may have been borrowed.

In some cases, it is obvious that the Lumun item is not a direct loan from Sudanese Arabic, because sound changes are involved that are not expected on grounds of the Lumun phonological system. One such item is **aṭ̪ám** 'book' from Sudanese Arabic *kitaab*. A clear indication that **aṭ̪ám** is not a direct loan is the loss of initial **k.** Such a loss is not expected in Lumun, which has many **k**-initial nouns. Another indication is the change of final **b** to **m**. Lumun does not have final bilabial obstruents, but nor does it have **m** in that position. A good candidate for being the source of this item is Moro, which has **áḍ̪ámá/náḍ̪ámá** 'book/books' (Gibbard, Rohde & Rose 2009, p. 112), with variant **áḍ̪ám/náḍ̪ám**. In Moro, loss of initial **k** or **g** is common in this noun class. Moreover, Arabic **b** often converts to **m** in Moro.[43]

Another item for which it is clear that it was not directly borrowed from Sudanese Arabic is **kɛccôk** 'market', from Sudanese Arabic (*as-*)*suug*. **k**(**ɛ**) is not a Lumun locative marker, but must have been borrowed together with the Arabic loan from another Nuba Mountain language. Candidates include Tira, which has a general locative preposition **k**- (Schadeberg 2009, p. 52); Otoro, which has a general locative preposition **gi** (**k**- before a vowel) (Schadeberg 2009, p. 214-215); Ebang, which has a general locative preposition **gi** (optionally **k**- before a vowel) (Schadeberg 2013, p. 143); or Krongo, which has a locative particle **kí**- before non-animate nouns (Reh 1985, p. 146-147).

Loans with the Arabic article **al**- that are assigned to the singular ∅ class have plurals in the **n**-class, unless they remain unpaired. Apart from the plural ∅ class, the **n**-class seems to be the plural class with the least semantic associations, for which reason it is suitable as a

[43] Personal communication by Sharon Rose (March 2017).

plural for a diversity of loanwords. My database contains some fifty nouns in which an Arabic word can be recognized. Some examples follow here. The Sudanese Arabic equivalents are cited from Tamis & Persson (2011), unless mentioned otherwise in a footnote. In one case (*darangal* 'bedstead') the item is Baggara Arabic. The examples show that Arabic vowel length is borrowed into Lumun as a falling tone (realized high in non-prepausal position).

aləpaccôṯ/naləpaccôṯ	'jackal/-s'	< *al-baᶜshoob*[44]
aləppɛ́ra/naləppɛ́ra	'flag/-s'	< *al-beerag*
alakkîn/nalakkîn	'clinic, hospital/-s'	< *al-ḥakiim*[45]
alawîr/nalawîr	'tree (sp.)/-s'	< *al-ᶜawiir*
alámpa/nalámpa	'lamp/-s'	< *al-lamba*
aləkkúppa/naləkkúppa	'basket/-s'	< *al-guffa*
alápıríṯ/naláp ıríṯ	'mat/-s'	< *al-birish*
aɣaŋkál/naɣaŋkál	'rope bed/-s'	< *darangal*[46]

Examples of unpaired nouns in the ∅ class:

aləppún	'coffee'	< *al-bunn*
accáı	'tea'	< *ash-shaay*
appəláppəl	'pepper'	< *al-filfil*

Arabic nouns with collective semantics tend to be borrowed together with the article into the plural ∅ class with a counterpart denoting a single unit in the **k**-class (the examples were given earlier):

kaləppaṯ̈óra/aləppaṯ̈óra	'tomato/-es'	< *al-banaḍoora*
kaṯ̈ṯəpâ/aṯ̈ṯəpâ	'piece of tobacco/tobacco'	< *at-tumbaak*
kakúccį/akúccį	'coin/money'	< *al-guruush*

[44] Hillelson (1930) mentions *baᶜshoob*, Hillelson and Tamis & Persson (2011) both have *baᶜshoom*.

[45] The item is translated by Hillelson as 'physician', by Tamis & Persson as 'doctor's assistant'.

[46] Hillelson gives not only the Sudanese Arabic word *angareeb*, but also the Baggara Arabic item *darangal* 'bedstead (kind of matting which serves as mattress)', which is clearly much closer to the Lumun item.

Nouns with an initial consonant that coincides with a noun class prefix are sometimes borrowed without the article. If the initial consonant coincides with a singular noun class prefix, a plural is often formed that fits in with a class pair and the other way round.

paṯṯaníɛ/aṯṯaníɛ	'blanket/-s'	< *baṭṭaaniyya*
capôn/mapôn	'soap/bars of soap'	< *ṣaabuun*
capára/mapára	'k.o. whistle/-s'	< *ṣuffaara*
ṯarra/larra	'scarf/-s'	< *ṭarḥa*
kəṯṯǎm/əṯṯǎm	'fish trap/-s'	< *kajjaama* 'steel trap'
kapərît/apərît	'match/-es'	< *kibriit*
côṯ/môṯ	'banana/-s'	< *mooz*
cɔ́ŋka/mɔ́ŋka	'mango/-s'	< *manga*

If the initial consonant coincides with a noun class prefix (singular or plural), this sometimes results in an unpaired noun that can have both singular and plural reference:

cıcára	'cigaret(s)'	< *sijaara*
ṯémʊr	'date(s)'	< *tamur*
móccʊṯ	'comb(s)'	< *mushuṭ*
méɲcɛl	'sickel(s)'	< *munjal*

The banana tree, mango tree and date palm cannot be denoted by changing the noun class. Instead, a description is used:

pıra pɔṯémʊr/kıra kɔṯémʊr 'date palm' ('tree of dates')

4.10. Kinship terms and personal names

4.10.1. The persona prefix[47]

Kinship terms and personal names have the persona prefix **ɔ́-** (which is also found in personal pronouns)**.** Two further nouns with the persona prefix are **ɔpəʈ̪ʈ̪í** 'person' and **ɔpəllǐn** 'one of a group'.

Tone

The prefix brings about the same tonal changes to the noun to which it is attached as a preceding word with a final high, rising or floating high tone. Since the prefix cannot receive a high tone itself unless through tone bridge, it can either be represented as high or rising. As explained in chapter 3.8, I represent a case like this as high.

A few examples follow here in order to show that the tonal effects are fully in line with the rule of Tone Shift. This includes the (non-)realization of a high (or falling) tone on the following noun, which takes place in precisely the same way as described in the chapter 3 on Tone.

ɔ-ʈ̪ɔ̂n	'Mouth'	<	**ɔ́- ʈ̪ɔn**	'mouth'
ɔ-cə́kkɔrɔk	'Hunchback'	<	**ɔ́- cəkkɔrɔk**	'hunch'
ɔ-parí	'wife (as kinshipterm)'	<	**ɔ́- parí**	'wife'
ɔ-ʊ́mpərʊ́ŋ	'Calf'	<	**ɔ́- ŋʊmpərʊ́ŋ**	'calf'
ɔ-ʈ̪akəɽʊ́k	'Chicken'	<	**ɔ́- ʈ̪akəɽʊ́k**	'chicken'
ɔ-ʊmaʈ̪ɔ̂n	'Elephant'	<	**ɔ́- ʊmaʈ̪ɔ̂n**	'elephant'
ɔ-cɔɽɔ̌ŋ	'Mountain'	<	**ɔ́- cɔɽɔ̌ŋ**	'mountain'

The exceptions to Tone sub-rule 2.3 apply here as well. Thus there is a falling contour (at least at surface level) on the short initial vowel of **cɪtín** 'bird (sp.)', and **paɽák** 'fly' gets an initial high tone without contour formation.

[47] The persona prefix is discussed in more detail in Smits (2012).

ɔ-cîtín	'*Cɪtɪn*-bird'	< **ɔ́- cɪtín**	'bird (sp.)'
ɔ-páɽák	'Fly'	< **ɔ́- paɽák**	'fly'

The vocative kinship term/personal names **lɔttí** 'second born child, which is a boy' and **lɔccɔ́** 'fifth born child, which is a boy', also get a high tone on their first vowel without contour formation. In these two cases the phenomenon cannot be observed in other contexts, since **lɔttí** and **lɔccɔ́**, without the prefix, are vocatives, and can, within a tonal domain not be preceded by other elements.

ɔ-lɔ́ttí 'second born child, which is a boy' (< ɔ́- lɔttí)
ɔ-lɔ́ccɔ́ 'fifth born child, which is a boy' (< ɔ́- lɔccɔ́)

The vowel has itself a –ATR quality but may be realized +ATR or somewhat towards +ATR when attached to a +ATR noun.

In case of assimilation to an adjacent vowel, the vowels coalesce, i.e. the resulting (underlyingly) long vowel becomes short, and the (underlying) tone sequence is realized as high:

ámra 'Red' (< âmra < a-âmra < **ɔ́- amra**) (< Sud. Arabic *amra*)
áməntácɪ 'Aməntacɪ' (< â-məntácɪ < a-âməntácɪ < **ɔ́- amәntácɪ**)

Shortening seems to be less rigorous when there is elision of **ŋ** between assimilating vowels. In the following case an initial low-high sequence may be pronounced, but not necessarily so:

a-á̰tərəpɛ̂ / á̰tərəpɛ̂ 'Rabbit' (< a-â̰tərəpɛ̂ < **ɔ́- ŋa̰tərəpɛ̂**)

Segmental effects: vowel coalescence, consonant gemination

The segmental part of the prefix is coalesced before **ɛ** and **a**: **ɔ** + **ɛ** > **ɛ**, **ɔ** + **a** > **a**. Before **ɔ** it may be coalesced as well, but some length may also be audible. There is no coalescence before the other vowels (**i̧**, **ɪ**, **u**, **ʊ**, **ə**). Cases of attachment of the prefix to a vowel-initial noun generally concern nouns that are loans. Some examples with adjacent vowels were already given above. Two further examples:

ɛlɪmélɪk ‘Elimelek’ (< **ɔ́- ɛlɪmélɪk**)
ɔɪlîn ‘Heleen’ (< **ɔ́- ɪlîn**)

In a few cases, I assume that attachment of the prefix causes gemination of the initial consonant of the noun. This is the case in the word for ‘my father’ (**ŋ** would otherwise be elided between vowels). **ŋ** is, however, not realized long, so that I write is with single **ŋ**:

ɔ́- + **ŋappâ** > **ɔŋappâ** ‘my father’

This also happens with borrowed names which have an initial voiceless obstruent. The following names are the names of story characters. They are not originally Lumun and have no meaning in Lumun.

ɔkkɔ́llɛ ‘Kɔllɛ’ (name of a story figure, < **ɔ́- kɔllɛ**)
ɔppénná ‘Pɛnna’ (name of a story figure, < **ɔ́- pɛnná**)

Prepositional proclitics preceding a noun with the persona prefix ɔ́-

The persona prefix **ɔ́**- becomes **a-** when preceded by one of the prepositions **ɪ**-, **nɔ**- or **tɔ**-. Compare the following examples with a common noun (**ɔʈɛn** ‘firewood’) and a noun with the persona prefix (**ɔpaŋ̂n** ‘siblings’):

ɪ-ɔʈɛ̂n ‘in/among the firewood’
ɪ-apaŋ̂n ‘among his/her siblings’

In the examples below, **ɔnnân** ‘(his/her) mother’, **ɔ̂k** ‘s/he’, **ɔpaŋ̂n** ‘siblings’ and **ɔlalô** ‘Lalʊ’ have the persona prefix **ɔ́**-. (For the paradigms of basic prepositions + personal pronouns, see 6.1.4).

m-p-ɔkəttɔ́.t	**ɪ-a-nnán**	**nɔ-kaʈ̪ór**
1-C-run_into:COMPL	in-PERS-mother	on-road

I ran into his/her mother on the road

m-p-ɔkəttɔ́.t	**ɪ-a-ák**	**nɔ-kaṯə́r**
1-C-run_into:COMPL	in-PERS-3	on-road

I ran into him/her on the road

k-kw-á.ṯṯɛ	**nɔ-kəmən**	**ána**	**n-a-paŋ-ɔ́n**	**ana**	**nɔ́-lịcɔ́k**
3-C-leave:INCOMPL	on-houses	and	on-PERS-sibling-PL	and	on-goats

s/he will leave the house and his/her siblings and the goats

k-kw-árrɔ́ṯ.ɛ	**t-a-lalô**
3-C-cross:COMPL	up_on-PERS-Lalʊ

s/he has climbed on Lalʊ (picture: Lalʊ is standing or sitting and the person has climbed onto Lalʊ's neck)

After **ṯɔ**- the persona prefix does not change to **a**, nor does it do so after the connexive marker C-**ɔ** 'of'. The prepositional proclitic **ń**- 'with, by, (away) from' cannot be combined with nouns with the persona prefix (see also chapter 16 on prepositional proclitics).

4.10.2. Kinship terms

In kinship terms, the noun class prefix of the noun to which the prefix is attached is often **p**- but not always. Nouns with the persona prefix do not occur in singular/plural pairs that differ from each other only as to the noun class prefix. Instead, they form plural through suffixation of a morpheme (-**ŋɔ̂n**) to the singular noun (see 4.10.3).

Nouns with the persona prefix have specific concords. With the exception of possessor pronouns and connexives, the concord of singular nouns with the persona prefix is **p**-, the concord of plural nouns with the persona prefix is **ṯ**-[48].

ɔ-ɪáɪá	**p-á.ík**	**p-ânṯán**
PERS-my_mother	C-be:PR	C-come:INCOMPL

my mother is coming

[48] See also Smits (2012).

ɔ-ɪáɪá-n	**t̪-á.ík**	**t̪-ânt̪án**
PERS-my_mother-PL	C-be:PR	C-come:INCOMPL

my mother and companions (also: my mother and father) are coming

Personal names also have the persona prefix **ɔ́-.** In fact, those personal names that denote whether a child is the first born, the second born, etc. (up to the fifth born) can be considered a type of kinship term. Other personal names are rather nicknames, or Arabic or English loans, but all have the personal prefix **ɔ́-.** The prefix is only absent when the name is used as a vocative, i.e. when the person is directly addressed.

All Lumun children receive a name that denotes the order in which they were born. The first born child is called **kakkâ** if it is a girl, and **kʊkkô** if it is a boy; the second born is called **nɛnnî** if it is a girl, and **lɔttí** if it is a boy, etc. The names of the first three children are more fixed than the names of the fourth and the fifth: there are alternatives here. With the sixth child the name-giving in principle starts again from the beginning, so that there may be two children called **kakkâ** or **kʊkkô**, etc. Most names are gender-specific, but some are used for both boys and girls. In the table below (after Smits 2012), both the vocative forms and the forms with the persona prefix are given.

Table 23 Birth names

boys		*girls*	
vocative	*with ɔ́-prefix*	*vocative*	*with ɔ́-prefix*
1. **kʊkkô**	**ɔkʊkkô**	1. **kakkâ**	**ɔkakkâ**
2. **lɔttí**	**ɔlɔ́ttí**	2. **nɛnnî**	**ɔnɛnnî**
3. **lalô**	**ɔlalô**	3. **cɛccê**	**ɔcɛccê**
4. **t̪ʊt̪̪tô**	**ɔt̪ʊt̪̪tô**	4. **ŋɔɽîn**	**ɔɽîn** (**ŋ** is deleted between vowels)
4. **lɛt̪̪tô**	**ɔlɛt̪̪tô**	4. **t̪ʊt̪̪tô**	**ɔt̪ʊt̪̪tô**
5. **lɔccɔ́**	**ɔlɔ́ccɔ́**	5. **kʊmâŋ**	**ɔkʊmâŋ**
5. **kʊmâŋ**	**ɔkʊmâŋ**		

Below, a list of kinship and relational terms with the persona prefix is provided. Except in the cases of 'father/paternal uncle (father's brother)' and 'mother/aunt (father's sister and mother's sister)', the terms are used for both people who stand in a certain relationship to each other, and in most cases male and female are not distinguished. For example, **ɔpəkí** denotes both grandparent (grandfather or grandmother) and grandchild (grandson or granddaughter). The terms for father and mother are inherently possessed by a first, second or third person, as is the term for 'mother's brother' (maternal uncle). In the forms for 'mother's brother' the 1SG, 2SG and 3SG possessor pronouns can be recognized. The other kinship terms are commonly used in combination with a possessor pronoun. This is the case even more so for their vocatives, for which reason a possessor ('my' or 'of X') is added in the table. The vocatives between parentheses are not commonly used.

Table 24 Kinship and relational terms

	ɔ́-prefix noun	*Vocative (with possessor C-**m** 'my', or C-ɔ-X 'of X')*
my father, my paternal uncle	**ɔŋappâ**	**ŋappâ**
my father, my paternal uncle (informal)	**ɔpáppa**	**páppa**
your father, your paternal uncle	**ɔt̪t̪é**	
(his, her) father, (his, her) paternal uncle	**ɔt̪t̪ân**	**t̪an pɔ**-X 'father of X'
my mother, my aunt	**ɔŋáɪa**	**ŋáɪa**
my mother, my aunt (informal)	**ɔcáca**	**ɪáɪa**
your mother, your aunt	**ɔnné**	
(his, her) mother, (his, her)	**ɔnnân**	**nan pɔ**-X

aunt		‘mother of X’
son, daughter	**ɔpɛí**	**pɛı pîn**
brother, sister, cousin	**ɔpáŋ**	**paŋ pîn, paŋkîn**
ancestor, descendant	**ɔpəkí**	**pəkı pîn**
grandparent, grandchild	**ápɔpɔ̂** (< Sud. Ar. *ḥabbooba* ‘grandmother’)	**apɔpɔ́ pın**
my maternal uncle, nephew, niece of a maternal uncle	**ɔréın**	**ɔréın**
your maternal uncle, nephew, niece of a maternal uncle	**ɔréaŋ**	
(his, her) maternal uncle, nephew, niece of a maternal uncle	**ɔrên, ɔréʊŋ, ɔrɔ̂ŋ**	**ɔrén pɔ**-X, **ɔréʊŋ pɔ**-X, **ɔrɔ́ŋ pɔ**-X ‘uncle of X’
husband	**ɔllê**	(**pəʧɛ pĭn**)
wife	**ɔparí**	(**parı pîn**)
co-wife	**ɔpʊʧʊkô̰n**	(**pʊʧʊkṵ́n pın**)
in-law (different generation)	**ɔpıt̪é**	**pıt̪ɛ pîn**
in-law (same generation)	**ɔʧî̱n**	**ɔʧí̱n pın**
master, servant	**ɔpít**	**pıt pîn**
friend	**ɔpʊrʊkɔ̂**	**pʊrʊkɔ́ pın**
my friend	**ɔkarrəkîn**	**karrəkîn**
friend	**ɔcâp, ɔcapí** (< Sud. Ar. *ṣaaḥib*)	**cápəcın, capí**

Personal names

The kinship terms conveying the order in which Lumun children are born, and which function also a personal names, were already presented in table 23. The persona prefix is further used in order to

derive (nick)names for people. Body parts and animal species such as certain birds serve as sources of name formation, but other kinds of nouns as well.

ɔcɔʈ̌ŋ	'the Mountain'	< **cɔʈ̌ŋ** 'mountain'
ɔkíɲcɛ	'the Nose'	< **kɪɲcɛ** 'nose'
ɔkəʈ̂n	'the Bold Patch'	< **kəʈ̂n** 'bold patch'
ɔcə́kkɔrɔk	'the Hunchback'	< **cəkkɔrɔk** 'hump'
ɔʈ̪ŭk	'the Dog'	< **ʈ̪ŭk** 'dog'
ɔcîttín	'the Cittin-bird'	< **cɪttín** 'bird (sp., making a lot of noise)'
ɔʈ̪ɔ́n ʈ̪ɔruʈ̪ʈ̪əruk	'the Mouth of Pig'	< **ʈ̪ɔn ʈ̪ɔruʈ̪ʈ̪əruk** 'mouth of pig'[49]

A (nick)name formation process with **ɔkká** is also attested. **ɔkká** contains the persona prefix, otherwise its composition is not fully clear. It has probably developed from the personal pronoun **ɔ̂k** '(s)he' (which contains the persona prefix) and the copula **p-á** 'be' where **p** is the concord. **ɔ̂k** + **pá** has then given rise to **ɔkkâ**, though tonally this is not regular. Some examples:

ɔkká-ʈ̪ʊʈan	'Thief'	< **ʈ̪ʊʈan** 'theft'[50]
ɔkká-cɪpín	'Born in the evening'	< **cɪpín** 'evening'
ɔkká-məkal	'Born when the mother was working in the sesame field'	< **məkal** 'sesame'
ɔkká-uʈ̌ɛ̆	'Funny person'	< **ŋuʈ̌ɛ̆** 'fun, joke'

Vocatives of this type of names start with **ka**:

káʈ̪ʊʈan	**ŋ-kw-aa.r-î**
thief	2-C-COME:COMPL-Q

Thief, have you come?

[49] The tonal representation of this item in Smits 2012 (p. 107) is not correct.

[50] There is a plural noun **aʈ̪ʊʈan** 'thieves', but no singular noun *__kaʈ̪ʊʈan__ 'thief'.

A comparable construction involves **ɔ̂k**, the connexive **p-ɔ** 'of' and a verbal noun, for example:

ǒkkwɔ̰ta̰təntakǒ (also: **ǒkkwɔ̰ta̰təntakǒ)** 'Dreamer'
(< **ɔ̌k** + **pɔ** + **t̰a̰təntakǒ**, lit.: 's/he of dreaming')

Names that are loans from other languages have the persona prefix:

ɔcɔ̂n 'John'
ɔlɔ́kka 'Luke'
ɔ́mar 'Umar'

The persona prefix is sometimes used in combination with a noun that denotes a kind of person, such as **kəllân** 'old woman' and **t̰ɔməccɔ** 'old man'. Such terms, for example **ɔkəllân** and **ɔt̰ɔ́məccɔ** function as names, denoting a specific individual.

The term **ɔpa̰t̰t̰í** 'person' is commonly used instead of somebody's name, in order to avoid the personal name. When **ɔpa̰t̰t̰í** is used, it is usually assumed that the hearer knows who is being referred to.

ɔ-pa̰t̰t̰ɪ	**p-ɪɔ́.t**	**p-a-t̰ʊk**	**t̰-ɔkkwɔt̰.ê**
PERS-person	C-die:COMPL	C-be-dog	C-kill:COMPL

the person died, he was killed by a dog

However, **ɔpa̰t̰t̰í** and its plural **ɔpa̰t̰t̰ɔ̂n** (see further below for plurals) can also refer to specific persons who are not (yet) identified by the hearer. A person who has arrived at somebody's house may call out **ɔpa̰t̰t̰í** in order to announce himself, and **ɔpa̰t̰t̰ɔ̂n** if he or she has arrived together with one or more others.

The word **ɔpəllĭn** typically refers to somebody from a group, but not somebody specific:

á-pəllɪn	**ânt̰án**
SUBJ.PERS-one_from_group	come:DEPINCOMPL

let one of you come!

The word can also denote each member of a group:

ɔ-pəllın	**p-a.nɛ́kıttat**	**lịcɔk**	**ukulûk**
PERS-one_from_group	C-be_taken_from:INCOMPL	goats	five

from each of you five goats will be taken

In the following example **ɔpəllĭn** is just used as 'somebody': the speaker does not know who has beaten on the ground.

ɔ-pəllın	**p-ɔ́kkwɔ.t**	**cîk**
PERS-one_from_group	C-beat:COMPL	VREF

somebody has beaten (on the ground with his stick) (i.e. a way of knocking at a place to see if somebody is there)

The plural **ɔpəllıŋɔ̂n** denotes 'some of a group'. In a construction **ɔpəllıŋɔ́n** … **ɔpəllıŋɔ́n** … it expresses 'some … others …', as in the sentence below:

ámmá	**á-kín**	**ɔ́pɔ́kɔ́**	**ɔ-pəllıŋ-ɔ́n**	**ṭ-á.cɔ́ƭɔ́**
if	CONJ.PERS-3A	be_beaten:DEPINCOMPL	PERS-one_of_a_group-PL	C-stand:INCOMPL

ana	**ɔ-pəllıŋ-ɔ́n**	**ṭ-íkkɔ**	**cık**
and	PERS-one_from_group-PL	C-sit:INCOMPL	VREF

and when they are beaten, some stand and others sit (fr. written description)

Unlike other nouns with the persona prefix, **ɔpəllĭn** cannot be used without it, i.e. it is not used as a vocative.

4.10.3. The plural suffix -**ŋɔ̂n**

Nouns with the persona prefix form plurals through suffixation of the plural morpheme -**ŋɔ̂n** to the singular noun. -**ŋɔ̂n** has associative meaning such as ‘and companions’. The companions are typically the people who live in the same house as the mentioned person, but can also be friends or people working together. ‘My mother and father’ is expressed by the plural of ‘my mother’ or ‘my father’:

ɔ-ŋappâ-n
PERS-my_father-PL
my father and mother, my father and his family/companions

-**ŋɔ̂n** does not cover accidental groups, such as people that happen to be together in a bus.

As expected, **ŋ** of -**ŋɔ̂n** causes full assimilation of a preceding **t**, **k** or **n** to **ŋ**. The resulting geminated velar nasal is then shortened. **ŋ** is deleted after **i̧**, **ɪ**, **u** or **ʊ** and after **l** or **r**. In addition, the **ɔ** of -**ŋɔ̂n** coalesces (after **ŋ**-deletion) with a preceding **ɔ**, **ɛ** or **a** resulting in **ɔ**, **ɛ** and **a**, respectively. The vowel of the suffix may adopt a +ATR realization, or a realization towards +ATR upon attachment to a +ATR noun. Note that there is tone bridge in **ɔlɔ́ttí-ɔ̂n** and that in **ɔkíɲcê-n** the falling contour of the elided **ɔ** of the suffix is retained.

ɔpít	‘master, servant’
ɔpɪŋɔ̂n	‘the master/servant and his/her companions’
ɔlɔ́ttí	‘Lɔttɪ’
ɔlɔ́ttí-ɔ̂n	‘Lɔttɪ and companions’
ɔkíɲcɛ	‘Nose’ (as a nick name)
ɔkíɲcê-n	‘Nose and companions’

If a possessor pronoun is present, the plural suffix is attached after the possessor pronoun:

ɔpɪt p-în ‘my master, my servant’
ɔpɪt p-ɪŋ-ɔ̂n ‘my master and his/her companions, my servant and his/her companions’

In case of a demonstrative modifier, the plural suffix can come after the demonstrative (first example), but also before it (second example):

ɔ-kakká	**ɛ́ŋ-k-í-ɔ́n**	**n̪-aá.t**
PERS-Kakka	DEM-C-NEARSP-PL	C-come:COMPL

this Kakka and her companions have come

ɔ-kakká-n	**ɛn-n̪-ɪ**	**n̪-aá.t**
PERS-Kakka-PL	DEM-C-NEARSP	C-come:COMPL

this Kakka and her companions have come

Vocatives of nouns which otherwise have the persona prefix also form plurals with the associative suffix:

ɪáɪa-n
mother-PL
mother and father!

The associative suffix allows for plural reference as ‘one or more X’s’ if this is appropriate in the context. The second example, based on **ɔpan̪n̪tí** ‘person’, is irregular because the **ɪ** is deleted before the suffix.

paŋ-k-ɪŋɔ̂n (< **páŋ pǐn -ŋɔ̂n**)
sibling-C-POSS1.PL
my brothers!

pan̪n̪-ɔ̂n
person-PL
people! (way of greeting a group of people)

Relative words and question words referring to people (‘who’, ‘the one who’) are pluralized with **-ŋɔ̂n** (see 6.1.5. and 20.1.1), as can the associative marker **an̪tʊt/án̪tʊ́t** (see 6.8).

A special case of suffixation of **-ŋə̂n** is the following, in which the suffix is attached to the plural of the common noun **ɲʊkʊ̀l** 'child'. It is a way of greeting a group of children, of which the speaker knows at least a few.

ɲʊkʊ̀l-ə̂n 'children!' (lit. children and companions)

The following example also involves a common plural noun (**ʊ̀l** 'people'). The suffix is attached to the demonstrative modifier:

k-kw-ânn-ítta	**ṭɔ-úl**	**ɛ́n-n-í-ə̂n**
3-C-NEG-be_married:DEPINCOMPL	at-people	DEM-C-NEARSP-PL

she cannot be married into the household of these people

5. Concords

In Lumun there is agreement between (pro)nouns and their modifiers, and between subjects and non-dependent TAM-forms of verbs (cf. 12.5.1). I call the morphemes expressing agreement concords. Lumun concords are consonantal and are prefixed to the nominal modifier or the non-dependent verb.

Agreement with common nouns is controlled by the noun class of the noun. For nouns with a ∅ prefix, i.e. vowel-initial nouns, the concord is **w**, for nouns with prefix **kw** it is **k**. In all other cases the concord is identical with the class prefix. Nouns with the persona prefix and personal pronouns have specific concords, which distinguish between singular and plural reference of the (pro)noun. Concords do not bring about any tonal change.

The concords of common nouns are presented in table 25.

Table 25 Concords of common nouns

noun class prefix	*concord*
p-	**p**-
t̪-	**t̪**-
t-	**t**-
c-	**c**-
k- **kw**-	**k**- **k**-
m-	**m**-
n-	**n**-
ɲ-	**ɲ**-
ŋ-	**ŋ**-
l-	**l**-
w- ∅	**w**- **w**-

The concord of singular nouns with the persona prefix is generally **p**; in some cases, however, singular nouns with the persona prefix take

another concord. Examples of this are presented further below. For personal pronouns with singular reference the concord is always **p**.

The concord of plural nouns with the persona prefix, as well as of personal pronouns with plural reference, is always **t̪**.

Table 26 Concords of nouns with the persona prefix

singular	**p̪**- (though not always, see further below)
plural	**t̪**-

Table 27 Concords of personal pronouns and pronominal clitics

singular (1, 2, 3)	**p̪**-
plural (12, 1A, 2A, 3A)	**t̪**-

5.1. Use of the concords

On verbs, the use of concords is restricted to the non-dependent TAM forms of main verbs and auxiliaries: Incompletives, Completives and Pasts. The Present of 'be' and irregular verbs, such as C-**ɔnû** 'have', also fall into this category. Concords further occur on modifiers, whether used as attributes or predicates or as independent forms.

In the example below, the connexive that modifies **lɔn** 'words' has the concord **l**; the demonstrative that modifies **pʊl** 'person' has the concord **p̪**; and the adjectival predicate has the concord **l**, agreeing with the head (**lɔn**) of the noun phrase that functions as subject to the predicate:

lɔn	**l-ɔ-pʊl**	**ɛm-p̪-əʈɛ́**	**l-ɔpərɔ̂t**
words	C-of-person	DEM-C-DIST	C-good

the words of that man are good (that man is saying good things)

An overview of modifiers with concords is presented in table 28. Certain quantifying modifiers, for example **appık** 'all', are never used with a concord. Numerals have not been included in the table, though the lower numerals take, or can take, a concord (see 10.4.1).

Table 28 Modifiers with concord

possessor pronoun	*demonstrative*	*connexive*	*adjective*
C-**ĭn** ‘my’ C-**ăŋ** ‘your’ C-**óŋ** ‘his/her’ C-**ɔrɪt** ‘our’ (of you (SG) and me) C-**ɻ́n** ‘our’ (EXCL) C-**ɔnnɔ́n** ‘our’ (INCL) C-**ɔ́n** ‘your (PL)’ C-**én** ‘their’	C-**ɛn** ‘that’ (anaphoric) **ɛn**-C-**í** ‘this, these’ (near speaker) **ɛn**-C-**ərík** ‘that, those’ (near addressee) **ɛn**-C-**əɽê** ‘that, those’ (away from speaker and addressee)	C-**ɔ** ‘of’	C-ADJ

The non-dependent verbal TAMs always have a concord. This includes the Present of ‘be’ C-**aîk**. By contrast, the dependent TAMs (Dependent Incompletive and Dependent Perfective), whether of a main verb or of an auxiliary verb, never have a concord. (See the chapter on Verbal inflections for the presence or absence of the concord in verbal TAMs).

As will be described in chapter 12, complex verbs (whether consisting of one or more verbal words) are built up of more than one verbal stem. Each composing verbal part occurs with or without concord, determined by its being a non-dependent or a dependent form. The verbal complex in the example below is built up of two Completives (an auxiliary and a main verb), which both have a concord:

m-p-ɔká.t **p-ɔkəṭáccɛ.t**
1-C-be:COMPL C-watch:COMPL

I had watched

The first verb in the next example (‘say’) is in Dependent Incompletive TAM and therefore has no concord. The second verb contains an Itive auxiliary in Incompletive TAM and a main verb in Dependent Incompletive TAM. The concord therefore only occurs on the Itive auxiliary, not on the main verb:

a-parɪ	**p-ârəkkaa̱ta**	**ɪʏɛ.kat**	**ɪttɪ**
CONJ-wife	C-of.Arəkkaa̱ta	said:DEPPRFV	that

k-kw-á.t̪-ɔ́né	**appɛnt̪ína**
3-C-IT:INCOMPL-grind:DEPINCOMPL	groundnuts

the wife of Arəkkaa̱ta said that he must go and grind the groundnuts (i.e. told him to go and grind the groundnuts) (fr. written story)

The subject of a non-dependent verb, whether a noun (phrase), a free pronoun or a pronominal proclitic, always occurs in the same clause. Therefore, a concord never occurs without its lexical or pronominal subject being present in the same clause.

5.2. Concords of singular nouns with the persona prefix

Singular nouns with the persona prefix **ɔ́**- typically have **p**-concord, but not always. With some modifiers they take concord as if they were common nouns, i.e., as if they lacked the persona prefix. Some details follow here (see also: Smits 2012: 97-98).

Singular kinship terms, except birth names, take **p**-concord:

ɔ-ŋappá	**p-ɔnnɔ́n**
PERS-my_father	C-POSS12A

our(INCL) father (i.e. father of me and other people who are not my siblings)

Singular birth names (table 23) do not take **p**-concord on a modifying possessor pronoun. Instead, the concord is determined by the initial segment of the noun without the persona prefix **ɔ́**-:

ɔ-nɛnní n-ɪn ‘my Nɛnnɪ’ (second child, which is a girl)
ɔ-cɛccé c-ɪn ‘my Cɛccɛ’ (third child, which is a girl)

The same goes for other personal names such as nicknames based on common nouns (first example below) and for nouns with the persona prefix that are based on a common noun that refers to a human being (second example below):

ɔ-kəʈɔ́l k-ɪn ‘my Tortoise’ (Tortoise as a nick name)
ɔ-kəllán k-ɪn ‘my old woman’ (typically refers to the wife)

Likewise, the concord on the connexive C-**ɔ** ‘of’ is **p** in case of singular kinship terms (first example below), but is determined by the initial segment of the noun without the prefix in case of a personal name (second example):

ɔ-nnán p-ɔ-mɛẗ̪ẗ̪ɪmɛ́ẗ̪t̪ɪ ‘the mother of Mɛẗ̪ẗ̪ɪmɛẗ̪t̪ɪ’
ɔ-lɔ́ttɪ l-ɔ́-maṯ̈arɪ ‘Lɔttɪ (son) of Maṯ̈arɪ’

With personal names from other languages that start with a non-indigenous sound or with a sound that does not occur word-initially in Lumun, the concord **ŋ** is used on the connexive that forms part of the longer name (the name in the example below starts with [j])**:**

ɔ-cɔ́n ŋ-ɔ́-cákkɪr ‘John (son) of Shakir’

In such cases **ŋ** may be a remnant of the phrase ***ŋʊkʊl ŋɔ** ‘child of’, with ***ŋʊkʊl** as an earlier form of the current **ʊkʊl** ‘child’. Historical presence of the noun class prefix **ŋ** on ‘child’ is suggested by the plural **ɲʊkʊl** ‘children’. Moreover, semantically the noun class prefix **ŋ** would fit well on ‘child’, since the pair **ŋ/ɲ** contains several nouns with the semantic notion of being small.

Also the concord on the copular verb (with or without restrictor) that introduces a relative clause takes the concord that goes with the name without **ɔ́**-prefix:

ɔ-kʊkkʊ́	**í-k-á**	**ḿ-p-ɔ́córɔ́ṯ̈.é**	**tít**
PERS-Kʊkkʊ	RES-C-COP	1-C-meet:COMPL	in:ABS

Kʊkkʊ, whom I met with in the way, …

On the other hand, the concord on a verb expressing agreement with a singular personal name is **p**, as it is with other kinship terms:

ɔ-ɪáɪa p-aá.t ‘my mother has come’
ɔ-kakká p-aát ‘Kakka has come’

However, a common noun that denotes a human being and that is used with the persona prefix takes agreement with the class of the noun without persona prefix:

ɔ-kəllán k-aá.t ‘the old woman has come’

5.3. Concords of plural nouns with the persona prefix

Plurals of nouns with the **ɔ́**-prefix always induce the concord **t̪**. For example:

ɔ-kakká-n t̪aát ‘Kakka and her companions have come’
ɔ-kəlláŋ-ɔ́n t̪aát ‘the old woman and her companions have come’

5.4. Agreement with coordinated nouns

It seems that coordinated nouns as subjects tend to be avoided in natural language. It is nevertheless possible to make such constructions, particularly with nouns with animate reference, and especially with nouns with the persona prefix. Coordinated nouns with this prefix induce **t̪**-concord:

ɔ-kʊkkʊ́	**ana**	**ɔ-kakká**	**t̪-ɔpərɔ̂t**
PERS-Kʊkkʊ	and	PERS-Kakka	C-good

Kʊkkʊ and Kakka are fine

This also works for coordinated common nouns referring to humans, though not without some hesitation:

kəllán	**ana**	**ɔ́kʊl**	**t̪-ɔpərɔ̂t**
old_woman	and	child	C-good

the old woman and the child are fine

With regard to coordinated singular animals and inanimates there was some confusion. **t̪**-concord was sometimes preferred (implicitly agreeing with **ɔkîn** ‘they’, particularly in the case of animals), but agreement with the noun closest to the predicate was considered more or less acceptable as well, as was the concord **w**-, implicitly

agreeing with **aʧəpʊ** ‘things’. In the examples below all options are given a question mark.

ɟmɟt	**ána**	**cɟməntɛrɟ**	**?ʈ̪-ɔ́pərɔ̂t / ?c-ɔ́pərɔ̂t / ?w-ɔ́pərɔ̂t**
goat	and	hedgehog	C-good / C-good / C-good

the goat and the hedgehog are fine

kərɛt	**ána**	**cuccú**	**?ʈ̪-ɔʧɛ̌ / ?c-ɔʧɛ̌ / ?w-ɔʧɛ̌**
cloth	and	bead	C-red / C-red

the cloth and the necklace are red

In case of two nouns belonging to the same singular noun class, agreement with the plural of that same noun class was not an option:

***cʊmpúraŋ**	**ána**	**cɟməntɛrɟ**	**m-ɔ́pərɔ̂t**
monkey(sp.)	and	hedgehog	C-good

the monkey and the hedgehog are fine

In case of coordination of a singular and a plural (or vice-versa) belonging to the same class, it was considered possible, though not without hesitation, to have agreement with the plural noun. The option is given a question mark:

mʊmpúraŋ	**ána**	**cɟməntɛrɟ**	**?m-ɔ́pərɔ̂t**
monkeys(sp.)	and	hedgehog	C-good

the monkeys and the hedgehog are fine

Coordinated plurals belonging to the same class take the concord corresponding with that class:

mʊmpúraŋ	**ána**	**mɟməntɛrɟ**	**m-ɔ́pərɔ̂t**
monkeys(sp.)	and	hedgehogs	C-good

the monkeys and the hedgehogs are fine

When both nouns were plural but belonged to different classes agreement with the plural closest to the modifier/predicate was considered the most acceptable option:

əlla	**ana**	**lʊk**	**l-ɔ̃nnɔ́n**
cats	and	dogs	C-POSS12A

our cats and dogs / the cats and dogs are ours

lʊk	**ána**	**élla**	**w-ɔnnɔ́n**
dogs	and	cats	C-POSS12A

our dogs and cats / the dogs and cats are ours

6. Pronouns

Lumun has free pronouns and bound pronouns (or pronominal clitics). There are different sets of pronouns according to their syntactic function (subject, first object, second object, addressee of a command, hortative addressee, complement of a preposition) and their type of reference: "persons" versus "things".

The free personal pronouns in their full form will be discussed first, including their realization as complements of prepositions, then the personal subject pronominal clitics and the non-person (common noun) subject pronominal clitics. This is followed by a discussion of object pronominals, and addressive and hortative pronominals.

Within a sentence, the pronoun is generally used at a later stage than the noun with which it is co-referent, but not necessarily so. An example of cataphoric use of a (bound) pronoun is the following:

akka	**k-kw-ɔ́kʊɽɔ̰t.é**	**n-tán**	**a-kəɽɔ́l**	**ɔ̰t-íat**
that	3-C-move_up:COMPL	with-up_on:ABS	CONJ-tortoise	IT:DEPINCOMPL-find:DEPPRFV

ɪttɪ	**mɛ́n**	**m-ɛllâ**
that	palm_fruits	C-be_absent:INCOMPL

when he$_i$ had climbed up, the tortoise$_i$ found there were no palm fruits (left) (App. IV, 118-119)

6.1. Free personal pronouns: the full forms

Lumun has eight person/number distinctions in the personal pronouns. I gloss them as 1, 12, 2, 3, 1A, 12A, 2A and 3A, where 'A' stands for 'et alii' (and others). In the text, I refer to 1A pronouns as 'we EXCL', and to 12A pronouns as 'we INCL'. These are the free personal pronouns in their full form:

Table 29 Free personal pronouns

1	**ɔ́ún**	I
12	**ɔrǐ̌t**	I + you SG
2	**ɔ́úŋ**	you SG
3	**ɔ̂ɔ̂k**	s/he

1A	**ɔnɟ́n**	we EXCL (I and other(s))
12A	**ɔrún/ɔrɔ́n**	we INCL (I and you SG and other(s))
2A	**ɔnɔ́n**	you PL (you SG and other(s))
3A	**ɔkîn**	they (s/he and other(s))

The Talodi language Dagik has the same person/number distinctions (Vanderelst, 2013).

6.1.1. Formatives of the free personal pronouns in their full form

The free pronouns in their full form contain the following formatives:

- the persona prefix **ɔ́-**, which is the initial **ɔ** that is present in all full pronouns. This is the same marker that is found on kinship terms and personal names when used referentially (chapter 4.10).

- a person-marking element. This element contains **n** + a high tone for the 1 and 1A pronouns (**ɔ́n** and **ɔnɟ́n**), and **k** + a low tone for the 3 and 3A pronouns (**ɔ̂k** and **ɔkîn**). In the 3 and 3A pronouns, the falling tone is due to shift of the high tone of the persona prefix. The 12 and 12A pronouns share a person marking element **t**, realized as **r** between vowels, but are, unlike the other pairs, tonally different from each other (**ɔrĭt** and **ɔrún/ɔrɔ́n**). The 2 and 2A pronouns (**ɔ́ŋ** and **ɔnnɔ́n**) share a high tone belonging to the person-marking element, but lack a shared person-marking segment.

- a final element **n** marks the notion 'et alii' ('and others') as compared to the 1, 12, 2 and 3 pronouns. This element is undoubtedly related to the plural marker **-ŋɔ̂n** of nouns which have the persona prefix, even though as a formative of the pronouns it lacks a falling contour. In the pronouns, it is glossed as A, from 'et alii'.

A fourth formative

There is good reason to posit in addition a pronominal formative **ŋ(ɔ)** in the free pronouns, which is deleted between vowels at the surface. Evidence for this formative is found in certain free pronouns that

lack the persona prefix **ɔ́-**, notably the object pronouns (occurring as second object) **ŋúŋ** 'you (SG)' and **ŋɔk** 'him/her' (see section 6.4) and the 2A addressive pronoun **ŋɔnɔ́n** 'you (PL)' (see section 6.5). The same pronominal element (**ŋ**) is present in all independent pronouns of Dagik (Vanderelst 2013), and, as **ɔŋ** or **ŋɔ,** in all independent pronouns of Ngile, Dengebu and Jomang (Schadeberg 1981b, p. 155-156). The free pronouns and their assumed underlying forms with the pronominal formative **ŋ(ɔ)** after the persona prefix follow here:

1	**ɔ-ún**	< **ɔ-ŋ-ún**
12	**ɔ-rĭt**	< **ɔ-ŋɔ-rĭt**
2	**ɔ-úŋ**	< **ɔ-ŋ-úŋ**
3	**ɔ-ɔ̂k**	< **ɔ-ŋ-ɔ̂k**
1A	**ɔ-nɻ́n**	< **ɔ-ŋɔ-nɻ́n**
12A	**ɔ-rún/ɔ-rɔ́n**	< **ɔ-ŋɔ-rún/ɔ-ŋɔ-rɔ́n**
2A	**ɔ-nɔ́n**	< **ɔ-ŋɔ-nɔ́n**
3A	**ɔ-kîn**	< **ɔ-ŋɔ-kîn**

6.1.2. Use of the free pronouns in their full form: subjects

Non-singular free pronouns in their full form are commonly used as subject pronouns. In the first example below the free pronoun precedes a verb, in the second a predicative adjective:

ɔ-kín	**ṭ-á.ík**	**ṭ-ínakɔ**	**ŋ-ŋɔ́rɛ**
PERS-3A	C-be:PR	C-be_known:INCOMPL	with-laziness

they are known for laziness

ɔ-nɻ́n	**ṭ-ɔpərɔ̂t**
PERS-1A	C-good

we are fine

In the next examples, the subjunctive clitic **â** has coalesced with the initial vowel of **ɔrĭt** 'I and you (SG)' and **ɔrún** 'we (INCL)':

ânṭan	**á-rɪt**	**ɔránɛ**	**áləpaccôṭ**
SUBJ.(2-)come:DEPINCOMPL	SUBJ.PERS-12	cultivate_for:DEPINCOMPL	jackal

come so that we cultivate for the jackal ('The story of the jackal')

ámmá ɔ́-rʊ́n ṯ-áṯṯ-ɪɔt á-rʊn ína ɪttĭ …
if PERS-12A C-ITVEN:COMPL-find:DEPINCOMPL SUBJ.PERS-12A know:DEPINCOMPL that

when we find it, we will know that …

ɔkîn ‘they’ is commonly used with a plural antecedent. However, in the next example, from ‘A boy and a goat’, it has a singular antecedent (Lɔttɪ). Its underlying meaning ‘s/he and others’ (translating here into ‘(he and) his family’) can be clearly recognized:

ʊkʊl w-əɽɛk w-ɔkát cɪk w-ɔccɔ́.t kəɽan ɪttɪ ɔ-lɔ́ttɪ
child C-some C-be:COMPL VREF C-receive:COMPL name that PERS-Lɔttɪ

ana ɔ-kín ṯ-ɔná.t kúṯúk k-ɛ́n nɔ́-káɽən
and PERS-3A C-bring:COMPL grazing_ground C-POSS3A on-place

í-k-ɔ́ccɔ́.t kəɽan ɪttɪ ṯ̱ɔ́ícâŋ
RES-C-receive:COMPL name that Ṯ̱ɔɪcâŋ

there was a boy called Lɔttɪ, and his family (lit.: they) had their grazing ground in a place called Ṯ̱ɔɪcâŋ (‘A boy and a goat’)

Singular subjects, when immediately preceding a verb or predicative adjective, are far more commonly expressed by a bound pronominal form. Use of the free pronoun, as in the examples below, is nevertheless possible:

ɔ-ʊn p-ɛ.káṯ-ɔ́k ŋə́pák á-kw-i̱kkɔ
PERS-1 C-give:PST-O3 beer SUBJ-3-drink:DEPINCOMPL

I gave him beer to drink

ɔ-ʊŋ p-ɔpərɔ̂t
PERS-2 C-good

you are fine

A free pronoun is used when the pronoun functions as subject but does not directly precede the verb (or adjective). Here the subject pronoun is modified by an adverb that separates it from the verb:

ɔ-ʊn cənɛ p-a.kkɔ́t ŋərɛ
PERS-1 here C-do:INCOMPL work

I do the work here

In the following two examples, the predicative adjective and the verb are omitted because they are understood from the preceding clause:

m-p-ɔpərɔ̂t	**ana**	**ɔ-úŋ**
1-C-good	and	PERS-2

I am fine, and you?

ʊkkw.ɪ	**ámm.akka**	**ɔ-ún**
dance:IMP	like	PERS-1

dance like me! (dance like I dance!)

Free pronouns are further used in contrastive focus constructions with the focus marker **akk-** (first example), and in contrastive focus-constructions with a postposed free pronoun that is co-referent with a clitic pronoun before the verb (second example):

ɔ-ɔ́k	**akk-a.kákɔ**	**mî̱l**
PERS-3	FOC-grind:INCOMPL	sorghum

s/he grinds the sorghum

kərənn.ɪ	**a-n-ɔṯ̈-ómmɔ**	**ṯ̈ɪk**	**ɔ-ún**
let:IMP	CONJ-1-IT:DEPINCOMPL-take:DEPINCOMPL	fire	PERS-1

leave it! I will go and get the fire myself

6.1.3. Use of the free pronouns in their full form: objects

Pronominalized objects that follow the verb immediately are mostly expressed by enclitic pronouns. In this position, free pronouns are uncommon, though not altogether impossible in a word-for-word way of speaking. The example below is somewhat unnatural, hence the question mark, but was not considered “wrong” by my consultant (JS). Normally a clitic object pronoun would be used.

? **ana**	**pʊl**	**p-ɪmma.káṯ̈ɛ**	**ɔ-ɔ̂k**
and	person	C-see:PST	PERS-3

and the man saw him/her (only in word-for-word speech)

Free pronouns can function as syntactic objects when the verb is understood from the context (first example below), or when the

object is contrastively focused in a construction with **akkǎ** 'that' (second example below):

m-p-ɪmmáṱ-ʊ́ŋ	**kɛ́ccûk |**	**ɔ-ʊn-â |**	**i̯i̯**
1-C-see_at:COMPL-O2	market	PERS-1-Q	yes

I saw you in the market. me? yes

ɔ-ɔ́k	**akka**	**ɔn-ɔnánɛ**	**mî̯l**
PERS-3	that	2A-bring_for:DEPINCOMPL	sorghum

it is to him/her that you (PL) will bring the sorghum

A free pronoun can also be used as an addressive, as in the following example:

ɛ́ɛ	**ɔ-ʊŋ**	**ɛ̂m-p-ərík**
hey	PERS-2	DEM-C-NEARADDR

hey you there!

Normally, Imperatives and Hortatives are not combined with free subject pronouns. However, it is possible to have Imperatives with a postposed 2nd person free pronoun, expressing contrastive focus:

ɔṯʊk.ʊ |	**ɔṯʊk.ʊ**	**ɔ-ʊ́ŋ**
eat:IMP	eat:IMP	PERS-2

eat it! eat it yourself!

6.1.4. Free pronouns as complements of a preposition

Pronominal complements of prepositions have the free pronoun in its full form. Like in kinship terms and personal names, the persona prefix of the free pronoun changes to **a** after a preposition. The free pronouns can be complements of the prepositions **ɪ-** 'in', **nɔ-** 'on, at' and **tɔ-** '(up) on, (up) at', as well as of the combined prepositions **ntɪ ɪ-** 'from, out of', **nnɔ-** 'from on, from at' and **ntɔ-** 'from (up) on, (up) at'. The paradigms with **ɪ-**, **nɔ-** and **tɔ-** are given below.

Note that the tonal make-up of the free pronouns plays no role here: all combinations have the same low-falling (L.HL) tone pattern.

	ɪ ‘in’	**nɔ** ‘on, at’	**tɔ** ‘(up) on, (up) at’
1	**ɪ-aôn**	**n-aôn**	**t-aôn**
2	**ɪ-aôŋ**	**n-aôŋ**	**t-aôŋ**
12	**ɪ-arît**	**n-arît**	**t-arît**
3	**ɪ-aâk**	**n-aâk**	**t-aâk**
1A	**ɪ-anîn**	**n-anîn**	**t-anîn**
12A	**ɪ-arôn/ɪ-arɔ̂n**	**n-arôn/n-arɔ̂n**	**t-arôn/t-arɔ̂n**
2A	**ɪ-anɔ̂n**	**n-anɔ̂n**	**t-anɔ̂n**
3A	**ɪ-akîn**	**n-akîn**	**t-akîn**

Some examples of pronominal substitution follow here.

k-kw-ɔ́cʊrɔ́ṭ.ɛ	**ɪ-kəllân**
3-C-pass_coming_from_opposite_direction:COMPL	in-old_woman

s/he passed the old woman coming from the opposite direction

k-kw-ɔ́cʊrɔ́ṭ.ɛ	**ɪ-a-âk**
3-C-pass_coming_from_opposite_direction:COMPL	in-PERS-3

s/he passed her coming from the opposite direction

k-kw-á.n̪ṭ̪é	**nɔ́-úl**	**én-n-í**
3-C-leave:inCOMPL	on-persons	DEM-C-NEARSP

s/he will leave these people

k-kw-án̪ṭ̪é	**n-á-kîn**
3-C-leave:INCOMPL	on-PERS-3A

s/he will leave them

By contrast, complements of the preposition **n̪ɔ** ‘(down) at’ cannot be replaced by a personal pronoun.

6.1.5. **ɔkkwên** ‘who’ and **ɔ́kkwí í** ‘(the one) who’

ɔkkwên ‘who’ functions as a relative question word in embedded clauses. It contains a formative based on the 3SG pronoun **ɔ̂k** ‘s/he’ and the anaphoric demonstrative **p-ɛn** ‘this, that’, with **p** agreeing with **ɔ̂k**. **ɔkkwên** is discussed in chapter 20.1.1, the anaphoric demonstrative in 8.2.

A formative based on the 3SG pronoun **ɔ̂k** 's/he' is also part of **ɔ́kkwí** 'the one'. **ɔ́kkwí** further contains **p-í**, with the concord **p** agreeing with the 3SG pronominal element. **p-í** is derived from the deictic verb C-**éɪ** 'be here (near speaker)', which is also present in the near-speaker demonstrative **ɛn**-C-**í**. **ɔ́kkwí** is always used in combination with the restrictor **í-**, together expressing '(the one) who' (literally 's/he is here who'). Its plural is formed through attachment of the plural of nouns with the persona prefix -**ŋɔ̂n**: **ɔkkwɪɔ̂n**. Two examples follow here.

aɽɪk	**ír-ɔ̱t-óllattarənɛ**			**ana**	
come:IMP	(SUBJ-)12-IT:DEPINCOMPL-run_against_each_other:DEPINCOMPL			and	
ɔ́k.kw.í	**í-p-ɔ́rrɔ.t**	**ɔ-páŋ**	**á-kw-ɔ́nɔ́kɔ**	**kəpa**	**áppɪk**
the_one	RES-C-leave_behind:COMPL	PERS-sibling	SUBJ-3-take:DEPINCOMPL	meat	all

Come so that we run against each other and the one who wins let him take all the meat (fr. written story)

ana	**ɔ́k.kw.í-ɔ́n**	**í-ṯ-íllɛ**	**ṯ-a.pə́rɛ**	**ŋʊccûk**
and	the_one-PL	RES-C-die.PLUR:INCOMPL	C-excrete:INCOMPL	blood

and the ones who die excrete blood (fr. written essay)

6.2. Bound personal subject pronouns

The bound personal subject pronouns precede a (concord +) verb or concord + modifier. Some of the bound pronouns surface in a different way before a concord than directly before a verbal stem. Most of these differences, however, can be explained from phonological effects (see 6.2.1 and 6.2.2). The bound second person plural pronoun (2A) has different shapes directly before a (vowel-initial) verbal stem, namely **nń-**, and before its concord (**ṯ**), namely **ń-** or **ɔ́n-**. Assuming that the underlying form has the long nasal, the obligatory retention of nasal length before a verb stem can be explained from avoidance of ambiguity with the first person singular bound pronoun in the same environment (examples are given in tables 37 and 38). Before the concord **ṯ**, on the other hand, nasal length cannot be realized. Noteworthy is also that the bound 3A pronoun is used only before a concord, not directly before a verbal stem. In the latter environment, the full pronoun is used. This, too,

may be motivated by avoidance of ambiguity with the bound first person singular pronoun (see tables 37 and 38). Further details of assimilation of the bound subject pronouns before a concord as well as paradigms with bound subject pronouns before a concord + verb and before a verbal stem are provided in 6.1.1 and 6.2.2.

The table below presents the bound personal subject pronouns (also called personal subject pronoun clitics). The free pronouns are given for comparison. Most bound subject pronouns are shortened forms of the free pronouns and induce the same tonal effects on the element that they precede as the corresponding free pronoun.

Table 30 Bound personal subject pronouns

	bound personal subject pronouns	*free pronouns*
1	**ń-**	**ɔ́n**
2	**ŋ́- /ɔ́ŋ-**	**ɔ́ŋ**
3	**kw-** + tone pattern	**ɔ̂k**
12	**ǐt-**	**ɔrǐt**
1A	**ɟ́n-**	**ɔnɟ́n**
12A	**ɔ́n-**	**ɔrɔ́n/ɔrɔ́n**
2A	**nń-/ń-/ɔ́n-**	**ɔnɔ́n**
3A	**n̂-** + tone pattern	**ɔkîn**

The 3rd person bound pronoun (**kw-**) is not just a shortened form of the free pronoun (**ɔ̂k**). Moreover, the 3 and 3A bound subject pronouns have tonal effects that are different from those of the 3 and 3A free pronouns. They add a high tone to the initial mora of the predicate to which they are attached. When the predicate is a verb in Past or Completive TAM this initial high tone comes in addition to the tone belonging to verb itself. When the verb is in (Dependent) Incompletive or Dependent Perfective TAM, the initial high tone lowers a high or falling tone present later in the verb. Some examples of this —irregular— tonal effect are given in the tables 32-36. Apart from this tonal effect, the 3A bound pronoun (a moraic nasal) has retained the falling tone of the free pronoun: it remains high itself upon attachment to a predicate.

6.2.1. Combinations of bound subject pronominal and concord

Before non-dependent verbs and other predicates such as adjectival predicates, the subject, whether a noun (phrase), a free pronoun or a bound pronoun, is always followed by a concord. The combination of the subject proclitics with their concords gives the following results (the tones are omitted in the list below, since for the 3 and 3A forms they cannot be adequately represented). Note in the 2A form that the nasal is short before the concord:

1 'I'	**n** + **p**	> **m-p**
2 'you'	**(ɔ)ŋ** + **p**	> **(ɔ)ŋ-kw**
3 's/he'	**kw** + **p**	> **k-kw** (< **kw-kw**)
12 'I and you (SG)'	**ɪt** + **t̪**	> **ɪt̪-t̪**
1A 'we (EXCL)'	**i̪n** + **t̪**	> **i̪n-t̪**
12A 'we (INCL)'	**ʊn** + **t̪**	> **ʊn-t̪**
2A 'you (PL)'	**(ɔ)n** + **t̪**	> **(ɔ)n-t̪**
3A 'they'	**n** + **t̪**	> **n-t̪**

These assimilations are regular except the assimilation between the 2SG subject clitic and concord, and between the 3SG subject clitic and concord. Though in a few other cases a first velar consonant determines the place of articulation of the second consonant in the sequence[51], the general rule is that the place of articulation of the second consonant is dominant, whether within the word or across the word boundary.

Example paradigms with Incompletives of verbs of different tone classes and a bound pronominal + concord, showing the tonal and assimilatory effects, follow here. For comparison the forms are given with the free pronoun as well. Recall that the bound pronoun is commonly used for 1, 2 and 3 subjects, while the free pronoun is commonly used for 12, 1A, 12A, 2A and 3A subjects. There is tone

[51] Notably **ɔpaŋ** + **pîn** > **ɔpaŋkîn** 'my sibling' (not *__ɔpampîn__), and **ɪccɪk** + **cɔ** > **ɪccɪk kɔ** 'near' (not *__ɪ-ccɪc-cɔ__). The place of articulation of the first consonant is also dominant upon suffixation of the discourse particles **-tɪ**, **-na** and **-mɛ́** (see 17.2.2 to 17.2.4).

bridge on the Incompletives of tone class IIA and IIB when preceded by 3 and 3A free pronouns.

Table 31 Clitic and free pronouns with Incompletive C-**ímma** (< **ɪmma** 'see')

	subject clitic	*free pronoun*	
1	**m-p-ímma**	**ɔʊn p-ímma**	'I will see'
2	**ŋ-kw-ímma**	**ɔʊŋ p-ímma**	'you will see'
3	**k-kw-ímma**	**ɔ́k p-ímma**	's/he will see'
12	**ɪn̪-t̪-ímma**	**ɔrɪt t̪-ímma**	'I and you (SG) will see'
1A	**i̱n-t̪-ímma**	**ɔni̱n t̪-ímma**	'we (EXCL) will see'
12A	**ʊn-t̪-ímma**	**ɔrʊn t̪-ímma**	'we (INCL) will see'
2A	**n-t̪-ímma**	**ɔnɔn t̪-ímma**	'you (PL) will see'
3A	**ń-t̪-ímma**	**ɔkín t̪-ímma**	'they will see'

Table 32 Clitic and free pronouns with Incompletive C-**arékɔ** (< **ɔrékɔ** 'work')

	subject clitic	*free pronoun*	
1	**m-p-arɛ́kɔ**	**ɔʊn p-arɛ́kɔ**	'I will work'
2	**ŋ-kw-arɛ́kɔ**	**ɔʊŋ p-arɛ́kɔ**	'you will work'
3	**k-kw-árɛkɔ**	**ɔ́k p-árɛ́kɔ**	's/he will work'
12	**ɪn̪-t̪-arɛ́kɔ**	**ɔrɪt t̪-arɛ́kɔ**	'I and you (SG) will work'
1A	**i̱n-t̪-arɛ́kɔ**	**ɔni̱n t̪-arɛ́kɔ**	'we (EXCL) will work'
12A	**ʊn-t̪-arɛ́kɔ**	**ɔrʊn t̪-arɛ́kɔ**	'we (INCL) will work'
2A	**n-t̪-arɛ́kɔ**	**ɔnɔn t̪-arɛ́kɔ**	'you (PL) will work'
3A	**ń-t̪-árɛkɔ**	**ɔkín t̪-árɛ́kɔ**	'they will work'

Table 33 Clitic and free pronouns with Incompletive C-**ɔɽəkɔ̂** (< **ɔɽəkɔ̂** 'eat')

	subject clitic	*free pronoun*	
1	**m-p-aɽəkɔ̂**	**ɔʊn p-aɽəkɔ̂**	'I will eat'
2	**ŋ-kw-aɽəkɔ̂**	**ɔʊŋ p-aɽəkɔ̂**	'you will eat'
3	**k-kw-áɽəkɔ**	**ɔ́k p-áɽə́kɔ̂**	's/he will eat'
12	**ɪn̪-t̪-aɽəkɔ̂**	**ɔrɪt t̪-aɽəkɔ̂**	'I and you (SG) will eat'
1A	**i̱n-t̪-aɽəkɔ̂**	**ɔni̱n t̪-aɽəkɔ̂**	'we (EXCL) will eat'
12A	**ʊn-t̪-aɽəkɔ̂**	**ɔrʊn t̪-aɽəkɔ̂**	'we (INCL) will eat'
2A	**n-t̪-aɽəkɔ̂**	**ɔnɔn t̪-aɽəkɔ̂**	'you (PL) will eat'
3A	**ń-t̪-áɽəkɔ**	**ɔkín t̪-áɽə́kɔ̂**	'they will eat'

Paradigms with Completives of the same verbs follow here. In the Completives there is no tone bridge.

Table 34 Clitic and free pronouns with Completive C-**ɪmmât** (< **ɪmma** 'see')

	subject clitic	*free pronoun*	
1	**m-ɒ-ɪmmât**	**ɔʊn ɒ-ɪmmât**	'I saw'
2	**ŋ-kw-ɪmmât**	**ɔʊŋ ɒ-ɪmmât**	'you saw'
3	**k-kw-ímmât**	**ɔ́k ɒ-ɪmmât**	's/he saw'
12	**ɪn̪-n̪-ɪmmât**	**ɔrɪt n̪-ɪmmât**	'I and you (SG) saw'
1A	**i̱n-n̪-ɪmmât**	**ɔni̱n n̪-ɪmmât**	'we (EXCL) saw'
12A	**ʊn-n̪-ɪmmât**	**ɔrʊn n̪-ɪmmât**	'we (INCL) saw'
2A	**n-n̪-ɪmmât**	**ɔnɔn n̪-ɪmmât**	'you (PL) saw'
3A	**ń-n̪-ímmât**	**ɔkín n̪-ɪmmât**	'they saw'

Table 35 Clitic and free pronouns with Completive C-**ɔrɛkɔ̂t** (< **ɔrɛ́kɔ** 'work')

	subject clitic	*free pronoun*	
1	**m-ɒ-ɔrɛkɔ̂t**	**ɔʊn ɒ-ɔrɛkɔ̂t**	'I have worked'
2	**ŋ-kw-ɔrɛkɔ̂t**	**ɔʊŋ ɒ-ɔrɛkɔ̂t**	'you have worked'
3	**k-kw-ɔ́rɛkɔ̂t**	**ɔ́k ɒ-ɔrɛkɔ̂t**	's/he has worked'
12	**ɪn̪-n̪-ɔrɛkɔ̂t**	**ɔrɪt n̪-ɔrɛkɔ̂t**	'I and you (SG) have worked'
1A	**i̱n-n̪-ɔrɛkɔ̂t**	**ɔni̱n n̪-ɔrɛkɔ̂t**	'we (EXCL) have worked'
12A	**ʊn-n̪-ɔrɛkɔ̂t**	**ɔrʊn n̪-ɔrɛkɔ̂t**	'we (INCL) have worked'
2A	**n-n̪-ɔrɛkɔ̂t**	**ɔnɔn n̪-ɔrɛkɔ̂t**	'you (PL) have worked'
3A	**ń-n̪-ɔ́rɛkɔ̂t**	**ɔkín n̪-ɔrɛkɔ̂t**	'they have worked'

Table 36 Clitic and free pronouns with Completive C-**ɔʧəkɔ́t** (< **ɔʧəkɔ̂** 'eat')

	subject clitics	*free pronoun*	
1	**m-ɒ-ɔʧəkɔ́t**	**ɔʊn ɒ-ɔʧəkɔ́t**	'I have eaten'
2	**ŋ-kw-ɔʧəkɔ́t**	**ɔʊŋ ɒ-ɔʧəkɔ́t**	'you have eaten'
3	**k-kw-ɔ́ʧəkɔ́t**	**ɔ́k ɒ-ɔʧəkɔ́t**	's/he has eaten'
12	**ɪn̪-n̪-ɔʧəkɔ́t**	**ɔrɪt n̪-ɔʧəkɔ́t**	'I and you (SG) have eaten'
1A	**i̱n-n̪-ɔʧəkɔ́t**	**ɔni̱n n̪-ɔʧəkɔ́t**	'we (EXCL) have eaten'
12A	**ʊn-n̪-ɔʧəkɔ́t**	**ɔrʊn n̪-ɔʧəkɔ́t**	'we (INCL) have eaten'
2A	**n-n̪-ɔʧəkɔ́t**	**ɔnɔn n̪-ɔʧəkɔ́t**	'you (PL) have eaten'
3A	**ń-n̪-ɔ́ʧəkɔ́t**	**ɔkín n̪-ɔʧəkɔ́t**	'they have eaten'

6.2.2. Use of the subject pronominals without concord

Before the dependent TAMs of verbs (the Dependent Incompletive and the Dependent Perfective) the bound subject pronominals occur without concord. Here too singular subjects are usually expressed by the bound pronominal, the ones with plural reference by free pronouns.

The table below gives paradigms with Dependent Incompletives and Dependent Perfectives. The Dependent Incompletives in table 37 and the Dependent Perfectives in table 38 are introduced by the proclitic conjunctive particle **á** 'and, while' and the proclitic subjunctive particle **â** 'so that'. The verb in the table is **ɪʈɛ** 'say' (tone class I); its Dependent Incompletive and Dependent Perfective stems are, respectively, **ɪʈɛ** and **ɪʈɛkat**. The 12A bound form is rarely used, hence the parentheses. The form was given in elicitation with some hesitation. The full form is much preferred here, probably also to avoid ambiguity with the first person singular free pronoun. The 3A clitic is not used in this context at all and the 2A clitic has a long nasal in this environment (as noted also in 6.2). In both cases this avoids ambiguity with the first person singular clitic.

Note further that **a** and **ɔ** do not assimilate in the 3 free pronouns. Note also that the falling tone of the 3 and 3A free pronouns (**ɔ̂k** and **ɔkîn**) is realized as low after the subjunctive particle **â**, and that, in the same environment, the bound 3 pronoun brings no high tone to the initial mora of the verb. In the other cases, the tones are expected from the tone rules.

Table 37 Clitic and free pronouns with Dependent Incompletive **ɪʈɛ** 'say'

		á or **â** + pronoun clitic + Dep. Incompletive	**á** or **â** + free pronoun + Dep. Incompletive
1 'I'	**á**	**a-n-íʈɛ**	**a-ʊn íʈɛ**
	â	**á-n-íʈɛ**	**á-ʊn íʈɛ**
2 'you'	**á**	**a-íʈɛ** (< **a-ŋ-íʈɛ**)	**a-ʊŋ íʈɛ**
	â	**á-íʈɛ** (< **á-ŋ-íʈɛ**)	**á-ʊŋ íʈɛ**
3 's/he'	**á**	**a-kw-íʈɛ**	**a-ɔ́k ɪʈɛ**

	â	**á-kw-ɪɽɛ**	**á-ɔk ɪɽɛ**
12 ‘I and you (SG)’	**á**	**a-ɪr-íɽɛ**	**a-rɪt íɽɛ**
	â	**á-ɪr-íɽɛ**	**á-rɪt íɽɛ**
1A ‘we (EXCL)’	**á**	**a-ɟn-íɽɛ**	**a-nɟn íɽɛ**
	â	**á-ɟn-íɽɛ**	**á-nɟn íɽɛ**
12A ‘we (INCL)’	**á**	**? a-ʊn-íɽɛ**	**a-rʊn/arɔn íɽɛ**
	â	**? á-ʊn-íɽɛ**	**á-rʊn/árɔn íɽɛ**
2A ‘you (PL)’	**á**	**a-nn-íɽɛ**	**a-nɔn íɽɛ**
	â	**á-nn-íɽɛ**	**á-nɔn íɽɛ**
3A ‘they’	**á**	**-**	**a-kín ɪɽɛ**
	â	**-**	**á-kɪn ɪɽɛ**

Table 38 Clitic and free pronouns with Dependent Perfective **ɪɽɛkat** (< **ɪɽɛ** ‘say’)

		á + subject clitic + Dep. Perfective	**á** + free pronoun + Dep. Perfective
1 ‘I’	**á**	**a-n-íɽɛkat**	**aʊn íɽɛkat**
	â	**á-n-íɽɛkat**	**áʊn íɽɛkat**
2 ‘you’	**á**	**a-íɽɛkat** (< **a-ŋ-íɽɛkat**)	**aʊŋ íɽɛkat**
	â	**á-íɽɛkat**	**áʊŋ íɽɛkat**
3 ‘s/he’	**á**	**a-kw-íɽɛkat**	**aɔ́k ɪɽɛkat**
	â	**á-kw-ɪɽɛkat**	**áɔk ɪɽɛkat**
12 ‘I and you (SG)’	**á**	**a-ɪr-íɽɛkat**	**arɪt íɽɛkat**
	â	**á-ɪr-íɽɛkat**	**árɪt íɽɛkat**
1A ‘we (EXCL)’	**á**	**a-ɟn-íɽɛkat**	**anɟn íɽɛkat**
	â	**á-ɟn-íɽɛkat**	**ánɟn íɽɛkat**
12A ‘we (INCL)’	**á**	**(a-ʊn-íɽɛkat)**	**arʊn/arɔn íɽɛkat**
	â	**(á-ʊn-íɽɛkat)**	**árʊn/árɔn íɽɛkat**
2A ‘you (PL)’	**á**	**a-nn-íɽɛkat**	**anɔn íɽɛkat**
	â	**á-nn-íɽɛkat**	**ánɔn íɽɛkat**
3A ‘they’	**á**	**-**	**akín ɪɽɛkat**
	â	**-**	**ákɪn ɪɽɛkat**

Examples with the 3 subject pronominal follow here. C-**arə́ʈʊk** in the example below patterns with the non-dependent verbs: it always occurs with a concord.

ɔ-t̪t̪ɛ	**p-íʈé.t**	**lɔ́n**	**él-l-í**	**mɛ́ɲcén**
PERS-your_father	C-say:COMPL	words	DEM-C-NEARSP	some_time_ago

á-k-kw-árət̪ʊk	**íɔ**	**a-kw-íʈɛ.kat**	**ɪttĭ …**
CONJ-3-C-still	die:DEPINCOMPL	CONJ-3-say:DEPPRFV	that

your father said these things some time ago before he died, he said … (lit.: when he was still to die) (Genesis 50:16)

k-kw-át̪t̪-ɪɔt	**ɔ-nɛnní**	**a-kw-ɔ́ʈəkɔ**	**kəpá**
3-C-ITVEN:COMPL-find:DEPINCOMP	PERS-Nɛnnɪ	CONJ-3-eat:DEPINCOMPL	meat

s/he found Nɛnnɪ eating meat

6.3. Common noun subject pronominal clitics

There is a set of common noun subject pronominal clitics that pronominalizes common nouns. Like the bound person subject pronominals, the bound common noun subject pronominals are pro-clitic to the predicate. They are segmentally the same as the concords, but pattern tonally with the 3 (and 3A) pronominal subject clitics with person reference: they add a high tone to the first mora of the predicate to which they are attached. This high tone lowers the high or falling tone of (Dependent) Incompletives of tone classes IIA and IIB, which have a high or falling tone on the second or third mora (see chapter 12.4.2 for the tone classes). In other TAMs the high tone comes in addition to the high or falling tone of the verb.

The subject pronominal clitics are represented in the table below. The last column gives the combinations of pronominal clitic and concord. The obstruent pronoun clitic and concord combinations are all voiceless, and remain voiceless when preceded by a word with a final vowel. They are therefore represented with a double consonant. The nasal combinations as well as **l-l** and **w-w** are underlyingly geminated but realized without length. For this reason they are represented as a single consonant. Note that underlyingly geminated (PRO-C) **ŋ** and **w** are not deleted in case of a vowel-final preceding word.

Table 39 Pronoun clitics and concords combined

noun class	*C*	*common noun subj. pronominal clitic*	*pronominal clitic + concord*
p	**p-**	**p-** + tone pattern	**p-p-** + tone pattern
ṭ	**ṭ-**	**ṭ-** + tone pattern	**ṭ-ṭ-** + tone pattern
t	**t-**	**t-** + tone pattern	**t-t-** + tone pattern
c	**c-**	**c-** + tone pattern	**c-c-** + tone pattern
k, **kw** subcl. **k** subcl. **kw**	 **k-** **k-**	 **k-** + tone pattern **kw-** + tone pattern	 **k-k-** + tone pattern **k-k-** + tone pattern
m	**m-**	**m-** + tone pattern	**m** + tone pattern (< **m-m**)
n	**n-**	**n-** + tone pattern	**n** + tone pattern (< **n-n**)
ɲ	**ɲ-**	**ɲ-** + tone pattern	**ɲ** + tone pattern (< **ɲ-ɲ**)
ŋ	**ŋ-**	**ŋ-** + tone pattern	**ŋ** + tone pattern (< **ŋ-ŋ**)
l	**l-**	**l-** + tone pattern	**l** + tone pattern (< **l-l**)
∅, **w** subcl. ∅ subcl. **w**	 **w-** **w-**	 **w-** + tone pattern **w-** + tone pattern	 **w** + tone pattern (< **w-w**) **w** + tone pattern (< **w-w**)

An example with a nominal common noun subject and one with pronominal substitution follow here:

ana	**pálla**	**p-ɔʈəkɔ́.t**
and	cat	C-eat:COMPL

and the cat has eaten it

ana	**p-p-ɔ́ʈəkɔ́.t**
and	PRO-C-eat:COMPL

and it (the cat) has eaten it

Two further examples follow here. In the first, the subject is taken up by a pronoun after **ana** ‘and’. In the second, the subject pronoun is co-referent with the object noun of the preceding clause:

ṭ-ɪkkɔ	**cɪk**	**kárəṯṯóm**	**ṭ-ɔpərɔ́t**	**ana**	**ṭ-ṭ-ɔ́kɪṭak**
NOM-sit	VREF	Khartoum	C-good	and	PRO-C-bad

staying in Khartoum is good and bad (lit.: staying in Khartoum is good and it is bad)

ɔ-kʊmáŋ	**p-ɔ́nó**	**cúccû**	**ana**	**c-c-ɔ́pərɔ̂t**
PERS-Kʊmaŋ	C-have	bead	and	PRO-C-good

Kʊmaŋ has a necklace and it is beautiful

6.3.1. Subject referencing common nouns denoting people

Some common nouns refer to people. In a subordinated clause with a subject that is co-referent with a common noun in the main clause that denotes a person, preferably, a common noun pronoun is used:

kəllán	**k-á.ɽə́kɔ́**	**n̪úɽít**	**ámmá**	**k-k-íamâ.t**
old_woman	C-eat:INCOMPL	food	if	PRO-C-become_hungry:COMPL

the old woman eats food when she is hungry

n̪ɔmɔccɔ	**n̪-ɔŋɔn̪.é**	**ɪttɪ**	**n̪-n̪-ântán**
old_woman	C-like:COMPL	that	PRO-C-come:INCOMPL

the old man wanted to come

It is, however, not impossible to switch to the 3 personal pronoun in the subordinated clause. In the example below, co-reference of the subject of the main clause and the subordinate clause is possible, but not assumed on the basis of the utterance alone. The context must make clear to whom the 3 personal pronoun refers.

n̪ɔmɔccɔ	**n̪-ɔŋɔn̪.é**	**ɪttɪ**	**k-kw-ântán**
old_woman	C-like:COMPL	that	3-C-come:INCOMPL

the old man wanted him/her to come / the old man wanted to come

In stories, however, it is not uncommon to find 3 personal pronouns instead of common noun pronouns in subordinate clauses. In the next sentence, from an animal story, the jackal (**aləpaccûn̪**) is pronominalized by the 3 personal pronoun clitic **kw**- after **ɪttɨ̌** and then again after the subjunctive particle **â**. The squirrel (**ŋərrɔ̂ŋ**), which is nominal object in the clause introduced by **ɪttɨ̌**, is pronominalized by the (elided) common noun subject pronominal **ŋ** (**á-ŋ-ɔ́rrəpɔ́** > **á-rrəpɔ́**). In the third clause, both the jackal (as the subject of 'eat') and the squirrel (as the object of 'eat') are pronominalized by personal pronouns:

aləpaccúṯ	**w-ɪʈɛ.káṯɛ**	**nɔ-cịkịt**	**c-ʊŋ**	**ɪttɪ**
jackal	C-say:PST	on-heart	C-POSS3	that

k-kw-ámɪkkɔt	**ŋərrɔ́ŋ**	**á-rrə́pɔ́**	**ń-tɔ́-pírá**
3-C-deceive:INCOMPL	squirrel	SUBJ-(PRO-)move_down:DEPINCOMPL	with-up_on-tree

á-kw-ɔ́ʈə́kɔ́-kɔ̂k
SUBJ-3-eat:DEPINCOMPL-O3

the jackal said by himself that he would trick the squirrel so that he (the squirrel) would come down from the tree so that he (the jackal) would eat him

In the next sentence, the cat is first pronominalized by a common noun pronoun (on the verb 'call') then by a personal pronoun (on the verb 'say to'). In the last clause, the jackal is pronominalized by a personal pronoun as object of 'say to':

a-pə́lla	**akkakat**	**a-p-ákkar.at**	**áləpaccôṯ**
CONJ-cat	come:DEPPRFV	CONJ-PRO-call:DEPPRFV	jackal

a-kw-ɔ́mɛ.kaṯ-ɔ́k	**ɪttɪ …**
CONJ-3-tell:DEPPRFV-O3	that

and the cat came and called the jackal and he said to him: "how are you, I hope you are fine?" ('The story of the jackal')

6.4. Object pronouns

Object pronouns come after the verb. Object pronouns refer only to humans (including animals that act like humans, as found in stories). Non-human objects are not pronominally expressed. Compare the two sentences below. In the first sentence it is also possible, though not preferred, to omit the object pronoun. In the second it cannot be present.

m-p-ɔnɔ́	**pəʈɛ**	**ana**	**m-p-ɔŋɔṯ-ɔ̂k**
1-C-have	husband	and	1-C-like:COMPL-O3

I have a husband and I love him

m-p-ɔnɔ́	**cúccú**	**ana**	**m-p-ɔŋɔṯ.ɛ̂**
1-C-have	necklace	and	1-C-like:COMPL

I have a necklace and I like it

The object pronominals with singular reference (1, 2 and 3) come in four paradigms. The choice between the first three of these paradigms is conditioned by the morphology of the verbal TAM and the tone class of the verb involved (see chapter 12.4.2); I call these paradigms group I, group II and group III. The forms of group I and group III in some cases interact with the preceding verb in ways that do not necessarily follow from phonological rules, and the initial **k** of the group II forms is epenthentic. The singular object pronouns of the first three paradigms are clitic.

The singular forms in the fourth paradigm mark a second object; they are free pronouns. This paradigm lacks first person forms (1, 12 and 1A) since in case of presence of both a first person object and a second or third person object, the first person object always comes first, due to the person hierarchy between objects (see futher down in this section).

The object pronouns with plural reference (12, 1A, 12A, 2A and 3A) each have one form. Because the 2A and 3A pronouns also function as second objects and are thus free pronouns, not clitics, I regard the whole set as free pronouns. The plurals of group I, II and III might also be regarded as bound pronouns, but there is no compelling reason to do so: assimilation processes occur in just the same way as expected between two separate words.

Whereas the bound subject pronouns have a tonal trace of the persona prefix **ɔ́**-, the object pronouns lack this, as can be seen from the 3 and 3A object pronouns, which are low-toned. The 1 and 2 object pronouns of group I and II are represented as nasals with a high tone. In prepausal position this high tone is realized on the final vowel of the verb to which the pronoun is attached. In non-prepausal position the high tone will lower and may be realized on the next word (analogous to the Tone Shift Rule and the Tone Reappearance sub-Rules).

For comparison, the full pronouns are given in the first column of the table below.

Table 40 Object pronouns and clitics

Full pronouns	*Object clitics (realizations)*			*Second object pronouns*
	group I	group II	group III	
1 **ɔ́ún**	**-ń**	**-kín**	**-ín**	–
2 **ɔ́úŋ**	**-ŋ́**	**-kúŋ**	**-úŋ**	**ŋúŋ**
3 **ɔ̂k**	**-k**	**-kɔk**	**-ɔk**	**ŋɔk**
12 **ɔrǐt**	**tǐt**			–
1A **ɔnń̨n**	**nń̨n**			–
12A **ɔrún/ ɔrɔ́n**	**tún/tɔ́n**			–
2A **ɔnɔ́n**	**nɔ́n**			
3A **ɔkîn**	**kın**			

The next part mentions the tone classes and TAM-stems of verbs. Verbs of tone class I have an all-low tone pattern. Verbs of tone class IIA have at least three morae and have a high tone on their second mora while the other morae are low. Verbs of tone class IIB consist of two or three morae and have a falling tone on their final mora while the preceding mora(e) is/are low. For TAMs and TAM-stems see chapter 12. Lumun verbs are either vowel-final or t-final.

Group I object pronouns

Group I object pronouns (**-ń**, **-ŋ́**, **-k**, **tǐt**, **nń̨n**, **tún/tɔ́n**, **nɔ́n**, **kın**) are used after:

- incompletive, dependent incompletive and dependent completive TAM-stems of vowel-final verbs of tone classes I and IIA (these forms end in **ɔ**, **ɛ** or **a**);
- Imperatives of vowel-final verbs of tone classes I and IIA (these forms end in **í**, **ɛ** (not **ɛ́**) or **a**, and occasionally in **ʊ**).

Pronouns of this paradigm are not used with verbs ending in the benefactive suffix **(ɪ)nɛ**.

An example paradigm with the Imperative of the verb **ɔkə́n̰accɛ** ‘watch’ (tone class IIA) follows here. The Imperative is **ɔkən̰accɛ**.

ɔkən̪accé-n ‘watch me!’
ɔkən̪accɛ-k ‘watch him/her!’
ɔkən̪accɛ nɨ́n ‘watch us (EXCL)!’
ɔkən̪accɛ kɪn ‘watch them!’

An example paradigm with the Incompletive of the verb **ɪmma** ‘see’ (tone class I) follows here. The incompletive TAM-stem of this verb is **ímma** + H. The tonal effects are in accordance with the tone rules specified in chapter 3.3. The final falling tone in the example with the 3SG object pronoun is the realization of the high tone that comes with the incompletive TAM-stem of **ɪmma** (probably on underlying **-ɔk**, of which the vowel is deleted after **a**, 3rd example in the paradigm); the same is true for the falling tone on the 3PL object pronoun (last example). The initial obstruents of the plural pronominals are pronounced with lenition (as between vowels).

ʊl n̪ímmá-n ‘the people will see me’
ʊl n̪ímmá-ŋ ‘the people will see you’
ʊl n̪ímmâ-k ‘the people will see him/her’
ʊl n̪ímma tɨ̌t ‘the people will see us (you and me)’
ʊl n̪ímma nɨ́n ‘the people will see us (EXCL)’
ʊl n̪ímma tʊ́n ‘the people will see us (INCL)’
ʊl n̪ímma nɔ́n ‘the people will see you (PL)’
ʊl n̪ímma kî̀n ‘the people will see them’

Imperatives based on **ɔ**-final verbs of tone classes I and IIA end in **í** and in some rare cases in **ʊ** (see table 47). Such Imperatives take object pronouns from group I, though the forms with a singular object pronominal do not result from a regular process of attachment. The final vowel of the Imperative (**í** or **ʊ**) changes into **ɔ**, and the high tone of the final **ɪ** is lost, as can be seen upon attachment of the 3 object pronoun. Both the vowel change and the loss of high tone are not expected from general morpho-phonological and morpho-tonological processes. The combination with object pronouns with plural reference is morpho-phonologically and morpho-tonologically regular.

Examples with the Imperative **ɔmɪccí** ‘greet!’ (< **ɔmíccɔ** ‘greet’, tone class IIA) follow here.

ɔmɪccɔ́-n	‘greet me!’
ɔmɪccɔ-k	‘greet him/her!’
ɔmɪccɪ nį́n	‘greet us (EXCL)!’
ɔmɪccɪ kîn	‘greet them!’

Examples with the Imperative **ɔʈʊ** (< **ɔʈɔ** ‘throw at’, tone class I) follow here. Note, however, that only in a few cases the Imperative of a verb of tone class I ends in **ʊ**. By contrast, Imperatives of **ɔ**-final verbs of tone class IIB all take final **ʊ**. In the paradigm below, the use of (singular) object pronouns of group II was rejected.

ɔʈɔ́-n	‘throw at me!’
ɔʈɔ-k	‘throw at him/her!’
ɔʈʊ nį́n	‘throw at us (EXCL)!’
ɔʈʊ kɪn	‘throw at them!’

Group II object pronominals

Object pronouns of group II (**-kín**, **-kúŋ**, **-kɔk**, **tĭt**, **nín**, **tún**, **nɔ́n**, **kɪn**) are used after:

- incompletive, dependent incompletive and dependent completive TAM-stems of vowel-final verbs of tone class IIB (these forms end in **ɔ**, **ɛ** or **a**);
- Imperatives of vowel-final verbs of tone class IIB (these forms end in **ʊ**, **ɛ** or **a**).

The morpho-tonological effects conform to the tone rules specified in chapter 3.3, except in some cases of attachment of the 3 object pronominal **-kɔk**. A case is presented below in which **-kɔk** is unexpectedly realized with a falling tone, though there is no preceding high tone that can shift.

An example paradigm with the Incompletive of the verb **ɔkɛ̂** ‘shave’ follows here. The incompletive TAM-stem of this verb is **akɛ̂**. C-**akɛ̂**

+ **-kɔk** would be expected to result in C-**akɛ́kɔk**, but gives C-**akɛkɔ̂k** instead. The other forms conform to expectation, including, for example, the lowering of the verbal contour before a pronominal with a high tone (see 3.4.1). The initial **k** of the singular pronominals is epenthetic; it is not part of the full free pronouns of which all object pronominals (like all subject pronominals) are shortened forms.

pʊl pakɛ-kín ‘the person will shave me’
pʊl pakɛ-kúŋ ‘the person will shave you’
pʊl pakɛ-kɔ̂k (expected: p**akɛ̂** + **-kɔk** > ***pakɛ́kɔk**)
‘the person will shave him/her’
pʊl pakɛ́ tɪt ‘the person will shave us (you and me)’
pʊl pakɛ nɟ́n ‘the person will shave us (EXCL)’
pʊl pakɛ tɔ́n ‘the person will shave us (INCL)’
pʊl pakɛ nɔ́n ‘the person will shave you (PL)’
pʊl pakɛ́ kɪn ‘the person will shave them’

An example paradigm with the Imperative of the verb **ɛɛ̂** ‘stab, blow’ follows here. The Imperative is **ɛɛ**. Note that the 3 pronominal has a low tone here (which is expected from the tone rules: there is no high tone involved at all).

ɛɛ-kín ‘stab me!’
ɛɛ-kɔk ‘stab him/her!’
ɛɛ nɟ́n ‘stab us!’
ɛɛ kɪn ‘stab them!’

Imperatives based on **ɔ**-final verbs from tone class IIB end in **ʊ**. This **ʊ** is lowered to **ɔ** upon attachment of **-kín** ‘me’ or **-ɔk** ‘him, her’. Before a plural pronoun clitic, **ʊ** remains unchanged.

Imperative: **ɔccʊ** (< **ɔccɔ̂** ‘receive, take’)
ɔccɔ-kín ‘take me’ (***ɔccʊ-kín**)
ɔccɔ-kɔk ‘take him!’
ɔccʊ nɟ́n ‘take us!’
ɔccʊ kɪn ‘take them!’ (***ɔccɔ kɪn**)

Imperative: **ɔkkwʊ** (< **ɔkkwɔ̂** ‘hit’)
ɔkkwɔ-kín ‘hit me!’ (*__ɔkkwʊ-kín__)
ɔkkwʊ kɪn ‘hit them!’ (*__ɔkkwɔ kɪn__)

For comparison, before a common noun as object the vowel of the Imperative remains **ʊ**:

ɔccʊ kɨ̌t ‘take the wild chicken!’
ɔccʊ pɔ́k ‘take the foam!’
ɔccʊ kat ‘take the grasshopper!’

An exception is the verb **ɔmmâ** ‘not know’. This verb takes group I object pronouns, for example:

pʊl pɔmmâ-k the person does not know him/her

Group III object pronominals

Group III object pronouns (**-ín**, **-ʊ́ŋ**, **-ɔk**, **tɨ̌t**, **nín**, **tʊ́n**, **nɔ́n**, **kɪn**) are used after:

- **t**-final verb forms (i.e. (dependent) incompletive and dependent completive TAM-stems of **t**-final verbs; completive TAM-stems of vowel-final verbs; dependent perfective TAM-stems of all verbs);
- verb forms ending in **t̪ɛ** or **t̪é** (i.e. completive TAM-stems of **t**-final verbs; Imperatives of **t**-final verbs; pasts TAM-stems of all verbs);
- Benefactive verb forms, whether ending in **-(ɪ)nɛ**, **-(ɪ)nt̪ɛt**, **-kant̪ɛt** or **-(ɪ)nɛt**, and forms of the verb **ɛt̪êt** ‘give’.

Notably, all TAM-forms based on **t**-final verbs take object pronouns of group III.

Upon attachment to verb forms ending in **t̪ɛ**, **t̪é**, **-(ɪ)nɛ**, **-(ɪ)nt̪ɛt**, **-kant̪ɛt** or **-(ɪ)nɛt** the vowel-initial pronoun clitics replace the final segments **ɛ** or **ɛt**. The consonant initial object pronouns come after the full verb form.

Example paradigms with the Incompletive of the verb **ɔccíʂkɔt** ‘hear, listen’ and with the Dependent Perfective of **ɔmíccɔ** ‘greet’ follow here. The Incompletive of **ɔccíʂkɔt** ‘hear, listen’ is C-a**ccíʂkɔt** + H, the Dependent Perfective of **ɔmíccɔ** is **ɔmíccat**. The final **t** in these verbs changes to **ṯ** [ð] before the vowel-initial pronominals. In the other cases, final **t** assimilates to the initial consonant of the object pronoun. In the second paradigm, the subject **pʊl** ‘person’ is preceded by the conjunctive marker **á** ‘and’.

pʊl paccíʂkɔṯ-ín	‘the person will listen to me’
pʊl paccíʂkɔṯ-úŋ	‘the person will listen to you’
pʊl paccíʂkɔṯ-ôk	‘the person will listen to him/her’
pʊl paccíʂkɔt tĭt/tɪt	‘the person will listen to us (you and me)’
pʊl paccíʂkɔt nʂ́n	‘the person will listen to us (EXCL)’
pʊl paccíʂkɔt tʊ́n	‘the person will listen to us (INCL)’
pʊl paccíʂkɔt nɔ́n	‘the person will listen to you (PL)’
pʊl paccíʂkɔt kîn	‘the person will listen to them’

apʊ́l ɔ́míccaṯ-ín	‘and the person greeted me’
apʊ́l ɔ́míccaṯ-úŋ	‘and the person greeted you’
apʊ́l ɔ́míccaṯ-ôk	‘and the person greeted him/her’
apʊ́l ɔ́míccaṯ tĭt/tɪt	‘and the person greeted us (you and me)’
apʊ́l ɔ́míccaṯ nʂ́n	‘and the person greeted us (EXCL)’
apʊ́l ɔ́míccaṯ tʊ́n	‘and the person greeted us (INCL)’
apʊ́l ɔ́míccaṯ nɔ́n	‘and the person greeted you (PL)’
apʊ́l ɔ́míccaṯ kîn	‘and the person greeted them’

The following paradigm show the forms with the Completive of **ɔmíccɔ** ‘greet’, C-**ɔmɪccôt**. Before a vowel-initial object pronominal the completive morpheme **t** changes to **r**. Before a consonant-initial object pronoun, completive **t** assimilates to the following consonant.

ʊkʊl w-ɔmɪccɔ́r-ín	‘the child has greeted me’
ʊkʊl w-ɔmɪccɔ́r-úŋ	‘the child has greeted you’
ʊkʊl w-ɔmɪccɔ́r-ɔk	‘the child has greeted him/her’
ʊkʊl w-ɔmɪccɔ́t tɪt	‘the child has greeted us (you and me)’
ʊkʊl w-ɔmɪccɔ́t nʂ́n	‘the child has greeted us (EXCL)’
ʊkʊl w-ɔmɪccɔ́t tʊ́n	‘the child has greetted us (INCL)’

ʊkʊl w-ɔmɪccɔ́t nɔ́n ‘the child has greeted you (PL)’
ʊkʊl w-ɔmɪccɔ́t kɪn ‘the child has greeted them’

Tonal realizations of the 1 and 2 object pronouns (-**ín**, -**úŋ**) are not always as expected, as in the following sentence with the Completive verb C-**ɔkkwɔ́t** (< **ɔkkwɔ̂** ‘hit’):

pən̰ɔk **p-ɔkkwɔ.r-în**
stone C-hit:COMPL-O1

the stone has hit me

A paradigm with a verb form ending in -**n̰ɛ** follows here. It is the Completive verb C-**ɔccį́kɔ́n̰ɛ** (< **ɔccį́kɔt** ‘hear, listen’).

pʊl p-ɔccį́kɔ́n̰-ín ‘the person has listened to me’
pʊl p-ɔccį́kɔ́n̰-úŋ ‘the person has listened to you’
pʊl p-ɔccį́kɔ́n̰-ɔk ‘the person has listened to him/her’
pʊl p-ɔccį́kɔ́n̰ɛ tĭt/tɪt ‘the person has listened to us (you and me)’
pʊl p-ɔccį́kɔ́n̰ɛ nį́n ‘the person has listened to us (EXCL)’
pʊl p-ɔccį́kɔ́n̰ɛ tʊ́n ‘the person has listened to us (INCL)’
pʊl p-ɔccį́kɔ́n̰ɛ nɔ́n ‘the person has listened to you (PL)’
pʊl p-ɔccį́kɔ́n̰ɛ kɪn ‘the person has listened to them’

Some examples with the Imperative **ɔccį́kɔn̰ɛ́** ‘listen!’ (< **ɔccį́kɔt** ‘hear, listen’) follow here:

ɔccį́kɔn̰-ín ‘listen to me!’
ɔccį́kɔn̰-ɔ̂k ‘listen to him/her!’
ɔccį́kɔn̰ɛ nį́n ‘listen to us (EXCL)!’
ɔccį́kɔn̰ɛ kîn ‘listen to them!’

Some examples with forms of the Benefactive verbs **ɔcɔ́ɣɪnɛ** ‘stand for sb., wait for sb.’, **ɛrɛnɛ** ‘talk to sb.’ and **ɛrɛnn̰ɛt** ‘talk to sb. at/about’, and some examples with forms of **ɛn̰ê̂t** ‘give’ are the following:

With Imperative **ɔcɔɣɪnɛt** (< **ɔcɔ́ɣɪnɛ** ‘stand for sb., wait for sb.’):

ɔcɔʈɪn-ín ‘wait for me!’
ɔcɔʈɪn-ɔk ‘wait for him/her!’
ɔcɔʈɪnɛt nɻ́n ‘wait for us (EXCL)!’
ɔcɔʈɪnɛt kɪn ‘wait for them!’

With Incompletive C-**érɛnɛ** + H (< **ɛrɛnɛ** ‘talk to sb.)

ʊl ʈ̪-érɛn-úŋ ‘the people will talk to you’
ʊl ʈ̪-érɛn-ɔ̂k ‘the people will talk to him/her’
ʊl ʈ̪-érɛnɛt tɨ̌t/tɪt ‘the people will talk to us (you and me)’
ʊl ʈ̪-érɛnɛt nɔ́n ‘the people will talk to you (PL)’
ʊl ʈ̪-érɛnɛ kî̀n ‘the people will talk to them’

With Past C-**ɛrɛkánʈ̪ɛt** (< **ɛrɛnʈ̪ɛt** ‘talk to sb. at/about’)

ʊl ʈ̪-ɛrɛkánʈ̪-úŋ ‘the people will talk to you about it’
ʊl ʈ̪-ɛrɛkánʈ̪-ɔk ‘the people will talk to him/her about it’
ʊl ʈ̪-ɛrɛkánʈ̪ɛt tɨ̌t/tɪt ‘the people will talk to us (you and me) about it’
ʊl ʈ̪-ɛrɛkánʈ̪ɛt nɔ́n ‘the people will talk to you (PL) about it’
ʊl ʈ̪-ɛrɛkánʈ̪ɛt kɪn ‘the people will talk to them about it’

With Completive C-**ɛ́ʈ̪ɛt** (< **ɛʈ̪ɛ̂t** ‘give’)

pʊl pɛ́ʈ̪ín ‘the person has given it to me’
pʊl pɛ́ʈ̪ɔk ‘the person has given it to him/her’
pʊl pɛ́ʈ̪ɛt tɨ̌t/tɪt ‘the person has given it to us (you and me)’
pʊl pɛ́ʈ̪ɛt nɻ́n ‘the person has given it to us (EXCL)’
pʊl pɛ́ʈ̪ɛt kɪn ‘the person has given it to them’

Second object pronominals and person hierarchy

The forms **ŋúŋ** ‘you (SG)’ and **ŋɔk** ‘him/her’ (see also table 40) are used as the second in sequences of two object pronouns. A verb which can have a double object is **ɛʈ̪ɛ̂t** ‘give’. In case of two equivalent nominal objects, the recipient object comes first, then the patient object.

k-kw-ɛ́n̪ɛt **ɔ-kakká** **ɔ-cɛccɛ̂**
3-C-give:COMPL PERS-Kakka PERS-Cɛccɛ

s/he gave Cɛccɛ to Kakka

In sequences of object pronominals there is a person hierarchy (or person scale): first persons come before second and third persons, and second persons come before third persons. Third persons come before nouns referring to humans, whether with or without persona prefix, and these precede nouns with non-human reference. This means that there are no second-object forms of the first person pronouns (1, 12, 1A and 12A), and that expressions with double objects can be ambiguous. Some further examples with **ɛn̪ɛ̂t** 'give' follow here.

k-kw-ɛ́n̪-ín **ŋúŋ**
3-C-give-O1 $O_2$2

s/he gave you to me ; s/he gave me to you

k-kw-ɛ́n̪-ín **ŋɔ̂k**
3-C-give-O1 $O_2$3

s/he gave him/her to me ; s/he gave me to him/her

k-kw-ɛ́n̪ɛt **tɪt** **ŋɔ̂k**
3-C-give:COMPL O12 $O_2$3

s/he gave him/her to us ; s/he gave us to him/her

k-kw-ɛ́n̪ɛ́t **tɔ́n** **ŋɔ̂k**
3-C-give:COMPL O12A $O_2$3

s/he gave him/her to us ; s/he gave us to him/her

Violation of the person hierarchy leads to ungrammaticality:

***k-kw-ɛ́n̪-ɔk** **ŋúŋ**
3-C-give:COMPL-O3 $O_2$2

***k-kw-ɛ́n̪ɛt** **kɪn** **nɔ́n**
3-C-give:COMPL O3A O2A

The second-object pronouns **ŋúŋ** 'you (SG)' and **ŋɔk** 'him/her' cannot come after a full noun:

***k-kw-ɛ́n̪ɛt**	**ɔ-kʊkkʊ́**	**ŋɔ̂k**
3-C-give:COMPL	PERS-Kʊkkʊ	$O_2$3

In such a case the pronoun (of group III) comes first, and the interpretation is ambiguous:

k-kw-ɛ́n̪-ɔk	**ɔ-kʊkkʊ̂**
3-C-give:COMPL-O3	PERS-Kʊkkʊ

s/he gave Kʊkkʊ to him/her ; s/he gave him/her to Kʊkkʊ

The third person singular object clitic substitutes not only nouns with the persona prefix, but also common nouns denoting people and animals in stories acting as people. An example of the latter was given in 6.3.1.

It is sometimes possible to omit this clitic where it would normally be expected, as in the example below. The final part of a Lumun story is typically narrated in an accelerated fashion. In the sentence below, which is the last sentence of the story of the tortoise and the *ŋan̪̪tən̪̪tapɛ*-bird, omission of the pronominal object is part of this narrative acceleration:

… a-kw-ɔ́n̪-ɪat	**pʊ́l**	**p-ɔ́-nɔ́ppə́t**
CONJ-3-IT:DEPINCOMPL-find:DEPPFTV	person	C-of-Nɔppət

a-kw-ɔ́cʊkkwar.at	**cɪk**
CONJ-3-step_on.PLUR:DEPPRFV	VREF

mɔ́nɔ́	**a-pʊ́l**	**p-ɔ́-nɔ́ppə́t**	**í.ât**
until	CONJ-person	C-of-Nɔppət	die:DEPPRFV

and he found the person of Nɔppət and he stepped (on him) repeatedly until the person of Nɔppət died (App. IV, 162-163)

6.5. Pronouns as addressees in commands

6.5.1. Imperatives

Commands to a singular addressee are specialized Imperative forms (see chapter 12.5.2). In Imperatives, the addressee is not expressed pronominally. For example:

ɔɽək.ʊ
eat:IMP

eat it!

ɔnɛkkɛt̪.ɛ **cîk**
put_down:IMP VREF

put it down!

An exception is the irregular Imperative **ŋkɔ́** 'go!' (< **ɛ̂ɔ̂** 'go'). It is likely that the initial **ŋ** is historically the second person singular pronominal marker.

6.5.2. Commands to a plural addressee

Commands to a plural addressee consist of a pronominal form followed by the verb stem (the Dependent Incompletive TAM). The free 2A pronoun **ɔnɔ́n** is not used in this context. The 2A addressee has three variants, which can be used interchangeably:

ŋɔnɔ́n/ɔ́n-/ń-

ŋɔnɔ́n is the free pronoun, but without the persona prefix **ɔ́-**, so that **ŋ** is retained instead of elided between vowels. Like in vocatives of kinship terms and personal names, the persona prefix is absent from the addressive form of the pronoun. **ɔ́n-** and **ń-**are clitic forms of the addressive pronoun. Examples:

ŋɔnɔn **ɛɔ̂** **/ ɔn-ɛɔ̂** **/ n-ɛɔ̂**
2A go:DEPINCOMPL 2A-go:DEPINCOMPL 2A-go:DEPINCOMPL

go! (to plural addressee)

ŋɔnɔn ɔccíkɔt / ɔn-ɔccíkɔt / n-ɔccíkɔt lɔ́n pápênnaŋ
2A hear:DEPINCOMPL 2A-hear:DEPINCOMPL 2A-hear:DEPINCOMPL words properly

listen to my words carefully! (to plural addressee)

6.6. Hortative pronouns

Lumun hortatives are restricted to 12 and 12A persons. Some different forms are distinguished, which can be used interchangeably. The hortative pronominals precede the Dependent Incompletive TAM stem. The bimoraic forms are free pronouns, the others, which are shortened forms of the free ones, clitics. Initially, yet a few other forms were provided, which, however, I did not come across in speech nor in written text. They were later judged as not-acceptable or even non-existent. Since some confusion about these forms nevertheless remained, I provide them with a question mark and between parentheses. The free subject pronouns are given in the last column for comparison.

Table 41 Hortative pronouns and clitics

	hortative pronoun clitic	*full hortative pronoun*	*free subj. pronoun*
12	**cîr-**, **tîr-**, **ntîr-**	**círɪt**, (? **tírɪt**), **cáttɪt**, (? **ɲáttɪt**)	**ɔrǐt**
12A	(? **cʊn-**), **tôn-**, **tɔ̂n-**, **ntôn-**, **ntɔ̂n-**	**cúrʊn**, **cɔ́rɔn**, (? **túrʊn**), (? **tɔ́rɔn**), **cáttʊn**, (? **ɲáttʊn**)	**ɔrún**, **ɔrɔ́n**

Some examples follow here. Any of the other hortative pronominals with the same person reference could be used as well. The verbs are **ɔŋɔkɔ** 'rest', **ɔrɛ́kɔ** 'work', **ɔkkɔ̂t** 'do, make' and **ɔʈəkɔ̂** 'eat'.

círɪt ɔŋɔkɔ
HRT12 rest:DEPINCOMPL

let us rest

túrún ɔ́rɛ́kɔ
HRT12A work:DEPINCOMPL

let us do some work

cáttít **ɔʏɘ́kɔ́** **ŋúʏû**
HRT12 eat:DEPINCOMPL asida

let us eat the asida

tír-ɔ́rɛ́kɔ
HRT12-work:DEPINCOMPL

let us do some work

tɔ́n-ɔ́kkɔ́t **ɪ.ṯŏn**
HRT12A-do:DEPINCOMPL together

let us do it together

In the following sentence, only the first verb ('go') is preceded by a hortative pronoun. The second verb, which can still be understood as part of the hortatory expression, is preceded by a bound subject pronoun.

paṯṯí **cáttít** **ɛ́ɔ̋** **ír-ɔṯ-ɔkwáncɔt** **áʏəpʊ** **w-əʏɛk**
person HRT12 go:DEPINCOMPL 12-IT:DEPINCOMPL-search:DEPINCOMPL things C-some

Mister, let us go and find some animals (fr. written story)

6.7. Pronominals in comitative constructions

Comitative constructions have the following structure:

X (…) free pronoun PERS-Y or:
X (…) bound pronoun-PERS-Y

In these constructions, the free pronouns and the plural person pronominal subject clitics are used. The noun that refers to the added person(s) ('Y') must have the persona prefix **ɔ́-**. In kinship terms and personal names, the persona prefix is already present, to common nouns it must be added. The whole sentence is constructed as a plural, in the sense that only the plural pronouns can be used as comitatives, and that, for example, in imperatives the plural addressee form is chosen.

In the first example below, though only Lɔttɪ is directly addressed, the plural pronominal is used on the command. The 2A pronoun

ɔnɔ́n (or a shortened form **ɔ́n** or **ń**) preceding **ɔlalô** 'Lalʊ' functions as comitative. In the second example, on the other hand, the verb 'eat' is marked for second person singular**. ɔnɔ́n** and **ɔ́n**- as pronominals in comitative functions are possible here as well.

lɔttí	**n-ɛ̃**	**ɔ-nɔn**	**ɔ-lalô /**	**ɔn-ɔ-lalô /**	**n-ɔ-lalô**
Lɔttɪ	2A-go:DEPINCOMPL	PERS-2A	PERS-Lalʊ	2A-PERS-Lalʊ /	2A-PERS-Lalʊ

Lɔttɪ, go with Lalʊ!/Lɔttɪ and Lalʊ, go!

ŋín-n̰a	**akka**	**a-ɽákɪnɛ**	**ŋuɽú**	**n-ɔ-kakkâ**
what-QW	that	CONJ-(2-)eat_for:DEPINCOMPL	asida	2A-PERS-Kakka

why do you eat asida with Kakka?/ why do you and Kakka eat asida?

Two examples with the free 3A pronoun follow here:

kəllán	**k-ɔká.t**	**cɪk**	**ɔ-kín**	**ɔ-pɛɪ**	**n̰-əllék**
old_woman	C-be:COMPL	VREF	PERS-3A	PERS-child	C-alone

the old woman was alone with her child

n̰ɪpa	**n̰-ɔ-kʊkkʊ́**	**ɔ-kín**	**ɔ-kakkâ**
marriage	C-PERS-Kʊkkʊ	PERS-3A	PERS-Kakka

the marriage of Kʊkkʊ and Kakka

In the following examples, reference is initially made to a singular person, then a pronoun with plural reference follows (referring to this singular person and an added person), then the added person is mentioned in a construction with the plural pronoun as a comitative (the latter pronouns are underlined). In the second sentence below, the initial high tone on 'jackal' shows that the persona prefix **ɔ́**- is present on the noun.

m-p-á.p-p-ɔŋɔn̰.é	**ɪttɪ**	**ɔ-nin̰**	**n̰-áppʊn̰a**	**ɔ-nin̰**	**ɔ-cɛccê**
1-C-be:COMPL-C-like:COMPL	that	PERS-1A	C-play:INCOMPL	PERS-1A	PERS-Cɛccɛ

I wanted to play with Cɛccɛ

… a-kw-ɔ́kkarəttak.at	**a-kín**	**ɪkk.at**	**cɪk**
CONJ-3-return:DEPPRFV	CONJ.PERS-3A	sit:DEPPRFV	VREF

a-kín	**ɔ́rá**	**ɔ-kín**	**áləpaccûn̰**
CONJ.PERS-3A	cultivate:DEPINCOMPL	PERS-3A	PERS.jackal

and he returned and they started to cultivate, he and the jackal (‘The story of the jackal’)

Compare also:

k-kw-áa.t	**ɔ-kín**	**ɔ-nɛnnî**
3-C-come:COMPL	PERS-3A	PERS-Nɛnnɪ

s/he has come with Nɛnnɪ

ɔ-kín	**ṯ-aá.t**	**ɔ-kín**	**ɔ-nɛnnî**
PERS-3A	C-come:COMPL	PERS-3A	PERS-Nɛnnɪ

s/he has come with Nɛnnɪ*, also:* they have come with Nɛnnɪ

If the preceding pronoun has the conjunctive particle **á**, it is alternatively possible to use the conjunctive particle also on the comitative pronoun:

… a-kín	**ɔ́rá**	**a-kín**	**áləpaccôṯ**
CONJ.PERS-3A	cultivate:DEPINCOMPL	CONJ.PERS-3A	PERS.jackal

and they started to cultivate, he and the jackal (‘The story of the jackal’)

6.8. Constructions with the associative marker **aṯṯʊt**, **áṯṯʊ́t**

The free plural pronouns and the bound subject pronouns **ǐt**- (I and you), **ǐn**- (I and others), **ʊ́n-** (I and you and others) and **ɔ́n**- (you PL) can be followed by the associative marker **aṯṯʊt** (or **áṯṯʊ́t**) or its plural **aṯṯʊŋô̰n** (**áṯṯʊ́ŋô̰n**). **aṯṯʊt** is probably the realization of underlying **at**-C-**ʊt**, with **ṯ**-, agreeing with the preceding plural pronoun, as concord. An underlying structure **a**-C-C-**ʊt** is perhaps possible as well, though double concord is not common in the language. Double concord seems to occur in the subject focus marker used in Tɔɽəmaṯô̰n (**a**-C-C-), but there it may rather be a development of **a**k-C- (see chapter 19.1).

aṯṯʊt is further discussed in 10.4.2 (on numerals), since, instead of the plural marker -**ŋô̰n**, it also allows for the suffixation of a numeral.

The plural pronoun immediately preceding **aⱪⱪʊt** or **aⱪⱪʊŋɔ̂n** refers to the group as a whole. In order to compose this group, **aⱪⱪʊt** adds one person to it; **aⱪⱪʊŋɔ̂n** more than one person. 'I and you (SG)' can only be followed by **aⱪⱪʊt**, not by **aⱪⱪʊŋɔ̂n**, because, either way (whether the first person or the second person is added) only one person can be added in order to get 'I and you (SG)'. The other pronouns can be followed by **aⱪⱪʊt** or **aⱪⱪʊŋɔ̂n**. The choice depends on how the composition of the group is conceptualized, as the examples will show.

aⱪⱪʊt and **aⱪⱪʊŋɔ̂n** (or their high-toned variants) are used in one of the following constructions:

sg. pronoun + verb + pl. pronoun (clitic)- **aⱪⱪʊt/aⱪⱪʊŋɔ̂n**
pl. pronoun + verb + pl. pronoun (clitic)- **aⱪⱪʊt/aⱪⱪʊŋɔ̂n**

These constructions can have a comitative interpretation, but not necessarily so. They are used when the same action was performed or undergone at (around) the same time by somebody in relation to other(s), but not necessarily together with the other(s). Still there is a kind of 'group-conceptualization' about these constructions:

ɔ-rɪt	**ⱪ-aa.t**	**ɪr-áⱪ-ⱪ-ót**
PERS-12	C-come:COMPL	12-ASS-C-ASS

I came with you (SG), also: we came at the same time (i.e. one person (**áⱪⱪʊ́t**) was added so that the group finally consisted of me and you (SG). The opening of the clause with 'I and you (SG)' (which is also the final make-up of the group) induces the interpretation that 'I' was added, thus: I came with you (SG).

'I came with you (SG)' is commonly expressed as above, though the following is in principle possible as well:

m-p-aat	**ɪr-áⱪ-ⱪ-ót**
1-C-come:COMPL	12-ASS-C-ASS

'I came with you (SG)', I came at the same time as you did

Some further examples:

k-kw-áa.t **ɟn-áṯ-ṯ-ót**
3-C-come:COMPL 1A-ASS-C-ASS

s/he came with me/us, he came at the same time as I/we did (i.e. one person (**áṯṯót**) was added so that the group finally consisted of me and other(s). The opening of the clause with the third person singular excludes that **áṯṯót** refers to the first person singular, thus the clause cannot be interpreted as 'I came with him/her/them'.)

ɟn-ṯ-aa.t **ɟn-áṯ-ṯ-ót**
1A-C-come:COMPL 1A-ASS-C-ASS

I came with him/her/them, we came at the same time (i.e. one person (**áṯṯót**) was added so that the group finally consisted of me and other(s). The opening of the clause with 'I and others' (which is also the final make-up of the group) gives the interpretation that 'I' was added, thus: I came with him/her/them)

ɔ-kín **ṯ-aa.t** **ɟn-áṯ-ṯ-óŋ-ŋɔ̂n**
PERS-3A C-come:COMPL 1A-ASS-C-ASS-PL

they came with me/us, they came at the same time as I/we did (i.e. two or more persons (**áṯṯóŋɔ̂n**) were added so that the group finally consisted of me and other(s). The opening of the clause with the third person plural excludes that **áṯṯóŋɔ̂n** refers to the first person plural, thus the clause cannot be interpreted as 'we came with him/her/them'.)

ɟn-ṯ-aa.t **ɟn-áṯ-ṯ-óŋ-ŋɔ̂n**
1A-C-come:COMPL 1A-ASS-C-ASS-PL

I/we came with them (i.e. two or more persons (**áṯṯóŋɔ̂n**) were added so that the group finally consisted of me and other(s). The opening of the clause with 'I and others' (which is also the final make-up of the group) gives the interpretation that 'I' was added, thus: I came with him/her/them)

A textual example follows here. In the first, the participants of the event, 'they', are conceptualized as 'she added to **ɔpaṯṯɔ̂n** ('the people')'. The context of the sentence is that a girl has become pregnant without having undergone the rite of passage of being beaten while running together with the girls of her age group. This will cause mockery by her age mates.

ana	**ɔ-paṯṯ-ɔ́n**	**í-ṯ-á**	**k-kw-ɔ́ká.t**	**p-ɔ́nó**	**ɪttɪ**
and	PERS-person-PL	RES-C-COP	3-C-be:COMPL	C-have	that

k-kw-ápəɽəṯṯa	**ɔ-kín**	**áṯ-ṯ-út**	**ṭ-á.ccịrɔ́-k**	**ŋ.ŋɪn**
3-C-be_beaten_while_running:INCOMPL	PERS-3A	ASS-C-ASS	C-laugh:INCOMPL-O3	with:ABS

and the people together with whom she should have been beaten while running will laugh at her because of it (because she is pregnant without having undergone the proper rite of passage) (fr. written description)

In the next, **ɔrɔ́n** 'we (INCL)' is conceptualized as 'I added to you (PL)'. **ɔrɔn ṭarətʊk ɔrɔn áṯṯót** 'we were still we with one (I) added' would be possible here as well.

ɛl-l-ɪ	**ɪ-l-a**	**m-p-ɛrɛ́.t**	**appɪk**
DEM-C-NEARSP	RES-C-COP	1-C-speak:COMPL	all

akka	**m-p-arətʊk**	**ɔ-rɔn**	**áṯ-ṯ-út**
that	1-C-still	PERS-12A	ASS-C-ASS

all this I have said when I was still with you (PL) (John 14:25)

An example with **aṯṯʊŋ ŋốn** follows here. The husbands of the addressees are added to the speaker ('I'), together forming **ịn-** 'I and others'. The addressees (the wives) are not involved in the event of doing something:

ámmá	**ɔ́-llɛ́**	**p-aŋ-ɔ́n**	**ṭ-aá.t**	**ana**
if	PERS-husband	C-POSS2-PL	C-come:COMPL	and

n-ṭ-íná	**ákka**	**ịn-ɔkkɔt**	**ịn-áṯ-ṭ-ó-ŋốn**
2A-C-know:INCOMPL	that	1A-do:DEPINCOMPL	1A-ASS-C-ASS-PL

when your(PL) husbands come you will know what I will do with them

6.9. Reflexivity: 'oneself'

Lumun does not have a reflexive pronoun. Reflexivity is expressed by **ka** 'body' + possessive pronoun. Some examples follow here:

m-p-ɔŋɔṯ.ɛ́	**ɪttɪ**	**m-p-ímmat**	**ká**	**k-ɪn**	**ɪ-mɪrárɪ**
1-C-like:COMPL	that	1-C-see_at:INCOMPL	body	C-POSS1	in-mirror

I want to see myself in the mirror

lɔn	**ɪ-l-a**	**pʊ́l**	**p-ɔlləkké.nn̪ét**	**ká**	**k-ʊ́ŋ**
words	RES-C-COP	person	C-put_down_for:COMPL	body	C-POSS3

things which the man promised himself

pʊl	**p-ʊrək.án̪ɛ**	**ana**	**p-p-án̪n̪-ɪ.at**	**ká**	**k-ʊ́ŋ**
person	C-get_up:DEPPRFV	and	PRO-C-ITVEN:COMPL-find:DEPPRFV	body	C-POSS3

cí-nɔ́-kʊ́n̪tʊ́t	**k-ɔ-rʊé**
LOC-on-lip	C-of-river

the man woke up and found himself at the side of the river

7. Connexive and possessor pronouns

In this chapter I present the connexive and the possessor pronouns. The core function of the connexive is to establish a possessee-possessor relationship between two nouns. I gloss it as 'of'.

7.1. The connexive

The connexive proclitic (C-**ɔ**-) consists of the vowel **ɔ** preceded by a concord. The concord agrees with a preceding (pro)noun (X) that is modified by the connexive construction. The connexive proclitic is attached to a noun (Y) or a prepositional proclitic (PPC) and noun:

X C_x-**ɔ**-(PPC-)Y

Y cannot be a pronoun in this construction. For pronominal possessors there is a different set of forms.

7.1.1. Tone and morpho-phonology

Low tone

The connexive proclitic has a low tone. If preceded by a high or rising tone, it is realized with a high tone, following the rules of Tone Shift and Contour Simplification (see 3.3.1 and 3.3.2):

ʈʊk ʈɔ́-pʊl (< ʈʊk ʈɔ̂-pʊl < **ʈʊ̌k ʈɔ- pʊl**) 'the dog of the person'

When cliticized to a noun that starts with a vowel or with the velar nasal (which is then deleted between vowels), the two adjacent vowels:

- assimilate and shorten: **ɔ** + **ɛ** > **ɛ**; **ɔ** + **a** > **a**
- shorten: **ɔ** + **ɔ** > **ɔ**
- form a diphthong: **ɔ** + **i̱** > **ɔi̱**; **ɔ** + **u** > **ɔu**; **ɔ** + **ɪ** > **ɔɪ**; **ɔ** + **ʊ** > **ɔʊ**; **ɔ** + **ə** > **ɔə**

In case of assimilation of two vowels or two adjacent **ɔ**'s, the resulting vowel is generally realized short, but also allows for a realization with a little length (as is the general rule, stated in chapter 2.2.8). Thus, in the next example, the fusion of the Connexive and the initial vowel (the persona prefix) of *ɔkakkâ* (Kakka) is generally realized short, but can also have a little length:

pəlla **p-ɔ-kakkâ** (< **pəlla** + **pɔ-** + **ɔkakkâ**)
cat C-of.PERS-Kakka

the cat of Kakka

However, if a high tone is involved, the resulting vowel is realized short and with a high tone, unless in slow or carefully articulated speech. In case of underlying high + low tones, which, on a shortened vowel would be a falling tone on a non-final single mora, this complies with the Contour Simplification Rule. Likewise, in case of underlying low + high tones, which on a shortened vowel would be a rising tone on a non-final single mora, simplification to a high tone is expected, since, as stated in the chapter on Tone, rising tones occur only on word-final (prepausal) morae. Cf.:

ʈʊk **ʈ-ɔ́-kʊkkô**
dog C-of.PERS-Kʊkkʊ

the dog of Kʊkkʊ
(< ʈʊk ʈɔ̂kʊkkô < ʈʊk ʈɔ̂ ɔkʊkkô < **ʈʊ̌k ʈɔ- ɔkʊkkô**)

ʊkʊl **w-ɔ́ʈʈa**
child C-of.who

whose child (is s/he)? (lit.: the child of whom?)
(< ʊkʊl wɔ̌ʈʈa < ʊkʊl wɔɔ́ʈʈa < **ʊkʊl wɔ- ɔ́ʈʈa**)

Changed shape of certain nouns after the connexive

Certain nouns occur (or can occur) in a changed phonological shape when preceded by the connexive, e.g., C-**ɔ** + **ʊkʊl** > C-**ɔkkʊl**:

ɔ-t̪t̪án **p-ɔ-kkʊl**
PERS-father C-of-child
the father of the child

In these nouns, the non-geminated consonant following the first vowel becomes geminated, while the first vowel and the initial consonant of the noun (if present) are deleted. The tone pattern of the resulting word can be different from what is expected on the basis of the composing parts. A list of these nouns, which can also occur in changed form after the prepositional proclitics **ɪ-**, **nɔ-**, **tɔ-** an **t̪ɔ-**, is provided in chapter 4.4.

7.1.2. Semantics

The connexive expresses a possessor-possessee relationship between two nouns. The first element (X in the formula X C-**ɔ**-Y) is the possessee, the proclitic connexive is attached to the possessor (Y):

campal **c-ɔ́-púl** **í-p-ɔ́parí**
stick(k.o.) C-of-person RES-C-female
the *campal*-stick of the woman

kəʈi̯ttaŋ **k-ɔ́-kʊkkô**
knife C-of.PERS-Kʊkkʊ
the knife of Kʊkkʊ

The connexive construction can also express other than possessor relationships between nouns. Some examples follow here.

part of whole:

tacɔk **t-ɔ́-pərrɔk**
legs C-of-chair
legs of a chair

made of, consisting of:

cəʈ̪ána **c-ɔ-ʈ̪ərɔ́ma**
tassel C-of-ram
tassel of ram's hair (lit.: tassel of ram)

for the purpose of:

kɪrɛk **k-ɔ́-ʈ̪-ɔra** **ɪ-ttɔ́k** **nɔ-ʈ̪ampâŋ**
hoe C-of-NOM-cultivate in-farming_field on-flat_open_space
hoe for cultivating in a field on the plains (the ground there is less stony than on the slope of the mountain and requires a different type of hoe)

laɪ **l-ɔ́-kɛ́ccôk**
tamarind C-of-market
tamarind for the market (i.e. for selling at the market)

occupations:

pʊl **p-ɔ-ʈ̪ɔʈák**
person C-of-war
warrior, soldier

pʊl **p-ɔ-kəmɛl**
person C-of-hunting_party
hunter

ownership, association:

ʊl **w-ɔ-lị́cɔ́k**
people C-of-goats
the owners of the goats

place where somebody lives:

pʊl **p-ɔ-karəʈ̪ʈ̪ôm**
person C-of-Khartoum
person from Khartoum

'child of' in personal names:

ɔ-lɔ́ttɪ **l-ɔ́-maṯarɪ**
PERS-Lɔttɪ C-of.PERS-Maṯarɪ
Lɔttɪ (son) of Maṯarɪ

In these cases the concord **p**- (the general concord of singular nouns with the persona prefix) is not used. Instead, the name without persona prefix is interpreted as containing a noun class prefix, and agreement is with this noun class prefix (**l**- in the example above).

Foreign names with an initial sound that is not part of the Lumun inventory of sounds occurring word-initially are not reanalysed as containing a noun class prefix. In such cases the concord **ŋ**- is used:

ɔ-rúmɪa ŋ-aṯəríṯ 'Rumia (daughter) of Aṯərɪṯ'
ɔ-ɪúnɪc ŋ-alɛmîn 'Younis (son) of Alemin'
ɛ́rəmía[52] **ŋɔ-ómar** 'Jeremiah (son) of Umar'

ŋ- possibly comes from agreement with the noun class prefix **ŋ**- of a historical noun ***ŋʊkʊl** 'child' (today **ʊkʊl** 'child'). A historical noun ***ŋʊkʊl** is conceivable, since it would give a regular singular-plural pair (***ŋʊkʊl/ɲʊkʊl).** Moreover, words for the young of animals also typically come in this class pair (see chapter 4.3.5).

agent of actions expressed by a verbal noun:

ṯ-ɔŋwɔ **ṯ-ɔ́-píŋɲít**
NOM-sing C-of-singer
the singing of the singer

undergoer of actions expressed by a verbal noun:

ṯ-ɪɔ **ṯ-áʈəpʊ** **w-əʈɛk** (< **ṯ-ɔ́** + **aʈəpʊ**)
NOM-die C-of.things C-some
the dying of some animals

[52] The persona prefix **ɔ́**- is regularly elided before **ɛ**, see chapter 4.10.1.

patient of actions expressed by a verbal noun:

n̪-ɔkkwɔt **n̪-áɽəpʊ** **w-əɽɛk** (< **n̪-ɔ́** + **aɽəpʊ**)
NOM-kill C-of.things C-some

the killing of some animals

Leaving out the connexive in the example above (with a patient of the action) above gives a result that is still grammatical (see also chapter 4.6.1).

Readings of connexive constructions of the type X C_x-**ɔ**-PREP-Y follow here:

place where somebody lives:

ʊl **w-ɔ-nɔ-n̪t̪ɔk** **p-árrô**
people C-of-on-stone C-of.Lumun_people

the people of Lumun country (lit.: people of on stone of Lumun people) (**ʊl** + **w-ɔ-** + **nɔ-** + **pən̪t̪ɔk** + **p-ɔ-** + **arrô**)

occupation:

pʊl **p-ɔ-rɪ-ŋkwêl** (< **pʊl** + **pɔ-** + **ɪ-** + **kəmɛl)**
person C-of-in-hunting_party

person who joins in a hunting party (lit. person of in the hunting party)

ʊl **w-ɔ-rį̆-įmɔ̂n**
people C-of-in-porcupines

people hunting porcupines (lit.: people of in porcupines)

for use in a certain environment:

kuppəɽuŋ **k-ɔ-nɔ-əɽĭ**
bed_plank C-of-on-water

boat

7.1.3. Attributive and predicative use

Connexive constructions often function attributively but can also be used as predicates. The first example below illustrates attributive use, the second predicative use:

kərɛt **k-ɔ́-kkʊl** **k-ıé́**
cloth C-of-child C-new

the shirt of the child is new

k-kw-ɔ́ká.t **p-ɔ-mɔkənta** **m-în**
3-C-be:COMPL C-of-supporting_girls C-POSS1

she was (one) of my supporting girls
(i.e. girls that support a man during certain initiation rites: they fetch water, prepare food for guests, accompany the man on his visits, sing and dance)

In a predicative construction, a subject clitic can be attached to the connexive:

ɔ-ɔ́k **p-ɔ-mɔkənta** **m-în** / **k-kw-ɔ́-mɔkənta** **m-în**
PERS-3 C-of-supporting_girls C-POSS1 3-C-of-supporting_girls C-POSS1

she is (one) of my supporting girls

ɔ-ɔ́k **p-ɔ-karəṯṯôm** / **k-kw-ɔ́-karəṯṯôm**
PERS-3 C-of-Khartoum 3-C-of-Khartoum

s/he is from Khartoum

7.1.4. Independent use of a connexive construction

A connexive + noun can be used independently. In the first example, the concord **ŋ-** in **ŋ-ɔ́-ṯʊʊlı** agrees with **ŋəʔǐ** ‘water’; in the second example, the concord **k-** in **k-ɔ́-cɛccé** agrees with **kálam** ‘pen’.

a-əʈɪ[53]	**ŋ-ʊŋ**	**ŋ-ɔká.t**	**ŋ-ɛn̪îâ.t**	**ana**
CONJ-water	C-POSS3	C-be:COMPL	C-become_cool:COMPL	and

ŋ-ɔ́-n̪ʊʊlɪ	**ŋ-ɔká.t**	**ŋ-árə̀n̪ʊk**	**ŋ-áŋkɔ**	**ɪppa**
C-of-hyena	C-be:COMPL	C-still	C-be_hot:INCOMPL	hotly

and his water (i.e. of the cat) had become cold, but hyena's (water) was still very hot (fr. written story)

kálam	**k-aŋ**	**k-a.ɪk**	**p-əllɛ́k**
pen	C-POSS2	C-be:PR	C-alone

ana	**k-ɔ́-cɛccɛ́**	**k-á.ík**	**p-əllɛ̂k**
and	C-of.PERS-Cɛccɛ	C-be:PR	C-alone

your pen is different from Cɛccɛ's (pen) (lit.: your pen is alone and Cɛccɛ's (pen) is alone)

The following phrase allows for two interpretations. It can refer to the marriage of Kʊkkʊ and the marriage of Kakka (two different marriages), but also to their marriage to each other, because in case of coordinated "possessors" the connexive is used on both:

n̪ɪpa	**n̪-ɔ-kʊkkʊ́**	**ana**	**n̪-ɔ́-kakkâ**
marriage	C-of-Kʊkkʊ	and	C-of-Kakka

the marriage of Kʊkkʊ and the one of Kakka (the marriage of Kʊkkʊ and Kakka)

7.2. The absolute connexive

There is also an absolute form of the connexive: C-**ɛn**. The absolute connexive is homonymous with the demonstrative with anaphoric reference C-**ɛn** 'that'. It seems likely that both contain the pronominal base **ɛn** (for **ɛn** and C-**ɛn** 'that', see chapter 8). Possibly, the absolute connexive C-**ɛn** historically derives from the Connexive C-**ɔ** + **ɛn** 'of that'.

The absolute connexive is used in relativized possessor phrases:

[53] < **á-** + **ŋəʈɪ̌**

ʈakəɽʊk	**ɪ-ʈ-a**	**m-p-ɔɽəkɔ.t**	**ʈúŋkɛ**	**ʈ-ɛn**
chicken	RES-C-COP	1-C-eat:COMPL	liver	C-of:ABS

the chicken of which I ate the liver

It is also used for pronominal reference to non-humans in possessor role, irrespective of whether they are singular or plural. In such cases it translates as ‘its’ (or ‘their’):

ŋ-kw-íɔt	**kəmən**	**na**	**ɲúkúl**	**í-ɲ-ârran**	**ɔkʊrrɔ**
2-C-find:INCOMPL	rooms	where:REL	children	RES-C-young	engrave:DEPINCOMPL

kəʈət	**k-ɛ́n**	**k-á.ɲɔt**	**ɔpákkɔt**
door	C-of:ABS	C-open:INCOMPL	return:DEPINCOMPL

na	**cɟŋkɟ**	**ʊmmət**	**ŋ.ŋɪn**
where:REL	sun	come_up:DEPINCOMPL	with:ABS

you will find a house where little children are writing (a school). Its door opens to where the sun comes up (the east)

ana	**tʊɛ**	**t-á.kkʊnakɔ**	**ana**
and	river	C-smell:INCOMPL	and

mʊccɪrɪn	**mənna**	**m-akánn-ɟkkɔ**	**ŋəɽɪ**	**ŋ-ên**
Egyptians	even	C-NEG-drink:DEPINCOMPL	water	C-of:ABS

and the river will stink and even the Egyptians will not drink its water (Exodus 7:18)

ɔɽək.ʊ	**appɛnʈína**	**n-áɽɔl**	**w-ên**
eat:IMP	groundnuts	with-shells	C-of:ABS

eat the groundnuts with their shells!

7.3. Possessor pronouns

There are eight possessor pronouns corresponding to the eight personal pronouns. The possessor pronouns start with a concord that agrees with the noun that they modify. In the list below, the full subject personal pronouns are given between parentheses for comparison. How the 1 and 2 possessor pronouns should tonally be (best) represented is not clear.

1	C-**ĭn**, C-**ɪn**, C-**ín**	‘my’	(**ɔ́n**)
12	C-**ɔrɪt** +H	‘our (of you (SG) and me)’	(**ɔrĭt**)
2	C-**ăŋ**, C-**aŋ**, C-**áŋ**	‘your (SG)’	(**ɔ́ŋ**)
3	C-**óŋ**	‘his/her’	(**ɔ̂k**)
1A	C-**i̱n**	‘our (EXCL)’	(**ɔni̱n**)
12A	C-**ɔnnɔ́n**	‘our (INCL)’	(**ɔrún/ɔrɔ́n**)
2A	C-**ɔ́n**	‘your (PL)’	(**ɔnɔ́n**)
3A	C-**ɛ́n**	‘their’	(**ɔkîn**)

There is little indication that the connexive is a formative of the personal pronouns.

7.3.1. Tone

The possessor pronouns are largely tonally regular, but the tonal behaviour of ‘my’ and ‘your (SG)’, as well as of ‘our (of you (SG) and me)’ is not fully compatible with any of the tones. In prepausal position modifying an all-low noun or a noun with a final falling tone, ‘my’ and ‘your (SG)’ can be realized with a rising tone or with a low tone, apparently in free variation, which is compatible with a rising tone. For example: **pəlla pĭn** ‘my cat’ and **pəlla pɪn** ‘my cat’ (**pəlla** ‘cat’ is all-low). After a high or rising tone, ‘my’ and ‘your (SG)’ are realized with a falling tone, which could point at a low tone, for example: **t̪ʊk t̪în** ‘my dog’ (**t̪ŏk** ‘dog’ has a rising tone). There are, furthermore, instances of ‘my’ and ‘your (SG)’ that have a high tone in prepausal position, which is not compatible with a low tone, nor with a rising tone, only with a high tone. An example is provided in 7.3.3. The possessor pronoun functions predicatively there. Throughout the book some other examples can be found of prepausal predicative 1 and 2SG possessor pronouns with a high tone, however, cases with low tone are attested as well.

The 12 possessor pronoun is realized with a (final) low tone in prepausal position. In context, however, it receives a high tone from a preceding item on its first mora and brings a high tone to the next item, which points to an underlying L pattern with floating high tone:

ṭʊk	**ṭ-ɔ́rɪt**	**ána**	**pə́llá**	**p-ʊ́ŋ**
dog	C-POSS12	and	cat	C-POSS3

our dog (of you and me) and his/her cat

Examples of the possessor pronouns preceded by possessee nouns with various tones follow here.

Possessor pronouns preceded by low and falling tones: **ŋərɛ** 'work' and **kʊṭôt** 'lip, side'

1	**ŋərɛ ŋ-ĭn/ŋ-ɪn**	'my work'	**kʊṭʊ́t k-ĭn/k-ɪn**	'my lip'
12	**ŋərɛ ŋ-ɔrɪt**	'our work'	**kʊṭʊ́t k-ɔrɪt**	'our lip'
2	**ŋərɛ ŋ-ăŋ/p-aŋ**	'your work'	**kʊṭʊ́t k-ăŋ/k-aŋ**	'your lip'
3	**ŋərɛ ŋʊ́ŋ**	'his/her work'	**kʊṭʊ́t k-ʊ́ŋ**	'his/her lip'
1A	**ŋərɛ ŋ-ı́n**	'our work'	**kʊṭʊ́t k-ı́n**	'our lip'
12A	**ŋərɛ ŋ-ɔnnɔ́n**	'our work'	**kʊṭʊ́t k-ɔnnɔ́n**	'our lip'
2A	**ŋərɛ ŋ-ɔ́n**	'your work'	**kʊṭʊ́t k-ɔ́n**	'your lip'
3A	**ŋərɛ ŋ-ɛ́n**	'their work'	**kʊṭʊ́t k-ɛ́n**	'their lip'

Possessor pronouns preceded by high and rising tones: **ṭɔʧə́k** 'rope' and **ŋəʧĭ** 'water':

1	**ṭɔʧək ṭ-în**	'my rope'	**ŋəʧɪ ŋ-în**	'my water'
12	**ṭɔʧək ṭ-ɔ́rɪt**	'our rope'	**ŋəʧɪ ŋ-ɔ́rɪt**	'our water'
2	**ṭɔʧək ṭ-âŋ**	'your rope'	**ŋəʧɪ ŋ-âŋ**	'your water'
3	**ṭɔʧək ṭʊ́ŋ**	'his/her rope'	**ŋəʧɪ ŋ-ʊ́ŋ**	'his/her water'
1A	**ṭɔʧək ṭ-ı́n**	'our rope'	**ŋəʧɪ ŋ-ı́n**	'our water'
12A	**ṭɔʧək ṭ-ônnɔ́n**	'our rope'	**ŋəʧɪ ŋ-ônnɔ́n**	'our water'
2A	**ṭɔʧək ṭ-ɔ́n**	'your rope'	**ŋəʧɪ ŋ-ɔ́n**	'your water'
3A	**ṭɔʧək ṭ-ɛ́n**	'their rope'	**ŋəʧɪ ŋ-ɛ́n**	'their water'

Recall that for non-human possessors the absolute connexive C-**ɛn** is used (see 7.2.), which contrasts tonally with the 3A possessor C-**ɛ́n**.

ŋərɛ ŋ-ɛn	'its work'
kʊṭʊ́t k-ɛn	'its side'
ṭɔʧək ṭ-ên	'its rope'
ŋəʧɪ ŋ-ên	'its water'

7.3.2. Morpho-phonology

Phonological effects at the boundary of noun and possessor are regular. This means that in the examples above with **ŋərɛ** the concord **ŋ** of the possessor is deleted, and in the examples with **t̪ɔʈák** final **k** fully assimilates to the concord **t̪** of the possessor. Incidentally, however, the process of assimilation deviates from what is expected. This is the case with the items **páŋ** 'item of the same kind' and **ɔpáŋ** 'sibling'. Compare the first (irregular) example with **ɔpáŋ** 'sibling' with the second (regular) example with **parantáŋ** 'gourd'. After **ɔpáŋ** (and **páŋ**) the concord **p** changes to **k**:

ɔpaŋkîn	'my sibling'	
parantaŋ pîn	'my gourd'	[parandam bîn]

7.3.3. Possessor pronouns as predicates

Like the connexive construction, possessor pronouns can function as predicates. In the example below, the predicative 1SG possessor pronoun in prepausal position is represented with a high tone. It is, however, also possible to realize it with a low tone (without tonal changes in the sentence otherwise).

t̪ʊk	**én-t̪-í**	**t̪-á.ká**	**t̪-ín**
dog	DEM-C-NEARSP	C-be:INCOMPL	C-POSS1

this dog will be mine

Compare also the following two examples. The last element functions as the predicate:

pət̪ɔk	**p-ɪn**	**ém-p-í**
stone	C-POSS1	DEM-C-NEARSP

my country is this one (for example while pointing at a country on a map)

pət̪ɔk	**ɛm-p-ɪ**	**p-ín**
stone	DEM-C-NEARSP	C-POSS1

this country is mine

7.3.4. Reference

The personal possessor pronouns refer to humans: speech participants and third persons. With respect to third persons there is no difference between reference to nouns with the persona prefix and common nouns referring to humans. In the following example, **kɛ́n** 'their' refers to two human beings denoted by common nouns: **ʊkul** 'child' and **parı pɔ́kkʊl** 'the wife of the child'. The sentences come from a description of main events in the life of a boy/man.

ɔ-t̪t̪án	**p-ɔ-kkʊl**	**ana**	**ókól**
PERS-father	C-of-child	and	child

t̪-únınɛ	**parı**	**p-ɔ́-kkʊl**	**kəmən**	**k-ɛ́n**
C-build_for:INCOMPL	wife	C-of-child	rooms	C-POSS3A

the father of the boy and the boy will build for the boy's (future) wife their (the boy and his wife's) house (fr. written description)

Animal characters in stories are referred to by personal possessor pronouns. An example from a story called **t̪ʊʊlı ana pəlla** 'the hyena and the cat':

… a-t̪úʊlı	**ɔccíkat**	**lɔ́n**	**l-úŋ**
CONJ-hyena	hear:DEPPRFV	words	C-POSS3

and the hyena listened to his (the cat's) words (fr. written story)

7.3.5. Semantics

The personal possessor pronouns typically express possession, including of body parts. Kinship and relational terms are also typically used in combination with a possessor pronoun. For an overview of these terms, see chapter 4, and also Smits (2012). It is recalled here that the terms for father and mother (as well as for maternal uncle) have different forms for (kinship) relations with a first person, a second person and a third person. The terms indicating a kinship relation with a third person, for example **ɔt̪t̪ân** '(his, her) father', can be modified by a connexive construction which states the related person:

ɔ-t̪t̪án **p-ɔ-nɛnnî**
PERS-father C-of-Nɛnnɪ

the father of Nɛnnɪ

It is possible to add a plural possessor pronoun to a kinship term that is inherently possessed:

ɔ-ŋappá **p-ɔnnɔ́n**
PERS-my_father C-POSS12A

our(INCL) father (i.e. father of me and other people who are not my siblings (typically said about God))

Occasionally the personal possessor pronouns also express other semantic relations, as in the following example:

ámmá **ŋ́-kw-ɔ́nú** **nə̀ɽé** **n-úŋ**
if 2-C-have fear C-POSS3

á-ɛ̃ **ɪ-cʊɽé** **c-ɔ́-pírá** **ém-p-ə́ɽê**
SUBJ-(2-)go:DEPINCOMPL in-buttock C-of-tree DEM-C-DIST

If you are afraid of him (lit. if you have his fear), you go under that tree over there (‘The story of the jackal’)

The non-human possessor pronoun often expresses a part-whole relationship, as in the examples above (‘the door of the house’, ‘the water of the river’).

7.3.6. Unexpressed possessors

Possessors of body parts can be unexpressed when they can be easily understood from the context:

m-p-a.ɪk **p-íllakkɔ** **tacɔ́k**
1-C-be:PR C-wash:INCOMPL feet

I am washing my feet

ɔt̪ɪɛ **ʊkún**
make_pull:IMP hand

stretch out your hand!

A person's stick is typically an item which is not shared with other people. Therefore there is no problem in identifying its possessor in the next example:

ant-ɔkwárɪkɔt	**na**	**ŋ-kw-ɔnəkkéṭ.é**	**kúrrôŋ**
can:DEPINCOMPL-remember:DEPINCOMPL	where:REL	2-C-put_down:COMPL	stick

please try to remember where you have put your stick

It is possible, though not very common, to explicitly mention the possessor of a body part, even though the possessor is perfectly clear:

lɔn	**ɛl-l-ɪ**	**a-kəllán**	**k-ɔká.t**	**á-k-ɛ́rɛt**
words	DEM-C-NEARSP	CONJ-old_woman	C-be:COMPL	CONJ-PRO-speak_at:DEPINCOMPL

nɔ-cịkịt	**c-úŋ**
on-heart	C-POSS3

these words, the old woman was saying them in her heart (fr. written story)

A construction with **ka** 'body' and a co-referent possessor pronoun is automatically interpreted as a reflexive (see 6.9); when the possessor pronoun is absent, **ka** more specifically refers to the body. The body in the second example below is the own body. Compare:

a-kw-ɔ́ṭʊp.at	**ká**	**k-úŋ**	**Í-láí**	**í-l-ə́rrákɔ.t**
CONJ-3-smear:DEPPRFV	body	C-POSS3	with-tamarind	RES-C-be_pushed:COMPL

and s/he painted himself/herself with pounded tamarind

a-kw-ɔ́ṭʊp.at	**ká**	**l-laɪ**	**ɪ-l-ərrákɔ.t**
CONJ-3-smear:DEPPRFV	body	with-tamarind	RES-C-be_pushed:COMPL

and s/he$_i$ painted his/her$_i$ body with pounded tamarind

When the person who does the painting and the owner of the body are not co-referential, the owner is expressed as object of the verb, followed by **ka** 'body'. In this construction, there is no possessor pronoun.[54]

[54] Constructions of this type, which can be called "possessor raising" are described in chapter 14.

a-kw-ɔ́n̪ʊp.at̪-ɔ́k	**ka**	**l-laɪ**	**ɪ-l-ərrákɔ.t**
CONJ-3-smear:DEPPRFV-O3	body	with-tamarind	RES-C-be_pushed:COMPL

and s/he$_i$ painted his/her$_j$ body with pounded tamarind

7.3.7. Independent possessor pronouns

The possessor pronouns have independent forms. These forms consist of a pronominal base **a**, realized with a high tone, a concord expressing agreement with the pronominalized possessed noun, and the possessor:

á-C-POSS

The forms below refer, for example, to **kálam** ‘pen’:

á-k-ɪn	**á-k-ɪn k-ɔpərɔ̂t** ‘mine is good’
á-k-aŋ	**á-k-aŋ k-ɔpərɔ̂t** ‘yours (SG) is good’
á-k-ʊ́ŋ	**á-k-ʊ́ŋ k-ɔ́pərɔ̂t** ‘his/hers is good’
á-k-ɔrɪt	**á-k-ɔrɪt k-ɔpərɔ̂t** ‘ours (of you SG and me) is good’
á-k-ɻ́n	**á-k-ɻ́n k-ɔ́pərɔ̂t** ‘ours (EXCL) is good’
á-k-ɔnnɔ́n	**á-k-ɔnnɔn k-ɔpərɔ̂t** ‘ours (INCL) is good’
á-k-ɔ́n	**á-k-ɔ́n k-ɔ́pərɔ̂t** ‘yours (PL) is good’
á-k-én	**á-k-én k-ɔ́pərɔ̂t** ‘theirs is good’

In the first example below, the concord of the independent possessor pronoun agrees with **kálam** ‘pen’. In the next two, the concord **ɲ** agrees with (earlier mentioned) **ɲʊkʊl** ‘children’.

kálam	**k-aŋ**	**k-a.ɪk**	**p-əllɛ́k**
pen	C-POSS2	C-be:PR	C-alone

ana	**á-k-ɪn**	**k-a.ɪk**	**p-əllɛ̂k**
and	PROB-C-POSS1	C-be:PR	C-alone

your pen is different from mine (lit.: your pen is alone and mine is alone)

ana	**á-ɲ-aŋ**	**ɲ-a.ík**	**kərɛn**
and	PROB-C-POSS2	C-be:PR	where

and where are yours?!

á-ɲ-ın	**ɲ-ɛllâ**
PROB-C-POSS1	C-be_absent:INCOMPL

mine are lacking (i.e. I do not have children)

A last example has **á-úŋ** (< **á-w-úŋ**), which agrees with the earlier mentioned **apɛ̂** 'fish (PL)' (tonally realized here as **ápɛ**[55]).

ɔ́k.kw.í	**í-p-á.nɔ́kɔ**	**lɔʈək**	**l-ín**	**ɔ-ɔ́k**	**p-á.ŋwɔ́**	**ápɛ**
the_one	RES-C-take:INCOMPL	ropes	C-POSS1	PERS-3	C-kill.PLUR:INCOMPL	fish(PL)

ana	**k-kw-á.nán-ın**	**cıt.tɔ́.kít**
and	3-C-bring_for:INCOMPL-O1	firstly

áná	**ánt-ómmın-ɔ́k**	**á-úŋ**
and	can:DEPINCOMPL-take_for:DEPINCOMPL-O3	PROBS-(C-)POSS3

who takes my ropes will catch fish, and he must bring them to me first (lit. up at eyes) and then he can take his (i.e. the fish that remain after the owner of the rope has been given his share of the fish) (fr. written story)

Independent possessor pronouns can be preceded by a prepositional proclitic. The independent demonstrative in the example below refers to a **kaʈʊk** 'goatskin bag'.

maıt	**m-a.ık**	**ı-á-k-ın-ı**
beans	C-be:PR	in-PROB-C-POSS1-Q

are the beans in mine?

However, C-POSS allows for independent use as well:

ant-ɔkə́t̪a	**tacɔk**	**t-ín**	**ana**	**t-ăŋ**
can:DEPINCOMPL-look:INCOMPL	legs	C-POSS1	and	C-POSS2

please look at my feet and yours (fr. written dialogue)

7.3.8. 'My home', 'our home', etc.: irregular forms

'My home', 'your home', etc. are expressed through fixed collocations of the locative noun **tʊ̆ăn** '(at, to) home' followed by a word that

[55] The realization **ápɛ** (its own tones are **apɛ̂**) deviates from the tone rules. I have no explanation for this.

contains the prepositional proclitic **ʈɔ-** '(down) at' and a pronominal possessor, as well as a formative **an**. **an** is most likely a remnant of a noun, perhaps of **kaɽən** 'place'. Specific forms collocating with **tʊǎn** are attested for all personal possessors pronoun, except C-**ɔrɪt**: 'our home' (i.e. of you and me) is just **tʊan t-ɔ́rɪt**.

The list with the other possessors follows here, together with alternative expressions using the noun **kaɽən** 'place'. The forms with **kaɽən** 'place' are not commonly used.

tʊan ʈ-an-ĭn	'my home'
tʊan ʈɔ-kaɽə́n kɪn	'the home at my place'
tʊan ʈ-an-ằŋ	'your home'
tʊan ʈɔ-kaɽə́n kaŋ	'the home at your place'
tʊan ʈ-an-ú̀ŋ	'his/her home'
tʊan ʈɔ-kaɽə́n kú̀ŋ	'the home at his/her place'
tʊan ʈ-ɛn-i̍n	'our (1A) home'
tʊan ʈɔ-kaɽə́n ki̍n	'the home at our (1A) place'
tʊan ʈ-an-ɔ̂nnɔ́n	'our (12A) home'
tʊan ʈɔ kaɽə́n k-ɔnnɔ́n	'the home at our (12A) place'
tʊan ʈ-an-ɔ́n	'your (PL) home'
tʊan ʈɔ kaɽə́n k-ɔ́n	'the home at your place'
tʊan ʈ-an-ɛ́n	'their home'
tʊan ʈɔ-kaɽə́n k-ɛ́n	'the home at their place'

7.3.9. Position in the noun phrase

Attributive possessor pronouns generally precede other modifiers:

pəʈɔk	**p-ɪn**	**p-ɔ́-maɽɔ̂t**
stone	C-POSS1	C-of-long_ago

my country of long ago

papʊ	**p-ɪn**	**ɛ́m-p-í**	**í-p-á**	**n-ɔ̂kʊrrɔ**	**n.tít**
thing	C-POSS1	DEM-C-NEARSP	RES-C-COP	1-engrave:DEPINCOMPL	from:ABS

tʊan	**ṭ.an-ǐn**
home	at_place-POSS1

this thing of mine from which I write in my house (refers to the laptop of the speaker, 'writing from' refers in this context to the sending of messages, for example through e-mail)

C-**ulluk** 'only' is a modifier that can follow but also precede the possessor pronoun:

ɔ-parɪ	**p-ín**	**p-ulluk**	**á-p-p-ɪna**	**lɔ́n**	**ɛ́l-l-í**
PERS-wife	C-POSS1	C-only	FOC-C-C-know:INCOMPL	words	DEM-C-NEARSP

only my wife knows these things

ɔ-parɪ	**p-ulluk**	**p-ín**	**a-p-p-ɪna**	**lɔ́n**	**ɛ́l-l-í**
PERS-wife	C-only	C-POSS1	FOC-C-C-know:INCOMPL	words	DEM-C-NEARSP

only my wife knows these things

8. Demonstratives

In this chapter I present the three spatial demonstratives of Lumun, as well as demonstrative C-**ɛn** and the manner adjective C-**ɛɛná** 'such, like this/that'. They all share the pronominal base **ɛn** as a formative.

The spatial demonstratives consist of the pronominal base **ɛn** (or C-**ɛn**) and a space-deictic suffixal element that agrees with the head noun. They can be used gesturally, but also anaphorically. Also in the latter case a deictic notion is involved. Demonstrative C-**ɛn**, without space-deictic element, functions anaphorically; it does not allow for a deictic interpretation. For this reason I call it an anaphoric demonstrative. The pronominal base **ɛn**, however, is not intrinsically anaphoric, since it is also part of the spatial demonstratives, which can be used gesturally. I gloss the formative **ɛn** in the demonstratives as DEM (demonstrative).

ɛn (or C-**ɛn**) is (most probably) also a formative of the manner-deictic adjective C-**ɛɛná** 'such, like this/that' (see 8.2.5). C-**ɛn** is furthermore part of **ɔkkwɛ̂n** 'who' (< **ɔ̂k** 's/he' + **p-ɛn**) and **ŋɪmpɛ̂n** 'what' (< **ŋɪn** 'what' + **p-ɛn**), which are discussed in 20.1.1 and 20.1.2.

All demonstratives and also C-**ɛɛná** can function as nominal modifiers but also independently.

8.1. The spatial demonstratives

The spatial demonstratives consist of the demonstrative pronominal base **ɛn**, a concord and a deictic suffix. These are the spatial demonstratives:

ɛn-C-**í**	'this, these': near the speaker
ɛn-C-**ərík**	'this, that, these, those': near the addressee
ɛn-C-**əɽɛ̂**	'that, those': away from the speaker and the addressee

The spatial demonstratives can have two concords:

C-**ɛn**-C-**í** ‘this, these’: near the speaker
C-**ɛn**-C-**ərík** ‘this, that, these, those’: near the addressee
C-**ɛn**-C-**əɽê** ‘that, those’: away from the speaker and the addressee

As modifiers, the spatial demonstratives with both an initial and a word-medial concord seem to be rarely used. According to my consultant (JS), especially elderly people may (still) employ them this way. He gave the following sentence as a case in which they might use **pɛmpí** instead of **ɛmpí**:

pʊl	**p-ɛm-p-ɪ**	**p-ɔ́-kárə́-ṭâ**
person	C-DEM-C-NEARSP	C-of-where-QW

where does this person come from?

The forms with two concords are more commonly used as independent demonstrative pronouns. Whereas the form with one concord functioning independently tends to imply a contrast with another entity of the same type, the independent demonstrative with two concords signals the absence of such a contrast (this will be exemplified below). In the example with **pɛmpí** given above, there is no contrast with another man. For many speakers, the modifying spatial demonstratives have lost this opposition, and it seems that, as modifiers, the forms with two concords are on their way to disappear.

The three deictic suffixes are related to the deictic verbs (chapter 12.8), as shown in table 42:

Table 42 Deictic suffixes

deictic suffix	*deictic verb*
-í ‘near-speaker’	C-**ɛ́í** ‘be here (near speaker)’
-ərík ‘near-addressee’	C-**ɛ̂rík** ‘be here, be there (near addressee)’
-**əɽê** ‘distal’	C-**ɛ́ɽê** ‘be there (away from both speaker and addressee)’

8.1.1. Phonological realizations and tone

In table 43 I give examples of the three spatial demonstratives preceded by nouns from different noun classes and with different tone patterns. The **n** before the concord assimilates to the concord for place of articulation; it fully assimilates when the concord is **l**. The concord **w**, on the other hand, assimilates to the preceding nasal. Resulting geminated nasals and geminated **l** can be pronounced with some length.

Tonally, the spatial demonstratives display specific behaviour which does not go against the tone rules, but is also not in full detail predicted by them (recall that neither the occurrence of a high tone on a first mora due to high tone shift, nor the occurrence of tone bridge is phonologically predictable). All spatial demonstratives get a high tone on their first mora in case of a preceding high or rising tone. This includes **ɛn**-C-**í**, which itself has a high tone on its second mora. Furthermore, there is tone bridge between a noun which, in isolation, has a final falling tone and **ɛn**-C-**í** or **ɛn**-C-**əɽê**, but not between a noun with a final falling tone and **ɛn**-C-**ərík**.

Table 43 Nouns and demonstratives

noun	*C*	***ɛn-C-í*** *near speaker*	***ɛn-C-ərík*** *near addressee*	***ɛn-C-əɽê*** *distal*
pərrɔk ‘chair’	**p**	**pərrɔk ɛmpí**	**pərrɔk ɛmpərík**	**pərrɔk ɛmpəɽê**
t̪ŭk ‘dog’	**t̪**	**t̪ʊk éntí**	**t̪ʊk éntərík**	**t̪ʊk éntə́ɽê**
tʊppʊ́ŋ ‘mushroom (k.o.)’	**t**	**tʊppʊŋ éntí**	**tʊppʊŋ éntərík**	**tʊppʊŋ éntə́ɽê**
cɔpɔ̂k ‘arrow’	**c**	**cɔpɔ́k éncí**	**cɔpɔ́k ɛncərík**	**cɔpɔ́k éncə́ɽê**
ka ‘body, corpse’	**k**	**ka ɛŋkí**	**ka ɛŋkərík**	**ka ɛŋkəɽê**
maṯ̪tak ‘calabashes (k.o.)’	**m**	**maṯ̪tak ɛmmí**	**maṯ̪tak ɛmmərík**	**maṯ̪tak ɛmməɽê**

naa̱tám 'books'	**n**	**naa̱tam énní**	**naa̱tam énnərík**	**naa̱tam énnə́ɽê**
ɲəa̱̱tarı 'monkeys (sp.)'	**ɲ**	**ɲəa̱̱tarı ɛɲɲí**	**ɲəa̱̱tarı ɛɲɲərík**	**ɲəa̱̱tarı ɛɲɲəɽê**
ŋaa̱̱ɔkkôl 'calabash (k.o.)'	**ŋ**	**ŋaa̱̱ɔkkól éŋŋí**	**ŋaa̱̱ɔkkól ɛŋŋərík**	**ŋaa̱̱ɔkkól éŋŋə́ɽê**
lŏk 'dogs'	**l**	**lʊk éllí**	**lʊk éllərík**	**lʊk éllə́ɽê**
ʊkʊl 'child'	**w**	**ʊkʊl ɛnní**	**ʊkʊl ɛnnərík**	**ʊkʊl ɛnnəɽê**

8.1.2. Morpho-phonological aspects

In connected speech, the final vowel of a preceding noun is deleted before the initial **ɛ** of the demonstrative, except when the noun is monomoraic (last example below):

ɲəa̱̱tar.ɛɲɲí (< **ɲəa̱̱tarı ɛɲɲí**) 'these monkeys (sp.)'
pap.ɛmpí (< **papʊ ɛmpí**) 'this thing'
pır.ɛmpí (< **pıra ɛmpí**) 'this tree'
ka ɛŋkí 'this body'

8.1.3. Use of the spatial demonstrative modifiers

Deictic use of the spatial demonstrative modifiers may be accompanied by a pointing gesture, but not necessarily so. They can also be used anaphorically or cataphorically, in which case some deictic notion will also be present (otherwise, for anaphoric reference, **ɔ-ɛn** is used). A storyteller can "play" with the deictic centre to make his story become more alive: he can change it from one participant to another, but he can also sometimes put it with himself or with the audience. Spatial demonstratives can also modify independent personal pronouns. Some examples of use of the spatial demonstratives as nominal modifiers follow here.

ɛn-ɔ**-í** 'near the speaker':

ʈʊk	**ɛn-ʈ-ɪ**	**ʈ-ɔpərɔ̂t**
dog	DEM-C-NEARSP	C-good

this dog is good (a dog is sitting next to the speaker, the speaker strokes it)

k-kw-érɛ́né.t	**kín**	**lɔ́n**	**él-l-í**
3-C-speak_to:COMPL	O3A	words	DEM-C-NEARSP

s/he told them these things (reference to a preceding or following stretch of discourse)

In the next example, the spatial demonstrative modifies the second person singular pronoun:

ant-ɔpərɪ	**ŋ-kw-a.kkɔt**	**ŋín-ʈa**
can:DEPINCOMPL-say:DEPINCOMPL	2-C-do:INCOMPL	what-QW

ɔ-ʊŋ	**ém-p-í**	**p-ɔ́ʈʈê**	**cík**
PERS-2	DEM-C-NEARSP	C-little	VREF

please say what you will do, you (here) who are small (lit.: this you who is small. Implying: you cannot do anything)

ɛn-C-ərík ‘near the addressee’:

ɪkkéʈ-ín	**áɽəpʊ**	**ɛn-n-ərɪk**	**áppɪk**
give.PLUR:IMP-O1	things	DEM-C-NEARADDR	all

give me all those things! (the addressee has things with him/her, the speaker points at them)

The next example is from ‘The story of the jackal’. The leopard and the lion are fighting, and the jackal is trying to direct them towards a trap (a hole in the ground) that he has dug for them. The ‘near addressee’ demonstrative draws the audience into the story: it makes them feel as if they are near that trap.

a-káɽən	**ɛŋ-k-ərík**	**ɪ-k-a**	**áləpaccúʈ**	**w-ɔŋɔʈ.é**	**ɪttɪ**
CONJ-place	DEM-C-NEARADDR	RES-C-COP	jackal	C-like:COMPL	that

w-á.ʈəkkarɛt	**kɟ́n**	**nán …**
C-make_move_aside:INCOMPL	O3A	on:ABS

and that place, to which the jackal wants to make them move, …

ɛn-C-**əɽê** ‘away from both speaker and addressee’ (distal):

ámmá	**ŋ-kw-ɔ́nó́**	**nə́ɽɛ́**	**n-a-ák**
if	2-C-have	fear	on-PERS-3

á-ɛ̃	**ɪ-cʊɽɛ́**	**c-ɔ́-pírá**	**ɛ́m-p-əɽɛ́**	**cənɛ́kɛt**
SUBJ-(2-)go:DEPINCOMPL	in-buttock	C-of-tree	DEM-C-DIST	there_not_far

if you are afraid of him, go under that tree over there (situation: there is a tree in the distance, the speaker points at it)

The next example is from ‘The story of the tortoise’. The distal demonstrative is used here cataphorically:

akka	**ɔpa**	**ɛ́n-n-əɽɛ́**	**w-ɔ-rɪ-pɪrá**	**w-aa.t**	**ɪ-ərịk**	**ɪkê …**
when	piece_of_meat	DEM-C-DISTAL	C-of-in-tree	C-come:COMPL	RES-(C-)big	giraffe

when that big wild animal of the forest, the giraffe, came … (App. IV, 155)

8.1.4. The spatial demonstratives as independent forms

The spatial demonstratives can be used as independent forms. Their reference —and thus the choice of concord— must be clear from the context, whether textual or extra-textual. Reference can also be made to a stretch of speech or a situation that was just described or that appears from the extra-textual context. In such cases **l**-concord is used, agreeing with implicit **lɔn** ‘words, matters’. For reference to a situation also **p**-concord can be used, agreeing with implicit **papʊ** ‘thing’. Examples are given below.

Independent demonstratives with one concord can imply a contrast between two entities of the same kind. Demonstratives with two concords cannot be used that way. In the second example below the demonstratives necessarily refer to entities of a different kind.

ɛm-p-ɪ	**p-în**	**ana**	**ɛ́m-p-í**	**p-áŋ**
DEM-C-NEARSP	C-POSS1	and	DEM-C-NEARSP	C-POSS2

this one is mine and that one is yours (both demonstratives can refer to the same kind of thing, for example **pərrɔk** ‘chair’)

p-ɛm-p-ɪ	**p-în**	**ana**	**p-ém-p-í**	**p-áŋ**
C-DEM-C-NEARSP	C-POSS1	and	C-DEM-C-NEARSP	C-POSS2

this one is mine and that one is yours (both demonstratives cannot refer to the same kind of thing. Instead, the first refers, for example, to **pərrɔk** ‘chair’, the second, for example, to **pʊrrʊt** ‘picture’).

Some further examples with independent demonstratives with one concord follow here. They cannot be replaced by demonstratives with two concords.

kʊrrɛt	**éŋ-k-í**	**k-ánn-ʊŋkɔ**	**éŋ-k-í**
line	DEM-C-NEARSP	C-NEG-resemble:DEPCOMPL	DEM-C-NEARSP

this stripe does not look like this one (referring here to the different colours of the stripes of a cloth)

a-kw-ápp-ɔmé.kaṯ-ɔ́k	**ɪttɪ**	**á-a**	**ɛŋ-k-əʏê**
CONJ-3-again:DEPINCOMPL-tell:DEPPRFV-O3	that	no-REDUP	DEM-C-DIST

ɪṯ̈ṯ̈ɪn-ɪn	**éŋ-k-əʏé**	**í-k-ɔ́ʏɛ**
pick_for:IMP-O1	DEM-C-DIST	RES-C-red

and he said to her again: no, that one! pick that ripe one for me! (the demonstratives refer to a *kicɛ*-fruit that is at some distance from the addressee, who is in the tree, picking fruits; the speaker is under the tree. The addressee wanted to pick a fruit nearby, but is told to pick one for which she must reach further)

In the next example, **ɛnní** ‘this one’ agrees with **ʊkʊl** ‘child’:

ɛn-n-ɪ	**ákk-ɔkwɔntá.t**	**tɔ́.kíʈ**
DEM-C-NEARSP	FOC-be_produced:COMPL	firstly

this one is the one who was born first (implying that there is another one who came second) (Genesis 38:28)

An element of contrast is also present in the following example. It is an answer to the question “did you […] sell the land for this price?” The concord **c-** agrees with **cɛkɛrɛk** ‘price’. The price is indeed that price, not a different one:

i̱i̱	**ɪ-c-én**	**éɲ-c-í**
yes	RES-C-DEM	DEM-C-NEARSP

yes, the one (the price) is this (Acts 5:8)

Demonstratives with one concord do not need to express contrast:

ɔ́t̪-t̪a	**ɛm-p-ərɪk**	**nɔ-pɪrâ**
PERS.3-QW	DEM-C-NEARADDR	on-tree

who is that in the tree? (two persons are involved: the speaker and the addressee who is in the tree)

Some examples with two concords follow here. In the first, **p**-concord of **pɛmpí** implicitly agrees with the **papʊ** 'thing', which refers to the situation that was just described:

ɔ-llé	**p-ɪn**	**p-ɔt̪i̱ɔt̪-ín**	**t̪əpút**	**ana**
PERS-husband	C-POSS1	C-send:COMPL-O1	outside	and

ŋ-kw-a.t̪-ɔkkɔt	**ŋɪn**	**ákka**[56]	**p-ém-p-í**	**í-p-ɔ́kɪt̪ak**
2-C-IT:INCOMPL-do:DEPINCOMPL	what	that	C-DEM-C-NEARSP	RES-C-bad

my husband has sent me away and what are you going to do, (because) this (thing, situation) is one which is bad

The concord **l-** in the example below is understood to agree with implicit **lɔn** 'words, matters':

l-ɛl-l-ɪ	**ámm.akka**	**l-érét̪-ɔ́k**	**l-ɔ́kít̪ak**
C-DEM-C-NEARSP	like	C-speak_about-O3	C-bad

these things that were said about him/her were bad (lit.: these words, like they spoke about him/her, were bad)

In the following example from 'The story of the tortoise', **pɛmpəʈ̪ê** refers to **pʊl pɔnɔppə́t** 'the person of Nɔppət', who is under the tree. The bird and the tortoise are together up in a tree, where they are collecting honey. The person of Nɔppət has just asked to throw down some honey for him, but the tortoise is unwilling:

[56] It is unclear where the high tone on **akka** comes from.

ŋ-kw-a.rréne	**p-ém-p-ə̋ɽé**	**áǘn**	**w-ɔ́-în**
2-C-throw_for:INCOMPL	C-DEM-C-DIST	bees	C-of-what

for what will you throw (down) honeycombs for that (person)? (App. IV, 89)

In the next example, **p**- agrees with the implicit noun **papʊ** 'thing'. 'This (thing) from which I write' refers to a laptop from which the speaker sends e-mails or other messages:

m-p-ɔná.t	**p-ém-p-í**	**í-p-á**	**n-ɔ̂kʊrrɔ**	**n.tít**
1-C-bring:COMPL	C-DEM-C-NEARSP	RES-C-COP	1-engrave:DEPINCOMPL	from:ABS

I brought this thing from which I write (a laptop)

Independent demonstratives can be preceded by a prepositional proclitic. The independent demonstrative in the example below refers to a **kaɽʊk** 'goatskin bag'.

maɪt	**m-a.ɪk**	**ɪ-ɛŋ-k-í-ɪ**
beans	C-be:PR	in-DEM-C-NEARSP-Q

are the beans in this one?

The following examples have two tonal realizations of the (prepausal) demonstrative. The final high or falling tone of the demonstrative can be realized (with tone bridge spanning over the whole demonstrative), or the own final high or falling tone of the demonstrative can become low:

appɛn̪tína	**w-á.ík**	**í-éŋ́-k-í**	**/ appɛn̪tína**	**w-á.ík**	**í-éŋ-k-ɪ**
groundnuts	C-be:PR	in-DEM-C-NEARSP	groundnuts	C-be:PR	in-DEM-C-NEARSP

the groundnuts are in this one

appɛn̪tína	**w-á.ík**	**í-éŋ́-k-ə́rík**	**/ appɛn̪tína**	**w-á.ík**	**í-éŋ-k-ərɪk**
groundnuts	C-be:PR	in-DEM-C-NEARADDR	groundnuts	C-be:PR	in-DEM-C-NEARADDR

the groundnuts are in that one (near you)

appɛn̪tína	**w-á.ík**	**í-éŋ́-k-ə̋ɽê**	**/ appɛn̪tína**	**w-á.ík**	**í-éŋ-k-əɽɛ**
groundnuts	C-be:PR	in-DEM-C-DIST	groundnuts	C-be:PR	in-DEM-C-DIST

the groundnuts are in that one (away from us)

8.2. The anaphoric demonstrative C-**ɛn**

8.2.1. Tonal properties

When the demonstrative pronominal base **ɛn** is only preceded by the concord, and no deictic element is attached to it, it takes on an anaphoric interpretation. I will call this element (C-**ɛn**) an anaphoric demonstrative, though the demonstrative base **ɛn** is not intrinsically anaphoric. C-**ɛn** has a low tone and is tonally regular in prepausal position:

pʊl	'person'	**pʊl pɛn**	'that person'
ṭŭk	'dog'	**ṭʊk ṭɛ̂n**	'that dog'
tʊppʊ́ŋ	'mushroom (k.o.)'	**tʊppʊŋ tɛ̂n**	'that mushroom (k.o.)'
cɔpɔ̂k	'arrow'	**cɔpɔ́k cɛn**	'that arrow'

However, in non-prepausal position before an element with a low tone, the Contour Simplification Rule tends not to apply when C-**ɛn** is preceded by the restrictor **í-**:

kálám	**k-ɔ́kíṭak**	**ana**	**ɪ-k-ɛ̂n**	**k-ɪn**
pen	C-bad	and	RES-C-DEM	C-POSS1

the pen is bad, but it is mine

This may point towards a historically long vowel that has become short, or perhaps the historical loss of a tone bearing unit. A long vowel is actually attested in C-**ɛɛná** 'such, like this/that'.

8.2.2. C-**ɛn** as attributive modifier

C-**ɛn** as attributive modifier is part of a noun phrase which also contains its nominal head; the head precedes C-**ɛn**. C-**ɛn** functions as anaphoric demonstrative, referring to a preceding noun phrase or to a clause or stretch of clauses. 'The story of Amʊṭa' opens with the following clauses: 'One day, Amʊṭa left from home to go stealing in Ṭɔɽəmʊ and he saw the goats of Alɛlɛn grazing in the field. Amʊṭa jumped quickly to catch the goats'. Then follows the sentence with C-**ɛn:**

caɣɪ	**c-én**	**a-kəllán**	**k-əɣɛk**	**k-ɔká.t**	**cɪk**
day	C-DEM	CONJ-old_woman	C-some	C-be:COMPL	VREF

a-k-ɔ́kən̪accé-k	**n.tɪ**	**ɪ-ɔɣê̞n**
CONJ-PRO-watch:DEPINCOMPL-O3	from	in-firewood

that (same) moment, some old woman was watching him while she was collecting firewood (fr. written story)

The next example is from Luke 2:19. **lɔn lɛn appɪk** ‘all those words’ refers to what the shepherds have heard from the angels and have come to tell:

ana.rrúk	**ɔ-mérɪɔm**	**p-ɔccɔ.kán̪ɛ**	**lɔn**	**l-ɛn**	**appɪk**	**nɔ-cịkịt**	**c-ú̱ŋ**
but	PERS-Mary	C-catch:PST	words	C-DEM	all	on-heart	C-POSS3

but Mary kept all those words in her heart (Luke 2:19)

8.2.3. C-**ɛn** used independently

C-**ɛn** can be used independently, i.e. without head in the same noun phrase. The absence of a high (or falling) tone on independently used C-**ɛn** shows that the initial consonant of independent C-**ɛn** is a concord, not a pronominal proclitic.

In the following fixed expression, the **p**-concord of **pɛn** implicitly agrees with the noun **papʊ** ‘thing’.

ŋín-n̪a	**p-ɛn**
what-QW	C-DEM

what you are talking about? (more lit.: what that (thing)?)

By analogy, the concord of the independent demonstrative in the following example implicitly agrees with **pʊl** ‘person’, agreement is not with **ɔ́n̪n̪a** ‘who’:

ɔ́n̪-n̪a	**p-ɛn**
PERS.3-QW	C-DEM

who is it? (Used in a speech environment, for example when somebody announced himself, but you did not hear his name, or in the sense of ‘whom are you talking about’).

8.2.4. C-**ɛn** preceded by the restrictor **í-**

C-ɛn can be preceded by the restrictor **í-** (which will be discussed in chapter 9). **ɪ-C-ên** functions independently and can be translated as 'the one(s)'. An example was already given earlier in this chapter. In the first example below, the concord **w-**, which is deleted between vowels (**ɪ-w-ên** > **ɪ-ên**), agrees with **aɣəpʊ** 'things'; in the second, **ɪrên** refers to a pig (**tuṯṯəruk**) that has been causing damage before, and that has come again; in the third, **k** refers to the Holy Spirit (**kənáŋ ɪ-k-ûpʊɣé**).

aɣəpʊ	**w-ɔ-páppá**	**áppík**	**í-ên**	**w-ɪn**
things	C-of.PERS-father	all	RES-(C-)DEM	C-POSS1

all the things of the Father are the ones that are mine (John 16:15)

a-púl	**í-p-ɔ́córá**	**ɔ́ṯí.at**	**ɪttɪ**	**ɪ-r-én**	**t-ɔ́-máí**
CONJ-person	RES-C-male	find:DEPPRFV	that	RES-C-DEM	C-of-some_time_ago

and the man found that it was the one of before

ana	**ɪ-k-ên**	**ɪ-k-a**	**ɔ-rʊn**	**ṯ-ɪmmá.t**	**ɪnénní**	**ana**	**ɔccíkɔt**
ana	RES-C-DEM	RES-C-COP	PERS-12A	C-see:COMPL	today	and	hear:DEPINCOMPL

and (it is) the one which we have seen and heard today (Acts 2:33)

ɪ-C-ên can be followed by a focus construction with **akka** 'that' (realized as **akk** before the initial vowel of a verb). The example below can also be stated just with **akka** or **akk-**, but the combination **ɪ-C-ên akka** makes the focus stronger.

pəṯɔk	**ɪ-p-a**	**ól**	**í-únɔ**	**w-əɣá.t**
stone	RES-C-COP	people	RES-(C-)build:INCOMPL	C-refuse:COMPL

ɪ-p-ên	**akk-ɔṯəkká.t**	**cɪllaŋ**
RES-C-DEM	FOC-become:COMPL	big_stone_as_fundament_of_wall

the stone which the builders rejected is the one that has become the fundament (Luke 20:17)

Two examples with **ɪ-C-ên akk(a) and** a transitive verb follow here. In the first, **k** of **ɪkên** agrees with **kəɣan** 'name'. Note in the second that the subject comes after the verb.

ɔ-nɔn	**n̪-ɔmma**	**ɪ-k-ê̞n**	**akka**	**m-p-a.ɪk**	**p-é̞rɛnɛ**
PERS-2A	C-not_know:INCOMPL	RES-C-DEM	that	1-C-be:PR	C-talk_to:INCOMPL

nɔn	**lɔ́n**	**l-ɛn**
O2A	words	C-of:ABS

you (PL) do not know that it is the one (i.e. 'the name') I am telling you of (Acts 17:23)

n̪ʊʈít	**ɪ-n̪-ê̞n**	**akk-ɔnó**	**púl**	**í-p-ɔ́ɲi̱**	**cənɛ**	**nɔ́-capó**
food	RES-C-DEM	FOC-have	person	RES-C-black	here	on-ground

food is what a human being needs here on earth

ɪlê̞n akka +H is a fixed expression for 'that's why'. The concord **l-** agrees with the implicit noun **lɔn** 'words, matters':

ɪ-l-ê̞n	**akka**	**a-n-é̞rɛntɛn-ʊŋ**	**áppɪn-appɪn**
RES-C-DEM	that	CONJ-1-speak_to.PLUR:DEPINCOMPL-O2	always-REDUP

that's why I always talk to you

ɪpê̞n, just by itself, is a fixed expression for 'that's it!' The concord **p** agrees with the implicit noun **papʊ** 'thing':

ɪ-p-ê̞n
RES-C-DEM

that's it! (i.e. that's what I had in mind, that's what I wanted to say)

8.2.5. The manner-deictic adjective C-**ɛɛná** 'such, like this/that'

It is very likely that C-**ɛɛná** 'such, like this/that' contains the pronominal base **ɛn** as a formative, as was mentioned earlier in this chapter. C-**ɛɛná** has anaphoric reference and can be used as a modifier (first example below), but also independently (second example below). Like most adjectives C-**ɛɛná** is preceded by the restrictor **í-** when it functions as an attribute.

á-púl	**í-p-ɛ́ɛ́ná**	**ɔ́kárənn-ɔmɛ**[57]	**ɪttɨ̌ …**
SUBJ-person	RES-C-such	NEG:DEP-say:DEPINCOMPL	that

let such a person not say that …

pʊl	**ɛm-p-ɪ**	**p-ɛ́ɛ́ná**	**ana**	**ɛ́m-p-í**	**p-ɛ́ɛ́ná**
person	DEM-C-NEARSP	C-such	and	DEM-C-NEARSP	C-such

this person is like this and the other one (lit. this one) is like that

[57] The falling tone of **ɔmɛ̂** ‘say’ becomes low in this context.

9. The restrictor

The "restrictor" (the proclitic element **í-**) turns adjectival and verbal predicates into attributive modifiers that restrict the reference of the head noun to a subgroup with the properties or qualities expressed by the adjectival or verbal predicate. Verbal predicates with the restrictor function as restrictive relative clauses (see chapter 11).

The restrictor brings a high tone to a following verb in the way described by the rules of Tone Shift (and Tone Reappearance sub-Rules) and Contour Simplification, cf:

pʊl **p-ɔparí**
person C-female

the person is female

pʊl **ɪ-p-ɔ́parí**
person RES-C-female

the woman (the person who is female)

It cannot itself receive a high tone from a preceding element, but it can have a high realization due to tone bridge. In view of these properties I represent it with a high tone: **í-** (a rising tone would have been possible as well, see 3.8). It has no prepausal realization.

A least some adjectives, however, have a tonal realization that is different from what would be expected, when preceded by the restrictor. Examples include **ᴄ-ɔɲḭ̂** 'black', C-**ɔttɛ̂** (or C-**ɔẗ̪ẗ̪ɛ̂**) 'small, little, young', C-**ərḭ̂k** 'big, important' and C-**ɔkíṭak** 'bad'. The restrictor brings a high tone to their initial mora replacing their own tone pattern, as, for example in **pʊl ɪ-p-ərḭ̂k** 'person who is important'. This is, however, not the case for all adjectives (nor for all adjectives with a L.HL or L.H.L tone pattern).

Morpho-phonologically the restrictor behaves in a regular way: when attached to an adjective or verb with +ATR vowels, its realization may change slightly in the direction of a +ATR realization. Preceding an **ɪ**-initial element a little length is generally retained.

An example with an adjective and a verb phrase preceded by the restrictor follow here:

kərɛt	**ɪ-k-ɟpɛ**	**k-á.ík**	**cə́nɛ́**
cloth	RES-C-old	C-be:PR	here

the old cloth is here

ṭʊk	**ɪ-ṭ-ʊkkwá.t**	**ṭ-á.ík**	**cə́nɛ́**
dog	RES-C-become_old:COMPL	C-be:PR	here

the old dog is here

The following examples concern modification of object nouns through modifiers with and without the restrictor, and placed inside and outside the noun phrase.

cʊrâŋ ‘stick’ in the first example below in principle allows for a definite as well as an indefinite reading. This is the same when the ‘stick’ is modified by an adjective or verb phrase with the restrictor, provided that this modifier is positioned within the noun phrase, i.e. used attributively (second example below):

k-kw-ɔ́ṭúkw.áṭɛ́	**cʊ́ɽáŋ**	**n.tɪ**	**ɪ-wɛ́t**
3-C-grab:PST	stick	from	in-horizontal_bamboos_of_roof

s/he grabbed a/the stick from the inside of the roof

k-kw-ɔ́ṭúkw.áṭɛ́	**cʊ́ɽáŋ**	**í-c-ɔ́ɲį**	**n.tɪ**	**ɪ-wɛ́t**
3-C-grab:PST	stick	RES-C-black	from	in-horizontal_bamboos_of_roof

s/he grabbed a/the black stick from the inside of the roof

It is different when the adjective with restrictor is positioned at the end of the clause, outside of the noun phrase. Now, the adjective (**ɪcɔ́ɲį** ‘black’) gives a definite reading to the noun (**cʊrâŋ** ‘stick’), identifying it as the black one among other sticks:

k-kw-ɔ́ṯúkw.áṯé	**cúʏáŋ**	**n.tɪ**	**ɪ-wɛt**	**ɪ-c-ɔ́ɲị́**
3-C-grab:PST	stick	from	in-horizontal_bamboos_of_roof	RES-C-black

s/he grabbed the black stick from the inside of the roof (implies that there are one or more other sticks: it is the black one that is taken)

The first example below is syntactically comparable to the example above, but lacks the restrictor on the adjective (**cɔʏɛ̌** 'red'). Providing some information about the necklace (**cuccû**), namely that it is red, the adjective establishes an indefinite reading of it. Unlike its counterpart with restrictor, an attributive adjective or verb phrase without restrictor is not placed inside the noun phrase, but comes at the end (second example below).

k-kw-ákɔ́.t	**cúccú**	**ɪ-cələ́k**	**c-ɔʏɛ̌**
3-C-wear:COMPL	bead	in-neck	C-red

she has put a red necklace around her neck

***k-kw-ákɔ́.t**	**cúccú**	**c-ɔʏɛ**	**ɪ-cələ́k**
3-C-wear:COMPL	bead	C-red	in-neck

Two examples contrasting a clause with and without the restrictor modifying an object noun follow here. The first is the opening line of a story, introducing the main character, the second identifies a certain jackal amongst others:

m-p-a.ɪk	**p-a.ṯ-ɛ́rɛt**	**áləpaccúṯ**
1-C-be:PR	C-IT:INCOMPL-speak_about:DEPINCOMPL	jackal

w-ɔná.t	**mərɛ**
C-bring:COMPL	cultivating_party

I am going to talk about a jackal who organized a cultivating party ('The story of the jackal')

m-p-a.ɪk	**p-a.ṯ-ɛ́rɛt**	**áləpaccúṯ**
1-C-be:PR	C-IT:INCOMPL-speak_about:DEPINCOMPL	jackal

ɪ-ɔná.t	**mərɛ**
RES-(C-)bring:COMPL	cultivating_party

I am going to talk about the jackal who organized a cultivating party (implies that there are other jackals who did not organize such a party)

Adjectives which are used independently have the restrictor. In the example below the concord **c** agrees with **cʊrâŋ** ‘stick’:

ɛt̪-ɪn **ɪ-c-ɔ́ɲi̱**
give:IMP-O1 RES-C-black
give me the black one!

The earlier given example with **ɪcɔ́ɲi̱** at the end of the clause in fact allows for a reading like this as well (‘s/he grabbed the stick from the inside of the roof, the black one’).

The use of the restrictor on adjectives (and numerals) and on relative clauses is further exemplified in the chapters 10 and 11. The restrictor is not used on connexive constructions, possessors and demonstratives, with the exception of the anaphoric demonstrative C-**ɛn**. **ɪ-C-ên** ‘the one’ was discussed in chapter 8.2.4.

The restrictor furthermore forms a fixed combination with **ɔ́kkwí**, giving **ɔ́kkwí í-** ‘(the one) who’ (see chapter 6.1.5).

10. Adjectives

Lumun adjectives consist of a concord and an adjectival stem:

C-ADJ

All adjectival stems are vowel-initial. Otherwise, there are no phonological restrictions other than those that apply to all words in the language. There are also no specific restrictions on the tone patterns.

10.1. Adjectives as predicates, attributes and independent forms

In its basic form (C-ADJ) the adjective functions as a predicate, for example:

pʊl **p-ɪttîk**
person C-big

the person is big

pʊl **p-ɔká.t** **p-ɟmmɟn**
person C-be:COMPL C-heavy

the person was heavy

Adjectival predicates can occur in any TAM through the addition of an inflected copular verb **ɔkâ** 'be' or **ɔt̪ákka** 'become'. Adjectives are also used in secondary predication (or depictive) constructions. In the first three examples below the depictive is subject-oriented, in the last it is object-oriented:

ŋəɽɪ **ŋ-aa.t** **ŋ-ɔttê**
water C-come:COMPL C-little

a little water has come (the water came little)

ʊl **w-ɪllé.t** **w-ɔppɔ́t**
people C-die.PLUR:COMPL C-many

many people have died (the people have died many)

m-p-ịcáṭ.ɛ **p-ɔpərɔ̂t**
1-C-lie_down:COMPL C-good

I slept well

a-kw-ímma.kat **pápəɽɛk** **ɪ-kaṭər** **p-ɔṭɛrĕt**
CONJ-3-see:DEPPRFV something in-road C-spotted

and he saw something spotted in the road (and he saw something in the road (as) spotted) (‘A boy and a goat’)

The adjective ‘good’ is also attested in situations in which it seems to modify a verb:

m-p-a.ɪk **p-aɲárɔ** **p-ɔpərɔ̂t**
1-C-be:PR C-walk:INCOMPL C-good

I am walking well (implying: I had difficulty walking before)

ɔ-kakká **p-á.ík** **p-ɛ́rɛ** **p-ɔpərɔ̂t**
PERS-Kakka C-be:PR C-speak:INCOMPL C-good

Kakka is speaking well (implying: she had difficulty speaking before, perhaps because of a sour throat)

It is, however, not actually modifying the verb, but providing information about the state of the subject, functioning not as an adverb, but as a depictive secondary predication. ‘Good’ agreeing with the subject can, for example, not be used in the next case, irrespective of whether the understood object **ŋuɽû** ‘asida’ is explicitly mentioned. ‘Good’ can only modify the object (second example below):

***ɔ-kakká** **p-íṭa** **p-ɔpərɔ̂t**
PERS-Kakka C-cook:INCOMPL C-good

Kakka cooks (asida) well

ɔ-kakká **p-íṭa** **ŋuɽú** **ŋ-ɔpərɔ̂t**
PERS-Kakka C-cook:INCOMPL asida C-good

Kakka cooks the asida good (i.e. she cooks good asida)

Also a noun phrase with **lɔn** ‘words’ modified by an adjective can function adverbially:

m-p-i̯cát̪ɛ	**lɔn**	**l-ɔpərɔ̂t**
1-C-lie_down:COMPL	words	C-good

I have slept well

When used attributively, adjectives are typically preceded by the restrictor **í-**:

pʊl	**ɪ-p-ɪttík**	**p-aát**
person	RES-C-big	C-come:COMPL

the big person has come

kərɛt	**ɪ-k-í̯pɛ́**	**í-k-ɔ́t̪ɛ́rɛ́t**
cloth	RES-C-old	RES-C-spotted

the old spotted cloth

The restrictor is also present when the adjective is used independently:

cat̪t̪ak	**c-a.ɪk**	**ɪ-c-ə́ri̯k**	**ana**	**ɪ-c-ɔ́t̪t̪ɛ**
calabash(k.o.)	C-be:PR	RES-C-big	and	RES-C-little
ana.rrúk	**ɪ-c-ɔ́t̪t̪ɛ**	**c-ɔkəttát̪.ɛ**		
but	RES-C-little	C-be_broken:COMPL		

there is a calabash which is big and one which is small, but the small one is broken (there is a big calabash and a small one, but the small one is broken)

10.2. Adjectives as a word class

Lumun adjectives are neither nouns nor verbs, but a word class in their own right.

Lumun adjectives are different from nouns because they must be preceded by the restrictor **í-** in order to be used independently. Nouns, on the other hand, are never preceded by the restrictor **í-**, cf.:

ɪ-c-ɔ́t̪t̪ɛ ‘the small one’ (for example a small **cat̪t̪ak** ‘calabash (k.o.)’
kʊrɛ̂ ‘left-handed person’

Moreover, there is a difference in predicating constructions of the type ‘X is Y’. A noun X can be juxtaposed with a noun Y or with an adjective Y, but there is an alternative construction with the copula C-**á** ‘be’ that is possible with nouns, but not with adjectives; and an alternative construction with the Present of ‘be’ C-**aîk** (containing the formative **cık**) that is possible between a noun and an adjective, but not between nouns. Cf.:

pʊl	**pɪɲɲît**	/	**pʊl**	**p-a**	**pɪɲɲît**
person	singer	/	person	C-be:PR	singer

the person is a singer

***pʊl**	**p-a.ık**	**pɪɲɲît**
person	C-be:PR	singer

pʊl	**p-ərĵk**	/	**pʊl**	**p-a.ık**	**p-ərĵk**
person	C-big	/	person	C-be:PR	C-big

the person is important

***pʊl**	**p-a**	**p-ərĵk**
person	C-be:PR	C-big

Adjectives resemble verbs more than nouns. Like verbs, adjectives function basically as predicates. The first example has a Completive verb, the second an adjective.

ɔ-lalʊ́	**p-ɔkɪɲâ.t**
PERS-Lalʊ	C-become_tired:COMPL

Lalʊ is tired

ɔ-lalʊ́	**p-ɔpərɔ̂t**
PERS-Lalʊ	C-good

Lalʊ is fine

Verbs and adjectives can both occur with a subject pronominal clitic. In the first example the pronominal clitic is attached to a verb, in the second to an adjective:

k-kw-áá.t
3-C-come:COMPL
s/he has come

k-kw-ɟmmɨn
3-C-heavy
s/he is heavy

Adjectives and verbs can both be preceded by the restrictor:

pʊl ɪ-p-ə́rɨ̰k p-aát
person RES-C-big C-come:COMPL
the person who is important has come (i.e. the important person has come)

pʊl ɪ-p-áŋkənɛ p-aát
person RES-C-teach:INCOMPL C-come:COMPL
the person who teaches (i.e. the teacher) has come

In the same way as verbs, several adjectives allow for the derivation of an abstract noun through replacement of the concord by the noun class prefix **ṯ** and adoption of the tone pattern L*.LH (see 4.6.3). Two examples:

C-**ɔpərə̂t** 'good' vs. **ṯɔpərə̌t** 'goodness'
C-**ɪpʊ́k** 'white' vs. **ṯɪpʊ̌k** 'whiteness'

However, the regular processes of verb-to-verb derivation cannot be applied to adjectives. For example, it is not possible to have a Benefactive derivation with adjectives, while this derivation can be made on the basis of (virtually) all verbs.

A further important difference with verbs is that adjectives cannot inflect. Verbs have inflectional morphology marking the basic TAMs (see 12.5) and they can occur together with auxiliaries. On adjectives, on the other hand, TAMs must be expressed with the help of an inflected copular verb (**ɔkâ** 'be' or **ɔṯə́kka** 'become'). Compare the verbal and the adjectival predicate:

ɔ-lalʊ́ **p-á.kíɲa**
PERS-Lalʊ C-become_tired:INCOMPL

Lalʊ will become tired

ɔ-lalʊ́ **p-á.n̪tə́kka** **p-ɔpərɔ̂t**
PERS-Lalʊ C-be:INCOMPL C-good

Lalʊ will become good

Some further examples with **ɔkâ** and **ɔn̪tə́kka** and an adjective follow here.

kəʈi̯ttaŋ **k-ɔká.t** **k-ɔ́rrʊ̂**
knife C-be:COMPL C-blunt

the knife was blunt

tacɔ **t-ɔn̪tə́kká.t** **t-ɔppɔt** **cɔ́kɔc-cɔkɔt**
grass C-become:COMPL C-many quickly-REDUP

the weeds have quickly become abundunt

n̪takəʈʊk **n̪-ɔn̪tə́kká.kan̪ɛ** **n̪-ɔɲərâ**
chicken C-become:PST C-smooth

the chicken became fat

Certain auxiliaries precede a verbal TAM-stem without concord. Adjectival predicates with such an auxiliary make use of a copular verb on which the auxiliary is expressed. Compare the first two examples with the negation auxiliary C-**akə́nn**. The first has a verbal predicate, the second an adjectival:

ŋəpak **ŋ-akə́nn-ɔ́kkə́ttat**
beer C-NEG-be_done:DEPCOMPL

the beer is not done (i.e., the beer is not ready)

ŋəpak **ŋ-akə́nn-ɔ́ká** **ŋ-írrʊ́k**
beer C-NEG-be:DEPCOMPL C-cold

the beer is not cold

Compare also the following examples with the irrealis marker (see 12.18). The first has a verbal predicate, the second an adjectival:

ɔ-n̪t̪án **p-á-ɪɔ́.t**
PERS-father C-IRR-die:COMPL

his/her father would have died

ɔ-n̪t̪án **p-á-aká.t** **p-ɔpərốt**
PERS-father C-IRR-be:COMPL C-good

his/her father would have been fine

There is no reason to analyse adjectives as defective verbs. Even though they share the obligatory presence of the concord with the Non-dependent basic TAMs (Incompletive, Completive and Past), all segmental and tonal characteristics of these verbal TAMs are lacking in the adjective.

10.2.1. Semantic grouping

This section presents adjectives in semantic groups, largely following the semantic types specified in Dixon (2010, p. 73-74). Instead of 'human propensity' I use 'spiritual property'. Some adjectives have a dimensional interpretation with singular head nouns and a quantifying interpretation with plural and mass nouns (C-**ərɨ́k** and C-**ɔttê**, C-**ɔn̪t̪ê**). This is discussed in section 10.2.6 of this chapter, as are the different plural forms of some of the dimensional adjectives. C-**ɔttê** and C-**ɔn̪t̪ê** have a dimensional interpretation ('small, little') as well as an age interpretation ('young'); their reduplicated plurals refer to small size. The plural C-**ârran** refers in the first place to young age of living creatures (people, animals, plants). There is an adjective for old age of things (C-**ɨ́pɛ**), but old age of living creatures is expressed with the Completive of the verb **ʊkkwa** (or **ʊkka**) 'become old' (C-**ʊkkwât** or C-**ʊkkât**). An example is found in chapter 9.

Tonally, the adjectives are represented here as they occur as predicates of an all-low noun. However, as remarked in chapter 9, use of the restricor causes unexpected tonal changes in at least some adjectives. Compare:

pʊl pɔkín̪ak ‘the person is bad’
pʊl ɪ-pɔ́kɪn̪ak ‘the bad person’

dimension, shape	*plural form*
C-**ərîn̪k** ‘big, important’ (SG)	/ C-**ɪttí-**C-**íttîk**, C-**ɪttíttîk** (PL)
C-**ɪttîk** ‘big’ (SG)	/ C-**ɪttí-**C-**íttîk**, C-**ɪttíttîk** (PL)
C-**ɔttê**, C-**ɔn̪n̪tê** ‘small, little, young’ (SG)	/ C-**ɔttɔ́-**C-**ɔ́ttê**, C-**ɔttɔ́ttê**, C-**ɔn̪n̪tɔ́-**C-**ɔ́n̪n̪tê**, C-**ɔn̪n̪tɔ́ttê**
C-**ûkwît** ‘long, tall, deep’ (SG)	/ C-**ûkwít-**C-**ûkwît** (PL)
C-**ʊn̪n̪ôt** ‘short’	
C-**ênnaŋ** ‘properly sized’	
C-**ápɛ** ‘wide’	
C-**ərʊlókkʊl** ‘round’	

age
C-**ɪé** ‘new’ (i.e. young age of things)
C-**ɔttê**, C-**ɔn̪n̪tê** ‘small, little, young’ / C-**ârran** (PL) ‘young’
C-**ín̪pɛ** ‘old’ (of things)

value
C-**ɔpərɔ̂t** ‘good’
C-**ɔkín̪ak** ‘bad’
C-**íccɪɲcɪn** ‘marvellous, superb’
C-**ərîn̪k** ‘big, important’ (SG) / C-**ɪttí-**C-**íttîk**, C-**ɪttíttîk** (PL)

colour
C-**ɔɲî** ‘black’
C-**ɪpók** ‘white’
C-**ɔrɛ̌** ‘red, ripe’
C-**ɔn̪əlɔ̂** ‘grey, yellowish’
C-**íccí** ‘green’
C-**ɔləmít** ‘light brown, towards green’
C-**arʊrɔ̌ŋ** ‘grey and brown mixed’
C-**ɔlʊrrô** ‘striped’
C-**ɔn̪ɛrɛ̌t** ‘spotted’
C-**acallɛrɔ̌** ‘spotted (with big spots)’

physical property
C-**ḭ́mmḭn** 'heavy'
C-**íppappat** 'light, easy'[58]
C-**ɪán** 'wet'
C-**íppá** 'hot, warm'
C-**írrʊ́k** 'cold'
C-**ɔnt̪ɔ́mat** 'hard'
C-**ɔɲərâ** 'smooth, soft, infertile (of a man)'
C-**akə́rɔkkərɔ** 'rough'
C-**ɔrɛrɛ̂** 'rough'
C-**ɔrrʊ́** 'blunt'
C-**ɔrrɛ̂** 'sharp'
C-**akírəkkɪr** 'dim'
C-**ípɪn** 'not well cooked'
C-**ɔt̪ɪɔ́t** 'tasty, sweet'
C-**ɔʈə́r** 'sour'
C-**ḭrâ** 'salty'
C-**ɔpʊ̂n** 'bitter'
C-**ɔʈɛ̌** 'clean, stingy'
C-**ɔŋɔ́** 'sick'
C-**aíʈɪlla** 'crippled'
C-**ɔparí** (SG)/C-**aarí** (PL) 'female'
C-**ɔcʊra** (SG)/C-**ɔmʊra** (PL) 'male'

spiritual property
C-**ʊ̂pʊrɛ́** 'clean (in spiritual sense)'
C-**ɔt̪ʊ̂n** 'forbidden'

speed
C-**acɔ́kɔccɔkɔt** 'fast'
C-**akʊ́cʊkkʊcʊk** 'fast'

similarity
C-**ɛɛná** 'such, like this/that'

[58] According to JS, younger people tend to use C-**íppappat** while older people tend to use the Completive verb C-**ɔpappât** (< **ɔpáppa** 'be(come) light').

quantification
C-**ɔppôt** ‘many, a lot of’ (PL or mass)
C-**ərɨ́k** ‘many, a lot of’ (PL or mass)
C-**ɔttê**, C-**ɔn̪t̪ê** ‘few, a little’ (PL or mass)
C-**əɣ̌ěk** ‘some, other’
C-**ullúk** ‘only, just’
C-**ərúk** ‘only, just’
C-**arît** ‘half, half full’

cardinal numbers
The numerals ‘one’ up to ‘ten’ are adjectives (‘five’, ‘eight’, ‘nine’ and ‘ten’ have an invariable form as well). They are discussed in 10.4.1.

Alamin Mubarak (2002, p. 47) remarks that in Acheron an adjective of size (‘big’) and an adjective of age (‘old’) cannot be combined (i.e. *the big old house). In Lumun (which has cognate items for ‘house’, ‘big’ and ‘old’), this is not a problem. The adjectives can be used in either order:

man	**ɪ-m-íttík**	**í-m-ɨ́pɛ**	**/ man**	**ɪ-m-ɨ́pɛ́**	**í-m-íttîk**
house	RES-C-big	RES-C-old	/ house	RES-C-old	RES-C-big

the big old house

10.2.2. Origins of adjectives

Several adjectives are underived, but there are also adjectives that are derived from verbs, nouns or adverbs. There are also cases in which there is a derivational relationship but in which the direction of the derivation is unclear. In some cases it seems likely that the adjective has served as basis for the derivation.

10.2.3. Verbal origins

C-**ɔnn̪ɔ́mat** ‘hard’ is a clear case of development from the Completive C-**ɔnn̪ɔmât** of the verb **ɔnn̪ɔma** ‘become dry’. The Completive C-**ɔnn̪ɔmât** itself is used for the expression of the quality of being ‘dry’, as the result of the process of drying:

kərɛt **k-ɔn̪ʈɔmâ.t**
cloth C-become_dry:COMPL

the cloth has dried / the cloth is dry

ŋərɛ **ŋ-ɔn̪ʈɔ́mat**
work C-hard

the work is hard

The adjective C-**íppappat** ‘light’ can be understood as a development from the adverb **ɪppáppat** (see 17.1.3 for its adverbial morphology), which relates to the Completive verb C-**ɔpappât** (< **ɔpáppa** ‘be(come) light’). An example with the adjective is given first, then an example with the adverb, then an example with the Completive verb.

pʊl **ɪ-p-ɔká.t** **p-íppappat**
person RES-C-be:COMPL C-light

a person who was light

ʊkʊl **w-ɔkkɔʈ̪.é** **ŋərɛ** **ɪppáppat**
child C-do:COMPL work lightly

the child did the work easily

pʊl **ɪ-p-ɔká.t** **p-ɔpappâ.t**
person RES-C-be:COMPL C-become_light:COMPL

a person who had become light / who was light

The segmental and tonal form of C-**ɔpərɔ̂t** ‘good’ suggest an origin in the Completive form of a verb *__ɔpərɔ__, but this verb (irrespective of its tones) does not exist. There is, however, a verb **ɔpíra** ‘be(come) good’:

pʊl **p-a.píra**
person C-become_good:INCOMPL

the person will get well (s/he is ill now, but shows signs of recovery)

There is surely a historical relationship between C-**ɔpərɔ̂t** ‘good’ and **ɔpíra**, but how exactly they relate is not clear.

There are other adjectives that are related to (inchoative) state verbs, which typically —though not in all cases— have a final or last vowel **a**. It is not evident which form is derived from which:

C-**ɔkíṭ̈ak** ‘bad’ vs. **ɔkíṭ̈aka** ‘become bad’
C-**ɪpúk** ‘white’ vs. **ʊpúka** ‘become white’
C-**ʊṭ̈ṭ̈ôt** ‘short’ (SG) vs. **ɔṭ̈ṭ̈órat** ‘become short’
C-**ɟ́pɛ** ‘old’ vs. **ɟ́pa** ‘become old’ (of things)
C-**ɔʈ̌ĕ** ‘red, ripe’ vs. **ɔʈɪa** ‘become red, ripe’
C-**ɔʈ̌ĕ** ‘clean’ vs. **ɔʈɪa** ‘become clean’
C-**ɔŋɔ́** ‘sick’ vs. **ɔŋa** ‘become sick’
c-ɔppôt ‘many, a lot’ vs. **ɔppât** ‘become full’
C-**ɔɲərâ** ‘smooth, soft, infertile (of a man) vs. **ɔɲára** ‘become smooth’
C-**ɔpôn** ‘bitter’ vs. **ɔpía** ‘become bitter’
C-**ɔrrú** ‘blunt’ vs. **ɔrrúttat** ‘become blunt’
C-**ɔrrê** ‘sharp’ vs. **ɔrréttat** ‘become sharp’
C-**ápɛ** ‘wide’ vs. **apɛkɔt cɪk** ‘become wide’

There can be subtle meaning difference between an adjective and the Completive of the related (inchoative) state verb. Compare the examples below. Whereas C-**ɟ́pɛ** ‘old’ reports on a state or property of a non-living thing in a neutral way (in the examples below sorghum that has been stored), the Completive C-**ɟ́pât** (< **ɟ́pa** ‘become old’), the Completive more strongly evokes a picture of showing signs of age:

míɟ́l	**ɪ-m-ɟ́pɛ**
sorghum	RES-C-old

old sorghum

míɟ́l	**ɪ-m-ɟ́pâ.t**
sorghum	RES-C-become_old:COMPL

sorghum which has become old (picture that comes to mind: it has holes from being eaten by ants, it has probably been stored for several years)

10.2.4. Nominal origins

Some other adjectives have nominal origins. They have developed either from the copula C-**á** 'be' and a noun, or from the connexive (C-**ɔ** 'of') and a noun. Some examples derived with C-**á** and noun:

C-**aíɽɪlla** 'crippled' (< C-**á** + **ɪɽɪlla** 'cripple')
C-**arʊrŏŋ** 'grey and brown' (< and C-**á** + **tʊrŏŋ** 'snake sp., with mixed grey and brown colour')
C-**akárɔkkərɔ** 'rough' (< C-**á** + **kərɔkkərɔ** 'rough spot')
C-**akírəkkɪr** 'dim' (< C-**á** + **kɪrəkkɪr** 'twilight')
C-**acallɛrŏ** 'spotted (with big spots)' (< C-**á** + (probably) **callɛ** 'ball' (final **rɔ** (or **tɔ**) is not identified)

Evidence that these adjectives are indeed adjectives and not copulas + nouns comes from the possibility to make constructions with the Present of 'be' C-**aîk**. Cf.:

pʊl	**p-a**	**íɽɪlla**
person	C-COP	cripple

the person is a cripple

pʊl	**p-aíɽɪlla**
person	C-crippled

the person is crippled

pʊl	**p-a.ɪk**	**p-aíɽɪlla**
person	C-be:PR	C-crippled

the person is crippled / there is a crippled person

In some, there is clear semantic specialization:

ɟmɟt	**w-arʊrŏŋ**
goat	C-grey_and_brown

the goat is grey and brown

pɪɲɪl	**p-a**	**tʊrŏŋ**
snake	C-COP	snake(sp.)

the snake is a *tʊrɔŋ*

In other adjectives the connexive C-**ɔ** and a noun can be recognized. Adjectives of this type are similar to normal connexive + noun constructions (see chapter 7.1), but there are differences. In the first place, there are cases with segmental or tonal changes, as in both examples below where the tones of the adjective are not expected on the basis of the composing parts. One also finds semantic specialization in the same examples (the composing nouns function metaphorically):

C-**ɔlʊrrô** 'striped' (< C-**ɔ** + **lʊrrʊ** 'ears of maize')
C-**ɔn̪ɛrɛ̌t** 'spotted' (< C-**ɔ** + **n̪ɛrêt** 'corn cob')

A fundamental syntactic difference between adjectives and constructions of connexive + noun has to do with the restrictor. Connexive + noun constructions are not preceded by the restrictor, but adjectives have the restrictor when used as restrictive attributes. This is the case even though some adjectives that are derived from the connexive and a noun may also lack the restrictor as restrictive attributes. An example of this is C-**ɔn̪ɛrɛ̌t** 'spotted'. In the example below the restrictor is present, but it could also be absent (second example):

ca̱t̪̱ak	**ɪ-c-ɔn̪ɛrɛt**	**c-ɔkəttáṇ.ɛ**
calabash(k.o.)	RES-C-spotted	C-break:COMPL

the spotted calabash has broken

ca̱t̪̱ak	**c-ɔn̪ɛrɛt**	**c-ɔkəttáṇ.ɛ**
calabash(k.o.)	C-spotted	C-break:COMPL

the spotted calabash has broken

The possibility to use C-**ɔn̪ɛrɛ̌t** 'spotted' as a restrictive attribute without the restrictor shows that C-**ɔn̪ɛrɛ̌t** 'spotted' does not fully behave as an adjective. Partly it (still) patterns with connexive + noun constructions.

However, like other adjectives, C-**ɔn̪ɛrɛ̌t** 'spotted' must have the restrictor in order to be used independently:

ɪ-c-ɔt̪ɛrɛt **c-ɔkəttáṭ.ɛ**
RES-C-spotted C-break:COMPL

the spotted one has broken

The adjectives ‘female’ and ‘male’ have different stems for singular/plural, containing singular and plural nouns, though in the case of ‘male’ the composing nouns are not synchronically attested. These adjectives do not allow for attributive use without the restrictor.

C-**ɔparí** (SG)/C-**aarí** (PL) ‘female’ (< C-**ɔ** + **parí** ‘wife’/ C-**ɔ** + **arí** ‘wives’)
C-**ɔcʊra** (SG)/C-**ɔmʊra** (PL) ‘male’ (< C-**ɔ** + ***cʊra** / C-**ɔ** + ***mʊra**)

Two examples:

ṭ̪aməlá **í-ṭ̪-ɔ́parí**
camel RES-C-female.SG

a female camel

laməlá **í-l-áarí**
camels RES-C-female.PL

female camels

The following example contrasts the adjective -**ɔparí** ‘female’ and the noun **parí** ‘wife’ in an equative relative construction:

pʊl **ɪ-p-ɔ́parɪ** **ɪ-p-a** **parí**
person RES-C-female.SG RES-C-COP wife

the woman who is a wife

10.2.5. Adverbial origins

One example of derivation of an adjective from an adverbial was mentioned earlier: C-**íppappat** ‘light’. Two others that contain C-**á** ‘be’ and an adverb are:

C-**acɔ́kɔccɔkɔt** ‘fast’ (< C-**á** + **cɔkɔccɔkɔt** ‘quickly’)
C-**akúcukkucuk** ‘fast’ (< C-**á** + **kucukkucuk** ‘quickly’)

10.2.6. Singular and plural forms

Some adjectives have different forms for singular and plural. ‘Male’ and ‘female’, which are based on singular vs. plural nouns, were mentioned above. A few adjectives obligatorily occur in (partial) reduplicated form when modifying a noun which refers to a plural entity. In the case of ‘big’ the final consonant does not participate in the reduplication; in the case of ‘small’, the first part has a changed final vowel. For this reason, I regard the first part as the reduplicated part. Note also that in ‘big’ and ‘small’, the reduplication can involve or not involve the concord. In the case of ‘long, tall, deep’, the concord always participates in the reduplication. In analogy to the other adjectives, I regard the first part here as the reduplicated part.

C-**ərîk** / C-**ɪttí**-C-**íttîk** or C-**ɪttí-íttîk** ‘big’
C-**ɪttîk** / C-**ɪttí**-C-**íttîk** or C-**ɪttí-íttîk** ‘big’
C-**ɔttê** / C-**ɔttɔ́**-C-**ɔ́ttê** or C-**ɔttɔ́-ɔ́ttê** ‘small’,
or: C-**ɔn̪t̪ê** / C-**ɔn̪t̪ɔ́**-C-**ɔ́n̪t̪ê** or C-**ɔn̪t̪ɔ́-ɔ́ttê** ‘small’
C-**ûkwît** / C-**ûkwít-**C-**ûkwît** ‘long, tall, deep’

Some examples follow here.

man	**ɪ-m-íttîk**
room	RES-C-big

a big room

kəmən	**ɪ-k-íttí~k-íttîk**	/	**ɪ-k-íttí~íttîk**
rooms	RES-C-PLR~C-big	/	RES-C-PLR~big

big rooms

pəɽak	**ɪ-p-íttí~p-íttîk**	/	**ɪ-p-íttí~íttîk**
group_of_people	RES-C-PLR~C-big	/	RES-C-PLR~big

a group of adults (a group of people who are big)

kaɪʔí **ɟ-k-ûkwɟt**
nail RES-C-long

a long nail

kɪra **ɟ-k-ûkwɟk~k-ûkwɟt**
trees RES-C-PLR~C-long

tall trees

In the next example ‘long’ is used in an object-oriented secondary predication:

t̪-ɔkɔrrənnɔ **áíʔí** **w-ûkwɟr~ûkwɟt** **t̪-ɔ́kít̪ak**
NOM-let nails C-PLR~(C-)long C-bad

leaving your nails long is bad (i.e.: not cutting your nails is bad)

In **wûkwɟrûkwɟt** ‘long’, in the example above, the segment **r** is the regular outcome of the underlying sequence **t-w** (< **wûkwɟt-wûkwît**).

C-**ɔttê** ‘small, little, young’ and C-**ɔt̪t̪ê**, and their reduplications, are alternative forms. The form with **t̪** is used in case of **t̪**-concord (first example below), or when the preceding qualified noun contains a **t̪** in non-initial position (second example below). The forms with **t̪** and **t** are both possible in case of **l**-concord or in case of the preceding qualified noun containing an **l** in non-initial position. In other cases the forms with **t** tend to be used.

t̪ún **t̪-ɔ́t̪t̪ê**
onion C-small

the onion is small

naṯa **n-ɔt̪t̪ɔ́~ɔ́t̪t̪ê**
leaves C-PLR~small

the leaves are small

The modifier of plural nouns C-**ârran** ‘young’ is used with living creatures:

appɛnn̪ína **w-ârran**
groundnuts C-young

the groundnuts are young/small (they are still on the plant, not yet fully grown)

ɲʊkʊl **ɲ-ârran**
children C-young

the children are young/small

When the children are small-sized for their age C-**ɔttɔ́-ɔ́ttɛ̂** or C-**ɔnn̪ɔ́-ɔ́nn̪ɛ̂** is used:

ɲʊkʊl **ɲ-ɔttɔ́∼ɔ́ttɛ̂**
children C-PLR∼small

the children are (too) small (suggesting they do not get good food, or not enough)

It is not impossible to use C-**ârran** 'young' outside of its normal domain:

mənn̪ɔk **m-ârran**
stones C-young

the stones are small (elic.)

Interestingly, the singular forms C-**ərîk** 'big', and C-**ɔttɛ̂** and C-**ɔnn̪ɛ̂** 'small' can also be used in combination with a plural noun, but then take on quantifying instead of dimensional meaning. C-**ərík** then expresses 'many' or 'a lot'; C-**ɔttɛ̂** and C-**ɔnn̪ɛ̂** then expresses 'few':

ʊl **w-ərîk**
people C-big

the people are many

maɽɪ **m-ɔttɛ̂**
days C-small

a few days

C-**ɔttɛ̂** (C-**ɔnn̪ɛ̂**) also takes on quantifying meaning in combination with a mass noun, namely as 'a little':

ŋʊcʊl	**ŋ-ɔt̪t̪ê**
sauce	C-small

the sauce is (too) little

Reduplication of ‘small’, ‘big’ and ‘long’ (or a subset of these) in case of modification of a plural noun also occurs in some other languages from the Talodi and Heiban groups, including Tocho, Dengebu and Jomang (Schadeberg 1981b, p. 20, 32, 38, 132, 148) as well as Ebang (Schadeberg 1981a p. 23, 47) and Otoro (Schadeberg 2009, p. 202). The use of the non-reduplicated dimensional adjective as a quantifier of plural nouns, too, is found in other Talodi and Heiban languages. Schadeberg (1981b) reports ‘small’/‘few’ for Ngile, Dengebu and Tocho (p. 148), and ‘big’/‘many’ for Dengebu (p. 132). Stevenson mentions ‘small’/‘few’ in Otoro (Schadeberg 2009, p. 202). In Tocho ‘many’ is applied as the (suppletive) plural of ‘big’ (Schadeberg 1981b p. 132).

10.2.7. Intensified forms

Some adjectives have a counterpart with (partial) reduplication and/or an added geminate expressing intensification. In the first and second example below it is unclear in which direction the reduplication has gone. The third and fourth examples are cases of partial reduplication occuring to the left of the root; the fifth has an added geminate to the right of the root. The sixth has an added geminate to the right of the root as well as a changed ending.

C-**ɔpʊ́n** ‘bitter’ vs. C-**ɔ-pʊm-pʊ́n** ‘very bitter’
C-**íccí** ‘green’ vs. C-**íccí-íccí** ‘very green’
C-**ʊt̪t̪ôt** ‘short’ vs. C-**ʊt̪t̪ʊ́**-C-**ʊ́t̪t̪ôt** or C-**ʊt̪t̪ʊ́-ʊ́t̪t̪ôt** ‘very short’
C-**ûpʊrɛ́** ‘clean (in spiritual sense)’ vs. C-**û-pʊ-pʊrɛ́** ‘very clean (in spiritual sense), holy’
C-**ɔkíṭak** ‘very bad’ vs. C-**ɔkíṭ-ɛt̪t̪-ak** ‘very bad’
C-**ɔpərɔ̂t** ‘good’ vs. C-**ɔpə́r-ət̪t̪ərɛ́** or C-**ɔp-ə́t̪t̪ərɛ́** ‘very good, very nice’

Certain colour adjectives co-occur with a dedicated cognate adverb that intensifies their meaning. These adverbs have the adverbial morphology of gemination of the first consonant of the stem,

preceded by the vowel **ɪ** (see 17.1). The intensifying adverbials tend to fuse with the adjective to an intensified adjective. Some examples:

C-**ɔɲî** 'black' vs. C-**ɔɲí ɟɲɲí** or C-**ɔɲîɲɲí** 'very black'
C-**ɪpúk** 'white' vs. C-**ɪpʊk ɪppŭk** or C-**ɪpʊkɪppŭk** 'very white'
C-**ɔn̪əlô** 'grey, yellowish' vs. C-**ɔn̪əlɔ́ ɪn̪n̪ólɔ** 'very grey, yellow'

See 17.1.4 for examples of **ɟɲɲí** 'very (black)' and **ɪppŭk** 'very (white)' modifying a verb.

C-**ɔɽĕ** 'clean, stingy' has a different intensified form, which involves reduplication and gemination of **ɽ** to **ll**: C-**ɔɽɪllîr** 'very clean, pure (especially of water)'.

The intensified form of C-**ɔɲərâ** 'smooth, soft, infertile (of a man)' has the adverbial morpholoy of a reduplicated first stem consonant preceded by the vowel **ɪ**:

C-**ɔɲərâ** 'smooth, soft, infertile (of a man)' vs. C-**ɪɲɲərâ** 'very smooth, soft'

C-**íccɪɲcɪn** 'marvellous, superb' is a reduplicated form and has an "intense" meaning, but a non-reduplicated form is not attested.

C-**ɔɽĕ** 'red, ripe' has a specific intensifying adverbial —which does not seem to be cognate— that may fuse with the adjective:

C-**ɔɽɛ ɪttʊăŋ** or C-**ɔɽɛttɪăŋ** 'very red, very ripe'

10.3. Other ways of expressing spiritual property

Lumun has adjectives in diverse semantic fields, but adjectives —as well as verbs and nouns — in the field of spiritual property or human propensity (including emotions) are virtually lacking. C-**ɔɽĕ** 'clean', which is listed under physical property, can be counted here since it also expresses 'stingy', possibly as an extension of 'clean', as well as some other adjectives which can be used with reference to human behaviour, notably C-**ɔpərôt** 'good' and C-**ɔkíṯak** 'bad'. Generally,

however, concepts in this field are described rather than expressed by a single word. The expressions for ‘happy’ and ‘angry’ involve a verb and the noun **ka** ‘body’:

m-p-ɔpɪrá.t	**nɔ-kâ**
1-C-become_good:COMPL	on-body

I am happy (lit.: I am good on body)

k-k-ǒa	**kâ**
3-C-rise:INCOMPL	body

s/he is angry (lit.: s/he rises as to the body)

Some concepts in this field are expressed with C-**ɔnô** ‘have’ (or a form of C-**ɔnâ** ‘bring, have’) and a noun:

ŋ-kw-ɔnó	**ŋɔrɛ**
2-C-have	laziness

you are lazy

ɔ-lɔ́ttɪ	**p-ɔnó**	**t̪ʊkʊŋkô̰n**
PERS-Lɔttɪ	C-have	trouble_making

Lɔttɪ is a troublemaker

Being stingy can be expressed with the adjective C-**ɔʈɛ̆**, but also with ‘have’ and the noun **nɔʈɛ̆** ‘stinginess’:

ɔ-nɛnní	**p-ɔ́nó**	**nɔʈɛ̆**
PERS-Nɛnnɪ	C-have	stinginess

Nɛnnɪ is stingy

The same construction is also used for the expression of properties in other semantic fields, for example:

ŋ-kw-ɔnó	**míɲâ**
2-C-have	speed

you are fast

10.4. Numerals and quantifiers

Some numerals consist of a concord and a stem, others have an invariable form. Some invariable numerals are nouns, because they co-occur with modifiers which agree with them; other invariable forms are more difficult to assign to a word class since they do not combine with modifiers. Certain numerals have an adjectival and as well as an invariable form.

10.4.1. Numerals

The numerals 'one' up to 'ten' have one or more adjectival forms. 'five', 'eight', 'nine' and 'ten' also also occur as invariable elements. The numerals 1-10 are tonally represented below as in an isolated noun phrase, preceded by an all-low noun, as in **papʊ pulukkû** 'one thing', etc.

Table 44 Numerals

	Adjectival numeral	*Invariable numeral*
one	C-**ulukkû**	
two	C-**ɛɽá**	
three	C-**əɽapórʊk**	
four	C-**ɔcɔɽɪn**	
five	C-**úkúlúk**, C-**ukulúk**	**ukulúk**
six	C-**əɽâkkʊrʊk**, C-**əɽárəpʊrʊk**	
seven	C-**êɽɛ**-C-**əɽapórʊk**, C-**êɽɛɽapórʊk**, C-**ɔ́cɔɽa**-C-**əɽapórʊk**	
eight	C-**amɔ́rəmɔr**	**mɔrəmɔr**
nine	C-**ʊkʊllácɔɽɪn**, C-**úkʊllácɔɽɪn**	**ʊkʊllácɔɽɪn**
ten	C-**áttʊl**	**attʊl**

Schadeberg (1981b, p. 154) mentions "one hand" as the proto-Talodi expression for 'five'. He reconstructs the proto-Talodi nouns ***tsugwiŋ** / ***ɲugwin** 'hand / hands' and the numeral ***-VllVg** 'one', in which V stands for "some vowel". The Lumun expression for 'one hand' is **ʊkʊn wulukkû**. It can be seen that the invariable **ukulúk** 'five', like the items for 'five' in other Talodi languages, finds its origin in "one hand". The adjectives C-**úkúlúk** and C-**ukulúk** can be

assumed to have developed from C-**á** + **ukulúk** (C-**úkúlúk**), and from the connexive C-**ɔ** + **ukulúk** (C-**ukulúk**).

The word for 'three' C-**əʧapórʊk** and the words for 'six', C-**əʧâ-kkʊrʊk** and C-**əʧârəpʊrʊk**, seem to be related, but it is not clear how exactly. The full form C-**éʧɛ**-C-**əʧapórʊk** 'seven', which has a repeated concord, and its shortened form C-**éʧɛʧapórʊk** are built up as C-two-two-(C-)three. An alternative way of expressing 'seven' has a repeated concord as well: C-**ɔ́cɔʧa**-C-**əʧapórʊk** (C-four-C-three).

'Four' C-**ɔcɔʧɪn** and 'eight' **mɔrəmɔr**, C-**amɔ́rəmɔr** seem related through a (unattested) plural noun from the **c**-/**m**- class pair, which occurs as a reduplicated form in 'eight'. C-**ɔcɔʧɪn** 'four' seems to contain the connexive C-**ɔ** preceding this C-initial noun. The adjectival form of 'eight' C-**amɔ́rəmɔr** contains the Present of 'be' C-**á**. C-**ʊkʊllácɔʧɪn** 'nine' is a compound of 'five' and 'four'.

Four, five, eight and nine find their origins in nouns, but whether or not the invariable variants of five, eight and nine must synchronically be regarded as nouns is less clear, since no examples where they induce concord on a modifier (or verb) were found.

Invariable **attʊl** 'ten' functions as a noun, since 'twenty' can be expressed as **attʊl w-ɛʧá** (lit.: two tens). Its adjectival form, with initial high tone, appears to contain C-**á**.

The adjectival and the invariable form do not communicate precisely the same. The adjectival form is used in case of an exact (i.e. precisely counted) number of items. The invariable form does not suggest meticulous counting, and though it is likely to be accurate (the numbers are small) one more or one less would not be impossible:

lịcɔk mɔ́rəmɔr	'(ca.) eight goats'
lịcɔk lamɔ́rɛmɔr	'eight goats
lịcɔk lɔkát mɔrəmɔr	'there were (ca.) eight goats'
lịcɔk lɔkát lámɔ́rəmɔr	'there were (precisely) eight goats'

The numerals eleven up to nineteen are expressed as additions to ten:

attʊl (C-**áttʊl**) **ana ɪkkén cúlúkkû**	'eleven'
attʊl (C-**áttʊl**) **ana ɪkkén kɛɽá**	'twelve'
attʊl (C-**áttʊl**) **ana ɪkkén kəɽapárʊk**	'thirteen'

etc.

My consultant (JS) associated the word **ɪkkên** with **cíṯ/kíṯ** 'eye/eyes', in this context referring to coins. If **ɪkkên** is indeed based on 'eye/eyes', these expressions probably developed only with the emergence of trade involving money.

The word for 'twenty', **arrɪâl**, is a noun. It comes from Arabic *riyal* — today the name of the currency of, amongst others, Saudi Arabia— which is itself based on the old Spanish currency *real*. 'Forty' is expressed as **arrɪál w-ɛɽá** (lit.: two twenties).

The Lumun counting system beyond twenty is based on twenties and an additional **aləkaɪrê** 'ten' (not **attʊl** or C-**áttʊl**). The origin of **aləkaɪrê** is unknown.

arrɪál ana áləkaɪrê	'thirty' (twenty and ten)
arrɪál wɛɽá	'forty' (two twenties)
arrɪál wɛɽá ana áləkaɪrê	'fifty' (two twenties and ten)
arrɪál wəɽapárʊk	'sixty' (three twenties), etc.

kaṯór 'road' (plural: **aṯór** 'roads') is used for 'hundred', but sometimes also for 'thousand'.

The format for abstract counting and for counting on the fingers is PRO-C-numeral 'it is one', 'they are two', etc.. Counting on the fingers starts with the digital finger of the right hand touching the little finger of the left hand and moving from there to the thumb (1 to 5), and is continued with the digital finger of the left hand moving from the little finger of the right hand to the thumb (6-10). '1' is preceded by pronominal **c**- and concord **c**-, the other numbers by pronominal **m**- and concord **m**-, referring to **caún/maún** 'finger/fingers'. For the numbers up to 19 the adjectival form is used:

ccúlukkû ‘1’, **mmêʈá** ‘2’, **mmáʈapárʊk** ‘3’, **mmɔ́cɔʈɪn** ‘4’, **mmúkulúk** ‘5’, **mmáʈâkkʊrʊk**, **mmáʈârəpʊrʊk** ‘6’, **mmêʈéməʈapárʊk**, **mmêʈéʈapárʊk**, **mmɔ́cɔʈaməʈapárʊk** ‘7’, **mmámərəmər** ‘8’, **mmúkʊllácɔʈɪn** ‘9’, **mmáttʊl** ‘10’, **mmáttʊl ana ɪkkén cúlúkkû** ‘11’, **mmáttʊl ana ɪkkén kɛʈá** ‘12’, …, **arrɪâl** ‘20’, etc.

Pronominal reference changes when items are counted that are referred to with nouns from other noun classes. In the first clause of the example below, ‘three’ is a numeral modifier of the noun **ɲʊkʊl** ‘children’. In the second and third clause, the instances of ‘three’ consist of pronominal **ɲ-** (+ H-tone), referring to **ɲʊkʊl** ‘children’, and the concord **ɲ**.

k-kw-ɔ́nʊ	**ɲʊkʊl**	**ɲ-əʈapúrʊk**
3-C-have	children	C-three

ɲ-əʈapúrʊk	**tulluk-î**
PRO.C-three	only-Q

ɨ̱ɨ̱	**ɲ-əʈapúrʊk**	**tullúk**
yes	PRO.C-three	only

s/he has three children. only three? yes, only three

Adjectival numerals are generally used without the restrictor:

ṯáʈú	**ṯ-ɔ́nú**	**aṯər**	**w-əʈapúrʊk**	**ɪ-íttí~íttík**
Ṯaʈʊ	C-have	roads	C-three	RES-(C-)PLR~big

Ṯaʈʊ has three big roads

ɛṯ-ɪn	**máṯṯák**	**m-áttʊl**
give:IMP-O1	bowls	C-ten

give me ten bowls

It is, however, possible to use the restrictor with an adjectival numeral. Reference is then made to a specific group consisting of that number of items:

ɛn̪-ɪn	**mán̪t̪ák**	**í-m-áttʊl**
give:IMP-O1	calabashes(k.o.)	RES-C-ten

give me the ten bowls, give me the group of ten bowls (lit.: give me the bowls which are ten)

The restrictor cannot be combined with a nominal adjective:

ɛn̪-ɪn	**mán̪t̪ak**	**attʊl**
give:IMP-O1	calabashes(k.o.)	ten

give me (ca.) ten bowls

***ɛn̪-ɪn**	**mán̪t̪ák**	**í-áttʊl**
give:IMP-O1	calabashes(k.o.)	RES-ten

Adjectival and invariable numerals can both be used predicatively with a copular verb ('be' or 'become'). For Present TAM the form of 'be' is C-**aîk**, not only for adjectival numerals but also for the invariable numerals. Thus, the invariable numerals behave here like adjectives instead of like nouns (in case of nominal behaviour not C-**aîk** but the copula C-**á** would be used.

man̪t̪ak	**m-a.ɪk**	**m-áttʊl**
calabashes(k.o.)	C-be:PR	C-ten

there are ten bowls

man̪t̪ak	**m-a.ík**	**attʊl**
calabashes(k.o.)	C-be:PR	ten

there are (ca.) ten bowls

A specific group of a number of items, with the number expressed by a nominal numeral, can be referred to through a construction with C-**aîk**, preceded by the restrictor:

ɛn̪-ɪn	**mán̪t̪ak**	**ɪ-m-a.ík**	**attʊl**
give:IMP-O1	calabashes(k.o.)	C-be:PR	ten

give me the (ca.) ten bowls, give me the group of (ca.) ten bowls

Numerals, like adjectives, can be used as secondary predication (cf. 10.1). In the next example the numeral modifies both the object

noun (**mɛ̂n**) and the verbal complex. The example has a concordial numeral, but an invariable numeral would be possible as well:

ɔ-kʊkkʊ́	**p-á.ík**	**p-á.cɔ́t**	**mɛ́n**	**nɔ-kwəʅɛ**	**m-ɔ́cɔʅɪn**
PERS-Kʊkkʊ	C-be:PR	C-string_at:INCOMPL	palm_fruits	on-pointed_stick	C-four

Kʊkkʊ is stringing four palm fruits on a stick

Plural numbers generally modify a plural noun, but not when clock time is expressed:

cɻŋkɻ	**c-əʅapórʊk**
sun	C-three

it's three o'clock (lit.: the sun is three)

Numerals can also be used independently. An example follows here. The concord **k** agrees with **kaʊn** 'bee, honeycomb'.

n-ánt-ɔrrɛn-ɪn	**n-tan**	**k-ulukkû**
2A-can:DEPINCOMPL-throw_for:DEPINCOMPL-O1	with-up_on:ABS	C-one

"please throw to me one (honeycomb) for me!" (App. IV, 87)

10.4.2. **at**-C-**ʊt**, **át**-C-**ʊ́t** and numeral

The associative marker **a̱t̪̱ʊt** (or **á̱t̪̱ʊ́t**) can be combined with the plural suffix **-ŋɔ̂n** (cf. chapter 6.8), but also with a numeral. Attachment of a numeral shows that **a̱t̪̱ʊt/á̱t̪̱ʊ́t** involves nominal agreement and can (probably) be analysed as **at**-C-**ʊt**/**át**-C-**ʊ́t**. The associative marker is combined with a numeral in the following way:

at-C-**ʊt**-C-NUMERAL, **át**-C-**ʊ́t**-C-NUMERAL

or shortened:

at-C-NUMERAL, **át**-C-NUMERAL

t assimilates largely regularly to the following concord, and the resulting (underlyingly) geminated consonants are —as is regular— pronounced without length. When preceded by an all-low noun,

there are two tonal alternatives: **at**-C-**ʊt** and **át-**C-**ʊ́t**, in the latter case there is tone bridge unto the high tone on the numeral:

ɲʊkʊl aŋɲʊɲ-ɲɛʈá, **ɲʊkʊl áŋɲʊ́ɲ-ɲéʈá**	‘both children’
ɲʊkʊl aŋɲʊɲ-ɲɛʈapórʊk, **áŋɲʊ́ɲ-ɲéʈápórʊk**	‘all three’
ɲʊkʊl aŋɲʊɲ-ɲɔ́cɔʈɪn, **áŋɲʊ́ɲ-ɲɔ́cɔʈɪn**	‘all four’
ɲʊkʊl aŋɲʊɲ-ɲukulúk, **áŋɲʊ́ɲ-ɲúkúlúk**	‘all five’

etc.

Some examples with different concords follow here, each time the shortened form is given as well. In isolation **kamár** ‘trees (sp.)’ and **lɔʈák** ‘ropes’ have a final high tone, **nʊ̂ʊ̂n** ‘digging tools (k.o.)’ a final falling tone.

kamar ák-k-ʊ́k-k-éʈá	‘both *pamar*-trees’
kamar ák-k-éʈá	‘both *pamar*-trees’

lɔʈək ál-l-ʊ́l-l-úkúlúk	‘all five ropes’
lɔʈək ál-l-úkúlúk	‘all five ropes’

nʊʊ́n án-n-ʊ́n-n-ɔ́cɔʈɪn	‘all four *tʊʊn*-digging tools’
nʊʊ́n án-n-ɔ́cɔʈɪn	‘all four *tʊʊn*-digging tools’

With all concords, **at**-C-**ʊt** gives the expected outcome, except with the concord **w**. A sequence **t**-**w** is expected to be realized as **r** ([ɾ]), but **at**-C-**ʊt-**C-NUMERAL is realized as **a-ʊr**-NUMERAL, instead of expected *__ar-ʊr__-NUMERAL. The shortened form **at-**C-NUMERAL can, as expected, be realized as **ar-**NUMERAL before, but also as **a-ʊ-**NUMERAL:

aʈəpʊ á-ʊ́r-éʈá ‘both things’	<	**át-w-ʊ́t-w-éʈá**	(not expected)
aʈəpʊ ár-éʈá ‘both things’	<	**át-w-éʈá**	(expected)
aʈəpʊ á-ʊ́-éʈá ‘both things’	<	**át-w-éʈá**	(not expected)

aʈəpʊ a-ʊr-əʈapórʊk ‘all three things’	<	**a-ʊr-əʈapórʊk**	(not expected)
aʈəpʊ ar-əʈapórʊk ‘all three things’	<	**ar-əʈapórʊk**	(expected)
aʈəpʊ a-ʊ-əʈapórʊk ‘all three things’	<	**a-ʊ-əʈapórʊk**	(not expected)

This raises some doubt whether the underlying form should indeed be analysed as **at**-C-**ʊt**, and not rather as **a**-C-C-**ʊt**. I rejected this analysis because there is only one possible other case of double concord in the language, namely in the variant **a**-C-C- of the subject focus marker **akk**- (see 19.1), and which may have developed from **ak**-C- rather than from double concord.

Use and semantics

at-C-**ʊt**-C-NUMERAL (**át**-C-**ʊ́t**-C-NUMERAL) can modify a preceding plural (pro) noun. In such cases it expresses 'all' (and in case of two: 'both'). The notion of 'added item' is not so clear here, but there is no doubt that the same formative as used in comitative constructions is involved, as shown further below.

ɲʊkʊl	**áɲ-ɲ-úɲ-ɲ-éɽá**	(< **át-ɲ-út-ɲéɽá**)
children	ASS-C-ASS-C-two	

both children (all two children)

ɔ-kín	**án̪-n̪-ún̪-n̪-énd̪á**
PERS-3A	ASS-C-ASS-C-two

both of them

at-C-**ʊt**-C-NUMERAL (**át**-C-**ʊ́t**-C-NUMERAL) does not convey information about togetherness. In the example below, the persons that were found may have been found together, but also in different places:

m-p-ɪɔn̪.é	**kín**	**án̪-n̪-ún̪-n̪-énd̪á**
1-C-find:COMPL	O3A	ASS-C-ASS-C-two

I found both of them (in the same place or in different places)

at-C-**ʊt**-C-NUMERAL, **át**-C-**ʊ́t**-C-NUMERAL can be used in a comitative construction comparable to the one described in chapter 6.7. In that construction the associative marker **atʈʊt** (or **átʈʊ́t**) expresses that one person is added in order to get the final group, **atʈʊŋɔ̂n** (**or átʈʊ́ŋɔ̂n**) that more persons are added. In constructions with **at**-C-**ʊt**-C-NUMERAL (**át**-C-**ʊ́t**-C-NUMERAL) the numeral does not express the

number of added persons, the number of people of which the group finally consists. Examples:

ɔpakkɔt̪.ɛ	**tʊan**	**ɔn-át̪-t̪-ɛ́ʈá**
return:IMP	home	2A-ASS-C-two

go back home with her! (i.e. being two persons in total: you (Ruth) and Orpah) (Ruth 1:15)

kərənnɔ-n	**ɪr-ɛ̃ɔ̃**	**ɪr-át̪-t̪-ɛ́ʈá**
let:IMP-O1	12-go:DEPINCOMPL	12-ASS-C-two

let me go with you! (i.e. being two persons in total: I (Ruth) and you (Naomi)) (Ruth 1:16)

ana	**ɔ-lɔ́t**	**p-ɔɪŋ.kát̪ɛ**	**ɔ-kín**	**át̪-t̪-ɛ́ʈá**
and	PERS-Lot	C-go:PST	PERS-3A	ASS-C-two

and Lot went with him (Genesis 12:4)

10.4.3. Ordinal numbers

There is no morphological process to derive ordinal numbers from cardinal numbers. ‘First’ as an adjective can be expressed in more than one way. The first two expressions below are made up of the connexive C-**ɔ**, a preposition (**nɔ**- ‘on, at’, **tɔ**- ‘up on, up at’) and a noun. The third expression suggests the same make-up but a noun ***môn** is not attested.

C-**ɔ-rɔ-kɻ́t**	‘first’	lit.: ‘of up on eyes’
C-**ɔ-nɔ-t̪ôn**	‘first’	lit.: ‘of on mouth’
C-**ɔ-nɔ-môn**	‘first’	lit.: ‘of on ?’

All three expressions can be collocated with **caʈɪ̆** ‘time, day’:

caʈı cɔ́rɔ́kɻ́t, caʈı cɔ́nɔ́t̪ôn, caʈı cɔ́nɔ́môn 'the first time, the first day’

For translating ordinals higher than one, the numerals listed above can be used in different constructions. The first example, which has the restrictor preceding the numeral, presents a translation of ‘the

second day', the second, which has the numeral in extraposition, of 'April', i.e. 'the fourth month'.

a-l-ɔ́ka.kat	**maʧı**	**ı-m-ɛʧá**
CONJ-PRO-be:DEPPRFV	times	RES-C-two

and it was the second day (lit.: and it (**lɔn** 'words, matters') was days which were two) (Genesis 1:8)

ámmá	**ánɔ́k**	**w-aa.t**	**w-ɔ́cɔ́ʧín …**
if	moons	C-come:COMPL	C-four

when the moons/months have reached four (i.e. in April)

10.4.4. Quantifiers

Most quantifiers are adjectives, but some have an invariable form. The adjectival quantifiers, mentioned also in section 10.2.1, are repeated here:

C-**ɔppô̱t** 'many'
C-**ərî̱k** 'many, a lot of'
C-**ɔttê** / C-**ɔ̱ṯṯê** 'few, a little'
C-**ərúk** 'only, but'
C-**ullúk** 'only, just'
C-**arît** 'half, half full'

The following quantifiers have an invariable form (a form which is reminiscent of the shape of certain adverbs, starting with a vowel and a geminate).

appık 'all, whole'
attɛl 'many'

Two examples follow with **appık** 'all, whole':

ɲʊkʊ̀l	**appık**	**ɲ-ɛ̂.t**
children	all	C-go:COMPL

all children have left

a-kuṭu	**ɔll.at**	**n-nɔ**	**ká**	**appık**
CONJ-skin	run:DEPPRFV	with-on	body	all

and the whole skin came off from the body / and the skin came off from the whole body

A special case are the items **pəllék/ṭəllék** ‘alone, different’ (also **pərék/ṭərék**). They function as adjectives, stating a quality of the head noun, but are morphologically different from adjectives, since their only attested forms are **pəllék** and **ṭəllék**. Initial **p** and **ṭ** do not agree with the noun class of the head noun, as can be seen in the examples below, but agree with its singular or plural reference:

kálam	**k-aŋ**	**k-a.ık**	**p-əllék**
pen	C-POSS2	C-be:PR	C-alone

your pen is different

álam	**w-aŋ**	**w-a.ık**	**ṭ-əllék**
pens	C-POSS2	C-be:PR	C-alone

your pens are different

pəllék and **ṭəllék** could, on the basis of their morphology, be nouns from the **p**- and **ṭ**- noun classes in singular-plural opposition. They do not, however, function like nouns. C-**aík** ‘be’, as in the examples above, cannot be used in equations of nouns. Moreover, **pəllék** and **ṭəllék** never function as the subject or object argument of a verb. All in all, **pəllék** and **ṭəllék** resemble adjectives more than nouns. Note that initial **p**- and **ṭ**- have a parallel in the **p**-concord of singular (pro)nouns with the persona prefix **ɔ́**- and the **ṭ**-concord of nouns that are marked with the associative plural marker **-ŋɔ̂n** (see 5.2 and 5.3).

Notes on the use of some quantifiers

*C-**ullúk** ‘only, just’*

C-**ullúk** ‘only, just’ has an invariable adverbial counterpart with initial **t**: **tullúk** ‘only, just’. An example with **tullúk** ‘only, just’ is given in 17.1.4. An example with the adjective C-**ullúk** follows here:

cʊmpúraŋ	**c-ulluk**	**ákk-ɔká.t**	**ɪ.ccík**	**k-ɔ-măn**
monkey	C-only	FOC-be:COMPL	near	C-of-house

the monkey only was the one who was near the house (i.e.: it was only the monkey who was near the house)

*C-**ərúk** 'only, just'*

Like C-**ullúk**, C-**ərúk** has an invariable adverbial counterpart with initial **t**: **tərúk** 'only, just'. The adverb is typically used together with the conjunction word **ana** 'and', forming the contrasting conjunction word **anarrúk** 'but'. Adjectival C-**ərúk** is typically used in clauses introduced by **ana** 'and'. It conveys the same notion of contrast, but follows the noun that it modifies. Note in the second example below that the verb in the clause introduced by **ana** is a dependent perfective, however, a (non-dependent) past —which is generally much more common in clauses introduced by **ana**— would be possible here as well. Alternatively, instead of **ana** conjunctive **ă-** could be used; the verb will then be a dependent perfective.

ana	**ól**	**w-əruk**	**w-ɛlla.kátɛ**	**pəɽɪn**
and	people	C-only	C-be_absent:PST	finally

… but people were only completely absent (i.e. nobody was there)

k-kw-ɔ̰t̰ḭ.á̰tɛ	**t̰urumpḭl**	**n-tán**	**a-t̰-ɔ́nɛk.at**	**áɽʊk**
3-C-send:PST	car	with-up_on:ABS	CONJ-PRO-take:DEPPRFV	bags

ana	**ól**	**w-əruk**	**ɔíŋkat**	**n-tacɔ́k**
and	people	C-only	go:DEPPRFV	with-legs

s/he sent the car there and it took their bags, but the people (themselves) went on foot

10.5. The adjective C-**əɽĕk** 'some, other'

C-**əɽĕk** 'some, other' is used for the expression of an unspecified time, place or person ('some time', 'somewhere', 'somebody')

ɔ-nį̣n	**ákk-áŋwɔt**	**kamʊ̱tɛ**	**k-árrʊ́**
PERS-1A	FOC-guard:INCOMPL	celebration	C-of.Lumun_people

akka	**a-k-úrat**	**cɪk**	**t̪úpʊt**	**t̪-əɽɛk**
that	CONJ-PRO-become_lost	VREF	year	C-some

we are the ones who keep the Lumun celebration so that it does not get lost some day

m-p-a.ɪk	**p-a.ɛ̃ɔ̃**	**nɔ-kaɽə́n**	**k-əɽɛk**
1-C-be:PR	C-go:INCOMPL	on-place	C-some

I am going somewhere

li̱cɔk	**l-a.ɽə́kɪnɛ**	**pʊ́l**	**p-əɽɛk**	**mî̱l**
goats	C-eat_for:INCOMPL	person	C-some	sorghum

the goats will eat somebody's sorghum

In combination with **papʊ** 'thing', generally shortened to **papʊɽɛk** or **papəɽɛk**, it expresses an unspecified thing ('something') or animal:

paʊn	**p-ănn-ɔɽəkɔ**	**pap.əɽɛk**
rat	C-NEG-eat:DEPCOMPL	something

the rat did not eat anything

C-**əɽɛ̆k** is a fixed part of the opening clause of many stories 'once upon a time …' or 'one day …'. Following this opening clause, the character(s) introduced in the same sentence are not modified with C-**əɽɛ̆k**:

caɽɪ	**c-əɽɛk**	**c-ɔká.t**	**cɪk**	**a-pu̱tú̱ŋ**	**p-a̱t̪̱-ɪɔt**
time	C-some	C-be:COMPL	VREF	CONJ-marten(?)	C-ITVEN:COMPL-find:DEPINCOMPL

ŋərrɔ́ŋ	**á-ŋ-ŋ-á.ík**	**áppʊ̱ta**[59]	**nɔ́ɽá**	**w-ɔ́-pɪra**
squirrel	CONJ-PRO-C-be:PR	(CONJ-PRO-)play:DEPINCOMPL	on_top	C-of-tree

one day a marten(?)[60] found a squirrel playing in the tree top

[59] underlyingly the verb is: **a-ŋ-ŋ-á-ɪk a-ŋ-áppʊ̱ta**

[60] Described as a furry animal with a hole in the ground. It can be grey or brown and sometimes has white on its back.

As mentioned by Stirtz (2012) C-**əʈĕk** ‘some, other’ can be used for the introduction of a new character, as in the next example:

caʈɪ	**c-én**	**a-kəllán**	**k-əʈɛk**	**k-ɔká.t**	**cɪk**
day	C-DEM	CONJ-old_woman	C-some	C-be:COMPL	VREF

a-k-ɔ́kə̱ʈaccé-k	**n.tɪ**	**ɪ-ɔʈên**
CONJ-PRO-watch:DEPINCOMPL-O3	from	in-firewood

that day, some old woman was watching him while she was collecting firewood (fr. written story)

C-**əʈĕk** cannot be preceded by the restrictor (**í**-). It can, however, be used independently, as in the earlier given example, which is repeated here. The high-toned **a** preceding (**w**)**əʈĕk** (agreeing with **ʊl** ‘persons’) is probably the same pronominal base as found in independent possessors (see 7.3.7), I have therefore given it the same gloss:

á-əʈɛk	**w-a.ík**	**kərɛn**	**ɪ-ʊkʊllácɔʈɪn**
PROBS-(C-)some	C-be:PR	where	RES-(C-)nine

where are the other nine? (Luke 17:17)

In the example below, C-**əʈĕk** functions independently without this **a**. In the chapter on possessor pronouns a comparable example was given of an independent possessor without the pronominal base (‘look at my feet and yours’).

arrɪɛ̱t.ɛ	**wɛk**	**w-əʈɛk**	**cɪc-cénəkɛt**	**ána**	**w-əʈɛk**	**cɪc-cénəkɛt**
make_cross:IMP	leg	C-some	LOC-there_not_far	and	C-some	LOC-there_not_far

put one foot just there and the other one just there! (fr. written story)

As shown in the previous example C-**əʈĕk** … C-**əʈĕk** expresses ‘one …, the other …’, or ‘some …, other …’. Another example:

ʊl	**w-əʈɛk**	**w-ɔnʊ́**	**ɔ-pʊrʊkɔ́-n**	**ʈ̱-ɔppɔ́t**
people	C-some	C-have	PERS-friend-PL	C-many

á-əʈɛk	**w-ɔnʊ́**	**ɔ-pʊrʊkɔ́-n**	**ʈ̱-ɔttê**
PROBS-(C-)some	C-have	PERS-friend-PL	C-little

some people have many friends, others have few friends

10.6. Some remarks on syntax

Adjectives with the restrictor (i.e. adjectives as attributive modifiers) typically come after other modifiers in the noun phrase:

[ṯʊk	**ṯ-ín**	**én-ṯ-í**	**í-ṯ-ɔ́kɪṯak]**$_{NP}$	**t-ɔkəʧɔ.t**	**ɔ́kʊl**
dog	C-POSS1	DEM-C-NEARSP	RES-C-bad	C-bite:COMPL	child

this bad dog of mine has bitten a child

There can be more than one attributive adjective with restrictor in the noun phrase. No conjunction is used between them:

[ṯakəʧʊk	**ɪ-ṯ-ɔ́ṯṯé**	**í-ṯ-ɔ́ʧɛ]**$_{NP}$	**ṯ-aá.t**
chicken	RES-C-small	RES-C-red	C-come:COMPL

the little red hen has come

Attributive adjectives can occur outside the noun phrase, as in the first example below, where **ɲânrran** 'young' comes after the verbal predicate, in apposition to **ɲʊkʊl** 'children'. In the second example it is positioned within the noun phrase. In both cases, the invariable quantifier **appɪk** 'all' is positioned outside the noun phrase.

ɲʊkʊl	**ɲ-ɔnɔ́**	**ɪttɪ**	**ɲ-á.ŋʊtta**	**ɪ-ɲ-ârran**	**appɪk**
children	C-have	that	PRO.C-be_killed.PLUR:INCOMPL	RES-C-young	all

all little children must be killed (Matthew 2:16)

ɲʊkʊl	**ɪ-ɲ-árrán**	**ɲ-ɔ́nɔ́**	**ɪttɪ**	**ɲ-á.ŋʊtta**	**áppɪk**
chickens	RES-C-young	C-have	that	PRO.C-be_killed.PLUR:INCOMPL	all

the little children must all be killed

There is a difference in informational value between the sentences. The first states the properties of the children that must be killed (it concerns small children and it concerns all of them), the second refers to an already identified group of children.

Another example is the following. In the text, 'male' lacks the restrictor, but it could also be present:

a-áppɔ	**ákkakat**	**w-ɔ́mʊra**[61]	**ana**	**ɪ-áarɪ**	**n-ɔt̪án**
CONJ-Tocho	come:DEPPRFV	C-male.PL	and	RES-female.PL	with-baskets(k.o.)

and the Tocho, male and female, came with baskets (fr. written story)

An earlier mentioned example with a numeral placed outside of the noun phrase is the following:

á-əʈɛk	**w-a.ík**	**kərɛn**	**ɪ-ʊkʊllácɔʈɪn**
PROBS-(C-)other	C-be:PR	where	RES-(C-)nine

where are the other nine? (Luke 17:17)

[61] In the written text, the concord is absent, but this is because it is not audible: after t (realized as r) w is regularly deleted.

11. Relative clauses

Relative clauses are clauses that function as modifiers of a noun or pronoun in the matrix clause. Lumun has subject and non-subject relative clauses, and different constructions for a restrictive and a non-restrictive relative clause. Restrictive relative clauses restrict the reference of their head to a subgroup with certain properties; non-restrictive relative clauses just provide additional information.

Relative clauses contain a concord that agrees with the (pro)noun in the matrix clause that they modify. This (pro)noun from the matrix clause functions as subject in a subject relative clause and as a something other than subject in a non-subject relative clause. A locative relative clause uses the (fixed) locative relative **ná** 'where'.

Restrictive relative clauses, whether subject, non-subject or locative relative clauses have the restrictor (**í-**, see chapter 9), non-restrictive relative clauses lack the restrictor.

A special use of non-restrictive non-subject relative clauses is in cleft constructions. Such constructions are discussed in 11.2.4.

11.1. Subject relative clauses

A subject relative clause contains a non-dependent verb. The concord on the verb agrees with the head in the matrix clause. In a restrictive subject relative clause the concord is preceded by the restrictor **í-**:

C-*verb* (non-restrictive)
ɪ-C-*verb* (restrictive)

The verb in a subject relative construction can be an Incompletive, a Completive, the Present of 'be', the copula C-**á** or a complex verb starting with an auxiliary in non-dependent TAM. One non-dependent TAM, the Past, is not used in subject relative clauses. The Past, like its dependent counterpart the Dependent Perfective, is a narrative TAM that must be preceded in the discourse by another verb, if only a verb that provides "background" information about a

state or situation. This is not compatible with use in a relative clause. A verb in a relative clause typically provides background information itself, either as additional information or in order to restrict the reference of its head.

11.1.1. Restrictive subject relative clauses

Restrictive subject relative clauses typically function as attributive modifiers. Examples follow here:

pʊl ɪ-p-aɛ̰̃	'the person who will go'
pʊl ɪ-p-ɔkát cənɛ́	'the person who was here'
pʊl ɪ-p-aṯ-ɔʈəkɔ̂	'the person who will come and eat it'

Restrictive subject relative clauses can modify (pro)nouns from the matrix clause in different syntactic functions. In the first example below **ɔkîn** 'they' is modified; in the second **ɔkakkâ** 'Kakka'; in the third a **maʈɪ̌** 'days'.

ámmá	**ɔ́-kín**	**í-ṯ-á.pɔ́kɔ**	**ṯ-ɔppɔ́ṯ.ɛ**	**ɲacɔk**	**ɪ-cá …**
if	PERS-3A	RES-C-be_beaten:INCOMPL	C-put_on:COMPL	amounts_of_mud	in-head

as soon as those who are beaten have put mud on their heads … (fr. written story)

ŋ-kw-ɪɔṯ.é	**ɔ-kakká**[62]	**í-p-ɛ́rɛ**	**íŋkəlísɪ**
2-C-find:COMPL	PERS-Kakka	RES-C-speak:INCOMPL	English

did you meet the Kakka who speaks English?

ɔ-kʊkkʊ́	**p-aa.t**	**maʈɪ**	**m-ɛʈa**	**ɪ-m-ɛ̰̂.t**
PERS-Kʊkkʊ	C-come:COMPL	days	C-two	RES-C-go:COMPL

Kʊkkʊ arrived two days ago (two days which have gone)

The next is an example with the copula C-**á** 'be':

[62] When the first born child is a girl she is called Kakka. There are therefore many people called Kakka.

pʊl	**ɪ-p-a**	**páʈəʈ̪an**
person	RES-C-COP	rich_person

a person who is a rich

Syntactic position

In case of more attributive modifiers, a relative clause comes last:

ɲʊkʊl	**ɛɲ-ɲ-ɪ**	**ɪ-ɲ-árrán**	**í-ɲ-á.ík**	**ɲ-áppʊʈ̪a**
children	DEM-C-NEARSP	RES-C-young	RES-C-be:PR	C-play:INCOMPL

these small children who are playing

A restrictive subject relative clause can also be placed outside the noun phrase, after the predicate. This is typically done when the relative clause is rather long. In the next example it happens twice: the first relative clause is a modifier of the subject of the matrix clause **nılı** 'leaders', the second of **ʊl** 'people', which functions as object in the first relative clause. Postposition of the relative clauses makes the sentence easier to follow:

a-nılí	**n-ɔ́-mʊ́ʈ̪ʈ̪ʊ́**	**ɪat**	**kín**
CONJ-leaders	C-of-Arabs	find:DEPPRFV	O3A

[í-n-álıkınɛ	**ʊ́l**	**cık**	**ɪ-aʈ̪ər]**
RES-C-stop:INCOMPL	people	VREF	in-roads

[ɪ-úra	**ɔkʊ́ʈɔt**	**tɔ́rrʊ̂]**
RES-(C-)escape:INCOMPL	move_up:DEPINCOMPL	Lumun_country

and the Arab leaders who stopped the people in the roads who were escaping going up to Tɔrrʊ̂ (Lumun homeland) found them (fr. written description)

Independent use of the restrictive relative construction

Like adjectives with the restrictor, and like the anaphoric demonstrative (C-**ɛn**) with the restrictor, a verb phrase with the restrictor can function independently. In the example below, the relative clause **ɪpɛlıkkákɔt** 'who was released' modifies the unexpressed object **pʊl** 'the person' of the matrix clause

akwɔ́kərənnɔ ‘while s/he let’. The object of the matrix clause is understood from the preceding clause.

k-kw-é-ɛlɪkk.ą́ɛ́ pól ém-p-í a-kw-ɔ́kərənnɔ ɪ-p-ɛlɪkkákɔ.t
3-C-IRR-release:PST person DEM-C-NEARSP CONJ-3-let:DEPINCOMPL RES-C-be_released:COMPL

s/he should have released this person and not the one who was released (i.e. and leave the one who was released)

11.1.2. Non-restrictive subject relative clauses

A non-restrictive subject relative clause does not restrict the reference of its head but provides additional information about it. It functions as a predicative modifier:

k-kw-ɔ́cʊrɔ́ṭ.ɛ ɪ-pól p-ɔccɔ́.t kəɣan ɪttɪ ɔ-ṭʊṭ̈ṭ̈ô
3-C-come_across:COMPL in-person C-receive:COMPL name that PERS-Ṭʊṭ̈ṭ̈ʊ

s/he came across a person called Ṭʊṭ̈ṭ̈ʊ

Compare also the following examples, in which the object noun from the matrix clause is modified. The first has a non-restrictive subject relative clause, the second a restrictive:

m-p-ɔcʊmɔ.t máɪt m-untą́ṭ.ɛ nɔ-capó
1-C-take.PLR:COMPL beans C-be_poured_on:COMPL on-ground

I have picked up some beans, which had fallen on the ground

m-p-ɔcʊmɔ.t máɪt ɪ-m-untą́ṭ.ɛ nɔ-capó
1-C-take.PLR:COMPL beans RES-C-be_poured_on:COMPL on-ground

I have picked up the beans that had fallen on the ground

In the following example the presence of a preceding main verb, the absence of a pronoun (clitic) on the verb, and the lack of a conjunction word or clitic between the clauses provide the cue that we are dealing with a modifier of the subject pronoun of the matrix clause, and not an additional main clause. The non-restrictive relative clause comes after the full matrix clause:

m-p-aa.t	**n-n̪ɔ́-mɪɽuk**	**p-áṯṯ-ɔ́ŋáɛ̃ɔ̃**
1-C-come:COMPL	with-at-bush	C-ITVEN:COMPL-urinate:DEPINCOMPL

I come from the bush, having gone to urinate

11.2. Non-subject relative clauses

Non-subject relative clauses are introduced by the copula C-**á**. The same distinction that is found in subject relative clauses between restrictive and non-restrictive relative clause is found in non-subject relative clauses. In case of a restrictive non-subject relative clause, the restrictor precedes the copula. The concord of C-**á** agrees with the noun in the matrix clause that is modified. C-**á** (which is realized low in context) is followed by a (pro)nominal subject and verb which, depending on the verbal TAM, has or lacks a concord:

C-**a** SUBJ (C)-*verb* (non-restrictive non-subject relative clause)
ɪ-C-**a** SUBJ (C)-*verb* (restrictive non-subject relative clause)

The verb in a non-subject relative clause is a Dependent Incompletive, a Completive, the Present of 'be', or a complex verb starting with one of these. So, while a subject relative clause takes the non-dependent Incompletive, the non-subject relative clause takes its dependent counterpart. Compare:

pʊl	**ɪ-p-a.ɽəkɔ**	**n̪ʊɽît**
person	RES-C-eat:INCOMPL	food

the person who eats the food

n̪ʊɽít	**í-n̪-á**	**pʊ́l**	**ɔ́ɽə́kɔ̂**
food	RES-C-COP	person	eat:DEPINCOMPL

the food which the person eats

Predicates with the same structure as the non-restrictive non-subject relative clause (C-**a** SUBJ (C)-*verb*) will be discussed in 11.2.4.

11.2.1. Morpho-phonology and constructions with personal pronouns

Across a morpheme boundary there is often assimilation between adjacent **a** and **ɔ**, either to **a** or to **ɔ** (see, for example, 2.2.8). After

C-**á**, however, whether with or without the restrictor, a sequence **a**-**ɔ** is generally realized as a diphthong: **a** remains, **ɔ** —though to a lesser extent— tends to remain audible as well (first example below). The persona prefix **ɔ́**-, on the other hand, typically coalesces with the vowel of (**ɪ**-)C-**á** (second example). An example is further given with non-geminated **ŋ** after (**ɪ**-)C-**á**, which is regularly deleted (third example).

aʈəpʊ ɪa ɔcaŋ ɔʈəkɔ̂ 'things which the lizards(sp.) eat'
aʈəpʊ ɪa-kʊmáŋ ɔ́ʈákɔ̂ (<**ɪa ɔkʊmâŋ**) 'things which Kʊmaŋ eats'
aʈəpʊ ɪa ŋərrɔ́ŋ ɔ́ʈákɔ̂ 'things which the squirrel eats'

A singular personal pronoun follows (**ɪ**-)C-**á** in its clitic form, a plural personal pronoun either in its clitic or its full form. The clitic form of the 3PL pronoun is not used in this environment. Unlike the initial **ɔ** of a common noun, the persona prefix of the full personal pronouns coalesces with the **a** of (**ɪ**-)C-**á** to short **a**. For this reason I write the relative marker and the full plural pronouns connected (as I do in case of the 2SG clitic).

The table below presents the paradigm of personal pronouns as part of a restrictive non-subject relative clause with a Dependent Incompletive verb. The geminated allomorph of the 2PL pronoun clitic (**nn-** 'you') is used before the vowel-initial verb in this environment. Some length of the nasal is indeed audible here (and mentally experienced by the speakers), disambiguating the 2PL form from the 1SG form.

Table 45 Restrictive non-subject relative clauses with personal pronoun and Dependent Incompletive

	with full pronoun	*with clitic pronoun*
things which I eat		**aʈəpʊ ɪa n-ɔʈəkɔ̂**
things which you eat		**aʈəpʊ ɪaʈəkɔ̂** (**ɪa ŋ-ɔʈəkɔ̂** > **ɪa ɔʈəkɔ̂** > **ɪaʈəkɔ̂**)
things which s/he eats		**aʈəpʊ ɪa kw-ɔ́ʈəkɔ**

things which we (12) eat	**aʈəpʊ ɪarɪt ɔʈəkɔ̂** (< **ɪa ɔrɪ̌t**)	**aʈəpʊ ɪa ɪr-ɔʈəkɔ̂**
things which we (1A) eat	**aʈəpʊ ɪanin̨ ɔʈəkɔ̂** (< **ɪa ɔnɪ́n̨**)	**aʈəpʊ ɪa i̧n-ɔʈəkɔ̂**
things which we (12A) eat	**aʈəpʊ ɪarʊn ɔʈəkɔ̂** (< **ɪa ɔrʊ́n**) **aʈəpʊ ɪarɔn ɔʈəkɔ̂** (< **ɪa ɔrɔ́n**)	**aʈəpʊ ɪa ʊn-ɔʈəkɔ̂**
things which you (PL) eat	**aʈəpʊ ɪanɔn ɔʈəkɔ̂** (< **ɪa ɔnɔ́n**)	**aʈəpʊ ɪa-nn-ɔʈəkɔ̂**
things which they eat	**aʈəpʊ ɪakín ɔ́ʈəkɔ̂** (< **ɪa ɔkîn**)	

The modified noun from the matrix clause can have different syntactic functions in a non-subject relative clause; this function is not related to its syntactic function in the matrix clause. Examples of different syntactic functions in restrictive and non-restrictive non-subject relative clauses (as well as in the matrix clause) follow here.

11.2.2. Restrictive non-subject relative clauses

The modified noun from the matrix clause can be object in the relative clause. Two examples follow here. In the first, **lɔn** 'words' functions as object in the relative clause, in the second, **ʊrrêt** 'lines'.

m-p-ɛllá.t	**lɔn**	**nɔ-cį̨kį̨t**	**ɪ-l-a**	**n-ɔkʊ́ccɛt**	**caʈɪ**	**c-ên**
1-C-not_have:COMPL	words	on-heart	RES-C-COP	1-prepare:DEPINCOMPL	day	C-DEM

I lacked matters in my heart that I do that day (i.e. I did not plan anything that day)

… á-kw-ɔ́n̰-ʊ́mmɔ	**ŋaak**	**á-kw-ɔ́n̰ɔ́t**
… SUBJ-3-IT:DEPINCOMPL-take:DEPINCOMPL	oil	SUBJ-3-rub_at:DEPINCOMPL

í-ʊ́rrɛ́t	**ên-n-ərɪk**	**ɪ-a**	**k-kw-ɔ́kʊrrɔ.t**	**ŋ-kʊrĭn**
in-lines	DEM-C-NEARADDR	RES-(C-)COP	3-C-engrave:COMPL	with-awl

… she must go and take the oil to rub it into those grooves that she has drawn with the awl (App. III, 9-11)

When the relativized noun is part of a prepositional phrase, an absolute preposition is used (see 16.6). Cf. the following pairs of examples. Each time, the second has the non-subject relative clause:

m-p-ɔcʊrárɔt̪.ɛ	**ɪ-ól**	**én-n-í**	**t̪ɔ́ɽî**
1-C-come_across_each_other:COMPL	in-people	DEM-C-NEARSP	T̪ɔɽî

I met with these people in T̪ɔɽî

ʊl	**ɪ-a**	**m-p-ɔcʊrárɔ́t̪.é**	**tít**	**t̪ɔ́ɽî**
people	RES-(C-)COP	1-C-come_across_each_other:COMPL	in:ABS	T̪ɔɽî

the people with whom I met in T̪ɔɽî

m-p-i̧cát̪.ɛ	**na-aɽaŋkal**	**én-n-í**	**méccín**
1-C-lie_down:COMPL	on-bed	DEM-C-NEARSP	yesterday

I slept on this bed yesterday

aɽaŋkal	**ɪ-a**	**m-p-ɪcát̪.é**	**nán**	**méccín**	**w-ɔ́cɔ́ttâ.t**
bed	RES-(C-)COP	1-C-lie_down:COMPL	on:ABS	yesterday	C-break:COMPL

the bed on which I slept yesterday has broken down

In the second example below the relativized noun is part of a comitative construction. The relative construction makes use of the associative marker **á̪t̪ót**. Compare:

k-kw-ɔ́ká.t	**p-ɔ́nó**	**ɪttɪ**	**k-kw-ápəɽə̪t̪̪a**
3-C-be:COMPL	C-have	that	3-C-be_beaten_while_running:INCOMPL

ɔ-kín	**ɔ-pa̪t̪̪-ɔ̂n**
PERS-3A	PERS-person-PL

she should have been beaten while running together with those people (lit.: she had had to be beaten while running together with those people)

ɔ-pa̪t̪̪-ɔ́n	**í-t̪-á**	**k-kw-ɔ́ká.t**	**p-ɔ́nó**	**ɪttɪ**
PERS-person-PL	RES-C-COP	3-C-be:COMPL	C-have	that

k-kw-ápəɽə̪t̪̪a	**ɔ-kín**	**á̪t̪-t̪-ót**	**t̪-á.ccɨɾɔ́-k**	**ŋ.ŋɪn**
3-C-be_beaten_while_running:INCOMPL	PERS-3A	ASS-C-ASS	C-laugh:INCOMPL-O3	with:ABS

the people together with whom she should have been beaten while running will laugh at her because of it (because she is pregnant without having undergone the rite of passage of being beaten while running) (fr. written description)

Possessors can also be relativized. In the second example, with relative clause, the possessor pronoun C-**én** 'their' expresses the possessor relation. Compare:

lị́cɔk	**l-ɔ́-ʊl**	**l-ɔɽəttâ.t**
goats	C-of-people	C-be_eaten:COMPL

the goats of the people have been eaten

ʊl	**ɪ-a**	**lị́cɔk**	**l-ɛn**	**l-ɔɽəttâ.t**
people	RES-(C-)COP	goats	C-POSS3A	C-be_eaten:COMPL

the people whose goats have been eaten (lit.: the people which their goats have been eaten)

There are other ways to relativize possessor-noun constructions, as illustrated in the following examples. In the first example the possessor relation is expressed through a benefactive verb, in the second through the verb 'have'. In the first, the semantic possessor is encoded as object of a benefactive verb in the non-subject relative clause; in the second the possessor is modified by a subject relative clause. The verb **lɔɽəttât** functions as a non-restrictive subject relative clause, adding information about the goats.

ʊl	**ɪ-a**	**lị́cɔk**	**l-ɔɽəttánɛ.t**
people	RES-(C-)COP	goats	C-be_eaten_for:COMPL

people whose goats have been eaten (lit.: people who the goats have been eaten to)

ʊl	**ɪ-ɔ́nʊ**	**lị́cɔk**	**l-ɔɽəttâ.t**
people	RES-(C-)have	goats	C-be_eaten:COMPL

people whose goats have been eaten (lit.: people who have the goats eaten)

11.2.3. Non-restrictive non-subject relative clauses

The modified noun from the matrix clause can be object in the relative clause. Two examples follow here. In the first, **pʊl** 'person' functions as object in the relative clause, in the second, **măn** 'house'. In the matrix clause they function as subject and as object. Like in non-restrictive subject relative clauses, the relative clause comes after the matrix clause, but is not another main clause:

pʊl	**p-ɪɔ.t**	**p-a**	**ʈ̪ʊk**	**ʈ̪-ɔkkwɔʈ̪.ê**
person	C-die:COMPL	C-COP	dog	C-kill:COMPL

the man died, killed by a dog (the man died whom the dog killed)

m-p-ɔnó	**man**	**m-a**	**m-p-ɔkɛrɔ́.t**	**káʈ̪úkəlɪ**
1-C-have	house	C-COP	1-C-trade:COMPL	Kadugli

I have a house, which I bought in Kadugli

Interestingly, in the next example the relative clause has a reason reading, suggesting that the verb **ɔkárɛllɔ** 'bite' takes a double object: the person bitten ('I') as well as the result of the biting (the marks).[63]

m-p-ɔnó	**nɛpɪlá**	**n-á**	**ɔ́ʈ́ék**	**w-ɔ́kárɛ́llɔ.r-ɪn**[64]
1-C-have	marks	C-COP	ants(sp.)	C-bite:COMPL-O1

I have marks because the ants (sp.) have bitten me

The following sentence also makes use of a non-restrictive non-subject relative clause. **nɔʈ̪énʈ̪a** 'of what' is the predicate, **na ŋkwɔnô** 'that you have' modifies the (plural) noun **nəʈ́ê** 'fear' from the matrix clause:

nəʈ́é	**n-ɔ́ʈ̪énʈ̪á**	**n-á**	**ŋ-kw-ɔnô**
fear	C-of_what	C-COP	2-C-have

the fear that you have is for what? (i.e. why are you afraid?)

The construction in the first example below relativizes a possessor phrase (compare the second example below which contains a possessor phrase modifying **ʈ̪ʊʈ́ît** 'food'). The concord on C-**á** is **ʈ̪**, agreeing with **ʈ̪ʊʈ́ît** 'food'. The antecedent, however, is in fact the whole preceding clause 'the food got spoilt just like that'. The possessor element is subsumed in absolute connexive C-**ɛn**, which actually establishes the reference to the antecedent, while the concord (only) establishes grammatical agreement:

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[63] The sentence forms a tonal minimal pair with an example given in 11.3, which is interpreted as containing the locative relative ná.

[64] Alternative realization: **wɔ́kárɛ́llɔ́rín** (with tone bridge). Both realizations don't need anything to follow.

ţʊɽít ţ-ɔkįtták.aţɛ nʊţʊk ţ-a-rʊn ţ-ɔmma lɔ́n l-ɛn
food C-get_spoilt:PST for_no_reason C-COP.PERS-12A C-not_know:INCOMPL words C-of:ABS

the food got spoilt just like that, the reasons of which we do not know (lit.: 'the food that got spoiled just like that, which we do not know the words of') (fr. written text)

ɔ-rʊn ţ-ɔmma lɔ́n l-ɔ́-ţʊ́ɽít í-ţ-ɔ́kįttták.aţɛ nʊţʊk
PERS-12A C-not_know:INCOMPL words C-of-food RES-C-get_spoilt:PST for_no_reason

we do not know why the food got spoilt just like that (lit.: 'we do not know the words of the food which got spoilt just like that')

A temporal phrase is relativized in a variant of the standard opening of Lumun stories 'once upon a time …'. The variant with relative clause (first example below) lacks the conjunctive particle **á-.** Compare:

caɽɪ c-əɽɛk c-ɔká.t cɪk c-a-áţərəpɛ́ ana cį́məntɛrį …
day C-some C-be:COMPL VREF C-COP-rabbit and hedgehog

once upon a time, the rabbit and the hedgehog … (more lit.: there was some day on which the rabbit and the hedgehog …) (fr. written story)

caɽɪ c-əɽɛk c-ɔká.t cɪk a-áţərəpɛ́ ana cį́məntɛrį …
day C-some C-be:COMPL VREF CONJ-rabbit and hedgehog

once upon a time, the rabbit and the hedgehog … (more lit.: there was some day, and the rabbit and the hedgehog …)

The following is also an interesting case, relativizing a comitative construction:

m-p-árəţʊk p-a-rɔn ţ-a.îk
1-C-still C-COP.PERS-12A C-be:PR

I am still (staying) with you (for example in answer to the question 'when will you be going?', more lit.: 'I am still being we are')

11.2.4. Cleft constructions: topicalization of a patient, instrument or comitative constituent

Non-restrictive non-subject relative clauses also function in cleft constructions. This cleft-construction topicalizes the patient of an

action by putting it into subject position, however, unlike a construction with a passive verb, without downplaying the agent of the action. The construction focuses the topic (or theme). The construction can also be applied to constituents with instrument role or in comitative construction. Such constituents are typically grammatically encoded as adjuncts, but now function as subject of the copula. The copula is the main verb, linking the subject with a clausal constituent.

The sentences below are full statements answering the questions 'what happened to the man' and 'what happened to the goat', respectively. My consultant (JS) translated the Lumun expressions into English with a passive construction. The topicalized argument is part of the core of the sentence, and not in extraposition: 'C-**a** SUBJ verb' is not a grammatical format for a main clause. Moreover there is regular assimilation across the word boundary, which would not be the case if the 'person' and the 'goat' in the examples below were extraposed. Note also the absence of an object pronoun on the verb 'kill' in the first example below. It is not possible for the topicalized argument to be pronominally referenced in the embedded clause.

The verb used in the embedded clause is a Dependent Incompletive, a Completive, the Present of 'be', or a complex verb starting with one of these. The examples following here have a Completive verb, the last the Present of 'be'.

pʊl	**p-a**	**n̪ʊk**	**n̪-ɔkkwɔn̪.ɛ̂**	[pʊl ᵃβa ðʊ n̪ɔkʷɔðɛ̂]
person	C-COP	dog	C-kill:COMPL	

the man was killed by a dog (lit.: the man is the dog killed)

ŋ̀mŋ̀t	**w-a**	**n̪ʊk**	**n̪-ɔkkwɔn̪.ɛ̂**	[imiɾ a ðʊ n̪ɔkʷɔðɛ̂]
goat	C-COP	dog	C-kill:COMPL	

the goat was killed by a dog (lit.: the goat is the dog killed)

The following sentence could be a reply to someone who says that he likes to have a certain dog. The answer, which makes use of the patient-topicalizing cleft, communicates that the dog cannot be given away because Lalʊ already gave it to somebody else.

ʈʊk	**ʈ-a-lalʊ́**	**p-ɛ́ʈɛt**	**ɔ-lɔ́ttí**
dog	C-COP.PERS-Lalʊ	C-give:COMPL	PERS-Lɔttɪ

the dog has (already) been given to Lɔttɪ by Lalʊ (lit.: the dog is Lalʊ has given to Lɔttɪ)

In the next example a constituent with instrumental role is topicalized, taking up subject function. The sentence can be a reply to the question 'what was done with this stick?'

kurrɔ́ŋ	**é-ŋ-kí**	**k-á**	**píɲɪl**	**p-ɔkkʊttáʈ.ɛ**	**ŋ.ŋɪn**
stick	DEM-C-NEARSP	C-COP	snake	C-be_killed:COMPL	with:ABS

with this stick a snake was killed (lit.: this stick is a snake was killed with)

In this example a comitative constituent is topicalized. It can be an answer to 'where is your brother?':

ɔ-paŋ-k-ín	**p-á-nɟ́n**	**ʈ-á.ík**	**ɟ́n-áʈ-ʈ-ót**
PERS-sibling-C-POSS1	C-COP.PERS-1A	C-be:PR	1A-ASS-C-ASS

my brother is with me

11.3. The locative relative **ná** 'where'

Non-subject relative clauses modifying a noun with locative semantics and expressing that something takes place at that location make use of a different construction. In such cases the locative relative marker **ná** (realized low) is used: **na** SUBJ-(C)-*verb*. **ná** selects the same TAMs as the marker of non-subject relative clause (**ɪ**-)C-**á (**a Dependent Incompletive, a Completive, the Present of 'be', a defective verb, or a complex verb starting with an auxiliary in non-dependent TAM). I represent **ná** with a high tone since its behaviour is compatible with that of a monomoraic element with a high or a rising tone (it cannot receive a high tone from a preceding element; it can only be realized with a high tone due to tone bridge). The choice between a high and a rising tone is arbitrary because the element has no prepausal realization.

The exact phonological and morphological make-up of **ná** 'where' is not clear. Instead of assimilating to **n**, as would be expected (see

2.1.1 in the chapter on phonology), a preceding word-final **t** or **k** undergoes lenition before **ná**, as it would before a vowel-initial word (some examples of this are given in section 2.1.1). Lenition of a preceding **t** and **k** suggests that the locative relative is actually **n-ná**, with a moraic initial nasal. Moreover, at least one speaker spelled it as <ina>, but the presence of a vowel before the nasal was rejected by JS. Writing a vowel might then also point at an underlying form **n-ná**. Length of the nasal is, however, not audible, nor was it intuitively acceptable for my consultant (JS). For this reason I represent the element as **ná**.

In addition, it is not clear whether the element **ná** is itself morphologically complex or not. **ná** could be a realization of C-**á**, which introduces a non-restrictive non-subject relative clause. An argument in favour of this is that **ná** selects the same TAMs as (**ɪ**-)C-**á**. However, if **ná** historically is a realization of C-**á**, it is unclear what the concord **n** would have agreed with. Would Lumun have had locative nouns, like the Bantu languages, perhaps with a **n**-initial locative prefix, relating to the current preposition **nɔ**- 'on, at'? Since a convincing analysis is lacking, I just represent the element as **ná** and gloss it as a single unit.

Like the non-subject relative, the locative relative fuses with the persona prefix (**ɔ́**-) of a following personal pronoun, kinship term or personal name (first example below). It does not fuse with the initial vowel **ɔ** of a common noun:

k-kw-á.ík	**ná-lálô**
3-C-be:PR	where:REL.PERS-Lalʊ

s/he is (at the place) where Lalʊ is

m-p-ɔnó	**nɛpɪlâ**	**na**	**ɔ́ʈɛ́k**	**w-ɔ́kárɛ́llɔ.r-ɪn**[65]
1-C-have	marks	where:REL	ants(sp.)	C-bite:COMPL-O1

I have marks where the ants (sp.) have bitten me

[65] Alternative realization: **wɔ́kárɛ́llɔ́rín** (with tone bridge). Both realizations don't need anything to follow. Tonal minimal pair with an example given in 11.2.3, with non-restrictive non-subject relative construction.

Another example with the locative relative follows here.

m-p-ɔká.t	**ṯáɣʊ**	**na**	**m-p-ɔkwɔntáṯ.ɛ**
1-C-be:COMPL	Ṯaɣʊ	where:REL	1-C-be_born_at:COMPL

I was in Ṯaɣʊ, where I was born

In the following example, the relative clause introduced by **ná** modifies the noun **kaɣən** 'place'. **kaɣən** cannot be left out here, since the benefactive verb **ɔ́nɛ** 'go to' is used: the verb needs an object noun expressing the goal-argument:

… a-kw-ɔ́ŋ.kanṯɛt	**káɣən**	**na**	**k-kw-á.ík**	**p-á.kkwɔ́t**	**karraŋ**
CONJ-3-go_to:DEPPRFV	place	where:REL	3-C-be:PR	C-construct:INCOMPL	wall

and then he goes to the location where he is constructing the wall

In combination with the non-benefactive **ɛ̃́** 'go' the locative phrase **nɔ-kaɣə̂n** 'at place' can be present, but also absent:

… a-kw-ɔ́ŋkat	**(nɔ-káɣən)**	**na**	**k-kw-á.ík**	**p-á.kkwɔ́t**	**karraŋ**
CONJ-3-go:DEPPRFV	on-place	where:REL	3-C-be:PR	C-construct:INCOMPL	wall

and then he goes to the location where he is constructing the wall

ná is commonly used without antecedent:

na	**íkkɔ**	**cík**	**m-p-íkkɔ**	**cık**
where:REL	(2-)sit:DEPINCOMPL	VREF	1-C-sit:INCOMPL	VREF

where you will stay, I will stay
(Ruth 1:16)

k-kw-á.ík	**ná**	**kə́pá**	**k-á.îk**
3-C-be:PR	where:REL	meat	C-be:PR

s/he is (at the place) where the meat is (this expression can be used in the market: the person is in the part of the market where the meat is sold).

Note in the following example that a Present of 'be' is absent in the clause introduced by **ná.** An other example of this was presented above (**kkwáík nálálô** 's/he is where Lalʊ is'). In both cases the subject of the relative clause is human.

m-p-a.nɛ́kɔ	**kʊ́mmʊk**	**na**	**kəllân**
1-C-take:INCOMPL	pot	where:REL	old_woman

I will take the pot to where the old woman is

In order to express ablative ‘from where’, the absolute preposition **ŋŋɪn** ‘with, by, from’ is added:

k-kw-á.kənn-ɪɽɛ	**na**	**k-kw-áa.t**	**ŋ́ŋɪn**
3-C-NEG-say:DEPCOMPL	where:REL	3-C-come:COMPL	with:ABS

s/he did not say where s/he came from

12. Verbs

This chapter discusses verbal inflection: the morphological marking of verbs for mood, tense and aspect, modality, negation, irrealis and deixis, as well as verbal complexes.

In section 12.1 I present some terminology I use in this chapter. Section 12.2 mentions the form for citing a verbal lexeme; 12.3 presents the morphological structure of the verbal word. In 12.4 I give the base forms of verbs and their segmental and tonal characteristics. Section 12.5 discusses the so-called 'basic TAMs' and in 12.6 I make some general remarks about verbs with defective inflection. 12.7 is devoted to the verb **ɔkâ** 'be', a verb that has an extra TAM-stem and a basic TAM based on this TAM-stem. 'Be' can function as copular verb, as main (locative/existential) verb, or as auxiliary verb. Auxiliary verbs other than **ɔkâ** are discussed in 12.8 to 12.20. Some defective verbs are discussed in 12.21 and 12.22. The final section of this chapter (12.23) presents some combinations of auxiliary verbs.

12.1. TAMs and TAM-stems

In order to describe Lumun verbal inflection, I distinguish between "TAM-stems" and "TAMs". In "TAM-stems", TAM is short for tense-aspect-mood and refers to inflectional morphology expressing these grammatical categories. In addition, the inflectional morphology of TAM-stems reflects "dependency" versus "non-dependency", so that TAM-stems (and also TAMs) can be divided into dependent and non-dependent ones. TAM as in "TAMs" refers to the inflectional structure of a whole verbal word or even a whole verbal complex, involving also negation, irrealis, deixis and categories of modality.

TAM-stems are building stones of verbal words. A verbal word contains at least one TAM-stem. Some TAM-stems can themselves form a complete verbal word, other TAM-stems are obligatorily combined with a concord (i.e. a marker of agreement with the verbal subject).

When a verbal word contains just one TAM-stem I call it a simple verbal word, when it contains more than one TAM-stem I call it a complex verbal word. In a complex verbal word a least one TAM-stem is of an auxiliary verb, while at most one TAM-stem is of a main verb. An example of a complex verbal word is the following. It contains three TAM-stems: a TAM-stem of the negation auxiliary, a TAM-stem of the auxiliary 'again' and a TAM-stem of the main verb 'drink':

m-p-ănn-ápp-ɟkkɔ
1-C-NEG-again:DEPINCOMPL-drink:DEPINCOMPL
I will not drink it again

A verbal word can also consist of one or more TAM-stems of auxiliary verbs only; in such cases the verbal word forms part of a verbal complex and the TAM-stem of the main verb is part of a separate verbal word within that complex. In a verbal complex there is one main verb TAM-stem. The following is an example of a verbal complex consisting of two verbal words. The first verbal word contains one TAM-stem of an auxiliary verb ('be'), the second has two TAM-stems, one of the negation auxiliary and one of the main verb 'lie down':

m-p-a.ık **p-ănn-ɟcat**
1-C-be:PR C-NEG-lie_down:DEPINCOMPL
I am not lying down

Whereas TAM-stems are building stones of verbal words and complex verbs, I use the notion TAM to name the inflectional structure of a verbal word as a whole. The inflectional structure ('TAM') of a complex verbal word can thus involve more than just the categories expressed by TAM-stems (tense-aspect-mood and dependency); this is the case when an auxiliary verb is present that expresses another notion, such as, e.g., negation, possibility or deixis. The TAM of the verb in the example below is Negative Incompletive (consisting of a concord, a TAM-stem of the negation auxiliary and a TAM-stem of the main verb 'work'). Note that I use small letters for the names of TAM-stems and initial capitals for the names of TAMs.

ʊkʊl **ᴡ-ănn-ɔrɛ́kɔ**
child C-NEG-work:DEPINCOMPL
the child does not work

In some cases I also give a name to the inflectional structure (TAM) of a whole verbal complex. I only do this for certain common types of verbal complexes. The verbal complex in the example 'I am not lying down' (see above) is a case of a verbal complex which, as a whole, can be called a Negative Present Continuous. The Negative Present Continuous is composed of the Present TAM of 'be' and the Negative Incompletive TAM of 'lie down'.

Verbs typically have seven separate TAM-stems, which can be divided into three groups: the non-dependent TAM-stems (i.e. the incompletive, completive and past TAM-stem), the dependent TAM-stems (i.e. the dependent incompletive, dependent completive and dependent perfective TAM-stem), and the imperative TAM-stem. The dependent incompletive TAM-stem is the base form (i.e. the uninflected form) of the verb. The other TAM-stems are described in terms of changes applied to this base.

Based on the TAM-stems, verbs typically have six 'basic TAMs' (see 12.5.2-12.5.7). One of the TAM-stems, the dependent completive, has a status that is different from the others, and no basic TAM is based on it. Using data presented in the sections 12.14 to 12.16, I argue in 12.17 (on negation) that after a negation auxiliary main verbs have an additional TAM-stem, which can be called a dependent completive TAM-stem. Data presented in 12.14 to 12.16 lead to the analysis that this dependent completive TAM-stem is a development of the dependent incompletive TAM-stem, brought about by inflectional reduction (grammaticalization) of a historical Completive auxiliary. The auxiliary discussed in 12.14 actually still has this Completive form, alongside a reduced variant, demonstrating its tonal effects on the main verb TAM-stem. The auxiliaries discussed in 12.15 and 12.16 have a partly reduced Completive auxiliary, next to a more fully reduced variant. The various stages of grammaticalization of these different auxiliaries show how the dependent completive TAM-stem has developed from the dependent incompletive TAM-stem.

One verb has an eighth TAM-stem: 'be' has an additional present TAM-stem (see 12.7.1).

There are two positions for inflectional morphology, determining the TAM-stem: the TAM1-position, replacing the initial vowel of the stem, and the TAM2 position, replacing the final (or last) vowel of the stem or following it. In addition, the TAM-stems are marked by tone patterns. Verbs inflect differently depending on their segmental, tonal and morphological make-up (section 12.5). In order to give an idea at this stage, the seven TAM-stems of the verb **ɔrɛ́kɔ** 'work' are presented here. The segments marking the different TAM-stems are underlined. +H denotes a floating high tone. This tone does not manifest itself in prepausal position. In context, however, it can surface on a following element.

*TAM-stems of **ɔrɛ́kɔ** 'work':*

ɔrɛ́kɔ +H	dependent incompletive TAM-stem
arɛ́kɔ +H	incompletive TAM-stem
ɔrɛkáṯɛ	past TAM-stem
ɔrɛ́kat +H	dependent perfective TAM-stem
ɔrɛkɔ̂t	completive TAM-stem
ɔ́rɛ́kɔ +H	dependent completive TAM-stem
ɔrɛkí	imperative TAM-stem

12.2. Citing the verb as lexeme

When referring to a verb as a lexeme, I use its base form: the dependent incompletive TAM-stem. This TAM-stem functions without any addition as Dependent Incompletive TAM and can thus be cited in isolation without problem. It displays the segmental and tonal structure of the verb. It is noted, however, that several dependent incompletive TAM-stems have a floating high tone. This high tone can surface on a next element, but if there is no such element, it leaves no trace. Using the citation form as an isolated form, I therefore do not represent an (eventual) floating high tone.

The base form of the verb will often just be called “the verb”. Thus, for example, **ɔrɛkí** and **wakánnɔrékɔ** are TAMs of the verb **ɔrékɔ** ‘work’ (respectively Imperative and Negative Incompletive). In this chapter, the verb will sometimes be presented between parentheses next to the example that contains a form (TAM) of it.

12.3. Morphological structure of verbal words

In its shortest form, a Lumun verbal word consists of just a TAM-stem – and TAM-stems themselves are morphologically marked (through segments and/or tone) as compared to the base form (the dependent incompletive TAM-stem). A verbal word can also be longer than just a TAM-stem: a number of clitic morphemes can precede the TAM-stem and some can follow it. There are three slots for auxiliaries (other than irrealis) in the scheme below, though it is not impossible that longer strings could be constructed. They would, however, be uncommon in natural speech.

slot 1: conjunctive **á-**, subjunctive **â-**, the restrictor **í-**, focus marker (**akk-** or **a-C-C-**[66])
slot 2: subject pronominal
slot 3: concord (nb. concord in Lumun is always subject concord)
slot 4-6: auxiliary (TAM-stem)
slot 7: irrealis auxiliary
slot 8: main verb TAM-stem
slot 9: object pronominal, vague reference clitic **-ɪk**
slot 10: clitic adverbial particles **-a**, **-na**, **-tɪ**, **-mɛ́**, **-mɛ**, clitic question particles **-ɪ**, **-ɛ**, **-a**.

Certain auxiliaries can be proclitic to the main verb. They have a reduced set of TAM-stems: some have just one (non-dependent) TAM-stem, others have a non-dependent vs. a dependent TAM-stem, again others have a three way distinction: an incompletive, a dependent incompletive and a completive TAM-stem.

[66] **a** followed by double concord.

There are restrictions on combinations of morphemes occupying different slots. Some observations:

1. if slot 1 contains a focus marker, slots 2 and 3 are empty;
2. non-dependent TAM-stems are immediately preceded by the focus marker (slot 1), a concord (slot 3), or the irrealis auxiliary (slot 7).
3. dependent TAM-stems are not immediately preceded by a concord. If the main verb is a non-dependent TAM-stem, slot 3 can only be filled if slot 4 contains a non-dependent auxiliary.

Some verbs must be combined with the vague reference particle **cɪk**. In principle **cɪk** is a separate word. In the Present of 'be', however, it only occurs as enclitic **-ɪk** (slot 8). In certain other cases it can alternatively be realized as a separate word or as enclitic **-ɪk** (see chapter 15.2 about **cɪk**).

TAMs can consist of more than one verbal word. This is the case for auxiliary + main verb constructions, whether or not containing the conjunctive marker **á**, e.g.,

pʊl	**p-ɔká.t**	**cɪk**	**a-p-ɔ́ɽəkɔ**	**kəpá**
person	C-be:COMPL	VREF	CONJ-PRO-eat:DEPINCOMPL	meat

the person was eating meat

pʊl	**p-a.ɪk**	**p-a.ɽəkɔ**	**kəpá**
person	C-be:PR	C-eat:INCOMPL	meat

the person is eating meat

The sections in this chapter on basic and complex TAMs present the minimal structure of these TAMs. The basic TAMs either consist of just the TAM-stem (the imperative TAM-stem and the dependent TAM-stems), or of concord + TAM-stem (the non-dependent TAM-stems). As stated before, TAMs which have the concord can only lack it when it is replaced by a focus marker.

The tones of TAM-stems —whether of main verbs or of auxiliaries— are represented in the way they surface in an environment where

they do not undergo tonal influence from other elements. Non-dependent TAM-stems are presented as if only preceded by a low-toned noun (for example **pʊl** 'person') and a concord; dependent TAM-stems of low verbs as if preceded by the conjunctive particle **á** and a low noun (for example **á-** + **pʊl**, giving **a-pʊ̂l**), dependent TAM-stem of verbs with a high (or falling) tone by the conjunctive particle **á** and a noun with final high tone (for example **á-** + **parí**, giving **a-parí)**: in these cases no high tone will be added to the verb, nor will a verbal high tone be changed to low. In practice, tones will often surface differently, due to various influences of the environment.

All TAM-stems form the basis of a basic TAM, except the dependent completive TAM-stem. This TAM-stem only occurs after a negation auxiliary (see 12.17).

12.4. Segmental and tonal shape of verbs

12.4.1. Segmental shape

Underived verbs (i.e. verbs in their base form) are predominantly bimoraic or trimoraic, derived verbs are often longer. An example of a long verb (seven morae) is **ɔkkápərəttakɪɛ** 'make sb./sth. return'. Monomoraic verbs, that is verbs with only one tone-bearing unit, are not attested.

Verbs are vowel-initial and end in a vowel or in vowel + **t**. The initial vowel can be any vowel (**ị**, **ɪ**, **u**, **ʊ**, **ɔ**, **ɛ**, **a** or **ə**), the last vowel, whether or not a final **t** still follows, is restricted to **ɔ**, **ɛ** or **a**. Initial **ə** is very rare. The vowel **ɔ** is very common, both initially and as last vowel. Of the vowels in last position, **ɔ** is the only "neutral" one, not having any association of its own with meaning. Both as initial vowel and as last vowel, **ɔ** can replaced by another vowel in inflection, as last vowel it can also be replaced in derivation. This suggests that initial and last **ɔ** are, unlike other vowels in those positions, not part of the actual lexical root or stem, but default "fillers" to complete the structure of the verb.

The initial vowel, the last vowel and the presence or absence of a final **t** are elements that are relevant for the subdivision of verbs because they correlate with differences in the TAM-stems (and thus with different inflectional forms). Both for the initial vowel and for the last vowel of the verb, a distinction must be made between the vowel **ɔ** and the other vowels. Thus, for inflection, the following segmental differences between verbs are important:

- The vowel **ɔ** as initial vowel differs from other initial vowels in that it is subject to inflectional change, whereas the other initial vowels always remain the same. Initial **ɔ** changes into **a** in the incompletive TAM-stem.
- A final (or last) vowel **ɔ** is replaced by an inflectional morpheme in the imperative, past and dependent perfective TAM-stems. Other final (or last) vowels do not change: an inflectional element is only added after it.
- Presence or absence of a final **t** correlates with differences in the formation of imperative and completive TAM-stems. In the past and dependent perfective TAM-stems, the presence or absence of a final **t** is neutralized.

A distinction on grounds of differences in TAM-stem formation must also be made between benefactive verbs, ending in **ɪnɛ**, **ɛnɛ** or **anɛ**, or in **ɪn̪ɛt**, **ɛn̪ɛt** or **an̪ɛt**, versus non-benefactive verbs ending in **ɛ** or **ɛt** (this will be further explained in the section on basic TAMs).

Finally, passive verbs ending in -**akɔ**(**t**) or -**ɛkɔ**(**t**) and derived from verbs ending in -**a**(**t**) and -**ɛ**(**t**) respectively, have a deviating past and dependent perfective formation.

12.4.2. Tone patterns

In their citation form, all verbs have a low tone on the first mora. The main (surface) tone patterns of verbs are L.L* (all morae have a low tone) and L.H.L* (the second mora has a high tone).[67] There are

[67] In the tonal representations of verbs (*) stands for ≥ 1. For example, L.L* refers to verbs of any length (that is, of two morae or more) that are completely low.

two minor tone patterns: L.HL and L.L.HL (in both cases the final mora has a HL-contour).

L.L*	**ɪmma** ‘see’, **ɛnɛkkɛ** ‘try’, **ɔkkʊnakɔ** ‘smell’
L.H.L*	**ɔkɛ́rɔ** ‘trade’, **ɔpə́llɛ** ‘fear’, **ɔkwárɪccat** ‘search’
L.HL	**ɛ̂** ‘go’, **ɔrâ** ‘cultivate’
L.L.HL	**ɔɽəkô** ‘eat’

These patterns can be divided into a low tone class (I) and a high tone class; the latter is again subdivided into the main pattern L.H.L* (IIA) and the smaller pattern L.HL/L.L.HL (IIB). These three groups correlate with inflectional differences.

I	L.L*
IIA	L.H.L*
IIB	L.HL/L.L.HL

In class IIB, most verbs with a final HL-contour consist of two morae only, L.L.HL is rare. This suggests that the pattern is basically the L.H.L (class IIA) pattern realized on two tone-bearing units instead of three or more. This is supported by longer derivations of L.HL verbs: the Low part of the falling tone is now realized on the following mora:

ɔllô ‘run’ vs. **ɔllínɛ** ‘run because of something’

The trimoraic verbs with a final HL-contour are a very limited set. All attested trimoraic verbs with a final HL-contour have the vowel **ə** as their second mora, and this **ə** either precedes or follows a rhotic sound. Possibly, these verbs were bimoraic L.HL verbs in an earlier stage of the history of the language and have only become trimoraic through **ə**-insertion, dissolving a disallowed consonant cluster.

ɔɽəkô	‘eat’
ɔrəpô	‘move down’
ɔrəpê	‘make move down, put down’

ɔkəɽê ‘burn’
ɔkəɽô ‘bite, get burnt; untie’

In longer derivations based on these verbs, the High tone surfaces on the second mora. These longer derivations are thus an exception to the general rule that derived verbs retain the tone pattern of the underived verb:

ɔɽəkô ‘eat’ / **ɔɽákɪnɛ** ‘eat for’

12.4.3. Correlation between initial vowels and tone patterns

Any vowel can constitute the initial vowel of a verb, but there is a correlation between the initial vowel of the verb and its tone pattern. When the initial vowel is **ɔ**, the tones cannot be predicted:

ɔkɪɔ	‘cut’	L.L
ɔt̪áttɔ	‘fight’	L.H.L
ɔllô	‘run’	L.HL
ɔɽəkô	‘eat’	L.L.HL

Verbs with an initial vowel other than **ɔ** have a L.L* tone pattern:

i̧kkɔ	‘drink’	L.L
ɪttarɔt	help’	L.L.L
unɔ	‘pour’	L.L
ʊrəkɔ	‘get up, start’	L.L.L
əɽa	‘refuse’	L.L
ɛrɛ	‘speak’	L.L
akkarɔ	‘call’	L.L.L

There are a few exceptions, all starting with **ɛ**. These verbs have a L.HL pattern:

ɛô	‘go’	L.HL
ɛɛ̂	‘stab, blow’	L.HL
ɛt̪êt	‘give’	L.HL

12.4.4. Overview of segmental and tonal properties relevant for TAM-inflection

Summarizing, the following divisions in verbs are relevant for TAM-inflection:

- the three tone patterns: L.L*, L.H.L* and L.HL/L.L.HL
- **ɔ**-initial versus non-**ɔ**-initial verbs
- vowel-final versus **t**-final verbs
- **ɔ**-final versus **ɛ** or **a**-final verbs, **ɔt**-final versus **ɛt** or **at**-final verbs
- benefactive verbs ending in **ɪnɛ**, **ɛnɛ, anɛ, ɪn̪ɛt**, **ɛn̪ɛt** or **an̪ɛt** versus non-benefactive verbs ending in **ɛ** or **ɛt**

The six basic TAMs (based on six of the seven TAM-stems), are discussed in the next section. A few verbs have partly irregular TAM-stems. Verbs that do not have the full paradigm of TAMs (some verbs have only one) are discussed in sections 12.8-12.22, which deal with auxiliaries and other verbs with defective inflection.

12.5. The basic TAMs

Lumun verbs have six basic TAMs:

- Imperative
- Incompletive
- Dependent Incompletive
- Past
- Dependent Perfective
- Completive

As remarked earlier, TAMs are built on the basis of TAM-stems. The dependent completive TAM-stem is only part of complex verbs with a negation auxiliary, it does not form a basic TAM. The Incompletive, the Past and the Completive contain a concord that agrees with the subject, the others do not. A list of the basic TAMs of the verb **ɔllɔ̂** ‘run’ follows here. The segmental marking in the TAM-stems is underlined. TAMs have basic tone patterns which correlate with the tone pattern of the verb.

TAM	*Structure of the TAM*	*example*
Imperative	= imperative TAM-stem	**ɔllʊ̲**
Incompletive	= concord + incompletive TAM-stem	C-**a̲llɔ̂**
Dep. Incompletive	= dependent incompletive TAM-stem	**ɔllɔ̂**
Past	= concord + past TAM-stem	C-**ɔlla̲ta̲ɛ**
Dep. Perfective	= dependent perfective TAM-stem	**ɔllâ̲t**
Completive	= concord + completive TAM-stem	C-**ɔllɔ̂t̲**

The Locative-applicative suffix and TAM-marking

Verbs with the Locative-applicative suffix have basic TAM-morphology that is different from the basic TAM-morphology of vowel-final verbs. The presence (or absence) of the Locative-applicative suffix can be recognized in Imperatives, Incompletives (both non-dependent and dependent) and Completives, but not in Pasts and dependent Perfectives. In the latter TAMs the difference between vowel-final and **t**-final verbs is neutralized. The examples below contrast TAMs of the verbs **ɔ̱ʈ̱ɔ** 'push' and **ɔ̱ʈ̱ɔt** 'send' (see 14.2 for some remarks about the semantics of these related verbs):

Table 46 TAMs of **ɔ̱ʈ̱ɔ** 'push' and **ɔ̱ʈ̱ɔt** 'send'

	ɔ̱ʈ̱ɔ 'push'	***ɔ̱ʈ̱ɔt 'send'***
Imperative	**ɔ̱ʈ̱i̱**	**ɔ̱ʈ̱ɔ̱ʈ̱é**
Incompletive	C-**a̱ʈ̱ɔ** (+H)	C-**a̱ʈ̱ɔt** (+H)
Dep. Incompletive	**ɔ̱ʈ̱ɔ** (+H)	**ɔ̱ʈ̱ɔt** (+H)
Completive	C-**ɔ̱ʈ̱i̱ɔ́t**	C-**ɔ̱ʈ̱i̱ɔ̱ʈ̱ê**
Past	C-**ɔ̱ʈ̱i̱áʈ̱ɛ**	C-**ɔ̱ʈ̱i̱áʈ̱ɛ**
Dep. Perfective	**ɔ̱ʈ̱i̱at** (+H)	**ɔ̱ʈ̱i̱at** (+H)

12.5.1. Non-dependency versus dependency

Dependent TAMs or TAM-stems lack agreement with the subject, i.e. they are not preceded by a concord. If dependency is not mentioned in the gloss (irrespective of whether it concerns a main verb, an auxiliary or a copular verb), the TAM-stem is non-dependent. Likewise, I speak of Incompletive vs. Dependent Incompletive TAM and Past vs. Dependent Perfective TAM.

Dependent TAMs occur in specific syntactic environments, in which there is typically preceding discourse that allows for the lesser grammatical marking on the verb. The sections on the Dependent Incompletive and the Dependent Perfective specify such environments. Only when the subject is a speech participant (so that subject reference is clear from the extra-textual situation), preceding discourse can be absent, i.e. in hortatives and mild commands.

Arguably, the Imperative is a dependent TAM as well, and the imperative TAM-stem a dependent TAM-stem. However, since non-dependent counterparts are lacking, dependency does not need to be specified.

The six basic TAMs are discussed below.

12.5.2. The Imperative

Lumun Imperatives address a singular addressee. They consist of the imperative TAM-stem:

Imperative = imperative TAM-stem

Verbs that end in **a** or **ɛ** mark the imperative stem (and thus the Imperative) only through tone. Irrespective of the tone pattern of these verbs, their Imperative is completely low. This includes the tonally irregular verb **ɛɛ̂** 'stab, blow'. The Imperative of **ɔ**-final verbs is marked both tonally and segmentally: the final **ɔ** changes into **ɨ́** or **ʊ**[68]. The first group thus has a final high tone (pattern L*.H), the Imperatives in **ʊ** are completely low. There is some correlation between the tone pattern of an **ɔ**-final verb and the shape of its imperative stem:
- imperative stems based on an **ɔ**-final verb with all-low tone pattern

[68] In some +ATR items (i.e. with an **ɨ** and/or **u** in the verb root), harmonization effects were observed. The final vowel of the Imperative was articulated as [i], or towards [i] rather than as [ɪ]. In other such items however, harmonization effects were not perceived by the researcher, nor by her consultants. In all cases, **ɪ** is used in the spelling. +ATR items with an Imperative ending in **ʊ** are not attested.

mostly end in **í**;
- the great majority of imperative stems based on an **ɔ**-final verb with L.H.L* tone pattern end in **í**;
- the imperative stems of **ɔ**-final verbs with a L.HL/L.L.HL pattern all end in **ʊ**.

Verbs ending in **t** form imperative stems by changing the final **t** into **ṯé**, with a H tone on the final **ɛ** (pattern L.L*.H). Verbs ending in **-ɪnɛ**, **-ɛnɛ** or **-anɛ** (i.e. benefactive stems) form imperative stems by adding a final **t** and taking an all-low tone pattern. Verbs ending in **ɪnṯɛt**, **ɛnṯɛt** or **anṯɛt** do not change segmentally, but adopt an all-low tone pattern. The verb **ɛṯêt** 'give' patterns with the verbs ending in **ɪnṯɛt**, **ɛnṯɛt** or **anṯɛt**.

The patterns of imperative stem formation are presented in the table below. If a kind of marking is rare for verbs with a certain shape and tone pattern this is mentioned in the third column.

Table 47 Imperatives

verbal ending and tone pattern	*verb examples*	*marking of imperative TAM-stem*	*Imperative*
-ɔ ; L.L*, L.H.L*	**ɪɔ** 'die' **ɔccịrɔ** 'laugh' **ɔrɛ́kɔ** 'work' **ɔmárəttɔ** 'finish'	**-í** ; L*.H	**ɪ.í** **ɔccịr.í** **ɔrɛk.í** **ɔmarətt.í**
-ɔ ; L.HL/L.L.HL	**ɔllɔ̂** 'run' **ɔɽəkɔ̂** 'eat'	**-ʊ** ; L.L*	**ɔll.ʊ** **ɔɽək.ʊ**
-ɔ ; L.L*	**ɔllɔ** 'move aside'	**-ʊ** ; L.L* (rare)	**ɔll.ʊ**
-ɔ ; L.H.L*	**ɔkúkwɔ** 'blow PLUR'[69]	**-ʊ** ; L.L* (rare)	**ɔkʊkw.ʊ**

[69] This is the Pluractional form of **ɔkwɔ̂** 'blow', which (also) has an Imperative in **ʊ**. There may be more such cases. It is, however, not the case that Pluractionals with L.H.L* pattern ending in **ɔ** and based on L.HL/L.L.HL verbs always (or even generally) have **ʊ** in the Imperative. Compare: **ɔṯʊ** 'pull!' (< **ɔṯɔ̂**) vs. **ɔṯʊṯí** 'pull repeatedly!' (< **ɔṯúṯɔ**), and: **ɔkəɽʊ** 'bite!' (< **ɔkəɽɔ̂**) vs. **ɔkəɽɛllí** 'bite repeatedly!' (< **ɔkárɛllɔ**).

-a, -ɛ (except Benefactive stems); all tone patterns	**ʊra** ‘escape’ **ɔkə́n̪a** ‘look’ **ɔccâ** ‘scoop’ **ɛrɛ** ‘speak’ **ɔkánɛ** ‘show’ **ɔkê** ‘shave’	L.L*	**ʊra** **ɔkən̪a** **ɔcca** **ɛrɛ** **ɔkənɛ** **ɔkɛ**
Benefactive stems (**-ɪnɛ**, **-ɛnɛ**, **-anɛ**); all tone patterns	**ɔpéttɪnɛ** ‘divide for’ **ɛrɛnɛ** ‘explain to’ **ɔnánɛ** ‘bring to’	**-t** ; L.L*	**ɔpɛttɪnɛ.t** **ɛrɛnɛ.t** **ɔnanɛ.t**
-t (except Benefactive + Locative-applicative stems) ; all tone patterns	**ɪɔt** ‘find’ **ɛɛt** ‘arrange’ **ɔɽíkɔt** ‘wait’	**-n̪é** ; L.L*.H	**ɪɔn̪.é** **ɛɛn̪.é** **ɔɽɪkɔn̪.é**
Benefactive + Locative-applicative stems (**-ɪnn̪ɛt**, **-ɛnn̪ɛt**, **-ann̪ɛt**); all tone patterns	**ɔkkínn̪ɛt** ‘do for’ **ɛrɛnn̪ɛt** ‘talk to sb. about’ **ɔkwárɪccann̪ɛt** ‘search for sb’ *also:* **ɛn̪ê̪t** ‘give’	L.L*	**ɔkkɪnn̪ɛt** **ɛrɛnn̪ɛt** **ɔkwarɪccann̪ɛt** **ɛn̪ɛt**

An example with the Imperative of **ɔɽəkɔ̂** ‘eat’ follows here, showing that there is no high tone involved. **maɪt** ‘beans’ is itself all-low and remains low:

ɔɽəkʊ **maɪt**
eat:IMP beans
eat the beans!

An Imperative can in principle be formed from all verbs, except for a small set of defective verbs. Passive verbs are in principle open to Imperative formation. The Imperatives in the examples below refer to rites of passage involving getting beaten and scarification of the body.

apəɽɛtta	**t̪ʊpʊt**	**ɛn-t̪-í**	(< **apəɽɛtta**)
be_beaten:IMP	year	DEM-C-NEARSP	

get beaten this year!

ɔmɛkɪ	**t̪úpʊ́t**	**ɛ́n-t̪-í**	(< **ɔmɛ́kɔ**)
be_scarified:IMP	year	DEM-C-NEARSP	

get scarified this year!

'Go' and 'come' have an irregular Imperative:

Table 48 Imperatives of **ɛ̂** 'go' and **aɔ** 'come'

verb	*Imperative*	*type of irregularity*
ɛ̂ 'go'	**ŋkɔ́**	suppletive form
aɔ 'come'	**aɽík**	**a** + **ɽík** (related to **cǐk** 'place(s)' and/or the vague reference particle **cɪk** (chapter 15))

A few verbs allow for omission of the initial **ɔ** in the Imperative. This omission makes the Imperative more urging. In the Imperative of **ɔkárənnɔ** 'let' the initial **ɔ** is always left out.

Table 49 Imperatives with omission of initial **ɔ**

verb	*Imperative*	*Imperative with urge*
ɔcɔ́ɽɔ 'stand, wait'	**ɔcɔɽí**	**cɔɽí**
ɔkát̪a 'look'	**ɔkət̪a**	**kat̪a**
ɔkárənnɔ 'let'	**kərənní**	

Nothing can be attached before the Imperative, but clitics can be attached at the end of it. Some Imperatives undergo a change upon attachment of a vowel-initial object pronominal clitic. For example, final **ɪ** and **ʊ** change into **ɔ,** and the H-tone of final **ɪ** is deleted:

ɔmɪccɔ-k	(< **ɔmɪccí**; verb: **ɔmíccɔ**)
advise:IMP-O3	

greet him/her!

ɔccɔ-kɔk	(< **ɔccʊ**; verb: **ɔccɔ̂**)
receive:IMP-O3	

take him/her!

Forms and attachment of object pronominal clitics to specific TAM stems are discussed in detail in chapter 6.4.

Two Imperatives cannot be coordinated. Instead the second command is expressed by a Dependent Incompletive:

ɔllʊ	**ana**	**ɟ́rrɔ**
run:IMP	and	jump:DEPINCOMPL

run and jump!

Other commands (to first, second and third persons) are not based on the imperative TAM-stem but on the dependent incompletive TAM-stem.

12.5.3. The Incompletive

Form of the Incompletive

Incompletives consist of a concord and the incompletive TAM-stem:

Incompletive = concord + incompletive TAM-stem

Incompletive stems take different shapes depending on the initial vowel of the verb and its tone pattern. Incompletives are the only TAM-stems that, if segmentally marked, are marked in the TAM1-position.

A stem-initial vowel **ɔ** changes into **a**, and a high tone appears on the initial vowel of all-low stems. Some verbs with an all-low tone pattern have a falling tone on the initial vowel. Unless in careful speech, this falling tone can also be realized as high. Which verbs belong to this group is lexically determined. Some have a long nasal or a nasal and stop after the initial vowel, others a geminated (= voiceless) stop. The group does not seem to contain verbs with a single consonant after the initial vowel. It is possible that instances have been missed, since in normal speech the falling tone is not always realized.

Stems that are not **ɔ**-initial do not change their initial vowel, and stems with another tone pattern than L.L* retain their stem tones.

Incompletive TAM-stems (and thus Incompletives) have a floating high tone, except Incompletives of verbs with a final falling tone. Incompletives of such verbs lack the floating high tone also upon attachment of a third person pronoun clitic, which changes the tones of the verb. Compare the examples based on **ɛrɛ** 'speak' and **ɔkə́ n̰a** 'look at' with those based on **ɔkwɔ̂** 'blow away' and **ɔʈəkɔ̂** 'eat'. The object nouns are themselves all-L:

mpérɛ lɔ̂n	'I will speak words'
kkwérɛ lɔ̂n	's/he will speak words'
mpakə́n̰a máɪt	'I will look at the beans'
kkwákən̰a máɪt	's/he will look at the beans'
mpakwɔ́ lɔn	'I will blow matters away'
kkwákwɔ lɔn	's/he will blow matters away'
mpaʈəkɔ́ maɪt	'I will eat beans'
kkwáʈəkɔ maɪt	's/he will eat beans'

A floating high tone is represented as +H.

Table 50 Incompletives

initial vowel and tones of the verb	*verb examples*	*marking of incompletive TAM-stem*	*Incompletive*[70]
ɔ, L.L*	**ɔkɪɔ** 'cut'	**a** ; H.L* +H	C-**á.kɪɔ** +H
ɔ, L.H.L*	**ɔkə́n̰a** 'look'	**a** ; +H	C-**a.kə́n̰a** +H
ɔ, L.HL	**ɔllɔ̂** 'run'	**a**	C-**a.llɔ̂**
ɔ, L.L.HL	**ɔʈəkɔ̂** 'eat'	**a**	C-**a.ʈəkɔ̂**
i̱, ɪ, u, ʊ, ɛ, a, L.L*	**ɪɔt** 'find' **ʊmmɔ** 'take, pick up' **ɛrɛ** 'speak' **aŋkɔ** 'be hot'	H.L* +H	C-**íɔt** +H C-**úmmɔ** +H C-**érɛ** +H C-**áŋkɔ** +H

[70] The tones of the Incompletives are represented as in an environment that causes no tonal change, for example as in: **pʊl pákɪɔ** 'the person will cut it'.

L.L*	**ɔŋkənɛ** ‘teach (PLUR)’ **ɪɲcɛt** ‘find (PLUR)’ **akkarɔ** ‘call’ **ɛkkɪɛ** ‘measure’	**a** ; HL.L* +H / H.L* +H	C-**â.ŋkənɛ** +H / C-**á.ŋkənɛ** +H C-**îɲcɛt** +H / C-**íɲcɛt** +H C-**âkkarɔ** +H / C-**ákkarɔ** +H C-**êkkɪɛ** +H / C-**ékkɪɛ** +H
ɛ, L.HL	**ɛ̂ɛ̂** ‘stab, blow’ **ɛn̰t̰êt** ‘give’	–	C-**ɛ̂ɛ̂** C-**ɛn̰t̰êt**

There are only few incompletive TAM-stems which show no marking at all as compared to the dependent incompletive TAM-stem (the citation form). This is because there are only few verbs which are both not **ɔ**-initial and containing a H-tone. The attested cases are given in the last row of the table).

Some examples with an Incompletive follow here. The first examples have forms of the verbs **aɪnɛ** ‘come to’ and **ɔ́ínɛ** ‘go to’. The Incompletives of these verbs differ only tonally. When preceded by the 3rd person pronoun clitic and concord (third example below) their realization is identical. The verb **ɔʈəkɔ̂** ‘eat’ (last examples) lacks a floating high tone.

ɔ-kakká	**p-áɪnɛ**	**ókʊl**	(< **aɪnɛ**)
PERS-Kakka	C-come_to:INCOMPL	child	

Kakka will come to the child

ɔ-kakká	**p-a.ínɛ**	**ókʊl**	(< **ɔ́ínɛ**)
PERS-Kakka	C-go_to:INCOMPL	child	

Kakka will go to the child

k-kw-áɪnɛ / k-kw-á.ɪnɛ	**ókʊl**	(< **aɪnɛ**, < **ɔ́ínɛ**)
3-C-come_to:INCOMPL / 3-C-go_to:INCOMPL	child	

s/he will come to the child / s/he will go to the child

əlla	**w-a.ʈəkɔ́**	**aʊn**	(< **ɔʈəkɔ̂**)
cats	C-eat:INCOMPL	rats	

cats eat rats

w-á.ɽəkɔ **aʊn** (< **ɔɽəkɔ̂**)
PRO.C-eat:INCOMPL rats
they (the cats) will eat rats

The following verbs have an irregular Incompletive.

Table 51 Irregular Incompletives

verb	*Incompletive*	*type of irregularity*
aɔ 'come'	C-**â.nn̰án** (also regular: C-**áɔ)**	**nn̰án** 'towards the deictic centre' is part of the verb
ɛɔ̰̂ 'go'	C-**a.ɛɔ̰̂**	added **a**
ɔɔ 'cry'	C-**ɔ́ɔ** +H	no change of initial **ɔ** to **a**
ɔmmâ 'not know'	C-**ɔmmá**	no change of initial **ɔ** to **a** + tonal irregularity
ɪna 'know'	C-**ɪná**	tonal irregularity
ɛlla 'be absent, lack' (intr.)	C-**ɛllâ**	tonal irregularity
ɛlla 'not have, lack' (tr.)	C-**ɛllâ**	tonal irregularity

Meaning of the Incompletive

The Incompletive basically expresses that, at a certain moment in time, something will still happen. This moment in time can be prior to the moment of speech, at the moment of speech or after the moment of speech.

(< **ɔkkɔ̂t**)

ɔ-kín	**n̰-ɛrɛttárɛnɛ.t**	**ɪttɪ**	**ɔ-kín**	**n̰-á.kkɔ́t**	**ŋím-p-ên**
PERS-3A	C-discuss:COMPL	that	PERS-3A	C-do:INCOMPL	what-C-DEM

they discussed what they would do

(< **ɔkkɔ̂t**)

ŋ-kw-a.kkɔ́t	**ŋərɛ́**	**ɛŋ-ŋ-í**	**íttí**	**kán̰-n̰a**
2-C-do:INCOMPL	work	DEM-C-NEARSP	that	how-QW

how will you do this work?

(< **ɔɽəkɔ̂**)

kəllán	**k-á.ɽákɔ́**	**t̪ɔ́rít**	**ámmá**	**k-k-íammâ.t**
old_woman	C-eat:INCOMPL	food	if	PRO-C-become_hungry:COMPL

the old woman will eat the food when she is hungry

Incompletives can give expression to a speaker's attitude in terms of necessity or desirability of an event that is still to happen, or to a readiness for it to take place.

ŋ-kw-a.ccíʆɔt	**ɪttɪ**	**á-ɪna**	**cɪk**	(< **ɔccíʆɔt**)
2-C-hear:INCOMPL	that	SUBJ-(2-)know:DEPINCOMPL	VREF	

you must listen so that you know

tun̪n̪əruk	**t-ápakɔ**	(< **apakɔ**)
pig	C-be_roasted:INCOMPL	

the pig can be roasted (it is ready to be roasted)

The Incompletive sometimes allows for an irrealis reading:

m-p-a.cɔ́mɔkkɪnɛ	**ŋɪn-t̪a**	**n-a-ôn**	(< **ɔcɔ́mɔkkɪnɛ**)
1-C-disturb_for:INCOMPL	what-QW	on-PERS-1	

why would I disturb you? (I did not do that!)

Incompletives are used in general truth expressions and can express habitual aspect: something happened in the past and is expected to happen again.

ɲɪlláŋkɛr	**ɲ-ɔ́nɔ**	**nʊné**	**nɔ-kɛʆɔ̂ŋ**	(< **ʊnɔ**)
birds(sp.)	C-build:INCOMPL	nests	on-palm_trees	

ŋɪllaŋkɛr-birds build their nests in palm trees

(< **ɔrâ**)

ʊl	**w-a.rá**	**aʆəpʊ**	**ámm.akka**	**t̪ún**	**ana**	**án̪n̪ɔ́pâ**
people	C-cultivate:INCOMPL	things	like	onion	and	tobacco

the people cultivate crops such as onions and tobacco

12.5.4. The Dependent Incompletive

Form of the Dependent Incompletive

Dependent Incompletives consist of the dependent incompletive stem:

Dependent Incompletive = dependent incompletive TAM-stem

Dependent incompletive TAM-stems (and thus Dependent Incompletives) have a floating high tone unless the TAM-stem has a final HL-contour.

Table 52 Tone patterns of Dependent Incompletives

tones of the verb	*verb*	*Dependent Incompletive*
L.L*, L.H.L*, L.HL	**ɔkɪɔ** 'cut' **ɔkə́n̪a** 'look' **ɔllɔ̂** 'run'	**ɔkɪɔ** +H **ɔkə́n̪a** +H **ɔllɔ̂**
L.L.HL	**ɔɽəkɔ̂** 'eat'	**ɔɽəkɔ̂**

Dependent Incompletives cannot take a concord. The examples below contrast an Incompletive (first example) and a Dependent Incompletive (second and third example).

n̪ʊk **n̪-a.ɽəkɔ̂**
dog C-eat:INCOMPL

the dog will eat it

á-n̪ʊk **ɔɽəkɔ̂**
SUBJ-dog eat:DEPINCOMPL

and the dog must eat it / let the dog eat it

… a-n̪-ɔ́ɽəkɔ
CONJ-PRO-eat:DEPINCOMPL

… and/while it (the dog) eats it

Meaning and environments in which it is used

Typically the Dependent Incompletive is connected —through a conjunction word or particle, or also through juxtaposition—, to a preceding verb or verb phrase. In same-subject coordinations with **anǎ** ‘and’, the Dependent Incompletive adopts the tense/aspect and/or modality interpretation of the preceding verb. It can also be used for background information about an aspect of a larger event, such as an action performed simultaneously with the main action, the purpose of an action, or the way in which it is done. It can, however also be used alone, i.e. not in some kind of conjunction with another verb. In such cases it expresses a (mild) command.

Environments in which the Dependent Incompletive is used include the following:

a) in a clause introduced by the subjunctive particle **â** ‘so that, in order to’;
b) in a clause introduced by conjunctive particle **á** ‘and, while’;
c) as the second verb coordinated through **anǎ** ‘and’ with another verb, sharing the same subject;
d) as the second verb in a verb sequence expressing the way in which something is done, or expressing the “path” in a verb sequence of motion and path;
e) as a complement of **əɣa** ‘refuse, insist’, **ına** ‘know’, **ɔmmâ** ‘not know’;
f) In negative commands (with **ɔkárənnɔ** ‘let, leave, allow’);
g) with a second person plural pronoun clitic expressing a mild command; with a hortative pronoun, expressing an obligation or duty of a first person;
h) in constructions with fronted question words and in non-subject focus constructions with **akka** ‘that’;
i) in non-subject relative constructions (see 11.2), topicalizing cleft constructions (11.2.4), and clauses introduced by the locative relative **ná** (11.3)

A verb in Dependent Incompletive TAM can furthermore be part of a complex TAM with the auxiliary verb ᴄ-**arə́ṯʊk** ‘be still’. More commonly, complex verb constructions involve the dependent

incompletive TAM-stem as part of a larger word with one or more auxiliaries. These cases are discussed in the sections on auxiliaries.

In the following, the environments mentioned above are exemplified and explained in some more detail.

*Ad a) in a clause introduced by the subjunctive particle **â** 'so that, in order to'*

The subjunctive particle **â-** 'so that, in order to' links the action expressed by the Dependent Incompletive to the preceding action. The verb in the clause introduced by **â** typically denotes the purpose or goal of the action expressed in the preceding clause (see also chapter 18.2.2):

ɔ-rɔn	**ʈ̪-a.rɛ́kɔ**	**kəʈʊŋ-kəʈʊŋ**	**á-rɔn**	**íɔt**	**ʈ̪ʊʈ̪ît**
PERS-12A	C-work:INCOMPL	seriously-REDUP	SUBJ.PERS-12A	find:DEPINCOMPL	food

we must work hard so that we have food

*Ad b) in a clause introduced by conjunctive particle **á** 'and, while'*

The conjunctive particle **á**, when introducing a clause with a Dependent Incompletive, expresses an action that happens or happened more or less at the same time as the previous action (see also chapter 18.2.1):

a-áʈ̪úʈán	**ɔ́íŋkat**	**tʊan**	**ʈ̪an-ɛn**
CONJ-thieves	go:DEPPRFV	home	at_place-POSS3A

a-íʈɛt	**ká**	**k-én**	**íttí …**
CONJ-(C-)tell:DEPINCOMPL	body	C-POSS3A	that

and the thieves went home, saying to themselves …

The Dependent Incompletive preceded by **á** 'and, while' is part of some complex TAMs, for example of the Past Continuous (first example below) and of a complex TAM involving **ɪkkɔ cɪk** 'sit, stay' as an auxiliary expressing the start of an action (second example below):

m-p-ɔ́ká.t	**cık**	**a-n-ɔ́mɛntɛ**	**ıttĭ …**
1-C-be:COMPL	VREF	CONJ-1-say.PLUR:DEPINCOMPL	that

I was saying all the time that …

… a-n-íkk.at	**cık**	**a-n-ípɔt**	**ɲúmpʊʈúŋ**
CONJ-1-sit:DEPPRFV	VREF	CONJ-1-dig:DEPINCOMPL	potatoes

and I started digging potatoes

*Ad c) as the second verb coordinated through **ană** 'and' with another verb, sharing the same subject*

In constructions of two verbs with the same subject coordinated through **ană** 'and', the second can be a Dependent Incompletive. In the example below (which continues on the example above) it is coordinated with a Dependent Incompletive that is preceded by a subject pronoun:

… a-n-íkk.at	**cık**	**a-n-ípɔt**	**ɲúmpʊʈúŋ**
CONJ-1-sit:DEPPRFV	VREF	CONJ-1-dig:DEPINCOMPL	potatoes

ana	**ɟkkɔ**	**marî**
and	drink:DEPINCOMPL	fruits(k.o.)

and I started digging potatoes and eating *marı*-fruits

An example with an Incompletive first verb follows here. The second verb can be a Dependent Incompletive, but also, just like the first, an Incompletive. The actions are not presented as consecutive, but just as both taking place:

ʊl	**w-ɟkkɔ**	**ŋə́pak**	**ɛppın-ɛppın**
people	C-drink:INCOMPL	beer	always-REDUP

ana	**ɔɲárɔ / w-a.ɲárɔ**	**n-əʈɟttăŋ**
and	walk:DEPINCOMPL / C-walk:INCOMPL	with-knives

the people drink beer all the time and carry knives (fr. written essay)

This is an example with a Future Continuous TAM (see 12.7.5) coordinated with a Dependent Incompletive:

nɔ-caʈɪ	**c-én**	**ʊl**	**w-a.ka**	**w-a.ŋwɔ́**	**ana**	**ɔ́kkwɔ**
on-day	C-DEM	people	C-be:INCOMPL	C-sing:INCOMPL	and	dance:DEPINCOMPL

on that day, the people will be singing and dancing

ană can also coordinate a Completive and a Dependent Incompletive verb with the same subject. The Dependent Incompletive adopts the same temporal/aspectual reference as the Completive:

ɪ-l-ên	**akka**	**m-p-ɪcánṭɛt**	**mɛccɪn**	**ɲ-cɪk**	**ɪ-cį̨ŋkį́**
RES-C-DEM	that	1-C-lie_down_for:COMPL	yesterday	with-VREF	in-sun

ana	**ɔ́rəkɔ**	**a-cį́ŋkį̨**	**c-ɛ́ɔ́.t**	**cɪk-ɪ-ṯɪʈɔ̂t**
and	get_up:DEPINCOMPL	CONJ-sun	C-go:COMPL	LOC-in-sky

and that is why I slept yesterday from sunrise and I got up (only) when the sun had left the sky

Two Imperatives cannot be coordinated. Instead, the second command is expressed by a dependent verb, in the example below a Dependent Incompletive:

ɔkakɪ	**mį́l**	**ana**	**ɔkkɔ́t**	**ŋʊcʊl**
grind:IMP	sorghum	and	do:DEPINCOMPL	sauce

grind the flour and make the sauce!

Ad d) as the second verb in a verb sequence expressing the way in which something is done, or expressing the "path" in a verb sequence of motion and path

l-ɔ́mma	**ɪttɪ**	**m-p-érɛn-ʊŋ**	**ɔ̂kʊrrɔ**
PRO.C-know_not:INCOMPL	that	1-C-speak_to:INCOMPL-O2	engrave:DEPINCOMPL

I don't know how to explain this to you in writing (lit.: they (the words) do not know that I say it to you writing)

The second verb in a motion and path construction typically denotes whether the motion is upward, downward or remains at (more or less) the same height.

a-lɔ́ttɪ	**ɔll.át**	**ʊɔ**	**ʈ̪ɔ́-rɔ́k**
CONJ.PERS-Lɔttɪ	run:DEPPRFV	descend:DEPINCOMPL	at-well

and Lotti ran down to the well

*Ad e) as a complement of **əɽa** 'refuse, insist', **ɪma** 'know', **ɔmmâ** 'not know', **ɔkárənnɔ** 'let, leave, allow'*

The verbs **əɽa** 'refuse, insist', **ɪma** 'know', **ɔmmâ** 'not know' and **ɔkárənnɔ** 'let, leave, allow' can take a Dependent Incompletive as a direct complement, without a complementizer. There is no reference on the Dependent Incompletive to the subject.

kálám	**éŋ-k-í**	**k-əɽá.t**	**ɔkʊrrɔ**
pen	DEM-C-NEARSP	C-refuse:COMPL	engrave:DEPINCOMPL

this pen refuses to write

kálám	**éŋ-k-í**	**k-íná**	**ɔ́kʊrrɔ**
pen	DEM-C-NEARSP	C-know:INCOMPL	engrave:DEPINCOMPL

this pen works

m-p-ɔmma	**ɔ́kʊrrɔ**
1-C-know_not:INCOMPL	engrave:DEPINCOMPL

I cannot write

*Ad f) In negative commands (with **ɔkárənnɔ** 'let, leave, allow')*

Commands with **ɔkárənnɔ** can immediately be followed by a Dependent Incompletive. The construction functions as a prohibitive:

kərənn.ɪ	**ɔpéllɛ**
let:IMP	fear:DEPINCOMPL

don't be afraid!

n-ɔkárənnɔ	**ɔ̂ŋɔkɔ**
2A-let:DEPINCOMPL	rest:DEPINCOMPL

don't rest! (to plural addressee)

Ad g) with a pronoun clitic expressing a mild command to 'you (PLUR)'; with a hortative pronoun expressing an obligation or duty of a first person

Commands to a second person plural consist of one of the variants of the second person plural addressee pronoun (see 6.5) and a Dependent Incompletive. They are somewhat less pressing than Imperatives:

n-ǒ́rəkɔ
2A:get_up:DEPINCOMPL
stand up! (to plural addressee)

Commands to first persons, 'I and you' or 'we (INCL)', consist of a hortative pronoun (see 6.6) and a dependent incompletive stem:

tír-ɛ́ɔ̋	**kɛ́ccôk**
HRT12-go:DEPINCOMPL	market

let us go to the market

*Ad h) in constructions with fronted question words and in non-subject focus constructions with **akka** 'that'*

Dependent Incompletives are used in non-subject focus constructions, whether non-contrastive, with a content question word (first example below), or contrastive (second example below). More examples can be found in the chapters on question words and focus.

ŋín-n̰a	**akka**	**i̧n-ɔkkɔ̂t**
what-Q	that	1A-do:DEPINCOMPL

what should we do? / what can we do?

ɔ-ɔ́k	**akka**	**ɔ-rɔn**	**ɔnánɛ**	**ŋʊrô**
PERS-3	that	PERS-12a	bring_to:DEPINCOMPL	asida

he is the one to whom we bring asida

akka can also be combined with an Incompletive verb, as in the next sentence, which is structurally very similar to the previous sentence:

kəllán	**akka**	**ɔ-kʊkkʊ́**	**p-ípɪnɛ**	**aôn**
old_woman	that	PERS-Kʊkkʊ	C-collect_for:INCOMPL.	bees

it is for the old woman that Kʊkkʊ collects honey

*Ad i) in non-subject relative constructions (see 11.2), topicalizing cleft constructions (11.2.4), and clauses introduced by the locative relative **ná** (11.3)*

Topicalizing cleft constructions and non-subject relative constructions (with or without the restrictor **í**-) are introduced by the copula C-**á**. In the sentence introduced by the copula an incompletive verb occurs in the form of a Dependent Incompletive. The first example shows a non-subject relative construction; the second example a topicalizing cleft, which forms a full (topic- or theme-focussed) sentence (see 11.2.4).

aʧəpʊ	**ɪ-a**	**ɔ-ʊn**	**ɔʧəkɔ̂**
things	RES-(C-)COP	PERS-1	eat:DEPINCOMPL

the things which I eat

kəpa	**k-a**	**ʈʊk**	**ɔʧəkɔ̂**
meat	C-COP	dog	eat:DEPINCOMPL

the meat will be eaten by the dog

A clause introduced by the locative relative **ná** ‘where’ can have a Dependent Incompletive verb:

na	**cɟŋkɟ**	**ɔrʊŋkɔ**
where:REL	sun	disappear:DEPINCOMPL

where the sun sets / (in) the west

More details on relative constructions are provided in chapter 11.

12.5.5. The Past

Form of the Past

Pasts consists of a concord and the past TAM-stem:

Past = C + past TAM-stem

Past stems are segmentally marked in the TAM2 position: a past marker replaces the final vowel of the verb or is attached after it. Pasts are further marked by a special tone pattern.

Verbs which end in **ɔ(t)** are marked differently for Past than verbs which end in **ɛ(t)** or **a(t)**. In verbs which end in **ɔ** or **ɔt**, the final **ɔ** or **ɔt** is replaced by **aⱪɛ**. Verbs which end in **ɛ** or **a** add a past marker **kaⱪɛ.** In verbs which end in **ɛt** or **at,** the final **t** is replaced by **kaⱪɛ**. In Passive derivations of **ɛ(t)** and **a(t)** final verbs ending, respectively, in **ɛkɔ(t)** and **akɔ(t)** final **ɔ(t)** is not replaced by **aⱪɛ** but by **akaⱪɛ**. This has the effect of disambiguating the Pasts of underived verb and those of their Passive derivations ending in **kɔ(t)**, for example:

ɪmma 'see' C-**ɪmmakáⱪɛ**
ɪmmakɔ 'be seen' C-**ɪmmakákaⱪɛ** (instead of C-**ɪmmakáⱪɛ**)

The Pasts of Locative-applicative derivations (ending in **t**) and their underived counterparts are, on the other hand, neutralized.

The Past imposes a tone pattern on the verb that is independent of the tones of the verb. A Past has a H-tone on the second mora, if there are three morae, and on the third mora if there are more than three. The Past does not generate a H-tone on a following constituent.

Table 53 Pasts

final segment(s) of the verb	*segmental marking of the past TAM-stem*	*verb*	*Past*
ɔ, ɔt two morae	**aⱪɛ** H on 2nd mora	**ɪɔ** 'die' **ɪɔt** 'find'	C-**ɪ.áⱪɛ** C-**ɪ.áⱪɛ**
ɔ, ɔt three or more morae	**aⱪɛ** H on 3rd mora	**ɔkɪɔ** 'cut' **ɔⱪórakɔ** 'stretch oneself"	C-**ɔkɪ.áⱪɛ** C-**ɔⱪʊrák.aⱪɛ**

ɛ, ɛt **a, at**	**kaⱪɛ,** **kaⱪɛ** H on 3rd mora	**ɛrɛ** ‘speak’ **ɛrɛt** ‘talk about’ **ɔkáⱪa** ‘look’ **ɔkwárɪccat** ‘search’	C-**ɛrɛ.káⱪɛ** C-**ɛrɛ.káⱪɛ** C-**ɔkəⱪá.kaⱪɛ** C-**ɔkwarícca.kaⱪɛ**
Passives ending in **ɛkɔ(t)**, **akɔ(t)**	**akaⱪɛ** H on 3rd mora	**ɪmmakɔ** ‘be seen’ **ɛⱪɪɛkɔ** ‘be made cool, be blessed’	C-**ɪmmak.ákaⱪɛ** C-**ɛⱪɪék.akaⱪɛ**

An example illustrating that no H tone comes on the next constituent:

pʊl **p-ɪ.áⱪɛ** **pəlla** (< **ɪɔt**)
person C-find:PST cat
the man found the cat

Benefactive verbs inflect somewhat differently. In verbs ending in **ɪnɛ**, the Past is formed by replacing **ɪnɛ** by **anⱪɛt**. In verbs ending in **ɛnɛ** or **anɛ**, the final **nɛ** changes into **kantɛt**. In verbs ending in **ɪnⱪɛt** the **ɪ** is replaced by **a**. In verbs ending in **ɛnⱪɛt** or **anⱪɛt**, **ka** is inserted before the final **nⱪɛt**. Like in non-benefactive verbs, the difference between non-**t**-final and **t**-final verbs is neutralized in the Past.

Tonally, Pasts of benefactive verbs behave the same as other Past verbs: there is a H-tone on the second mora in case of three morae, and on the third mora if the past stem is longer.

Table 54 Pasts of Benefactive derivations

ending and length of the Benefactive derivation	*marking of the past TAM-stem*	*verb*	*Past*
ɪnɛ, **ɪnⱪɛt** three morae	**anⱪɛt** H on 2nd mora	**ɔŋwínɛ** ‘sing for’ **ɪpɪnⱪɛt** ‘dig for’	C-**ɔŋw.ánⱪɛt** C-**ɪp.ánⱪɛt**
ɪnɛ, **ɪnⱪɛt** more than three morae	**anⱪɛt** H on 3rd mora	**ɔrékɪnɛ** ‘work for’	C-**ɔrɛk.ánⱪɛt**

ɛ.nɛ, **ɛ.nn̪ɛt** **a.nɛ**, **a.nn̪ɛt** three morae	**kann̪ɛt** **kann̪ɛt**, H on 2nd mora	**ɛrɛnɛ** ‘talk to’ **ɛrɛnn̪ɛt** ‘talk to sb about’ **ɔnánɛ** ‘bring to sb’	C-**ɛrɛ.kánn̪ɛt** C-**ɛrɛ.kánn̪ɛt** C-**ɔna.kánn̪ɛt**
ɛ.nɛ, **ɛ.nn̪ɛt** **a.nɛ**, **a.nn̪ɛt** more than three morae	**kann̪ɛt** **kann̪ɛt** H on 3rd mora	**ɔkéccɛnɛ** ‘cut for (PLUR)’ **ɔkwárɪccann̪ɛt** ‘search sth for’	C-**ɔkɛccɛ́.kann̪ɛt** C-**ɔkwarícca.kann̪ɛt**

Some examples:

< **aɲɪnn̪ɛt** ‘open for somebody’

ɔ-kakká	**p-aɲánn̪ɛt**	**ʊkul**	**kən̪át**
PERS-Kakka	C-open_for:PST	child	door

Kakka opened the door for the child

< **ɔrɛ́kɪnɛ** ‘work for somebody’

ʊl	**w-ɔrɛkánn̪ɛ́t**	**púl**	**í-p-ərịk**
people	C-work_for:PST	person	RES-C-big

the people worked for the big man

A few verbs have an irregular Past:

Table 55 Irregular Pasts

verb	*irregular Past*	*type of irregularity*
aɔ ‘come’	**C-akkakán̪ɛ**	suppletive form
aɪnɛ ‘come to’	**C-akkakann̪ɛt**	suppletive form
ɛ̂ ‘go’	**C-ɔɪŋkán̪ɛ**	suppletive form
ɔ́ɪnɛ ‘go to’	**C-ɔɪŋ.kann̪ɛt**	suppletive form
ɔɣəkô ‘eat’	**C-ɔɣək.kán̪ɛ**	doubling of k
ɔɣəkô̰t ‘eat at’	**C-ɔɣək.kán̪ɛ**	doubling of k
ɔɣəkínɛ ‘eat for’	**C-ɔɣək.kann̪ɛt**	doubling of k
ɔɣəkínɛt ‘eat for at’	**C-ɔɣək.kann̪ɛt**	doubling of k
ɛn̪ḛ̂t ‘give’	**C-ɛɛ.kán̪ɛ / C-ɛ.kán̪ɛ**	replacement of **n̪ḛ̂t** by the past ending

Use of the Past

The Past is a TAM which in principle demands a context. It is not easily used in an isolated expression, since it has no implications for the situation at the time of the speech act. Pasts describe actions or events which have taken place before the moment of speech, but otherwise bear no relation to the time of speech. Pasts typically need a time anchor, which is usually set by a Completive or Past Completive verb preceding the Past verb at some place in the discourse. The Past refers to an action or event in its entirety, without drawing attention to aspectual notions such as completion or result. The sentence below describes how the speaker felt at the moment that he found a lost goat. The sentence gives no information about his feelings at the time of speech: he may, or may not be still happy about it.

an-ákka	**m-p-ɪɔt.é**	**m-p-ɔpɪrá.káa̱t́é**	**nɔ́-kâ**
and-when	1-C-find:COMPL	1-C-become_good:PST	on-body

and when I found it, I was happy

I call these verbs Past and not Perfective because, unlike the Incompletive and the Completive, they refer to a moment that is necessarily anterior to the time of speech.

In the examples below a Completive verb provides the time anchor for the Past verb.

mən.ákka	**m-p-aa.t**	**ɪccík**	**k-úŋ**	**ana**	**k-kw-ɟ́rr.áa̱t́ɛ**	(< **ɟ́rrɔ**)
when	1-C-come:COMPL	near	C-POSS3	and	3-C-jump:PST	

when I had come near him, he jumped

ɔ-lɔ́ttɪ	**p-ɔká.t**	**tʊan**	**ana**	**k-kw-ɔ́ʈəkk.áa̱t́é**	**ŋúʈû**	(< **ɔʈəkɔ̂**)
PERS-Lɔttɪ	C-be:COMPL	home	and	3-C-eat:PST	asida	

Lotti was at home and ate asida

ʊʈít	**w-ɔkɟ́ccé.t**	**ŋʊrak**	**ana**	**w-ɔ́kkw.áa̱t́ɛ**	(< **ɔkkwɔ̂t**)
young_men	C-chase:COMPL	monkey	and	PRO.C-kill:PST	

the young men had chased the monkey and (then) they killed it

Pasts can be used in non-subject relative clauses (see 11.2), they were at least given in elicitation. Their nature of drawing attention to the action itself, however, tends to conflict with the information structure of the sentence as a whole. The example below aims to provide information about the 'things', stating that they were many, not about what the man did. A Completive would be better:

(?)	**aɣəpʊ**	**ɪ-a**	**pʊ́l**	**p-ɔkɛr.áa̱ɛ**	**w-ɔká.t**	**w-ɔppɔ́t**
	things	RES-(C-)COP	person	C-trade:PST	C-be:COMPL	C-many

the things that the man traded were many

12.5.6. The Dependent Perfective

Form of the Dependent Perfective

Dependent Perfectives consist of the dependent perfective TAM-stem:

Dependent Perfective = dependent perfective TAM-stem

The dependent perfective TAM-stem is segmentally marked in the TAM2 position and has the basic tone pattern of the verb. Like the Dependent Incompletive, the Dependent Perfective can be directly preceded by a lexical or pronominal subject (the latter can be a free pronoun or a clitic).

Unlike the Past, the Dependent Perfective generates a H-tone on the following constituent, unless it is based on a verb with a final falling tone.

Table 56 Dependent Perfectives

final segment(s) of the verb	*marking of the dep. perf. TAM-stem*	*verb*	*Dep. Perfective*
ɔ, **ɔt**	**at**	**ɔkɪɔ** 'cut' **ɪɔt** 'find' **ɔkérɔ** 'trade' **ɔllɔ̂** 'run'	**ɔkɪ.at** +H **ɪ.at** +H **ɔkér.at** +H **ɔll.ât**

ɛ, ɛt **a, at**	**ɛ.kat** **a.kat**	**ɛrɛ** ‘speak’ **ɛrɛt** ‘talk about’ **ɔkáa̱ta** ‘look’ **ɔkwárɪccat** ‘search’	**ɛrɛ.kat** +H **ɛrɛ.kat** +H **ɔkáa̱ta.kat** +H **ɔkwárɪcca.kat** +H

In the table below, Dependent Perfective are contrasted to Pasts. Whereas Past forms end in **(k)aa̱tɛ**, Dependent Perfectives end in **(k)at**. The table below contrasts Dependent Perfectives and Pasts.

Table 57 Dependent Perfectives and Pasts contrasted

verb	*Dep. Perfective*	*Past*
ɔkɪɔ ‘cut’	**ɔkɪ.at** +H	C-**ɔkɪ.áa̱tɛ**
ɪɔt ‘find’	**ɪ.at** +H	C-**ɪ.áa̱tɛ**
ɔkérɔ ‘trade’	**ɔkér.at** +H	C-**ɔkɛr.áa̱tɛ**
ɔllô ‘run’	**ɔll.ât**	C-**ɔll.áa̱tɛ**
ɛrɛ ‘speak’	**ɛrɛ.kat** +H	C-**ɛrɛ.káa̱tɛ**
ɛrɛt ‘talk about’	**ɛrɛ.kat** +H	C-**ɛrɛ.káa̱tɛ**
ɔkáa̱ta ‘look’	**ɔkáa̱ta.kat** +H	C-**ɔkəa̱tá.kaa̱tɛ**
ɔkwárɪccat ‘search’	**ɔkwárɪcca.kat** +H	C-**ɔkwarícca.kaa̱tɛ**

The irregular Pasts relate to the Dependent Perfectives in the same way:

Table 58 Irregular Pasts and Dependent Perfectives contrasted

verb	*Dep. Perfective*	*Past*
aɔ ‘come’	**akkakat** +H	**C-akkakáa̱tɛ**
aɪnɛ ‘come to’	**akkakanta̱t** +H	**C-akkakánta̱t**
ɛ̂ ‘go’	**ɔíŋkat** +H	**C-ɔɪŋkáa̱tɛ**
ɔínɛ ‘go to’	**ɔíŋ.kanta̱t** +H	**C-ɔɪŋ.kánta̱t**
ɔɣəkô ‘eat’	**ɔɣək.kât**	**C-ɔɣək.káa̱tɛ**
ɔɣəkôt ‘eat at’	**ɔɣək.kât**	**C-ɔɣək.káa̱tɛ**
ɔɣəkínɛ ‘eat for’	**ɔɣək.kánta̱t** +H	**C-ɔɣək.kánta̱t**
ɔɣəkínɛt ‘eat for at’	**ɔɣək.kánta̱t** +H	**C-ɔɣək.kánta̱t**
ɛta̱ât ‘give’	**ɛɛ.kât /ɛ.kât**	**C-ɛɛ.káa̱tɛ / C-ɛ.káa̱tɛ**

The Dependent Perfective and the Past of a benefactive verb are segmentally identical, but tonally different. Like other Dependent Perfectives, Dependent Perfectives of benefactive verbs have the basic tones of the verb.

Table 59 Dependent Perfectives of Benefactive derivations

ending of Benefactive derivation	*marking of the dep. perfective TAM-stem*	*verb*	*Dep. Perfective*
ɪnɛ, **ɪnt̪ɛt**	**ant̪ɛt**	**ɔŋw.íne** 'sing for' **ɪp.ɪnt̪ɛt** 'dig for'	**ɔŋw.ánt̪ɛt** +H **ɪp.ant̪ɛt** +H
ɛ.nɛ, **ɛ.nt̪ɛt** **a.nɛ**, **a.nt̪ɛt**	**ɛ.kant̪ɛt** **a.kant̪ɛt**	**ɛrɛ.nɛ** 'talk to' **ɛrɛ.nt̪ɛt** 'talk to sb about' **ɔpíranɛ** 'thank' **ɔkwárɪccant̪ɛt** 'search sth for'	**ɛrɛ.kant̪ɛt** +H **ɛrɛ.kant̪ɛt** +H **ɔpíra-kant̪ɛt** +H **ɔkwárɪcca-kant̪ɛt** +H

The table below contrasts Dependent Perfectives and Pasts of benefactive verbs.

Table 60 Dependent Perfectives and Pasts of Benefactive derivations

verb	*Dep. Perfective*	*Past*
ɔŋwíne 'sing for' **ɪpɪnt̪ɛt** 'dig for'	**ɔŋw-ánt̪ɛt** +H **ɪp-ant̪ɛt** +H	C-**ɔŋw-ánt̪ɛt** C-**ɪp-ánt̪ɛt**
ɛrɛnɛ 'talk to' **ɛrɛnt̪ɛt** 'talk to sb. about' **ɔpíranɛ** 'thank' **ɔkwárɪccant̪ɛt** 'search for'	**ɛrɛ-kant̪ɛt** +H **ɛrɛ-kant̪ɛt** +H **ɔpíra-kant̪ɛt** +H **ɔkwárɪcca-kant̪ɛt** +H	C-**ɛrɛ-kánt̪ɛt** C-**ɛrɛ-kánt̪ɛt** C-**ɔpɪrá-kant̪ɛt** C-**ɔkwarícca-kant̪ɛt**

Absence of concord

Like Dependent Incompletives, Dependent Perfectives cannot be preceded by a concord. Compare the Past in the first example below, with the Dependent Perfectives in the second and third:

ṭɔmɔccɔ **ṭ-aṉəntá.kaṭɛ**
old_man C-dream:PST

the old man dreamt

… a-ṭɔ́mɔccɔ **aṉəntakat**
CONJ-old_man dream:DEPPRFV

… and (then) the man dreamt

… a-kw-áṉəntakat
CONJ-3-dream:DEPPRFV

… and (then) s/he dreamt

Use of the Dependent Perfective

The Dependent Perfective is the dependent counterpart of the Past. I call it Dependent Perfective, because it does not only denote actions or events that happened in the past, but also actions or events that are still to happen at the moment of speech or reference. While the Dependent Incompletive in a verbal complex typically denotes an action that forms part of a larger event, the Dependent Perfective typically denotes a consecutive action: an action that follows upon another in time.

The Dependent Perfective is used in the following environments:

a) a clause introduced by the conjunctive particle **á** expressing ‘and, while’;
b) a clause introduced by the subjunctive particle **â** ‘so that, in order to’;
c) As a second command coordinated through **anǎ** ‘and’ with an Imperative.

A verb in Dependent Perfective TAM can furthermore be part of a complex TAM with the auxiliary verb C-**arəkât** ‘as always’. More

commonly, complex verb constructions involve the dependent perfective TAM-stem as part of a larger word with one or more auxiliaries. These cases are discussed in the sections on auxiliaries.

*Ad a) Clauses introduced by the conjunctive particle **á** 'and, while'*

Attestations of the conjunctive particle **á** 'and, while' introducing a clause with the Dependent Perfective are abundant. The first verb, which sets the time anchor, is usually in Completive TAM (see 12.5.7). The Dependent Perfective is typically used for telling what happened next. The sentence below states that the man saw the hyena in the well, but does not present this as the purpose for which the man was taken along; it is just something that happened next.

m-p-ɔnɛkɔ́.t	**pól**	**a-p-ɔ́ṯ-ɔ́kə́ṯa.kat**	**ŋaŋkór**	**ɪ-rɔ́k**
1-C-take:COMPL	person	CONJ-C-go-look_at:DEPPRFV	hyena	in-well

I took the man along and (then) he saw the wild dog in the well

á + Dependent Perfective is typically used in narratives, expressing consecutive actions or events as in English 'and then … and then … and then …'. In the example below, **mɔnɔ** 'until' is followed by the conjunctive particle **á** (realized with a H-tone through tone bridge) and a Dependent Perfective. Pronominal **p** refers to **papɛn** 'that thing' (< **papʊ p-ɛn**), which itself refers to the leopard (**papɔkɪra** < **papʊ p-ɔ-kɪra** 'thing of the forest'):

(< **ɔɽʊmɔt** ; < **ɔnémɔ** ; < **ɪɔ**)

a-pápɔkɪra	**ɔɽʊm.at**	**ṯɔ́mɔccɔ**
CONJ-leopard	attack:DEPPRFV	old_man

a-ṯɔ́mɔ́ccɔ́	**ɔ́né́m.at**	**kaṯʊk**	**ɪ-ṯɔ́n**	**ṯ-ɔ́-pá-p-én**
CONJ-old_man	press:DEPPRFV	spear	in-mouth	C-of-thing-C-DEM

mɔ́nɔ́	**á-p-í.at**
until	CONJ-PRO-die:DEPPRFV

and the leopard attacked the old man, and the old man pressed the spear into the mouth of that thing (the leopard), until it (the leopard) died (fr. written story)

The examples below show that in some environments the conjunctive **á** + Dependent Perfective and **anǎ** 'and' + Past can be used alternatively. **á** cannot be combined with a Past, nor can **anǎ** be combined with a Dependent Perfective. In both sentences Lɔttɪ was not at home for the purpose of eating asida: it is just something that happened (the eating of asida as a purpose would be expressed with the particle **â** and a Dependent Incompletive).

ɔ-lɔ́ttɪ	**p-ɔká.t**	**tʊan**	**a-kw-ɔ́ɽəkk.at**	**ŋuɽû**
PERS-Lɔttɪ	C-be:COMPL	home	CONJ-3-eat:DEPPRFV	asida

Lɔttɪ was at home and he ate asida

ɔ-lɔ́ttɪ	**p-ɔká.t**	**tʊan**	**ana**	**k-kw-ɔ́ɽəkk.ą́ɽé**	**ŋúɽû**
PERS-Lɔttɪ	C-be:COMPL	home	and	3-C-eat:PST	asida

Lɔttɪ was at home and he ate asida

The conjunctive particle with a Dependent Perfective verb can also be used as the second command after an Imperative. The use of the Dependent Perfective in the example below conveys that the washing must be done after the sweeping. **anǎ** + Past verb is not an option here.

ɔlla	**cɪk**	**nɔ-ppan**	**a-ímɛ.kat**	**ərét**
sweep:IMP	VREF	on-house	CONJ-wash:DEPPRFV	cloths

sweep the room and then wash the clothes!

*Ad b) Clauses introduced by the subjunctive particle **â** 'so that, in order to'*

The use of **â** + Dependent Perfective in the example below conveys explicitly that the telling is regarded as a consecutive event:

ámmá	**k-kw-ɛ́ɔ́.t**	**á-kw-ɪɽɛ.kat**	**kín**	**ɪttĭ …**
if	3-C-go:COMPL	SUBJ-3-tell:DEPPRFV	O3A	that

when s/he has arrived (lit.: has gone), let him/her then tell them (that) …

Dependent Perfectives occur in fewer environments than Dependent Incompletives. Their use is restricted by the notion of consecutiveness they convey. A Dependent Perfective cannot occur as the second verb in a sequence expressing (manner of) motion and path, nor as a complement of **əɽa** 'refuse', **ɪna** 'know', **ɔmmâ** 'not know' or **ɔkárənnɔ** 'let, leave, allow'. It does not directly follow the conjunction words **mɔnɔ** 'until' and **məna** 'until, then'. However, constructions of **mɔnɔ** 'until' and **məna** 'until' followed by the conjunctive particle **á** and a Dependent Perfective are abundant.

12.5.7. The Completive

Form of the Completive

Completives consists of a concord and the completive TAM-stem:

Completive = C + completive TAM-stem

Completives are segmentally marked in the TAM2 position. Vowel-final verbs get a final **t**, verbs which end in **t** change into **t̪ɛ**, and **t**-final benefactives remain segmentally unchanged.

The Completive imposes a tone pattern on the verb which is independent of the basic tones of the verb, but which has some correlation with the final vowel of the verb and the length of the verb (counted in morae). The tendencies are described below.

Bimoraic and trimoraic verbs which end in **ɔ** have **t**-final Completives with either a final falling tone or a final H-tone. An apparently deviating Completive is C-**ɔŋɔ́kɔt** (< **ɔŋɔkɔ** 'rest'). An explanation would be that this verb underlyingly has four morae. This is supported by the Incompletive of this verb, which is not *C-**áŋɔkɔ**, but C-**âŋɔkɔ.**

Bimoraic and trimoraic verbs which end in **a** or **ɛ** have t-final Completives with a final falling tone. A deviating case is the Completive of the pluractional verb **ɔkákɛ** 'shave (PLUR)', related to

ɔkə̂ ‘shave’. Its Completive has a H-tone on the second mora C-**ɔkə́kɛt**.

Completives of vowel-final verbs with four or more morae get the High tone on the third mora.

Bimoraic stems ending in **t** have trimoraic Completives ending in **t̪ɛ**. If such Completives are based on a verb ending in **ɔt**, they have a final falling tone. Completives based on a bimoraic stem ending in **at** or **ɛt** have a H-tone on the second (non-final) mora.

Completives based on a trimoraic or longer verb ending in **t** have, in most cases, a H-tone on the third (non-final) mora.

The Completives of the verbs **ɔʧəkɔ̂t** ‘eat at’ and **ɔŋkíkkəʧɪɔt** (also **ɔŋkɪkkəʧɪɔt)** ‘squeeze (PLUR)’ deviate from the main patterns. They are rare cases of, respectively, a HL contour on the fourth mora (C-**ɔʧəkɔt̪ɛ̂**) and a H-tone on the second (C-**ɔŋkíkkəʧɪɔt̪ɛ**).

Table 61 Completives

shape and length of verb	*completive marking*	*verb*	*Completive*
bi- or trimoraic, **ɔ**-final	**ɔ́-t**	**ɔʧɔ** ‘land’ **ʊnɔ** ‘build’ **ɔkkwɔ̂** ‘hit’ **ɔcʊ́mɔ** ‘collect’ **ɔʧəkɔ̂** ‘eat’	C-**ɔʧɔ́-t** C-**ʊnɔ́-t** C-**ɔkkwɔ́-t** C-**ɔcʊmɔ́-t** C-**ɔʧəkɔ́-t**
bi- or trimoraic, **ɔ**-final	**ɔ̂-t**	**aɲɔ** ‘open’ **ɔllɔ̂** ‘run’ **akkarɔ** ‘call’ **ɔt̪áttɔ** ‘fight’	C-**aɲɔ̂-t** C-**ɔllɔ̂-t** C-**akkarɔ̂-t** C-**ɔt̪attɔ̂-t**

bi- or trimoraic, **a**- or **ɛ**-final	**â-t** **ê-t**	**ɪmma** ‘see’ **ɪama** ‘be(come) hungry’ **ɔʈálla** ‘be(come) weak’ **ɪllɛ** ‘die (PLUR)’ **ɔkíccɛ** ‘chase’ **ɔkê** ‘shave’	C-**ɪmmâ-t** C-**ɪamâ-t** C-**ɔʈəllâ-t** C-**ɪllê-t** C-**ɔkiccê-t** C-**ɔkê-t**
four morae or more, vowel-final	**-t**, H on third mora	**apəʈɪlakɔ** ‘hang’ **ɔcímɪttɔ** ‘advise’ **ɔkáṯaccɛ** ‘watch’	C-**apəʈílakɔ-t** C-**ɔcɪmíttɔ-t** C-**ɔkəṯáccɛ-t**
bimoraic, **ɔt**-final	**ɔ-ṯê**	**ɪɔt** ‘find’ **ɔkkwɔ̂t** ‘kill’	C-**ɪɔṯ-ê** C-**ɔkkwɔṯ-ê**
bimoraic, ending in **at** or **ɛt**	**á-ṯɛ** **é-ṯɛ**	**ɪttat** ‘become fat’ **ɔppêt** ‘fill’	C-**ɪttáṯ-ɛ** C-**ɔppéṯ-ɛ**
trimoraic or longer, **t**-final	**-ṯɛ**, H-tone on third mora	**ɔʈɪat** ‘become red’ **ɔnákkɛt** ‘put down’ **ɔkwárəttɪkɔt** ‘recall	C-**ɔʈɪáṯ-ɛ** C-**ɔnəkkéṯ-ɛ** C-**ɔkwarəttɪkɔṯ-ɛ**

The Completive does not generate a H-tone on a following constituent, as can be seen from example below.

pʊl	**p-ɔkwaríccaṯ.ɛ**	**pəlla**	(< **ɔkwárɪccat**)
person	C-search:COMPL	cat	

the man has looked for the cat

The Completive is marked in Benefactive verbs which end in **-ɪnɛ**, **-ɛnɛ** or **-anɛ** through addition of a final **t** and a tone pattern which is different from other **ɛ**-final verbs. A H-tone surfaces on the second mora when the Completive has three morae, and on the third mora when the Completive is longer.

Completives based on verbs ending in **-ɪnṯɛt**, **-ɛntɛt** or **-antɛt** (Benefactive + Locative-applicatives derivations) are only tonally marked. Here too, the H-tone surfaces on the second mora in case of three morae, and on the third in case of four or more. In some cases the result is identical with the tones of the citation form.

Table 62 Completives of Benefactive verbs

verb	*ending and length of verb*	*completive marking*	*Completive*
ɛrɛnɛ ‘speak to’	vowel-final, trimoraic	H-tone on 2nd mora, final **t**	C-**ɛrɛ́nɛ-t**
ɛrɛnn̪ɛt ‘speak to sb. about’ **ɔkkínn̪ɛt** ‘do for’	**t**-final, trimoraic	H-tone on 2nd mora	C-**ɛrɛ́nn̪ɛt** C-**ɔkkínn̪ɛt**
ɔrɛ́kɪnɛ ‘work for’ **ɔɽə́kɪnɛ** ‘eat for’ **ɔpíranɛ** ‘thank sb.’	vowel-final, four morae or longer	H-tone on 3rd mora, final **t**	C-**ɔrɛkínɛ-t** C-**ɔɽəkínɛ-t** C-**ɔpɪráné-t**
ɔkwárɪccann̪ɛt ‘search for’	**t**-final, four morae or longer	H-tone on 3rd mora	C-**ɔkwaríccann̪ɛt**

A few verbs have an irregular Completive, though in the first case below one might also say that it is rather the verb stem **aɔ** that is irregular, since usually adjacent **a** and **ɔ** assimilate:

Table 63 Irregular Completives

verb	*Completive*	*irregularity*
aɔ ‘come’	C-**aá-t**	change of final **ɔ** to **a**
ɛn̪ê̪t ‘give’	C-**én̪ɛt**	resemblance to benefactive verbs ending in **ɪnn̪ɛt**, **ɛnn̪ɛt** or **ann̪ɛt** as to retaining the same segmental shape, but different tones

Meaning and use of the Completive

The Completive basically expresses that the action or event has just been completed: it has just stopped or ceased to occur. The second example has a pluractional verb which translates here as an habitual:

ɲʊkʊl **ɲ-ɔn̪attɔ̂.t** (< **ɔn̪áttɔ**)
children C-fight:COMPL
the children have fought (but they have stopped)

ɔ-lɔ́ccɔ **p-ɔkə́kɛ.t** **ʊl** (< **ɔkə́kɛ**)
PERS-Lɔccɔ C-shave.PLUR:COMPL people
Lɔccɔ used to shave people (but he has stopped)

The Completive often implies a resulting state:

m-p-ɔccɔ́.t **kəɽan** **ɪttɪ** **ɔ-nɛnnî** (< **ɔccɔ̂**)
1-C-receive:COMPL name that PERS-Nɛnnɪ
my name is Nɛnnɪ (lit. I have received the name Nɛnnɪ)

n̪ɪrɔt **n̪-ɔɽɔ.t** **nɔ-máɪt** (< **ɔɽɔ**)
mould C-land:COMPL on-beans
there is mould on the beans (lit. mould has landed on the beans)

m-p-ɔccɔ́.t **cɪk** (< **ɔccɔ̂**)
1-C-receive:COMPL VREF
I am late (lit.: I have taken time)

l-ɛ̂kkɔ̂.t (< **ɛkkɔ**)
PRO.C-fit:COMPL
enough!

The action expressed by the Completive is not necessarily fully completed. In the following example it is just a period of eating that has passed by:

akka **ɔ-kín** **n̪-ɔɽəkɔ.t** **ŋuɽú** **póccóok**
when PERS-3A C-eat:COMPL asida for_some_time

a-kw-ɔ́mɛ.kan̪-ɔ́k **ɪttɪ** **ant-ɔ́nɔt**
CONJ-3-tell:DEPPRFV-O3 that can:DEPINCOMPL-taste:DEPINCOMPL
when they had been eating the asida for some time, he said to him, “Please taste it (the sauce)” (App. IV, 25-26)

In the following expression, commonly said upon leaving, the Completive refers to a state in the immediate future:

m-p-ɛ̂.t (< **ɛ̃̂**)
1-C-go:COMPL
I am gone (i.e. I am leaving now)

Completives of (inchoative) verbs often have a stative interpretation:

m-p-ɔkɪɲá.t **ana** **m-p-ɪamâ.t** (< **ɔkíɲa**, < **ɪama**)
1-C-become_tired:COMPL and 1-C-become_hungry:COMPL
I am tired and I am hungry

This is especially clear in the following example, where the Completive verb does not imply that the child was not fat before:

ʊkʊl **w-ɪttáṭ̈.ɛ** (< **ɪttat**)
child C-become_fat:COMPL
the child is fat/healthy

In context, however, the Completive of an (inchoative) verb may also have a changed-state interpretation:

aɽəpʊ **w-ɔɽıá.ṭ̈ɛ** **ɪ-paŋ-k-ên** (< **ɔɽɪa**)
things C-become_red_at:COMPL in-sibling-C-of:ABS
the fruits have become ripe between their siblings (i.e. between other fruits)

Completives denoting a state can function syntactically in the same way as adjectives, for example with an auxiliary of ‘be’ denoting a future state, or with a negated auxiliary of ‘be’ negating a state. The examples below contrast clauses with tense/aspect and negation expressed on the main verb with clauses where tense/aspect and negation are marked on the auxiliary (as would be the case in an adjectival construction):

ʊkʊl **w-a.kíɲa**
child C-become_tired:INCOMPL
the child will get tired

ʊkʊl **w-a.ka** **w-ɔkɪŋâ.t**
child C-be:INCOMPL C-tired:COMPL

the child will be tired

maɪt **m-a.kə́nn-ɛkkɔ**
beans C-NEG-fit:DEPCOMPL

the beans are not enough

maɪt **m-a.kə́nn-ɛ̂kkɔ**
beans C-NEG-fit:DEPINCOMPL

the beans will not be enough

maɪt **m-ɔká.t** **m-a.kə́nn-ɛkkɔ**
beans C-be:COMPL C-NEG-fit:DEPCOMPL

the beans were not enough

maɪt **m-a.kə́nn-ɔ́ká** **m-ɛ́kkɔ̂.t**
beans C-NEG-be:DEPCOMPL C-fit:COMPL

the beans are not enough

maɪt **m-a.kə́nn-ɔka** **m-ɛkkɔ̂.t**
beans C-NEG-be:DEPINCOMPL C-fit:COMPL

the beans will not be enough

maɪt **m-ɔká.t** **m-á.kə́nn-ɔ́ká** **m-ɛ́kkɔ̂.t**
beans C-be:COMPL C-NEG-be:DEPCOMPL C-fit:COMPL

the beans were not enough

maɪt **m-a.ka** **m-ɛ̂kkɔ**
beans C-be:INCOMPL C-fit:INCOMPL

the beans may be enough (at some specific occasion which is still to come, for example a party, there may be enough beans (it is not sure))

maɪt **m-a.ka** **m-ɛkkɔ̂.t**
beans C-be:INCOMPL C-fit:COMPL

the beans will be enough (at some specific occasion which is still to come, for example a party, there will (surely) be enough beans)

maɪt **m-ɛ̂kkɔ**
beans C-fit:INCOMPL

the beans will be enough (for example upon buying a certain amount: this amount is all we need)

maɪt **m-a.ɪk** **m-ɛ̂kkɔ**
beans C-be:PR C-fit:INCOMPL

the beans are turning out to be enough (for example while distributing portions to a group of people)

States of mind, emotional states and some sensory perceptions tend to be expressed with a Completive:

m-p-ɔŋɔt̪.é **ɪttɪ** **ŋ-kw-ântán**
1-C-like:COMPL that 2-C-come:INCOMPL

I want you to come

m-p-əʈâ.t
1-C-refuse:COMPL

I don't want / no thanks (for example as a refusal of more food)

m-p-ɔpɪrá.t **nɔ́-kâ**
1-C-become_good:COMPL on-body

I am happy / I am grateful

m-p-ɔccɨkɔ́t̪.ɛ
1-C-hear:COMPL

I understand / I hear / I have heard it

Also a state of 'resembling' takes a Completive:

t̪-t̪-ʊ́ŋkwɔ́.t **ŋín-t̪a**
PRO-C-resemble:COMPL what-Q

what does it look like? (reference is to the lion, **t̪ɛpa**)

In narratives, the Completive is typically used in backgrounded phrases, whereas the main action tends to involve a Past or

Dependent Perfective. The Completive can refer to a moment in the past, in the present or in the (relative) future. Some examples:

mən.ákka **k-kw-ɔ́ná.t** **ŋáák**
when 3-C-bring:COMPL oil
a-kw-íp.ann̪ɛt **n̪akəɣʊk** **ɪ-ʊɣəccô**
CONJ-3-dig_for:DEPPRFV chicken in-feathers
after s/he had brought the oil, s/he applied it between the feathers of the chicken

akka **k-kw-áá.t** **tʊ́n-ɛ́ɔ̰̀**
that 3-C-come:COMPL HRT12A-go:DEPINCOMPL
now that s/he has arrived, let us go

ámmá **ɔ́-nɔ́n** **n̪-ɔ́ccɟkɔ́n̪.ɛ** **lɔn** **l-ɔ-n̪ɔɣák**
if PERS-2A C-hear:COMPL words C-of-war
á-nn-ɔkárənnɔ **ɔpállɛ**
SUBJ-2A-let:DEPINCOMPL be_afraid:DEPINCOMPL
when you hear about war, do not be afraid

Completives are also used in a number of environments requiring the dependent counterparts of the Incompletive and/or the Past. One such environment is the conjunctive particle **á** 'and, while'. The particle can precede a Completive verb:

… a-kw-ímma.kat **cɪpít** **á-c-c-ɔ́ná.t** **cɟ̀l**
CONJ-3-see:PST ant CONJ-PRO-C-bring:COMPL grain_of_sorghum
and s/he saw the ant (just) having brought a grain of sorghum

The following example has the combination **akkă** … **á** 'when … then':

akka **ɔ-rɪt** **n̪-ɛrɛ́n̪-ɔk** **a-k-kw-íɔ.t** **n.tít**
that PERS-12 C-speak_about:INCOMPL-O3 CONJ-3-C-die:COMPL from:ABS
when we talked about him, he had already been dead for some time

The next example contains two clauses with **á** and a Completive. The first sets the time for the event, the second presents the going to the

market as anterior to the events that are going to be told, not as already part of it:

… a-caɣɪ	**c-én**	**c-ɔká.t**	**cɪk**	**a-m-p-ɛ́ɔ́.t**	**t̪allat̪t̪á**	**…**
CONJ-day	C-DEM	C-be:COMPL	VREF	CONJ-1-C-go:COMPL	market	

… and that day I had gone to the market

Completives are used in non-subject relative constructions:

lɔn	**ɪ-l-a**	**t̪ɔ́mɔccɔ**	**t̪-ɔlləkkéntét**	**ká**	**k-úŋ**
words	RES-C-COP	old_man	C-put_down_for:COMPL	body	C-POSS3

things which the old man promised himself

k-kw-éɾɛkánt̪ɛt	**ɟmiɟt**	**lɔ́n**	**áppík**	**ɪ-l-a**	**k-kw-ɔ́kkɔt̪.ê**
3-C-speak_to_about:PST	goat	words	all	RES-C-COP	3-C-do:COMPL

she spoke to the goat about everything she had done (fr. written story)

The Completive commonly occurs in constructions with fronted question words and **akka** ‘that’:

ŋín-t̪a	**akka**	**ɟn-t̪-ɔkkɔt̪.ê**	(< **ɔkkɔ̂t**)
what-Q	that	1A-C-do:COMPL	

what have we done?

I did not find Completives in combination with the subjunctive particle **â** ‘so that, in order to’.

12.6. Auxiliaries and other special verbs – defective inflection

Verbs typically function as main verb and have six basic TAMs as described in the previous section. Some verbs, however, (also) function as auxiliary verb, or as both auxiliary and copular verb. Many of these verbs have a defective inflection. Verbs with a defective inflection typically have:

- just one form (in this case I only gloss its meaning)
- non-dependent and a dependent TAM-stem (in this case I add DEP in the gloss of the dependent TAM-stem)

- three TAM-stems which can be viewed as non-dependent incompletive (glossed as INCOMPL), dependent incompletive (glossed as DEPINCOMPL) and completive (glossed as COMPL)
- four TAM-stems. In addition to the three afore-mentioned stems, there is also an imperative TAM-stem (glossed as IMP)

Several of these verbs have a deviating phonological shape. All have specific tonal characteristics, though an underlying pattern can often not be assigned.

Auxiliary verbs precede the main verb, either as a separate word, or as part of the same word as the main verb. In constructions with more than one auxiliary, an auxiliary can also form a word with another auxiliary. Examples of combinations of auxiliaries of 'be' are given in 12.7.5, examples of other auxiliary combinations elsewhere in chapter 12, including 12.23.

The (reconstructed) auxiliary verb ***arəka** 'as always', discussed in 12.14, has inflectional forms from which tonal phenomena on the main verb can be understood. The same tonal phenomena on main verbs are found in combination with some auxiliaries that synchronically lack revealing surface forms. In those cases I use ***arəka** as model for the analysis.

The auxiliaries, to different degrees, display loss of inflectional marking, due to loss of segments and/or tonal changes. In several cases variant forms exist next to each other and in one case (the negation auxiliary) a process of loss of functionality of the inflectional marking is clearly in progress.

A few verbs with a defective inflectional paradigm function only as main verb. They are discussed in 12.21 and 12.22.

12.7. **ɔkâ** 'be'

The six basic TAMs of **ɔkâ** 'be' are entirely regular. It has, however, an additional basic TAM, which no other verb has: the Present. This is the paradigm:

Imperative	**ɔka**
Present	C-**a-îk**
Incompletive	C-**a.kâ**
Dep. Incompletive	**ɔkâ**
Past	C-**ɔka.káa̱ɛ**
Dep. Perfective	**ɔká.kat** +H
Completive	C-**ɔkâ.t**

The dependent completive TAM-stem of **ɔkâ** is **ɔ́kâ.** Furthermore, there is a copula based on **ɔkâ**: C-**á**.

12.7.1. The copula and the Present

The copula consists of a concord and the segment **a**, and it can generate a H-tone on a following element. It cannot itself receive a high tone from a preceding element, unless through tone bridge, so that, as a monomoraic element, it can have a high or a rising tone. It has no prepausal realization, so that both options remain. In such cases I assign a high tone (see 3.8): C-**á**.

The Present of 'be' has the copula and a remnant of the vague reference particle **cık** as formatives: C-**a-îk**[71]**.** The Present functions as locative/existential verb and as auxiliary verb, and can also function as copular verb.

Before discussing (common) copula clauses and the TAMs of 'be' as copular verb, locative/existential, and auxiliary verb, some remarks about syntactic constructions in which the Present and the copula appear follow here.

Syntactic environments in which the Present of 'be' can be used

In section 12.5 of this chapter it was shown that in certain syntactic environments the dependent counterpart of the Incompletive (i.e. the Dependent Incompletive) is selected, and in certain, partly different

[71] In glossed Lumun text, I write the Present of 'be' as C-**a.îk**, not glossing **ık** separately.

environments, the dependent counterpart of the Past (i.e. the Dependent Perfective). In some environments in which a dependent TAM is selected, a Completive can occur as well. Such environments also allow for use of the Present, irrespective of whether it functions as main verb or as (initial) auxiliary. Like the Completive, the Present lacks a dependent counterpart. These environments include:

- Clauses preceded by the conjunctive particle **á-**:

ʈ̪ɔmɔccɔ	**ʈ̪-a.ɽəkɔ**	**ŋuɽú**
old_man	C-eat:INCOMPL	asida

á-ʈ̪-ʈ̪-á.ık	**á-ʈ̪-íkkɔ**	**cık**	**nɔ.ppăn**
CONJ-PRO-C-be:PR	CONJ-PRO-sit:DEPINCOMPL	VREF	inside

the old man eats asida while remaining inside

- Cleft constructions with **akka** ‘that’:

ŋ-kw-ɔ́nʈ̪a	**akka**	**ŋ-kw-a.ık**	**cí.náŋ**	**ɲ-cık-akkómân**
2-C-why	that	2-C-be:PR	where_you_are	with-LOC-since

why are you just still there?

Environments in which the copula is used

The copula C-**á** has already been introduced in chapter 11 on relative clauses. Preceded by the restrictor **í-**, C-**á** introduces a restrictive non-subject relative clause, without restrictor a non-restrictive non-subject relative clause. In section 11.2.4 it was shown that the copula functions in topic constructions. In such constructions C-**á** links a topicalized patient or instrument subject to what is stated about it (11.2.4). The use of C-**á** in common copula clauses is discussed here.

Common copula constructions

Common copula constructions, i.e. constructions of the type ‘X is Y’ with X and Y both being a noun phrase, make use of the copula. In case of a pronominal subject, the full pronoun, but also the clitic can be applied (second example below).

ɔ-nɛnní	**p-á**	**pə́ʈán**	**p-ın**
PERS-Nɛnnı	C-COP	name_sharer	C-my

Nɛnnı is my name-sharer (i.e. Nɛnnı and I have the same name)

ɔ-ʊŋ	**p-a**	**kwat**	**cənɛ́**	**/ ŋ-kw-a**	**kwat**	**cənɛ́**
PERS-2	C-COP	stranger	here	2-C-be:PR	stranger	here

you are a stranger here

In common copula constructions (not in other constructions with the copula), the copula can also be left out. Such verbless clauses do not allow for use of a pronoun clitic:

ɔ-ʊŋ	**kwat**	**cənɛ́**
PERS-2	stranger	here

you are a stranger here

12.7.2. ‘Be’ as copular verb

The TAMs of ‘be’, except the Present C-**aîk**, can be used as copular verbs in nominal copula constructions. For example:

nuⱡⱡəruk	**n-ɔká.t**	**cuŋkut**	**c-ɔppɔ́t**
pigs	C-be:COMPL	crowd	C-many

the pigs were a large herd (Mark 5:11)

lɔn	**ɪ-l-a.kə́nn-ɔkə́rənnɔ**	**pʊ́l**
words	RES-C-NEG-let:DEPINCOMPL	person

á-p-ɔ́ká	**pʊ́l**	**ámm.akka**	**p-p-ɔ́ŋɔʈ.ɛ̂**
CONJ-PRO-be:DEPINCOMPL	person	like	PRO-C-like:COMPL

things which do not allow a person to be the person s/he wants to be

‘Be’ as a copular verb has an inchoative counterpart **ɔⱡə́kka** ‘become’:

pʊl	**ɛm-p-ɪ**	**p-a.ⱡə́kka**	**pʊl**	**ɪ-p-á.ŋkənɛ**
person	DEM-C-NEARSP	C-become:INCOMPL	person	RES-C-show:INCOMPL

this person will become a teacher

12.7.3. 'Be' in adjectival constructions

TAMs of 'be', including the Present, can be used in adjectival constructions. The copula (C-**á**) cannot be used in this environment.

attɪ	**ɔ-nɔn**	**t̪-a.ɪk**	**t̪-ɔpərɔ̂t**
I_hope_that	PERS-2A	C-be:PR	C-good

I hope you (PL) are fine

i̯n-t̪-ɔká.t	**t̪-əɽapóɾʊk**
1A-C-be:COMPL	C-three

we were three (i.e. there were three of us)

Referring to the present situation, the Present is often absent:

m-p-ɔpərɔ̂t
1-C-good
I am fine

Other TAMs are more often stated explicitly. Yet, they too, can be absent. In the next example the TAM-interpretation of the adjectival predicate just follows from the preceding clause:

ɔ-kakká	**p-ɔnɛkɔ́.t**	**ŋəɽɪ**	**ána**	**ŋ-ŋ-í̯mmi̯n**
PERS-Kakka	C-take:COMPL	water	and	PRO-C-heavy

Kakka carried the water and it was heavy

The inchoative counterpart of 'be', **ɔt̪ə́kka** 'become', can be used in a construction with an adjective as well:

attɪ	**ŋ-kw-ɔt̪əkká.t**	**p-ɔpərɔ́t**	**pá-p-ɔ́ttɛ̂**
I_hope_that	2-C-become:COMPL	C-good	thing-C-little

I hope you feel somewhat better? (lit.: I hope you have become good a little)

12.7.4. 'Be' as a locative or existential verb

In locative constructions, a TAM of 'be' is normally present:

ŋaṯ̪ṯ̪ɔkkɔ́l **ŋ-á.ík** **nɔ́-cə́nâ**
calabash(k.o.) C-be:PR on-grinding_table
the calabash is on the grinding table

m-p-ɔká.t **nɔ-ṯ̪ṯ̪ɔk** **tɔ́rrô**
1-C-be:COMPL on-stone Lumun_country
I was in Lumun country

A presentative clause with a locative constituent can contain the Present of 'be', but also be verbless:

m-p-a.ık **cənɛ́** / **ɔ-ʊn** **cənɛ́**
1-C-be:PR here PERS-1 here
I am here / here I am

In the absence of a locative phrase 'be' has an existential interpretation:

pʊl **p-ɔ-nɔppət** **p-a.ík** **ıcat**
person C-of-Nɔppət C-be:PR really
the person of Nɔppət really exists

Other TAMs than the Present, when used existentially, co-occur with the vague reference particele **cık** (see 15.2). An example is the typical opening line of a story:

caɽı **c-əɽɛk** **c-ɔká.t** **cık …**
day C-some C-be:COMPL VREF
once upon a time …

12.7.5. 'Be' as auxiliary verb

The Present, the Incompletive and the Completive of 'be' can function as auxiliaries in complex TAMs. Some of these TAMs contain, or can contain, the vague reference particle **cık**. In general, **cık** makes the hearer dwell a little longer at the action or situation presented. Some complex TAMs contain the conjunctive particle **á-**, in such cases the TAM involves clause chaining.

When used after the conjunctive particle **á**- (an environment where a dependent TAM is selected) the auxiliary of 'be' changes to its dependent form (if such a form is available) and the main verb is preceded by **á**- as well. For some verbs this will involve no change because the main verb is already preceded by **á**-, for others **á**- is added but the main verb itself does not change because it has no dependent counterpart, for again others added **á**- before the main verb changes it to its dependent counterpart.

Some complex TAMs with 'be' are the following (for ease of reference I have given some of them a name):

1. C-**aık** C-verb:INCOMPL, *or* C-**ak**-C-verb:INCOMPL *(Present Continuous)*
   a-C-**aık a**-PCL-verb:DEPINCOMPL *(Dependent Present Continuous)*
2. C-**aka** C-verb:INCOMPL (*Future Continuous)*
   a-C-**ɔká a**-PCL-verb:DEPINCOMPL (*Dependent Future Continuous)*
3. C-**ɔkát a**-PCL-verb:DEPINCOMPL*, or*
   C-**ɔkát cık a**-PCL-verb:DEPINCOMPL (*Past Continuous)*
4. C-**ɔkát** C-verb:INCOMPL, *or* C-**ɔkát cık** C-verb:INCOMPL
5. C-**ɔkát** C-verb:COMPL, *or* C-**át**-C-verb:COMPL (*Past Completive)*
   C-**ɔkát a**-PCL-C-verb:COMPL *(Dependent Past Completive)*

Ad. 1. Present Continuous:
C-**aık** C-verb:INCOMPL, or shortened:

C-**ak**-C-verb:INCOMPL

The Present Continuous consists of the Present of 'be'+ Incompletive main verb: C-**aık** C-verb:INCOMPL. It describes an action or event that is going on at the time of speech or at the reference point in time:

m-p-a.ık	**p-a.kákɔ**
1-C-be:PR	C-grind:INCOMPL

I am grinding

ɔ-cɛccɛ́	**p-á.ík**	**p.ímɛ**	**máṯṯak**
PERS-Cɛccɛ	C-be:PR	C-wash:INCOMPL	calabashes(k.o.)

Cɛccɛ is washing the bowls

The Present Continuous is also used for expressing that an action is about to begin at the moment of speech or at the time of reference. The example above could also express ‘I am about to grind’ and ‘Cɛccɛ is about to wash the dishes’, respectively. An example with time reference point in the past is the following:

k-kw-áṭ̪ṯ-ɪɔt	**ɔ-kʊmáŋ**
3-C-ITVEN:COMPL-find:DEPINCOMPL	PERS-Kʊmaŋ

á-k-kw-á.ík	**á-kw-ɔ́ʈə́kɔ́**	**kə́pá**
CONJ-3-C-be:PR	CONJ-3-eat:DEPINCOMPL	meat

s/he found Kʊmaŋ while she was eating meat / about to eat meat

The Present Continuous has a shortened form:

C-**ak**-C-verb:INCOMPL, whereby **ak** is what remains of **aɪk**. **k** of **ak** then assimilates to the concord on the main verb. Thus:

m-p-a.ɪk	**p-á.kʊrrɔ /**	**m-p-a.p-p-á.kʊrrɔ**
1-C-be:PR	C-engrave:INCOMPL	1-C-be:PR-C-engrave:INCOMPL

I am writing

In the Present Continuous C-**aɪk** can not be separated from the verbal word containing the main verb TAM-stem by another constituent. In the example below **mpaîk** ‘I am’ is followed by another constituent, for which reason it does not function as part of the Present Continuous. A Present Continuous follows, on which the subject pronoun is not repeated:

m-p-a.ɪk	**cənɛ**	**p-a.ɪk**	**p-ɔ́kkɔ**	**ɪkkíṭ̪ɛṭ̪ṭ̪ak**
1-C-be:PR	here	C-be:PR	C-dance:INCOMPL	very_badly

I am here, dancing the best I can (lit.: very badly) (fr. written story)

Dependent Present Continuous:
C-**aɪk a**-PCL-verb:DEPINCOMPL

The Dependent Present Continuous is the dependent variant of the Present Continuous. It is attested in one specific environment, namely after the conjunctive particle **á-**. The subject of the clause

introduced by **á-** can be the same as the subject of the preceding clause, but can also be different. The Present auxiliary does not have a dependent counterpart, and thus remains the same, but **á-** is repeated before the main verb, so that it occurs as a Dependent Incompletive (not as an Incompletive). In the example below, the subject pronominal clitic **ŋ́-** 'you (SG)' is deleted between the conjunctive particle and the initial vowel of the Dependent Incompletive main verb.

ŋ-kw-ɛ́rɛkɔt	**a-ŋ-kw-a.ık**	**a-ɽəkɔ**	**ŋuɽú**
2-C-grumble_in_oneself:INCOMPL	CONJ-2-C-be:PR	CONJ-(2-)eat:DEPINCOMPL	asida

akaín-n̪a
why-Q

why are you grumbling while eating asida?

In the example below, there is a change of subject, from the leopard (**papɔkıra**) to the lion (**n̪ɛpa**), which is pronominally referred to:

papɔkıra	**p-akkakán̪é**	**á-n̪-n̪-á.ík**	**á-n̪-ɔ̂ŋɔkɔ**
leopard	C-come:PST	CONJ-PRO-C-be:PR	CONJ-PRO-rest:DEPINCOMPL

the leopard came while it (the lion) was resting

By contrast, in a non-subject relative clause (an environment which would select a Dependent Incompletive) the Present Continuous does not change to its dependent shape:

n̪ʊɽít	**ı-n̪-a**	**m-p-a.ık**	**p-á.ɽəkɔ**
food	RES-C-COP	1-C-be:PR	C-eat:INCOMPL

the food which I am eating

Ad. 2. Future Continuous:
C-**aka** C-verb:INCOMPL

The Future Continuous consists of the Incompletive of 'be'+ Incompletive main verb. It expresses an action or event that will be going on at a later time than the time of speech or the time of reference. The action or event is expected with a high degree of certainty.

nɔ-caɽɪ	**c-ɔ́-kamʊ̩ʈ̆ɛ̆**
on-day	C-of-celebration

ʊl	**w-a.ká**	**cɪk**	**w-a.píranɛ**	**kápík**	**nɔ́-kâ**
people	C-be:INCOMPL	VREF	C-thank:INCOMPL	God	on-body

on the day of the celebration, the people will be praising God

ámmá	**ŋ-kw-ɔ́ínɛ.t**	**kín**
if	2-C-go_to:COMPL	O3A

ŋ-kw-a.ka	**p-a.ʈáttɔ**	**ɪ-ól**	**w-aŋ**
2-C-be:INCOMPL	C-fight:INCOMPL	in-people	C-POSS2

if you join them (lit.: when you will have gone to them), you will be fighting against your (own) people

Dependent Future Continuous

After the conjunctive particle **á-**, the Incompletive auxiliary changes to its dependent form and **á-** is repeated on the main verb, which changes to the Dependent Incompletive as well:

ŋín-ʈa	**akka**	**a-kw-ɔ́ká**	**á-kw-ɔ́ʈáttɪnɛ**	**ɪ-ól**	**w-óŋ**
what-Q	that	CONJ-3-be:DEPINCOMPL	CONJ-3-fight_for:DEPINCOMPL	in-people	C-POSS3

why will he be fighting against his (own) people?

Ad. 3. Past Continuous:
C-**ɔkát a**-PCL-verb:DEPINCOMPL, or
C-**ɔkát cɪk a**-PCL-verb:DEPINCOMPL

The Past Continuous consists of the Completive of 'be' + **á** + Dependent Incompletive main verb. **cɪk** can be present or absent on the auxiliary. The Past Continuous has a clause chaining structure, i.e., consists of two separate clauses. It expresses an action or event that was going on in the past, but has stopped at the time of speech or the time of reference. The presence of **cɪk** draws more attention to the action having some duration.

m-p-ɔká.t	**á-n-íʈɛ**	**ɪttĭ …**
1-C-be:COMPL	CONJ-1-say:DEPINCOMPL	that

I was saying (that) …

amʊ́ṭa	**p-ɔká.t**	**cık**	**a-kw-ɔ́kịɔ**	**lịcɔ́k**
PERS.Amʊṭa	C-be:COMPL	VREF	CONJ-3-push:DEPINCOMPL	goats

Amʊṭa was pushing the goats together (fr. written story)

ɔ-kín	**ṭ-ɔká.t**	**cık**	**a-kín**	**ɔmɔ́ttɔ**	**aôn …**
PERS-3A	C-be:COMPL	VREF	CONJ.PERS-3A	break_in_two:DEPINCOMPL	bees

they were breaking off the honeycombs …

The clause chaining structure allows for an additional constituent in the first clause, coming before the conjunctive particle **á**:

ŋ-kw-ɔká.t	**cık**	**maɽɔ́t**	**ă-mpəppɔnɛ**	**lịcɔk**	**akaín-ṭa**
2-C-be:COMPL	VREF	long_time_ago	CONJ-(2-)miss.PLUR:DEPINCOMPL	goats	why-Q

why were you always losing goats in the past?

This is also possible when **cık** is absent. In the example below the Completive of 'be' in the first clause functions as copular verb, but the whole construction still functions as a Past Continuous:

nuṯṯəruk	**n-ɔká.t**	**cuŋkut**	**c-ɔppɔt**	**a-n-ɔ́ɽɔ́kɔ́**	**cík**
pigs	C-be:COMPL	crowd	C-many	CONJ-PRO-eat:DEPINCOMPL	VREF

í.ccík	**k-ɔ-cɔɽɔŋ**
near	C-of-mountain

a large herd of pigs was feeding on the nearby hill (lit.: the pigs were a large crowd while feeding on the nearby hill) (Mark 5:11)

After conjunctive **á**- (or in any other environment that selects a dependent TAM if available) there is no change in the verbal complex, because the auxiliary has no dependent form and the main verb already is in its dependent form.

Ad. 4. 'was about to' (imminence in the past)
C-**ɔkát** C-verb:INCOMPL, or
C-**ɔkát cık** C-verb:INCOMPL

This verbal complex consists of the Completive of 'be' + Incompletive main verb. The Completive auxiliary can be followed by **cık**, but **cık** can also be absent. It expresses that an action was

about to take place at some time in the past. Unless stated otherwise or apparent from the context, it is understood that it eventually did not.

k-kw-ɔ́ká.t **cık** **p-a.pɔ́ẗ̪ẗ̪ɔt** **ʊ́kʊl** (< **ɔpɔ́ẗ̪ẗ̪ɔt**)
3-C-be:COMPL VREF C-beat:INCOMPL child
s/he was about to beat the child

k-kw-ɔ́ká.t **p-á.kákɔ** **ana** **k-kw-á.nn-ɔ́kák.at** (< **ɔkákɔ**)
3-C-be:COMPL C-grind:INCOMPL and 3-C-NEG-grind:DEPPRFV
she was about to grind, but then she did not

When the time reference point is the time of speech, the construction gives an interpretation as 'was X-ing and completed this': at the moment of speech, the action, which had some duration, has stopped. The example below can be a response to the question 'do you know where Kakka is?'. The answer implies that she was here, grinding, but now she has gone.

k-kw-ɔ́ká.t **p-á.kákɔ** (< **ɔkákɔ**)
3-C-be:COMPL C-grind:INCOMPL
she was grinding (just a moment ago, but not anymore now)

Ad. 5. Past Completive:
C-**ɔkát** C-verb:COMPL, or shortened:
C-**át**-C-verb:COMPL

The Past Completive consists of the Completive of 'be' + Completive main verb. The Past Completive is often shortened. It is then realized as C-**at**, with **t** assimilating to the following consonant:

k-kw-ɔ́ká.t **p-ɛ̂.t** / **k-kw-á.p-p-ɛ̂.t**
3-C-be:COMPL C-go:COMPL 3-C-be:COMPL-C-go:COMPL
s/he had gone

lɛpa l-ɔká.t l-ɔɽʊmɔ́t̪.ɛ / lɛpa l-á.l-l-ɔɽʊmɔ́t̪.ɛ
lions C-be:COMPL C-attack:COMPL lions C-be:COMPL-C-attack:COMPL
the lions have/had attacked

In case of **w**-concord, there are two alternatives for the shortened Past Completive. The first example has the full form, the second the two short alternatives. **wárɔkât** is the expected short form: **t** becomes **r** before concord **w**, then **w** is deleted between **r** and the following vowel. **wáwɔkât** is somewhat unexpected, but appears to exist as well (recall that elision of concord **w** between vowels across a morpheme boundary is not obligatory, see 2.1.6).

ʊkʊl w-ɔká.t w-ɔká.t w-ulukkû-ppʊ
people C-be:COMPL C-be:COMPL C-one-really
the child was the only child

ʊkʊl w-á.r-ɔká.t / w-á-w-ɔká.t w-ulukkû-ppʊ
people C-be:COMPL-(C-)be:COMPL / C-be:COMPL-C-be:COMPL C-one-really
the child was the only child

The Past Completive refers to a completed action or event some time in the past. It can express that the action or event just stopped or ceased then, but it can also be that the resulting state continues up to the time of reference or the moment of speech. The latter is the case in the example below. The Past Completive implies that it is already some time ago that the addressee has put his stick somewhere. That action still bears relevance to the present: at the moment of speech they cannot find it. The pluractional verb **ɔkwárəttɪkɔt** 'think, remember', as opposed to the more instantaneous non-Pluractional verb **ɔkwárɪkɔt** 'recall', corresponds with this longer time frame, expressing that remembering the place will take some repeated effort.

ant-ɔ́kwarəttɪkɔt na
can:DEPINCOMPL-remember.PLUR:DEPINCOMPL where:REL

ŋ-kw-ɔká.t p-ɔnəkkɛ́t̪.ɛ́ kúrrɔ̂ŋ
2-C-be:COMPL C-put_down:COMPL stick
please recall where you put your stick (then)

By contrast, a Completive used in the same sentence, implies that only a short time has elapsed between the action of putting the stick somewhere and the moment when the hearer is asked to recall where he put it (perhaps an hour or a day). The non-pluractional verb **ɔkwárɪkɔt** ‘recall’ corresponds to this short time frame, expressing that the place is expected to come to mind easily:

ant-ɔkwárɪkɔt	**na**
can:DEPINCOMPL-remember:DEPINCOMPL	where:REL

ŋ-kw-ɔnəkkɛ́ṭ.ɛ́	**kúrrɔ̂ŋ**
2-C-put_down:COMPL	stick

please recall where you have put your stick

The example below is the last sentence of an account describing the events during a period of hunger. The Past Completive conveys that the hunger has stopped and corresponds with the events having happened a considerable time ago.

lɔn	**ɛl-l-ɪ**	**l-ɔká.t**	**l-ɔká.t**	**nɔ-ṯʊpót**	**2001**
words	DEM-C-NEARSP	C-be:COMPL	C-be:COMPL	on-year	2001

these things took place in the year 2001

The Past Completive often functions as a pluperfect. In the following example, the giving of the money has been anterior to the events in the past that are going to be told:

pʊl	**p-əɣɛk**	**p-á.p-p-ɛ́ṯɛt**	**ʊl**	**w-ɛɣa**	**ákúccį**
person	C-some	C-be:COMPL-C-give:COMPL	people	C-two	money

ɪttɪ	**á-kín**	**ant-áṯ-ɔkkárəttɪn-ɔ̂k**
that	SUBJ-3A	can:DEPINCOMPL-VEN:DEPINCOMPL-return_to:DEPINCOMPL-O3

a man had given two people money in order for them to come and give it back to him (later) (Luke 7:41)

Some verbs need a Completive in order to express an actual mental or emotional state, for example **ɔpíra** ‘become happy’ and **ɔŋɔt** ‘like, want, love’. With such verbs, the Past Completive is applied in order to express a state that existed at some time in the past:

m-p-á.p-p-ɔŋɔn̪.é **ɪttɪ** **ɔ-nin̪** **n̪-áppʊn̪a** **ɔ-nin̪** **ɔ-cɛccɛ̂**
1-C-be:COMPL-C-like:COMPL that PERS-1A C-play:INCOMPL PERS-1A PERS-Cɛccɛ
ana.rruk **m-p-ănn-ɪ.an̪-ɔ̂k**
but 1-C-NEG-find:DEPPRFV-O3
I wanted to play with Cecce, but (then) I could not find her

ana **ákká** **k-kw-íɔn̪.é** **k-kw-ɔ́ká.t** **p-ɔpɪrá.t** **nɔ́-kâ**
and when 3-C-find:COMPL 3-C-be:COMPL C-become_good:COMPL on-body
and when s/he found it, s/he felt happy

In a clause introduced by **ámma** +H 'if, when', the Distant Completive is used as a counterfactual:

ámmá **pól** **ém-p-í** **p-á.p-p-ɔká.t** **pól**
if person DEM-C-NEARSP C-be:COMPL-C-be:COMPL person
í-p-ɛ́rɛntɛ **lɔ́n** **l-ɔ́-kápík** **ícát** **p-á-ɪná.t …**
RES-C-speak.PLUR:INCOMPL words C-of-God truly C-IRR-know:COMPL
if this man were a person who truly speaks the word of God, he would know … (Luke 7:39)

Dependent Past Completive: C-**ɔkát a**-PCL-C-verb:COMPL

When a Past Completive is used after the conjunctive particle **á-**, the particle is repeated on the main verb, so that the clauses become chained (recall that Completives have no dependent TAM as counterpart). Like in the Past Completive, **cɪk** cannot be present:

k-kw-án̪n̪-ɪɔt **ɔ-nɛnní**
3-C-ITVEN:COMPL-find:DEPINCOMPL PERS-Nɛnnɪ
a-k-kw-ɔ́ká.t **a-k-kw-ɔ́ɽəkɔ.t** **kəpá**
CONJ-3-C-be:COMPL CONJ-3-C-eat:COMPL meat
s/he found Nɛnnɪ while she had been eating meat (but she had just stopped)

Other complex verbs with an auxiliary of 'be'

TAMs can contain complex auxiliaries of 'be'. The following, which has the Completive + Present Continuous of 'be', is an example. Like

the Past Continuous it expresses ‘was X-ing’, but it suggests that the action was not continued or finished. It can for example be used in a situation where the speaker reports that he saw somebody coming towards his house, but the person suddenly turned around and did not come after all. **cık** can be present or absent. **cık** adds a subtle (further) notion of spatiality and/or duration to the clause.

pʊl	**p-ɔká.t**	**p-á.ík**	**p-ânn̰án**
person	C-be:COMPL	C-be:PR	C-come:INCOMPL

the man was coming (suggestion: but then something happened so that he did not come)

pʊl	**p-ɔká.t**	**cık**	**p-a.ık**	**p-ânn̰án**
person	C-be:COMPL	VREF	C-be:PR	C-come:INCOMPL

the man was coming (suggestion: but then something happened so that he did not come)

In general, when a TAM contains a Completive of ‘be’, a double Completive is possible as well. The double Completive can be shortened in the same way as happens in the Past Completive. Such constructions typically have a pluperfect reading. Some examples follow here.

Past Continuous with double Completive of ‘be’:

C-**ɔkát** C-**ɔkát a**-PCL-verb:DEPINCOMPL, or shortend:
C-**át-**C-**ɔkát a**-PCL-verb:DEPINCOMPL;
C-**ɔkát** C-**ɔkát cık a**-PCL-verb:DEPINCOMPL, or shortened:
C-**át-**C-**ɔkát cık a**-PCL-verb:DEPINCOMPL

nɔ-caɽı	**c-én**	**ɔ-cɛccé**	**p-á.p-p-ɔká.t**	**cık**
on-day	C-DEM	PERS-Cɛccɛ	C-be:COMPL-C-be:COMPL	VREF

a-kw-ɔ́ra
CONJ-3-cultivate:DEPINCOMPL

On that day Cɛccɛ had been busy cultivating

‘be about to’ with double Completive of ‘be’:

C-**ɔkát** C-**ɔkát** C-verb:INCOMPL, or shortened:
C-**át**-C-**ɔkát** C-verb:INCOMPL;
C-**ɔkát** C-**ɔkát cɪk** C-verb:INCOMPL, or shortened
C-**át**-C-**ɔkát cɪk** C-verb:INCOMPL

ɔ-ʈʊṯṯó	**p-á.p-p-ɔká.t**	**cɪk**	**p-ânʈán**	**ana**
PERS-Ʈʊṯṯʊ	C-be:COMPL-C-be:COMPL	VREF	C-come:INCOMPL	and

k-kw-áppər-ɔká.kat	**p-ɔŋɔ́**
3-C-again:COMPL-be:DEPPRFV	C-ill

Ʈʊṯṯʊ had been about to come, but he fell ill again

Past Completive with double Completive of 'be':

C-**ɔkát** C-**ɔkát** C-verb:COMPL, or shortened:
C-**át**-C-**át**-C-verb:COMPL

ɔparɪ	**p-ɔká.t**	**p-á.p-p-ɔkwɔnín-ɔk**	**ɲʊkʊl**
wife	C-be:COMPL	C-be:COMPL-C-produce_for:COMPL-O3	children

his wife had produced children for him

12.8. Deictic verbs

There are three deictic verbs. They always contain a concord and have only one form. They contain the formatives **ǐ**, **êrík** and **éɽê**, respectively, that also form part of the spatial demonstratives (see chapter 8.1). The deictic verbs are given in the first column of the table, the demonstratives, for comparison, in the second.

Table 64 Deictic verbs

C-**ɛí**	'be here (near speaker / deictic centre)'	**ɛn-C-í**	'this, these (near the deictic centre)'
C-**êrík**	'be there (near addressee)'	**ɛn-C-ərík**	'that, those (near addressee)
C-**éɽê**	'be over there (away from speaker/deictic centre and addressee)'	**ɛn-C-əɽê**	'that, those (away from both, but in sight)'

The deictic verbs can function as main verbs, but also as auxiliaries. As main verbs, they typically function as presentatives:

m-p-ɛɪ	**cənɛ́**
1-C-be_NEARSP	here

I am here

a-m-p-ɛ̂rɪk	**a-n-ít̪t̪ɔ**	**kį̧cɛ**	**k-əɽɛk**
CONJ-1-be_NEARADDR	CONJ-1-pick:DEPINCOMPL	kicɛ-fruit	C-some

k-ɛ́í	**k-ɔ́ɽɛ́**	**ɪttʊaŋ**
C-be_NEARSP	C-red	very

and I am here with you, picking this other very ripe *kicɛ*-fruit here (fr. written story)

appɛnt̪íná	**w-ɛ̂rík**
groundnuts	C-be_NEARADDR

the groundnuts are there in front of you!

aɽɪk	**nút̪t̪əruk**	**n-əɽɛk**	**n-ɛ́ɽɛ̂**
come	pigs	C-some	C-be_DIST

come, there are some pigs over there!

In a verbal complex, the deictic verbs can precede an Incompletive, a Present, a Present Continuous, or a Completive expressing a state:

m-p-ɛ́í	**p-á.ɛ́ɔ̃́-a**
1-C-be_NEARSP	C-go:INCOMPL-ATT

I am going!

m-p-ɛ́í	**p-á.ík**	**p-á.ɛ́ɔ̃́-a**
1-C-be_NEARSP	C-be:PR	C-go:INCOMPL-ATT

I am going!

m-p-ɛ̂rɪk	**p-a.mákɔt**	**nɔn**	**n-t̪ɔ-cəkɛ̂n**
1-C-be_NEARADDR	C-follow:INCOMPL	O2A	with-at-lower_back

I will be near to you, following you (PL) from behind

mɛ́n	**m-ɛ̂rık**	**m-ɔməttáṭ.ɛ**
palm_fruits	C-be_NEARADDR	C-be_finished:COMPL

the palm fruits there with you are finished (App. IV, 115)

ʊl	**w-əʈɛk**	**w-ɛ́ʈɛ́**	**w-ânṭán**
people	C-some	C-be_DIST	C-come:INCOMPL

some people are over there, coming

12.9. **ıkkɔ cık** ‘sit, stay’

The verb **ıkkɔ cık** ‘sit, stay’ can function as a main verb, but also as auxiliary verb in a verbal complex. In such a complex auxiliary and main verb occur in separate clauses connected through the conjunctive particle **á**. Together the clauses express a continuing action or the start of an action. Examples of **ıkkɔ cık** ‘sit, stay’ as main verb are given first. Presence of **cık** is obligatory.

ıkkı	**cîk**
sit:IMP	VREF

sit down!

ʊkʊl	**w-ɔŋɔṭ.é**	**ıttı**	**ɔ-nın**	**ṭ-íkkɔ**	**cık**
child	C-like:COMPL	that	PERS-1A	C-sit:INCOMPL	VREF

the child wants us to stay

As an auxiliary Completive C-**ıkkɔ́t cık**, Past C-**ıkkáṭɛ cık** and Dependent Perfective **ıkkat cık** are used in clause chaining construction with the conjunctive particle **á** in the following ways:

C-**ıkkɔ́t cık** + **á** + PRO-verb:DEPINCOMPL

C-**ıkkáṭɛ cık** or **ıkkat cık** + **á** + PRO-verb:DEPINCOMPL

The construction with Completive C-**ıkkɔ́t cık** expresses that an action was going on at some time in the past, literally: ‘X sat/stayed doing Y’. Some examples:

akka	**ɔ-kín**	**t̪-ɪkkɔ́.t**	**cɪk**
that	PERS-3A	C-sit:COMPL	VREF

a-kín	**ɔ́rá**	**íttíná**
CONJ.PERS-3A	cultivate:DEPINCOMPL	like_that

a-t̪ʊk	**ákkakat**
CONJ-dog	come:DEPPRFV

and when they were cultivating like that, the dog came (‘The story of the jackal’)

ŋaẗ̪t̪aẗ̪t̪apɛ	**ŋ-ɪkkɔ́.t**	**cɪk**	**a-íttɪttɛ**	**aô̰n**
bird(sp.)	C-sit:COMPL	VREF	CONJ-(PRO-)collect.PLUR:DEPINCOMPL	bees

the *ŋaẗ̪t̪aẗ̪t̪apɛ*-bird was always collecting honey (App. IV, 2)

The second construction, with Past C-**ɪkkát̪ɛ cɪk** or Dependent Perfective or **ɪkkat cɪk** expresses that an action (or state) started (literally “sat down”).

m-p-ɪkk.át̪ɛ	**cɪk**	**a-n-ɔkíŋa**
1-C-sit:PST	VREF	CONJ-1-become_tired:DEPINCOMPL

I started to feel tired

ana	**t̪akəɣʊk**	**ɪ-t̪-ɔ́ttɛ́**	**í-t̪-ɔ́ɣɛ**	**t̪-ɪkk.át̪ɛ**	**cɪk**
and	chicken	RES-C-little	RES-C-red	C-sit:PST	VREF

a-t̪-ɔ́ɪŋcɛ	**tɔ.pɔ́n**	**appɪn-appɪn**
CONJ-PRO-go_to.PLUR:DEPINCOMPL	at_farming_field	always-REDUP

and the little red hen started to go to the field every day (fr. written story)

… a-kkʊ́naccɪ	**ɪkk.at**	**cɪk**	**a-kw-íttat**	**mʊɣɛ́**
CONJ.PERS-Kʊnaccɪ	sit:DEPPRFV	VREF	CONJ-3-become_fat:DEPINCOMPL	buttocks

n-t̪ɔ-cəkɛ́n
with-at-lower_back

… and Kʊnaccɪ started to grow fat at the buttocks from behind (fr. written story)

Like auxiliaries of ‘be’, **ɪkkɔ cɪk** as auxiliary can itself co-occur with an auxiliary verb, as in the following example:

a-lɔ́n **ɛ́l-l-í** **ánt-íkk.at** **cık** **a-l-érɛtta**
CONJ-words DEM-C-NEARSP can:DEPINCOMPL-sit:DEPPRFV VREF CONJ-PRO-be_spoken:DEPINCOMPL
and these things started to be said (and the situation was there that these things started to be said)

12.10. C-**íkkɔ** 'may'

The auxiliary verb C-**íkkɔ**, without **cık**, precedes an Incompletive main verb:

C-**íkkɔ** C-verb:INCOMPL

Unlike **ıkkɔ cık**, C-**íkkɔ** 'may' cannot function as a main verb. It occurs only in this one form and always as an auxiliary: it does not inflect for Past or Completive, nor does it have a dependent counterpart.

The construction expresses that something *may* happen. There is an expectation or possibility, but no certainty that the stated action or will actually take place.

lɔn **l-íkkɔ** **l-a.ka** **l-ɔppɔ́t**
words C-may C-be:INCOMPL C-many
a lot of things may be going to be said now (For example after somebody has died: things that have been kept quiet are now perhaps going to be said openly)

C-**íkkɔ** cannot directly precede an adjective, it must always come before a verb. The first example has the Incompletive of the verb **ɔŋa** 'become ill', the second the Incompletive of the verb **ɔ̱ṭ́ákka** 'become', followed by the adjective C-**ɔŋɔ́** 'ill'. **ɔ̱ṭ́ákka** cannot be left out.

papʊ **p-íkkɔ** **p-á.ŋa**
thing C-may C-become_ill:INCOMPL
the animal may become ill

papʊ	**p-íkkɔ**	**p-a.n̪̱t̪̱ɔ́kka**	**p-ɔŋɔ́**
thing	C-may	C-become:INCOMPL	C-ill

the animal may become ill

C-**íkkɔ** ‘may’ often precedes an Incompletive verb, but can also be combined with an auxiliary of ‘be’ that contains the Completive itive/ventive auxiliary C-**ân̪̱t̪̱** (see the example below). C-**an̪̱t̪̱** has a modal interpretation in this context, as ‘may’ (see 12.20.2). It is this element C-**ân̪̱t̪̱** that allows for the presence of C-**íkkɔ**. In the example C-**íkkɔ** can be left out without a change of meaning, but **pán̪̱t̪̱ɔ́ká** cannot be omitted.

ɔ-pəlɪn	**p-íkkɔ**	**p-án̪̱t̪̱-ɔ́ká**	**p-ákkárákɔ.t**	**cakʊrʊk**
PERS-somebody	C-may	C-ITVEN:COMPL-be:DEPINCOMPL	C-be_called:COMPL	also

ɪ-p-ərı̨k	**n-a-ôŋ**
RES-C-big	on-PERS-2

somebody who is more important than you may have been invited as well (Luke 14:8)

Though C-**íkkɔ** normally conveys that something may happen, not that something is certain to happen, it is sometimes used in a way that expresses precisely the opposite. In the following example the Person of Nɔppət is threatening the tortoise. With C-**íkkɔ** he communicates that the tortoise can be sure ‘to know him today …’. **kənɛ́** is a swear word variant of **ɔnnɛ́** ‘your mother’.

ŋ-kw-íkkɔ	**p-ínanɛ**	**kənɛ**	**ɪnénní**	**túllúk**
2-C-may	C-know_for:INCOMPL	your_mother	today	just

ámmá	**ḿ-p-á.nn-ɔ́kíŋcɔ́t̪̱-ʊŋ**	**ca**	**cîk**
if	1-C-NEG-throw_stones_at.PLUR:DEPCOMPL-O2	head	VREF

just today you will know (me), on your mother, I will crush your head with stones (lit.: you may know for your mother just today, if I will not have stoned your head)

Negation is expressed on the main verb, not on the auxiliary:

ɔ-rɪt	**ṯ-íkkɔ**	**ṯ-ănn-ɔrékɔ**	**maɽɪ**	**m-ɔppɔ́t**
PERS-12	C-may	C-NEG-work:DEPINCOMPL	days	C-many

we may not be able to do a lot of work for many days

12.11. C-**arə́ṯʊk** +H ‘be still’

C-**arə́ṯʊk** +H occurs in this form only. It can, for example, not be used without concord. C-**arə́ṯʊk** +H ‘be still’ does not have the shape of a verb. Final **k** is not attested in verbs, unless in presents of ‘be’ (C-**aîk**), where it is a remnant of the vague reference particle **cɪk**. Whether or not **k** of C-**arə́ṯʊk** +H is perhaps itself a remnant of **cɪk** is unclear. There seems to be no other verb (or other word) to which it is related. In context, it can bring a high tone to the next element.

C-**arə́ṯʊk** +H resembles adjectives in that it has a fixed form, must co-occur with a concord (or the focus marker **akk**- as a replacement of the concord) and can itself be combined with different TAMs of ‘be’ as auxiliaries. However, it does not express a quality, but functions typically as a verb: a locative/existential (main) verb, a copular verb and auxiliary verb. Some examples of C-**arə́ṯʊk** +H as locative/existential verb follow here:

ŋ-kw-arə́ṯʊk-ɪ[72]
2-C-be_still-Q

are you ready? / have you finished? *(lit.: are you still?)*

cɪk	**c-arə́ṯʊk**	**áṯṯík**
place	C-be_still	ever

there is still endless time

As a main verb it can be preceded by an auxiliary of ‘be’:

[72] In spite of C-**arə́ṯʊk** having a floating high tone (+H), no high tone (realized as falling) is generated on the question particle.

ka	**k-a.ık**	**k-arə̰ʊ̰k**	**ı-nt̰ɛ́**[73]
body	C-be:PR	C-be_still	in-sleep

I am still asleep (lit.: the body is still in sleep)

ɔ-kín	**t̰-ɔká.t**	**t̰-árə̰ʊ̰k**	**cık-ı-ká**	**k-ɔ-t̰ampaŋ**
PERS-3A	C-be:COMPL	C-be_still	LOC-in-body	C-of-flat_open_space

they were still right in the middle of the flat open space

It can also be combined with C-**ícca** 'be still, continue to' as auxiliary verb. C-**ícca** is discussed in chapter 12.2.

m-p-íccá	**p-árə̰ʊ̰k**
1-C-be_still	C-be_still

I am still not ready / I have still not finished

C-**arə̰ʊ̰k** +H can also function as a copular verb. In the first example it makes a connection between the subject and a noun; in the second and third between the subject and an adjective; in the fourth between the subject and connexive construction:

k-kw-árə̰ʊ̰k	**ókól**	**w-ɔ́n**
3-C-be_still	child	C-POSS2A

s/he is still your child

ŋəʈı	**ŋ-arə̰ʊ̰k**	**ŋ-írrók**
water	C-be_still	C-cold

the water is still cold

pʊl	**p-arə̰ʊ̰k**	**p-ɔŋɔ**	**cânnan**
person	C-be_still	C-ill	very

the person is still very ill

cık	**c-arə̰ʊ̰k**	**c-ɔ́-ɔrrɔt**
place	C-be_still	C-of-tomorrow

it is still morning (maybe around 10.00 am)

[73] **ınt̰ɛ́** is a contraction of **í** + **mət̰ɛ́**, see 4.4.

C-**arə̰tʊk** +H as auxiliary verb can be followed by a Dependent Incompletive main verb. Examples with **ɪmma** 'see' **akkarɔ** 'call', **ɔmʊ́ɲɛ** 'steal', **ɔkkwɔ̂t** 'kill' are given in the table. The floating high tone of C-**arə̰tʊk** +H is realized on all-low dependent incompletive TAM-stems (first two examples in the table. The falling realization in the second example point towards an underlyingly long vowel).

Table 65 C-**arə̰tʊk** +H and Dependent Incompletive

	*C-**arə̰tʊk** +H + Dependent Incompletive*
ɪmma 'see'	C-**arə̰tʊk ímma** +H
akkarɔ 'call'	C-**arə̰tʊk âkkarɔ** +H
ɔmʊ́ɲɛ 'steal'	C-**arə̰tʊk ɔmʊ́ɲɛ** +H
ɔkkwɔ̂t 'kill'	C-**arə̰tʊk ɔkkwɔ̂t**

Followed by a Dependent Incompletive it expresses that something is still to happen or to be done. It can often be translated with 'not yet':

m-p-arə̰tʊk	**ɟ́kkɔ**	**áləppʊ́n**
1-C-be_still	drink:DEPINCOMPL	coffee

I am still to take coffee / I have not taken coffee yet

k-kw-árə̰tʊk	**áɪkɔt**	**ɪ-a-paŋ̂n**
3-C-be_still	feel_at-ease:DEPINCOMPL	in-PERS-sibling.PL

s/he does not yet feel at ease between his/her siblings (s/he is still to feel at ease between his/her siblings)

ʊkʊl	**ɪ-ɔ́parɪ**	**w-ɔnʊ́**	**ɪttɪ**	**w-ápəʈɛ̰t̪a**
child	RES-(C-)-female	C-have	that	PRO.C-be_beaten:INCOMPL

a-w-árə̰tʊk	**ɔppɛ̂t**
CONJ-PRO.C-be_still	get_pregnant:DEPINCOMPL

a girl must be beaten before she gets pregnant (she must undergo the initiation rite of being beaten. Lit.: while being still to get pregnant …)

an-ákka	**k-kw-árən̪ʊk**	**íllɔ**	**ɪ-ruⁿtⁿórúk**[74] **…**
and-that	3-C-be_still	cut_in_two:DEPINCOMPL	in-pig

and before cutting the pig in two … (lit.: and when s/he was still to cut the pig in two …) (fr. written story)

C-**arə̪ʊk** +H can also be combined with a non-dependent verbal complex expressing continuous action. With the Present Continuous in the first example, it communicates that an action is still going on:

m-p-arə̪ʊk	**p-a.ɪk**	**p-íkkɔ́**	**áləppún**
1-C-be_still	C-be:PR	C-drink:INCOMPL	coffee

I am still drinking coffee (I have not finished my coffee yet)

However, this type of expression more often seems to make use of a construction with C-**ícca** 'be still'.

Negation is expressed on the main verb, not on C-**arə̪ʊk**:

k-kw-árən̪ʊk	**p-ă.nn-aŋkɔt**	**ɪttɪ**	**k-kw-ítta**
3-C-be_still	C-NEG-want:DEPCOMPL	that	3-C-be_married:INCOMPL

she still does not want to get married

12.12. C-**ícca** 'be still'

The verb C-**ícca** 'be still' occurs only in this form, always with a concord. C-**ícca** can only be followed by a non-dependent verb or adjective. Therefore, whether or not it would itself have a floating high tone is of no consequence since there is no environment where such a tone could manifest itself. Non-dependent verb and adjectives always have a high tone themselves and will not receive a preceding high tone. C-**ícca** does not seem to be related to another verb (or other word).

Unlike C-**arə̪ʊk** +H, C-**ícca** cannot function as a main verb. As a copular verb with adjectival predicate it can be used interchangeably with C-**arə̪ʊk** +H.

[74] Clause-final boundary tone (see 3.6).

ŋəʈɪ **ŋ-íccá** **ŋ-írrúk**
water C-be_still C-cold

the water is still cold

pʊl **p-ícca** **p-ɔŋɔ** **cânnan**
person C-be_still C-ill very

the person is still very ill

C-**arə̱ṯʊk** and C-**ícca** can be used together, in either order:

pʊl **p-íccá** **p-árə̱ṯʊk** **p-ɔŋɔ** **cânnan**
person C-be_still C-be_still C-ill very

the person is still very ill

pʊl **p-arə̱ṯʊk** **p-ícca** **p-ɔŋɔ** **cânnan**
person C-be_still C-be_still C-ill very

the person is still very ill

C-**ícca** 'be still' cannot serve as a copular verb with a nominal predicate. In such a case C-**arə̱ṯʊk** 'be still' must be present:

k-kw-íccá **p-árə̱ṯʊk** **úkúl** **w-ɔ́n**
3-C-be_still C-be_still child C-POSS2A

she is still your child

C-**ícca** is commonly used as an auxiliary in verbal complexes with a Present of 'be', a Present Continuous, or a Completive denoting a state:

C-**ícca** C-**aık**
C-**ícca** C-**aık** C-incompletive TAM-stem
C-**ícca** C-completive TAM-stem

C-**ícca** expresses that something is still going on or is still in a certain state. Some examples:

ŋ-kw-íccá **p-á.ík-ı**
2-C-be_still C-be:PR-Q

are you still there?

ɔ-nɛnní	**p-íccá**	**p-á.ík**	**p-érɛt**	**ɪttɪ**	**k-kw-ânn̰an-î**
PERS-Nɛnnɪ	C-be_still	C-be:PR	C-talk_about:INCOMPL	that	3-C-come:INCOMPL-Q

is Nɛnnɪ still saying that she will come?

C-**ícca** can precede a Present Continuous within a larger verbal structure. In the example below, the Completive of 'be' (+ **cɪk**) and the conjunctive particle **á** are followed by C-**ícca** and a Present Continuous.

ŋa-ŋa-n̰ʊŋkwat	**ŋ-ɔká.t**	**cɪk**
DIM-REDUP-sheep	C-be:COMPL	VREF

a-ŋ-íccá	**ŋ-á.ík**	**ŋ-áppʊn̰a**
CONJ-PRO.C-be_still	C-be:PR	C-play:INCOMPL

the lamb was still playing

The Completive of **ɔccɔ́ cɪk** 'take time' is used for the state of being late (first example below). In the second example this Completive is combined with C-**ícca**.

m-p-ɔccɔ́.t	**cɪk**
1-C-receive:COMPL	VREF

I am late *(upon arrival, as an apology)*

ɔ-nnɛ	**p-ícca**	**p-ɔccɔ́.t**	**cɪk**
PERS-your_mother	C-be_still	C-receive:COMPL	VREF

your mother has still not come (lit.: your mother is still taking time)

A present state of refusing something is expressed with the Completive of **əɣa** 'refuse, insist'. The example shows that in an environment where a Dependent Incompletive would be selected instead of an Incompletive and a Dependent Perfective instead of a Past, both without concord, C-**ícca** retains its concord (like Completives and like the Present of 'be'):

a-cɟkɟt	**c-ícca**	**c-əɣá.t**	**ɔ́kkwɔ́t**	**ka**
CONJ-heart	C-be_still	C-refuse:COMPL	kill:DEPINCOMPL	body

and the heart still refused to kill the body (the heart still refused to stop beating)

Unlike C-**arə́ʈʊk** +H, C-**ícca** does not precede a dependent verb, nor does it, in certain environments, allow for a reading as 'not yet'.

12.13. C-**ʊ́rənn** +H 'just now'

The auxiliary C-**ʊ́rənn** +H 'just now' has only one form and only combines with a dependent incompletive TAM-stem. C-**ʊ́rənn** brings a high tone on the initial mora of an all-low dependent incompletive TAM-stems (first two examples in the table - the falling realization in the second example points towards an underlyingly long vowel).

Table 66 C-**ʊrənn** +H and dependent incompletive TAM-stem

	*C-**ʊrənn** +H and dep. incompl. TAM-stem*
ɪmma 'see'	C-**ʊ́rənn-ímma** +H
akkarɔ 'call'	C-**ʊ́rənn-âkkarɔ** +H
ɔmʊ́ɲɛ 'steal'	C-**ʊ́rənn-ɔmʊ́ɲɛ** +H
ɔkkwɔ̂t 'kill'	C-**ʊ́rənn-ɔkkwɔ̂t**

C-**ʊ́rənn** +H 'just now' + dependent incompletive TAM-stem expresses that something has just happened, or has just been carried out. Some examples:

ɔ-kʊkkʊ́ **p-ʊ́rənn-ɛ̂**
PERS-Kʊkkʊ C-just_now-go:DEPINCOMPL

Kʊkkʊ has just left

m-p-ʊ́rənn-ɔ̂ŋɔkɔt **ɪ-cʊʈɛ́** **c-ɔ-pɪra**
1-C-just_now-rest_at:DEPINCOMPL in-buttock C-of-tree

I have just taken a rest under the tree

C-**ánt** / C-**ántər** 'can' with dependent incompletive main verb TAM-stem, can also express that something just happened (see 12.15). If C-**ánt** / C-**ántər** is used in this sense, (virtually) no time has elapsed between the time of speech and the time of the event. When C-**ʊ́rrən** +H is used, a little time may have past. Compare:

m-p-úrrən-áɔ
1-C-just_now-come:DEPINCOMPL

I have just arrived (perhaps an hour or so ago)

m-p-ántər-aɔ
1-C-can:COMPL-come:DEPINCOMPL

I have just arrived (the moment of speech is the moment of arrival)

C-**úrənn** can be combined with an auxiliary of 'be'. In the next example, the arrival was not shortly before but shortly after the time anchor:

m-p-ɔká.t	**p-úrrən-áɔ**	**ákka**	**k-kw-íɔ́.t**
1-C-be:COMPL	1-C-just_now-come:DEPINCOMPL	that	3-C-die:COMPL

I had just arrived after s/he had died (I was just too late)

12.14. *arəka 'as always'

The auxiliary 'as always' has three TAMs, based on a reconstructed verb ***arəka**:

Table 67 TAM-stems and TAMs of ***arəka**

TAM-stem		*TAM*	
dependent incompletive	**arək** +H	Dependent Incompletive	**arək** +H
incompletive	**árək** +H	Incompletive	C-**árək** +H
completive	**arəkât** shortened: **arək**	Completive	C-**arəkât** shortened: C-**arək**

A verb ***arəka** can be reconstructed, because of Completive C-**arəkât**, which would be the regular Completive of an **a**-initial, **a**-final, low-toned verb (***arəka**). Furthermore, a Dependent Incompletive form ***arəka** +H and an Incompletive form *C-**arəka** +H would be regularly expected. These verbs, however, can easily been seen to have lost their final vowel before the initial vowel of the dependent verb that must follow. Such loss of a verb-final vowel **a** before a vowel with which it does not necessarily coalesce is attested elsewhere in connected speech, for example in:

m-p-ɔmma	**ɪttɪ̌ …**	[m̄bɔ̄mː-ītī]
1-C-not_know:INCOMPL	that	

I don't know (that) …

maṯ̱ṯ̱a	**ʊmmɪ**	**káppəɽɪ**	**k-áŋ-ɛ**	[maṯ̱-ʊmːɪ]
please	take:IMP	spoon	C-2POSS-PROP	

please, do pick up your spoon! (App. IV, 74)

It is therefore not far-fetched to assume that the attested auxiliaries are remaining (shortened) TAMs of a verb *__arəka__.

Dependent Incompletive **arək** +H and Incompletive C-**árək** +H are followed by the dependent incompletive TAM-stem of the main verb. This (vowel-initial) verb is attached to the auxiliary. In the table below the forms are given of **arək** +H and C-**árək** +H preceding dependent incompletive TAM-stems of the verbs **ɪmma** 'see', **akkarɔ** 'call', **ɔmʊ́ɲɛ** 'steal' and **ɔkkwɔ̂t** 'kill'. The floating high tone of the auxiliary is realized or not realized on the dependent incompletive TAM-stem of the main verb (see the Tone Shift Rule and Tone Reappearance sub-Rules, 3.3.1 and 3.3.3).

Table 68 **arək** +H and C-**árək** +H and dep. incompletive TAM-stem

	arək *+H + dep. incompletive TAM-stem*	*C-**árək** +H + dep. incompletive TAM-stem*
ɪmma 'see'	**arək-ímma** +H	C-**árək-ímma** +H
akkarɔ 'call'	**arək-âkkarɔ** +H	C-**árək-âkkarɔ** +H
ɔmʊ́ɲɛ 'steal'	**arək-ɔmʊ́ɲɛ** +H	C-**árək-ɔmʊ́ɲɛ** +H
ɔkkwɔ̂t 'kill'	**arək-ɔkkwɔ̂t**	C-**árək-ɔkkwɔ̂t**

Completive C-**arəkât** can select more than one TAM of the main verb: a Completive, a Past, a Dependent Incompletive and a Dependent Perfective. Table 70 presents Completive C-**arəkât** followed by a Completive and by a Past:

Table 69 Completive C-**arəkât** with Completive and with Past

	*C-**arəkât** + Completive*	*C-**arəkât** + Past*
ɪmma 'see'	C-**arəkát** C-**ɪmmât**	C-**arəkát** C-**ɪmmakáa̱ɛ**
akkarɔ 'call'	C-**arəkát** C-**akkarɔ̂t**	C-**arəkát** C-**akkaráa̱ɛ**
ɔmʊ́ɲɛ 'steal'	C-**arəkát** C-**ɔmʊɲɛ̂**t	C-**arəkát** C-**ɔmʊɲɛ́kaa̱ɛ**
ɔkkwɔ̂t 'kill'	C-**arəkát** C-**ɔkkwɔa̱ɛ̂**	C-**arəkáa̱ɛ**

When followed by a dependent verb, Completive C-**arəkât** and the dependent verb will fuse together to one word. I therefore regard the dependent main verb as TAM-stems rather than as TAMs.

Table 71 gives examples of C-**arəkât** with dependent TAM-stems of the verbs **ɪmma** 'see', **akkarɔ** 'call', **ɔmʊ́ɲɛ** 'steal' and **ɔkkwɔ̂t** 'kill'. Final **t** of C-**arəkât** is realized as its intervocalic allophone **r**. The falling tone of the auxiliary is realized as high (Contour Simplification Rule). When the main verb contains a high or falling tone, tone bridge occurs.

Before a dependent TAM-stem, Completive C-**arəkât** can be shortened to C-**arək**. Comparing Completive C-**arək** to C-**arəkât**, we see that the falling tone is lost, together with the segmental loss. However, after the shortened form C-**arək** the same tones are retained on the main verb as (regularly) occur after the full form C-**arəkât**: a low-toned main verb TAM-stem does not receive a high tone, and there is tone bridge in case of a main verb TAM-stem that has a high or falling tone itself.

Table 70 Completive C-**arəkât**/C-**arək** and dependent TAM-stem

	*C-**arəkât** / C-**arək** and dependent incompletive TAM-stem*	*C-**arəkât** / C-**arək** and dependent perfective TAM-stem*
ɪmma 'see'	C-**arəkár-ɪmma** +H C-**arək-ɪmma** +H	C-**arəkár-ɪmmakat** +H C-**arək-ɪmmakat** +H
akkarɔ	C-**arəkár-akkarɔ** +H	C-**arəkár-akkarat** +H

'call'	C-**arək-akkarɔ** +H	C-**arək-akkarat** +H
ɔmʊ́ɲɛ 'steal'	C-**arəkár-ɔ́mʊ́ɲɛ** +H C-**arək-ɔ́mʊ́ɲɛ** +H	C-**arəkár-ɔ́mʊ́ɲɛkat** +H C-**arək-ɔ́mʊ́ɲɛkat** +H
ɔkkwɔ̂t 'kill'	C-**arəkár-ɔ́kkwɔ̂t** C-**arək-ɔ́kkwɔ̂t**	C-**arəkár-ɔ́kkwât** C-**arək-ɔ́kkwât**

*Meaning and use of ****arəka***

When the auxiliary is followed by a dependent verb it expresses the assumption that something happened, happens or will happen, just like it always (or usually) does. Its use implies or suggests knowledge of the speaker about the way the subject typically behaves, or something that is happening all the time, whether this is common knowledge or private knowledge of the speaker. A specific type of source or evidence on which his assumption is based is not implied: it may be that the speaker has witnessed the same behaviour before, or that he bases his assumption on what he heard from other people. Expressions with a form of ***arəka**, expressing expected behaviour, typically have a pejorative flavour: the behaviour is disapproved of.

Examples with dependent incompletive and dependent perfective main verb TAM-stems follow here. The assumptions they express are rather strong, for which reason I translate the auxiliary with 'surely'. The first example below has an Incompletive auxiliary and a dependent incompletive main verb. 'As always' precedes the main verb, not the auxiliary.

pʊl	**p-ɔ-nɔppət**	**p-a.ɪk**	**p-árək-ɔmákarɔt**
person	C-of-Nɔppət	C-be:PR	C-as_always:INCOMPL-follow_each_other:DEPINCOMPL

n-ʈɔ-cəkɛ̂n
with-at-lower_back

the person of Nɔppət is surely following from behind (he always follows people at this hour) (fr. written story)

In the following two examples, the auxiliary is Dependent Incompletive:

a-kəllán **arək-ɔŋwɔ̂**
CONJ-old_woman as_always:DEPINCOMPL-sing:DEPINCOMPL

and the old woman will surely sing (it is her habit to sing, but now it is not really appropriate)

ɔ-kakká **p-á.ík** **kárə̱t̪â**
PERS-Kakka C-be:PR where

akka **a-kw-árək-ɔka** **ɪ-nt̪ɛ́**
that CONJ-3-as_always:DEPINCOMPL-be:DEPINCOMPL in-sleep

where is Kakka? she is surely asleep! (many times, she sleeps at this unusual hour)

Completive C-**arəkât**/C-**arək** followed by a dependent incompletive main verb TAM-stem expresses an assumption that a certain event just happened before the time of speech or the time of reference. C-**arəkât** and C-**arək** can be used interchangeably. Some examples:

pʊl **p-arək-ɔ́mʊ́ŋɛ** **ana** **ɔ-kín** **t̪-ɔkkwɛ́.r-ɔk**
person C-as_always:COMPL-steal:DEPINCOMPL and PERS-3A C-beat.PLUR:COMPL-O3

the man has surely stolen, that is why they have beaten him (the man is know -by the speaker or generally- to have stolen before)

ɔ-kakká **p-arəká.r-ɔ́ká** **í-nt̪ɛ́**
PERS-Kakka C-as_always:COMPL-be:DEPINCOMPL in-sleep

Kakka was surely asleep (many times, she sleeps at this unusual hour)

C-**arəkât**/C-**arək** followed by a dependent perfective main verb expresses an assumption about what happened as the next thing at some moment in the past. In the second example the concord on the auxiliary is replaced by the focus marker **akk-**.

pʊl **p-arək-akkarat**
person C-as_always:COMPL-call:DEPPRFV

the man surely called (then) (this is what he does in such situations, but he actually shouldn't)

ɔ-lalʊ́	**akk-arəká.r-ɔ́mʊ́ɲɛ.kat**	**ɟmíʃt**
PERS-Lalʊ	FOC-as_always:COMPL-steal:DEPPRFV	goat

it was surely Lalʊ who (then) stole the goat (he is known for stealing, by the speaker or generally)

The adverb **íkkərɛ** ‘maybe’ can be added to a clause with ‘as always’. **íkkərɛ** somewhat weakens the assumption:

íkkərɛ	**ʈʊk**	**ʈ-a.ık**	**ʈ-árək-ɟkkɔ**	**nî**
maybe	dog	C-be:PR	C-as_always:INCOMPL-drink:DEPINCOMPL	pooh

maybe the dog is eating pooh again (the dog has a habit of eating pooh)

When the (Completive) auxiliary is followed not by a dependent main verb, but by a non-dependent main verb, it is not an assumption, but a factual statement. In this context I translate the auxiliary with ‘as expected’ (because the same is always, or often, the case). Compare these examples with a Past (the first) and a dependent perfective main verb (the second), which both express a consecutive event:

ɔ-lalʊ́	**p-arəká.t**	**p-ɔmʊɲé.kaʈɛ**	**ɟmíʃt**
PERS-Lalʊ	C-as_always:COMPL	C-steal:PST	goat

Lalʊ, as expected, stole the goat (then)

ɔ-lalʊ́	**p-arəká.r-ɔ́mʊ́ɲɛ.kat**	**ɟmíʃt**
PERS-Lalʊ	C-as_always:COMPL-steal:DEPPRFV	goat

Lalʊ surely stole the goat (then)

Another example with Dependent Perfective main verb is the following:

ʈʊk	**ʈ-arəká.t**	**ʈ-ɔrəkk.áʈɛ**	**ŋuɽû**
dog	C-as_always:COMPL	C-eat:PST	asida

the dog, as always, (then) ate the asida (the dog is always stealing asida if you don’t pay attention)

The combination with a Completive main verb expresses that something has just happened at the time of speech, or at the

reference time, as could be expected, because it always (or often) happens this way. The auxiliary has a pejorative connotation. Some examples:

ɔ-nɛnní	**p-arəká.t**	**p-aá.t**
PERS-Nɛnnɪ	C-as_always:COMPL	C-come:COMPL

Nɛnnɪ has, as always, (already) arrived (she always comes exactly in time, she gives people no space)

ʈʊk	**ʈ-ɔ́-pattɪ**	**t-arəká.t**	**t-ɔkkwɔʈ.é**	**ŋaʈərəpê**
dog	C-of-person	C-as_always:COMPL	C-kill:COMPL	rabbit

the dog of that person has, as always, killed the rabbit (it is never my dog that kills the rabbit!)

a-pə́lla	**p-arəká.t**	**p-ɔʈʈɪé.t**	**kʃ́t**
CONJ-cat	C-as_always:COMPL	C-make_leave:COMPL	eyes

the cat, as always, had quickly glimpsed around (it always does this, it is part of its unreliable nature)

Negation comes between the auxiliary and the main verb:

ʈʊk	**ʈ-ɪn**	**ʈ-arəká.r-ɔ́kə́nn-ɔ́kkwɔ̂t**
dog	C-POSS1	C-as_always:COMPL-NEG:DEP-kill:DEPCOMPL

as always my dog did not kill it (as always my dog did not make the kill)

12.15. *anta ‘can (possibility)’

The auxiliary ***anta*** ‘can (possibility)’ has three TAMs, as given in table 72. These forms are based on a verb which can be reconstructed as ***anta** (see below).

Table 71 TAM-stems and TAMs of ***anta**

TAM-stem		*TAM*	
dependent incompletive	**ant** +H	Dependent Incompletive	**ant** +H
incompletive	**ánt** +H	Incompletive	C-**ánt** +H
completive	**ántər** shortened: **ánt**	Completive	C**-ántər** shortened: C-**ánt**

The initial **a** of the dependent auxiliary (and the absence of a form with **ɔ**) suggests development from an **a**-initial verb. The final vowel is less clear, but may well have been **a** as well, so that a possible reconstruction of the auxiliary is *__anta__.

The Dependent Incompletive and the Incompletive TAMs of the auxiliary (**ant** +H and C-**ánt** +H) are followed by a dependent incompletive TAM-stem of the main verb. Examples are given in table 73, with **ant** +H and C-**ánt** +H preceding dependent incompletive **ɪmma** 'see', **akkarɔ** 'call', **ɔmúɲɛ** 'steal' and **ɔkkwɔ̂t** 'kill'. The floating tone of the auxiliary is realized or not realized on the main verb in accordance with the Tone Shift Rule and the Tone Reappearance sub-Rules.

Table 72 **ant** +H and C-**ánt** +H and dep. incompletive TAM-stem

	ant *+ H + dep. incompl TAM-stem*	*C-**ánt** + H + dep. incompl. TAM-stem*
ɪmma 'see'	**ant-ímma** +H	C-**ánt-ímma** +H
akkarɔ 'call'	**ant-âkkarɔ** +H	C-**ánt-âkkarɔ** +H
ɔmúɲɛ 'steal'	**ant-ɔmúɲɛ** +H	C-**ánt-ɔmúɲɛ** +H
ɔkkwɔ̂t 'kill'	**ant-ɔkkwɔ̂t**	C-**ánt-ɔkkwɔ̂t**

Completive C-**ántər** precedes dependent incompletive or dependent perfective TAM-stems of the main verb, generating the same tone patterns on the main verb as the Completive auxiliary C-**arəkât** 'as always'. Though these tones cannot be regularly derived from the combination of C-**ántər** and dependent incompletive main verb, and though C-**ántər** is no longer a regular Completive (the regular Completive would have been *C-**antât**, regularly realized *C-**antár** or *C-**antar** before a vowel-initial main verb), I gloss the main verb as dependent incompletive (like after C-**arəkât**), and the auxiliary stem **ántər** as completive.

The second vowel of *C-**antât** most likely has been reduced to **ə** before developing the short variant C-**ánt**, which has the high tone now on the first mora. Probably under influence of this short form,

the high tone then moved to the first mora on the longer form C-**ántər** as well.

The short Completive auxiliary C-**ánt** is —apart from its tonal effect on the following verb stem— no longer distinct from the Incompletive C-**ánt** +H. However, since it is a free variant of C-**ántər**, and since it has the same tonal effect on the following dependent incompletive main verb as C-**ántər**, I will still consider it a reduced completive stem. Note also that C-**ántər** and C-**ánt** have no dependent counterparts, which also points at them being former Completives, in the first case still on the pathway of loosing the completive marking, in the second case already having lost it, except for its tonal effects on the following element.

Notably, a reconstruction as *__antɔ__ (with Completive *C-__antôt__) would be possible as well. Reduction and tonal change would in that case have followed the same pathway.

Table 75 presents the forms of Completive C-**ántər** / C-**ánt** followed by the dependent incompletive TAM-stem of a main verb. With **ɔmʊ́ɲɛ** ‘steal’ and **ɔkkwôt** ‘kill’ there is tone bridge.

Table 73 C-**ántər** / C-**ánt** and dep. incompletive TAM-stem

	*C-**ántər** / C-**ánt** + dep. incompletive TAM-stem*
ɪmma ‘see’	C-**ántər-ɪmma** +H / C-**ánt-ɪmma** +H
akkarɔ ‘call’	C-**ántər-akkarɔ** +H / C-**ánt-akkarɔ** +H
ɔmʊ́ɲɛ ‘steal’	C-**ántár-ɔ́mʊ́ɲɛ** +H / C-**ánt-ɔ́mʊ́ɲɛ** +H
ɔkkwôt ‘kill’	C-**ántár-ɔ́kkwôt** / C-**ánt-ɔ́kkwôt**

Completive C-**ántər** and C-**ánt** can also be followed by a dependent perfective main verb TAM-stem (just as can C-**arəkât** and C-**arək**). A dependent perfective TAM-stem can, moreover, follow after Incompletive C-**ánt** +H and Dependent Incompletive **ant** +H. Preceded by Completive C-**ántər**/C-**ánt** the dependent perfective is all-low or has tone bridge until its own high or falling tone; preceded by Incompletive C-**ánt** +H and Dependent Incompletive **ant** +H the

presence of a floating high tone can be seen when the main verb is all-low. In table 75, Dependent Incompletive **ant** +H with dependent perfective main verb TAM-stem is presented in the first column, Incompletive C-**ánt** +H with dependent perfective main verb TAM-stem in the second, and Completive auxiliaries with dependent perfective main verb TAM-stems in the third:

Table 74 Forms of *__anta__ with dependent perfective TAM-stem

	ant + H + dep. perfective TAM-stem	C-**ánt** +H + dep. perfective TAM-stem	C-**ántər** / C-**ánt** + dep. perfective TAM-stem
ɪmma 'see'	**ant-ímmakat** +H	C-**ánt-ímmakat** +H	C-**ántər-ɪmmakat** +H C-**ánt-ɪmmakat** +H
akkarɔ 'call'	**ant-âkkarat** +H	C-**ánt-âkkarat** +H	C-**ántər-akkarat** +H C-**ánt-akkarat** +H
ɔmójɲɛ 'steal'	**ant-ɔmójɲɛkat** +H	C-**ánt-ɔmójɲɛkat** +H	C-**ántár-ɔ́mójɲɛkat** +H C-**ánt-ɔ́mójɲɛkat** +H
ɔkkwɔ̂t 'kill'	**ant-ɔkkwât**	C-**ánt-ɔkkwât**	C-**ántár-ɔ́kkwât** C-**ánt-ɔ́kkwât**

I thus assume that, originally, C-**ántər** and C-**ánt** developed from a regular Completive *C-**antât**, like C-**arək** has developed from (still existing) C-**arəkât**. While the auxiliaries are loosing completive inflection and are probably moving towards just one (short) auxiliary form, the tone patterns regularly generated by the (formerly) full Completive auxiliary become associated with completive semantics of the verb as a whole. The same development can be seen in the auxiliaries of 'again', based on the reconstructed auxiliary verb *__appa__ (or perhaps *__appɔ__) (see 12.16). Loss of completive inflection has gone furthest in the negation auxiliaries, where only the main verb TAM-stems still carry the (tonal) marking of a formerly Completive auxiliary, so that, in that context, it has become useful to speak of dependent completive main verb TAM-stems (see 12.17).

Meaning and use

Auxiliaries of *__anta__ express an opportunity, a possibility or just that the moment is there for something to be done or to happen. The auxiliary is often rather difficult to translate in English. I gloss it with 'can', but it does not refer to personal skill or ability.

Some examples with (non-dependent) Incompletive C-**ánt** +H followed by a Dependent Incompletive main verb follow here. Only the tones on the main verb show that the auxiliary is an Incompletive (and not a Completive).

pʊl	**p-ánt-ɔmʊ́ɲɛ**	**káɽʊk**	**ana**	**p-p-á.kənn-ɔnɛ́kɔ**
person	C-can:INCOMPL-steal:DEPINCOMPL	bag	and	PRO-C-NEG-take:DEPINCOMPL

the person can steal the bag, but he will not hold (keep) it

ɔ-rɔn	**ṯ-ánt-ímma**	**cɔɽɔŋ**	**ŋɔ́rrɔt**
PERS-12A	C-can:INCOMPL-see:DEPINCOMPL	mountain	tomorrow

we will be able to see the mountain tomorrow (context: now we cannot see it because it is dark)

The following sentence is situated in the Past:

ana	**mənn.ákka**	**m-p-aa.t**	**ɪ.ccík**	**k-úŋ**
and	when	1-C-come:COMPL	near	C-POSS3

ɪttɪ	**m-p-ánt-ɔkáṯá-k**	**ana …**
that	1-C-can:INCOMPL-look_at:DEPINCOMPL-O3	and

and when I had come near him so that I could see him, (then) … (fr. written story)

The auxiliary can have a politeness effect:

m-p-ɔŋɔṯ.é	**ɪttɪ**	**ɔ-nɔn**	**ṯ-ánt-ɔkə́nɛ-n**	**ɪttɪ**
1-C-like:COMPL	that	PERS-2A	C-can:INCOMPL-show:DEPINCOMPL-O1	that

ɔ-nɔn	**ṯ-a.ra**	**ṯún**	**ɪttɪ**	**káṯ-ṯa**	**cənɛ́**
PERS-2A	C-cultivate:INCOMPL	onion	that	how-Q	here

could you show me how you cultivate onion here? (lit.: I want that you can show me how you cultivate onion here) (fr. written text)

Dependent Incompletive **ant** +H with a dependent incompletive main verb TAM-stem is very common as a friendly command to a singular or plural addressee. When addressing a single person, there is no pronoun clitic. **ant** does not seem to be in Imperative TAM, since the Imperative of an **a**-final verb does not bring a high tone to the next element. In case of a plural addressee, the pronoun clitic 'you (PL)' is present in the form of **ń-** or **ɔ́n-**. I translate **ant** in these cases with 'please', though 'please' is perhaps a little strong.

Table 75 Commands with **ant** +H

	sg. addressee	*pl. addressee*	
ɪpɪttɔ 'ask'	**ant-ípɪttɔ**	**(ɔ)n-ánt-ípɪttɔ**	please ask!
ɔcɔ́ƭɔ 'stand'	**ant-ɔcɔ́ƭɔ**	**(ɔ)n-ánt-ɔcɔ́ƭɔ**	please wait!
ɔccɨ́kɔt 'hear, listen'	**ant-ɔccɨ́kɔt**	**(ɔ)n-ánt-ɔccɨ́kɔt**	please listen!
ɔllɔ̂ 'run'	**ant-ɔllɔ̂**	**(ɔ)n-ánt-ɔllɔ̂**	please make way!

Examples with Completive auxiliary, as shown by the tones on the main verb, follow here. Such constructions express that the opportunity for something to happen has come (or had come at a certain point in time), implying that, at the time of speech (or at the time reference point), the action has just been carried out and/or there is a resulting state.

m-p-ántər-aɔ
1-C-can:COMPL-come:DEPINCOMPL

I have arrived just now

m-p-ánt-ɪɔ **pəƭɪn**
1-C-can:COMPL-die:DEPINCOMPL finally

I am dead now / I am completely finished (said when something serious has happened)

ınɛ́nní	**m-p-ántər-ərrɔt**	**kɪɲɪt**	**t̪əpʊt**	**pə́ɽɪn**
today	1-C-can:COMPL-push_to:DEPINCOMPL	teeth	outside	finally

today the time has come for me to suffer very much (more lit.: today the moment has come to push out the teeth completely)

ka	**k-ántár-ɔ́kkɔ́t**	**tát̪-t̪a**
body	C-can:COMPL-do:DEPINCOMPL	how-Q

how has the body been doing? (typically asked when the last time the speaker saw the addressee, the addressee was ill)

m-p-ántár-ɔt̪əkka	**p-ɔpərɔ̂t**
1-C-can:COMPL-become:DEPINCOMPL	C-good

I had the chance to become well (i.e. I am fine now; answer to the question in the previous example)

The next example has a reference point in the past:

ɔ-nɨ̨n	**t̪-ánt-ɪɔt**	**át̪ʊɽan**	**pəɽɪn**
PERS-1A	C-can:COMPL-find:DEPINCOMPL	thieves	finally

we could finally catch the thieves

Some examples with Dependendent Incompletive **ant** and Incompletive C-**ánt** preceding a Dependent Perfective verb follow here. Such events are situated in the past, or, as a consecutive event, in the relative future.

akka	**mə́rɛ**	**m-ɔká.t**	**cík**
that	cultivating_party	C-be:COMPL	VREF

a-pʊ́l	**ant-ɟ́kk.at**	**ŋə́pak**
CONJ-person	can:DEPINCOMPL-drink:DEPPRFV	beer

because of the cultivating party, the man (then) could drink beer (he had the opportunity and he did it)

mənn-ákka **ʊkʊl** **w-ɪttáṭ̪.ɛ** **kɪccɛ́**
even-that child C-become_fat:COMPL properly

a-kakká **ant-ákkakat** **tʊan**
CONJ.PERS-Kakka can:DEPINCOMPL-come:DEPPRFV home

only when the child was completely better, Kakka finally came to the house (implying: she came too late, she should have come during the child's illness).

an-ákka **maʈɪ** **m-ɔkkɔṭ̪.ɛ́** **m-əʈɛ-m-əʈapúrúk**
and-that days C-do:COMPL C-two-C-two.three

a-íkɛ **ant-ákkakat** **nɔ́-capú**
CONJ-flood can:DEPINCOMPL-come:DEPPRFV on-ground

and when the seven days were done, the flood came over the earth (Genesis 7:10)

An example with Completive auxiliary C-**ántər**/C-**ánt** preceding a Dependent Perfective main verb follows here:

pʊl **p-ántər-ɔ́mʊ́ɲɛ.kat / p-ánt-ɔ́mʊ́ɲɛ.kat**
person C-can:COMPL-steal:DEPPRFV / C-can:COMPL-steal:DEPPRFV

the person just (finally) got the chance and stole

12.16. *appa 'again'

The auxiliary 'again' has three TAMs, as given in table 77. These forms are based on a verb which can be reconstructed as ***appa** (see further below).

Table 76 TAM-stems and TAMs of ***appa**

TAM-stem		*TAM*	
dependent incompletive	**app** +H	Dependent Incompletive	**app** +H
incompletive	**ápp** +H	Incompletive	C-**ápp** +H
completive	**áppər** shortened: **ápp**	Completive	C-**áppər** shortened: C-**ápp**

The initial **a** of the dependent auxiliary (and the absence of a form with **ɔ**) suggests development from an **a**-initial verb. The final vowel

is less clear, but may well have been **a** as well, so that a possible reconstruction of the auxiliary is *__appa__. C-**áppər**, like C-**ántər**, then probably developed from Completive *C-**appât** (regularly realized as *C-**appár** or *C-**appar** before a vowel-initial main verb TAM-stem). The second vowel **a** then reduced to **ə** before developing the short variant C-**ápp**, which had the high tone now on the first mora. Probably under influence of this short form, the high tone then also changed to the first mora on the longer form.

Notably, a reconstruction as *__appɔ__ (with Completive *C-**appôt**) would be possible as well. Reduction and tonal change would in that case have followed the same pathway.

The Dependent Incompletive and the Incompletive TAMs of 'again' (**app** +H and C-**ápp** +H) are followed by a dependent incompletive TAM-stem of the main verb.

Table 77 **app** +H and C-**ápp** +H and dep. incompletive TAM-stem

	app *+H + dependent incompletive*	*C-**ápp** +H + dependent incompletive*
ɪmma 'see'	**app-ímma** +H	C-**ápp-ímma** +H
akkarɔ 'call'	**app-âkkarɔ** +H	C-**ápp-âkkarɔ** +H
ɔmʊ́ɲɛ 'steal'	**app-ɔmʊ́ɲɛ** +H	C-**ápp-ɔmʊ́ɲɛ** +H
ɔkkwɔ̂t 'kill'	**app-ɔkkwɔ̂t**	C-**ápp-ɔkkwɔ̂t**

C-**áppər** precedes dependent incompletives or dependent perfectives of the main verb, generating the same tone patterns on main verbs as the Completive auxiliaries C-**arəkât**/C-**arək** 'as always' and C-**ántər**/C-**ánt**. Though these tones cannot be regularly derived from the combination of C-**áppər** and dependent incompletive main verb, I gloss the main verb as dependent incompletive and C-**áppər** as completive, assuming the same tonal process as after C-**arəkât**/C-**arək** 'as always' and C-**ántər**/C-**ánt**.

Like C-**ánt**, the short completive form C-**ápp** is no longer distinct from the incompletive form of the auxiliary, but, as a free variant of C-**áppər** is glossed as completive as well. Like completives, C-**áppər**/C-**ápp** has no dependency opposition. The whole process appears to be precisely analogous to the development of C-**ántər**/C-**ánt.** The Completive auxiliaries with dependent incompletive main verb TAM-stem are presented in table 79.

Table 78 C-**áppər**/C-**ápp** and dep. incompletive TAM-stem

	*C-**áppər**/C-**ápp** + dep. incompletive TAM-stem*
ımma 'see'	C-**áppər-ımma** +H C-**ápp-ımma** +H
akkarɔ 'call'	C-**áppər-akkarɔ** +H C-**ápp-akkarɔ** +H
ɔmʊ́ɲɛ 'steal'	C-**áppə́r-ɔ́mʊ́ɲɛ** +H C-**ápp-ɔ́mʊ́ɲɛ** +H
ɔkkwɔ̂t 'kill'	C-**áppə́r-ɔ́kkwɔ̂t** C-**ápp-ɔ́kkwɔ̂t**

Dependent perfectives TAM-stems can be preceded by Completive C-**áppər** and C-**ápp**, but also by Incompletive C-**ápp** +H and Dependent Incompletive **app** +H (just as they can be preceded by Completive C-**ántər**/C-**ánt**, and by Incompletive C-**ánt** +H and Dependent Incompletive **ant** +H). After C-**áppər**/C-**ápp** the dependent perfective stem is all-low or there is tone bridge until its own high; preceded by **app** +H the presence of the preceding high tone can be seen when the main verb itself is all-low. The forms are given in table 80.

Table 79 Forms of *__appa__ with dependent perfective TAM-stem

	***app** +H + dep. perfective TAM-stem*	*C-**ápp** +H + dep. perfective TAM-stem*	*C-**áppər**/C-**ápp** + dep. perfective TAM-stem*

ɪmma ‘see’	**app-ímmakat** +H	C-**ápp-ímmakat** +H	C-**áppər-ɪmmakat** +H C-**áp-ɪmmakat** +H
akkarɔ ‘call’	**app-âkkarat** +H	C-**ápp-âkkarat** +H	C-**áppər-akkarat** +H C-**áp-akkarat** +H
ɔmójɲɛ ‘steal’	**app-ɔmójɲɛkat** +H	C-**ápp-ɔmójɲɛkat** +H	C-**áppár-ɔ́mójɲɛkat** +H C-**áp-ɔ́mójɲɛkat** +H
ɔkkwɔ̂t ‘kill’	**app-ɔkkwât**	C-**ápp-ɔkkwât**	C-**áppár-ɔ́kkwât** C-**áp-ɔ́kkwât**

Commands with ‘again’ are formed with Dependent Incompletive **app** +H and the dependent incompletive TAM-stem of the main verb. When addressing a singular second person no pronoun (clitic) is applied. When addressing a plural second person, these commands have the full 2PL pronoun **ɔnɔ́n**, or the clitics **ɔ́n-** or **ń**-. Examples with the latter are given in table 81.

Table 80 Commands with **app** +H

verb	*2SG addressee*	*2PL addressee*	*English*
akkarɔ ‘call’	**app-âkkarɔ**	(ɔ)**n-ápp-âkkarɔ**	call again!
ɔcɔ́ʈɔ ‘stand’	**app-ɔcɔ́ʈɔ**	(ɔ)**n-ánt-ɔcɔ́ʈɔ**	wait again!
ɔccɟ́kɔt ‘hear’	**app-ɔccɟ́kɔt**	(ɔ)**n-ápp-ɔccɟ́kɔt**	listen again!
ɔllɔ̂ ‘run’	**app-ɔllɔ̂**	(ɔ)**n-ápp-ɔllɔ̂**	make way again!

The following two examples contrast a verb with Completive ‘again’ and dependent incompletive main verb with a verb with Completive ‘again’ and dependent perfective main verb. The first draws attention to the result of the action, another goat being dead, not so much to the action of the lion. It also implies that the event happened recently. The second draws attention to the action of the lion, not so

much to another goat being dead. The expression makes no claim about when the event occurred. Therefore, in a thetic statement, addition of an adjunct of time is appropriate.

ʈɛpa	**ʈ-ápp-ɔ́kkwɔ́t**	**ɟmɟ́t**	**w-ə́ɽɛk**
lion	C-again:COMPL-kill:DEPINCOMPL	goat	C-some

the lion has again killed a goat (i.e.: another goat is dead from the lion)

ʈɛpa	**ʈ-ápp-ɔ́kkw.át**	**ɟmɟ́t**	**w-ə́ɽek**	**mɛccɪn-tî**
lion	C-again:COMPL-kill:DEPPRFV	goat	C-some	yesterday-you_know

the lion killed a goat again yesterday, you know

The following is an example with Dependent Incompletive **app** +H preceding a dependent perfective main verb. The verb now denotes a future consecutive event:

ɔ-pəllɪn	**p-a.ʈʈɛ**	**nɔ-ɲʊkúl**
PERS-one_of_group	C-leave:INCOMPL	on-children

á-kw-á.nn-ápp-ére.kat	**pə́ɽɪn**	**ɪttɪ**	**m-p-a.ínɛ**	**ʊ́kʊl**
CONJ-3-NEG:DEP-again:DEPINCOMPL-speak:DEPPRFV	finally	that	1-C-go_to:INCOMPL	child

a man will abandon his children and he will never again say ‘I go to my child’ (fr. written essay)

There is an adverb **əttəŋ** ‘again’. This adverb can be used instead of the auxiliary but can also be added to a clause that has a verb with the auxiliary ‘again’:

k-kw-ɔ́kkɔ.ʈé	**əttəŋ**
3-C-do:COMPL	again

s/he has done it again

k-kw-ápp-ɔ́kkɔ̂t
3-C-again:COMPL-do:DEPINCOMPL

s/he has done it again

k-kw-ápp-ɔ́kkɔ́t	**əttəŋ**
3-C-again:COMPL-do:DEPINCOMPL	again

s/he has done it again

12.17. Negation auxiliary

Negation is marked by TAMs of the verb **ɔkárənnɔ** 'let, abstain' functioning as auxiliary verb. As a main verb **ɔkárənnɔ** has a full inflectional paradigm, as an auxiliary verb its inflectional paradigm is reduced. As an auxiliary of negation it has two TAMs, both of which have shortened forms:

Dep. Incompletive **ɔkárənn** +H, shortened: **ɔkánn** +H, **ǎnn** +**H**
Incompletive C-**akárənn** +H, shortened: **akánn** +H, **ǎnn** +H

Main verb stems coming after a negation auxiliary can have the shape of a dependent incompletive TAM-stem or of a dependent perfective TAM-stem. Stems with the (segmental) shape of a dependent incompletive, however, come in two sets of tone patterns: the tone patterns that are expected on the basis of the composing parts, but also an unexpected set of tone patterns. The latter are the same tone patterns as found after the Completive auxiliaries C-**arəkât**/C-**arək**, C-**ántər**/C-**ánt** and C-**áppər**/C-**ápp** (sections 12.14-12.16). It seems then that the negation auxiliaries have grammaticalized to the extent that a former Completive auxiliary (which would have regularly generating the different tone patterns on the main verb stems) has adopted the shape of the Incompletive auxiliary. Moreover, it allows for absence of the concord, so that the formerly Completive auxiliary now has a dependent counterpart. Negated verbs still have the contrast incompletive-completive, but this is now only marked through the tones on the main verb, and no longer segmentally or tonally on the negation auxiliary itself.

Glossing

Synchronically, therefore, main verb stems after a negation auxiliary with tones as after (Completive) C-**arəkât**/C-**arək,** C-**ántər**/C-**ánt** and C-**áppər**/C-**ápp** will be regarded as dependent completive TAM-stems and glossed as DEPCOMPL. Their tones are the only markers of completiveness of the verb. The negation morphemes (synchronically) are no longer incompletives or completives, but only

have a dependency opposition. They will therefore be glossed as NEG vs. NEG:DEP.

Negation auxiliaries are always followed by a dependent TAM-stem: a dependent incompletive, a dependent perfective or a dependent completive. Examples with **ɪmma** 'see', **akkarɔ** 'call', **ɔmʊ́ɲɛ** 'steal' and **ɔkkwɔ̂t** 'kill' follow here.

The longer and shorter forms are free variants. The longest forms, however, do not seem to be used so often. In the Tɔɽəmaṱɔ̂n area the middle form is generally preferred, according to my consultant (JS), while in the Ṱaɽʊ and Ṱɔɽî areas, the shortest forms are very common. In the tables, the names of the TAMs are given in italics.

Table 81 Dependent Negative Incompletive and Negative Incompletive

	Dependent Negative Incompletive: ***ɔkə́rənn*** *+H/****ɔkə́nn*** *+H/****ɔ̌nn*** *+H + dep. incompletive main verb TAM-stem*	*Negative Incompletive:* *C-****a.kə́rənn*** *+H/ C-****a.kə́nn*** *+H/C-****ǎ.nn*** *+H + dep. incompletive main verb TAM-stem*
ɪmma 'see'	**ɔkə́rə́nn-ímma** +H **ɔkə́nn-ímma** +H **ɔ̌nn-ímma** +H	C-**a.kə́rə́nn-ímma** +H C-**a.kə́nn-ímma** +H C-**ǎ.nn-ímma** +H
akkarɔ 'call'	**ɔkə́rə́nn-âkkarɔ** +H **ɔkə́nn-âkkarɔ** +H **ɔ̌nn-âkkarɔ** +H	C-**a.kə́rə́nn-âkkarɔ** +H C-**a.kə́nn-âkkarɔ** +H C-**ǎ.nn-âkkarɔ** +H
ɔmʊ́ɲɛ 'steal'	**ɔkə́rənn-ɔmʊ́ɲɛ** +H **ɔkə́nn-ɔmʊ́ɲɛ** +H **ɔ̌nn-ɔmʊ́ɲɛ** +H	C-**a.kə́rənn-ɔmʊ́ɲɛ** +H C-**a.kə́nn-ɔmʊ́ɲɛ** +H C-**ǎ.nn-ɔmʊ́ɲɛ** +H
ɔkkwɔ̂t 'kill'	**ɔkə́rənn-ɔkkwɔ̂t** **ɔkə́nn-ɔkkwɔ̂t** **ɔ̌nn-ɔkkwɔ̂t**	C-**a.kə́rənn-ɔkkwɔ̂t** C-**a.kə́nn-ɔkkwɔ̂t** C-**ǎ.nn-ɔkkwɔ̂t**

Table 82 Dependent Negative Completive and Completive

Verb	*Dependent Negative Completive:* ***ɔkárənn/ɔkánn/ŏnn*** *+ dependent completive main verb TAM-stem*	*Negative Completive:* *C-**a.kárənn**/C-**a.kánn**/C-**ă.nn** + dependent completive main verb TAM-stem*
ımma ‘see’	**ɔkárənn-ımma** +H **ɔkánn-ımma** +H **ŏnn-ımma** +H	C-**a.kárənn-ımma** +H C-**a.kánn-ımma** +H C-**ă.nn-ımma** +H
akkarɔ ‘call’	**ɔkárənn-akkarɔ** +H **ɔkánn-akkarɔ** +H **ŏnn-akkarɔ** +H	C-**a.kárənn-akkarɔ** +H C-**a.kánn-akkarɔ** +H C-**ă.nn-akkarɔ** +H
ɔmúɲɛ ‘steal’	**ɔkárənn-ɔ́múɲɛ** +H **ɔkánn-ɔ́múɲɛ** +H **ŏnn-ɔ́múɲɛ** +H	C-**a.kárənn-ɔ́múɲɛ** +H C-**a.kánn-ɔ́múɲɛ** +H C-**ă.nn-ɔ́múɲɛ** +H
ɔkkwɔ̂t ‘kill’	**ɔkárənn-ɔ́kkwɔ̂t** **ɔkánn-ɔ́kkwɔ̂t** **ŏnn-ɔ́kkwɔ̂t**	C-**a.kárənn-ɔ́kkwɔ̂t** C-**a.kánn-ɔ́kkwɔ̂t** C-**ă.nn-ɔ́kkwɔ̂t**

Table 83 Dependent Negative Perfective and Negative Perfective

Verb	*Dependent Negative Perfective:* ***ɔkárənn/ɔkánn/ŏnn*** *+ dep. perfective TAM-stem*	*Negative Perfective:* *C-**a.kárənn**/C-**a.kánn**/C-**ă.nn** + dep. perfective TAM-stem*
ımma ‘see’	**ɔkárənn-ımmakat** +H **ɔkánn-ımmakat** +H **ŏnn-ımmakat** +H	C-**a.kárənn-ımmakat** +H C-**a.kánn-ımmakat** +H C-**ă.nn-ımmakat** +H
akkarɔ	**ɔkárənn-akkarat** +H	C-**a.kárənn-akkarat** +H

‘call’	**ɔkánn-akkarat** +H **ǒnn-akkarat** +H	C-**a.kánn-akkarat** +H C-**ǎ.nn-akkarat** +H
ɔmʊ́ɲɛ ‘steal’	**ɔkáránn-ɔ́mʊ́ɲɛkat** +H **ɔkánn-ɔ́mʊ́ɲɛkat** +H **ǒnn-ɔ́mʊ́ɲɛkat** +H	C-**a.káránn-ɔ́mʊ́ɲɛkat** +H C-**a.kánn-ɔ́mʊ́ɲɛkat** +H C-**ǎ.nn-ɔ́mʊ́ɲɛkat** +H
ɔkkwɔ̂t ‘kill’	**ɔkáránn-ɔ́kkwât** **ɔkánn-ɔ́kkwât** **ǒnn-ɔ́kkwât**	C-**a.káránn-ɔ́kkwât** C-**a.kánn-ɔ́kkwât** C-**ǎ.nn-ɔ́kkwât**

The sets below illustrate the different non-dependent TAMs. **pʊl** ‘person’, **ʊkʊl**’ child’ and **pɪŋɪl** ‘snake’ are low-toned nouns. The TAMs in the first set are based on **akkarɔ** ‘call’, in the second on **ɔkkwɔ̂t** ‘kill’. In both sets, the first example has a Negative Incompletive, the second a Negative Completive, the third a Negative Perfective.

pʊl p-a.kánn-âkkarɔ ʊ́kʊl ‘the man does/will not call the child’
pʊl p-a.kánn-akkarɔ ʊ́kʊl ‘the man has not called the child’
pʊl p-a.kánn-akkar.at ʊ́kʊl ‘the man did not call the child’

pʊl p-a.kánn-ɔkkwɔ́t pɪŋɪl ‘the man does/will not kill the snake’
pʊl p-a.kánn-ɔ́kkwɔ́t pɪŋɪl ‘the man has not killed the snake’
pʊl p-a.kánn-ɔ́kkw.át pɪŋɪl ‘the man did not kill the snake’

There are signs of still further grammaticalization of the negation auxiliary. Particularly among speakers who use the shortest form, there is a tendency to use **a** in the dependent form instead of **ɔ**, so that only **ǎnn** (C-**ǎnn**) remains.

Use and scope

To start with, some sentences will be presented with **ɔkárɔnnɔ** ‘let’ as main verb. The verb can express ‘let’ in the sense of ‘allow’, as in the following examples:

pʊl **p-ɔkərə́nnɔ.t**
person C-let:COMPL
the man allowed it

… a-t̪ʊ́ʊlɪ **ɔkə́rənn.at̪-ɔ̂k**
CONJ-hyena let:DEPPRFV-O3
… and the hyena let him (do it) (fr. written story)

The verb can also express 'let' in the sense of 'abstain from':

m-p-ɔká.t **cɪk** **a-n-ɔ́mɛntɛ** **ɪttɪ** **n-ɔkə́rənnɔ** **karrǎ**
1-C-be:COMPL VREF CONJ-1-say.PLUR:DEPINCOMPL that 2A-let:DEPINCOMPL lie
I was saying all the time 'do not lie!'

Negative commands (prohibitives) are formed with the Imperative **kərənní** of **ɔkə́rɔnnɔ**:

kərənnɪ **ɔpə́llɛ**
let:IMP be_afraid:DEPINCOMPL
do not be afraid!

kərənnɪ **ɔɽəkɔ**[75] **cɪk** **n-ʊkʊn** **w-ɔ́-kʊ́rɛ̂**
let:IMP eat:DEPINCOMPL VREF with-hand C-of-left_side
do not eat with your left hand!

For an advice not to do something the Dependent Incompletive auxiliary is used. The two expressions below, in which the 2SG subject clitic **ŋ́-** 'you' is deleted between vowels, differ tonally, due to the use of the subjunctive particle **â-** (first example) vs. the conjunctive particle **á-** (second example). In the first example, the advice has immediate relevance; the addressee is about to begin eating. The advice in the second example is a general advice, for some time in the future.

[75] In this environment the final vowel of **ɔɽəkɔ̂** is realized as low.

á-kənn-ɔʧəkɔ[76]	**cɪk**	**n-ʊkʊn**	**w-ɔ́-kúrê**
SUBJ-(2-)NEG:DEP-eat:DEPINCOMPL	VREF	with-hand	C-of-left_side

you must not eat with your left hand! (the addressee is about to eat)

á-kə́nn-ɔʧəkɔ[77]	**cɪk**	**n-ʊkʊn**	**w-ɔ́-kúrê**
CONJ-(2-)NEG:DEP-eat:DEPINCOMPL	VREF	with-hand	C-of-left_side

you must not eat with your left hand (as a general advice)

If the eating has already started and the speaker wants to stop the addressee, the Dependent Incompletive auxiliary is used directly. Its long form can be glossed as the auxiliary but also as the verb **ɔkə́rənnɔ:**

ɔkə́rənn-ɔʧəkɔ[78]	**cɪk**	**n-ʊkʊn**	**w-ɔ́-kúrê**
NEG:DEP-let:DEPINCOMPL-eat:DEPINCOMPL	VREF	with-hand	C-of-left_side

no eating with your left hand! (while catching the hand of the child)

Further examples illustrating the use of the negation auxiliaries follow here.

Just like the Completive can express a present state or a present sensory perception, a Negative Completive can express negation of a present state or a of present sensory perception:

ɔ-rɔn	**t-ă.nn-ɪmma**	**mɔʧɔŋ**	**ákka**	**ŋíʧímák**	**ŋ-á.ɪk**
PERS-12A	C-NEG-see:DEPCOMPL	mountains	that	darkness	C-be:PR

we cannot see the mountains because it is dark

An example of a Negative Perfective is the following. The sentence does not refer to an event that just happened, but forms part of a series of events that are set in the past.

[76] In this environment the final vowel of **ɔʧəkɔ̂** is realized as low.

[77] In this environment the final vowel of **ɔʧəkɔ̂** is realized as low.

[78] In this environment the final vowel of **ɔʧəkɔ̂** is realized as low.

ɔ-kín	**n̪-á.nn-ɔ́kə́n̪a.kat**[79]	**n̪épa**
PERS-3A	C-NEG-look_at:DEPPRFV	lion

they did not look at the lion

A Negative Perfective does not necessarily refer to an event in the past. It can also refer to a consecutive event in the future, as in the sentence below. Because of the conjunctive particle **á**, which selects a dependent verb, the auxiliary **ɔ̆nn** instead of **ănn** is in principle expected here. This opposition, however, is not for all speakers functional anymore. The negation morpheme was given here with **a**; the speaker confirmed that some people would use **ɔ** here. Note further that there is a double auxiliary on the verb 'speak' (the example was also given in the section 12.6 on 'again').

ɔ-pəllɪn	**p-a.n̪n̪ɛ**	**nɔ-ɲʊkʊ́l**
PERS-one_of_group	C-leave:INCOMPL	on-children

á-kw-á.nn-ápp-ɛ́rɛ.kat[80]	**pə́ɽɪn**	**ɪttɪ**	**m-p-a.ínɛ**	**ʊ́kʊl**
CONJ-3-NEG:DEP-again:DEPINCOMPL-speak:DEPPRFV	finally	that	1-C-go_to:INCOMPL	child

a man will abandon his children and he will never again say 'I go to my child' (fr. written essay)

The following example was given with initial **ɔ** on the negation auxiliary. Here too, there is a double auxiliary on the main verb, but now the negation auxiliary is the second.

məna	**ɔ-nɔn**	**n̪-ánt-ɔkə́nn-ɔccɟ́kɔn̪-ín …**
even	PERS-2A	C-can:INCOMPL-NEG:DEP-hear:DEPINCOMPL-O1

even if you do not listen to me … (John 10:38)

Lumun has no negative adverbs. Hence an English expression with 'never' is negated on the verb in Lumun:

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[79] The tone on the negation morpheme is realized as high in this environment.

[80] After the 3rd person pronoun clitic **kw** the negation morpheme is realized with a high tone, not with a falling tone.

t̪ɪk	**ɛn-t̪-ɪ**	**t̪-ă.nn-íɔ**	**át̪t̪ík**	**(< ɪɔ)**
fire	DEM-C-NEARSP	C-NEG-die:DEPINCOMPL	ever	

this fire will never die

In the English equivalent of the following example, negation is expressed on the verb 'want'. In Lumun it is expressed on the verb **ɔkíttiɲɛ** 'destroy for':

m-p-ɔŋɔt̪.é	**ɪttɪ**	**ól**
1-C-like:COMPL	that	people

w-ă.nn-ɔkíttiɲɛ	**niɲ**	**kéccúk**	**k-íɲ**
C-NEG-destroy_for:DEPINCOMPL	O1A	market	C-POSS1A

I do not want people to destroy our market (lit.: I want that people do not destroy for us our market)

Negation can, however, also be expressed on 'want', as in the next example. Combined with negation, the verb **aŋkɔt** 'want, agree' is used, not **ɔŋɔt** 'like, want, love'.

m-p-ă.nn-aŋkɔt	**ɪttɪ**	**ɔ-rɪt**	**t̪-áppʊt̪a**	**pə́ɽɪn**
1-C-NEG-want:DEPINCOMPL	that	PERS-12	C-play:INCOMPL	finally

I don't want to play with you (SG) anymore (I don't want that you and I play anymore)

A negated construction with 'be' is used in order to establish scope over a noun phrase:

ɔkə́nn-ɔ́ká	**papɔkɪra**	**akk-ɔkiccé.r-ʊŋ**
NEG:DEP-be:DEPCOMPL	leopard	FOC-chase:COMPL-O2

it was not a leopard that chased you

Inherently negative verbs

A few verbs are inherently negative: **ɔmmâ** 'not know', **ɛlla** (tr.) 'not have, lack', **ɛlla** (intr.) 'be absent, lack' and **əɽa** 'refuse, not want'. With a negation auxiliary these verbs express strong affirmation (assertive focus). Two examples in different TAMs (Negative

Incompletive and Negative Completive) are given with **ɔmmâ** ‘not know’. The Negative Completive expresses a present state.

m-p-a.kə́nn-ɔmmá	**akka**	**a-n-ɔkkɔ́t**	**ŋərɛ**
1-C-NEG-not_know:DEPINCOMPL	that	CONJ-1-do:DEPINCOMPL	work

I *will* know how to do the work (lit.: I will not not know how to do the work. Conveying: I will find out, I will learn)

m-p-a.kə́nn-ɔ́mmá	**akka**	**a-n-ɔkkɔ́t**	**ŋərɛ**
1-C-NEG-not_know:DEPCOMPL	that	CONJ-1-do:DEPINCOMPL	work

I *do* know how to do the work

12.18. Irrealis

Irrealis is marked by the auxiliary **ɔ̂**. The auxiliary occurs in two forms, a dependent form and a non-dependent form. The non-dependent form is always preceded by a concord (unless replaced by a focus marker), the dependent irrealis marker cannot be preceded by a concord:

ɔ̂	(dependent)
C-**â**	(non-dependent)

The dependency value will only be marked on the dependent irrealis marker (IRR:DEP).

The irrealis morpheme precedes a (non-dependent!) completive or a past TAM-stem of the main verb. Thus, in combination with the irrealis marker, the completive and past TAM stems are not immediately preceded by a concord. Apart from focus constructions, in which the concord is replaced by a focus marker, this is the only (morpho-syntactic) environment where this happens.

Irrealis **ɔ̂** coalesces with the initial vowel of the completive of past TAM-stem of the main verb that follows. This results in **i̧**, **î**, **û**, **ô**, **ɔ̂**, or **â**. Irrealis **ɔ̂** before **ə** results in **ɔ́ə.** Coalesced vowels with a contour can be pronounced with some length.

Irrealis **â** is realized as **á** before the vowels **ị**, **ɪ**, **u**, **ʊ** and **ə**, resulting in diphthong **áị**, **áɪ**, **áu**, **áʊ** and **áə**. The falling contour of the irrealis marker spreads over the vowel sequence. Irrealis **â** before **a** and **ɔ** is realized as **â**. **â** coalesces with an initial vowel **ɛ**, resulting in **ê**.

The **ɔ̂/â** opposition that functions as marker of dependency versus non-dependency shows that irrealis developed from an **ɔ**-initial verb. In such verbs the same opposition is found in the dependent incompletive TAM-stem versus the incompletive TAM-stem. The irrealis possibly developed from **ɔkâ** 'be'. It lacks the segmental part **ka** of 'be', but the same goes for the copula C-**á** and the Present TAM of 'be', C-**aîk**.

In environments that select a dependent TAM-stem, for example after a negation auxiliary, the irrealis marker in principle occurs as **ɔ̂**. When the irrealis marker is directly preceded by both a subject and a concord, only its non-dependent form **â** is possible.

Table 84 Dependent Irrealis Completive and Irrealis Completive

verb	*Dependent Irrealis Completive:* ***ɔ̂*** *+ completive TAM-stem*	*Irrealis Completive:* C-***â*** *+ completive TAM-stem*
ɪmma 'see'	**îmmâ.t**	C-**á-ɪmmâ.t**
ʊnɔ 'build'	**ûnɔ́.t**	C-**á-ʊnɔ́.t**
ɔkkwɔ̂ 'hit'	**ɔ̂kkwɔ́.t**	C-**âkkwɔ́.t**
ɔkkwɔ̂t 'kill'	**ɔ̂kkwɔ̰t.é**	C-**âkkwɔ̰t.é**
ɛrɛ 'speak'	**êrê.t**	C-**êrê.t**
ərrɔ 'push'	**ɔ́-ərrɔ̂.t**	C-**á-ərrɔ̂.t**
apɔ 'fall'	**âpɔ̂.t**	C-**âpɔ̂.t**
aɔ 'come'	**âá.t**	C-**âá.t**

Table 85 Dependent Irrealis Past and Irrealis Past

verb	*Dependent Irrealis Past:* ***ɔ̂*** *+ past TAM-stem*	*Irrealis Past:* *C-**â** + past TAM-stem*
ɪmma ‘see’	**îmma.káɲɛ**	C**-á-ɪmma.káɲɛ**
ʊnɔ ‘build’	**ôn.áɲɛ**	C**-á-ʊn.áɲɛ**
ɔkkwɔ̂ ‘hit’	**â.kkw.áɲɛ**	C**-âkkw.áɲɛ**
ɔkkwɔ̂t ‘kill’	**â-kkw.áɲɛ**	C**-âkkw.áɲɛ**
ɛrɛ ‘speak’	**êrɛ.káɲɛ**	C**-êrɛ.káɲɛ**
ərrɔ ‘push’	**ɔ́-ərrá.ɲɛ**	C**-á-ərrá.ɲɛ**
apɔ ‘fall’	**âp.áɲɛ**	C**-âp.áɲɛ**
aɔ ‘come’	C**-âkka.káɲɛ**	C**-âkka.káɲɛ**

Some speakers use **â** in morpho-syntactic contexts where (dependent) **ɔ̂** would be expected. An example is the following. The irrealis marker comes after the negation auxiliary, which selects a dependent verb form. Nevertheless, **â** was used:

pʊl **p-a.kə́nn-á-ɛɔ̂.t**
person C-NEG-IRR:DEP-go:COMPL
the man should not have gone

Another case is the following in which irrealis **ɔ̂** is expected, but in which **â** was considered possible as well. The initial vowel of the past TAM stem of the main verb is **ɔ** (the verb is **ɔmmâ** ‘not know’).

m-p-a.kə́nn-ɔ́-ɔmma.káɲɛ́ / m-p-a.kə́nn-á-amma.káɲɛ́
1-C-NEG-IRR:DEP.not_know:PST / 1-C-NEG-IRR:DEP-not_know:PST

ɔ́ɽə́kɔ́	**ɲʊ́ɽít**	**ámmá**	**ɔ́-ɪáɪa**	**p-ɔká.t**	**p-ɔŋkɛ́né.r-ín**
eat:DEPINCOMPL	food	if	PERS-my_mother	C-be:COMPL	C-show:COMPL-O1

I *would* have known how to eat food, if my mother had taught me (lit.: I would not have not known …)

It seems then, that, at least in the speech of some speakers, the irrealis marker is in a process of further grammaticalization, losing its dependency/non-dependency distinction. The same process is witnessed, at least for part of the speakers, in the negation auxiliaries (see 12.17).

Meaning and use

The irrealis marker can express that an event did not happen, while conveying that this is regretted by the speaker:

ŋ-kw-é-ɛlɪkkɔ́.t	**pʊ́l**	**ém-p-í**
2-C-IRR-release:COMPL	person	DEM-C-NEARSP

you should have released this man (i.e. you did not release this man, but it would have been better if you had)

In sentences which contain a clause introduced by **ámma** +H 'if, when', the irrealis marker is not used on the verb in the **ámma** +H -clause, only on the verb in the main clause. In the examples below, the irrealis conveys that the event would have occurred if the situation had been different.

ámmá	**ŋ́-kw-ɔ́ká.t**	**p-áppə́r-ɔ́mʊ́ɲɛ**	**ana**	**ŋ-kw-á-ɪɔ́.t**
if	2-C-be:COMPL	C-again:COMPL-steal:DEPINCOMPL	and	2-C-IRR-die:COMPL

if you would have stolen again, you would have died/be dead.

ɔ-nin̰	**n̰-á-aká.t**	**cɪk**	**tɔ́rrʊ́**	**ínɛ́nní**
PERS-12	C-IRR-be:COMPL	VREF	Lumun_country	today

ámmá	**n̰ɔ́ɽák**	**n̰-éllâ.t**
if	war	C-be_absent:COMPL

we would be in the Lumun area now, if the war had not been there

The following example has the dependent irrealis **ɔ̂**. It is the first verbal element in a clause introduced by the conjunctive marker **á**. In this environment the dependent form is selected:

ámmá **ḿ-p-á.p-p-ɪná.t** **a-n-ɔ́-ɔkkwɔt̪-úŋ**
if 1-C-be:COMPL-C-know:COMPL CONJ-1-IRR:DEP-kill:COMPL-O2

if I had known, I would have killed you

In my corpus, the Irrealis Completive is more frequent than the Irrealis Past. It is often difficult to establish a clear difference in interpretation between the two. Generally speaking, the Irrealis Past tends to draw the attention more strongly to the action or event itself while the Irrealis Completive tends to focus rather on the resulting situation. The sentence below, with an Irrealis Past, was first given with an Irrealis Completive, but is fine with both.

k-kw-é-ɛlɪkk.áṭ̪é **pól** **ém-p-í**
3-C-IRR-release:PST person DEM-C-NEARSP

a-kw-ɔ́kərənnɔ **ɪ-p-ɛlɪkkákɔ.t**
CONJ-3-let:DEPINCOMPL RES-C-be_released:COMPL

s/he should have released this person, while leaving the one who was released (or: s/he should have released this person and not the one who was released)

Irrealis can alternatively be expressed with a Completive of the verb **ɔnâ** 'bring' (second example below) or with a Past Completive construction involving the defective verb C-**ɔnô** 'have' (third example below).

ŋ-kw-á-accɻkɔ́t̪-ín
2-C-IRR-hear:COMPL-O1

you should have listened to me

ŋ-kw-ɔná.t **ɪttɪ** **ŋ-kw-a.ccɻkɔt̪-ín**
2-C-bring:COMPL that 2-C-hear:INCOMPL-O1

you should have listened to me

ŋ-kw-á.p-p-ɔ́nó **ɪttɪ** **ŋ-kw-a.ccɻkɔt̪-ín**
2-C-be:COMPL-C-have that 2-C-hear:INCOMPL-O1

you should have listened to me

The above given constructions with **ɔnâ** ‘bring’ and C-**ɔnô** ‘have’ can also be combined with an Irrealis Completive:

ŋ-kw-ɔná.t	**ɪttɪ**	**ŋ-kw-á-accḭkɔ́.ṯ-ín**
2-C-bring:COMPL	that	2-C-IRR-hear:COMPL-O1

you should have listened to me

ŋ-kw-á.p-p-ɔ́nó	**ɪttɪ**	**ŋ-kw-á-accḭkɔ́.ṯ-ín**
2-C-be:COMPL-C-have	that	2-C-IRR-hear:COMPL-O1

you should have listened to me

C-**ɔnô** ‘have’, which is undoubtedly related to **ɔnâ** ‘bring’, is further discussed in section 12.22 of this chapter.

12.18.1. Combinations of irrealis with some other auxiliaries

In case of other auxiliaries forming part of the verbal complex, the irrealis auxiliary always comes closest to the main verb, selecting a (non-dependent) completive or perfective TAM-stem.

Some examples of negation and irrealis follow here:

pʊl	**p-a.kə́nn-á-akkakáṯɛ**	**pəɽɪn**	**ákka**	**cɪk**	**c-ɛ̂.t**
person	C-NEG-IRR:DEP-come:PST	finally	that	VREF	C-go:COMPL

the man should not have come anymore because it was too late

pʊl	**p-a.kə́nn-í-ɪmma.káṯɛ́**	**nḭ́n**	**ámmá**	**ɔ́-nḭ́n**	**ṯ-á.kə́nn-akkarɔ̂-k**
person	C-NEG-IRR:DEP-see:PST	1A:O	if	PERS-1A	C-NEG-call:DEPCOMPL-O3

the man would not have seen us if we had not called him

k-kw-á.nn-ɔ́-ɔkərə́nnɔ́.t	**pʊ́l**	**á-p-ânṯán**
3-C-NEG-IRR:DEP-let:COMPL	person	SUBJ-PRO-come:DEPINCOMPL

s/he should not have allowed the person to come

ámmá	**ḿ-p-á.p-p-ɪná.t**	**á-n-ɔkə́nn-ɔ́-ɔkkwɔṯ-ɔ̂k**
if	1-C-be:COMPL-C-know:COMPL	SUBJ-1-NEG:DEP-IRR:DEP-kill:COMPL-O3

if I had known, I would not have killed him

The following is an example of C-**ánt** 'can' and irrealis. C-**ánt** is probably completive here, but this cannot be seen from the tones. The clause expresses that the opportunity was there to call and the subject should have called according to the speaker, but he did not.

k-kw-ánt-á-akkarɔ̂.t (< **k-** + **p-** + **ánt-** + **ɔ̂-** + **akkarɔ̂t**)
3-C-can:COMPL-IRR:DEP-call:COMPL

he should have called

The following statement combines C-**árək** and irrealis. C-**árək** is probably a completive form, though it cannot be seen from the tones. It is said just after finding a man in the house:

pʊ̀l	**p-árək-ɔ́-ɔmʊŋɛ́.t**
person	C-as_always:COMPL-IRR:DEP-steal:COMPL

ámmá	**ŋ̀kʊ̀l**	**ŋ-ɛllâ.t**	**t.ʊan**
if	children	C-be_absent:COMPL	at_house

the man would surely have stolen, if the children had not been at home (because the man always steals if he has the opportunity).

12.19. C-**íra** 'should'

C-**íra** 'should', which is always preceded by a concord, has one form only. It can be combined with an Incompletive or an Irrealis Completive:

C-**íra** C-incompl stem
C-**íra** C-IRR-completive stem

Since it can only be combined with non-dependent verbs, it is of no consequence whether or not it would itself have a floating high tone. A non-dependent verb has a high (or falling) tone itself and a preceding high tone will not manifest itself on it.

In combination with an Incompletive, the construction expresses that something should (still) happen, in other words that the stated event did not yet take place and perhaps even will not take place, but that, according to the speaker, it would be better if it did:

ŋ-kw-íra	**p-ɛ́lıkkɔ**	**pól**	**ɛ́m-p-í**
2-C-should	C-release:INCOMPL	person	DEM-C-NEARSP

you should release this man

ɔ-kín	**t̪-íra**	**t̪-a.nán-ʊŋ**	**lɔ́n**	**appık**
PERS-3A	C-should	C-bring_to:INCOMPL-O2	words	all

they should explain everything to you

At least in some cases in which an Irrealis Completive is used, C-**íra** can be added, apparently without change of meaning. Like their counterparts without C-**íra** (see chapter 12.18), the examples below express that something did not happen, while conveying the speaker's view that it would have been better if it had.

ŋ-kw-íra	**p-ɛ́-ɛlıkkɔ́.t**	**pól**	**ɛ́m-p-í**
2-C-should	C-IRR-release:COMPL	person	DEM-C-NEARSP

you should have released this man

ɔ-kín	**t̪-íra**	**t̪-á-anán-ʊŋ**[81]	**lɔ́n**	**appık**
PERS-3A	C-should	C-IRR-bring_to:COMPL-O2	words	all

they should have explained everything to you

C-**íra** can also serve as a main verb. It is then followed by **akka** 'that', functioning as a complementizer, and a Dependent Incompletive verb:

ŋ-kw-íra	**akka**	**ɔccɟ́kɔt**
2-C-should	that	hear:DEPINCOMPL

you should listen!

Negation is expressed on the main verb, not on C-**íra**:

[81] The completive TAM-stem of the benefactive derivation **ɔnánɛ** 'bring to' is **ɔnánɛt**. Plural (consonant-initial) object pronominal clitics come after the TAM-stem (for example **ɔnánɛt-tɔ́n** 'brought for us'); singular (vowel-initial) object pronominal clitics, however, replace the ending **ɛt** of the completive TAM-stem of a benefactive verb, for example **ɔnán-úŋ** 'brought for you'.

k-kw-íra **p-ă.nn-ɔkárənnɔ** **púl** **á-p-ânn̰án**
3-C-should C-NEG-let:DEPINCOMPL person SUBJ-C-come:DEPINCOMPL
he should not allow the man to come

12.20. Itive and ventive

Lumun has an itive auxiliary **ɔ́n̰** and a ventive auxiliary **an̰**. Both have a dependent incompletive TAM-stem, a (non-dependent) incompletive TAM-stem and a completive TAM-stem. In addition, ventive **ɔn̰** has an imperative TAM-stem. The forms are given in the table. The itive and ventive completive TAM-stems are precisely the same, also as to their tonal behaviour.

Table 86 Itive and ventive TAM-stems

TAM-stem	*itive*	*ventive*
dependent incompletive	**ɔ́n̰**	**an̰**
incompletive	**án̰**	**an̰**
completive	**ânn̰n̰**	**ânn̰n̰**
imperative	**n̰**	-

I represent the completive itive/ventive TAM-stem **ânn̰n̰** with a falling tone, since, in context, it is always realized with a high tone and does not bring a high tone to the following element. The tonal representation of the dependent incompletive and incompletive TAM-stems is only tentative. Examples of their realization as part of verbal words are presented in the tables 87-90 and in the example sentences in this chapter.

The incompletive and completive TAM-stems are preceded by a concord, thus: itive incompletive C-**án̰**, ventive incompletive C-**an̰**, and itive/ventive completive C-**ânn̰n̰**. The dependent forms (itive **ɔn̰**, ventive **an̰**) occur in environments that would select a dependent incompletive or a dependent perfective TAM-stem. The dependency opposition in the itive and ventive auxiliaries is fully functional.

The dependent incompletive and incompletive itive and ventive auxiliaries select a dependent incompletive or a dependent perfective TAM-stem of the main verb. The completive auxiliary **ânn̰n̰** (whether

receiving an itive or a ventive interpretation) selects a completive TAM-stem. **âṭṭ** is further discussed in 12.20.1.

The tables below present dependent and non-dependent itive and ventive verbs. The tones are given as they would be when the verb is preceded by a subject that does not influence the tones of the verb, for example **pʊl** 'person'.

Table 87 Dependent Itive Incompletive and Itive Incompletive

	Dep. Itive Incompletive ***ɔ́ṭ*** *+ dep. incompletive TAM-stem*	*Itive Incompletive* C-***á.ṭ*** *+ dep. incompletive TAM-stem*
ɪmma 'see'	**ɔṭ-ímma** +H	C-**a.ṭ-ímma** +H
akkarɔ 'call'	**ɔṭ-âkkarɔ** +H	C-**a.ṭ-âkkarɔ** +H
ɔmʊ́ɲɛ 'steal'	**ɔṭ-ɔmʊ́ɲɛ** +H	C-**a.ṭ-ɔmʊ́ɲɛ** +H
ɔkkwɔ̂t 'kill'	**ɔṭ-ɔkkwɔ̂t**	C-**a.ṭ-ɔkkwɔ̂t**

Table 88 Dependent Itive Perfective and Itive Perfective

	Dep. Itive Perfective ***ɔ́ṭ*** *+ dep. perfective TAM-stem*	*Itive Perfective* C-***á.ṭ*** *+ dep. perfective TAM-stem*
ɪmma 'see'	**ɔṭ-ímmakat** +H	C-**a.ṭ-ímmakat** +H
akkarɔ 'call'	**ɔṭ-âkkarat** +H	C-**a.ṭ-âkkarat** +H
ɔmʊ́ɲɛ 'steal'	**ɔṭ-ɔmʊ́ɲɛkat** +H	C-**a.ṭ-ɔmʊ́ɲɛkat** +H
ɔkkwɔ̂t 'kill'	**ɔṭ-ɔkkwât**	C-**a.ṭ-ɔkkwât**

Table 89 Dependent Ventive Incompletive and Ventive Incompletive

	Dep. Ventive Incompletive ***aṭ*** *+ dep. incompletive TAM-stem*	*Ventive Incompletive* C-***âṭ*** *+ dep. incompletive TAM-stem*
ɪmma 'see'	**aṭ-ɪmma** +H	C-**áṭ-ɪmma** +H

akkarɔ ‘call’	**aṉ-akkarɔ** +H	C-**áṉ-akkarɔ** +H
ɔmʊ́ɲɛ ‘steal’	**aṉ-ɔmʊ́ɲɛ** +H	C-**áṉ-ɔmʊ́ɲɛ** +H
ɔkkwɔ̂t ‘kill’	**aṉ-ɔkkwɔ̂t**	C-**áṉ-ɔkkwɔ̂t**

Table 90 Dependent Ventive Perfective and Ventive Perfective

	Dep. Ventive Perfective ***aṉ*** *+ dep. perfective TAM-stem*	*Ventive Perfective* *C-**âṉ** + dep. perfective TAM-stem*
ɪmma ‘see’	**aṉ-ɪmmakat** +H	C-**áṉ-ɪmmakat** +H
akkarɔ ‘call’	**aṉ-akkarat** +H	C-**áṉ-akkarat** +H
ɔmʊ́ɲɛ ‘steal’	**aṉ-ɔmʊ́ɲɛkat** +H	C-**áṉ-ɔmʊ́ɲɛkat** +H
ɔkkwɔ̂t ‘kill’	**aṉ-ɔkkwât**	C-**áṉ-ɔkkwât**

Ventive **aṉ** may have developed from **aɔ** ‘come’, itive **ɔ́ṉ** from **ɛ̂ɔ̂** ‘go’, but where **ṉ** has come from is not clear.

Use of the itive and ventive auxiliaries

The itive and ventive auxiliaries are used when an action takes place at a location that is different from where the performer of the action is at the time of speech (the performer has or had to go somewhere to perform the action) or, when the location where he performs the action is different from where he was or will be before (he will have to come, or has had to come, to the location first). Whether a movement is viewed as itive or ventive depends on the position of the deictic centre. In case of speech participants (first and second persons), the deictic centre lies with the speaker. In case of third persons, the storyteller will typically change the deictic centre from one participant to another, and he may put the deictic centre with himself, as if he himself were located somewhere in the scene. Generally, the use of an itive or ventive auxiliary is obligatory when an action involves movement to or from another place.

Itive and ventive with dependent incompletive TAM-stem

Two examples of itive **ɔ́n̪** combined with a dependent incompletive TAM-stem of the main verb are given here. The first has the non-dependent incompletive TAM-stem **án̪**, the second the dependent incompletive **ɔ́n̪**.

m-p-a.n̪-ɔkákɔt	**ɪ-aləpapór**	**ŋɔrrɔt**
1-C-IT:INCOMPL-grind_at:DEPINCOMPL	in-mill	tomorrow

I will go and grind at the mill tomorrow

m-p-a.ɛ́ɔ̃	**a-n-ɔn̪-ɔkákɔt**	**ɪ-aləpapôr**
1-C-go:INCOMPL	CONJ-1-IT:DEPINCOMPL-grind_at:DEPINCOMPL	in-mill

I must go and grind at the mill (I am going now)

Ventive **an̪** is used in the following two examples. The second has two auxiliaries on the main verb, with the ventive as the second:

m-p-án̪-ɔkákɔ	**ŋɔ̂rrɔt**
1-C-VEN:INCOMPL-grind:DEPINCOMPL	tomorrow

I will come and grind tomorrow (the speaker is at the mill, maybe she came to check if it is working, she will go home and return tomorrow)

m-p-ápp-án̪-ɔkákɔ	**ŋɔ̂rrɔt**
1-C-again:INCOMPL-VEN:DEPINCOMPL-grind:DEPINCOMPL	tomorrow

I will come and grind again tomorrow (the speaker is at the mill, she is (or has been) grinding there)

The following two examples contrast a non-dependent itive and ventive followed by a dependent incompletive TAM-stem.

ŋ-kw-a.n̪-ɔʃəkɔ̂

2-C-IT:INCOMPL-eat:DEPINCOMPL

you (must) go and eat (the speaker is not at the place where the food is, the addressee must move away from the speaker)

ŋ-kw-án̪-ɔʃəkɔ̂

2-C-VEN:INCOMPL-eat:DEPINCOMPL

you (must) come and eat (the speaker is at the place where the food is, the addressee must come to where the speaker and the food are)

The next two examples contrast a dependent itive and ventive followed by a dependent incompletive TAM-stem:

ɔmɛṱ.ɛ	**kín**	**á-kín**	**ɔ́ṱ-ɔ́míccɔ**	**ɔ-nnân**
tell:IMP	O3A	SUBJ.PERS-3A	IT:DEPINCOMPL-greet:DEPINCOMPL	PERS-mother

tell them to go and greet their mother (the mother is not where the speaker is)

ɔmɛṱ.ɛ	**kín**	**á-kɪn**	**aṱ-ɔmíccɔ**	**ɔ-nnân**
tell:IMP	O3A	SUBJ.PERS-3A	VEN:DEPINCOMPL-greet:DEPINCOMPL	PERS-mother

tell them to come and greet their mother (the mother is where the speaker is)

Itive and ventive with dependent perfective TAM-stem

In the following examples the consecutive action (that takes place at a location where the subject first had to go) is expressed with an itive auxiliary and a dependent perfective TAM-stem:

a-mʊ́ṱá	**ɔ́rə́p.át**	**ṱəmən-ṱəmən**
CONJ.PERS-Amʊṱa	jump_down:DEPPRFV	quickly-REDUP

a-kw-ɔ́ṱ-áʊkkwat	**lḭcɔ́k**
CONJ-3-IT:DEPINCOMPL-drive_in_different_direction:DEPPRFV	goats

Amʊṱa moved down quickly (jumping down) and drove the goats in a different direction (fr. written story)

a-kw-ɔ́ɪŋkat	**ɪttɪ**	**k-kw-á.ɛ́ɔ̂́**	**t.ʊ́án**
CONJ-3-go:DEPPRFV	that	3-C-go:INCOMPL	at_house

a-kw-ɔ́ṱ-íat	**pḭcɛ**	**p-ɔɽɛ**	**pə́ɽɪn**
CONJ-3-IT:DEPINCOMPL-find:DEPPRFV	tree(sp)	C-red	finally

and she got on her way home and she found then a *pice*-tree with very ripe fruits (lit. a very ripe *pice*-tree) (fr. written story)

A clause with a form of the verb **ɛɔ̂** 'go' or **aɔ** 'come' often precedes a verb with an itive or ventive auxiliary, drawing stronger attention to the movement that is required in order to carry out the action at a different location than where the performer is (or was). The itive or ventive auxiliary cannot be omitted in such cases.

m-p-a.ɪk	**p-a.ɛ̃ɔ̃**	**p-a.n̪-ít̪t̪ɔ**	**ʊá**
1-C-be:PR	C-go:INCOMPL	C-IT:INCOMPL-pick:DEPINCOMPL	fruit(sp)

I am going to pick *ʊa*-fruits

ɔ-nnɛ	**p-a.ɪk**	**p-âkkarɔ**
PERS-your_mother	C-be:PR	C-call:INCOMPL

ɪttɪ	**ŋ-kw-ânn̪an**	**á-n̪-ɔɽəkɔ**	**ŋuɽû**
that	2-C-come:INCOMPL	SUBJ-(2-)VEN:DEPINCOMPL-eat:DEPINCOMPL	asida

your mother is calling you to come and eat asida

In the following example the deictic centre lies at the house of the man who performs the actions. He goes to the market to buy engine oil and comes back to his house to treat his chicken with the oil. The going is expressed with a main verb and with the itive auxiliary, the coming back only with the ventive auxiliary.

pʊl	**p-ɔɪŋkán̪ɛ**	**n̪allan̪t̪a**
person	C-go:PST	market

á-p-ɔ́n̪-ɔ́kérɔ	**ŋaak**	**ŋ-ɔ́-n̪ʊrʊmpíl**
SUBJ-PRO-IT:DEPINCOMPL-trade:DEPINCOMPL	oil	C-of-car

á-kw-an̪-ɪpɪnn̪ɛt[82]	**n̪akʊɽʊk**	**ɪ-ʊɽəccô**
SUBJ-3-VEN:DEPINCOMPL-dig_for:DEPINCOMPL	chicken	in-feathers

the man went to the market to buy engine oil in order to put it between the feathers of the chicken (lit.: in order to come and put it …) (fr. written story)

In the next example, **ɛ̃ɔ̃̃** ‘go’ itself has an itive auxiliary:

pʊl	**p-ɔ-nɔppət**	**p-əɽa.káɲɛ**	**nɔ-ppan**
person	C-of-Nɔppət	C-refuse:PST	on-room

a-p-ɔ́n̪-ɛ́ɔ̃̃	**í-mán**	**m-ɔ́-ttɪt**
CONJ-C-IT:DEPINCOMPL-go:DEPINCOMPL	in-house	C-of-granary

the person of Nɔppət did not go into the house but went into the granary (fr. written story)

[82] A high tone is in principle expected on the dependent ventive auxiliary, because of the 3SG pronominal proclitic. It is not realized, however, due to the subjunctive particle **â-**.

In a chain of clauses, the deictic centre does not need to stay fixed. In the following example, the perspective changes from the place from where the man left to the place where he arrived:

a-pól	**ɔ́íŋkat**	**a-p-áṯ-ɔkér.at**
CONJ-person	go:DEPPRFV	CONJ-PRO-VEN:DEPINCOMPL-trade:DEPPRFV

and the man went and he came to buy it

The verb **ɪɔt** ‘find’ is a special because an itive or ventive auxiliary is often obligatory also when there is no spatial movement involved, as in the example below. The speaker is sitting at a place and not moving. It seems that whenever **ɪɔt** is not the first verb in a verbal sequence, an itive or ventive auxiliary is used.

… a-n-íkk.at	**cɪk**	**pá.p.ɔ́ttɛ́**	**a-n-ɔṯ-í.at**
CONJ-1-sit:DEPPRFV	VREF	short_time	CONJ-1-IT:DEPINCOMPL-find:DEPPRFV

a-n-íɽɪmat	**n.tɪ**	**ɪ-kíʒt**
CONJ-1-become_blind:DEPINCOMPL	from	in-eyes

and I sat for a while and I found that I was getting blind

An example with ‘find’ and a (dependent) ventive auxiliary is the following:

ámmá	**ɔ́-rón**	**ṯ-áá.t**	**məna**	**aṯ-ɪ.at …**
if	PERS-12A	C-come:COMPL	until	VEN:DEPINCOMPL-find:DEPPRFV

when we will find it … (lit.: when we will have come to come find it … : the speakers will come back to the place where they are now to try and find something they expect to be there)

Commands with an itive auxiliary

Itive **ɔ́ṯ** has an imperative TAM-stem: **ṯ**. Imperative **ṯ** is followed by the dependent incompletive TAM-stem of the main verb. Imperative **ṯ** comes with a high tone, as shown in the example below with the low-toned verb **ɔŋɔkɔ** ‘rest’.

ṭ-ôŋɔkɔ
IT:IMP-rest:DEPINCOMPL

go and rest! (to singular addressee)

ṭ-ípın-ın	**mɛ́n**	**á-n-áṭ-ịkkɔ**
IT:IMP-pick_for:DEPINCOMPL-O1	palm_fruits	SUBJ-1-VEN:INCOMPL-drink:INCOMPL

pick palm fruits for me so that I come and eat them!

The ventive auxiliary does not have an imperative TAM-stem. Commands to a singular addressee with 'come' are expressed with the Imperative of **aɔ** 'come' followed by the conjunctive particle **á** + main verb with ventive auxiliary:

aɽık	**áṭ-ıkkınɛ**[83]	**ɔ-ıáıa**	**cık**	**pá.p.ɔ́ttê**
come:IMP	CONJ.(2.)VEN:DEPINCOMPL-wait_for:DEPINCOMPL	PERS-mother	VREF	short_time

come and wait a little time for my mother! (fr. written story)

A combination of the Imperative of **ɛ̃̂** 'go', the conjunctive particle **á** and a dependent incompletive itive auxiliary and main verb are possible as well when addressing a singular person:

ŋkɔ	**áṭ-ɔcúrɔt**[84]	**ı-a-âk**
go:IMP	CONJ.(2.)IT:DEPINCOMPL-meet:DEPINCOMPL	in-PERS-3

go to meet him/her!

Commands to a plural addressee, whether itive or ventive, use a 2PL addressive pronominal proclitic or pronoun (see 6.5), followed by a dependent incompletive auxiliary and main verb, for example:

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[83] The conjunctive particle **á** seems involved here. The 2SG pronoun clitic **ŋ́** is deleted between vowels. Derivation: **á** + **ŋ́** + **aṭ-ıkkınɛ** > **aáṭıkkınɛ** > **ăṭıkkınɛ** > **áṭıkkınɛ**.

[84] The conjunctive particle **á** seems involved here. The 2SG pronoun clitic **ŋ́** is deleted between vowels. Derivation: **á** + **ŋ́** + **ɔṭ-ɔcúrɔt** > **aáṭ-ɔcúrɔt** > **ăṭ-ɔcúrɔt** > **áṭ-ɔcúrɔt**. In this analysis, the itive dependent incompletive stem receives a high tone.

ɔn-ɔt̪-ɔ̂ŋɔkɔ
2A-IT:DEPINCOMPL-rest:DEPINCOMPL

go and rest! (to plural addressee)

n-át̪-ɪkkɪɛ-nɟn **cîk**
2A-VEN:DEPINCOMPL-make_sit:DEPINCOMPL-O1A VREF

come and make us sit together! (to family members, in order to mediate in a conflict)

12.20.1. The completive itive/ventive auxiliary C-**ât̪t̪**

The Completive auxiliary C-**ât̪t̪** can precede a dependent perfective TAM-stem of a main verb and a TAM-stem that has the segmental shape of a dependent incompletive with the tones that are found after the (completive) auxiliary verbs C-**arəkât**, C-**ántər**, C-**áppər** (and their shortened variants) and after the negation auxiliaries when a completive tense is expressed. In the latter case, I call these stems 'dependent completive', as explained in 12.17. In the other cases they are simply dependent incompletive TAM-stems, since their tones follow regularly from the preceding (not-shortened) auxiliaries.

Also in the case of C-**ât̪t̪**, the tones are regularly generated: no tone on low stems, since verbs with a final falling tone do not bring a high tone to a next element, and tone bridge in case the verb has a high (of falling) tone itself. I therefore conclude that the completive auxiliary C-**ât̪t̪** combines with the dependent incompletive TAM-stem. As will be seen in the examples, this is also consistent with the meaning of these TAMs. The forms are given in the table below. I call the TAMs Itive/Ventive Completive and Itive/Ventive Past Perfective, respectively. The latter must be distinguished from the Itive Perfective and the Ventive Perfective.

Table 91 Itive/Ventive Completive and Itive/Ventive Past Perfective

	Itive/Ventive Completive C-**ât̪t̪** + *dep. incompletive TAM-stem*	*Itive/Ventive Past Perfective* C-**ât̪t̪** + *dep. perfective TAM-stem*
ɪmma 'see'	C-**át̪t̪-ɪmma** +H	C-**át̪t̪-ɪmmakat** +H
akkarɔ 'call'	C-**át̪t̪-akkarɔ** +H	C-**át̪t̪-akkarat** +H
ɔmʊ́ɲɛ 'steal'	C-**át̪t̪-ɔ́mʊ́ɲɛ** +H	C-**át̪t̪-ɔ́mʊ́ɲɛkat** +H
ɔkkwɔ̂t 'kill'	C-**át̪t̪-ɔ́kkwɔ̂t**	C-**át̪t̪-ɔ́kkwât**

Itive/ventive C-**ât̪t̪** has probably developed along two lines, which have resulted in one and the same morpheme. The itive auxiliary is likely to have developed from the Completive TAM of **ɛ̂ɔ̂** 'go', the ventive from the Completive of **aɔ** 'come'. The first example below has the itive/ventive auxiliary and allows for two interpretations, depending on the context. The second example gives the alternative way for expressing the itive variant, the third the alternative way for expressing the ventive variant:

pʊl **p-át̪t̪-ɔ́kérɔ**
person C-ITVEN:COMPL-trade:DEPINCOMPL

the man has gone/come to buy it

pʊl **p-ɛɔ́.t** **á-p-ɔ́t̪-ɔ́kérɔ**
person C-go:COMPL SUBJ-C-IT:DEPINCOMPL-trade:DEPINCOMPL

the man has gone to buy it

pʊl **p-aa.t** **á-p-at̪-ɔkérɔ**
person C-come:COMPL SUBJ-C-VEN:DEPINCOMPL-trade:DEPINCOMPL

the man has come to buy it

The construction C-**ât̪t̪** + dependent incompletive TAM-stem of the main verb has undoubtedly developed from these constructions, neutralizing the opposition itive-ventive in the resulting short form C-**ât̪t̪**. C-**ât̪t̪** retains the notion of movement from one place to another,

but the direction of the movement must be interpreted, according to the situation.

The examples also show that the TAM-stems of main verbs with L.H.L* or L.HL/L.L.HL tone patterns used after C-**ân̪t̪** have developed not from completive, but from incompletive TAM-stems. Synchronically, however, they can be regarded as completive TAM-stems. This is because stems with the same tone patterns occur in other environments where they minimally contrast with dependent incompletive TAM-stems: the tones on these stems have become the only elements signalling the TAM of the verb. This is, for example, the case in negated verbs: the negation auxiliaries (no longer?) have a distinction between Incompletive and Completive, only the tones on the main verb TAM-stems make the distinction. A process in the same direction is seen at work in auxiliaries of ***anta*** 'can' and ***appa*** 'again'. The (longer) completive form of these auxiliaries is being shortened to the same forms as the incompletives. There too, when the short forms are used, only the tones on the dependent main verb can distinguish the TAMs.

The same process of shortening of constructions of the Completive of **ɛ̃ɔ̃** 'go' and the Completive of **aɔ** 'come' with a dependent perfective TAM-stem has given rise to the combination **ân̪t̪** + dependent perfective TAM-stem. Compare the following cases. In all three, the buying is just the next action. There is no purposerelation between the going or coming and the action expressed by the main verb.

pʊl	**p-án̪t̪-ɔ́kɛ́rat**
person	C-ITVEN:COMPL-trade:DEPPRFV

the man went/came and bought it

pʊl	**p-ɛɔ́.t**	**a-p-ɔ́n̪t̪-ɔ́kér.at**
person	C-go:COMPL	CONJ-PRO-IT:DEPINCOMPL-trade:DEPPRFV

the man went and bought it

pʊl	**p-aa.t**	**a-p-án̪t̪-ɔkér.at**
person	C-come:COMPL	CONJ-PRO-VEN:DEPINCOMPL-trade:DEPPRFV

the man came and bought it

C-**ân̪t̪** patterns with completive TAM-stems in that it cannot occur without a preceding concord.

Use and meaning

Some further sentential examples are given here to illustrate the use and meaning of Completive C-**ân̪t̪**:

m-p-án̪t̪-ɔ́ccɔ́	**t̪ɪk**	**ana**	**attɪ**	**t̪ɪk**	**t̪-a.îk**
1-C-ITVEN:COMPL-receive:DEPINCOMPL	fire	and	I_hope_that	fire	C-be:PR

I have come to get fire and I hope the fire is there (the speaker has arrived at the neighbour's place, where she hopes to get fire. The deictic centre lies where the speaker is while saying this sentence). (fr. written story)

m-p-aa.t	**n-t̪ɔ́-mɪɽʊk**	**p-án̪t̪-ɔ́ŋáɛ̃**
1-C-come:COMPL	with_at-bush	C-ITVEN:COMPL-urinate:DEPINCOMPL

I come from the bush, having gone to urinate (the deictic centre is where the speaker is while saying this sentence)

It was remarked before that the verb **ɪɔt** 'find' is very often combined with an itive or ventive auxiliary, and that, in combination with this verb, movement does not need to be involved. Also the example below does not express movement. C-**ân̪t̪** + dependent incompletive TAM-stem of **ɪɔt** does not express itive or ventive action in order to (try and) find (i.e. to search), but the end result of having found.

m-p-án̪t̪-ɪɔt	**ókól**	**kɛ́ccôk**
1-C-ITVEN:COMPL-find:DEPINCOMPL	child	market

I found the child in the market (*not*: I have gone to find the child in the market)

C-**ân̪t̪** + dependent perfective TAM-stem expresses a consecutive action or event, following upon a movement that has taken place. Two examples:

ɔ-n̪t̪án	**p-án̪t̪-ɔ́ccɔ́.kat**	**ɟmiɟt**	**w-ɪttík**
PERS-father	C-ITVEN:COMPL-receive:DEPPRFV	goat	C-big

ana	**ɔ-kín**	**n̪-án̪t̪-akkar.at**	**kúʏí**	**k-én**
and	PERS-3A	C-ITVEN:COMPL-call:DEPPRFV	family	C-POSS3A

ɪttɪ	**ɔ-kín**	**n̪-án̪-ɛn̪ɪakɔ**
that	PERS-3A	C-VEN:INCOMPL-become_blessed:DEPINCOMPL

the father (went and) caught a fat goat and they (went and) invited their family to come and get blessed

ana	**ílí**	**kapɪk**	**w-ɪʏɛ.káɳ́é**	**pápɛ́**	**ɪttɪ**
and	leader	God	C-tell:PST	fish	that

p-p-á.n̪-úttɛt	**ɔ-ɪʊnán**	**cɪ-nɔ́-kún̪út**	**k-ɔ́-rɔ́k**
PRO-C-IT:INCOMPL-vomit_at:DEPINCOMPL	PERS-Jonah	LOC-on-lip	C-of-water_place

ana	**p-p-án̪t̪-uttɛ.kan̪-ɔ́k**	**cɪk**
and	PRO-C-ITVEN:COMPL-vomit_at:DEPPRFV-O3	VREF

and the Lord God told the fish that it must (go and) vomit Jonah onto the water side, and it (went and) vomited him there. (Jonah 2:10)

The following examples have C-**ân̪t̪** + dependent perfective TAM-stem. The verbs convey that a consecutive action can or may have happened, but there is no certainty about whether or not it actually did. In the first example C-**ân̪t̪** precedes the dependent perfective stem of **ɪmma** ‘see’, in the second the dependent perfective stem of **ɪmmakɔ** ‘shelter’.

ɔ-lɔ́ttɪ	**p-án̪t̪-ɪmma.kat**	**ɔ-n̪t̪án**	**akka**	**k-kw-ɛ́ɔ́.t**	**kɛ́ccôk**
PERS-Lɔttɪ	C-ITVEN:COMPL-see:DEPPRFV	PERS-father	that	3-C-go:COMPL	market

It is possible that Lɔttɪ saw his father when he went to the market

ɔ-lalú	**p-ɛllá.t**	**t.ʊan**	**ána**	**púl**	**p-án̪t̪-ɪmmak.at**
PERS-Lalʊ	C-be_absent:COMPL	at_house	and	person	C-ITVEN:COMPL-shelter:DEPPRFV

ákka	**kápɪk**
that	rain

Lalʊ was not in the house, therefore the person may have sheltered (there) from the rain

12.20.2. Itive and ventive as markers of possibility/probability

In certain environments itive **ɔt̪** and ventive **at̪** can have a modal interpretation expressing a possibility rather than a certainty. A Dependent Perfective without auxiliary can refer to a future consecutive event. The same is possible for a verb that contains an itive or ventive auxiliary and a dependent perfective TAM-stem. In a sentence that contains a clause introduced by **ámma** +H 'if, when', however, the itive or ventive auxiliary + dependent perfective TAM-stem does not convey that a consecutive event *will* happen, but that it *can* or *may* happen. It expresses a possibility, not a certainty.

ɔ-lɔ́ttɪ	**p-a.t̪-ímma.kat**	**ɔ-t̪t̪án**	**ámmá**	**k-kw-ɛ́ɔ́.t**	**kɛ́ccôk**
PERS-Lɔttɪ	C-IT:INCOMPL-see:DEPPRFV	PERS-father	if	3-C-go:COMPL	market

Lɔttɪ can/may see his father when he goes to the market (the deictic centre is placed with Lɔttɪ)

ɔ-lɔ́ttɪ	**p-át̪-ɪmma.kat**	**ɔ-t̪t̪án**	**ámmá**	**k-kw-áa.t**	**kɛ́ccôk**
PERS-Lɔttɪ	C-VEN:INCOMPL-see:DEPPRFV	PERS-father	if	3-C-come:COMPL	market

Lɔttɪ can/may see his father when he comes to the market (the deictic centre is placed with the father)

Completive C-**ât̪t̪** also allows for a modal interpretation, as in the following two examples:

k-kw-át̪t̪-ɪmma	**lŏk**
3-C-ITVEN:COMPL-see:DEPINCOMPL	dogs

s/he came to see the dogs / s/he went to see the dogs / s/he may have seen the dogs (the speaker is not sure)

ɔ-kín	**t̪-át̪t̪-ant̪án**
PERS-3A	C-ITVEN:COMPL-come:DEPINCOMPL

maybe they came (I am not sure, I don't remember)

Particularly when used with **ɔkâ** 'be', C-**ât̪t̪** obtains a modal reading, expressing that something is maybe or probably the case:

lɔn	**l-át̪t̪-ɔ́ká**	**l-ɔ́ppɔ́t**
words	C-ITVEN:COMPL-be:DEPINCOMPL	C-many

maybe a lot of things are said now (for example, somebody has died and bad things were whispered about the person before. Maybe these things are now said openly, but the speaker is not sure if this is actually happening)

mɪɔ	**ɛ́m-m-í**	**m-át̪t̪-ɔ́ká**	**m-ɔ́ŋwɔ́.t**	**ʊ́l**	**w-ɔppɔ́t**
disease	DEM-C-NEARSP	C-ITVEN:COMPL-be:DEPINCOMPL	C-kill.PLUR:COMPL	people	C-many

this disease has (by now) probably killed many people

pʊl	**ɛm-p-ɪ**	**p-át̪t̪-ɔ́ká**	**p-ɔ́-kárə́t̪â**
person	DEM-C-NEARSP	C-ITVEN:COMPL-be:DEPINCOMPL	C-of-where

from where could this person be?

ɔ-cɛccɛ́	**p-át̪t̪-ɔ́ká**	**p-ákkárákɔ.t**
PERS-Cɛccɛ	C-ITVEN:COMPL-be:DEPINCOMPL	C-be_called:COMPL

Cecce may have been invited

Under this interpretation of the ventive/itive Completive, also a dependent form is attested (that is, a form without concord). This actually suggests that C-**ât̪t̪** with modal reading is no longer perceived as a Completive verb, since a Completive would under all circumstances retain its concord. The clause from the Bible 'it must have been an angel' (Acts 12:15) is translated with (dependent) **ât̪t̪**:

át̪t̪-ɔ́ká	**ʊɽʊpa**	**w-ɔ-t̪ɔt̪ɪllɛttǎt**
ITVEN:COMPL-be:DEPINCOMPL	spirit	C-of-NOM.be_sent.PLUR

it must have been an angel (lit.: a spirit of being sent repeatedly)

C-**ât̪t̪** can be used in combination with C-**íkkɔ** 'may':

ɔ-cɛccɛ́	**p-íkkɔ**	**p-át̪t̪-ɔ́ká**	**p-ákkárákɔ.t**
PERS-Cɛccɛ	C-may	C-ITVEN:COMPL-be:DEPINCOMPL	C-be_called:COMPL

Cɛccɛ may have been invited

12.21. Defective verbs with complementizer element **tǐ**

attǐ ‘I hope that’ contains the complementizing formative **tǐ** that is also part of the complementizer **ɪttǐ** ‘that’ (see 18.7). **tǐ** is also a formative of the defective verb **ɔpərǐ** ‘say, think’.

attǐ ‘I hope that’ is a fully frozen form. It is immediately followed by its complement, without the complementizer **ɪttǐ** ‘that’. It is used in greetings, and solicits a response. It is commonly translated with ‘I hope that’, but whether the first person singular subject has actually ever been part of it is unclear, since no remnant of ‘I’ can be recognized. Two examples:

attɪ	**ŋ-kw-a.ɪk**	**p-ɔpərɔ̂t**
I_hope_that	2-C-be:PR	C-good

I hope you are fine?

at-tɪ	**ŋ-kw-i̧cáṭ̱.ɛ**
I_hope_that	2-C-lie_down:COMPL

I hope that you slept?

ɔpərǐ ‘say, think’, like **attǐ**, contains the complementizing element **tǐ**. Unlik **attǐ**, it can be followed by **ɪttǐ** ‘that’, but this is not necessary. It can inflect for Incompletive, in which case the initial vowel (regularly) changes to **a**. The Incompletive does (irregularly) not have a high tone on its initial vowel.

m-p-a.pərɪ	**k-kw-ânṭ̱án**
1-C-say:INCOMPL	3-C-come:INCOMPL

I think she will come

m-p-a.pərɪ	**ɪttɪ**	**k-kw-ânṭ̱án**
1-C-say:INCOMPL	that	3-C-come:INCOMPL

I think she will come

Apart from the base form (the dependent incompletive TAM-stem) **ɔpərǐ** and Incompletive C-**apərǐ**, a Completive C-**ɔpərǐ** attested. In the first example below, dependent incompletive **ɔpərǐ** follows the auxiliary **ant** ‘can’. The second example has Completive C-**ɔpərǐ**.

ant-ɔpərɪ	**ŋ-kw-a.kkɔt**	**ŋín-n̪a**
can:DEPINCOMPL-say:DEPINCOMPL	2-C-do:INCOMPL	what-QW

tell (me), what will you do?

ŋ-kw-ɔpərɪ	**táṯ-n̪a**
2-C-say:COMPL	how-QW

what did you say?/what have you just said?

12.22. C-**ɔnû** ‘have, must’

The verb C-**ɔnû** ‘have, must’ occurs in one form only. Its phonological shape is different from other verbs since it ends in **ʊ**. It shares with adjectives that it is always preceded by a concord (unless replaced by the focus marker **akk**- or a-C-C-) and that it can be combined with different TAMs of **ɔkâ** ‘be’, including the Present of ‘be’. Nevertheless, I consider it a verb, since it needs not only a subject but also an (expressed or unexpressed) object. Some examples:

k-kw-ɔ́nʊ	**larɔ**
3-C-have	twins

s/he has twins

kapɪk	**akk-ɔnû**
God	FOC-have

it is in God’s hands (it is God who has it)

áməntácɪ	**p-ɔká.t**	**p-ɔ́nʊ́**	**kapɪk**
PERS.aməntacɪ	C-be:COMPL	C-have	rain

Aməntaci was holding the rain (i.e. had control over the rain) (App. I, 3)

Before C-**ɔnû**, the Completive of ‘be’ C-**ɔkât** can be shortened to C-**ât**, in the same way as happens in Past Completives (see12.7.5). Thus:

áməntácí	**p-á.p-p-ɔ́nʊ́**	**kapɪk**
PERS.Aməntacɪ	C-be:COMPL-C-have	rain

Aməntacɪ was holding the rain (Aməntacɪ had control over the rain)

C-**ɔnô** is used in verbal constructions in which it paradigmatically relates to Completives expressing a state. For example, it can co-occur with the external auxiliary C-**ícca**.

ɔ-nɛnní	**p-íccá**	**p-ɔ́nó**	**lɔn**	**ɪttɪ**	**k-kw-ânn̰an-î**
PERS-Nɛnnɪ	C-be_still	C-have	words	that	3-C-come:INCOMPL-Q

is Nɛnnɪ still planning to come?

C-**ɔnô** is also found in combination with the Present of 'be'. Completives preceded by the Present of 'be' are uncommon, but not entirely unattested, as shown in the second example below, which has the Completive of **ɔŋɔt** 'like, want, love'. Co-occurrence with the Present of 'be' reveals a tendency of C-**ɔnô** and C-**ɔŋɔn̰ê** towards becoming adjectives. However, particularly the combination with C-**ɔŋɔn̰ê** was not fully acceptable for my consultants.

pa-p-əɽɛk	**p-a.ɪk**	**p-ɔnó**	**kəɽan**	**ɪttɪ**	**pə́lla**
thing-C-some	C-be:PR	C-have	name	that	cat

some animal that is called cat/some animal having the name cat

? k-kw-á.ík	**p-ɔ́ŋɔ́n̰.é**	**ɪttĭ …**
3-C-be:PR	C-like:COMPL	that

s/he wants that …

C-**ɔnô** 'have, must' is undoubtedly related to the verb **ɔnâ** 'bring, carry', though not by means of an otherwise attested derivational process**.** Cross-linguistically, a development from a verb 'carry' to a verb 'have' is well-attested (Payne 1997, p. 126). **ɔnâ** 'bring, carry' can sometimes itself be used in the meaning 'have'. The following examples contrast C-**ɔnô** 'have' and **ɔnâ** 'bring, carry': the first expresses a current state of 'having', the other a state of 'having' in the future.

m-pɔŋɔn̰.é	**akka**	**kɛ́ccúk**	**k-ín̰**	**k-ɔ́nó**	**aɽəpʊ**	**cɪk**	**áppɪk**
1-C-like:COMPL	that	market	C-POSS1A	C-have	things	VREF	all

I like it that our market has everything

m-pɔŋɔt̪.é	**ɪttɪ**	**kéccúk**	**k-ɟ́n**	**k-á.ná**	**aʏəpʊ**	**cɪk**	**áppɪk**
1-C-like:COMPL	that	market	C-POSS1A	C-bring:INCOMPL	things	VREF	all

I want our market to have everything

C-**ɔnû** does not only express possession, it also commonly expresses 'must':

k-kw-ɔ́nʊ	**ɪttɪ**	**k-kw-á.ccɟ́kɔt**
3-C-have	that	3-C-hear:INCOMPL

s/he must listen

lɔttí	**ŋ-kw-ɔnʊ́**	**ɪttɪ**	**ŋ-kw-a.ʏəkɔ**	**t̪ʊʏít**	**t̪-ɔppɔ́t**
lɔttɪ	2-C-have	that	2-C-eat:INCOMPL	food	C-many

Lɔttɪ, you must eat a lot of food

12.23. Combinations of auxiliaries

Some combinations of auxiliaries are presented here. Within the word, auxiliaries occur in a certain order. If present, a form of *__anta__ 'can' comes as the first, itive/ventive as the last, except for the irrealis morpheme, which is the very last. Negation precedes a form of *__appa__ 'again', but follows a form of *__arəka__ 'as always'. Some examples:

məna	**ɔ-nɔn**	**t̪-ánt-ɔkánn-ɔccɟ́kɔt̪-ín …**
even	PERS-2A	C-can:INCOMPL-NEG:DEP-hear:DEPINCOMPL-O1

even if you do not listen to me … (John 10:38)

cɟ́kɟt	**c-ərrɔ.r-ín**	**ɪttɪ**	**m-p-ánt-át̪-ɔkáṭa**	**ʊ́kʊl**
heart	C-push:COMPL-O1	that	1-C-can:INCOMPL-VEN:DEPINCOMPL-look_at:DEPINCOMPL	child

my heart pushed me to come and see the child (that I take the opportunity to come and see the child)

t̪ʊk	**t-ɪn**	**t̪-arək-ɔ́kánn-ɔ́kkwɔ̂t**
dog	C-POSS1	C-as_always:COMPL-NEG:DEP-kill:DEPCOMPL

my dog surely did not kill anything (it never catches anything!)

m-p-ănn-ápp-ɟ́kkɔ	**ŋə́pak**
1-C-NEG-again:DEPINCOMPL-drink:DEPINCOMPL	beer

I will not drink beer again

m-p-ápp-ɔ̱-ɔkákɔt	**ɪ-aləpapór**	**ŋɔrrɔt**
1-C-again:INCOMPL-IT:DEPINCOMPL-grind_at:DEPINCOMPL	in-mill	tomorrow

I will again go and grind at the mill tomorrow

m-p-ănn-ápp-ɔ̱-ɟ́kkɔ	**ŋə́pak**
1-C-NEG-again:DEPINCOMPL-IT:DEPINCOMPL-drink:DEPINCOMPL	beer

I will not go and drink beer again

12.23.1. Constructions with an auxiliary of ‘be’

Auxiliaries are attached to the main verb in some cases and to another auxiliary in other cases. In a Present Continuous (C-**aɪk** + Incompletive main verb), the negation auxiliary, and auxiliaries of *__anta__ ‘can’ and *__appa__ ‘again’ come on the main verb:

m-p-a.ɪk	**p-akə́nn-ɟ́cat**
1-C-be:PR	C-NEG-lie_down:DEPINCOMPL

I am not lying down

k-kw-á.ík	**p-ánt-úɛt**	**ŋúcʊl**
3-C-be:PR	C-can:INCOMPL-prepare:DEPINCOMPL	sauce

she is just starting to prepare the sauce (lit.: she is having the opportunity to prepare the sauce. As an answer to a question: has mother already prepared the food?)

m-p-a.ɪk	**p-ápp-ɛ́rɛn-ʊŋ**	**ɪttĭ …**
1-C-be:PR	C-again:INCOMPL-speak_to:DEPINCOMPL-O2	that

I am telling you again …

In Past Completive constructions (C-**ɔkât** ‘was/were’ + Completive main verb) negation tends to come on the main verb as well. The negated construction can be shortened in the same way as the Past Completive (see 12.7.5):

m-p-ɔká.t **p-ákə́nn-i̧cat** / **m-p-á.p-p-ákə́nn-i̧cat**
1-C-be:COMPL C-NEG-lie_down:DEPCOMPL 1-C-be:COMPL-C-NEG-lie_down:DEPCOMPL

I had not laid down

In the following example negation comes on the copular verb ‘be’, not on the auxiliary ‘be’:

pʊl **p-ɔká.t** **p-ákə́nn-ɔ́ká** **pɪak**
person C-be:COMPL C-NEG-be:DEPCOMPL orphan

the man was not a poor person

However, in constructions with a Past Completive with a main verb expressing a state, negation comes on the auxiliary. Completives indicating a state pattern here with adjectives. For comparison, an example with an adjective is given last.

m-p-ănn-ɔ́ká **p-íámâ.t**
1-C-NEG-be:DEPCOMPL C-become_hungry:COMPL

I was not hungry

m-p-ănn-ɔ́ká **p-ɔ́ŋɔ́t̪.é** **ɪttĭ …**
1-C-NEG-be:DEPCOMPL C-like:COMPL that

I did not want (that) …

lɔn **ɛl-l-ɪ** **l-akə́nn-ɔka**[85] **l-ɔpərɔ̂t**
words DEM-C-NEARSP C-NEG-be:DEPINCOMPL C-good

these things will not be good

In complex verbs with a clause chaining structure, negation comes on the auxiliary of ‘be’.

m-p-akə́nn-ɔ́ká **á-n-i̧cat**
1-C-NEG-be:DEPCOMPL CONJ-1-lie_down:DEPINCOMPL

I was not lying down (on the contrary: I was working)

[85] The falling tone of **ɔkâ** is realized here as low.

Also in the following example, the auxiliary is attached to the auxiliary of ‘be’:

m-p-ántər-ɔ́ká	**p-íɔ́.t**
1-C-can:COMPL-be:INCOMPL	C-die:COMPL

I am dead/I have just died (said in serious distress)