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A Grammar of Koyra Chiini



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A Grammar of Koyra Chiini

The Songhay of Timbuktu



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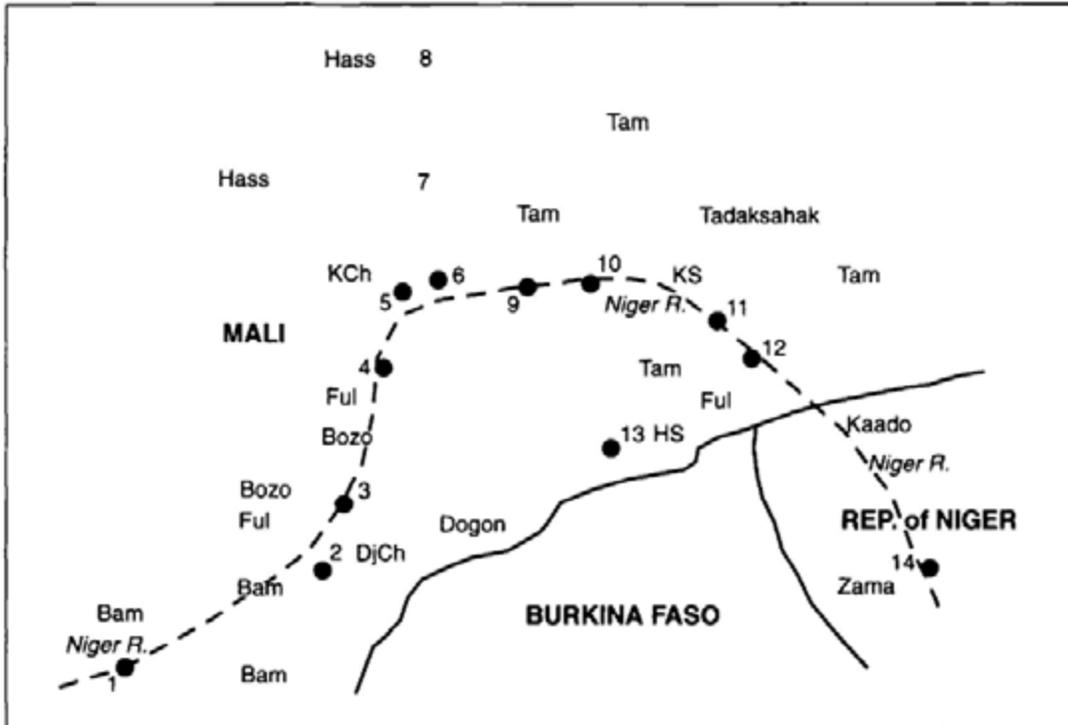
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Abbreviations

Absol	Absolute form of adjective
Abstr	Abstractive (verbal noun)
Adj, adj	adjective
adv	adverb (adverbial NP)
Ar.	Arabic
Caus	Causative
Comit	Comitative
cf.	compare
D	Diré (town)
Dat	Dative
Def	Definite
Dem	demonstrative pronoun 'this, that'
dimin	Diminutive
DjCh	Djenné Chiini (Songhay of Djenné)
Emph	Emphatic
esp.	especially
F	Full pronoun (in 3SgG and 3PIF)
Fact	Factitive
Foc	Focus morpheme
Fr.	French
Fut	Future
G	Goundam (town)
HS	Humburi Senni (Songhay of Hombori)
Impf	Imperfective aspect
Inf	Infinitive
Instr	Instrumental
Intens	Intensifier (for adjectives and some verbs)
intr	intransitive verb
KCh	Koyra Chiini
KS	Koroboro Senni (Songhay of Gao)
lit.	literally
Loc	Locative (Postp or PP)
Logo	Logophoric (pronoun)
LP	Locational Phrase
Mediop	Mediopassive
n	noun
N	Niafunké (town)
Neg	Negative
NP	noun phrase
O	Object pronoun (in 1SgO, 3SgO, etc.)
Partpl	Participle
Pl	plural

Poss	Possessive
Postp	Postposition
PP	postpositional or prepositional phrase
Q	question
Rdp	reduplication
Recip	Reciprocal
Refl	Reflexive pronoun (in 3Refl)
Rel	Relative (clause)
S	subject (in 1SgS, 2SgS, SFoc, etc.)
SFoc	Subject Focus morpheme
Sg	singular
Subju	Subjunctive
<i>t</i>	trace (phonological zero, representing extracted NP)
Tam.	Tamashek (language of Tuaregs)
T	Timbuktu
To	Tonka (town)
Top	Topic morpheme
TP	Temporal Phrase (e.g. time adverb)
tr	transitive verb
VP	verb phrase
1	first person pronoun
2	second person pronoun
3	third person pronoun
3F	Full third person pronoun
3Refl	simple third person reflexive pronoun
<	derived from
√	root (of Arabic stem)
*	reconstructed
#	ungrammatical
∅	zero
??	interrogative or 'whatchamacallit' form

Map



language abbreviations

Bam = Bambara
 DjCh = Djenné Chiini
 Ful = Fulfulde
 Hass = Hassaniya Arabic
 HS = Humburi Senni
 KCh = Koyra Chiini
 KS = Koroboro Senni
 Tam = Tamashek

broken line = Niger R.

towns/cities and their dominant language(s)

1. Bamako, capital of Mali (Bam)
2. Djenné (DjCh; outlying villages Ful, Bam, Bozo)
3. Mopti (Ful, Bam; Bozo nearby)
4. Niafunké (KCh; Ful nearby)
5. Goundam (KCh; Tam nearby)
6. Timbuktu (KCh, some Tam and Hass)
7. Araouan (KCh, Hass)
8. Taoudenni, salt mine (Hass)
9. Gourma Rharous (KS)
10. Bamba (KS, some Tam and Hass)
11. Gao (KS, some Tam)
12. Ansongo (KS)
13. Hombori (HS, some Ful)
14. Niamey, capital of Rep. of Niger (Zarma, Hausa)

Chapter 1

Introduction

1.1 Generalities about Songhay

Songhay is often described loosely as a “language,” but in fact it is a large complex of varieties, some of which are quite clearly distinct languages. Languages of the Songhay family are linguistically dominant in northeastern Mali along the Niger River, and others of the family occupy much of the Republic of Niger (“Kaado” and “Zarma”). Additional varieties are spoken in Bénin, and perhaps still residually in the Dori area of Burkina Faso (formerly Upper Volta). Some “nomadic” or “northern” Songhay languages, not yet well studied, are spoken by small beduin groups in far northern Niger, with one offshoot each extending into Mali (“Tadaksahak” near Menaka) and in southwestern Algeria (“Korandjé” in the Tabelbala oasis). The major work on the internal genetic classification of Songhay varieties is that of Nicolaï (1981), who puts considerable emphasis on sound changes and phonological typology.

My work on Songhay has focused to date on the four main varieties spoken in Mali. The following sets of designations are partially interchangeable. One set consists of transcriptions of the native terms; the second is simply the name (in English or French) of the respective major town; the third is the cardinal-direction system developed by Nicolaï.

<u>native term</u>	<u>major city or town</u>	<u>Nicolaï's term</u>
<i>koyra čiiini</i>	Timbuktu	western Songhay (S. occidental)
<i>jenne čiiini</i>	Djenné	" " "
<i>koroboro šenn-i</i>	Gao	eastern Songhay (S. oriental)
<i>humburi senn-i</i>	Hombori	central Songhay (S. central)

For Gao, *koroboro šenn-i* co-occurs with other variants such as *koyra šenn-i* and *koyra šenn-e*.

The nouns *čiiini* and *senn-i* ~ *šenn-i* (with variant *senn-e* ~ *šenn-e*) are noncognate, though both mean ‘speech, speaking, language’, cf. verbs *čii* (<**čiin*) and *šelaŋ* ~ *šeleŋ*. In the cases of Djenné and Hombori, both of which are (in effect) Songhay enclaves rather than parts of extended Songhay-speaking regions, the first term of the compound is simply the name of the town. Timbuktu and Gao, on the other hand, are merely the largest cities in extended Songhay-speaking regions, and the terms for these varieties are more general: *koyra-čiiini* ‘town language’ and *koroboro-šenn-i* (contraction of *koyra-boro šenn-i* ‘town-person language’) distinguish the sedentary Songhays from the nomadic Arabs and Tuaregs. The Songhay are also sometimes called ‘river people’ (Timbuktu *isa-boro*), but no related expression for their language is in common use.

For the native sense of *soŋoy*, see beginning of §1.2.

We will use the informal transcription “Koyra Chiini” to denote the unbroken *koyra čiiini* complex of dialects in the region along and near the Niger River beginning

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with Timbuktu. This includes the towns of Diré, Tonka, Goundam, and Niafunké going upriver (west) from Timbuktu. There is a thinly populated northern extension in Araouane, on the caravan route from Timbuktu to Taoudenni. There is a relatively sharp linguistic break between Koyra Chiini and Koroboro Senni (the “Gao” variety) just east of Timbuktu. Koroboro Senni is the traditional language even of Gourma Rharous and Bamba, the first important towns on the Niger River going east from Timbuktu.

Most of my Koyra Chiini data are from Timbuktu itself. I have a corpus of some six hours of transcribed recordings, mostly dyadic (interviews, conversations, or narratives with an interactive listener). I have supplemented this data base with elicited material obtained chiefly in the final field sessions (1996-97).

I also have some transcribed recordings from Niafunké and Goundam, which can serve as representatives of the larger complex of “upriver” dialects (“upriver” from the perspective of Timbuktu). I also spent about a week in this area in 1996 to clear up some problems in the analysis of these tapes and to do some follow-up elicitation and ethnobiological vocabulary elicitation and specimen collection. A summary of observable differences between the upriver dialects and the Timbuktu dialect is given in the short Appendix 1. In the much larger Appendix 2, I describe the distinctive and geographically separated variety of Djenné, which I refer to as “Djenne Chiini” (for *jenne čiini*, literally “Djenné language”). Abbreviations for the Malian Songhay languages and varieties used in this grammar are KCh (Koyra Chiini, the present object of study), DjCh (Djenné Chiini), KS (Koroboro Senni of Gao, etc.), and HS (Humburi Senni of Hombori). Names of other Songhay languages are not abbreviated.

The wider genetic affiliation of Songhay is controversial. It is one of the few African languages for which Joseph Greenberg (1966) did not make a confident assignment to a large genetic stock, though he suggested Nilo-Saharan as a possible connection. Nicolai (1984, 1990) has suggested a possible creole origin in which Tamashek (Tuareg) played a major lexifying role, but this has not won wide acceptance. It might be advisable to defer reconsideration of the wider affiliation of the Songhay complex until we have better descriptions of the several varieties within the complex and can thus do serious reconstruction of Proto-Songhay.

1.2 History and geography

The KCh term *soŋoy* (= KS *soŋoy*, HS *soŋay*) does not ordinarily denote the broad ethnolinguistic group who use the language(s) in question. Rather, it is part of a set of terms for patrilineal clans or castes, each of which was associated with particular occupations, rituals, and customs. In this traditional system, now in the process of being peripheralized or suppressed by the combination of orthodox Islam and of European culture, *soŋoy* was associated chiefly with the original Songhay-speaking group which founded Gao and Hombori, and lost a crucial battle with an invading Moroccan army in the late Middle Ages which spelled the end of the Songhay Empire and remains the subject of popular legends. Currently, *soŋoy* in this limited sense is associated with the patronymic *meyga* (Gallicized as Maiga), and more particularly with those Maiga who continue practicing sorcery and other traditional practices

frowned on by Islam. Currently, under the influence of French (still the major administrative and educational language), *sojy* is increasingly used in the French sense as a general language name and ethnic label.

The descendants of the Moroccan soldiers (many of whom were non-Arab mercenaries) are called *arma*, and associated with the French patronymic Touré. There is a collective “joking” relationship between the Maiga and the Touré, who call each other cross-cousins. Another traditional caste-like group is the *siise* (French patronymic Cissé), traditionally associated with Islamic scholarship.

The Niger River is the lifeblood of this region, since it picks up the annual rains from its source in Guinea (near the Atlantic) and flows inland (northeastward) through Mali before “buckling” south in the Republic of Niger on its way to Nigeria. Because the river has to fight its way through some rises it is very slow-moving and annually floods any adjacent low-lying areas. These floodplains and seasonal lakes are especially abundant in the region between Mopti and Timbuktu. In addition to the very large Lac Debo in non-Songhay territory between Mopti and Niafunké, there are three important wet-season lakes in the area of Goundam, and several smaller floodplains along the river in the KCh zone.

The local economy is based primarily on farming, fishing, and herding. The latter is primarily associated with the non-Songhay-speaking minorities in the area, known in KCh as *belle* and *fulan*. The Bella, Tamashek-speaking blacks formerly enslaved to Tuaregs, are the main herding people in the area from Timbuktu to Goundam, tending to specialize in sheep and goats but also sometimes handling cows. The bovine specialists, however, are the Fula (language: Fulfulde), who are especially numerous in the area around Niafunké.

Historically, the prototypical fishing people in the area were the Bozo. However, in the KCh area, the Bozo have long since been linguistically and to some extent culturally assimilated by the Songhay. The term *sorko* now denotes all of the fishing people in the area, both the assimilated ethnic Bozos and those Songhays who have adopted this occupation and life style. It is therefore a kind of caste label rather than an ethnolinguistic label in the usual sense. (In KS and DjCh, for example, *sorko* can still denote specifically ‘Bozo’ in the ethnic sense.)

Among the other castes of greatest sociocultural interest, both feared and despised by mainstream Songhays, are the griots and the blacksmiths. The local griot castes include the *maabe*, who have important roles in public rituals and in reciting the genealogies of leading citizens (to flatter them); the *sulewule*, who specialize in singing and dancing; and the *hosso* (<**horso*), who assist in weddings and are notorious for their foul language and behavior. The griot castes are generally associated with Fula rather than Songhay ethnicity. The blacksmiths (whose families also do leatherwork) are thought to have black-magical powers; most local blacksmiths are ethnic Tuaregs.

The seasonally flooded areas support rice farming, which continues to increase in importance due to a long-term trend toward reduced rainfall and desertification of the land away from the river. Traditional non-submerged crops (millet and sorghum) are grown in fields which rely on direct rainfall, but under current climatic conditions these crops have been disappearing from the Timbuktu area. They are still extensively grown near the upriver towns such as Niafunké, which get somewhat more rainfall. Aside

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from lettuce and other vegetables grown in small irrigated fields (“gardens”) on the edge of the towns, for sale to westerners and the native bourgeoisie, we may mention that watermelon does well in the zone, and several types of dried watermelon seeds are exported from here to southern Mali.

Timbuktu is also an important commercial center for certain products, notably salt and spices. Though the trans-Saharan caravan routes are no longer actively used, there are still two annual two-week-long caravan expeditions from Timbuktu (and Bamba) to the salt mines at Taoudenni, located in the middle of the Sahara near the Algerian border north of Timbuktu. This is the specialty of local Arabs and Tuaregs and is of relatively little direct concern to the Songhay. Timbuktu cuisine is prestigious in northern Mali, especially for its rich spices—some grown locally (e.g. near Diré), others associated with the Sahara to the north, still others imported from the Maghreb. Timbuktu spices are now available in many other marketplaces in northern Mali and are gradually being accepted into the local cuisines.

In the late Middle Ages, the Songhay Empire based in Gao (farther east along the Niger) controlled Timbuktu. It seems likely that KCh developed in the context of the eastward expansion of the Songhay linguistic complex during that period, though it now differs grammatically from KS, especially in constituent order (SVOX vs. SOVX) and morphosyntax. In separate publications I will attempt to reconstruct the historical (socio-)linguistic developments underlying the development of KCh, making use of language-contact and creolization models.

The Songhay Empire collapsed at the end of the Middle Ages, due most immediately to the Moroccan invasion. That no comparable successor state emerged to fill the void is explained by the opening up of Portuguese navigation routes along the west coast of Africa, which reduced the significance of overland caravan routes and led to the long-term impoverishment of the region. Despite its important role in history, when I first visited Timbuktu in 1986 it was an unimpressive town of perhaps 20,000 persons staggering under the burdens of a fifteen-year drought, the desertification which had devastated the Arabs and Tuaregs living to the north, and economic isolation due to the city’s position on the “wrong” (northwestern) side of the floodplains, cutting it off from the main highway running on the southeastern side from the capital Bamako through Mopti and Gao onward to the Republic of Niger. As a provincial capital, its economy was kept above water largely by the salaries of government officials.

To make things worse, from 1990 to 1994, all of northern Mali was impacted by a small-scale military rebellion by Tuaregs and Arabs. This abortive insurrection provoked the numerically dominant Songhays to “cleanse” the towns of Tuaregs and Arabs, forcing many noncombatants to flee to Mauritania or other neighboring countries. By early 1995, with a new democratically elected government in place, peace had been reestablished, the rebels had been integrated into the Malian armed forces, Arab and Tuareg refugees had begun returning, and signs of economic renewal led by new NGO projects were visible. By early 1997, Timbuktu had undergone a major electrification project (streetlights and increased home electricity), tourism was recovering, and a new international airport was being built.

In 1986, prior to the rebellion, the population of Timbuktu had these native languages: KCh (about 80%), Hassaniya Arabic (10%), and Tamashek (10%). Tamashek is spoken both by ethnic Tuaregs and Bella. KCh is the lingua franca. There

are no major Fulfulde-, Bozo-, or Bambara-speaking communities in the immediate vicinity of Timbuktu. Knowledge of Bambara is slowly increasing due to mobility between Timbuktu and the major cities of the south (Bamako, Segou, etc.), but it is not yet a major factor in the region.

1.3 Format of grammar

The present grammar of KCh is written in a fairly strict format to facilitate comparison to the appendices and to my forthcoming parallel descriptions of other Songhay languages. The numbering of chapters and sections thereof will be held constant to the extent possible, although this means that in each grammar some subsections are blank (e.g., “tonology” in the present grammar). In Appendix 1 on the “upriver” (Goundarm, Niafunké) varieties, and to a lesser extent in Appendix 2 on DjCh, we disregard areas where their grammars do not differ significantly from that of Timbuktu KCh (perhaps giving an example or two), reserving extended analysis for areas where they differ from Timbuktu.

The format of the grammar is not revolutionary, and its general nature can be gleaned from a pass through the table of contents. We begin with a brief overview chapter (2), designed to give readers an idea what a simple Songhay sentence looks like. Fortunately, the language is simple morphologically and readers should be able to pick up its basic sentence structure quickly. A brief chapter on phonology (3) leads to two chapters (4, 5) on nominal constructions, the first focusing on derivational processes (also including information on personal and demonstrative pronouns), the second describing NP inflection and phrasal syntax.

Verbs likewise get two chapters (6, 7), one mainly on voice categories expressed by suffixation (or by zero), the other on mood-aspect-negation (MAN) inflection and VP structure.

The next chapter (8) turns to “information packaging” issues such as focus, topic, and relativization. These are all of great importance in Songhay discourse, and it turns out that there are important differences among the Songhay varieties in the respective forms and functions. This is followed by a chapter (9) on complex (interclausal) syntax, in which various types of “serial verb” construction play important roles. The final grammatical chapter (10) is on anaphora; the most significant topic here is the use of logophoric and reflexive versus ordinary personal pronouns.

The last chapter (11) looks at selected lexical semantic matters, including the lexical division of labor in expressing spatiotemporal concepts, and some ethnosemantic issues such as kinship and emotion terminology.

A volume of *Texts in Koyra Chiini (Songhay of Timbuktu)* is in press with Köppe Verlag, Cologne. It includes texts from Timbuktu, Niafunké (an “upriver” dialect), and Djenné. A set of three Songhay-English-French dictionaries is to be published by l’Harmattan, Paris. One of the three is KCh (Timbuktu to Niafunké), and another is for DjCh (the third is KS of Gao).

1.4 Transcriptional conventions

KCh is quite simple morphologically and there are few productive phonological rules disguising underlying (lexical) phonological representations. Double slashes // ... // enclose underlying representations (not italicized). In the grammar text, brackets [...] enclose phonetic representations. The ordinary phonemic transcription is italicized without slashes or brackets. We use the hyphen “-” as a morpheme boundary in a fairly restricted set of cases where it seems justified. Examples are verb stems containing a derivational suffix (Fact-Caus or Mediop *-ndi*), such as *dira-ndi* ‘cause to walk’.

It has been difficult to decide whether to use hyphens in noun-noun compounds, noun-adjective combinations, and similar close-knit stem sequences showing various degrees of lexicalization. There is no consistent phonological test for lexicalization of such combinations, and other criteria (frequency, semantic specialization) are gradient rather than categorical. In general, I use hyphens in compounds sparingly (when the combination seems fairly clearly lexicalized), and in combinations involving high-frequency finals such as *-ije* ‘child’ and *-ña* ‘mother’. However, readers should not put too much stock in these transcriptional decisions.

My most idiosyncratic transcriptional decision is to use the subscripted ligature “_̣” to indicate assimilations across word or morpheme boundaries. This enables us to show the basic forms of the morphemes in question, maintaining the transparency of the morpheme structure, while at the same time at least hinting at the surface pronunciation.

In the case of nasal consonants, a ligature indicates point-of-articulation assimilation to a following segment, generally *n* → [ŋ] before velar stop. The expected parallel shift *ŋ* → [n] before alveolar consonant is moot in Timbuktu KCh, where lexical stem-final *ŋ* is normally absent, but occurs in upriver KCh dialects which allow stem-final *ŋ*.

- (1) Ligature _̣ indicating point-of-articulation assimilation of nasal

<u>transcription</u>	<u>pronunciation</u>	<u>gloss</u>
<i>hin_̣ka</i>	[hiŋka]	‘be able to’

After a nonnasal consonant, a ligature indicates total assimilation to a following consonant. The common assimilations involving *r* before another alveolar, *y* before another alveopalatal, and *w* before another labial, as shown in (2).

- (2) Ligature _̣ indicating total assimilation of nonnasal sonorant

<u>transcription</u>	<u>pronunciation</u>	<u>gloss</u>
<i>har_̣di</i>	[had:i]	‘the man’
<i>čir_̣ow_̣bii</i>	[tʃirowbii]	‘black bird (=guinea fowl)’
<i>ay_̣ čindi</i>	[at:ʃindi]	‘I continued’

For more details on these assimilations, see §3.6.

A ligature between two vowels indicates contraction to a single surface long vowel with the quality features of the second input vowel; this is especially common in sentences containing Impf preverbal morpheme *o* preceded by a subject NP or

pronoun. Contraction may also occur in combinations involving a verb followed by 1Sg object marker *ey*, or a verb followed by a postpositional phrase beginning with any V-initial pronoun. A few examples are given in (3), below; see §3.7 for a full discussion and more examples.

(3) Ligature_ indicating contraction of vowel sequence to long vowel

<u>transcription</u>	<u>pronunciation</u>	<u>morphemes</u>
<i>woy di_o</i>	[wojdo:]	woman + Def + Impf
<i>ng<u>u</u> o</i>	[ŋgo:]	Logo3ReflSg + Impf
<i>ng<u>a</u> o</i>	[ŋgo:]	SFoc + Impf (or: 3SgF + Impf)

Note that this transcription usefully distinguishes *ngu o* from *nga o*, which have identical surface pronunciations.

In the underlying combinations 3Sg Impf *a_o* and 3Pl Impf *i_o*, we again get a long vowel but this time the quality of the first vowel prevails, so the outputs (in Timbuktu) are [a:] and [i:], respectively. Note that the regular rule would merge them as #[o:] with unfortunate consequences. I therefore transcribe them *a-a* and *i-i* rather than as underlying forms with ligatures. I also choose to use *no-o* rather than *ni_o* for the high-frequency 2Sg Impf combination. In general, my transcription is designed to be user-friendly rather than to be strictly consistent.

One important case of the assimilation //yj// to *jj* is intramorphemic, namely, the form of the noun *ije* ‘child’ after a vowel-final morpheme, especially in compounds: //tira-ije// → *tira-jje* ‘pupil in Koranic school’ (lit., ‘talisman-child’). Rather than try to make the morphemic composition transparent by showing a morpheme-internal ligature, i.e. as *tira-i_{je}*, I prefer to just write *tira-jje* and put cross-references between *-jje* and *ije* in the dictionary. The form *-jje* is quite frequent and readers will soon become familiar with it.

There are also a number of cases where an underlying segment is deleted. For example, 2Sg *ni* optionally contracts to *n* in certain positions (before a verb or a postposition), and a number of minor consonantal deletions occur in verbal derivatives with Fact-Caus or Mediop suffix *-ndi*: *din_{-ndi}* (pronounced [dindi]) ‘be taken (Mediop)’ or ‘set afire’ (Caus); underlying //kam-ndi// → *kam-di* ‘cause to fall’. Where the deletion involves one of two identical consonants, as in ‘be taken’, I use the ligature notation, though the dictionary has pointers (e.g. “din-di” See *din_{-ndi}*). Where the deletion involves nonidentical consonants, as in ‘cause to fall’, my transcription reflects the deletion.

I have chosen to make selective use of square brackets [...] in transcriptions to indicate phrase or clause boundaries that might otherwise be unclear to readers. My use of these boundary devices is designed mainly to help readers navigate through difficult (but interesting) textual passages, with an emphasis on clarifying scope relationships and other semantic as well as syntactic structures. For instance, one example from Chapter 2 is presented as (4).

- (4) [[*tubaabu* *di*] *kaa* *guna* *ni*] *se*
 [[white Def] Rel see 2Sg] Dat
 'to (for) the white man who saw you(Sg)'

Here the bracketing is intended to show that the final Dative postposition *se* takes as its complement the entire NP 'the white man who saw you', rather than (just) the 2Sg pronoun. One could imagine a more aggressive use of such brackets, perhaps requiring them in all sentences, but I prefer to make sparing, opportunistic use of this device, both in this grammar and in the published text collection.

In the texts volume, emendations (of addition, replacement, or omission) are fairly common. Many emendations of omission involve false starts, though some involve errors which the speaker immediately corrected. In order to make these emendations transparent to readers, the following bracketing and italicization conventions are applied:

addition: {*har di*};

replacement: {*har di*} with a note describing the emendation;

omission: <*har di*—> (usually false starts) disregarded in translation.

1.5 Literature review

There is no published scientific grammar or dictionary for KCh. The following are the publications known to me that deal with it:

a) An anonymous New Testament translation, [Anonymous] 1936, published by the Scottish National Bible Society. There is a copy in the Harvard library.

b) Two fairly brief, poor-quality pedagogical works by early French missionaries: Hacquard & Dupuis-Yakouba 1897, Dupuis-Yakouba 1917.

c) An article by Robert Nicolai on the western Songhay dialects (Nicolai 1978) focusing on their position within the larger Songhay family. Nicolai was based in Niger for many years but undertook field surveys of the Malian varieties. His article emphasizes comparative phonology.

d) Shopen and Konaré (1970) is an article about causatives and passives.

e) Zouber (1983), a hard-to-find mimeographed work produced in Niamey, is a text collection from some villages near Diré, in a dialect close to that of Goundam (see Appendix 1).

I have made little use of these publications in preparing this grammar.

1.6 Acknowledgements

My research on Songhay began in 1986, when I spent one month in Timbuktu as part of a nine-month Fulbright research fellowship, under its Islamic Civilization program, which took me to four countries. I went to Timbuktu primarily to study Hassaniya Arabic, an extension of my long-standing research in Maghrebi Arabic. I was surprised to find the region attractive and have been going back ever since; as the proverb says,

hamni har, na n guna hay kaa no-o baa, ma bun a ra 'the fly said, if you find something you like, you should die in it.'

I continued to work mainly on Hassaniya Arabic and secondarily on Songhay varieties during fieldwork periods of two to three months each in 1989 (Gao) and 1990 (Timbuktu), financed in part by the University of Michigan. I then received National Science Foundation grant BNS-9020409, which enabled me to focus my fieldwork on Songhay in two additional two-month stints in Mali in 1991 and 1992. The primary objective was to assess the possibility that KCh was the result of "semi-creolization" of a prior Gao-type Songhay variety during the Medieval Songhay Empire.

During the course of the NSF project I did exploratory work on DjCh and HS, in addition to gathering more material from Timbuktu and Gao. It became clear to me that these new data were complicating the rather simple notion of "semi-creolization" that I had proposed as a working hypothesis, and that more depth was needed in the grammatical analysis and vocabulary. In particular, DjCh, though very close to KCh in some ways (sound changes, basic lexicon), departed from it quite significantly in fundamental aspects of syntactic structure and phonemic systems. The upshot was that instead of an expected sharp break between KS (and HS) on the one hand and Western Songhay (KCh and DjCh) on the other, I was finding major phonemic and morphosyntactic isoglosses that seemed to cut across the major genetic boundary, some linking KCh with KS and apparently others linking DjCh with HS. This suggested a more complex historical sociolinguistic model involving continuing contact among neighboring Songhay varieties, rather than a "big bang" original creolization of Western Songhay followed by minor dialectal divergences. The role of other adjoining languages (especially Hassaniya Arabic, Tamashek, Fulfulde, Bozo, and Bambara) would also have to be dealt with.

I did another summer of fieldwork in 1993, with travel support from the University of Michigan. Then I received grant RT-21610-94 from the National Endowment for the Humanities, covering summer fieldwork in 1995 and extended fieldwork during a sabbatical year from fall 1996 to summer 1997. The main objective of the NEH project is the preparation of grammar-text-dictionary works covering the four major Songhay varieties of Mali (KCh and DjCh, along with KS and HS). The grammars, dictionaries (with French and English glosses), and text collections for KCh, DjCh, and KS are being prepared simultaneously, while the HS materials will follow a year or so later.

I prefer not to disclose the names of my informants, local assistants, and hosts, so I will thank them in other ways. I do, however, wish to publicly thank the linguists and community leaders who have been helpful to me. Prof. Robert Nicolaï of the Université de Nice helped to arrange my short stay in Nice in 1995 and has made his collection of (mostly untranscribed) early tape recordings available to me. In Mali, I have benefited from extensive collaboration with linguists at DNAFLA in Bamako, especially the "Songhayisants" Yousouf Maiga and Yousouf Haidara. Another Malian colleague is Ibrahima Traoré, a professor at the ENSUP in Bamako, who has also been helpful. In Timbuktu, I have worked extensively with an amateur linguist, Aldiouma Amadou dit Diadié, who has compiled his own extensive KCh lexicon. In Djenné, I have many debts to Ibrahima Koné, now a businessman, and Baba Ibrahima Touré, director of the local French-Arabic school.

Finally, I owe a special debt of gratitude to the American and Malian employees of USIS in the American Embassy in Bamako, who have always been extremely helpful to me in connection with research clearances, visas, tape duplication, and other small but vitally important administrative matters. They provided this assistance not only during my Fulbright visit in 1986, when they were expected to, but also in the ensuing years when I had no official embassy status. The American PAO's there generally do two-year stints, and I have been through several of them; I particularly thank the legendary Linda Buggeln, who put me up in her residence for several days one year when I returned from the field with incapacitating boils on my legs. Without the assistance and friendly advice over the years of the permanent Malian employees of USIS—Issa, Kalifa, and especially Gaousou—I would probably have taken my act to some other country.

Chapter 2 Overview

2.1 Brief outline of typical sentence and NP structures

For purposes of initial orientation, this section provides examples of typical sentence structures. The basic constituent order is SVO (subject-verb-object), and more precisely the ordering in (5):

- (5) subject NP - mood-aspect-negation (MAN) - V - other constituents

Examples of the pattern are in (6-8), with multi-word constituents enclosed in brackets.

- (6) [har di] o guna [woy di] doodi
[man Def] Impf see [woman Def] there
'The man sees the woman there.'
- (7) a guna ni doodi
3Sg see 2Sg there
'He (She) saw you(Sg) there.'
- (8) ay na guna [[huu di] kuna] [boro foo]
1SgS Neg see [[house Def] Loc] [person one]
'I didn't see anyone in the house.'

Each of (6-8) begins with a subject NP, which in (7-8) is a personal pronoun. The MAN position is occupied by Impf *o* in (6), by zero in (7), and by Neg *na* in (8). Except with equational and locational quasi-verbs, a zero MAN position is interpreted as perfective positive, which is extremely common in past tense narrative. The verb stem, here *guna* 'see', has no inflectional affixes for either pronominal agreement or MAN categories. The direct object NP follows the verb (though not always immediately), whether it is a pronoun as in (7) or a full NP as in (6,8). Further constituents such as adverbial modifiers generally follow the direct object NP, as with *doodi* 'there' in (6-7) and the Locative PP in (8). However, when a verb is followed by two or more complements (NPs and PPs), their linear ordering reflects morphological and discourse considerations as well as pure syntax.

The maximal internal structure of a NP or PP is schematized in (9).

- (9) possessor - noun - adjective - numeral - demonstrative - Definite -
Plural - DF[discourse-function] - postposition

Examples of this structure are (10-12).

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- (10) *[ay hāyši di yo] se*
 [1Sg dog Def Pl] Dat
 'to (for) my dogs'
- (11) *[[[ay baaba] wane] hāyši di yo] se*
 [[[1Sg father] Poss] dog Def Pl] Dat
 'to (for) my father's dogs'
- (12) *bor bibi hiŋka di*
 person black two Def
 'the two black persons'

In (9), the noun slot is essentially obligatory except that an understood noun may be omitted after a possessive (as in the pattern: 'Which house? Mine, or my father's?'). Possessor, adjective, and numeral are optional. In the definiteness slot, the choices are Def *di* and zero. In the plurality slot, the choices are Pl *yo* and zero (usually interpreted as singular). The DF slot may be filled by a topic, emphatic, or similar morpheme. In the final position, there are several nonzero postpositions such as Dative *se* and Locative *kuna*. Subject and direct object NPs have zero case, and may be said informally to be in the Nominative. Some adverbial modifiers like *nee* 'here' can be analysed as zero case forms of (defective) nouns.

Personal pronouns can, of course, be used as NPs, but they do not fit neatly into the schema (9). For example, the (third person) logophoric plural pronoun has a discernible (but often phonologically altered) Pl ending *yo*, as in (13). Any pronoun can take a DF morpheme, a postposition, or both (14).

- (13) *ŋgi-yo* (pronounced [ŋgijo], [ŋgije], [ŋge:], etc.)
 LogoPl
 'they (Logophoric)'
- (14) *ay ta se*
 1Sg Topic Dat
 'to (for) me'

The more complex sentence structures that we will briefly introduce here are topic and focus constructions, relative clauses, and complement clauses (reported speech, subjunctive, serial verbs).

Topic constituents (usually NPs) are usually preposed and set off from the sentence proper by a pause. In this preposed position, they optionally take a Topic morpheme. One common Topic morpheme is *bine* (also a noun 'heart'), often in contrastive-topic function. A preposed topical NP often corresponds to a pronoun (in any syntactic function or position) in the sentence proper, as in (15).

- (15) *[[ay baaba] bine], ay guna ga*
 [[1Sg father] Topic], 1SgS see 3SgO
 'As for my father, I saw him.'

However, a preposed topical NP does not require such a "resumptive" pronoun.

Occasionally a NP with topic marking is treated as part of the sentence proper, namely as its subject NP. In this case, the MAN morphemes and the VP immediately follow the topic-marked subject NP.

While topic-marked NPs are generally sentence-external, focalized NPs are clearly part of sentential syntax even though the focused NP (or PP) is always fronted (=extracted). (We use “preposed” or in connection with sentence-external elements such as most topic-marked NPs, “fronted” or “extracted” for sentence-internal movement associated with focalization, WH-interrogatives, and perhaps relativization). In KCh, unlike KS, extraction normally leaves behind a phonologically zero trace (rather than a resumptive pronoun).

The focalization system sharply distinguishes subject focus from other focus structures. If the grammatical subject is the focus, the morpheme *ŋga* occurs between subject NP and the remainder of the sentence (16).

- (16) *ay* *ŋga* *guna* *ga*
 1Sg SFoc see 3SgO
 ‘I [*focus*] saw him (her).’ (= ‘It was I [no-one else] who saw ...’)

Without the SFoc morpheme, there would be no way to tell that the subject has been focalized, since subjects precede MAN morphemes and VPs. SFoc *ŋga* is phonologically identical with a “Full” (nonclitic) 3Sg pronoun which we label “3SgF.” This raises the possibility of construing SFoc *ŋga* as a kind of subject resumptive pronoun: the subject NP, here *ay* (1Sg), is shifted to the left, out of the subject position into a special focus slot, whereby a type of 3Sg subject pronoun appears in the true subject position. However, this analysis is only one of the possibilities to be explored later, and it is problematic for the upriver dialects.

For non-subject focus, the normal KCh construction is to front (extract) the focused constituent, adding Focus morpheme *na* before the subject NP. This pattern is especially common in WH questions and responses to such questions (17).

- (17) *maa* *na* *no-o* *taasi?*
 what? Foc 2SgS-Impf seek
 ‘What [*focus*] are you seeking (=doing here)?’

Foc *na* should not be confused with Neg *na*, illustrated in (8), above, which follows (rather than precedes) subject NPs. Foc *na* is not used with isolated WH interrogatives (in truncated questions): *maa* ‘what?’ (not #*maa na*). Accordingly, there is no clear evidence that *na* in (17) forms a syntactic constituent with the preceding focused NP.

The productive relative-clause construction consists of the head noun followed by Rel *kaa* and the remainder of the relative clause. As with focalization, KCh differs from KS in that KCh normally has no resumptive pronoun within the relative clause. In some examples in this grammar, to help readers with parsing I use *t* (for “trace”) to indicate the virtual position of the deleted element and will use subscripts like “x” to indicate coreference. (Where the location of the trace is not at issue, trace notation is omitted in examples.) In (18-21) we see a subject relative (18), a direct object relative

(19), a postpositional relative with the postposition added directly to *kaa* (20), and an example showing how a postposition modifying the head noun (in the higher clause) is added (if at all) to the end of the entire relativized NP (21). I use the trace notation in (19). There are some tricky issues in analysing even simple subject relatives like (18); should we transcribe the relevant portion as *kaa guna ni*, as *kaa a guna ni* (with 3Sg subject pronominal contracting with the preceding *kaa*), or as *kaa t_x guna ni* (with a trace)? Is *kaa* itself a true relative pronoun (coreferential to the head noun), or merely a relative operator which requires a further pronoun (or trace)?

- (18) *[tubaabu di] kaa guna ni*
 [white Def] Rel see 2SgO
 'the white man who saw you(Sg)'
- (19) *[tubaabu di] kaa ay guna t_x doodi*
 [white Def] Rel 1SgS see t_x there
 'the white man_x whom_x I saw t_x there'
- (20) *[huu di] kaa kuna ay goro*
 [house Def] Rel Loc 1SgS sit
 'the house in which I lived'
- (21) *[[tubaabu di] kaa guna ni] se*
 [[white Def] Rel see 2Sg] Dat
 'to (for) the white man who saw you(Sg)'

One of the chronic difficulties of reading texts in KCh is separating Relative *kaa* from the common intransitive verb *kaa* 'come; become'. Moreover, *kaa* is also used as a non-relative 'that' complementizer with indicative clauses as complements, and as a 'when ...' conjunction.

(22) illustrates typical reported speech.

- (22) *ay baaba har (kaa) ngu o wii ga*
 1Sg father say (that) LogoSgS Impf kill 3SgO
 'My father_x said (that) he_x would kill him(her)_y.'

The material following the quotative verb *har* 'say' is attributed to the quoted speaker (here, 'my father'). In such contexts, the logophoric pronoun *ngu* is used instead of the usual 3Sg pronouns (*a*, *ga*) to denote the quoted speaker, in any syntactic position. Therefore an ordinary 3Sg pronoun must denote another third person referent, distinct from the quoted speaker. We use subscripted indexes {*x*, *y*, ...} to clarify the relationships in such sentences.

The form *ngu* can also be used in non-reported-speech contexts as a third person reflexive (3Refl), as in (23):

- (23) *a haabu ngu*
 3SgS prepare 3ReflSgO
 'He(he) got ready.'

Subjunctive clauses are marked with the morpheme *ma* in the MAN position between the subject NP and the verb. The type of modality they express is generally deontic rather than epistemic; more specifically, the modal value is usually hortative, imperative, or desiderative. However, as in some European languages, the subjunctive is largely confined to complement clauses. It is common as the complement of a quotative verb, in which case it is used to report an original imperative, as in (24).

- (24) *ni har [ay ma koy]*
 2SgS say [1SgS Subju go]
 ‘You(Sg) told me to go.’

Subjunctive clauses are also normal as complements of verbs of desire, notably *baa* ‘want’, and have other syntactic-semantic functions.

The major remaining complement clause type is a nonfinite VP beginning with Inf[initive] *ka*, followed immediately by the verb and any further material (object NPs, adverbials), as in (25).

- (25) *a duu [ka guna ga doodi]*
 3SgS get [Inf see 3SgO there]
 ‘He (She) proceeded to see her (him) there.’

Note that *ka* occurs in the position(s) normally filled by the subject NP and the preverbal MAN morphemes. Such nonfinite VPs are commonly used as complements of certain verbs, generally either “serial verbs” with aspectual value such as *duu* in (25), or “control verbs,” such as *wir* ‘seek (to ...)’.

This rather oversimplified sketch of KCh morphosyntax should suffice as an initial orientation.

2.2 Distinctive features of Koyra Chiini

KCh and DjCh share many features which distinguish them from the main block of Songhay languages (KS, HS, Zarma, etc.).

First, KCh and DjCh (like KS) lack lexical or grammatical tone distinctions of the sort typical of the non-Malian languages (Zarma, Dendi, etc.) and still going strong in HS.

Second, KCh and DjCh have merged **z* and **j* (affricate) as *j*, so *z* is no longer part of the phonology except in a few recent loanwords. KCh *j* may therefore correspond to either KS *z* or *j*, hence the homophones in (26).

- (26) Correspondences of KCh (and DjCh) affricate *j*
- | <u>KChDjCh</u> | <u>KS (Gao)</u> | <u>gloss</u> |
|----------------|-----------------|------------------|
| <i>jii</i> | <i>jii</i> | ‘butter’ |
| " | <i>zii</i> | ‘swim’ or ‘push’ |

Third, KCh and DjCh show S-MAN-V-X constituent order (subject, mood-aspect-negation, verb, other elements including direct object), while KS, HS, and the non-Malian varieties show S-MAN-O-V-X order with the direct object preceding the verb. In Greenbergian terms, Western Songhay is SVO while the other varieties are SOV, though the latter are not verb-final languages in the fashion of Turkish and Japanese. The SOV Songhay varieties also show a Transitive marker between the MAN complex and a direct object NP (if present); there is no trace of this in KCh or DjCh.

KCh and DjCh share Def *di* and Pl *yo* in NPs. (These are also found in the Bamba dialect of KS.) Mainstream KS and most other Songhay languages have different DefSg and DefPl suffixes.

DjCh differs from KCh on many counts. DjCh has seven phonemic vowel qualities to five for KCh. DjCh favors *in situ* relativization and WH-interrogatives, while KCh fronts the relative pronoun and the WH-interrogatives. Because of the many lexical differences between DjCh and KCh, it is necessary to devote separate dictionaries to them. For more details on DjCh grammar, see Appendix 2.

2.3 Internal variation within Koyra Chiini

Distinctive features of the upriver dialects are described in Appendix 1. Of particular phonological significance is the retention in upriver dialects of the full original shape of stems like *beeri*, which reduce to CVVC, e.g. *beer*, in Timbuktu KCh (and in DjCh). The most interesting syntactic differences involve the focalization system and the use of simple versus “Full” third person pronouns. For more details on the upriver dialects, see Appendix 1.

There are also many lexical isoglosses which distinguish Timbuktu from upriver dialects. In Timbuktu, *ham* means ‘meat’ (beef, mutton, goat, etc.), the compound *hari-ham* (‘water-meat’) means ‘fish’, and *baši* is a more restricted term meaning ‘piece (of meat)’. In the upriver dialects (and DjCh), *ham* means ‘fish’ and *basi*, *baši* is the general word for ‘meat’. Another well-known idiosyncrasy is Timbuktu *nuune* ‘fire’, versus *tow* in upriver dialects. In both of these cases, the Timbuktu variant closely matches that of the other major city in northern Mali, Gao.

Chapter 3 Phonology

3.1 Consonants

The basic consonants of KCh are shown in (27).

(27) Consonants

<u>labial</u>	<u>alveolar</u>	<u>palatoalveolar</u>	<u>velar</u>	<u>laryngeal</u>
(p)	t	č	k	
b	d	j	g	
f	s	(š)	(x)	
	(z)	(ž)		
m	n	ñ	ŋ	
	l			
	r (tap)			
w		y		h (')

Though no instrumental study has been done, the voiceless stops and affricate {p t č k} appear to be aspirated.

We now comment in turn on the minor phonemes.

p: most stems containing *p* are loanwords from French or other languages, e.g., *piisi* 'bundle (of women's garments)' (<Fr. *pièce*).

š: the distinction between *s* and *š* is clearer in KCh than in KS, where *š* often represents palatalization of *s* before {*i*, *e*}. However, the number of stems containing *š* is fairly small; many are clear borrowings, such as *šeytaan* 'devil' from Arabic and *šimoo* 'cement' from French. Many others stems with *š* are non-basic vocabulary for which loanword origins may be suspected. A partial minimal pair is *šombu* 'wooden comb' versus *sambu*, *sombu* 'lift (child to chest)'. To facilitate inter-Songhay lexical comparisons, *š* is treated as though it were *s* for purposes of alphabetical ordering in the dictionary.

x (voiceless velar fricative): confined to a few Arabic loanwords like *alxabar* 'news', and some speakers adapt this sound as *h* (less often *k*). I know of no stem-initial or -final cases.

{*z*, *ž*}: occur in Arabic and French loans, *z* being the preferred pronunciation: *zerbwa* 'jerboa (rodent)' (<Ar. with Fr. overlay). *z* is also fairly common in Arabic loans: *azzinaa* 'adultery'. Original Songhay **z* became *j* in KCh (§3.10.3).

ŋ (velar nasal): many cases of phonetic velar nasal [ŋ] are simply surface assimilations of *n* (or an underspecified nasal) to a following velar stop, as in *hiŋka* 'two' and *hiŋ ka* (pronounced [hiŋka]) 'be able to'. Word-final *ŋ* occurs in most Songhay varieties but normally shows up as *n* in Timbuktu KCh. However, *ŋ* does occur before vowels in a modest number of lexical items, including *ŋaa* 'eat' and *baŋa* 'hippopotamus'.

' (glottal stop): this sound is fairly common in Arabic, and certain Songhays who know some Arabic retain the sound in borrowings: *daa'iman* 'never'.

Since there are few phonological rules, there is not a great deal of dynamic evidence for grouping the segments into classes. The schema shown in (27) is a conventional one showing the intersection of points of articulation with manner of articulation classes (voiceless stops, etc.). The table aligns affricates *č*, *j* with the corresponding stop series.

Assimilation rules provide evidence for some groupings. *r* often assimilates totally to a following {*t d s l n*}, see §3.6.2. *w* often assimilates totally to a following {*b m f*}, and *y* often assimilates totally to a following {*č j ñ*}, see §3.6.3. These processes suggest phonological groupings: alveolars {*t d s l n r*}; labials {*b m f w*}; and palatoalveolars {*č j ñ y*}.

3.2 Oral vowels

The oral vowels are short {*i e a o u*} and their long counterparts {*ii ee aa oo uu*}. The uncommon nasalized vowels are discussed in §3.4.1.

The mid vowels {*e o ee oo*} tend to be fairly closed (high), and rarely reach the level of openness characteristic of the DjCh phonemes *ɛ*, *ɔ*.

Particularly in Timbuktu itself, short *a* tends to be fronted to phonetic [æ] in some morphemes such as *dam* 'do', and on occasion I have had some difficulty distinguishing *a* from *e* in this local dialect. In most cases where my transcriptions have oscillated, further study has shown that the phoneme is *a*, and the upriver dialects as well as DjCh usually have a clear *a*. However, after a palatoalveolar consonant, as in the first syllables of *yadda* - *yedda* 'consent' and *yanaa* - *yenaa* - *ñanaa* - *ñenaa* (dialectally also *yinaa*) 'precede', I believe that Timbuktu and perhaps some other KCh speakers differ from each other in their phonemic representation (or cannot distinguish the two vowels phonemically).

In Timbuktu I also had difficulty distinguishing *a* from *o* in several words of the type *C_ŋgu* and *C_mbu*, the vowel filling the blank often being heard as [ɔ]: *joŋgu* 'hundred', *noŋgu* 'place', *woŋgu* 'war' and 'refuse', *čombu* 'glass, bowl', *sombu* 'lift (child to breast)'. I generally write them as just shown, with *o*, in texts but give both pronunciations (if attested) in the dictionary. I have heard *a* consistently in *gambu* 'door', *ban̄gu* 'floodplain' (or 'circumcision'), and *hambur* 'fear'; I have heard *o* consistently in *fombu* 'melon seeds', *jombu* 'grain residue after pounding', and *hoŋgu* 'believe'. These remarks do not apply to upriver dialects or to DjCh.

On the contraction of two short vowels to a long vowel, see §3.7.1-4.

3.3 Diphthongs

By "diphthong" we mean the sequence of a vowel nucleus plus a semivowel coda *y* or *w* within a syllable, i.e., word-internally before another consonant or word-finally. There is some justification for treating diphthongs as quasi-units, since only certain vowel-semivowel combinations occur. All diphthongs in the language are upgliding (vowel plus semivowel).

3.3.1 Short-nucleus diphthongs

In KCh, the following short-nucleus diphthongs are well-established in the sense that they can occur word-finally in nouns and verbs: {*oy ew ey~ay ow~aw*}. These diphthongs all involve low or mid-height nuclei. The diphthongs *iw* and *uy*, with high nucleus and sharp differentiation of nucleus and coda, are attested but rare. *iw* occurs in the semi-onomatopoeic *titiw* ‘shatter’, and in one variant of *čiwsi* ~ *čipsi* ‘sacrificial ram’ (<Ar. *kabš*). *uy* occurs in the intensifying interjection *buy!* associated with the concept ‘yellow’ (§9.2). (See below on the aberrant phonetics of intensifiers.) It also occurs in one uncommon noun, *namaŋuy* ‘bullfrog sp.’ The remaining possibilities, #*iy* and #*uw*, with high nucleus and minimal differentiation of nucleus and coda, are unattested as diphthongs. We now consider the four well-established types in more detail.

oy is structurally unproblematic and common; examples are *boy* ‘fingernail’, *boyro* ‘good’ (related to *boori* ‘be good’), *doy* ‘float’, *garboy* ‘date’, *goy* ‘work’, *gumoy* ‘dock’, *hoy* ‘sauce’, *kokoy* ‘chief’, *koy* ‘go’, *koyne* ‘again’, and *moy* ‘namesake’. It also occurs in some *-ey* nominalizations of verbs with stem-final *o* such as *moŋg-oy* ‘inability’ (<*moŋgo* ‘fail’), compare *send-ey* ‘difficulty’ (<*sendu* ‘be difficult’).

ew is structurally parallel to *oy* (mid-height nucleus, nucleus maximally differentiated from coda). However, it is rather uncommon and it may have been less stable over time than *oy*. It occurs in *deelew* ‘spark’, *felew* ‘be light (in weight)’, and *hew* ‘wind, air, smell’. *dow* ~ *dew* ‘sand’ fluctuates between *ow* and *ew*; for *yow* ~ *yew* ‘guest’ and similar forms with preceding palatal or palatoalveolar, see the end of this section.

The diphthongs *ey~ay* and *ow~aw* constitute another pair of structurally parallel diphthongs. Each shows neutralization of the opposition between *a* and the neighboring mid-height vowel closest to the articulation of the coda (*e* for *y*, *o* for *w*). The actual articulation appears to be intermediate but tending toward the mid-height end of the relevant region, hence [ej] and [ɔw], except that we get a clear phonetic [a] word-initially or following stem-initial *h*: *haw* ‘tie’, *haw* ‘cow’, *hawru* ‘eat supper’, *hay* ‘give birth’, *hay* ‘price’, *hayni* ‘millet’, *ay* (1Sg pronoun). There are few cases of non-stem-initial *h* before such diphthongs, but in *hahey* ‘sieve’ I hear the diphthongs as close to [ej]. We get nasalized [äy] in two cases of historically late nasalization of **a*. Not only do we get *hāyši* ‘dog’ (<**haynši* <**hansi*), where the initial *h* would favor a low nucleus anyway, but we also have *gāyši* (<**gaynši* <**gansi*) ‘fonio (a grain)”; cf. also §3.4.1. We will write *ay* (nasalized *äy*) and *aw* word-initially, after stem-initial *h*, and in words like *gāyši*. Elsewhere we will write *ey* and *ow*, though the actual phonetic vowels are closer to [ej] and [ɔw] and there is some dialectal variability. Examples of *ey* include *bey* ‘know’, *dey* ‘buy’, *derey* ‘become lost’, *key* ‘stop’, *key* ‘weave’, *sey* ‘sow (grain)’, and *sey* ‘fever’. Examples of *ow* include *bisow* ‘Acacia sp.’, *bow* ‘be abundant’, *bukow* ‘corpse’, *hasar-ow* ‘destruction’ (cf. *hasara* ‘be ruined’), *hirow* ~ *hurow* ‘enter’, *yow* ‘bull’. For the historical shift **ab* → *ow*, see §3.10.

There are two types of lexical item which may go against the normal pattern and maintain phonemic oppositions between *ey* and *ay* and between *ow* and *aw*. These are interjections (particularly intensifiers) and loanwords.

Intensifiers (§9.2) permit [a] as diphthongal nucleus after consonants other than *h*, at least for some speakers. For one speaker I recorded a clear minimal pair: intensifier *gay!* [gaj] associated with the verb *kaan* 'be sweet', audibly distinct from *gey* [gej] 'endure, be a long time' and from *gaay* [gaj] 'restrain'. Another intensifier, *tey!* [tej], associated with the verb *hottu* 'be hot (spicy)', shows that the *ey* diphthong is also possible in interjections for this speaker. However, other speakers applied the same neutralizations to intensifiers as to other vocabulary, and did not distinguish the intensifier for 'be sweet' from the verb *gey* 'endure'.

The 1Sg pronoun *ay* calls for comment. As a subject pronoun, before a postposition, as a possessive, in preposed or fronted position, or in isolation, I generally hear [aj]. However, as a postverbal direct-object morpheme it tends toward [ej]. This probably reflects the status of direct-object pronominals as enclitics, with less natural stress than pronouns in other positions. In other words, it appears that [ej] is the "lax" counterpart of [aj]. I will accordingly transcribe the 1Sg pronoun as *ey* when it functions as direct-object clitic, and as *ay* elsewhere. This is an idealization, but aside from its approximation to phonetic reality it also provides useful orthographic differentiation. Examples: *ay bine* 'as for me', *ay kaa* 'I came', *ay ñaa* 'my mother', *ay doo* 'at my house (chez moi)', but *a kar ey* 'she hit me'.

Some Timbuktu speakers carefully retain Arabic pronunciations of loanwords such as *addawla* 'reputation, prestige' and *alwayli* 'suffering'. The fully assimilated pronunciations are *addowla* [ad:ɔwla] and *alweyli* [alwejli], and the fact that some speakers do not assimilate them suggests that the prevailing neutralized two-way system is vulnerable to re-splitting. On the other hand, there are other examples where a recently arisen **ay* or **aw* has been adjusted to the synchronic pattern. Several stems with original final **ab* have participated in a lenition of **b* to *w*, the resulting diphthong being heard in most cases as [ɔw] rather than as [aw], as in *algab* ~ *algow* 'hawk sp.' (more examples in §3.10.1).

However we choose to analyse the *ey*~*ay* diphthong, we should note that it has no tendency to induce palatalization of a preceding velar stop.

The basic diphthongal system of {*oy ew ey-ay ow-aw*} is subject to further reduction when the preceding consonant constituting the onset of the syllable is either *w* or a palatoalveolar from the set {*č j ñ š ž y*}. First, consider what happens when the onset and the coda are harmonic, as in the patterns *wVw* and *PVy* (*P* = any palatoalveolar). Only *o* is possible in *wVw*, as in *wow* 'insult' and *wow* 'become healed', and only *e* is possible in *PVy*, as in *jey* 'spend a long time' and *yey* 'become cold'. Note that the nucleus in these examples is harmonic with the flanking segments, *o* being close to *w* and *e* being close to the palatoalveolars.

Consider now the disharmonic flanking environments *wVP* and *PVw*, where the onset and coda tend to pull the nucleus in opposite directions. Since only *y* among the palatoalveolars may occur syllable- or word-finally, *wVP* in practice reduces to *wYy*. The relevant *wYy* forms are transcribed *woy* 'woman' and its homophone *woy* 'ten', as well as a few bisyllabic stems like *woyme* '(man's) sister' and *woyne* 'sun'. The pronunciation is actually intermediate in both cases between [wɔj] and [wej] and might be better represented as [wɔɛj], but since no phonemic distinction seems possible in this environment there is no harm in normalizing the transcription.

For *PVw* we have *jow* 'take', *čow* 'read, study', *yow* 'guest', and *yow* 'bull'. In these cases we again find intermediate nuclei, e.g. wavering between [dʒɔw] and [dʒɛw] and perhaps best represented as [dʒɛɔw], but no phonemic distinctions seem possible and we normalize the transcription to *ow*.

Broadly speaking, the (Timbuktu) KCh system of short-nucleus diphthongs is similar to that of KS, and different from that of DjCh and HS, which phonemically distinguish *ey* from *ay* and *ow* from *aw*.

3.3.2 Long-nucleus diphthongs

The long-nucleus diphthongs are *aay* and, marginally, *aaw*. They occur stem-finally and occasionally stem-medially. It is probably best to analyse them as simple sequences of *aa* plus a semivowel, essentially parallel to similar sequences with final sonorant such as *aan* or *aar*, in which case there is no special category of long "diphthongs." There are only slight differences between {*aay aaw*} and {*aan aar*} in distribution, and in all cases the nuclear *aa* has its normal articulation.

There are several examples of *aay*: *gaay* 'restrain', *gaayka* 'fish eagle', *taayla* 'bald spot', *taaytaay* 'ostrich', *waay* 'become aware of'.

The only possible examples of *aaw* are a handful of Arabic loans where a word-final **b* after a long **aa* has shifted to *w*, as in *čitaab* ~ *kitaaw* (~ *kitaw*) '(Koranic) tome' (<Ar. *kitaab*). The apparently shortened variant *kitaw* may reflect the optional, often incomplete shortening of vowels in final superheavy syllables, so perhaps *kitaaw* rather than *kitaw* is the valid lexical representation for those speakers who have shifted the **b* to *w*. In any event, the *aaw* diphthong is present for some speakers but quite marginal.

3.4 Nasalized vowels and word-final nasal consonants

3.4.1 Nasalized vowels

There are only a few native Songhay stems in KCh with a surface nasalized vowel that clearly cannot be accounted for phonologically as a vowel-nasal sequence: *dōō* 'old times', *fīī* 'blow nose', *hāā* 'inquire', *hāwhāw* '(dog) bark', *hīīhāā* 'breathe', *hōō* 'nowadays', *johō* '(dog) bark', *saahī* 'be solid'. There appears to be no example of #*ū*, and if 'fart' is reconstructed as **fūū* it has lost its nasalization in KCh *fuu*.

Four of the clear cases ('blow nose', 'bark' [2 stems], 'breathe') have onomatopoeic attributes. *hāā* 'inquire' might be suspected to be derived from *hā* 'huh?', but the verb occurs in KS and other Songhay languages as well.

Since French has many nasalized vowels, it is not surprising that French loanwords provide further examples: *bargō* 'metal drum (barrel)', *bō* 'well, ...', *kōkur* 'competition', *kōtinū* 'continue', *kurāā* 'electricity', *lāspeer* 'slingshot', *mangazā* 'warehouse', *milyō* 'million' (< French *barriqueaut*, *bon*, *concours*, *continue*, *courant*, *lance-pierre[s]*, *magazin*, *million*). The nasalization of *bargō* is secondary (vis-à-vis the

French source) and suggests that nasalized vowels have become an indicator of foreignness, like e.g. the æ vowel quality in 'warehouse'. Some other stems of unknown or Bambara origin may also be mentioned: *fugāā* 'metal of tin cans (aluminum alloy)' and *reglā* 'type of boubou (garment)'.

Unlike the "true" nasalized vowels in the stems listed in the first paragraph of this section, those just listed are frequently resolved into an oral vowel plus nasal consonant when immediately followed by a stop, affricate, or liquid, especially within the same phrase. This applies to the stems with word-final nasalized vowel followed by e.g. Def *di*, hence *bargon di* 'the metal drum', *kuraan di* 'the electricity', *mangazæn di* 'the warehouse', *milyon di* 'the million', *fugaan di* 'the tin', and *reglan di* 'the boubou'. Before a fricative or semivowel, resolution is not usual: *milyō foo* 'one million'. In the "true" nasalized-vowel cases listed at the beginning of this section, resolution does not occur even before stops: *hōō boro* 'a person of today'.

Phonetic nasalization is relatively common in vowels or diphthongs followed by fricatives {*f s š*}. One could argue that in these cases there is a nasal consonant (probably *n*, or an underspecified nasal) in the coda of the first syllable, and that it is realized in the form of nasalization of the preceding vowel (or diphthong nucleus). Examples are *bēysa* 'bundle of women's robes', *čěse* – *čěysa* 'scar; be jealous', *dōfo* 'steaming pot', *hāfī* 'clay bowl', *hāyši* 'dog', *hīsa* 'make', *kolōfar* 'a spice', *kūfa* 'be curious', *kūsum* 'roll up (wad of money)', *sāfa* – *sōwfa* 'slap', *tēfer* 'worn-out mat'. The underlying-nasal analysis is supported, at least historically, by the loanword *allīši* 'type of devil' (<Ar. *al-'insii*). The underlying-nasal representations would then be //beynsa//, //čense//, and so forth, using "n" to represent the underspecified nasal. In the case of *fūsu* – *fuusu* 'inflate; blow', two originally distinct lexical items may have converged.

A further complication is that a diphthong *ey* is often phonetically nasalized to [ēj] after *m*, as in *mey* [mēj] 'have'. In [mējsa] 'measles' and [mējсамējsa] 'bird sp.', the nasalization of the diphthong could be attributed either to the preceding *m*, or to a following underlying nasal, giving rise to alternative phonemic representations, e.g. //meysa// versus //meynsa// (orthographic *meysa* versus *mēysa*). We will use the simpler representations, e.g. *meysa*, but there is no evidence against the other interpretation.

There are a small number of cases of dialectal variation between a pronunciation with syllable-final nasal and an alternative with nasalized vowel or diphthongal coda. Most involve CVN stems: *dan* – *daw* – *dāw* 'cross', *hem* – *hēē* 'weep', *mom* – *moŵ* – *mōw* 'hear', *nan* – *now* – *nōw* 'abandon'. In each case, the pronunciation with nasal consonant is standard in Timbuktu. On the other hand, in the bisyllabic stem *hiñe* – *hiye* – *hīye* 'tooth', variation occurs even within Timbuktu.

3.4.2 Word-final nasal consonants

Word-final *n* and *m* are relatively stable in KCh. Examples of final *m* include many Arabic loans such as *alḥaram* 'bastard', and many native stems such as *dam* 'put, do' and *danam* 'blind'. Examples of final *n* are many Arabic loans like *alforon* 'bread

oven' and many native stems such as *baan* 'be light' and *ben* 'finish'. For a few cases of historical loss or shift of a final nasal, see §3.10, below.

Word-final velar nasal η is not normally allowed in Timbuktu, except as the surface form of n after assimilation to a following stop (§3.6.1). (Final η occurs sporadically in upriver dialects, Appendix 1.) Comparison of certain verbs with their derivatives suggests that vestiges of a former opposition of final $*n$ and $*\eta$ are still to be found (28).

(28)	<u>verb</u>	<u>gloss</u>	<u>nominalization</u>	<u>gloss</u>
a.	<i>hin</i>	be able	<i>hin-ey</i>	'wherewithal'
	<i>baan</i>	be soft	<i>baan-ey</i>	'softness'
	<i>jeen</i>	be old	<i>jeen-ey</i>	'old age'
	<i>kaan</i>	be sweet	<i>kaan-ey</i>	'sweetness'
b.	<i>jen</i>	fail	<i>jeŋey</i> (§4.6.5)	'lack'
	<i>tin, tim</i>	be heavy	<i>tiŋ-ey, tin-ey</i>	'weight'
	<i>kan</i>	fall	<i>(woyne-)kaŋ-ey</i>	'(sun-)set'

Most n -final verbs that have an abstractive nominalization keep the alveolar nasal; a few examples are given in (28a). However, the three stems in (28b) have an apparent shift of n to velar η (in one case, optionally). One way to analyse the data is to set up the (28a) cases with underlying n and the (28b) cases with underlying η , then posit a rule converting word-final η to n . This is historically correct, but such an analysis would be rather opaque synchronically, for the following reasons: the simple verbs are more salient than the nominalizations; there are only the three cases shown in (28b) for the alveolar-velar alternation; and the nominalizations in (28b) seem to show semantic specialization. Accordingly, we will not attempt to formalize a synchronic phonological rule to capture this minor alternation.

3.5 Syllabification

3.5.1 General restrictions on particular consonants

All regular native consonants occur word-initially, except that tap r is found initially only in the postposition *ra*. Examples of each initial consonant can be easily gleaned from the dictionary (where, be it noted, η is alphabetized as though n , and ξ as though s).

Native consonants that do not occur word-finally, excluding intensifiers and other interjections, are h , \bar{n} , η (in Timbuktu), affricates $\{\check{c} j\}$, stops $\{p t d k g\}$, and sibilants $\{s \xi\}$. There are two apparently native stems (along with some loans) ending in b (see §3.10.1), and a couple of loans ending in f , but these segments are clearly highly marked in final position.

3.5.2 Syllabic shapes of pronouns and grammatical morphemes

In this section we specify the possible shapes for syllables. We begin with pronouns and grammatical morphemes, proceed to monosyllabic stems, then discuss syllabic possibilities in multisyllabic words.

We use the conventions in (29).

(29) Notational conventions

<i>C</i>	any consonant
<i>V</i>	short vowel
<i>VV</i>	long vowel
<i>Vy, Vw</i>	diphthong
<i>R</i>	sonorant (liquid, nasal): { <i>l r m n ñ ŋ</i> }
<i>N</i>	nasal { <i>m n ñ ŋ</i> }
<i>T</i>	obstruent: { <i>p b t d č j k g f s š</i> }

Pronouns and other normally unstressed grammatical morphemes have short vowels even when not closed by a consonant, the most common shape being CV. A few grammatical morphemes with focal or presentative force (hence salient and stressed) have long vowels. The attested shapes are given in (30).

(30) Syllabic shapes (pronouns and grammatical morphemes)

<u>shape</u>	<u>example</u>	<u>category</u>	<u>comments on shapes</u>
V	<i>a</i>	3SgS pronoun	—
#VV	—	—	occurs in contractions
Vy	<i>ay</i>	1SgS pronoun	—
#Vw	—	—	—
#VR	—	—	—
#VT	—	—	—
#Vh	—	—	—
CV	<i>ga</i>	3SgO pronoun	very common shape
CVV	<i>daa</i>	Emphatic	—
#CVy	—	—	—
#CVw	—	—	—
CVR	<i>yer</i>	1PlS pronoun	—
#CVT	—	—	—
#CVh	—	—	—
NCV	<i>ŋgu</i>	LogoSg pronoun	—
NCVV	—	—	occurs in contractions

In the case of NCV, which applies to LogoSg *ŋgu*, SFoc *ŋga*, and *nda* ‘and, with’, one could argue that the nasal is syllabic, so the forms are really bisyllabic.

The long-vowel shapes VV, CVV, and NCVV occur in contractions of two short-vowel morphemes: *no-o* ‘2Sg Impf’ from //ni_o//, and *a-a* 3Sg Impf from //a_o//, *ŋgu* *o* (pronounced [ŋgo:]) ‘LogoSg Impf’.

Since there are a limited number of pronouns and unstressed grammatical morphemes, some of the gaps in (30) are perhaps fortuitous. However, the disallowance of final obstruents (“T”) and of *h* are very general restrictions on word-final segments.

3.5.3 Syllabic shapes of monosyllabic stems

In (31) we summarize the data for monosyllabic words consisting of a stem (usually a noun or verb). The preferred shapes are CVV and CVC (final segment not an obstruent).

(31) Syllabic shapes (monosyllabic stems)

<u>shape</u>	<u>example</u>	<u>gloss</u>	<u>comments</u>
#V	—	—	—
#VV	—	—	—
#Vy	—	—	—
#Vw	—	—	—
#VR	—	—	—
#VT	—	—	—
#Vh	—	—	—
#CV	—	—	—
CVV	<i>baa</i>	‘want’	—
Cv̄v̄	<i>hāā</i>	‘inquire’	—
CVy	<i>goy</i>	‘work’	—
CVw	<i>hew</i>	‘air’	—
CVR	<i>kar</i>	‘hit’	—
CVT	<i>dob</i>	‘attach’	<i>b</i> only, rare
#CVh	—	—	—
CVVy	<i>gaay</i>	‘restrain’	—
CVVR	<i>daar</i>	‘spread out’	—
CVVT	<i>piik</i>	‘spades (card suit)’	rare (loans only)
#CVVh	—	—	—
NCVR	<i>nčam, nčom</i>	‘mouse’	rare
NCVVR	<i>njeer, jeer</i>	‘antelope’	rare

Again, we might consider the forms beginning with NC to be bisyllabic.

Monosyllables ending in an obstruent are quite rare. Fricatives {*f s š*} are exemplified only by a few loanwords like *def* ‘scholastic exam’ (<Fr. acronym *D.E.F.*). The only native examples with final stops or affricates are two cases with *b*, *dob* ‘attach’ and dialectally *jab* ‘punch’, both of which are action verbs that perhaps favor CVT shape for sound-symbolic reasons.

3.5.4 Syllabic shapes of nonmonosyllabic stems and words

Bisyllabic (and longer) stems show somewhat similar patterns. However, they allow a few more possibilities, especially if we lump word-initial, -medial, and -final positions together. There are several reasons for this:

a) initial syllables may begin with a vowel (Arabic loans, also some native forms beginning with *i*);

b) the set of longer noun stems includes a few which permit an initial nasal (probably the vestige of an old noun-class prefix) followed by another consonant, as in *ndontor* – *dontor* ‘scorpion’, *ngorfu* ‘vine sp.’, and *nnori* – *nori* ‘ant sp.’;

c) bisyllabic and longer stems include a large number of loans from Arabic, French, and other languages whose syllabic preferences differ from those seen in native Songhay vocabulary;

d) geminate stops, nasal-stop clusters, and other word-medial consonant clusters increase the possibilities for syllabic codas of nonfinal syllables.

Basic schemas for allowed and disallowed syllable shapes in nonmonosyllabic stems are given in (32).

(32) Syllabic shapes (nonmonosyllabic stems)

<u>shape</u>	<u>example</u>	<u>gloss</u>	<u>comments</u>
V	<i>abada</i>	‘not at all’	initial
VV	<i>aadama-jje</i>	‘human being’	initial, rare
Vy	<i>aywa</i>	‘well, ...’	initial, rare
#Vw	—	—	—
VR	<i>alkifta</i>	‘meat ball’	initial
VT	<i>addibaara</i>	‘trick’	initial (geminate clusters)
#Vh	—	—	—
CV	<i>bomo, boŋo</i>	‘head’	initial, medial, final
CVV	<i>azzakaa</i>	‘donation’	initial, medial, final
Cv̄v̄	<i>hīhāā</i>	‘breathe’	initial, medial, final
CVy	<i>boyro</i>	‘good’	initial, medial, final
CVw	<i>čiwsi</i>	‘sacrificial ram’	initial, medial, final
CVR	<i>bolbol</i>	‘pouch’	initial, medial, final
CVT	<i>kupkup</i>	‘machete’	rare (loans only)
CVh	<i>arrahma</i>	‘God’s grace’	nonfinal, rare (loans only)
CVVy	<i>gaayka</i>	‘fish eagle’	rare
CVVC	<i>fahaam</i>	‘understand’	unstable (VV often shortened)
CVyC	<i>bisseyf</i>	‘at the least’	rare (loans only)
CVRT	<i>waxyart</i>	‘nice person’	rare (loans only)
NCV	<i>derey-ndi</i>	‘lose’	initial or with suffix <i>-ndi</i>
NCVV	<i>ndaamakolooti</i>	‘chameleon’	initial
#NCVy	—	—	—
#NCVw	—	—	—
NCVR	<i>ngorfu</i>	‘vine sp.’	initial
NCVT	<i>mbedde</i>	‘avenue’	initial (geminate clusters)
#NCVh	—	—	—

Medial nasal-stop clusters, as in *bundu* ‘stick’, are syllabified for present purposes as *bun-du*. If we segment the syllables as *bu-ndu*, with the nasal part of the following syllable, we would need to recognize a greater number of NC-initial types.

3.5.5 Final long vowels in nonmonosyllabic stems

Final *aa* is relatively common, occurring in some apparently native Songhay forms like *suubaa* ‘select’, and *haŋkaa* ‘stone oven’, as well as in many Arabic loans like *azzakaa* ‘donation’ and *maraa* ‘gather’. Other long vowels are rare word-finally in nonmonosyllables; we can cite *didii* ‘roll up’, *loloo* ‘alley’, *moroo* ‘excrement (pellets)’, *luuluu* ‘immerse in water’, and *tootoo* ‘rice chaff’, plus a few loans like *furnoo* ‘charcoal burner’. There are also a modest number of quasi-demonstrative forms in final *oo* resulting from contraction of demonstrative pronoun **woo*, see §3.7.5.

3.5.6 Nonfinal long vowels in nonmonosyllabic stems

Phonemic long vowels in stem-internal closed syllables are fairly uncommon but do occur. They are subject to phonetic shortening pressures, but in a number of stems this shortening is not complete, so the phonemic length remains valid. See the fuller discussion in (§3.7.9).

3.5.7 Allowed and disallowed medial consonant sequences

While syllable-final T is largely confined to cases involving medial geminate clusters, as in *fadda* ‘palm-leaf sack’, we can cite an occasional case (usually unstable) involving nonidentical obstruents: *assabdu* – *assowdu* ‘Saturday’, *čipsi* – *čiwsi* ‘sacrificial ram’ (both <Ar.).

In cases like *yakwa* ‘be firm’ (<Ar.), *alaafya*, *laafya* ‘peace’ (<Ar.), and *zerbwa* ‘jerboa (rodent)’ (ultimately <Ar.), which appear to have internal clusters consisting of an obstruent followed by a semivowel, it is possible that the correct transcriptions are of the type *yakuwa*, *alaafiya*, *zerbuwa*, with low-level syncope of the medial high vowel before the homorganic semivowel.

The stem *filaan*, *flaan* ‘so-and-so’ (<Ar.) shows optional syncope of its high vowel. It appears that the preceding fricative, the following lateral, and the long vowel of the following syllable are all factors favoring the syncope.

Among medial consonant clusters, geminates are relatively stable. All of the primary stop consonants {*b t d k g*} are attested as geminates within stems: *addabba* ‘animal’ (<Ar.), *fatta* ‘go out’, *mbedde* ‘avenue’, *hukkum* ‘leather tent’, *yagga* ‘nine’. So are the affricates {*j č*}, as in *ajjihaadu* ‘holy war’ (<Ar.) and *wočče* ‘co-wife’, though the vast majority of surface cases involve assimilations, as in *ay jey* ‘I stole’ and *ay čindi* ‘I remain’, pronounced [adʒe:] and [at:ʃindi]. Geminates of the fricatives {*s š f*} are rare; I can cite *saffahaa* ‘ridicule’ and the loan *treffal* ‘clubs (cards)’ (<Fr.). All of the native liquids and nasals occur as geminates: *bulle* ‘anus’, *warra* ‘throw’,

hanna 'stay up at night', *hamma* 'eldest (sibling)', *bañña* 'male slave', *koŋŋo* 'female slave'. I have no clear example of geminate semivowels, unless we transcribe *alkuuwa* 'power' (<Ar.) as ?*alkuwwa* and *iiye* 'seven' as ?*iyye*, transcriptions which have no phonetic basis. There are also no cases of geminated *h*.

Of nongeminate medial clusters, the most common and stable are homorganic nasal-stop clusters {*mb nt nd ŋk ŋg*}.

The only regularly occurring surface "triple clusters" arise when the common Fact-Caus or Mediop derivational suffix *-ndi* is preceded by a diphthong, as in *bey-ndi* 'instruct' and *felew-ndi* 'lighten'. As noted earlier, some diphthongs have a quasi-unit status and we may wish to avoid speaking here of triple clusters.

When *-ndi* is preceded by another nasal, contraction occurs: *dam-di* 'be put', *din-ndi* [dindi] 'set afire'. Tap *r* is unstable and often deleted before *-ndi*, as in *beer-ndi* [be:ndi] 'magnify' from *beer*. I have no combination of *-ndi* after stem-final *l*.

Nonhomorganic medial clusters include many of the type liquid {*l r*} plus obstruent, as in *čirkaare* 'breakfast', *wirči* 'be sick', and *kulba* 'gourd'. The least stable of these are combinations of the liquid with another alveolar. Intramorphemic **rt*, **rd*, **rn* have generally become geminated to {*tt dd nn*} by assimilation (see §3.6), and *ld* is unstable in *čille*, *čilde*, *činne* 'similar', though *bilta* 'be rescued' (<Fulfulde) seems stable.

Among other medial clusters, *ms* is quite common: *damsu* 'legume sp.', *kamsel* 'woman's undergarment' (<Fr. *camisole*), *kumsey* 'trap', *namsu* 'be proud', *nimsi* 'feel regret', place name *alkamsi*. However, other nasal-fricative combinations are avoided, or expressed with nasalized vowel instead of nasal consonant (see §3.4.1).

Diphthongs may be followed by essentially any consonant beginning the next syllable. Sequences of semivowels are uncommon but attested: *aywa* 'well, ...' (<Ar.), *jowya* 'albino'.

3.5.8 Stem-initial consonant clusters

Aside from recent loanwords, mainly from French, the only word-initial clusters are in morphemes beginning with a nasal followed by a homorganic obstruent or nasal. The attested clusters are *mb*, *nn*, *nd*, *nt*, *nj*, *nč*, *ŋg*, and *ŋk*. Examples: *mbaaga* 'lizard sp.', *nnori* 'ant sp.', *ndaamakolooti* 'chameleon', *ntende* 'ant sp.', *njarka* 'native violin', *nčom* ~ *nčam* 'mouse', *ŋgorfu* 'vine sp.', and *ŋkanji* 'tick'. As this selection suggests, the stems in question are nouns rather than verbs, and involve biological or cultural vocabulary, especially fauna, rather than basic vocabulary such as kin terms and body parts. Perhaps they were originally borrowings from a language with a noun-class prefix something like **aN-* (the vowel is preserved in HS), or regionally distributed words with an ultimate origin in such a language. However, there are indications that some cases of this initial cluster type are secondary, reflecting a certain productivity for the nasal "prefix" in the biological domain. (It seems especially productive in some upriver dialects, especially around Diré.)

As noted in §3.5.2, initial nasal-obstruent clusters also occur in a handful of grammatical morphemes. The examples are *nda* 'with, and', Logo/3ReflSg *ŋgu*, and 3SgF *ŋga*, plus the plural counterparts of these latter two.

The initial clusters mentioned in this section are not entirely stable. Some of the nouns in question also have variants without the initial nasal. *nda* ‘with, and’ has a variant pronunciation *na*, and Logo/3Ref1Sg *ŋgu* has a similar variant *ŋu*.

3.6 Consonantal assimilations and deletions

On the use of the ligature $_$ to show the underlying morphemic spellings while hinting at the surface assimilation, see §1.4.

3.6.1 Nasal point-of-articulation assimilation

n tends to assimilate across a word or morpheme boundary to a following noncoronal stop {*p b k g*}. This assimilation is most common within tightly knit phrases, viz., when a stem-final *n* is followed by an unstressed (enclitic-like) grammatical morpheme (e.g. object pronominal or postposition). Because the small set of relevant grammatical morphemes includes several beginning in a velar stop, but none beginning with a labial stop, in practice nasal-assimilation generally involves velarization of *n* to *ŋ* before {*k g*}. Examples are *ay diŋ ga* ‘I picked it up’ and *ŋeegeŋ ga* ‘on a toilet’, pronounced [ajdiŋga] and [ŋe:geŋga]. The verb *hin* ‘be able (to ...)’ is regularly followed by *ka* and VP, as in *ay hiŋ ka duu ga* ‘I can get it’, and is therefore heard as ending in a velar nasal (the alveolar is clear in Abstractive nominalization *hin-ey* ‘wealth’).

Cases of *n* assimilating to a labial are less common, generally involve a phrase boundary, and seem (impressionistically) to show less reliable assimilation: *ay diŋ bundu foo* ‘I picked up a stick’ ([ajdimbundufo:]).

Theoretically, cases involving an alveolar or palatoalveolar should also be transcribed with a ligature, as in *ay diŋ tuuri di* ‘I picked up the tree’ and *ay diŋ čaaku foo* ‘I picked up a sack’, but the “assimilation” here is vacuous and we omit the ligature.

The cluster *mn* is stable in KCh (unlike DjCh): *hamni* ‘fly; flour’, and several other examples.

3.6.2 Liquid assimilation

Tap *r* tends strongly to assimilate totally to a following alveolar {*t d s n*}. The result is a surface geminate, except in triple clusters where the *r* is deleted (one could argue that this is really assimilation, followed by geminate contraction). For historical evidence of intramorphemic sound changes **rt* → *tt*, etc., see §3.10. Examples of the synchronic rule applying at word-internal morpheme boundaries, and across word boundaries, are given in (33). The regular transcription represents the underlying form.

(33) Examples of *r* assimilating to following alveolar

<u>transcription</u>	<u>pronunciation</u>	<u>gloss</u>
<i>beer_~ndi</i>	[be:ndi]	'magnify'
<i>a gar_~ni</i>	[agan:i]	'he (she) found you(Sg)'
<i>njeer_~di</i>	[ndʒe:di]	'the antelope'
<i>yer_~ta</i>	[jetra]	'we'
<i>yer_~si bey</i>	[jes:ibej]	'we don't know'

There are two cases involving syncope (§3.7.1) where underlying //rn// surfaces as *nn* within a word. The (adjectival) verbs *horon* 'be bitter' and *koron* 'be hot' take the Adj suffix *-o* to form adjectives *honn-o* and *konn-o*. The Abstr nominal *konn-ey* 'heat' shows the same processes.

The other liquid, *l*, does not reliably assimilate to a following alveolar obstruent {*t d s*} at boundaries. There may be a tendency toward low-level assimilation before *n*, but this is not systematic. *l* does, however, regularly assimilate to following tap *r* to avoid an unpronounceable sequence. The most common combination here is *kul* 'all' plus Locative *ra*, as in *huu di yo kul_~ra* 'in all the houses', pronounced [...kuria].

3.6.3 Semivowel assimilation

y tends strongly to assimilate to a following palatoalveolar {*č j ñ*}. The most common cases involve 1Sg *ay* followed by a stem beginning in such a consonant. The parallel assimilation involving *w* applies before a labial {*p b m f*}, a combination which is attested but uncommon in the absence of a high-frequency pronoun or grammatical morpheme ending in *w*. Examples are given in (34), where again the regular transcription shows the underlying form.

(34) *y* and *w* assimilate to following homorganic consonants

	<u>transcription</u>	<u>pronunciation</u>	<u>gloss</u>
a. <i>y</i>			
	<i>ay_~čindi</i>	[at:ʃindi]	'I remain'
	<i>ay_~jur</i>	[ad:ʒur]	'I ran'
	<i>ay_~fi_~aa</i>	[aɲ:a:]	'my mother'
	<i>woy_~čindi-foo</i>	[wot:ʃindifo:]	'eleven' ("ten-remainder-one")
b. <i>w</i>			
	<i>čirow_~bii</i>	[tʃirob:i:]	'guinea fowl' ("bird-black")
	<i>haw_~mee</i>	[ham:e:]	'Muslim fast' ("tie-mouth")

Again we use ligatures to hint at the assimilation while preserving transparent morphemic spellings. In the case of *hammee*, the old compound structure may be synchronically opaque.

3.6.4 Palatalization of velars

Most cases of **k* → *č* and **g* → *j* before front vowel have resulted in respelling of the lexical representations and are not synchronic rules (§3.10.5). In the cases of 3Pl object marker *gi - ji*, 3PlF *ŋgi-yo - nji-yo*, and Logo/3RefI variant *ŋgi-yo - nji-yo*, it is possible that some native speakers have underlying velar stops and allow synchronic palatalization to apply.

3.6.5 Geminate consonant simplification

Geminate consonant clusters are simplified only when part of triple clusters. Such clusters arise at morpheme boundaries in cases like *ben-ndi* ‘cause to finish’, pronounced [bendi]. The suffix in such combinations may be Fact-Caus or Mediop-*ndi*, or Participle *-nte*. The slightly irregular [adže] from //ay ije// ‘my child’, via intermediate //ay-yje// or //aj-jje//, may also require such a simplification. Cf. also *hajje* ‘whatchamacallit?’, arguably still synchronically derivable from //hay-ije//. On the irregular phonology of *ije* as compound final, see §3.8.3.

3.7 Vocalic contraction, deletion, shortening, and lengthening

3.7.1 Contractions involving Imperfective *o*

The only obligatory contractions of two short vowels into a surface long vowel occur within the cluster of morphemes that precede a verb. The culprit is Impf *o* (the older form *go* is preserved in some contexts). This *o* combines with a preceding V-final morpheme (usually a subject pronoun, or a subject NP ending in Def *di* or Pl *yo*) to produce a contracted surface long vowel, as shown in (35). For 1SgS Impf *yee* see §3.8, below.

(35) Vowel-vowel contractions with Impf *o* (“ ” indicates contraction)

	<u>transcription</u>	<u>pronunciation</u>	<u>morphemes</u>
a.	<i>woy di o</i>	[wɔjdo:]	‘the woman’ + Impf
	<i>woy di yo o</i>	[wɔjdijo:]	‘the women’ + Impf
	<i>ni o</i>	[no:]	2SgS + Impf
	<i>ŋgu o</i>	[ŋgo:]	LogoSgS + Impf
	<i>ŋga o</i>	[ŋgo:]	SFoc + Impf
b.	<u>underlying</u>		
	//a o//	[a:]	3SgS + Impf
	//i o//	[i:]	3PlS + Impf
c.	//kaa o//	[ka:]	Rel + (3SgS +) Impf

In (35b-c) we get progressive assimilation, unlike the dominant regressive type in (35a). In (35b), note that the aberrant progressive type saves the important distinction

between 3Sg and 3Pl subject in imperfective clauses. In the rest of the grammar and in texts we transcribe the (35b) combinations as *a-a* and *i-i*.

The contraction in (35c) applies only to subject relatives. A (weak) case can be made that a 3SgS pronoun *a* is part of the sequence, hence //kaa_a o//, but the bulk of the evidence points toward a simpler underlying sequence //kaa_o o// (Rel + Impf), see §8.3.1. If so, //kaa_o o// → [ka:] (35c) is similar to //a_o o// → [a:] (35b). In any event, the output [ka:] for //kaa_a (a_o) o// is indistinguishable from that of simple *kaa*, the effect being that imperfective (with //o//) and the unmarked perfective aspect are phonetically indistinguishable in subject relatives; in texts we transcribe both as simple *kaa* with no attempt to indicate whether Impf is present. In nonsubject relatives with 3Sg subject, we get a structurally different sequence *kaa a-a*, which if contracted is transcribed *kaa_a a-a* with all morphemes shown.

The progressive assimilations in (35b-c) apply to the Timbuktu dialect and apparently to upriver Goundam. Djenné has different treatments of //a_o o//, //i_o o//, and //kaa_a (a_o) o//, while upriver Niafunké has different treatments of //a_o o// and //kaa_a (a_o) o//. See Appendixes 1 and 2 (sections §3.7.1 and §8.3.1).

(35a), where the quality of the second input vowel prevails, is the productive pattern, and is compatible with the further data on contractions in the following sections. An approximation to the productive contraction rule can be given as (36).

- (36) VV-Contraction (simplified)
 $V_1(\cdot) + V_2 \rightarrow V_2$:

That is, two vowels may combine to form a surface long vowel with the quality features of the second input vowel. The second input vowel is almost always short, since no grammatical morphemes and very few stems begin with a long vowel. The first vowel may be long or short, though as we will see in §3.7.3 the application of the rule is restricted when the first vowel is long. The rule is essentially obligatory when V_2 is Impf *o* except in the 3SgS, 3PlS, and Rel combinations in (35b-c).

3.7.2 Contractions involving object and dative pronouns

The following pronominal forms beginning in short vowels occur in postverbal position: 1SgO *ey*, 1Sg postpositions (other than dative) such as *ay ga* 'on me', and all simple third person postposition combinations, including Dative *a se* (3Sg) and *i se* (3Pl). When any such V-initial pronominal is preceded by a verb ending in a vowel, or by a pronominal direct-object clitic like 3SgO *ga* and 3PlO *gi*, contraction is possible.

The combinations involving 3Sg *a* and 3Pl *i* show frequent (though not obligatory) contraction in such cases, and follow the normal VV-Contraction pattern (36), above. Consider the examples in (37).

(37)	<u>underlying</u>	<u>pronunciation</u>	<u>gloss</u>
a.	<i>ay čerbu ga a se</i>	[at:ferbuga:se]	'I showed it to him (her).'
b.	<i>ay čerbu gi a se</i>	" "	'I showed them to him (her).'
c.	<i>ay čerbu ga i se</i>	[at:ferbugi:se]	'I showed it to them.'
d.	<i>ay čerbu gi i se</i>	" "	'I showed them to them.'

Note that applying the regressive assimilations of the normal VV-Contraction rule preserves the opposition between 3Sg and 3Pl before postpositions like dative *se*, but obliterates the distinction between 3SgO *ga* and 3PlO *gi* when they precede such PPs. Careful (uncontracted) pronunciations are also permitted. The surface mergers shown in (37) are another good reason for using the ligature notation (left column) in ordinary transcriptions, since it makes the underlying morphemic combinations more transparent while suggesting the surface pronunciation.

Contraction in combinations involving 1Sg *ey* ~ *ay* is somewhat messier. For the limited contraction of CVV stems with following 1Sg morpheme, see the following section. When a verb stem of more than one syllable ending in *u* is followed by 1Sg *ey*, I have heard the output as [ɛj] or [ɔj]: *tuuru ey* [tu:ɛj] 'reply to me', *batu ey* [batɛj] or [batɔj] 'wait for me', *čerbu ey* [tʃɛɔj] 'show me'. The data are not fully consistent, and subtle factors such as the presence of a labial consonant before the contracted VV sequence may be at work. See also the discussion of *-ey* Abstractive nominals (§3.7.6).

3.7.3 Contractions involving CVV stems

The contraction rule (36) described in §3.7 applies only in a limited way to combinations of a CVV verb and a following V-initial pronominal. If the two vowels are homorganic (e.g. *aa* plus *a*), contraction is always possible but may be a low-level phonetic process, so we focus here on nonhomorganic combinations. Both tightness of phrasing and vowel qualities are relevant factors in licensing contraction.

The most systematic contractions occur with *noo* 'give' followed by either 1SgO *ey* or a third person dative PP (3Sg *a se*, 3Pl *i se*). Examples in (38).

(38)	<u>underlying</u>	<u>pronunciation</u>	<u>gloss</u>
a.	<i>ay noo a se X</i>	[ajna:se X]	'I gave X to him (her).'
b.	<i>ay noo i se X</i>	[ajni:se X]	'I gave X to him (her).'
c.	<i>noo ey ga</i>	[nejga]	'Give it to me!'

Contraction is common in (38a-b), but the PPs *a se* and *i se* can be separately pronounced. With *noo ey* [nej] the contraction is surprisingly regular, and we could take it as a special, lexicalized fusion of the verb and the pronominal clitic. This is consistent with the syntax, since 'give' can occur in an unusual double-object construction, exemplified by (38c), with two direct-object clitics (§9.1.2). We might imagine an alternative transcription like *n-ey ga*, though we will in fact use the ligature transcription shown in (38c). A further indication of fusion is that [nej] from

noo ey has a short diphthongal nucleus, while the regular VV-Contraction rule would give a long vowel.

In KCh, the basic quotative verb 'say' is *har* rather than *nee* as in neighboring KS. Contraction of *noo* 'give' in cases like (38a-b) therefore poses no threat of confusion between 'give' and 'say'.

Another very common case of contraction is *goo* 'be' (§7.1.2) before a third person PP. Some of these are high-frequency combinations: *goo a ra* 'be in it' (can be used partitively as well as spatially), *goo i se* 'be for them'. On the other hand, when the corresponding negative *sii* 'not be' (§7.1.2) combines with a nonhomorganic vowel in a similar combination, the input *ii* is at least partially retained: *sij a ra* 'not be in it' is normally heard as [sijara], [sjarra], or the like.

Other CVV morphemes that commonly precede V-initial pronominals are Rel *kaa* (§8.3), *jaa* 'since ...' (§9.5.6), and clause-initial cases of Emph *dee* (often in the sense '... , only then ...', §8.5.7). Contraction seems regular with *dee*. With *kaa* and *jaa*, contraction with nonhomorganic following vowels can occur, but it seems much less common than with their KS counterparts. With a following 3PIS *i*, we regularly get *dee i* [di:], but contracted pronunciations *kaa i* [ki:] and *jaa i* [dʒi:] are sporadic.

From the data given so far, one infers that tight syntactic phrasing is a factor favoring contraction, but also that mid-height VV (*ee*, *oo*) and to some extent *aa* are the favored targets for contraction with a following vowel. The claim that phrasing is a factor is borne out by contrasting *noo* 'give' in (38) with *foo* 'greet'. We have noted [nej] as the output of *noo* plus a 1SgO morpheme (38c), but *foo ey* with the same 1SgO morpheme, if contracted at all, is heard as something like [foij], whose syllabic nucleus remains long and preserves at least some rounding. The claim that vowel-height is a factor is supported by the rarity of full contraction of verbs like *duu* 'get, obtain' and *hii* 'lend' which readily co-occur with pronominal PPs.

CVV nouns have little opportunity to contract, since the morphemes which may follow them within the same phrase (NP or PP) are consonant-initial. In *moo-jje* 'shelled rice', the usual shift of *ije* 'child' to *-jje* as compound final after nonhigh vowel (§3.8.3) pre-empts contraction.

3.7.4 Contractions of vowels over an intervening semivowel

The sequences *iyi* and *uwu* are not contracted in measured speech: *ije keyna di yiskan* 'the child was quiet', *čerbu wuraa X se* 'show some gold to X'. Since these sequences are the optimal ones for contraction, it is clear that contraction is not a regular phonological process.

However, the nearly homorganic sequences //eye// and //owo// are optionally contracted at word boundaries when certain grammatical morphemes are involved. The vowels belong by definition to different morphemes, but the semivowel may belong to either the morpheme on the left (39a) or that on the right (39b).

(39) Occasional VV contractions over a deleted intervening semivowel

	<u>underlying</u>	<u>contracted</u>	<u>gloss</u>
a.	<i>i činey ey</i>	[itʃineːj]	'they gossiped about me'
	<i>bukow o kani</i>	[bukoːkani]	'a corpse was lying down'
b.	<i>i neere yer se</i>	[ineːreːsːe]	'they sold to me'
	<i>i donto wor</i>	[idontɔr]	'they sent you(PI)'
	<i>a nee yer se</i>	[aneːsːe]	'he(she) said to us'

Type (39a) is rare since the only native morphemes beginning in *e* or *o* are 1SgO *ey* and Impf *o*. The Impf morpheme rarely follows a word (i.e., a subject NP) ending in *ow*, and when it does it optionally takes the allomorph *go*. In *činey ey*, the double underlying *ey* diphthong approaches tongue-twister difficulty and haplology may be involved.

Type (39b) is largely confined to combinations involving 1Pl *yer* and 2Pl *wor*, e.g. as postverbal object. The preceding vowel may be long or short. *yer* sometimes also contracts with a preceding *aa* or *oo* if the phrasing is fairly tight: *goo yer doo* [gedːoː] 'be at our place'. On frozen contractions involving original demonstrative **woo*, see §3.7.5.

The plural forms of certain bisyllabic pronouns constitute a special case. See §4.1 for a general treatment of personal pronouns. Of interest here are the forms Logo/3Ref1Pl *nggu-yo* ~ *nggi-yo* and 3PIPl *nggi-yo*. These can be analysed as consisting of Logo/3Ref1Sg *nggu* or 3SgF *ngga* plus Pl *yo*, but these high-frequency combinations are rather frozen and are vulnerable to contractions. Leaving aside the *ng* onset, which can be reduced to *ŋ* or palatalized (before *i*) to *nj*, I hear the remainder variously as *uyo*, *iyu*, as *uya*, *iya* (or *uye*, *iye*) with loss of rounding in the final vowel, or as contracted *ee*.

3.7.5 Contractions involving demonstrative **woo*

In combinations like *boro woo* 'this person', Demonstrative *woo* usually undergoes no special contraction with the stem. However, in allegro speech contractions sometimes occur, *woo* being treated as though it were *oo* and contracting with a preceding vowel to give [oː], as in *ni wane kamba futu woo* 'your bad hand', pronounced [... futoː]. The ligature before *woo* is the transcriptional indicator of this. Such optional contractions are typical of *woo* after multisyllabic stems or long NPs.

There are a few cases where this contraction has become lexicalized as an adverbial noun. See §4.2.2 for an inventory. Two examples are given here in (40).

(40) Frozen contractions involving demonstrative **woo*

	<u>simple noun</u>	<u>gloss</u>	<u>"demonstrative" form</u>	<u>gloss</u>
	<i>mise</i>	manner	<i>misoo</i> ~ <i>musoo</i>	'thus, like this'
	<i>jaari</i>	day	<i>jaaroo</i>	'today'

In the case of *mise*, the "demonstrative" form often shifts the *i* to *u*; this is favored by the combination of the labial *m* and the rounded vowel in the following syllable, but it is not phonologically regular and suggests lexical separation.

3.7.6 Phonology of Abstractive nominalizer *-ey*

Many verbs have an abstractive nominalization ending in *-ey* or *-oy*. We take the basic form of the suffix as *-ey*. Examples are in (41); for a fuller list see §4.3.1.

(41) Abstractive nominalizations

	<u>simple verb</u>	<u>gloss</u>	<u>Abstr form</u>	<u>gloss</u>
a.	<i>baan</i>	'be light'	<i>baan-ey</i>	'softness'
b.	<i>hin</i>	'be able'	<i>hin-ey</i>	'wherewithal'
c.	<i>hijji</i>	'marry'	<i>hijj-ey</i>	'marriage'
	<i>toofne</i>	'accuse'	<i>toofn-ey</i>	'(verbal) attack'
d.	<i>morgo</i>	'fail'	<i>morg-oy</i>	'inability'
	<i>waafaku</i>	'agree'	<i>waafak-oy</i>	'agreement'
e.	<i>sendu</i>	'be difficult'	<i>send-ey</i>	'difficulty'
	<i>futu</i>	'be bad'	<i>fut-ey</i>	'evil, anger'
f.	<i>koo</i>	'be dry'	<i>koog-ey, koog-oy</i>	'dryness'
	<i>yey</i>	'be cold'	<i>yeen-ey</i>	'coldness'

When the simple verb ends in a consonant, as in (41a-b), the Abstr suffix is *-ey*. The irregular cases in (41f) can also be described as having *-ey* added to a special C-final presuffixal stem allomorph.

In (41c-e), the simple stem ends in a vowel. If we continue to recognize *-ey* as the basic form of the Abstr suffix, we need to specify how the two vowels contract. Though we have no good example involving stem-final *a*, the data in (41c) suggest that unrounded stem-final vowels are dropped before *-ey*. The data in (41d-e) suggest that when the stem-final vowel is rounded {*o u*}, either this vowel drops as before to leave *-ey*, as in *send-ey* and *fut-ey*, or the rounded vowel combines in some way with the suffixal //*-ey*// to give surface *-oy*. This *-oy* can be derived phonologically in either of two ways. First, we could analyse the *o* as the result of transferring the rounding feature from {*u o*} to //*e*// before the stem-final vowel is dropped. Alternatively, we could argue that the //*e*// of the suffix is simply deleted (in the relevant forms) after a rounded vowel, and then that stem-final {*u o*} merge as *o* as nucleus of a diphthong (see §3.3.1 for the absence of *u* as diphthong nucleus).

In any event, these Abstr forms show a certain amount of semantic and phonological irregularity. In (41c-d), the result of the VV contractions is not a long vowel, as in the more productive VV contractions (§3.7.1-2). I will therefore resist the temptation to formulate a synchronic phonological rule to handle the vocalism of the Abstr ending. Except in those portions of this grammar where the morpheme boundaries are topically relevant, I will generally write the Abstr derivatives without hyphenation. Dictionary entries will make cross-references between simple verbs and Abstr derivatives.

3.7.7 Syncope

There is no productive syncope rule, by which a word-medial short V flanked by single consonants is deleted, as in CVCVCV becoming CVCCV.

Intransitive verbs of adjectival quality typically have a special Adjective form ending in *-o* (§4.4.2) when the stem is used as a noun or noun modifier. These verbs additionally have an Abstractive derivative in *-ey*, as do other types of verbs (§4.3.1). The phonological relationship between the simple verb of adjectival quality, and its form preceding *-o* and *-ey*, may involve minor, lexically specific irregularities. In only two cases (42), a CVCVC verb stem with identical vowels undergoes syncope to CVCC- before the V-initial suffixes.

(42)	Syncope in derivatives of verbs of adjectival quality			
	<u>simple verb</u>	<u>gloss</u>	<u>adjective</u>	<u>abstractive</u>
	<i>koron</i>	'be hot'	<i>konn-o</i>	<i>konn-ey</i>
	<i>horon</i>	'be bitter'	<i>honn-o</i>	<i>honn-ey</i>

Note that //rn// assimilates to *nn* (§3.6.2). The old **rn* cluster in the syncope derivatives is sporadically preserved in outlying dialects.

3.7.8 Deletion of word-initial vowels (apheresis)

Except for French loans and a few grammatical morphemes such as personal pronouns, words do not normally begin with vowels. The two chief exceptions are Arabic loans beginning in *a*, and certain nouns and adjectives beginning in *i*. Many of the Arabic loans probably entered KCh from other African languages (cf. §3.10.8), which probably accounts for the variation in their form.

Arabic has a definite prefix *al-*, which undergoes a special assimilation to a following coronal consonant (affricate *j* is treated in Classical Arabic as noncoronal, but in most modern Maghrebi dialects as coronal). As with Arabic loans into European languages (*algebra*, *algorithm*), Arabic nouns borrowed into KCh often include the old definite prefix, though the prefix is no longer segmentable and no longer marks definiteness. This gives rise to the KCh surface patterns in (43), where T is a coronal consonant and K is a noncoronal (velar, labial) consonant:

- (43) Four onset types of nouns borrowed from Arabic
- aKV...* , as in *albačir* 'miser';
 - aV...* after loss of glottal stop or pharyngeal, as in *alaahidu* 'promise';
 - IV...* , as in (b), with further elision of the initial **a*, as in *ladab* 'polite person';
 - aTTV...* , as in *adduhaa* 'mid-morning'.

The Arabic sources here are *al-baxiil*, *al-šaahid(u)* (or other form of the root $\sqrt{\text{šhd}}$), *al-'adab*, and *ađ-đuhaa*.

A preceding possessive pronoun, whether ending in a consonant or vowel, can induce truncation of the initial *a* in types (43a-b,d). An example of (43b) is *alagal* 'thought' in *yer lakal* 'our thought'. In (43a) and (43d), a C-final pronominal (1Pl *yer* or 2Pl *wor*) should produce a triple consonant cluster, but this is generally reduced. *r* normally assimilates to a following *l* (§3.6.2), and a geminate like *ll* before another consonant is degeminated (§3.6.5), so 'our mason (*albanna*)' is realized as [jelban:a], transcribed *yer lbanna*. This takes care of (43a). In the case of (43d), the geminate noncoronal consonant ("TT") can be degeminated: *assamaa* 'minaret', *yer samaa* 'our minaret'.

From *alčilla* 'mosquito net' I recorded a 2Sg possessor form as phonetic [ntfil:a] 'your mosquito net'. One could suggest a derivation from //n lčilla//, though the progressive assimilation of //nl// to *nn* (ultimately surface [n]) is abnormal. Since a stem-variant *nčilla* is common in neighboring KS (Gao dialect), I am dubious about a pure phonological derivation for the KCh 2Sg form; we may simply have a lexically specific allomorph alternation reflecting dialect mixing.

Since KCh speakers evidently have some difficulty with these possessed forms of Arabic nouns, it is not surprising that elicitation often results in the phonologically unproblematic full (postpositional) possessive construction of the type [*yer wane*] *alagal* 'our thought', pronouncing the possessed noun separately or contracting the two vowels to give phonetic [... wanalagal]. This is especially true with 3Sg possessor *a*, which could otherwise be inaudible after VV-Contraction before *a*-initial stems. (Another option is to use *nga* instead of *a*.)

Moreover, there is a considerable amount of subdialectal variation in the forms of these nouns. Even in the absence of pronominal possessors, we find some fluctuation between types (43b) and (43c) as in *alagal* ~ *lakal*, the shorter variant preserving only the **l* from Arabic Definite **al*-. We also find fluctuation between type (43a) with *al...* or type (43d) with *aT...* and a truncated variant with the *al* or *aT* stripped off. Such variants are subject to lexical specialization. For example, *alagal* is still fairly common as a noun meaning 'mind, intelligence', but *lakal* is regular in some idioms, as in *yee-ndi lakal* 'pay attention' and *X si mey lakal* 'X lacks intelligence (=is stupid)'. In the case of type (43d) *anniya* 'wish, intention, plan', the stripped-down variant *niya* is used chiefly as a verb 'intend (to ...)'. Among other stems with variant forms we may mention *addibaara* ~ *dibaara* 'stragem' and *assabab* ~ *assabow* ~ *sabab* 'cause', the details being given in the dictionary.

There are no native stems beginning in {*e o u*} or any long vowel, but there are a few nouns beginning in *i*: *ije* 'child', *isa* 'river', *ibaay* 'wish' and *ibere* 'enemy'. *ije* has special characteristics and we treat it separately (§3.8.3). In general, the other three *i*-initial stems do not undergo initial-vowel dropping in connection with possessors: *ay ibere* 'my enemy', *yer isa* 'our river', *ni ibaay* 'your wish'. I have occasionally heard a reduced form *-bere* for possessed *ibere* 'enemy' but it does not seem to be standard and it was rejected in direct elicitation. Similar comments apply to adjectives with Absolute prefix *i*- in nominal use, like *i-kaan-o* 'sweet one', possessed *yer i-kaan-o* 'our sweet one', occasionally *yer kaan-o*. As with *a*-initial stems, use of overt Possessive *wane* is common before *i*-initial stems.

3.7.9 Shortening of long vowels

Shortening of long vowels is difficult to formalize as a rule. It is best thought of as a gradient phonetic process rather than as an abstract phonological rule, though in some contexts (see below) the shortening is relatively systematic.

The only long vowels that are completely safe from shortening tendencies are those which occur in non-word-final open syllables: *faaba* 'help', *yeesi* 'last year', *čiina* 'be small', *yoobu* 'marketplace', and *duule* 'cloud'. The syllabification is *faa—ba*, etc., the initial syllable being heavy CVV, not superheavy CVVC.

Word-final long vowels in nonmonosyllabic words are fully shortened except when followed without pause by another morpheme within the same phrase. This is the most systematic case of shortening, and most previous works on KCh have failed to recognize stem-final long vowels. For noun stems, the simplest way to test for final vowel-length is to add Def *di*. In isolation or phrase-finally, I heard [ad:uŋa] 'world' and [ala:da] 'custom' with final short vowel, but adding *di* gives *adduñāaa di* (note the final long vowel) versus *alaada di*, leading to the lexical representations *adduñāaa* and *alaada*. The majority of nonmonosyllabic nouns with final long vowel have *aa*, though there are a few cases of other vowels, as in *loloo* 'alley' and *didii* 'roll up'. Many but not all of the nouns with final *aa* are Arabic loans. In texts, I generally transcribe the stems in their lexical form even though they are subject in some positions to surface shortening.

For nonmonosyllabic verbs, the simplest way to test for final vowel length is to add a pronominal clitic beginning with a consonant. While the great majority of V-final verbs have short vowels, a few have long vowels: *ay didii ga* 'I rolled it up', *yer maraa gi* 'we assembled them', *ni luuluu ga* 'you immersed it'. Phrase-finally or in isolation the long vowel is phonetically shortened, though in texts we write the long vowel consistently: *yer maraa* (phonetic [jer mara]) 'we assembled (ourselves)'.

Monosyllabic stems of the type CVV are normally heard with the long vowel loud and clear. However, phonetic shortening of CVV to CV is common in certain high-frequency grammatical morphemes which occur toward the end of clauses or major phrases. This comment applies particularly to the following: demonstrative *woo* 'this, that', postposition *doo* 'at (the place of)', and discourse-functional morphemes *yaa* (Emphatic), *dee* (Emphatic), *moo* 'also', and *mee* (Emphatic). Existential verbs *sii* 'not be' and *goo* 'be' are also subject to some degree of shortening when the stress is on a following locational expression (compare the related MAN morphemes, ImpfNeg *si* and Impf *o ~ go*, which are always short). When *ñaa* 'mother' is used as cpd. final (§4.6.2), it is often heard as short [-ŋa] unless followed by a morpheme like Def *di*. On the other hand, true short-V morphemes like 3SgO *ga* and Loc postposition *ra* do not have long-vowel variants.

In closed syllables within words, regardless of position, long vowels are subject to phonetic shortening tendencies but remain phonemically distinct from true short vowels. We first consider monosyllabic CVVC stems. Examples are several verbs of adjectival quality such as *kaan* 'be sweet; be sharp', most of which have an Adj form CVVC-*o* where the long vowel is easy to hear, as in *kaan-o* 'sweet; sharp' (see §4.4.1-2 for a list of such stems). There are also a few CVVC action verbs like *jeer* 'lift', *feer* 'open', *taar* 'touch', and *koom* 'chew', but their vowel length can be

difficult to hear unless they are immediately followed by a V-initial morpheme like 1SgO *ey* or 3Sg Dat *a se*. Among the nouns we have *jeer* 'gazelle' and *maar* 'leopard' along with a few others.

I know of no native CVVC stems with long high vowel {*uu ii*}. See §3.10.7 for apparent examples of complete shortening of long high vowels in such stems.

Many of the CVVC stems reflect *CVVCV with a final high vowel that has been dropped in Timbuktu (and in DjCh). The upriver KCh dialects generally preserve the fuller form, as do KS and HS.

We now consider nonmonosyllabic stems with a superheavy syllable. This syllable may be word-final (e.g. CV—CVVC) or nonfinal (e.g. ...CVVC—CV), using the dash to mark syllable boundaries.

The first type is exemplified by a handful of stems such as the verb *fahaam* 'understand'. In stems of this type, the vowel is not consistently long and my raw transcriptions vary between long and short vowels. For each such stem, there may be subdialects where the length has been entirely lost. However, *fahaam* and a few other stems present surface length with sufficient frequency to distinguish them phonemically from short CVCVC stems for my informants. Moreover, *fahaam* is sometimes pronounced [fa'ham] with short but distinctly stressed second vowel; such stress is not regular for short CVCVC stems. In those cases where a CV—CVVC stem can co-occur with a V-initial derivational suffix, the length becomes unmistakable: *fahaam-ey* 'understanding'. In summary, vowel length in the stem shape CV—CVVC is rare but still survives in a few forms.

The type ...CVVC—CV with word-medial superheavy syllable occurs in a few unsegmentable stems such as *faraandi* 'quarter (of town)', *gaayka* 'fish eagle', and *taayla* 'bald spot', along with the reduplicative *taaytaay* 'ostrich' consisting of two superheavy syllables. However, most of the medial superheavy syllables occur in morphological derivatives of (CV)CVVC stems, especially those in *-ndi* (Mediop or Fact-Caus). The superheavy syllables are subject to phonetic shortening pressures, but the shortening is often partial (gradient). Contrast, for example, *beer-ndi* 'make big, honor' (from *beer* 'be big') with *ben-ndi*. The former is heard as [be(:)ndi] with variable surface vowel length, while the latter is always heard as [bendi] with a short vowel. In cases like *maraa-nte* 'assembled', participle of *maraa* 'assemble', where the superheavy syllable is noninitial, the underlying long vowel may show up as a stressed phonetic short vowel [ma'rante].

3.7.10 Lengthening of morpheme-initial vowel after CVC syllable

Consider the forms in (44a-c).

- (44) a. *ay har [a se] ...*
 1SgS *say [3Sg Dat] ...*
 'I said to her ...'
- b. *ay dam [i se] ...*
 1Sg *put [3Pl Dat] ...*
 'I did (put) for them ...'

- c. *dabur-ije*
fishing line-child
'fishhook'

What these have in common is a sequence of a stem ending in a CVC syllable and a suffixal or (enclitic) pronominal morpheme beginning in VCV... (i.e., beginning with a vowel in an open syllable). In such cases, the morpheme-initial vowel is often phonetically lengthened. Impressionistically, it appears that the lengthening may not be phonemic (i.e., the lengthened vowel may have shorter duration than a true long vowel in the same position). I therefore do not indicate the lengthening in ordinary transcriptions.

3.8 Minor phonological alternations

3.8.1 Forms of the 1Sg pronoun

The 1Sg pronoun has the basic forms *ay* (subject, postpositional object) and *ey* (direct object). The diphthongs *ay* and *ey* are positional variants (§3.3.1), so there is no true phonemic distinction between these two variants.

There are three irregular combinations, summarized in (45), along with the KS counterparts for comparative purposes.

(45) Irregular 1Sg combinations

	<u>irreg. form</u>	<u>regular-expected</u>	<u>label</u>	<u>KS cognate(s)</u>
a.	<i>ye</i>	<i>ay ma</i>	1SgSSubju	<i>ya</i>
b.	<i>yene</i>	<i>ay se</i>	1SgDat	<i>yane, yana, yene</i>
c.	<i>yee</i>	<i>#ay o</i>	1SgSImpf	<i>ay ga</i>

In (45c), the "regular-expected" form does not occur, but *ay go* with a different variant of the Impf morpheme is attested (though rare). In (45a), the "regular-expected" form is a little more common than the irregular form. In (45b), the "regular-expected" form occurs (obligatorily) in fronted, focused position, while *yene* is obligatory in postverbal (clitic) position. Low-level phonetic variants [ene] and [e:ne] also occur in narrow transcriptions.

It seems hopeless to account for the irregular forms by synchronic phonological rules. The forms *ye* (45a) and *yene* (45b) have exact cognates in KS (and other Songhay languages). *yee* in (45c) is a KCh innovation (not shared by DjCh). Despite its recent vintage, *yee* would be difficult to derive from //ay o// by any reasonable phonological rules. However, there is one parallel to the unrounding and fronting of *o to e after y, namely, the frequent pronunciation of Pl *yo* as [je] before postpositions (§3.8.5).

It seems apparent from (45) that there is a 1Sg allomorph roughly of the form *ye* which occurs in the combinations shown. *yee* in (45c) could be interpreted as //ye o//, with the same (irregular) progressive assimilation found in two other pronoun

plus Impf combinations, 3SgSImpf *a-a* and 3PlSImpf *i-i* (§3.7.1). Both *ye* (45a) and *yene* (45b) have parallel irregular 2Sg forms, 2SgSSubju *ma* and 2SgDat *mana - mane* (following section).

There is no irregularity in the combination of 1SgS *ay* with Neg *na*, hence *ay na koy* 'I did not go.' (This combination is irregular in neighboring KS.)

3.8.2 Forms of the 2Sg pronoun

The basic 2Sg pronoun form is *ni*. It occurs invariably in this shape as postverbal direct object clitic, in isolation (e.g. as preposed topic), or in fronted focused position. It optionally reduces to *n* as subject marker and in postpositional phrases. Examples in (46).

(46)	Forms of 2Sg <i>ni</i>				
	<u>transcription</u>		<u>translation</u>		<u>2Sg function</u>
a.	<i>nda n(i) koy</i>		'if you(Sg) went'		subject
	if 2SgS go				
b.	<i>ay too n(i) doo</i>		'I arrived at your(Sg) place.'		with Postp
	1SgS arrive 2Sg chez				
c.	<i>ay guna ni</i>		'I saw you(Sg).'		direct object
	1SgS see 2SgO				

Aside from this minor contraction, there are two clearly irregular combinations, shown in (47). Both are parallel to corresponding 1Sg forms (preceding section).

(47)	Irregular 2Sg combinations			
	<u>irreg. form</u>	<u>regular-expected</u>	<u>label</u>	<u>KS cognate</u>
a.	<i>ma</i>	<i>ni ma</i> (rare)	2SgSSubju	<i>ma</i>
b.	<i>mana - mane</i>	<i>ni se</i>	2SgDat	<i>mane</i>
c.	<i>ma na</i>	<i>#ni na</i>	2Sg + Neg	<i>mana</i>

A synchronic phonological analysis of these forms would be very dubious, but we can discern at least a historical pattern. In (47b), *mana* is the common pronunciation. Comparing it to 1SgDat *yene*, we might segment off *-ne -na* as a specialized Dat morpheme occurring only in these two combinations. This would leave *ma-* as an irregular 2Sg allomorph parallel to 1Sg *ye-*. A similar 2SgS morpheme shows up in the (perfective) negative (47c). In this light, *ma* in (47a) is structurally ambiguous. If we simply compare *ma* (47a) to the very rare "regular-expected" form //ni ma//, which is attested in (554) in §9.6.2, below, we would incline to derive *ma* by a truncation rule deleting the 2Sg morpheme *ni* before Subju *ma*. However, in view of (47b-c), we might alternatively derive *ma* in (47a) from an underlying //ma ma// with homophonous 2SgS and Subju morphemes, either by haplology or by deletion of the Subju morpheme; note that 1SgSSubju *ye* (45a) does not contain Subju *ma*.

As with the 1Sg counterpart, the “regular-expected” 2Sg dative form *ni se* is required in fronted (focused) position, while the “irregular” form is standard in postverbal enclitic function.

3.8.3 Forms of *-ije* ‘child’ as compound final

ije ‘child’ is very common as a compound final in various senses (§4.6.2). Moreover, in the kinship sense ‘child’ (=son or daughter) it is commonly possessed. Its phonological behavior departs in some respects from that of other nouns with initial *i* (§3.7.8). In both compound and possessed constructions, *-ije* combines with preceding *i* or *u* by the regular VV-Contraction rule (36) in (§3.7.1) to give a long *ii*. Pronominal examples are *ni ije* (phonetic [ni:dʒe]) ‘your child’ and *ŋgu ije* ([ŋgi:dʒe]) ‘his or her (LogoSg) child’. Compound examples are *wangu-ije* ([wangi:dʒe]) ‘warrior’ and *fufu-tondi-ije* ([fufutondi:dʒe]) ‘grinding stone’.

As compound final, after vowels other than {*i u*}, ‘child’ takes the form *-jje*, the most likely derivation being //*-ije*// → //*-yje*// (desyllabification, not a regular rule) → *-jje* (semivowel assimilation, §3.6.3). Examples are *maafe-jje* ‘cumin’ (*maafe* ‘sauce’), *tongotongo-jje* ‘arrow’ (*tongotongo* ‘bow’), *baana-jje* ‘insect sp. that emerges after rains’ (*baana* ‘rain’). The desyllabification (after another vowel) is idiosyncratic but phonetically fairly natural. Semivowel assimilation, here //*yj*// to [dʒ], is ordinarily a cross-morpheme rule (§3.6.3). However, it is a productive, low-level process and there is no reason why it should not apply in the one instance where its conditions are met morpheme-internally. The diphthong *ow* is uncontracted before *-ije*, as in *kalkow-ije* ‘key’. The diphthong *ey* likewise does not routinely contract with *-ije*, hence *daarey-ije* ‘jujube fruit’ and *ferey-ije* ‘brick piece’.

There are a few slightly irregular compounds. From *kobe* ‘finger’ we get either *kobo-jje* [kobodʒe] or *kobe-eje* [kobe:dʒe] ‘finger’. The expected pronunciation #[kobedʒe] does not occur. Since *kobe* is uncommon as an uncompounded stem, the line of derivation is not very clear synchronically and the “compounds” are clearly lexicalized. If we did take *kobe* as the starting point, *kobo-jje* shows (irregular) progressive vocalic assimilation, but is otherwise regular. *kobe-eje* is of interest as a possible archaism, perhaps preserving an older type of contraction for the //*ei*// of //*kobe-ije*//. Another frozen irregularity is *hajje* ‘trivial thing; whatchamacallit’, which is probably an old *-ije* compound involving *haya* ‘thing’ (cf. *hay* allomorph in relative *hay kaa* ... ‘the thing that ...’).

When *ije* is a possessed noun, after vowels other than {*i u*} the situation is little more complex. For //*ay ije*// ‘my child’ the usual pronunciation is [adʒe], which we transcribe as *ay jje*. Note that this form, unlike the compounds (‘jujube fruit’, ‘piece of brick’) just mentioned, is based on the variant *-jje* even though the preceding possessor ends in a diphthong. For ‘his or her child’ I generally heard [a idʒe], tending phonetically toward [ajdʒe]. Note that this is still audibly distinct from ‘my child’.

3.8.4 Possessive *wane* before Definite *di*

The regular Possessive morpheme is the postposition *wane* (§5.2), which follows the NP or pronoun denoting the possessor. It is ordinarily followed by a head noun denoting the possessed entity, and in this full combination the postposition takes its bisyllabic form, as in [*har di wane*] *huu di* ‘the house [of the man]’.

However, the noun denoting the possessed entity may be omitted. In this event, *wane* is always directly followed by Def *di*. In this combination, *wane* shortens to *wan* to give the surface sequence ... *wan di*. Example: [*har di wan*] \emptyset *di* ‘the man’s \emptyset ’ (= ‘the one [of the man]’).

3.8.5 Plural *yo* before postpositions and other particles

The nominal Pl morpheme is pronounced *yo* in isolation or in other phrase-final position. It is also *yo* when immediately followed by the quantifier *kul* ‘all’, as in *boro di yo kul* ‘all the people’.

However, in some other combinations the *yo* is usually unrounded to *ye* – *ya*. (It is difficult to distinguish *a* from *e* after *y* in unstressed grammatical morphemes.) This unrounding is normal before Dat and spatial postpositions *se*, *ra*, *kuna*, and *doo*. Examples: *boro di ye ra* ‘in the people’, *boro di ye se* ‘for the people’ (dative). Note that the quality of the postposition vowel seems to play no role here; the process is best seen as a relaxation of the secondary labial articulation, influenced both by the preceding palatoalveolar *y* and by the lack of phonetic stress in these positions. It appears that phrase-final (and especially prepausal) position is too “exposed” to permit this relaxation.

The unrounding can also occur when the plural noun is followed without pause by another grammatical morpheme such as Rel *kaa* and SFoc *nga*. Thus *boro di ya kaa* ... ‘the people who ...’, *boro di ya nga kar ga* ‘it was the people [focus] who hit him.’

A similar unrounding is very common in the 3PIF pronoun *ngi-yo* and the (sometimes homophonous) Logo/3RefPl pronoun *ngu-yo* ~ *ngi-yo* (see §4.1.4). The rounded vowel is heard phrase-finally, as in the logophoric example *i har [ay kar ngi-yo]* ‘they_{xy} said that [I hit them_{xy}].’ Such phrase-final position is possible when the pronoun in question is a simple direct object, or when it occurs in isolation. In all other uses (subject, focused NP, dative or other postpositional object, possessor) the pronoun is immediately followed by other material. In this situation, at least in Timbuktu KCh, the *-yo* tends strongly to be pronounced [ja] (or [je], the two being hard to discriminate in rapid speech). A possessor example is *ngi-ya harme di* ‘their (LogoPl or 3RefPl) brother’.

3.8.6 Verb-stem changes before derivational suffix *-ndi*

The valency-changing suffix *-ndi* is added to an intransitive to add an argument NP (factitive and causative functions), or is added to a transitive to suppress an argument

NP (mediopassive function), see §6.2.2-4. In the great majority of cases, the phonology is regular. Stem-final *r* usually assimilates to the following alveolar and the geminate is then reduced before another consonant, as in *jur* 'run, flow' → Caus *jur-ndi* (usually pronounced [dʒundi]) 'expel, force out' (§3.6.1). Stem-final *m* combines with the suffix-initial *n* to give surface *m* (occasionally *n*), and stem-final *n* creates geminate //nn// which is reduced to *n* since it is followed by another consonant: *dam* 'do, put' → Mediop *dam-di* 'be put', *ben* 'finish, come to an end' → Caus *ben-ndi* [bendi] 'stop, bring to an end'.

There are only a few irregular stem changes before *-ndi* in KCh, shown in (48).

(48)	<u>stem</u>	<u>gloss</u>	<u>derivative</u>	<u>gloss</u>	<u>function</u>
a.	<i>jumbu</i>	'go down'	<i>jum-di</i>	'lower'	Caus
	<i>kani</i>	'lie down'	<i>kan-ndi</i>	'lay down'	Caus
b.	<i>kaan</i>	'be sweet'	<i>kaana-ndi</i>	'sweeten'	Fact
	<i>doon</i>	'be lightweight'	<i>doona-ndi</i>	'lighten'	Fact
	<i>maan</i>	'be near'	<i>maana-ndi</i>	'bring near'	Fact
	<i>baan</i>	'be soft'	<i>baana-ndi</i>	'soften'	Fact
c.	<i>gaabi</i>	'force [n.]'	<i>gaaba-ndi</i>	'try hard'	denominal

In (48a) the derivative shows irregular truncation of the second stem syllable. (Cognates of *jumbu* in other Songhay languages likewise have irregular causatives.)

In (48b) we get vestiges of older trisyllabic stem shapes which are still regular in KS, for example, where the suffix has the form *-andi*. In the KCh vestiges (48b), one could argue whether the extra *a* is part of the stem, part of the suffix, or an intercalated linker. Alongside *kaana-ndi* and *maana-ndi* we also get synchronically regular variants *kaan-ndi* (not very common) and *maan-ndi* (common). One factor in the preservation of the older shapes in the three cases in (48b) may be avoidance of homonymy with *kan-ndi* (48a), *doo-ndi* 'bring, present, take down (to river)', and *baa-ndi* 'prefer'.

(48c) is an isolated denominal derivation, perhaps opaque to native speakers.

3.8.7 Shortened forms of "light" nouns before Rel *kaa*

Certain common, semantically "light" noun stems have shortened forms in certain high-frequency combinations with following elements (49). For usage ('place', 'day') see §8.3.6.

(49)	<u>full form</u>	<u>gloss</u>	<u>simple Rel</u>	<u>Def Rel</u>	<u>universal Rel</u>
	<i>nangu - nongu</i>	'place'	<i>nan kaa</i>	<i>nangu di kaa</i>	<i>nan kul kaa</i>
	<i>boro</i>	'person'	<i>bor kaa</i>	<i>boro di kaa</i>	<i>bor(o) kul kaa</i>
	<i>haya</i>	'thing'	<i>hay kaa</i>	<i>hay(a) di kaa</i>	<i>hay(a) kul kaa</i>
	<i>handi ~ han</i>	'day'	<i>han kaa</i>	<i>handi di kaa</i>	<i>han kul kaa</i>

The details are subtly different for each of these. Comparison of the full form with the simple Rel (used as indefinite relative: 'a place where ...', 'a person who ...')

clearly shows that the latter is shortened, by losing the final V of CVCV or the final CV of CVCCV, at least in the first three cases. The shortening is also common for 'person' and 'thing', and perhaps categorical for 'place' and 'day', in the universal relative construction where *kul* 'all' (= 'any') precedes *kaa*, as in *bor(o) kul kaa ...* 'anyone who ...'. In the case of *haya* 'thing', but not the other three, shortening is fairly common in the Def Rel form with Def *di*, as in *hay(a) di kaa ...* 'the thing that ...'.

For *nangu* ~ *nongu* 'place', the vocalic variation does not apply to the shortened form, which is always heard as [nan] (with velar nasal due to the following *k*).

For *haya* 'thing', the reduced form *hay* is homophonous with another noun, *hay* 'price, cost, fee' (and with three other homophones less likely to cause confusion).

The stem *handi* ~ *han* shows the long-short alternation even in nonrelative contexts. We get *handi* before Def *di* in *handi di* 'the day', but *han* in the indefinite form *han foo* 'one day, a day'. (*han* is not used with other numerals, which take another noun *jirbi* to express duration expressed in days.) This distribution accounts naturally for the relative forms in (49), with Def Rel *handi di kaa* versus simple Rel *han kaa* and quantified *han kul*.

The shortening seen for all four stems before *kul kaa* does not apply before *kul* 'all' in the absence of Rel *kaa*, hence *nongu kul* 'every place'. Likewise, although *haya* often reduces to *hay* in definite relative *hay(a) di kaa*, it does not reduce in the simple definite form, which is always *haya di* 'the thing' (contrast *hay di* 'the price'). In other words, except for *handi* ~ *han*, presence of Rel *kaa* is a necessary condition for the shortening to occur.

3.8.8 Forms of unmarked and marked third person pronouns

The unmarked third person pronouns are 3Sg *a* and 3Pl *i*, with allomorphs *ga* and *gi* ~ *ji* as enclitics (postverbal direct object, complement of preposition *nda* 'with'). In addition, there are some "marked" third person pronouns which begin in *ŋg...*, sometimes reduced in allegro speech to *ŋ...* In the singular, there are two clearly distinct marked forms. The first is *ŋgu*, which has two closely related functions, both involving coindexation with an antecedent: (third person) reflexive (§10.2.2) and logophoric (§10.1.1-4). We label this "Logo/3ReflSg" in isolation, and in texts and examples either "LogoSg" or "3ReflSg" depending on its function. The second marked pronoun is *ŋga*, which we label "3SgF" ("F" for "Full"), which replaces 3Sg *a* in certain morphosyntactic positions informally designated as "exposed" (§8.4.2).

For all speakers, the plural of 3SgF *ŋga* is 3PlF *ŋgi-yo* with an irregular shift of *a* to *i*, presumably favored originally by the palatal semivowel. The plural of Logo/3ReflSg *ŋgu* is, depending on the speaker, either *ŋgu-yo* or *ŋgi-yo*, the latter being somewhat more common in my data (again, one assumes that the semivowel has had an assimilatory effect). As a consequence, many speakers do not distinguish 3PlF from Logo/3ReflPl.

3PlF and Logo/3ReflPl forms beginning in *ŋgi-* have further variants in *nji-*, where the *i*-vowel has induced palatalization of the preceding stop. Compare simple 3PlO *gi* ~ *ji*.

Like nominal Pl *yo*, the *-yo* of 3PIF *ŋgi-yo* and of Logo/3RefIPl *ŋgu-yo* ~ *ŋgi-yo* often loses its vocalic rounding feature except in prepausal position, resulting in ...-ye ~ -ya. For example, with Dat postposition *se* we usually hear *ŋgi-ye se*. In allegro speech, *ŋgi-ye* can appear as *ŋgee* or *njee* (see end of §3.7.4).

In proclitic position, the *-yo* ending can be dropped in allegro speech. This is most common in DF forms of 3PIF *ŋgi-yo*, such as *ŋgi ta* ‘as for them’, which would otherwise usually appear as *ŋgi-ye ta*. Note that the *i*-vowel of *ŋgi* can only be interpreted as plural, versus 3SgF *ŋga* and Logo/3RefISg *ŋgu*. I have not heard Logo/3RefIPl variant *ŋgu-yo* reduced to *ŋgu*, which would confuse this plural category with its singular counterpart. Preserving the Sg-Pl distinction in spite of truncation may have been a factor favoring the spread of the *ŋgi-yo* variant of Logo/3RefIPl *ŋgu-ya* if indeed the latter form is the more archaic one.

Combining all of the sources of phonetic variation, the surface forms of the “marked” third person pronouns are as given in (50).

- (50) Forms of marked third person pronouns
- | | | |
|----|--------------|-------------------------------|
| a. | 3SgF | <i>ŋga, ŋa</i> |
| b. | Logo/3RefISg | <i>ŋgu, ŋu</i> |
| c. | 3PIF | <i>ŋgi-yo, ŋgi-ye, ŋgi-ya</i> |
| | " | <i>ŋgee</i> |
| | " | <i>ŋgi</i> |
| | " | <i>nji-yo, nji-ye, nji-ya</i> |
| | " | <i>ŋi-yo, ŋi-ye, ŋi-ya</i> |
| | " | <i>njee</i> |
| | " | <i>ŋi-yo, ŋi-ye, ŋi-ya</i> |
| | " | <i>nji</i> |
| d. | Logo/3RefIPl | <i>ŋgi-yo, ŋgi-ye, ŋgi-ya</i> |
| | " | <i>ŋgee</i> |
| | " | <i>ŋgi</i> |
| | " | <i>nji-yo, nji-ye, nji-ya</i> |
| | " | <i>ŋi-yo, ŋi-ye, ŋi-ya</i> |
| | " | <i>njee</i> |
| | " | <i>ŋgu-yo, ŋgu-ye, ŋgu-ya</i> |
| | " | <i>ŋu-yo, ŋu-ye, ŋu-ya</i> |

We normally transcribe the plural forms as single words, e.g. *ŋgi-yo*. One could argue, however, that two-word transcriptions like *ŋgi yo* are structurally appropriate, even though the two components seem to interact phonologically in ways that do not apply to combinations of noun stems plus Pl *yo*. There is one possible piece of direct evidence for the two-word representation, viz., the (uncommon) elicited sequence *ŋgi woo yo* ‘they (there)’, with demonstrative *woo* apparently inserted between the two parts of *ŋgi yo* (§5.5). However, *ŋgi woo yo* is structurally parallel to *yer woo yo* ‘we here’ with 1Pl pronoun *yer*, and the fact that we get *ŋgi* (not *ŋga* or *ŋgu*) in *ŋgi woo yo* suggests that this phrase might better be analysed as a contraction of //ŋgi-yo woo yo// with two instances of the Pl morpheme.

3SgF *nga* and Logo/3Refl *ngu* are normally indistinguishable as subject markers before Impf *o*, since VV-Contraction (§3.7.1) applies, giving [ŋgo:] in both cases. In our practical transcription we maintain the underlying distinction, using the ligature to indicate that contraction occurs: *nga* *o* versus *ngu* *o*. In transcribing texts, we must use judgement in deciding which transcription is valid in each instance, and readers have the right to second-guess our judgements.

The morphosyntactic environments which allow unmarked “3” pronouns, and those which require a shift to “3F” (Full) pronouns, are given and exemplified in §8.4.2. In general, unmarked “3” pronouns are used when they are not directly modified (by a following Top, Emph, Foc, or other DF morpheme, by demonstrative *woo*, or any adjective or quantifier), and when they function as arguments of a following element or phrase (subject, postpositional complement, possessor). These can be described informally as “proclitic” positions. The variant “3” pronouns, 3SgO *ga* and 3PIO *gi* ~ *ji*, are used in direct object function (immediately following a verb), and as complements of the preposition *nda* ‘with, and’ (including right conjunct position in “X and Y”). These can be thought of informally as “enclitic” positions. By contrast, the “exposed” positions requiring the shift from “3” to “3F” forms are those where the pronoun is a phrasal head followed by a modifier or DF morpheme, or occurs in isolation.

Typical examples of 3SgF *nga* are *nga bine* ‘as for 3Sg’ and the left conjunct in *nga nda gi* (“3SgF and 3PI”). 3Sg *a* would be ungrammatical in these positions: #*a bine*, #*a nda gi*. The sequence *a bine* is grammatical in a different sense ‘his heart’.

In possessor function, “3F” pronouns can be used instead of 3Sg *a* or 3PI *i*. This option is especially common when the following noun stem begins with a vowel, which could trigger VV-Contraction and therefore cause the 3Sg or 3PI morpheme to disappear. Thus instead of #?a *albarka* ‘its spiritual power’ we normally get either *nga albarka* with 3SgF pronoun, or *a wane albarka* with overt possessive postposition. However, “3F” pronouns are also sporadically used instead of 3Sg or 3PI in possessor function even before C-initial stems.

3.9 Prosodics

3.9.1 Tonology

There are no lexical or grammatical tones in KCh or DjCh (except for a few marginal Bambara loanwords in the latter). In other Songhay languages of Mali, KS lacks tonal distinctions, HS still has a full-fledged tonal system with complex grammatical functions, and Tadaksahak has a simple tonal accent system.

3.9.2 Stress, incorporation (tight compounding), and cliticization

Stress is nonphonemic, with neither lexical nor grammatical significance, in the analysis and transcription used here. In a few cases, an unusual phonetic stress

placement may be a surface indicator of vowel length in a position (before a consonant cluster) where duration is an unreliable surface cue; see §3.7.9.

As in many languages, multisyllabic words tend to have reduced phonetic stress (intensity, pitch, vocalic duration, etc.) on final syllables, especially CV syllables. Even stem-final CVV syllables in nonmonosyllabic words tend to be heard as unstressed short-voweled phonetic [CV] when prepausal or at the end of syntactic phrases, so the length of final vowels is best determined by adding a grammatical formative, e.g. Def *di* in the case of nouns. The lack of intrinsic stress on final syllables allows speakers to use final syllables to express higher-level intonational patterns (e.g. rising pitch marking interrogation or a desire to keep the floor).

Many grammatical morphemes, though transcribed as separate words, are regularly unstressed and tend to pattern as proclitics or enclitics to nouns, verbs, and other lexical stems. We do not emphasize this issue here since the phonological consequences are usually nonexistent or subtle. For that matter, there are no completely reliable phonetic indices of affixation or incorporation (tight compounding, §4.6), as opposed to word sequencing, and our decisions about which morpheme sequences to recognize as single-word compounds and which to separate transcriptionally are based largely on semantic lexicalization and morphosyntactic patterning.

The best case for cliticization as a formal feature of the grammar involves postverbal pronominal objects and pronominal PPs. These elements normally immediately follow the verb, preceding other postverbal constituents that involve full (noun-headed) NPs (§9.1.1). The dative forms of two pronouns, 1Sg and 2Sg, also show special forms in this postverbal position, as opposed to the regular forms they have in fronted (focalized, preverbal) position (§3.8.1-2).

3.10 Historical phonological notes

3.10.1 Word-final *b

Word-final *b* is rare, and several cases of older word-final **b* appear to have shifted to *w*, or at least have developed a variant with *w*. In the word-final sequence *...*ab*, the shift of **b* to *w* entails a further rounding and partial raising of the **a* to *o* (except after *h*) because of restrictions on possible diphthongs (§3.3.1).

There are a handful of stems which preserve word-final **b*, without a variant in *w*. Aside from Arabic loans like *ladab* 'polite person', *alkab* 'stirrup', *alwaaajib* ~ *alwaažib* 'duty', and *taažab* 'miracle', the only stem attested in Timbuktu with final *b* is *dob* 'join, attach; joint' (<**dobu*). Perhaps the presence of *dow* ~ *dew* 'sand' played a role in discouraging the shift of *dob* to #*dow*.

Compilation of a full list of *w*-final stems reflecting **b* would require extensive comparative work within the Songhay complex and will not be attempted here. Note, however, the following doublets involving Arabic **b*: *algab* ~ *algow* 'hawk sp.', *assabab* ~ *assabow* ~ *sabab* 'cause', *čitaab* ~ *kitaaw* (~ *kitaw*) '(Koranic) tome', *tiyaabu* ~ *tiyow* 'widowhood'. From the same Arabic root √*ʃjb* involved in *taažab*

'miracle', note *laajow* 'miracle'. *yentesu* 'need' is perhaps from <Ar. *yantašib-*, via **yentesiw* or the like.

The intransitive verb *bow* 'be many' has an Adjective form *bobo*. If we interpret the latter as *bob-o* with Adj suffix *-o* (§4.4.2), we might (by internal reconstruction) derive *bow* from **bob*. But this is probably wrong, since KS *baa* 'be many' (compatible with **bow* but not with **bob*) argues for the antiquity of **bow*.

3.10.2 Word-final nasals

The distinction between word-final *m* and *n* is well preserved (in Timbuktu). There is modest synchronic evidence that word-final *n* is the result of merger of former **n* and (velar nasal) **ŋ*, see §3.4.2. See Appendixes 1 and 2 for dialectal data.

3.10.3 Sibilants

KCh and DjCh are characterized by the shift of **z* to *j* [dʒ], merging with inherited **j*. The two consonants remain distinct in KS, HS, and the non-Malian Songhay varieties.

I know of no exceptions to this shift in inherited native vocabulary. A few examples involving reconstructed **z* are KS *zuru* = KCh *jur* 'run'; KS *zaari* = KCh *jaari* 'day', KS *ize - iza* = KCh *ije* 'child'. Examples of reconstructed **j* are KS *jinde* = KCh *jinde* 'voice', KS *jirbi* = KCh *jirbi* 'sleep'.

3.10.4 Assimilation of **r*, **y*, **w* to following consonant

As noted in §3.6.2, *r* tends strongly to assimilate to a following alveolar across a morpheme or word boundary, especially within phrases.

A number of stems formerly containing the clusters {**rt *rd *rs*} now have geminate obstruents {*tt dd ss*} at least in the speech of most Songhays in the region considered here. In some cases, variants with the old **rC* cluster occur in upriver dialects, but for the speakers who have {*tt dd ss*} there is no reason to set up base forms with *rC*. Examples are *hosso* 'type of griot', *gassaka* 'hate', *gassi* 'grind millet', *mussu* 'be lost', *yadda* 'consent', *fatta* 'exit', and *kottu* 'cut'. This process has also applied to the loan *widdi* 'work rosary beads' (<Ar. root \sqrt{wrd}). Further study may well show some cases of former **rn* → *nn*.

An alternative progressive assimilation to *rr* is seen in *ferre* 'smell bad' and homophone *ferre* 'tree sp.', both from **ferde* (Kaado preserves distinct tones for the two senses), and in *harra* 'miss (target)' from **harta*.

In §3.6.3, we noted synchronic assimilations of *y* to a following alveopalatal, and of *w* to a following labial, across a morpheme or word boundary within phrases. In the noun *wočče* '(woman's) co-wife' (i.e., a second wife of the same bigamous gentleman), we may have a case where this change occurred historically but where *yč* is no longer part of the lexical representation. The protoform would have been

**woy-če*, cf. *woy* 'woman'. The male counterpart is *harče* '(woman's) male suitor', from **har-če*, cf. *har* 'man'.

3.10.5 Palatalization of velars

Many stems now have *č* which reflects older **k*, or *j* reflecting older **g*. The velar underwent palatalization (and affrication) before a front vowel **i* or **e* by a process which still has some synchronic validity (§3.6.4), but in the stems in question the lexical representation now has the palatoalveolar affricate rather than the original velar stop.

Examples are *taači* 'four' <**taaki*, *diče* (alongside *dike*) for 'basket', *jiji* 'go up' <**zigi* (via **jigi*), and *kanje* 'knee'. The original velars are preserved in each case in one or more other Malian Songhay languages, and sometimes in upriver dialects or in DjCh. Palatalization has also been spreading in KS, where reanalyses of lexical representations are ongoing. This is therefore an interesting areal development cutting across the basic language divisions, linking KS especially with the adjoining Timbuktu variety of KCh.

3.10.6 Loss of final short vowel

Stem-final high vowels {*i u*} have been dropped without trace in many *CVVCV stems. This process has occurred in Timbuktu KCh and in DjCh, but not in the upriver KCh towns such as Niafunké, and it is an interesting piece of evidence for direct relations between Timbuktu and Djenné. For the vowel to be dropped, it is necessary that the resulting C₁VVC₂ shape be pronounceable, which effectively limits the process to stems with a sonorant C₂ and excludes stems where the long VV is high (*ii uu*). Examples of vowel dropping are *beer* 'be big', *moor* 'be distant', *yoon* 'rub in, anoint', *doon* 'millet cream', and *taam* 'pair of shoes'. Compare KS *beeri*, *mooru*, *yoonu*, *doonu*, and *taami*. The process does not apply when the consonant in question is an obstruent, so the bisyllabic form is always preserved in cases like *yoobu* 'market' and *jeesi* 'tilt'. I know of no case where the final vowel has been dropped in a stem with long high vowel, so stems like *tuuru* 'reply' and *jiiri* 'year' remain bisyllabic. (For further evidence regarding the historical role of long high vowels, see the following section).

There are some stems that satisfy the conditions for the process which for some reason also preserve the bisyllabic shape, e.g., *jaari* 'day', *maani* '(animal) fat'.

The examples known to me which undergo this *CVVCV → C₁VVC₂ reduction have a C₂ from the set {*r n m*}. It is difficult to say whether the absence of *l* and the semivowels {*w y*} from the inventory is accidental. Among the stems which do not reduce are *laali* 'be cursed (unfortunate)' and *haawi* 'be ashamed; shame'. Since certain stems even with C₂ {*r n m*} do not reduce for reasons which are not entirely clear (*jaari* and *maani* were just mentioned), I cannot determine whether examples like *laali* and *haawi* are similar isolated exceptions, or whether their C₂ is incompatible with the

reduction. It may be relevant that *haawi*, though now functioning as verb or noun, is likely to represent an original nominalization **haaw-i*.

Comparisons like KCh *jur* with KS *zuru* 'run', and KCh *wir* with KS *wiri* 'seek', indicate that either KCh has dropped an original final vowel or that KS has added an echo vowel. The cases in question are of the shape *Cir(i)* or *Cur(u)* with tap *r* and short high vowel(s). Since KS also has some inherited verbs of the shape *Cur* without echo vowel (KCh = KS *dur* 'pound grain'), it is possible that KCh was the innovator and that the reconstructions are **zuru*, **wiri*, and **dur* as in KS.

3.10.7 Shortening of original long high vowel in closed syllable

It appears that original **CiiC* and **CuuC* stems (the final consonant being in all known cases a nasal) have shortened the long vowel to a short vowel. There is a tendency for long closed syllables in general to undergo a variable degree of shortening as a phonetic tendency (§3.7.9). We are here concerned with cases where the lexical representation has been permanently changed. To do this we must analyse the full set of potentially reconstructible **CVVC* stems. Consider the forms in (51)

(51)	<u>verb</u>	<u>gloss</u>	<u>derivative</u>	<u>gloss</u>
a.	<i>bun</i>	'die'	<i>buun-o</i>	'sickly (animal)'
b.	<i>din</i>	'catch'	—	—
c.	<i>ton</i>	'fill'	—	—
d.	<i>čum</i>	'be truthful'	<i>čiimi</i>	'truth'
e.	<i>čii</i>	'speak'	<i>čiini</i>	'language, speech'
f.	<i>fuu</i>	'fart'	—	—

Comparative evidence suggests that at least (51a-c) are old **CVVC* stems **buun*, **diin*. KCh shortened the vowels, while KS cognates dropped the final nasal (*buu*, *dii*, *too*). In (51d), internal reconstruction within KCh would point to **čiiim*, based on the noun *čiimi*, which presumably reflects **čiiim-i* (the nominalizing suffix *-i* is still productive in KS and elsewhere, though not in KCh itself). The KCh *čum* would therefore derive from **čiiim* via shortened **čim* (preserved in upriver dialects), with an irregular rounding to *čum* under the influence of the labial nasal. However, KS has verb *čim* – *čum* 'be truthful' and nominalization *čim-i* – *čum-i* 'truth' with short vowels, so the correct reconstruction (**čim* or **čiiim*) is in doubt. In (51e), the noun *čiini* 'language' can be internally reconstructed as **čiiin-i* with the same nominalizing suffix. This time the problem is that the verb *čii* has CVV shape instead of the CVC shape of the verbs in (51a-c). However, DjCh *či* – *čin* 'say' is compatible with a reconstruction **čin*, and a variant *čin* is attested (though rare) in KCh in the same sense, so KCh *čii* 'speak' may reflect an idiosyncratic mutation or even be etymologically unrelated. In (51f), comparative evidence suggests that *fuu* 'fart' may derive from **fuun* or perhaps **fūū* with nasalized vowel.

Though more historical work is needed, it would seem that superheavy **CVVC* stems with certain vowel qualities, namely **{uu ii oo}*, were unstable and required shortening of the long vowel (except before V-initial suffixes). There is no clear

evidence that *CaaC and *CeeC were also shortened, though it is presently difficult to identify indisputable cases of these reconstructed stem shapes (with final nasals). Synchronically, CVVC stems are acceptable with non-high vowel {ee aa oo} before nasals or *r*, and with *aa* before semivowel (*baar* 'exchange', *beer* 'be big', *maan* 'approach', *yaaw* 'bull'), but many and perhaps all of these have acquired CVVC shape secondarily (from *CVVCV, or by loss of medial *C in *CVCVC).

The alternation *yey* 'be cold', *yeen-ey* 'coldness' (§4.3.1), *yeen-o* 'cold (adj.)' (§4.4.2) is also suggestive. KS has *yey*, *yeyn-i*, and *yeyn-o*, respectively, which are matched by the HS forms. A proto-form **yeyn* for the verb 'be cold' deserves consideration. If valid, it would be a perhaps unique case of a superheavy syllable involving a short-nucleus diphthong. Since such a diphthong has no shorter counterpart, the only way to reduce the superheavy syllable was to drop the final nasal, and this happened in KCh as well as in KS.

3.10.8 Stem-final *ey to oy

Comparative evidence indicates that some nonmonosyllabic stems ending in ...oy derive from *...ey following a labial consonant. Examples with preceding *b* are *garboy* – *gorboy* '(wild) date' (**garbey*) and *saaboy* – *šaaboy* 'leafless bush sp.' (**saabey*). For *kubey* – *kuboy* 'encounter', both rounded and unrounded variants are recorded. A similar case involving *m* instead of *b* is *himey* – *humoy* 'bathe', where the rounding alternation extends into the vowel of the first syllable. Rounding is absent in other examples: *hamey* 'grap', *garsambey* 'tree sp.', *sumbey* '(nose) be elongated'.

This complex historical situation is reflected in somewhat messy synchronic alternations between *ey* and *oy* in contractions involving 1SgO *ey* following a V-final verb (§3.7.2), and involving surface forms of Abstractive nominalizing suffix *-ey* (§3.7.6).

There are no clear cases of *oy* from **ey* in monosyllabic stems. *bey* 'know', *mey* 'have', and *fey* 'separate' have no rounded variants.

3.10.9 Loss of *g

In several stems, a former **g* or possibly **ɣ* (velar-uvular fricative) has disappeared intervocally or after a liquid **l* or **r*. This is the source of several stems of the shape *CaCaa* like *faraa* 'become tired, suffer' from older **farga*. An intervocalic example is *loo* 'lick', cf. KS *logu* (Bamba dialect *lovu*). It is possible that this involved an initial spirantization of **g* to **ɣ* in a back-vowel environment, preserved in Bamba KS, with subsequent KCh deletion of this fricative.

3.10.10 Shifts among liquids

Though both *l* and *r* are basic phonemes, there appear to have been some historical shifts, probably from **l* to *r*. For example, *maraa* 'assemble' may derive from Ar.

malqaa 'meeting (place)'. The important quantifier *kul* 'all' is sometimes heard as *kur*. The particle *hal* 'until' is likewise sometimes heard as *har*.

3.10.11 Loanword phonology

Arabic loanwords are tricky since they may come either from Classical Arabic (Timbuktu has long been a center for Islamic learning and most KCh speakers are Muslim), or from the local Hassaniya vernacular. Moreover, as noted in §3.7.8, many Arabic loans are regional terms found in many other West African languages such as Fulfulde and Bambara, and the provenience of individual borrowings may be indirect. Of particular interest are Arabic loans filtered through Tamashek (Tuareg), since this language makes a number of neutralizations in Arabic back consonants.

Arabic consonants like *ħ* (voiceless pharyngeal fricative), *ʕ* (voiced pharyngeal approximant), *x* (voiceless uvular fricative), and *ɣ* (voiced uvular fricative), are occasionally heard in loanwords in the religious domain, as spoken by certain Timbuktu speakers who have some knowledge of Arabic. However, none of these segments is well-established in KCh. The conversions in (52) are attested:

(52) Arabic consonantal conversions

	<u>Arabic</u>	<u>KCh</u>	<u>gloss</u>
Ar. <i>ħ</i> → KCh <i>h</i>	<i>aḍ-ḍuḥaa</i>	<i>adduḥaa</i>	'mid-morning'
Ar. <i>ʕ</i> → KCh zero	<i>al-'arbaʕaa'</i>	<i>allarbaa</i>	'Wednesday'
Ar. <i>x</i> → KCh <i>h</i> or <i>k</i>	<i>al-'aaxir-a</i>	<i>alaakara</i>	'(the) Hereafter'
	<i>al-xabar</i>	<i>alhabar</i>	'news'
Ar. <i>ɣ</i> → KCh <i>ɣ</i>	<i>al-bulɣ-a</i>	<i>albarga</i>	'slippers'

There are isolated cases of deletion of one of the three Arabic consonants other than *ʕ*. It is likely that the *k* output from Ar. *x* is characteristic of indirect loans (via Fulfulde?). There are a few cases of KCh *č* for an Arabic back consonant, probably secondarily palatalized from earlier **k* (again via Fulfulde?). Examples are *albačir* 'miser' (Ar. root \sqrt{bxt}) and perhaps *baaliči* 'adult man' (if from Ar. root \sqrt{bly} 'attain' with unexplained devoicing).

French borrowings are likewise of variable provenience, sometimes entering directly and sometimes coming in via Bambara, Fulfulde, and other local languages. Newly borrowed verbs are generally taken over with final *ee*, representing the set of forms *-er*, *-ez*, *-ait*, etc., hence *kaaree* 'cut into squares' from Fr. *carrer*. Vowel-final nouns are also often borrowed with a long vowel: *kafee* 'coffee'. The tendency to stress and lengthen the final French syllable is also apparent in borrowings from French consonant-final nouns, where we typically get a lengthened vowel and an extra final high vowel, as in *sigireeti* 'cigarette' and *almeetu* 'matches' (Fr. *cigarette*, *allumettes*).

Chapter 4 Nouns, pronouns, and nominal derivation

4.1 Personal pronouns

Personal pronouns can occupy the same kinds of syntactic positions as the lexical cores of “full” NPs. That is, a personal pronoun corresponds syntactically to an NP structure consisting maximally of a possessor, a head noun, an adjective, a numeral, a demonstrative, Def *di*, and Pl *yo* (§5.A).

4.1.1 Person and number categories

The morphologically distinct categories of personal pronouns are 1Sg, 1Pl, 2Sg, 2Pl, 3Sg, 3Pl, 3SgF, 3PlF, Logo/3ReflSg, and Logo/3ReflPl. We sometimes use “1,” “2,” “3,” “3F,” and “Logo/3Refl” (note the quotation marks) as cover terms for the respective singular and plural categories. There are no gender or noun class distinctions; “F” stands for “Full” (not “Feminine”). An additional S or O at the end of a morpheme label means “subject” or “object.” Most pronouns have invariant forms, but the simple 3Sg and 3Pl forms have morphologically distinct object forms (3SgO, 3PlO), and we make liberal use of the subject and object specifications in interlinear morpheme glossing to make the syntax clearer.

1Sg denotes speaker, and 2Sg denotes an individual addressee. All other singular categories (3Sg, 3SgF, Logo/3ReflSg) exclude speaker and addressee. For the semantics of plural pronouns, see the following section.

There is no specifically generic pronoun (Fr. *on*, German *man*), but 2Sg is common in a generic (universal) human sense (§10.3.1).

For the forms of third person pronouns, see §3.8.8. The primary grammatical split in this subsystem is between “3” and “3F” on the one hand and the undifferentiated “Logo/3Refl” (logophoric and third person reflexive) on the other. To a large extent the difference between “3” and “3F” is automatically determined by syntactic position, “3F” occurring in more “exposed” (autonomous) positions and “3” occurring in more or less cliticized positions. However, both are possible as postpositional complements and as possessors (§8.4.2).

The Logo/3Refl pronouns express coindexation with a specific antecedent, either the attributed source (speaker-thinker) of the proposition (as with logophorics), or a syntactically specified NP (as with reflexives). It is possible for a Logo/3Refl pronoun to have both functions simultaneously, as in the final pronoun of ‘He_x (3Sg) said [he_x (LogoSg) would hit himself_x (LogoSg & 3ReflSg),’ which is coindexed both with the quoted speaker and with the clause-mate subject. For details see §10.1.1-4 on logophorics, and §10.2.1-4 on reflexives.

A few examples of third person (including “3F,” “Logo,” and “3Refl”) pronouns are in (53-56). English gender distinctions may be helpful in keeping references clear but have no KCh counterpart.

- (53) simple third person pronoun

a kar ga
3SgS hit **3SgO**
 'He_x hit her_y.'

- (54) "3F" pronoun

a. *ay gar gi [ŋga doo]*
1SgS hit **3PlO** [**3SgF** at]
 'I found them at his place.'

b. *ŋga daa na ay guna*
3SgF Emph Foc **1SgS** see
 'It was she [*focus*] whom I saw.'

- (55) Logo pronoun

a har ŋgu o kaa nee
3SgS say **LogoSgS** Impf come here
 'He_x said he_x would come here.'

- (56) 3Refl pronoun

a. *a guna [ŋgu baaba]*
3SgS see [**3ReflSg** father]
 'She_x saw her_x (own) father.'

b. *a bere ŋgu [nda ...]*
3SgS change **3ReflSgO** [with ...]
 'He_x turned himself_x into ...' (reflexive verb, §10.2.3)

4.1.2 Plural pronoun categories

As in perhaps all human languages, "1Pl" is used for the combination of speaker with any other entity. There is no inclusive-exclusive distinction. "2Pl" denotes multiple addressee, or any combination of addressee(s) with one or more non-speaker, non-addressee entities.

However, conjunctions of the component pronouns are also rather common ('I and you'). In KCh, such combinations are asymmetrical and are more revealingly glossed as, e.g., 'I [with you]'. For more details on conjunctions of pronouns, see §5.11.

Pronominal categories ("Logo" and "3Refl") that involve coindexation with an antecedent NP raise the issue of which category to use when the antecedent and bound NPs are "sloppily" coreferential. Typically, the denotation of one such NP strictly contains the denotation of the other. The syntax of sloppy coreferentiality is treated in §10.4.

4.1.3 Preference for plural over singular pronouns as possessors

In English, it is common to say *my house* or *her house* to denote a dwelling that is actually inhabited or owned by several persons. In KCh, it is more usual to say 'our house' and 'their house', even when the additional dwellers-owners have not been part of the preceding discourse. An expression like 'my house' may sound presumptuous and self-centered in ordinary contexts, while 'her house' just sounds odd, though neither is ungrammatical and either can be felicitously used under certain conditions.

The most common expression denoting a dwelling is a postpositional phrase with *doo*, used like French *chez*, as in (57).

- (57) a. *yee* *koy* [*yer doo*]
 1SgSImpf go [1Pl **chez**]
 'I am going home.' (= 'Je vais chez moi')
- b. *a-a* *koy* [*ŋgi-ye doo*]
 3SgS-Impf go [3Ref1Pl **chez**]
 'She is going home.'

Note that the postpositional complement is 1Pl in (57a) and 3Ref1Pl in (57b), in spite of the singular subject pronouns, hence literally e.g. 'I am going to our house.'

The disfavoring of singular pronouns does not usually apply to 2Sg in its generic sense. There are many textual examples of the type 'Let's say a guy_x comes to your house (*ni doo*),' where the 2Sg pronoun represents anyone. In such contexts, considerations of social delicacy are suspended.

There is no similar avoidance of singular possessor with kin terms, for example. 'My father' and similar expressions are perfectly felicitous, except e.g. when the speaker is addressing a sibling, where 'our father' or 'father' is appropriate.

4.1.4 Subject and Object forms of pronominals

The simplest type of NP is a bare personal pronoun. The basic forms are shown in (58); variants and irregular allomorphs are commented on below.

(58) personal pronouns (S=subject, O=object)

<u>category</u>	<u>S only</u>	<u>S=O</u>	<u>O only</u>
1Sg	<i>ay</i>		<i>ey</i>
1Pl		<i>yer</i>	
2Sg		<i>ni</i>	
2Pl		<i>wor ~ war</i>	
3Sg	<i>a</i>		<i>ga</i>
3Pl	<i>i</i>		<i>gi (~ ji)</i>
3SgF		<i>ŋga ~ ŋa</i>	
3PlF		<i>ŋgi-yo (etc.)</i>	
Logo/3Ref1Sg		<i>ŋgu ~ ŋu</i>	
Logo/3Ref1Pl		<i>ŋgu-yo ~ ŋgi-yo (etc.)</i>	

On the optional reduction of 2SgS *ni* to *n* in some but not all morphosyntactic positions, see §3.8.2. For irregular 1SgS *ye* and 2SgS *ma* in certain combinations, see §3.8.1-2. For numerous additional variants of *ŋgi-yo* and *ŋgu-yo*, see §3.8.8.

(58) shows distinct subject and object forms for the 1Sg, 3Sg, and 3Pl. The other pronouns have a single, invariant form (shown in a central S=O column between the S-only and O-only columns). In the case of 1Sg, the orthographic distinction reflects what is arguably a subphonemic positional variation in the pronunciation of the diphthong nucleus (§3.3.1). The only real subject-object variation is therefore in the “3” category, where the object form (which directly follows the verb) is 3Sg *ga* or 3Pl *gi* (sometimes palatalized to *ji*, §3.6.4). Some examples of the 1Sg, 3Sg, and 3Pl are given in (59); the syntactic order is subject + verb + object as in English.

- (59) Examples of subject and object personal pronouns (with *kar* ‘hit’)
- ay kar gi* ‘I hit them.’
 - a kar ey* ‘She hit me.’
 - i kar ga* ‘They hit him.’

Personal pronouns may not be directly followed by Def *di* in any position, though this morpheme is common after nouns and after the demonstrative pronoun *woo* ‘this, that’. The nominal Pl morpheme *yo* is not used with 1Pl, 2Pl, or (simple) 3Pl pronouns, but the 3PlF and Logo/3RefPl pronouns end in *-yo*.

The subject forms of personal pronouns regularly contract with a following Imperfective morpheme, underlying //o//. The full Impf form *go*, the usage of which is limited in KCh, does not contract. The contracted forms are shown in (60). For phonological discussion see §3.7.1.

(60) combinations of subject (S) pronoun and Impf *o*

<u>category</u>	<u>simple S form</u>	<u>S + Impf (phonetic)</u>	<u>transcription</u>
1Sg	<i>ay</i>	[je:]	<i>yee</i>
1Pl	<i>yer</i>	[jero], [joro]	<i>yer o</i>
2Sg	<i>ni</i>	[no:]	<i>no-o</i>
2Pl	<i>war (~ wor)</i>	[woro]	<i>wor o</i>
3Sg	<i>a</i>	[a:]	<i>a-a</i>
3Pl	<i>i</i>	[i:]	<i>i-i</i>
3SgF	<i>ŋga</i>	[ŋgo:]	<i>ŋga_o</i>
3PlF	<i>ŋgi-yo</i>	[ŋgijo:]	<i>ŋgi-yo_o</i>
Logo/3RefISg	<i>ŋgu ~ ŋu</i>	[ŋgo:]	<i>ŋgu_o</i>
Logo/3RefPl	<i>ŋgu-yo ~ ŋgi-yo</i>	[ŋgujo: ~ ŋgijo:]	<i>ŋgu-yo_o (etc.)</i>

The two phonetic [ŋgo:] combinations are differentiated in our transcription.

Examples of aspectual contrasts in sentences are in (61). The perfective is unmarked.

- (61)
- | | | |
|----|------------------------|---|
| a. | <i>a koy</i> | 'He went.' |
| | <i>a-a koy</i> | 'He is going (will go).' |
| b. | <i>a har ŋgu koy</i> | 'She _x said she _x (LogoSg) had gone.' |
| | <i>a har ŋgu o koy</i> | 'She _x said she _x (LogoSg) was going (would go).' |
| c. | <i>ay guna gi</i> | 'I saw them.' |
| | <i>yee guna gi</i> | 'I see (will see) them.' |

4.1.5 Pronominal forms as possessors and before postpositions

Pronouns used as possessors of a following head noun take the same form used in subject function, allowing of course for regular phonological rules. Examples with *harme* 'brother' (abbreviated "B") are *ay harme di* 'my B', *yer harme di* 'our B', *ni harme di* 'your(Sg) B', *war harme di* 'your(Pl) B', *a harme di* 'his or her (3Sg) B', *i harme di* 'their (3Pl) B', *ŋgu harme di* 'his or her (Logo/3ReflSg) B', and *ŋgi-ya harme di* 'their (Logo/3ReflPl) B'. There is no general avoidance of or reluctance to use simple 3Sg or 3Pl pronouns in possessive function in KCh. (KS, on the other hand, does avoid 3Sg and 3Pl possessive pronouns.) However, "3F" pronouns are sometimes used instead of 3Sg and 3Pl in possessor function, as noted in §3.8.8.

Postpositions specify marked cases, generally spatial in nature. Personal pronouns use the subject rather than object form (if overtly different), before a postposition. In the dative only, the 1Sg and 2Sg have special irregular forms in the normal postverbal (enclitic) position. In (62), last column, "=S" means "same as subject form."

(62) personal pronoun forms before postpositions

<u>category</u>	<u>subject form</u>	<u>dative (postverbal)</u>	<u>before other Postp</u>
1Sg	<i>ay</i>	<i>yene</i> (~ <i>eene</i> ~ <i>ene</i>)	=S
1Pl	<i>yer</i>	<i>yer se</i>	=S
2Sg	<i>ni</i>	<i>mana</i> (~ <i>mane</i>)	=S
2Pl	<i>war</i> (~ <i>wor</i>)	<i>war se</i>	=S
3Sg	<i>a</i>	<i>a se</i>	=S
3Pl	<i>i</i>	<i>i se</i>	=S
3SgF	<i>ŋga</i>	<i>ŋga se</i>	=S
3PlF	<i>ŋgi-yo</i>	<i>ŋgi-ye se</i>	<i>ŋgi-ye</i>
Logo/3ReflSg	<i>ŋgu</i> (~ <i>ŋu</i>)	<i>ŋgu se</i> (~ <i>ŋu se</i>)	=S
Logo/3ReflPl	<i>ŋgu-yo</i> ~ <i>ŋgi-yo</i>	<i>ŋgu-ye se</i> (etc.)	<i>ŋgu-ye</i> ~ <i>ŋgi-ye</i>

For analysis of the irregular 1Sg and 2Sg postverbal dative forms, see §3.8.1-2. When a 1Sg or 2Sg dative form is fronted in focused position, we get the regular forms *ay se* and *ni se*, respectively.

For the *-yo* - *-ye* alternations in the 3PlF and Logo/3ReflPl forms, see §3.8.6. The unrounded *-ye* variant is also heard as *-ya*.

A few examples of postpositional phrases in their usual postverbal position are given in (63), where the PP is bracketed even when (arguably) monomorphemic. Verbs are *noo* 'give', *har* 'say', *hanga* 'follow', and *too* 'arrive'.

- (63) a. *wor noo ga [i se]* 'You(Pl) gave it [to them].'
 b. *i noogi [yene]* 'They gave them [to me].'
 c. *ay har [mana]* '... ' 'I said [to you(Sg)], "...'
 d. *no-o hanga [ay banda]* 'You(Sg) follow [after me].'
 e. *yer o too [ni doo]* 'We will arrive [at you(Sg)] (=chez vous).'

(64a-b) illustrate the shift from irregular clitic forms to the regular forms of 1Sg and 2Sg datives when fronted to focused position.

- (64) a. [*ay se*] *na* *a noo ga*
 [1Sg Dat] Foc 3SgS give 3SgO
 'It was [to me] [*focus*] that he gave it.'
 b. [*ni se*] *na* *a noo ga*
 [2Sg Dat] Foc 3Sg give 3SgO
 'It was [to you(Sg)] [*focus*] that he gave it.'

Other postpositional phrases may also be fronted, but since their postverbal (clitic) forms are already regular there is no change in form when they are fronted.

4.1.6 Pronominal forms preceding and following *nda* 'and, with'

The morpheme *nda* with a following NP means 'and, with' in a broad range of senses (conjunction, association, instrumental) described in §5.11. A following pronoun takes the object form. We can best see this with the 3Sg and 3Pl, which reliably distinguish subject (S) from object (O) pronoun forms (§4.1.4). Examples in (65).

- (65) a. *ni nda ga*
 2Sg with 3SgO
 'you(Sg) and he (she, it)'
 b. *ay nda gi*
 1Sg with 3PIO
 'I and they'

There are several ways to explain the use of object rather than subject pronoun forms in the right conjunct of *nda*; see §9.1.1 and §9.5.1.

The left conjuncts in (65a-b) are compatible with the subject series, but this is only true for first and second persons. A nonlogophoric third person left conjunct must take a full ("F") form, 3SgF *nga* or 3PIF *ngi-ya* (§3.8.8, §8.4.2). Left conjunct position is therefore morphologically best taken as parallel to position before DF (discourse-functional) morphemes.

4.2 Demonstratives

4.2.1 Demonstrative pronoun

The basic demonstrative pronoun is *woo* 'this, that'. It is a general deictic, like Fr. *ce*, and can be discourse-anaphoric ('that woman we were just talking about') or deictic ('this woman here', 'that woman over there'). Two examples are given in (66).

- (66) a. *woo* (di)
Dem (Def)
'this (that) one'
- b. *har hiŋka woo* (di)
man two Dem (Def)
'these (those) two men'

I transcribe the morpheme as *woo* with a long vowel, which I hear in contexts where the morpheme receives some stress. However, many instances on the recorded tapes lack obvious phonetic length.

Although *woo* can be translated as either 'this' or 'that' in context, the proximal reading is unmarked. In contexts where two similar entities at different distances from the deictic center are contrasted, simple *woo* is generally used for the proximal entity and a combination of *woo* with a nonproximal demonstrative adverb is used for the other, as in (67).

- (67) *a na či woo, woo hentu*
3Sg Neg be Dem, Dem there
'not this one, (rather) that one over there'

For more on the syntax of *woo*, see §5.5.

4.2.2 Frozen combinations of noun plus **woo*

There is a closed set of forms which appear to be the result of fusion of demonstrative **woo* in the proximal sense 'this' with one of a small set of nouns denoting locations or times which are frequently combined with demonstratives. The full set of examples known to me from KCh are given in (68), below.

The forms in (68) can no longer be easily derived from, e.g., //čiji woo// by reasonable synchronic phonological rules, since *woo* only sporadically contracts (see §3.7.5 for discussion). We therefore omit internal hyphens. Note that the first vowel of *mise* often irregularly shifts to *u* in the "demonstrative" forms, influenced by the preceding labial and by the rounded vowel of the following syllable. Dictionary entries will make cross-references between related simple and "demonstrative" forms.

(68) Frozen “demonstrative” combinations with *woo

<u>simple noun</u>	<u>gloss</u>	<u>“demonstrative” form</u>	<u>gloss</u>
<i>ganda</i>	‘land’	<i>gandoo</i>	‘this country’
<i>koyra</i>	‘town, city’	<i>koyroo</i>	‘this town’
<i>čiji</i>	‘night’	<i>čijoo</i>	‘tonight’
<i>jaari</i>	‘day’	<i>jaaroo</i>	‘today’
<i>han</i>	‘day’	<i>hōō (<*han woo)</i>	‘today, nowadays’
<i>jiiri</i>	‘year’	<i>jiiroo</i>	‘this year’
<i>mise</i>	‘manner’	<i>misoo ~ musoo</i>	‘thus, like this’

The “demonstrative” forms in (68) with temporal meaning (‘tonight’, ‘today’, ‘this year’) generally function as adverbial modifiers with no further (e.g. postpositional) morpheme. On the other hand, *gandoo* ‘this country’ is more noun-like and may take a postposition if appropriate. The versatile form *misoo* (and its variants) is commonly used, with Def *di*, as a NP in the sense ‘something like that’, either by itself or in apposition to a preceding NP. The other *woo forms in (68) avoid *di*.

4.2.3 Demonstrative and deictic adverbs

Major deictic adverbs (and adverbial phrases) in KCh are given in (69).

<u>adverb</u>	<u>gloss</u>
<i>nee</i>	‘here’
<i>doodi ~ dooti</i>	‘there’ (anaphoric)
<i>hentu</i>	‘over there’ (deictic)
<i>moreyda</i>	‘now, then’

The variant form *doodi* is possibly still recognizable formally as the combination of *doo* ‘place’ and Def *di*. However, *doo* ‘place’ is now used mainly as a postposition ‘at (the place of)’ (like French *chez*), and as compound final in a few combinations like *kani-doo* ‘bedding’ (originally ‘sleep-place’). The usual noun for ‘place’ is *nangu ~ nonggu*. The connection of *doodi* with *doo* is probably now opaque to native speakers, so we transcribe *doodi* as a unit. The variant *dooti* is about equally common, and is even less easy to segment synchronically since Def *di* has no #*ti* allomorph elsewhere. Transcribing *doodi ~ dooti* as a unit makes it parallel to the proximal counterpart *nee*, which does not co-occur with Def *di*.

moreyda ‘now’ is perhaps historically segmentable as **mor ey da(a)* or the like, including **mor* ‘now’, and Emphatic **da(a)* (KS *da*, KCh *daa*) in an augmented form **ey da(a)* attested elsewhere in greeting formulae. Cf. Appendixes 1 and 2 (section §11.1.4) for cognates.

For *nda* ‘with’ preceding a deictic adverbial, see §5.11.4.

4.2.4 Emphatic and Approximative modifiers of deictics

The most common modifiers for demonstratives are Emphatic *daa* 'right (here, there)' and Approximative *here* 'around'. There is also a special extension of *moreyda*.

daa strongly emphasizes the referential correctness or the spatiotemporal exactitude of the deictic: *woo di daa* 'that very one', *nee daa* 'right here', *doodi daa* 'right there, that very place'. I do not recall hearing it with *moreyda* 'now', but this form may already end in a frozen instance of *daa* etymologically (see preceding section). See §8.5.1 for more on emphatics.

Locative *ra* or *kuna* cannot be added directly to an adverb like *nee* 'here' (#*nee ra*, #*doodi ra*). (Such combinations are common in KS.) If a DF morpheme like Emph *daa* or demonstrative *woo* intervenes, it is possible to add a postposition: *nee daa ra*, literally 'in right here', used like English *right in(side) here*; *nee woo kuna* 'in here'.

here has a basic sense 'around, along, in the vicinity of', with certain spatial and temporal expressions. With deictics, it is used chiefly in the combination *nee here* 'around here', though *doodi here* 'around there' and *hentu here* 'around there' are also attested. The approximative sense is not always clear, and *nee here* in particular often seems interchangeable with *nee* (except before Emph *daa*). The most common temporal combination is *čiji here* 'at night'.

here occurs in phrases containing *kamba* 'hand' denoting sides, not only 'left' versus 'right' but also 'this (near) side' versus 'that (far) side' over an intervening barrier such as a river. Examples are *kamba woo here* ('hand Dem Approx') 'on this side', *nee here kamba di* 'this (near) side', and *hentu here kamba di* 'that (far) side'.

here and *daa* may combine, as in *nee here daa* 'right around here'.

moreyda 'now' has an extended form *moreyda čiino*, which is perhaps a little more emphatic than the simple form but is not so emphatic as English *right now*. *moreyda* and *moreyda čiino* are fairly interchangeable. The second element is related to *čiina* 'be small', and *moreyda čiino* was therefore originally a kind of diminutive. It is synchronically irregular, since *čiina* does not shift its final vowel to *o* in any other combination. Historically, the final *o* may possibly reflect demonstrative **woo* (compare §4.2.2). For the more or less interchangeable use of simple and diminutive forms of 'now', compare Spanish *ahora* and (Latin American) *ahorita*.

4.3 Nominalizations

4.3.1 Abstractive nominal (-ey - -rey)

A fairly wide range of verbs have a nominal Abstr derivative ending in *y*. The phonology is somewhat obscure, but an underlying suffixal form //ey// is reasonable (see §3.7.6).

(70) gives a fairly complete inventory of Abstr forms ending in *y* which occur in my data, and ends with one isolated instance ending in *w*. For zero derivation of Abstr nominals, see the next section.

(70) Abstractive nominals (chiefly ending in *y*)

	<u>simple verb</u>	<u>gloss</u>	<u>Abstr nominal</u>	<u>gloss</u>
a.	<i>baan</i>	'be light, soft'	<i>baan-ey</i>	'lightness, softness'
	<i>beer</i>	'big, great'	<i>beer-ey</i>	'respect, funeral'
	<i>jeen</i>	'be aged'	<i>jeen-ey</i>	'old age'
	<i>kaan</i>	'be sweet'	<i>kaan-ey</i>	'sweetness'
	<i>maan</i>	'be near'	<i>maan-ey</i>	'nearness'
	<i>meer</i>	'be ugly'	<i>meer-ey</i>	'ugliness'
	<i>moor</i>	'be distant; be sour'	<i>moor-ey</i>	'distance, sourness'
b.	<i>futu</i>	'be bad'	<i>fut-ey</i>	'evil (n.)'
	<i>sendu</i>	'be difficult'	<i>send-ey</i>	'difficulty'
c.	<i>horon</i>	'be bitter'	<i>honn-ey</i>	'bitterness'
	<i>koron</i>	'be hot'	<i>konn-ey</i>	'hotness'
	<i>tin-tim</i>	'be heavy'	<i>tin-ey, tij-ey</i>	'heaviness'
	<i>koo</i>	'become dry'	<i>koog-ey</i>	'dryness'
	<i>yey</i>	'be cold'	<i>yeen-ey</i>	'coldness'
d.	<i>dumbu</i>	'be cut; (heart) beat'	<i>-dumb-oy</i>	'(heart-)beat'
	<i>nimsi</i>	'regret'	<i>nims-ey</i>	'regret(-fulness)'
	<i>door</i>	'harm; be sore'	<i>door-ey</i>	'harm, injury'
	<i>feer</i>	'open; be opened'	<i>-feer-ey</i>	'openness'
	<i>gassaka</i>	'hate'	<i>gassak-ey</i>	'hate, grudge'
	<i>hijey-hiije</i>	'get married'	<i>hij-ey</i>	'marriage'
	<i>hin</i>	'be able'	<i>hin-ey</i>	'means, power'
	<i>jen</i>	'fail'	<i>-jeney</i> (§4.6.5)	'lack of (in cpds.)'
	<i>-kasine</i>	'mate (in cpds.)'	<i>-kasin-ey</i>	'matehood'
	<i>moggo</i>	'be unable'	<i>mogg-oy</i>	'inability'
	<i>toonē</i>	'accuse'	<i>toon-ey</i>	'attack (n.)'
	<i>waafaku</i>	'agree'	<i>waafak-oy</i>	'agreement'
e.	<i>bey</i>	'know'	<i>bey-rey, bey-re</i>	'knowledge'
	<i>mey</i>	'own'	<i>mey-rey</i>	'wealth'
	<i>daabu</i>	'close; be closed'	<i>daabu-rey</i>	'covering, lid'
	<i>duu</i>	'get, earn'	<i>duu-rey, duu-ra</i>	'earnings'
	<i>duma</i>	'sow (millet)'	<i>duma-rey</i>	'seed(s)'
	<i>jongo-jongo</i>	'broken up (adj)'	<i>jongo-rey</i>	'remnants, debris'
	<i>taka</i>	'create'	<i>taka-rey</i>	'creature'
f.	<i>hasara</i>	'ruin; be ruined'	<i>hasar-ow</i>	'destruction'

The examples in (70a-c) show that this formation is most productive with verbs of adjectival quality (see §4.4). (70a) consists of CVVC stems with *-ey* ending in the Abstr. (70b) involves V-final verbs.

The examples in (70c) show minor phonological irregularities in the stem shapes. *honn-ey* and *konn-ey* can be accounted for, at least historically, as (irregular) Syncope

followed by r-assimilation, see (42) in §3.7.7 and (33) in §3.6.2, above. For the velar nasal in *tij-ey*, see §3.4.2. In the cases of *koog-ey* and *yeen-ey*, note that the irregular stem changes have the effect of producing a CVVC- stem shape before a suffix, bringing these stems into line with the CVVC shape typical of verbs of adjectival quality (as in (70a)).

The examples in (70d-e) involve verbs that do not denote prototypical adjectival qualities. The Abstr -ey nominalization is not productive in these other semantic domains, and the forms shown are a full list of the examples known to me. In some cases (*hin-ey*, *-jerjey* §4.6.5, *toof-ey*), there does not appear to be a close synchronic connection between the simple verb and the Abstr nominal due to semantic divergences.

The examples in (70e) involve a suffix -rey, occasionally with a reduced variant -ra or -re. In two of the examples, using -rey rather than -ey has the effect of avoiding a double diphthong #...ey-ey. Except perhaps for *bey-rey* the sense of the nominal is not really abstractive (action itself), rather product-of-action or instrumental.

(70f) gives the one case of final w. It is phonologically possible to segment the form as //hasara-w//, since underlying //aw// would naturally be treated as the ow ~ aw diphthong, which is pronounced [ow] in the relevant position (§3.3.1).

For Abstr nominals in compounds with a preceding noun stem, see §6.3.1.

4.3.2 Zero-derived nominals and minor nominalizations

Many stems are used both as nouns and verbs without overt derivational modification. In such cases there is no morphological test for determining which function (if any) is basic and which derived, though in individual cases we can make a judgement based on meaning and frequency. An exhaustive analysis is beyond the scope of this grammar, but a few examples, given in (71), will hint at their range.

(71) Noun-verb pairs without derivational markers

	<u>stem</u>	<u>gloss (verb)</u>	<u>gloss (noun)</u>
a.	<i>gaani</i>	'dance'	'dance'
	<i>haawi</i>	'be ashamed'	'shame'
b.	<i>boori</i>	'be pretty'	'beauty'
	<i>fari</i>	'toil in fields'	'(crop) field'
	<i>sinti</i>	'begin'	'beginning'
c.	<i>kuu</i>	'be long, high'	'length, height'
	<i>beer</i>	'be big'	'size'
d.	<i>doon</i>	'sing'	'song'
	<i>faraa</i>	'be tired, suffer'	'fatigue, hardship'
	<i>kufu</i>	'be bubbly, foam'	'bubbles, suds'
	<i>kufal</i>	'lock'	'key'
	<i>seere</i>	'dam up'	'dam, dike'
	<i>taabu</i>	'fold; become folded'	'(a) fold'
	<i>fafaa</i>	'pamper (child)'	'kid (child)'

The cases in (71a-b) involve stems ending in *i*. In some of these cases the noun is actually an old abstractive in suffix **-i* (still productive in KS). This is clearly true of *gaani* and *haawi* (71a), where comparative evidence points to verbs **gaan* ‘dance’ and **haaw* ‘be ashamed’, and to nominalizations **gaan-i* ‘dance’ and **haaw-i* ‘shame’; KCh has generalized the old noun forms to both functions. There are a few other apparent vestiges of the **-i* suffix. Related to *duma* ‘sow (millet)’, aside from *duma-rey* ‘seeds’ mentioned in the preceding section there is another form *dumi* ‘seeds’. *čiimi* ‘truth’ (**čiim-i*) and *čiini* ‘language’ (**čiin-i*) are discussed in §3.10.7.

In (71b), there is no comparable direct evidence that the noun originally had the **-i* suffix and the nominal and verbal forms may simply involve the same stem.

The cases in (71c-d), a very small sampling of the many observed examples, illustrate the difficulty of determining the direction of derivation (verbalization of noun, or nominalization of verb). (71c) involves verbs of adjectival quality, and the nouns can be taken as derived on semantic grounds. (71d) involves more active verbs. If we take the (71d) verbs as basic, we can analyse some nouns as product-of-action nominals (‘song’, ‘fold’, perhaps ‘bubbles’), instrumentals (‘key’), verbal nouns (‘beginning’), or characteristic patient (‘kid’). In several cases, though, we could also take the nouns as basic and analyse the verbs as expressing some more general action involving the denoted entities, e.g. ‘sing’ = ‘make a song’, ‘be bubbly’ = ‘make bubbles’, ‘lock’ = ‘shut with key’, ‘pamper’ = ‘treat like a kid’.

Compound verbs of the type [verb *ka* verb], linked by Infinitival *ka*, can have zero-derived nominals: *koy ka kaa* ‘go and come’ (verb) or ‘going and coming’ (noun). Derivatives, especially causatives, are easily nominalized: *jur-ndi* ‘cause to run, drive’ (verb) or ‘driving’ (noun).

There are a handful of cases where a noun-verb pair of the same general type as in (71d) involves a small phonological difference. These presumably reflect old derivational mechanisms, no longer productive. Entirely irregular are *fun* ‘pierce’ versus *fune* ‘hole’; *fiisi* ‘sweep’ versus *fisaa* ‘broom’; and *hawru* ‘eat evening meal’ versus *hawre* ‘evening meal (noun); eat evening meal (verb)’.

4.3.3 Characteristic nominals (-*koy*, -*koyni*, -*kom*)

There is a simple noun *kokoy* meaning ‘leader, chief’. It appears to have a short form *-koy* in the now-frozen *yerkoy* ‘God’ (originally ‘our Leader’ with IPI pronoun *yer*).

The forms *-koy* and *-koyni*, which are probably historically related to *kokoy*, occur in a considerable number of derived nominals used to define the status of a person by reference to some salient personal feature or activity. We will refer to these morphemes as Char[acteristic] nominalizers.

-koy can be added to noun or verb stems, while *-koyni* seems to be added only to noun stems. *-koy* is much more common than *-koyni* overall. All examples of *-koyni* involve permanent and fundamentally important characteristics. Some examples of *-koy* are of this type, but *-koy* can also be used to denote transient characteristics or roles (‘assailant’) or relations to specific others (‘close friend’). The only doublets I know of are *faraa-koy* ‘weary person’ plus *faraa-koyni* ‘person living in misery’ (verb

faraa 'be weary' or 'suffer', noun *faraa* 'weariness' or 'suffering'), and *gaabi-koy* alongside *gaabi-koyni* 'strong person' (noun *gaabi* 'strength').

The full set of *-koyni* derivatives in my data is given as (72). A generous sample of examples of *-koy* is displayed in (73).

(72) Characteristic nominals in *-koyni*

<u>stem</u>	<u>V,N</u>	<u>gloss</u>	<u>Char nominal</u>	<u>gloss</u>
<i>jirey</i>	N	'leprosy'	<i>jirey-koyni</i>	'leper'
<i>lakal</i>	N	'mind'	<i>lakal-koyni</i>	'intelligent person'
<i>toor</i>	N	'fetish'	<i>toor-koyni</i>	'fetishist'
<i>kotto</i>	N	'sorcery'	<i>kotto-koyni</i>	'sorcerer'
<i>faraa</i>	N	'misery'	<i>faraa-koyni</i>	'person in misery'
<i>gaabi</i>	N	'strength'	<i>gaabi-koyni</i>	'strong person'

(73) Characteristic nominals in *-koy*

	<u>stem</u>	<u>V,N</u>	<u>gloss</u>	<u>Char nominal</u>	<u>gloss</u>
a.	<i>baa</i>	V	'want'	<i>baa-koy</i>	'close friend'
	<i>beyrey</i>	N	'knowledge'	<i>beyrey-koy</i>	'expert, scholar'
	<i>boy</i>	V	'herd (animals)'	<i>boy-koy</i>	'herder, shepherd'
	<i>čow</i>	V	'read, study'	<i>čow-koy</i>	'expert, scholar'
	<i>doon</i>	V,N	'sing; song'	<i>doon-koy</i>	'singer'
	<i>gaa</i>	N	'body; camp'	<i>gaa-koy</i>	'leader, rich man'
	<i>hasar-ow</i>	N	'waste, damage'	<i>hasar-ow-koy</i>	'spendthrift'
	<i>hoo</i>	V	'hunt'	<i>hoo-koy</i>	'hunter'
	<i>huu</i>	N	'house'	<i>huu-koy</i>	'head of household'
	<i>jaari</i>	N	'success' (<'day')	<i>jaari-koy</i>	'famous person'
	<i>kallasi</i>	V,N	'protect(ion)'	<i>kallasi-koy</i>	'Protector' (=God)
	<i>kam</i>	V	'fall'	<i>kam-koy</i>	'assailant'
	<i>kar</i>	V	'hit'	<i>kar-koy</i>	'one who hits'
	<i>kokoši</i>	N	'scale(s)'	<i>kokoši-koy</i>	'scaly thing'
	<i>kooma</i>	N	'hunched back'	<i>kooma-koy</i>	'hunchback'
	<i>laamu</i>	N	'govern, reign'	<i>laamu-koy</i>	'overlord'
	<i>maa</i>	N	'name'	<i>maa-koy</i>	'famous person'
	<i>maamala</i>	V,N	'(do) business'	<i>maamala-koy</i>	'merchant'
	<i>safari</i>	V	'heal, treat'	<i>safari-koy</i>	'healer'
	<i>taabal</i>	N	'table'	<i>taabal-koy</i>	'petty merchant'
	<i>taayla</i>	N	'bald spot'	<i>taayla-koy</i>	'bald person'
b.	<i>taa (taam)</i>	V	'sew (shoe)'	<i>taam-taa-koy</i>	'shoemaker'

Some denominal examples in *-koy* can be paraphrased as 'one who has the physical or mental trait N' (N = leprosy, intelligence, scales, bald spot). When N denotes an external object, the best paraphrase is 'one who has mastery or control over N' (N = fetish, table stand, house). This leads naturally to the deverbal (agentive) uses of *-koy*, which can be paraphrased as 'one who Vs', especially 'one who Vs habitually and competently' (V = sing, hunt, govern, make shoes). In the case of *čow-koy*

'expert, scholar', there is probably more emphasis on the cumulative result of a past activity ('read, study') than on its current continuation.

Although most cases of *-koy* involve a single preceding morpheme (73a), or occasionally include an incorporated noun stem generically representing the direct object (73b), I have one example of *-koy* taking scope over a larger phrase (74).

- (74)
- | | | | | |
|-----------------|------------------------|-----------------|------------|-----------|
| <i>alwakati</i> | <i>addaruura-nte</i> | | <i>yo</i> | |
| time | disadvantageous-Partpl | | Pl | |
| <i>čiji</i> | <i>maasu</i> | <i>dira-koy</i> | <i>woo</i> | <i>yo</i> |
| night | middle | walk-Char | Dem | Pl |
- 'those who walk around in the middle of the night at dangerous times'

Perhaps there is really a break between [*alwakati addaruura-nte yo*] and the rest, but minimally the Characteristic nominal is *čiji maasu dira-koy* 'middle-of-the-night walker'.

The data also include a few examples of another nominalizer of the same general type, *-kom*. In most of the examples, the stem to which *-kom* is added is attested both as verb and noun, which makes it difficult to determine whether *-kom* is basically deverbal (i.e., Agentive), denominal (like *-koyni*), or both (like *-koy*). The impression one gets from the semantics of the attested forms is that *-kom* is probably deverbal, but since the formation is unproductive this cannot be conclusively demonstrated and I will provisionally classify *-kom* as another Characteristic morpheme like *-koy* and *-koyni*. The examples of *-kom* are those in (75).

- (75) Characteristic nominals in *-kom*
- | stem | V,N | gloss | Char nominal | gloss |
|----------------|-------|-----------------------|--------------------|---------------------------|
| <i>doon</i> | V,N | 'sing; song' | <i>doon-kom</i> | 'singer' |
| <i>faraa</i> | V,N | 'toil; weariness' | <i>faraa-kom</i> | 'manual laborer' |
| <i>futu</i> | V,Adj | 'be nasty, angry' | <i>futu-kom</i> | 'enraged; rabid (animal)' |
| <i>guttu</i> | V | 'be greedy' | <i>guttu-kom</i> | 'greedy person, glutton' |
| <i>hollo</i> | V,Adj | 'be crazy' | <i>hollo-kom</i> | 'crazy person' |
| <i>ŋaare</i> | V | 'beg' | <i>ŋaare-kom</i> | 'beggar' |
| <i>tangari</i> | V,N | 'tell a lie; (a) lie' | <i>tangari-kom</i> | 'liar' |
| <i>wirči</i> | V,N | 'be sick; illness' | <i>wirči-kom</i> | 'sick person, patient' |

The forms *doon-kom* and *faraa-kom* occurred in texts but are rejected as ungrammatical or said to be marginal by other informants. 'Singer' is usually *doon-koy*, *faraa-koy* and *faraa-koyni* were mentioned at the beginning of this section. The remaining forms in (75) are well-attested. *hollo* 'be crazy' can denote spirit possession as well as mental illness.

4.3.4 Participle and Ordinal (-nte)

I use the term “participle” for a common derivation in suffix *-nte*. The same suffix is used to produce the ordinal form of numerals. A range of examples is given in (76), divided into various categories which in some cases have fuzzy boundaries.

(76) *-nte* derivatives

	<u>stem</u>	<u>V,N</u>	<u>gloss</u>	<u>derivative</u>	<u>gloss</u>
a. ordinals					
	(a-)foo	Num	‘one’	lawal	‘first’ (suppletive)
	...-foo	Num	‘...-one’	...-foo-nte	‘...-first’
	(a-)hiŋka	Num	‘two’	(a-)hiŋka-nte	‘second’
	(a-)taači	Num	‘four’	(a-)taači-nte	‘fourth’
	(a-)guu	Num	‘five’	(a-)gu-nte	‘fifth’
	iddu	Num	‘six’	iddu-nte	‘sixth’
	waraŋka	Num	‘twenty’	waraŋka-nte	‘twentieth’
	woy-taači	Num	‘forty’	woy-taači-nte	‘fortieth’
	jorggu	Num	‘hundred’	jorggu-nte	‘hundredth’
	milyō	Num	‘million’	milyon-nte	‘millionth’
b. denominals					
	addaruura	N	‘disadvantage’	addaruura-nte	‘disadvantageous’
	albarka	N	‘spiritual power’	albarka-nte	‘powerful’
	daame	N	‘festive ambience’	daame-nte	‘interesting’
	dowla	N	‘prestige’	dowla-nte	‘prestigious’
c. unreduplicated verbs of adjectival quality					
	felew	V	‘be light, weak’	felew-nte	‘light, weak’
	futu	V	‘be bad, enraged’	futu-nte	‘bad, enraged’
	fuuye	V	‘be lazy, idle’	fuuye-nte	‘lazy, idle’
	guma	V	‘be inexpensive’	guma-nte	‘inexpensive’
	herey	V,N	‘hunger’	herey-nte	‘hungry’
	jaaso	V	‘be very bad’	jaaso-nte	‘very bad’
	saahī	V	‘be solid’	saahi-nte	‘solid’
	soobey	V	‘be grave’	soobey-nte	‘grave’
	tey	V	‘be wet’	tey-nte	‘wet’
	timme	V	‘be entire’	timme-nte	‘entire’
	wirči	V,N	‘be sick; illness’	wirči-nte	‘sick’
	yaraasu	V	‘be easy’	yaraasu-nte	‘easy’
	yekuwa	V,N	‘be firm; strength’	yekuwa-nte	‘firm’
	yuru	V	‘be smooth’	yuru-nte	‘smooth’
d. regularly reduplicated verbs of adjectival quality					
	boto-boto	V	‘(mud) get thick’	boto-boto-nte	‘thick (mud)’
	petepete	V	‘be oversized’	petepete-nte	‘be oversized’
	yeliyeli	V	‘be tinted’	yeliyeli-nte	‘tinted’

(continues ...)

(76, cont.) -nte derivatives

<u>stem</u>	<u>V,N</u>	<u>gloss</u>	<u>derivative</u>	<u>gloss</u>
e. motion verbs				
<i>bisa</i>	V	'pass by'	<i>bisa-nte</i>	'having passed'
<i>koy</i>	V	'go'	<i>koy-nte</i>	'departure'
<i>windi</i>	V	'go in circle'	<i>windi-nte</i>	'round, circular'
f. telic verbs (actions with an endpoint determining an ensuing state)				
<i>ben</i>	V	'finish'	<i>ben-nte</i>	'finishing touches'
<i>daabu</i>	V	'close; be closed'	<i>daabu-nte</i>	'closed'
<i>feer</i>	V	'open; be opened'	<i>feer-nte</i>	'opened'
<i>haaga</i>	V	'fry'	<i>haaga-nte</i>	'fried'
<i>hasara</i>	V	'be ruined'	<i>hasara-nte</i>	'ruined, spoiled'
<i>horgu</i>	V	'think, reflect'	<i>horgu-nte</i>	'having thought'
<i>laali</i>	V	'curse; be cursed'	<i>laali-nte</i>	'accursed'
<i>maraa</i>	V	'assemble'	<i>maraa-nte</i>	'combined'
<i>musey</i>	V	'rub; tan (hides)'	<i>musey-nte</i>	'tanned'
<i>mussu</i>	V	'be down and out'	<i>mussu-nte</i>	'down and out'
<i>yahdar</i>	V	'get ready'	<i>yahdar-nte</i>	'ready'
g. others				
<i>bey</i>	V	'know'	<i>bey-nte</i>	'kindly (person)'
<i>filla</i>	V	'repeat, do again'	<i>filla-nte</i>	'next, succeeding'
<i>guna</i>	V	'see'	<i>guna-nte</i>	'appearance'
<i>torro</i>	V	'pester, bother'	<i>torro-nte</i>	'bothersome'

Participles function as nouns or modifying adjectives. (KCh does not use participial clauses in DjCh fashion for resultative backgrounded clauses in narrative.) Participles can be derived from numerals, from verbs of adjectival quality, from motion and other action verbs, and in a few cases apparently from nouns.

The ordinal type in (76a) is productive and applies to all basic numerals. The Absolute prefix *a-* is used in the same way in the cardinals and ordinals for those numerals which take this prefix. An example of an ordinal based on a complex numeral phrase is (*a-*)*woy-čindi-hiŋka-nte* 'twelfth', the *-nte* taking the entire phrase in its semantic scope. *lawal* 'first' (<Arabic) is suppletive, cf. (*a-*)*foo* 'one'. However, we do get ordinal *-foo-nte* in complex numerals ending in 'one', as in *a-woy-čindi-foo-nte* 'eleventh' (Absol-ten-remainder-one-Ordinal).

(76b) shows that *-nte* can produce adjectives from nouns. This pattern is relatively rare and lexically restricted. Further lexicographic study might suggest that some of these are really deverbal (like the following sets), but of the four in (76b) only *dowla* is even attested in my data as a verb, and even this stem is normally a noun.

(76c-d) show *-nte* participles forming adjectives from intransitive verbs of adjectival (i.e., involuntary and enduring) quality. Other verbs of adjectival quality form adjectives by zero affixation (adjective = verb) or by suffixation of *-o* (§4.4.2). The choice between *-nte*, zero, and *-o* is partly lexical, but there are strong hints of phonological factors at work. The stem shape CVVC predominates in the set of stems taking *-o*, for example, but no stem of this shape takes *-nte* and only one (*beer* 'big')

takes zero. On the other hand, a final diphthong, a final *o* in the verb itself, or a lexicalized CVCV-CVCV reduplication favors *-nte* over *-o*.

The examples in (76c-f) mostly involve action verbs. Here the *-nte* participle is generally an adjective (occasionally a verbal noun) denoting a state resulting from the action. Semantically, the entity described by the adjectival cases is generally a patient or theme. However, in the case of *torro-nte* ‘bothersome, annoying, irritating’ in (76g), the participle appears to denote the agent (botherer) rather than patient (botheree).

As noted above, ordinals in *-nte* take Absolute prefix *a-* under the same conditions as do cardinals. Other participles in *-nte* can take Absol *i-* when the preceding noun slot is vacant, as in *i-futu-nte di* ‘the nasty one’ (§4.4.3). This indicates that participles can be treated as adjectives. However, certain participles can alternatively be treated as noun stems and so dispense with *i-*, as in *futu-nte di* (same meaning).

4.3.5 Use of Infinitival *ka* as nominalization

Infinitival VPs beginning with *ka* are almost always attached to other VPs, for example in the very common serial-verb construction (§9.7). I do have one textual passage where an infinitival VP is used as a nominalization in fronted (focalized) position (77).

- (77) *a* *na* *či* [[[*ka* *mey* *ga* [*ka* *dam* *ga*]]
 3SgS Neg be [[[Inf have 3SgO [Inf do 3SgO]]
 na *yee* *hãã*]
 Foc 1SgSImpf ask]
 ‘It’s not [owning it and doing it] [*focus*] that I’m asking (about).’

Here *a na či* is a higher-level negation (§9.3.2). The entire complex phrase *ka mey ga [ka dam ga]* functions as the focalized constituent. The internal *ka* before *dam* is the VP-linking use of *ka* and is not problematic. However, the *ka* before *mey* is not a VP-linker and functions here as a nominalizer. When the two VPs to be linked are very short (i.e., just a verb stem each), the nominalizing *ka* is not used and the VERB₁ *ka* VERB₂ sequence is used as a zero-derived nominalization; see *jokoro ka sakara* in (218) in §6.3.2, below. The presence of object pronominals in both VPs in (77), ‘have it’ and ‘do it’, seems to require an overt nominalizer.

I have not recorded an infinitival VP as complement of an adposition, or as a conjunct of *nda* ‘and’.

4.4 Morphology of adjectives

4.4.1 Verbs of adjectival quality

The derivationally unmarked form of most “adjectives” is an intransitive verb predicating an adjective-like (i.e. involuntary and enduring) quality of a subject NP, or

the transition into such a state. Thus *i moor* 'they were distant' or 'they became distant, went far away'. These verbs are collectively designated "verbs of adjectival quality." The verb form is used in predications of adjectival quality (or transition), and a derived form (adjective or *-nte* participle) is used as modifying adjective or as apparent head of a NP in the absence of a regular noun.

It is possible to divide this syntactic-semantic set of verbs into three formal subclasses based on the shape of the adjectival derivative. One set of verbs of adjectival quality form their adjectival derivative with the Partpl suffix *-nte*, which is also used with a number of nonadjectival verbs (§4.3.4). The other two sets take zero and *-o*, respectively (see following section).

Many verbs of adjectival quality also form an Abstractive nominalization ending in *y* (§4.3.1). This is especially common with the stems which form their adjective in *-o*.

4.4.2 Adjectives as noun modifiers (suffix *-o* or zero)

Verbs of adjectival quality can ordinarily be used as modifying adjectives in NPs, in which case they take a lexically specified form. Those which do not take the participle form (§4.3.4) either take an Adj ending *-o*, or take zero affix. We begin with the cases of *-o* in (78).

(78)	Adjectival suffix <i>-o</i>		
	<u>verb</u>	<u>gloss</u>	<u>adjectival form</u>
a.	<i>baan</i>	'be light, soft'	<i>baan-o</i>
	<i>jeen</i>	'be aged'	<i>jeen-o</i>
	<i>kaan</i>	'be sharp; be sweet'	<i>kaan-o</i>
	<i>maan</i>	'be near'	<i>maan-o</i>
	<i>meer</i>	'be ugly'	<i>meer-o</i>
	<i>moor</i>	'be distant'	<i>moor-o</i>
b.	<i>sendu</i>	'be difficult, expensive'	<i>send-o</i>
	<i>dumbu</i>	'cut; be cut'	<i>dumb-o</i>
c.	<i>horon</i>	'be bitter'	<i>honn-o</i>
	<i>koron</i>	'be hot, angry'	<i>konn-o</i>
	<i>tin ~ tim</i>	'be heavy'	<i>tin-o</i>
	<i>koo</i>	'become dry'	<i>koog-o</i>
	<i>yey</i>	'be cold'	<i>yeen-o</i>
d.	<i>bow</i>	'be many, much'	<i>bobo</i> (see §5.4.6)
	<i>boori</i>	'be pretty, nice, good'	<i>boyro</i>

(78a) gives the CVVC stems, (78b) the bisyllabic stems ending in *u*. The derivations in (78c) involve phonological oddities. These formal irregularities in (78c) are mostly identical to those noted for the corresponding Abstr nominals (*honn-*, *konn-*, *koog-*, *yeen-*) (cf. §4.3.1), but I have not recorded a velar nasal in *tin-o* 'heavy'; compare (70c) in §4.3.1, above. The cases in (78d) involve phonologically obscure relations between verb and adjective, so we do not use morpheme breaks in the

adjective. *boyro* may be historically metathesized from **bory-o*, compare verb *mari* 'be thin' and adjective *meyra* (<**mary-a*).

(79) Suffixless derivation of adjective (from verb of adjectival quality)

	<u>verb</u>	<u>gloss</u>	<u>adjectival form</u>
a.	<i>čirey</i>	'be red'	<i>čirey</i>
	<i>korey</i>	'be white'	<i>korey</i>
	<i>bibi</i>	'be black'	<i>bibi</i>
	<i>kara</i>	'be yellow'	<i>kara</i>
b.	<i>čiina</i>	'be small, young, few'	<i>čiina</i>
	<i>beer</i>	'be big, great, old'	<i>beer</i>
c.	<i>kuu</i>	'be long, tall'	<i>kuku</i>
d.	<i>woroo</i>	'be thick'	<i>woroo</i>

(79a) shows that an adjectival form without the *-o* suffix is the dominant pattern for verbs of primary color qualities (79a). This is also the pattern for 'small' and for 'big' (79b). (*čiino* in the phrase *moreyda čiino* 'right now' might contain Adj *-o*, but the final vowel might alternatively reflect demonstrative **woo*, see §4.2.4).

In (79c), *kuku* 'long' has a reduplicative stem-shape. Contrast the Abstractive *kuu* 'length' given as (71a) in §4.3.2, above. (79d) may be a case where addition of Adj *-o* is phonetically vacuous since the stem already ends in *oo*.

4.4.3 Adjectives as NP heads with Absolute prefix *i-*

When the adjectival forms of §4.4.2 are used as apparent lexical heads of NPs (i.e. when they follow an empty noun slot), they additionally require an Absolute prefix. For modifying adjectives of the sort described in the preceding section, and for *-nte* participles when treated as adjectives (rather than as nouns), the prefix is *i-*. See §4.5.1 for the more complex system of numerals, several of which have *a-*.

The Absol prefix may be compared roughly to English *one* (as in *a big one*, *two big ones*), which likewise allows an adjective to occur in a NP without a true noun. Some examples of verbs of adjectival quality and their adjectival derivatives are given in (80). We include one verb (*futu* 'be bad') which adds Participle ending *-nte* to form the corresponding adjective (§4.3.4).

(80) Adjectives

a.	<i>ni</i>	<i>beer</i> (<i>koron, čirey, futu</i>)	
	3Sg	big (hot, red, bad)	
		'You(Sg) were big (hot, red, bad).'	
b.	<i>har</i>	<i>beer</i> (<i>konn-o, čirey, futu-nte</i>)	<i>di</i>
	man	big (hot, red, bad)	Def
		'the big (hot, red, bad) man'	
c.	<i>i-beer</i> (<i>i-konn-o, i-čirey, i-futu-nte</i>)		<i>di</i>
	Absol-big (-hot, -red, -bad)		Def
		'the big (hot, red, bad) one'	

The Participle *futu-nte* in (80c) may also be treated as a noun and therefore can occur without Absol *i-*, as in *futu-nte di* ‘the bad one’.

The combination of 3Sg *a* or 3Pl *i* (as possessor) with a following Absol adjective beginning in *a-* is somewhat awkward because of the vowel sequence. Allowing VV-Contraction (36) to apply would obliterate the distinction between 3Sg and 3Pl, turning both *a i-konn-o di* ‘his hot one’ and *i i-konn-o di* ‘their hot one’ into [i:konn:odi]. In such cases, informants generally insisted on including the overt Possessive postposition *wane*, hence *a wane i-konn-o di* and *i wane i-konn-o di*, respectively. The same applies to numerals with Absol *i-* (§4.5.1).

4.5 Quantificational adjectives

4.5.1 Modifying and Absolute forms of simple numerals

Numeral stems are not used as verbs. They are commonly used as modifying adjectives, following a head noun (and any descriptive adjectives). They may also be used as NP heads, for example in counting, in which case some of them require an overt Absolute prefix. As modifiers or as NP heads, they may be followed by Def *di* and postpositions. The simple numerals are given in (81). For ordinals, see §4.3.4.

(81)	Numerals		
	<u>gloss</u>	<u>modifying Adj</u>	<u>Absolute prefix</u>
	‘one’	<i>foo</i>	<i>a-foo</i> ‘one’
	‘which?’	“	<i>i-foo</i> ‘which (one)?’
	‘two’	<i>hiŋka</i>	<i>a-</i>
	‘three’	<i>hinja</i>	<i>a-</i>
	‘four’	<i>taači</i>	<i>a-</i>
	‘five’	<i>guu</i>	<i>a-</i>
	‘six’	<i>iddu</i>	zero
	‘seven’	<i>iiye</i>	zero
	‘eight’	<i>yaaha</i>	zero
	‘nine’	<i>yagga</i>	zero
	‘ten’	<i>woy (-wey)</i>	<i>a-</i>
	‘twenty’	<i>waranjka</i>	zero
	‘thirty’	<i>waranja</i>	zero
	‘hundred’	<i>jonŋu ~ jangu</i>	zero
	‘thousand’	<i>jember</i>	zero

For the conditions under which numerals co-occur with Pl *yo*, see §5.4.1.

With preceding *woo činne* ‘that sort’ we get quantified expressions like *woo činne hiŋka* ‘two like that, two of that type’.

The forms for ‘twenty’ and ‘thirty’, though not synchronically analysable, share an onset *wara...*, and end with the final segments of ‘two’ and ‘three’, respectively. For

'thirty' through 'ninety', and for numerals like 'thirteen' and 'fifty-seven', see the following section.

a- is the regular nonzero Absol prefix in true numerals, versus *i-* with ordinary adjectives: *a-woy* 'ten'. Note that *foo* forms *a-foo* as numeral 'one', but *i-foo* as interrogative 'which (one)?'. The only other alternation of Absolute *a-* and *i-* in Timbuktu is *a-kul* 'all (of it)' versus *i-kul* 'all (of them)' (discussed in detail in §5.4.3). In expressions like 'two or three Xs' for some noun X, the first numeral is non-absolute since it is directly attached to the modified noun X, but the second numeral has the Absol prefix. It seems best to bracket such phrases as in (82).

- (82) [*keydiya* *hiŋka*] [*wala* *a-hinja*]
 [*wet-season* *two*] [or **Absol-three**]
 'two or three wet seasons'

Several numerals have zero Absol prefix; alternatively, we could say that they do not allow this prefix. The numerals from 'one' to 'ten' which have no overt Absol prefix are '6, 7, 8, 9'. These happen to be the numerals with stem-initial *i* or *y*, so there is a possible phonological characterization of this set, but the fact that these four constitute a consecutive sequence in counting may also be significant. Other numerals lacking an overt Absol prefix are 'hundred' and 'thousand', but in these cases the explanation may be that they are syntactic nouns rather than adjective-like numerals. Like ordinary nouns, 'hundred' and 'thousand' are themselves commonly quantified over ('five hundred', 'three thousand'). Finally, the suppletive ordinal *lawal* 'first' does not take an overt Absol prefix: *lawal di* 'the first one'.

Very large numbers are expressed using French terms (*million* 'million', *milliard* 'billion, thousand million').

In §4.4.3 we noted that 3Sg *a* and 3Pl *i* as possessors are phonologically awkward before ordinary adjectives beginning with Absol *a-*. The same awkwardness is observed when these pronouns occur as possessors before numerals (e.g., ordinals) beginning with Absol *a-*. Once again, the usual pattern is to include Poss *wane*, as in *a wane a-hiŋka-nte di* 'her second one', or a "3F" (Full third person) pronoun as possessor, as in *nga a-hiŋka-nte di* (same gloss). There is no difficulty with other pronouns, hence *ay a-hiŋka-nte di* 'my second one'.

boro 'person' is sometimes used as a kind of numeral classifier between a quantified noun and a numeral. See §5.4.8 for some of the nuances when the quantified element is a pronoun.

4.5.2 Compound numerals

Multiples of ten, from 'forty' to 'ninety', are constructed by compounding *woy* 'ten' and a following numeral from 'four' to 'nine', with irregular phonological contractions in the cases of '50', '60', and '70' to shorten final long vowels or to reduce bulky consonant clusters: *woy-taači* 'forty', *woy-gu* 'fifty', *woy-du* 'sixty', *woy-ye* 'seventy', *woy-yaaha* 'eighty', and *woy-yaaga* 'ninety'. Note in particular that *guu*

'five' loses its vowel length in *woy-gu* 'fifty', even in combinations like *woy-gu di* 'the fifty' where vowel length (if present) would be clearly audible.

These combinations could be analysed as 'four tens', etc. Although *woy* in the sense 'ten' takes the Absol prefix (*a-woy*) where syntactically appropriate, the larger multiples such as *woy-taači* do not, and so are used without modification as heads of NPs (and in counting).

Regular (uncontracted) numeral phrases are used for hundreds (*jongu*) and thousands (*jember*): *jongu hinja* 'three hundred', *jember guu* 'five thousand'. 'One hundred' is usually just *jongu*, while 'one thousand' is always *jember foo* including the numeral 'one'. The French loan *milyō* 'million' has the same pattern: *milyō foo* 'one million'.

Compound numerals from 'eleven' to 'nineteen' are expressed as *woy-čindi-...* 'ten-remainder-...' plus the uncontracted single-digit numeral, e.g., *woy-čindi-guu* 'fifteen' and *woy-čindi-iiye* 'seventeen'. Note that here *guu* 'five' preserves its long vowel. In Timbuktu, the *y* of *woy-* regularly assimilates to the following palatoalveolar to give [tʃ] (§3.6.3). The Absol prefix is used where appropriate in such combinations: *a-woy-čindi-guu* 'fifteen (of them)'.

The same kind of compound with *čindi* 'remain' as linker is used for compound numerals involving a multiple of ten plus a single digit, e.g., *wararka-čindi-yaaha* 'twenty-eight' and [*woy-gu-čindi-hijka* 'fifty-two'.

Combinations involving two or more parts (thousands, hundreds, 1-99) stitch the parts together with *nda* 'and, with' (§5.11). For example, '1,500 riyals' is expressed as (83).

- (83) *allaara* [[*jember* *foo*] *nda* [*jongu* *guu*]]
 riyal [[(thousand one) and (hundred five)]]

4.5.3 Other quantificational modifiers

For predications of existence ('There is an X'), see §7.2. Within a NP, there is no pure existential quantifier, but *foo* 'one' sometimes approaches it. For this and other relevant constructions see §5.4.2.

The morpheme *kul* is often used as a kind of universal quantifier. It occurs in a wide range of syntactic positions, both within NPs and clause-finally. See §5.4.3 for its role as quantifier within NPs, and §9.5.10 for its clause-final uses.

Numerals may be reduplicated, as in *a-foo-foo* 'one by one, one each' and *a-hijka-hijka* 'two by two, two each'. As heads of NP, as in these two examples, the Absol prefix is used once and is not repeated before the repeat occurrence of the numeral. These reduplicated numerals generally have distributive function (§5.4.4).

When a set is divided into two or more complementary subsets of one or more individuals, to which different predications are applied ('Some stayed here, the others left'), KCh generally uses symmetrical segments of the general type 'some ones ... , some ones ...' or 'the one ... , the one ...' See §5.4.5 for details.

The primary generalized quantifiers are *čiina* 'few, infrequent, rare' and *bobo* 'many, much' (corresponding to intransitive verbs *čiina* and *bow*). Formally, these are ordinary adjectives like those treated in §4.4. For details on usage, see §5.4.6.

4.6 Nominal compounds

4.6.1 N-N (tight) and NP-N (loose) compounds

We speak of the first component as the “(compound) initial” and of the following component as the “(compound) final.” In compounds involving two nouns, the final is ordinarily the lexical head and the initial is a modifier. Some specialized finals may not fit this pattern.

Highly lexicalized compounds normally take the form N_1-N_2 with no intervening morphemes. An example is *maale-bañña* ‘apprentice’ (literally ‘master-slave’, construable as ‘slave of the master’). We may refer to these as “tight” compounds. Such a compound functions syntactically as a noun stem.

On the other hand, in “loose” compounds the initial and final are more autonomous, and the initial may be followed by its own definite or plural marking where semantically appropriate. A possessor preceding a loose compound may have broad scope over the entire compound NP or narrow scope over the initial only. Loose compounds might themselves be analysed as possessive constructions in which the Poss postposition *wane* is omitted. An example is (84).

- (84) *[yer alhawa di kul] tin-ey di*
 [1Pl passion Def all] weight Def
 ‘the focus of our desire’

Here the initial is the entire NP *yer alhawa di kul*, which includes a pronominal possessor, Def *di*, and a quantifier in addition to the noun stem. The compound final *tin-ey* is the lexical head of the overall combination and takes its own Def marking.

4.6.2 ‘Mother’ and ‘child’ compounds (-*ñaa*, -*ije*)

Among the stems which occur frequently as compound finals, the pair -*ñaa* ‘mother’ and -*ije* ‘child’ are especially common. In my data, -*ñaa* and -*ije* tend to form compounds with nonoverlapping sets of stems, except when used in their literal kinship senses (on which see §4.6.6.).

Consider an uncompounded stem X, used independently with a basic lexical sense. If there is a compound X-*ñaa* (literally ‘mother of X’), the sense is ‘a larger whole of which X is a part’. This is characteristic of terms for certain flora spp. which have conspicuous fruits, nuts, or similar appendages. The uncompounded stem X denotes this appendage (collectively), or denotes the species in a general way, while the compound X-*ñaa* specifically denotes an entire plant, as in (85a). For reference we give the senses with -*ije* ‘child’ as well.

(85) Compounds with *-ñaa* 'mother'

	<u>stem</u>	<u>gloss (plain)</u>	<u>with <i>-ñaa</i></u>	<u>with <i>-ije</i></u>
a.	<i>baani</i>	'pods of an acacia sp.'	'acacia sp. (tree)'	'acacia seed'
	<i>booso</i>	'tamarind fruits'	'tamarind tree'	'tamarind seed'
	<i>daarey</i>	'jujube fruits'	'jujube tree'	'jujube (fruit)'
	<i>gorboy</i>	'native dates (fruit)'	'native date tree'	'date (fruit)'
	<i>koo</i>	'baobab fruits'	'baobab tree'	'baobab seed'
	<i>sebe</i>	'palm tree'	'palm tree'	'palm nut'
b.	<i>durguri</i>	'beans'	'bean plant'	'seed (of bean)'

The compound *durguri-ñaa* in (85b) also has a humorous secondary meaning, 'pregnant woman'. In these examples, the parallel compound with *-ije* is not in regular use to denote the fruit, since the uncompounded stem already denotes this. However, *-ije* forms can be pressed into service to denote grains or other units within the fruits.

Phonology: the *aa* in *X-ñaa* is heard most clearly as a long vowel when the compound is followed by Def *di*, otherwise it is normally shortened to surface [a] (§3.7.9). Stems like *daarey* and *gorboy*, ending in *y*, undergo assimilation of the *y* to the following *ñ* (§3.6.3), hence *daarey-ñaa*, pronounced [da:reɲa(:)].

For an uncompounded stem *X*, if there is a compound *X-ije* (literally 'child of *X*'), the sense is 'a smaller entity associated with *X*'. If *X* denotes a physical object, *X-ije* denotes a smaller object physically associated with it (86a), or a small *X* (86b). If *X* denotes a collectivity, mass, location, or abstraction, *X-ije* denotes an individual (86c). The cases in (86d) are slightly more complex but are mostly along the same lines.

(86) Compounds with *-ije* 'child'

	<u>stem</u>	<u>gloss (plain)</u>	<u>with <i>-ñaa</i></u>	<u>with <i>-ije</i></u>
a.	<i>baasu</i>	'well (water)'	—	'water recipient (for well)'
	<i>fufu-tondi</i>	'grinding stones'	'grindstone'	'small grindstone'
	<i>kankow</i>	'lock, key'	—	'key'
	<i>malfa</i>	'rifle'	—	'bullet'
	<i>tongotongo</i>	'bow'	—	'arrow'
	<i>maafe</i>	'sauce'	—	'cumin (spice)'
	<i>dabur</i>	'fishline with hooks'	—	'fishhook'
b.	<i>ferey</i>	'brick'	—	'piece of brick'
c.	<i>dira</i>	'travel, walk'	—	'gift by returning traveler'
	<i>kasa</i>	'jail'	—	'prisoner'
	<i>koyra</i>	'town'	—	'townsperson, citizen'
	<i>wangu</i>	'war; army'	—	'soldier'
	<i>baana</i>	'rain'	—	'insect sp. (after rain)'
d.	<i>duma</i>	'sow (seeds)'	—	'kidney'
	<i>gooro</i>	'kola tree or nut'	'kola tree'	'kola nut'
	<i>ham</i>	'meat' (<*'fish)'	—	'capitaine (fish sp.)'
	<i>kobe</i>	'finger (rare)'	—	'finger' (see §3.8.3)
	<i>kusu</i>	'baking dish'	—	'burnt residue in pots'
	<i>moo</i>	'rice plants (crop)'	'rice (plant)'	'shelled rice'
	<i>tira</i>	'talisman'	—	'Koranic school pupil'

The noun *alhoor* 'limestone' (used as a construction material) occurred in natural texts with both of these compound finals. *alhoor-ñaa* denoted a large limestone block found in nature, which had to be cut up into individual brick-sized blocks, each of which is an *alhoor-ije*.

Phonology: *-ije* is realized as *-jje* after a mid-height or low vowel {e o a}. It contracts with preceding high vowel {u i} to give [idʒe]. For examples and a possible analysis, see §3.8.3. For irregular *kobo-jje* ~ *kobe-eje* 'finger' and *hajje* 'trivial thing; whatchamacallit?', see the end of §3.8.3.

4.6.3 'Male' and 'female' compounds (-*har*, -*woy*)

There is no grammatical gender in KCh, and many nouns denoting humans are not lexically specified for sex. To make this specification, *har* 'man, male' or *woy* 'woman, female' may be added as a compound final. Examples: *ije-har* 'son, boy' and *ije-woy* 'daughter, girl', from *ije* 'child'. The same compound finals are also readily used to distinguish male from female animals.

In other Songhay languages, cognates of *har* and *woy* are additionally used to differentiate similar plant species denoted by the same basic term, the 'male' form generally being larger or more elongated than the 'female' form. I have not noticed this usage in KCh, though perhaps fieldwork among villagers with a strong interest in flora would produce a few examples.

4.6.4 Nominals of essential nature (-*terey*)

As a noun, *terey* denotes the area immediately outside a house. As a compound final (or derivational suffix), X-*terey* is usually translatable as 'X-hood' or 'X-ness'. A sample of the forms is given in (87).

- (87) Nominals of essential nature in -*terey*
- | | <u>compound</u> | <u>gloss</u> |
|----|------------------------|---|
| a. | <i>sorko-terey</i> | 'Bozo-hood; Bozo nation' |
| b. | <i>albanna-terey</i> | 'house-building, masonry' |
| c. | <i>borčin-terey</i> | 'nobility, high class' |
| | <i>kokoy-terey</i> | 'chiefhood, political authority' |
| | <i>talka-terey</i> | 'poverty' |
| d. | <i>har-terey</i> | 'manhood' |
| | <i>baba-jje-terey</i> | 'patrilineal kinship' |
| | <i>taawo-terey</i> | 'youth, newness' |
| e. | <i>alhaasidi-terey</i> | 'self-centeredness' |
| | <i>alwaajib-terey</i> | 'sense of duty' |
| | <i>lesel-terey</i> | 'tradition' |
| f. | <i>diya-terey</i> | 'message [n.]; send as messenger [tr.]' |
| | <i>seede-terey</i> | 'bear witness, testify' |

We could gloss **-me* here as ‘sibling’ and **-če* approximately as ‘(sexual) rival’.

Other compound kin terms are more transparent. *-ije* ‘child’ (cf. §4.6.2) occurs in a number of kinship expressions like *ñaa-ije* ‘blood relative’ (*ñaa* ‘mother’), *baba-ije* ‘respected male rival’ (*baba* ‘father’), and *fafa-ije* ‘close relative’ (*fafa* ‘breast’, hence literally ‘breast-mate’).

The adjectives *beer* ‘big’ and *keyna* ‘small’ occur with parental terms to produce expressions denoting parallel uncles and aunts, specified for seniority relative to the father or mother, as in *baa-beer* ‘big father’ (=father’s elder brother) and *ñaa-keyna* ‘little mother’ (=mother’s younger sister).

4.6.7 Verb-noun compounds (*-kasine*, *-nongu*)

Compounds consisting of a verb and a following noun stem are rare, especially if we factor out cases where the “verb” could be interpreted as a zero-derived nominalization (§4.3.2). However, there are three attested nominal compounds whose second member is *-kasine* ‘mate, companion’ and whose first member appears to be a true verb (90). *-kasine* is used only as a compound final, cf. *čere* ‘mate, peer, friend’ and other lexical choices for the simple noun.

(90)	<u>compound</u>	<u>gloss</u>	<u>gloss of initial</u>
	<i>bey-kasine</i>	‘acquaintance, friend’	‘know’
	<i>hanga-kasine</i>	‘follower, pal’	‘follow’
	<i>maraa-kasine</i>	‘fellow resident, companion’	‘assemble’

None of the compound initials is recorded independently in nominal function (for *bey* the Abstr nominal is *bey-rey*).

The noun *nongu* ‘place’ can be used as a compound final with a broad range of initials. (KS uses *-doo* ‘place’ in similar compounds.) In (91a), the initial is clearly a noun, compare the related verbs *waafaku* ‘agree’ and *waa* ‘defecate’. However, the initials in (91b) are identical to intransitive or transitive verb stems, and can be construed as true verbs or in some cases possibly as zero-derived nominalizations.

(91)	<u>compound</u>	<u>gloss</u>	<u>gloss of initial</u>
a.	<i>waafak-oy-nongu</i>	‘agreement place’	‘agreement’
	<i>wiri-nongu</i>	‘excrement plac’	‘excrement’
b.	<i>kani-nongu</i>	‘sleeping place’	‘lie down (to sleep)’
	<i>jingar-nongu</i>	‘praying place’	‘pray; prayer’
	<i>koosu-nongu</i>	‘abattoir’	‘slaughter’
	<i>goy-nongu</i>	‘workplace’	‘work’ [verb or noun]

The noun *čere* ‘friend’ is used (like English *each other*) in reciprocal constructions (‘help friend’ = ‘help each other’). The combination of *čere* (in direct object function) and a preceding verb can also be treated as a nominalized compound (‘help friend’ = ‘mutual assistance’). For examples see the end of §10.2.6.

4.6.8 Noun-verb compounds with verb modifying noun

In §6.3.1 we give examples of [noun-verb] compounds where the noun is an incorporated direct object or other complement, along with suffixal or zero-derived nominalizations of such compounds.

There is one other [noun-verb] type where the verb is a kind of modifier, like a participle or relative clause. This is seen in the pair *har-hiiji* ‘married man’ and *woy-hiiji* ‘married woman’. The initials are *har* ‘man’ and *woy* ‘woman’, and the final is *hiiji* ‘marry’, cf. *hiije* ~ *hiijey* ‘marriage’.

4.6.9 Archaic diminutives

The old Diminutive suffix **-iya* is preserved only vestigially in a few forms like *bundiye* ‘brochette’ (*bundu* ‘stick, wood’) and *huriya* ‘knife’ (now a dialectal variant of *huri* ‘knife’), plus a few flora-fauna terms like *takiriya* ‘firefinch’.

4.7 Reduplication of noun and adjective stems

Reduplication is not a common process with nouns. In the following examples, the sense of the unreduplicated stem is given after the “<” symbol. As with verbs (§6.4), bisyllabic stems are favored. In one set of forms, the reduplication has clear distributive value: *činne-činne* ‘co-tribesmen’ <‘peer’, *guuru-guuru* ‘spare auto parts’ <‘(piece of) metal’, *jiibi-jiibi* ‘dirty spots’ <‘dirt’, *jombu-jombu* ‘fragments, debris’ <‘broken-up grains’, *tombi-tombi* ‘spots, stains’ <‘spot’. In two cases, reduplication is used as an ad hoc derivational device defining one entity in terms of a better-known one: *kooro-kooro* ‘hooked device for retrieving bucket fallen into well’ <*kooro* ‘hyena’; *fendu-fendu* ‘cross-beam’ <*fendu* ‘winnowing van’. Nominal reduplication *kaari-kaari* ‘maximum, utmost’ is only dubiously connected to *kaari* ‘wait for’ (perhaps DjCh *kaari* ‘give freely to, donate to’ reflects the relevant original simple form). *boyboy* ‘pits dug in drying marsh to collect water’ may be connected to *boy* ‘(finger-)nail’ or to the verb *boy* ‘drive, herd’. *dugu-dugu* ‘teal’ is dubiously related to *dugu* ‘incense’.

There are quite a few noun stems which appear to be frozen reduplications, the simple stem being unattested. A few examples: *birimbirim* ‘a cultivar of sorghum’, *bitibiti* ‘mist’, *kusukusu* ‘couscous’, *lumbalumba* ‘vine sp.’, *tongotongo* ‘bow (weapon)’, *warawara* ‘coarse sieve’.

Verbs (especially bisyllables) are reduplicated more frequently than nouns (§6.4). Since most “adjectives” are suffixal derivatives of intransitive verbs, it is not surprising that bisyllabic adjectives can be reduplicated in distributive (cf. §5.4.4) or intensive sense. Examples are *dumb-o-dumb-o* ‘meager (bits)’ and *keyna-keyna* ‘just a little’. The form *mooso-mooso* ‘slowly, softly, gently’ is much more common than the simple *mooso* (same gloss).

The adverb *gumo-gumo* ‘extremely’, cf. *gumo* ‘right(-handed)’, is attested dialectally but is rare in Timbuktu.

(93) Noun Phrases and Postpositional Phrases

Noun Phrases

a. [ay wane] huu di
 [1Sg Poss] house Def
 'my house'

b. bor bibi hiŋka woo di
 person black two Dem Def
 'those two black men'

c. woy di yo kul se
 woman Def Pl all Dat
 'for all the women'

d. woo yo ta kul
 Dem Pl Top all
 'all of those'

Postpositional Phrases

e. har di yo se
 man Def Pl Dat
 'for the men'

f. a bomo lawal di nin ra
 3Sg head first Def only Loc
 'in its first part only'

structure

[Poss] N Def

N Adj Num Dem Def

N Def Pl kul Postp

Dem Pl Top kul

structure

N Def Pl Postp

Poss N Adj Def only Postp

5.2 Possessives

5.2.1 Possessor NPs with and without wane

A possessive NP has the form [[NP (wane)] N ...], where N is the possessed noun (and hence the lexical head of the larger NP). The possessor NP (which can be a simple pronoun or a multi-word NP) can be followed by the Possessive postposition *wane* (§5.9.3). Examples in (94).

- (94) a. a wane gaabi di
 3Sg Poss strength Def
 'its power'
- b. [isa here woo yo wane] fari di yo
 [river around Dem Pl Poss] field Def Pl
 'fields of (=in) those river areas'
- c. [alhoor di daa wane] čini di yo
 [limestone Def Emph Poss] word Def Pl
 'words of (=about) limestone'

However, *wane* is optional and may be omitted in each of (94a-c). Omission of *wane* in (94a) causes no interpretive problems since the 3Sg pronoun in *a gaabi di* can only be construed as possessive; likewise, 1Sg *ay* in (95a) must be possessive.

When the possessor is a full noun-headed NP, omission of *wane* results in the juxtaposition of two NPs, so possession may be indistinguishable from loose compounding (§4.6.5). However, possessive and compounding readings are not always semantically distinct, and if the possessed noun is semantically inalienable ('mother', 'belly') the construction can safely be read as possessive, as with 'mother' in (95b).

- (95) a. *ay* *ñaa*
 1Sg mother
 'my mother'
- b. [*har* *di* *yo*] *ñaa* *di*
 [man Def Pl] mother Def
 'the men's mother'

Note that the possessor and possessed NPs are independently marked for definiteness and for grammatical number both in (94b-c) with *wane* and in (95b) without it.

When the possessed "noun" is really a numeral or adjective beginning in Absolute *i-* or *a-*, and the possessor is 3Sg *a* or 3Pl *i*, omission of *wane* is uncommon. The strong preference for overt *wane* in this combination can be viewed as a device to avoid a VV sequence whose contraction would obliterate categorial information. Thus a *wane i boyro di* 'its best' (i.e., 'the best thing for it') rather than ?#*a i-boyro di*. There is no problem with pronominal possessors ending in consonants: *yer a-woy* 'our ten'.

5.2.2 Recursive possession

Recursion occurs when the first-order possessor NP itself contains a (second-order) possessor. A simple example is (96).

- (96) [[*ay*] *baaba* *wane*] *huu* *di*
 [[1Sg] father Poss] house Def
 'my father's house'

When cumbersome full NPs are involved, such constructions become difficult to process, but there is no syntactic restriction on them, as seen in (97).

- (97) a. [[*har* *di* *wane*] *huu* *di* *wane*] *sooro* *di*
 [[man Def Poss] house Def Poss] upstairs Def
 'the upstairs of the man's house'
- b. [[*war* *wane*] *faaba-čere* *di*] *addeliil* *di*
 [[2Pl Poss] help-friend Def] motive Def
 'the motive of your mutual help'
- c. [[*ggi-ye* *ta*] *tun* *di*] *alwakati* *di*
 [[3PIF Top] arising Def] time Def
 'the time of their arising'

These examples show various combinations of presence or absence of postposition *wane*. We get *wane* after both possessors in (97a), after the rightmost only in (96), after the leftmost only in (97b), and after neither in (97c).

5.2.3 Possessors as apparent heads of the higher NP

In the English sentence *My dog ran away but John's is still here*, the possessor *John's* appears to function as head of the higher NP and denotes John's dog. Alternatively, we could say that the head noun is expressed by zero (*John's* \emptyset is ...).

The same pattern occurs in KCh. In this case, the postposition *wane* is obligatory. In the ordinary definite case, *wane* is directly followed by Def *di*, a combination which is irregularly realized as *wan di* (§3.8.4). Examples in (98), with the position of the unexpressed head noun marked by \emptyset .

- (98) a. [ay wan] \emptyset di yo
 [1Sg Poss] \emptyset Def Pl
 'mine(Pl)'
 b. [har di yo wan] \emptyset di se
 [man Def Pl Poss] \emptyset Def Dat
 'for the men's'

It is possible, but fairly unusual, to get *wane* in indefinite contexts without Def *di*, as in (99).

- (99) yer fari hay kul kaa či [[moo ta wane] \emptyset]
 1PlS grow thing all Rel be [[rice Top Poss] \emptyset]
 'We have planted everything which is (any kind) of rice.'

More freely: 'We have planted every variety of rice.'

5.2.4 Inalienable possession

In general there is no special morphosyntax of inalienable possession (e.g. body parts, kin terms), except insofar as some types of nouns are normally possessed. However, the noun *moy* 'namesake' (i.e., anyone with the same personal name), which is always possessed, does have the unusual feature of avoiding Def *di*, hence *ay moy* 'my namesake', plural *ay moy yo* (not #*ay moy di* or #*ay moy di yo*).

5.3 Adjectives

5.3.1 Syntax of simple adjectives

We can define “adjective” syntactically as an element which may occur immediately after a lexical noun (as head of NP), preceding a numeral if the latter is present. Most of the common adjectives are derived from intransitive verbs of adjectival quality (§4.4.1), for example *jeen* ‘be aged’, Adj[ective] form *jeen-o*. Adj suffix *-o* is very common in such adjective forms but there is some lexical variation (§4.4.2).

Another class of syntactic adjectives are the *-nte* ordinals (derived from numerals) and participles (derived from various types of verb, and rarely from nouns), § 4.3.4. Examples are *hiŋka-nte* ‘second’, *albarka-nte* ‘powerful’, and *tey-nte* ‘wet’.

Examples of adjectives (including participles), with following numeral, are in (100).

- (100) a. *har jeen-o hiŋka*
 man old-Adj two
 ‘two old men’
- b. *derbe tey-nte taači di*
 boubou wet-Partpl four Def
 ‘the four wet boubous (men’s outer garments)’

If an adjective is present but the head noun is absent, the adjective can be said to function as the head of the NP. In this case, an Absolute prefix is added; this is, arguably, a dummy element which fills an otherwise vacant “noun” slot. The Absol prefix is *i-* (§4.4.3), as in (101).

- (101) a. *i-jeen-o di*
 Absol-old-Adj Def
 ‘the old one’
- b. *i-tey-nte taači di*
 Absol-wet-Partpl four Def
 ‘the four wet ones’

In these respects, adjectives are similar morphologically and syntactically to numerals, though numerals take a different Absol prefix, either *a-* or zero (§4.5.1). The quantifying adjectives *bobo* ‘much, many’ and *čiina* ‘few’ are morphologically indistinguishable from ordinary adjectives.

5.3.2 Sequences of adjectives

Some examples of adjective sequences are given in (102). The literal glosses retain the word order of the original.

(102)	<u>transcription</u>	<u>literal gloss</u>
a.	<i>čirow bibi beer</i>	'bird black big'
b.	<i>hāyši woroo futu-nte</i>	'dog fat vicious'
c.	<i>har keyna woroo</i>	'man small fat'
d.	<i>huri kaan-o beer</i>	'knife sharp big'
e.	<i>tuuri-ñaa beer kokom-te</i>	'tree big shaken'
f.	<i>derbe čiiina tey-nte</i>	'shirt little wet'

Judging from the variable location of the size adjectives *beer* 'big', *keyna* 'small', and *čiiina* 'small', it does not appear that the order of adjectives is rigidly grammaticalized.

5.4 Numerals and other quantifiers

5.4.1 Simple numeral phrases

When a numeral modifies a preceding noun, the numeral does not take an Absolute prefix. When the numeral acts as quasi-head of the NP, the common noun being absent, the numeral must take its regular Absol prefix, which is *a-* or zero depending on the numeral (§4.5.1). Examples with *hiŋka* 'two' are in (103).

(103)	a.	<i>woy hiŋka</i>	'two women'
	b.	<i>a-hiŋka</i>	'two (of them)'
	c.	<i>a-hiŋka di</i>	'the two (=both)'

Reduplicated numerals like *hiŋka-hiŋka* 'two each' (§5.4.4) occupy the same syntactic positions as the corresponding simple numeral, and no inflectional morphemes may intervene between the two parts of the reduplication.

Pl *yo* is not directly added to (nonsingular) numerals in their normal sense. However, if Def *di* intervenes, Pl *yo* is optionally added: *a-guu kaa* 'five came', but *a-guu di yo kaa* 'the five came'.

Pl *yo* may be added directly to a numeral in the more complex sense 'sets of X individuals', where X is the numeral. Thus *a-guu yo* means not 'five', rather 'fivesomes (quintets, groups of five)'. The most common case is with (*a-*)*foo* 'one', where no ambiguity is possible: (*a-*)*foo yo* 'some (ones), a few', as in (104).

(104)	<i>[saa foo yo] yer o kani i se hawey,</i>
	[time one PI] 1PIS Impf sleep 3PI Dat foodlessly,
	<i>hal ŋgi-ye ta ma hiŋ ka ŋaa</i>
	so 3PIF Top Subju can Inf eat
	'Sometimes, we sleep on an empty stomach for them, so they may be able to eat.'

For ordinal numerals, see §4.3.4.

5.4.2 Existential quantification

Existential quantification is generally associated with the initial introduction of a referent into a discourse. This may be accomplished either by an overt predication of existence or location ('There was a dog'), or by using an indefinite NP in a larger sentence ('A dog was sitting on the lawn,' or 'I saw a dog on the lawn'). For predications of existence, see §7.1.2-3.

Within a NP, KCh has no special form specifically for existential quantification, corresponding to the English indefinite article (*a dog*), the bare plural (*dogs*) for count nouns, the bare singular for mass nouns (*water*), or existential *some* (*some dogs, some water*).

The numeral *foo* 'one' can sometimes be translated as an English singular indefinite article, viz., when a new singular discourse referent is introduced with no special focus on its number. Therefore the NP *boro foo* can be rendered as either 'one person' or 'a person'. However, when a new referent is introduced, the *foo* is merely optional, and it always seems to have more of its numerical value than does English *a(n)*. Moreover, *foo* cannot normally be used with a mass noun. See the examples in (105).

- (105) a. *ay guna boro (foo)*
 1SgS see person (one)
 'I saw a person.'
- b. *ay guna hari (#foo)*
 1SgS see water (#one)
 'I saw (#a) water.'

The best case for an existential reading of *foo* is in the scope of a simple negative. Here the compositional sense is of the type 'not (even) one X', which effectively denies the existence of any denoted entity, as in (106).

- (106) *ma na bana [haya foo]*
 2SgS Neg pay [thing one]
 'You(Sg) didn't pay (=haven't paid) anything.'

(106) means, in quasi-logical notation, 'There is not (even) one x such that x is a thing and you paid x.' For more on interactions between *foo* and negation, see §9.3.3.

Some examples of reduplication and parallelism discussed in §5.4.4 also have existential implications, though no such construction is purely existential.

5.4.3 Universal quantification (*kul* 'all')

The only serious candidate for universal quantifier ('all, every') is *kul* (<Ar. *kull* 'all'). However, this morpheme has a considerably wider syntactic and semantic range than does an ordinary universal quantifier. For the important use of *kul* in marking the right boundary of a conditional antecedent or similar background clause, see §9.5.10.

We are here concerned with *kul* as a quantificational adjective meaning 'all, every, each, both'. A number of constructions need to be distinguished. First, *kul* may combine with a bare count noun in the distributive sense 'every, each'. This is most typical of its combinations with a set of relatively abstract generic nouns like 'time', 'place', 'person', and 'thing'. Examples are *saa kul* 'every time, any time, whenever' and *bor(o) kul* 'every person, anyone, whomever'. Note the absence of Def *di* and of Pl *yo* here. A following relative clause, however, is fine: *saa kul kaa ...* 'any time that ...' (§8.3.6).

This construction differs clearly from another pattern where *kul* is superimposed on an NP already specified for definiteness and number (singular for mass or collective nouns, plural for countable nouns). Here the *kul* merely emphasizes that the NP it binds is denotatively maximized. Examples are in (107). The appropriate gloss here is 'all' rather than 'every, each'. Note that in (107b) the plural subject with *kul* binds a plural (not singular) 3Refl pronoun functioning as possessor of the direct object, just as it would if *kul* were absent.

- (107) a. *ni alhawa di kul*
 2Sg passion Def all
 'all of your passion (=as much as you want)'
 b. [*boro di yo kul*] *dam [ŋgi-yo čaaku di yo] beene*
 [person Def Pl all] put [3ReflPl sack Def Pl] above
 'All the people put their sacks up above.'

Intermediate between the bare-noun type *saa kul* and the type with full NP seen in (107a-b) is one where the noun stem bound by *kul* takes Def *di* but cannot take Pl *yo*. This type is reliably distinguishable from the type (107a-b) only with countable nouns. An example is (108).

- (108) *tuuri sii di kul*
 tree kind Def all
 'every kind of tree'

This construction is regular with *sii* 'type'. Although the phrase in (108) is used in precisely the same contexts as English *all kinds of trees*, in Songhay it is a distributive and its *kul* is best glossed 'every' rather than 'all'.

Another pattern with more emphatically distributive meaning involves adding *kul* to a noun already quantified by the numeral *foo* 'one' or its distributive reduplication *foo-foo* 'one by one'. Examples are in (109).

- (109) a. [[*jere foo*] *kul*] *a-taači*
 [[side one] all] Absol-four
 '(on) each side, (there are) four'
 b. [[[*yer kuna*] *a-foo-foo*] *kul*] *go jisi ŋgu čaaku di nee*
 [[[1Pl Loc] Absol-one-one] all] Impf put 3ReflSg sack Def here
 'Each one of us will put his (or her) sack down here.'

It is clear that *kul* here has scope over the already quantified inner NP. Compare English *every single side*. Note that in (109b) the subject NP is treated syntactically as singular, and therefore binds a singular (not plural) 3Refl pronoun later in the sentence. In (109b), *yer kuna* (literally 'in us') is partitive in function (§5.4.10).

When *kul* 'all, every' is used as (apparent) NP head in the absence of a real noun, it is expressed phonetically as singular [akul] or as plural [ikul]. There are two possible ways to analyse (and transcribe) these forms. First, we could take the initial vowels as special cases of the Absolute prefix, which is prefixed to adjectives and numerals when they function as NP heads, the usual form being *i-* before ordinary adjectives and *a-* before numerals (§4.4.3, §4.5.1). We would then have to specify that, before *kul*, we get a unique number differentiation of the Absol not found with adjectives or numerals. The transcriptions would be *a-kul* and *i-kul*. This is the system we will actually use in transcriptions. We will gloss *a-* as AbsolSg and *i-* as AbsolPl in these combinations, instead of just as Absol as elsewhere. Examples in (110).

- (110) a. *a-kul* *o* *baa-baa*
 AbsolSg-all Impf Rdp-break
 'All of it will break' (= 'It will all break')
- b. *no-o* *soo* *i-kul* *se*
 2SgS-Impf pour AbsolPl-all Dat
 'You(Sg) will pour (tea) for all of them.'

The alternative would be to take the forms as *a kul* and *i kul*, i.e., as ordinary 3Sg *a* and 3Pl *i* pronouns, followed by *kul*. These would then be parallel to combinations like *yer kul* 'we all', *war kul* 'you all', etc. Since 3Sg *a* and 3Pl *i* are elsewhere replaced by 3SgF *ŋga* and 3PlF *ŋgi-yo* when followed by an attached particle or modifier (e.g. *ŋga woo* with a demonstrative), the fact that the quantified forms here have *a* and *i* instead of "3F" counterparts would force us to interpret *a kul* and *i kul* as possessives ('his or her allness', 'their allness') to save the analysis. This would be awkward but not beyond the pale. This possessive analysis would also explain why the *a* and *i* do not take the forms 3SgO *ga* and 3PlO *gi ~ ji* when directly following a verb in object function. Contrast 3SgO *ga* in (111a) with *a kul* (not #*ga kul*) in (111b).

- (111) a. *ay* *ŋaa* *ga*
 1SgS eat 3SgO
 'I ate it'
- b. *ay* *ŋaa* [*a kul* (*di*)]
 1SgS eat [3Sg all (Def)]
 'I ate all (of it).'

Having noted this possessive reading as an analytical option, we will not use it hereafter in our glossing of examples, preferring the Absolute analysis as in (110).

Combinations of quantificational *kul* with negation are discussed in §9.3.3.

5.4.4 Distributive reduplication of numerals

To indicate distributivity of individual entities, or of same-number sets of entities, the corresponding numeral is reduplicated. When the numeral functions as NP head, there is only a single occurrence of the Absolute prefix, as in *a-hiŋka-hiŋka* 'two each, two at a time'.

The most common context for distributives is in specifying unit prices for commodities. The distributive numeral often functions as an adverbial modifier, without an overt postposition, as in (112).

- (112) *no-o neere ga a se, allaara hiŋka-hiŋka*
 2SgS-Impf sell 3SgO 3Sg Dat, riyal two-two
 'You sell it to him (for) at two riyals (=10 CFA).'

Examples of absolute forms are *a-hiŋka-hiŋka* '(for) two (riyals each)' and *waraŋka-waraŋka* '(for) twenty riyals (each)'.

The textual example (112) continued as (113).

- (113) ... *wala allaara hinja, wala allaara hiŋka nda jere,*
 ... or riyal three, or riyal two with part,
a si bisa woo
 3SgS ImpfNeg pass Dem
 '... or three riyals, or two riyals and a fraction, it won't be more than that.'

Here the speaker could have said *allaara hinja-hinja* '(for) three riyals (each)', but the context was already clear. Compound numerical expressions like *hiŋka nda jere* 'two and a fraction' do not lend themselves to reduplication.

As these examples suggest, reduplicated distributive numeral phrases are used in sentences where members of one set are associated with subsets (individuals, pairs, triples, or whatever) of a second set. For example, each member of the set of mangoes is associated with two riyals (the unit price). In the case of *foo-foo* 'one by one', the association is from individuals to individual entities, as in (114).

- (114) a. *i bun a-foo-foo*
 3PIS die AbsolSg-one-one
 'They died one after the other (=one at a time).'
- b. *ay noo i-kul se bombõ foo-foo*
 1SgS give AbsolPl-all Dat candy one-one
 'I gave one candy each to all of them.'

In (114a), the members of the set 'they' are associated with members of an implied set of regularly spaced temporal points. In (114b), the members of the set of candies is associated with the members of the set 'them'.

In some discourse contexts, distributive *foo-foo* 'one by one' can be used as a paucal ('a few'). While a distributive involves associations between members (or

subsets) of two sets and implies no upper limit on the size of these sets, paucal 'a few' has at least an informal upper bound (determined by contextual factors). When a fisherman says, in KCh, 'I caught them (fish) one by one,' using the distributive form *a-foo-foo*, the point is not necessarily the spatiotemporal spacing (as in a true distributive reading). Instead, the point may be the implicature that only a few fish were caught during the day.

5.4.5 Complementary subsets ('some ... , others ...')

Another important logical relationship is generated by the partition of a set X of entities into two or more subsets (X_1, X_2, \dots). In discourse, antithetical predications are commonly made of the subsets, usually two in number but occasionally more. The role of quantifiers in such sequences can be examined by considering this scenario: 'The outlaws were holed up in a canyon. Some₁ gave themselves up immediately, some₂ fought for a while then gave up, and some₃ fought to the bitter end.' In English, this may be conveyed by any of the patterns in (115a-e), among others.

(115)		<u>symmetrical?</u>	<u>exclusive?</u>	<u>open?</u>
a.	<i>some</i> ₁ ... , <i>some</i> ₂ ... , <i>some</i> ₃ ...	√	no	√
b.	<i>some</i> ₁ ... , <i>others</i> ₂ ... , <i>others</i> ₃ ...	no	√	√
c.	<i>some</i> ₁ ... , <i>some</i> ₂ ... , <i>the others</i> ₃ ...	no	partly	no
d.	<i>some</i> ₁ ... , <i>others</i> ₂ ... , <i>the others</i> ₃ ...	no	√	no
e.	<i>some</i> ₁ ... , <i>others</i> ₂ ... , <i>still others</i> ₃ ...	no	√	√

Any combination of *some* and *others* involves at least some explicit exclusivity (the subsets do not overlap). With symmetrical *some* (115a), the quantifiers do not literally require exclusivity, though in the outlaw scenario described one can deduce exclusivity from the contrary relations among the predicates, and in any event exclusivity is often inferred from symmetrical parallel constructions like (115a) by implicature. The patterns (115a-b,e) could potentially continue with additional (fourth, fifth, ...) parallel segments, while (115c-d) are brought to a screeching halt by *the others*, which forces closure.

In KCh, the typical pattern for antithetical parallelism is semantically distinct from all of these English patterns. What we usually get is the type *čindi yo ... , čindi yo ... , čindi yo ...*, literally 'remainder Pl ... , remainder Pl ... , remainder Pl' (i.e., 'others ... , others ... , others ...'). This symmetrical pattern resembles the English type (115a), except that it is entirely exclusive insofar as each segment (even the first) anticipatorily opposes its subset to the subsets expressed in the following segments. (Latin likewise has *alii ... , alii ...* 'others ... , others ...'.) Other variants of the same general type are *jere foo ... , jere foo ...* 'one part ... , one part ...' and *a-foo yo ... , a-foo yo ...* '(some) ones ... , (some) ones ...'. In the latter type it is also possible to add Def *di*, giving *a-foo di yo ... , a-foo di yo ...* 'the ones ... , the ones ...'.

When the complementary subsets each consist of an individual, the typical construction is indefinite *a-foo ... , a-foo ...* 'one ... , one ...' or definite *a-foo di ... , a-foo di ...* 'the one ... , the one ...'.

5.4.6 Generalized quantifiers ('many, much, few')

Quantificational adjectives are, formally, special cases of ordinary adjectives of the sort discussed in §4.4.1-3. Specifically, as modifiers they follow the head noun (and any descriptive adjectives), and when they function as heads of NPs they take an Absol prefix. However, they differ from ordinary adjectives in some respects. The basic generalized quantifiers are 'many, much' and 'little, few'. Each is used with both mass and count nouns.

For 'many, much' the intransitive verb is *bow* 'be abundant, numerous'. The modifying adjective corresponding to *bow* is *bobo* 'much, many'. On these forms, see §3.10.1. The Absol form is *i-bobo*. Following the pattern observed with numerals, even when added to countable nouns *bobo* is not directly followed by Pl *yo* (116b), but *yo* is added if there is an intervening Def *di* (116c).

- (116) a. *jiiroo* *dunguri* *si* *bow*
 year-this beans ImpfNeg **be-abundant**
 'This year, beans are not abundant.'
- b. *tubaabu* *bobo* *bun*
 white **many** die
 'Many white people died.'
- c. *tubaabu* *bobo* *di* *yo* *bun*
 white **many** Def Pl die
 'The many white people died.'

The opposite of 'many, much' is 'little, few, rare'. The intransitive verb used in this sense is *čiiina*, which also means 'be small, young'. While *čiiina* can also be used as a modifying adjective, in this function it is usually replaced by *keyna* 'little, few, small, young'. The Absol forms are *i-čiiina* and *i-keyna*. Unlike *bobo*, *keyna* in the sense 'few (in number)' can be followed directly by Pl *yo*. This usefully makes possible a surface distinction between 'a small X' (X *keyna*) and 'a few Xs' (X *keyna yo*. *keyna* is not in normal use as an intransitive verb. Examples in (117).

- (117) a. *jiiroo* *dunguri* *go* *čiiina*
 year-this beans Impf **be-few**
 'This year, beans are few.'
- b. *tubaabu* *keyna* *yo* *bun*
 white **few** Pl die
 'A few whites died.'

For the paucal use ('a few') of distributive *foo-foo* 'one by one', see §5.4.4.

5.4.7 Currency and time of day

The local currency is the CFA franc, which is held at a fixed exchange rate to the French franc (FF) and is shared with the other Francophone West African countries

(except Mauritania). The rate was 50 CFA = 1 FF for many years until 1994, when it was abruptly devalued to 100 CFA = 1 FF. In the early years of Malian independence, there was a Malian franc (franc malien).

However, currency is normally calculated in terms of the 'riyal' (<Spanish *real*, via Arabic). The usual KCh pronunciation is *allaara*; an older form *alliyaara* is found in other Songhay dialects and points to an Arabic prototype such as **ar-riyaal(a)* via metathesis of *r* and *l*.

The riyal was a colonial-era coin of high value. Terms for smaller colonial-era coins like *koboro* are now used chiefly in 'red cent' negative polarity usage ('he didn't give me even a *koboro*'). As the colonial currency was displaced first by the franc malien and then by the CFA franc, the vernacular term *allaara* was equated with multiples of these new official units, and currency continues to be calculated in riyals in the native languages (though not in local French). One riyal is equivalent to 5 CFA francs. Therefore, in the marketplace, *warɔŋka* 'twenty' denotes the 100 CFA coin and *jember foo* 'one thousand' denotes the 5000 CFA banknote. However, *milyō foo* 'one million' (cf. French *million*) is directly equated with 1,000,000 CFA (French *million francs*) rather than a million riyals (=5,000,000 CFA).

In stating the unit prices of commodities, distributive reduplications of numerals are commonly used (§5.4.4).

Clock times are now commonly expressed in French (e.g. *trois heures et demi* '3:30'). The traditional time-of-day expressions revolve around the five daily Muslim prayers as coordinates, supplemented by a few other expressions. See §11.1.4 for details.

5.4.8 Quantification over pronouns

The interaction of quantifiers with pronouns is tricky, since there are three basic semantic possibilities, exemplified by 'three of us' (partitive), 'we three' (enumerating), and 'our three' (possessive).

The partitive is most clearly expressed by combining a locative PP of the type *yer kuna* 'in us' (or 'from us') with the quantified NP, as in (118); for Loc PPs in partitive function see §5.4.10. The quantified phrase is an autonomous NP; note *boro* 'person' as head noun in (118a). The locative PP may immediately precede the quantified NP, as in (118a-b), or it may occur at or near the end of the clause (see §5.4.10).

- (118) a. *[yer kuna] boro bobo koy*
 [1PI Loc] person many go
 'Many of us went.'
- b. *a kar [yer kuna] a-hinja*
 3SgS hit [1PI Loc] Absol-three
 'He hit three of us.'

In both the enumerating and possessive constructions, the pronoun in question precedes the quantifier. When the quantifier is *kul* 'all', we get clearcut enumerating expressions like *war kul* 'all of you(PI)'. However, with numerals, the preferred

surface expression adds a head noun distinct from the pronoun. The usual noun used for this purpose is *boro* 'person', as in (119).

- (119) *yer* *boro* *hinja*
 1Pl **person** three
 'we three'

Here *yer* might be said to be in apposition to *boro* or perhaps to *boro hinja*. But it is also possible to construe (119) syntactically as a possessive expression, glossable as 'our three persons' (cf. English *the three of us*). This is because possessors (including pronominal possessors) precede the heads nouns they modify and only optionally take Poss postposition *wane* (§4.1.5, §5.2.1).

What then about unambiguously possessive constructions like 'our three' (simplified from 'our three dogs' or the like), with an unexpressed but understood head noun? The expected maximal version of this is of the type [*yer* (*wane*)] \emptyset *i-hinja* lit. '[1Pl (Poss)] \emptyset Absol-three,' with " \emptyset " representing the vacant head-noun slot. This is quite grammatical and relevant examples occur in texts. However, again *boro* 'person' is optionally added as a dummy noun stem, sometimes even when the referent in question is nonhuman, as in (120).

- (120) *yer* (*wane*) *boro* *hinja*
 1Pl (Poss) **person** three
 'our three'

Note that possessive (120) is distinguishable from enumerating (119) only by the presence of the optional Poss postposition, and the latter is more often omitted than present. The syntactic distinction between enumerating and possessive types is therefore shaky. For an English parallel note the phrasing of *the three of us*, which has enumerating function but which is expressed in possessive form (*of*).

5.4.9 Quantification over events

The noun *čee* has the senses 'foot' and 'time (instance)'. This accidental homonymy reflects the phonetic merger of originally distinct stems (distinguished in DjCh and HS). In the sense 'time', *čee* is always quantified, and the resulting phrase appears as an adverbial modifier which takes scope over the core event type expressed by the verb and its arguments.

- (121) *ay* *kar* *gi* [*čee* *hinja*]
 1SgS hit 3PIO [**time** **three**]
 'I hit them three times.'

Of course, the core event type must be aspectually bounded for such quantification to occur. An informal logical paraphrase of (121) would be 'the event *e*, where *e* = I hit them, occurred in three distinct spatiotemporal locations.'

Another type of quantification is internal to a single event, involving its partial or full enactment: 'I started to hit them; I hit them thoroughly; I finished hitting them; I tried (and failed) to hit them.' This type of quantification is expressed by the combination of a special quantificational or aspectual serial verb with a substantive VP, see §9.7.5-6.

5.4.10 Partitive expressions

Partitives are expressed as Locative PPs with postposition *ra* or *kuna* (§5.9.4; §11.1.2). The partitive phrase may immediately precede the quantified expression, or may come later in the clause. The relative frequency of *kuna* as opposed to *ra* appears to increase in the former, more salient position, especially when clause-initial. Examples in (122); cf. also (109b) in §5.4.3. §5.4.8 discusses difficulties of analysing combinations of quantifiers with pronominals.

- (122) a. *[i kuna] a-hinja kaa*
 [3PI Loc] Absol-three come
 'Three of them came.'
- b. *a-hinja kaa [i ra]*
 Absol-three come [3PI Loc]
 [=122a]
- c. *no-o bey [a ra] haya?*
 2SgS-Impf know [3Sg Loc] thing ?
 'Do you know anything of (=about) it?'

When denoting measured quantities of a commodity defined by cost, the normal construction is the numerical expression followed by the noun denoting the commodity: *a-woy sukkar* 'ten (of) sugar', i.e., ten riyals worth of sugar.

5.5 Demonstrative *woo*

Dem *woo* 'this, that' (§4.2.1) follows nouns (123a), as well as modifying adjectives and numerals (123b), but precedes Def *di* and Pl *yo*. It can also occur after personal pronouns (123c), in which case our free translation is of the type 'I here'.

- (123) a. *har woo di yo*
 man Dem Def Pl
 'these (those) men'
- b. *har jeen-o hiŋka woo di*
 man old-Adj two Dem Def
 'these (those) two old men'
- c. *ay woo kaa wor o guna*
 1SgS Dem Rel 2PlS Impf see
 'I here whom you(Pl) see'

The combination *woo di* including Def *di* is very common, but *woo* occurs without *di* in deictic (pointing) function, where 'this' is the most common translation. *di* is not used after *woo* modifying a first or second person pronoun (123c). *woo* without *di* can also be used with a generic or other nonspecific noun, previously introduced as a discourse referent, in preposed topic function (124).

- (124) *aywa,* *ndooso* *woo,* *ni* *bey* *ka* *guna*
 well, pickax Dem, 2SgS know Inf see
nan *kaa* *i-i* *kar* *ga?*
 place Rel 3PIS-Impf strike 3SgO?
 'Well, this (type of) pickax, have you ever seen where they make it?'

On the other hand, *di* is normally present in discourse-anaphoric function: *hāyši woo di* 'that (same) dog'. Likewise, *woo* may anaphorically denote an eventuality from the preceding discourse. Note also the common expression *woo di banda* 'after that (=afterwards)', with postposition *banda* 'behind, after'.

(123c) shows a 1Sg pronoun, but other pronouns are also possible: *yer woo yo* 'we here', *ni woo* 'you(Sg) there', *wor woo yo* 'you(Pl) there'. Note that nominal Pl morpheme *yo* (§5.7) is required when *woo* follows a plural pronoun, though *yo* is not added directly to such pronouns (#*yer yo*, #*war yo*). When *woo* is added to a third person pronoun, simple 3Sg *a* and 3Pl *i* must be replaced by corresponding "3F" pronouns, and Def *di* is optionally present: *ŋga woo di* 'he (the aforementioned one)', with 3SgF *ŋga* (§8.4.2). *ŋga woo* 'he (there)' without *di* is also attested. A plural *ŋgi woo yo* is also recorded, suggesting that 3PlF *ŋgi-yo* might be separated into its component morphemes by an intervening *woo*. However, we do not get #*ŋga woo yo* with 3SgF pronoun, so the initial morpheme in *ŋgi woo yo* is already plural (§3.8.8).

woo is occasionally added to a deictic adverbial like *nee* 'here', and this combination allows freer use of further postpositions: *nee woo ga* 'from here'. However, *woo* is uncommon in this combination in Timbuktu.

There are occasional textual examples of the apparent type *woo X woo* with two instances of *woo* flanking a noun X. This is atypical of Timbuktu (though common in DjCh), and since there are fairly few textual examples, one is tempted to consider some of them to be restarts with the noun included belatedly ('this—, this X'). There is also the possibility that the preceding *woo* is a possessor in some examples ('this X of this'). Similar issues arise with *woo di* before a noun X.

5.6 Definite *di*

The Def morpheme is *di*. It follows the lexical material (noun, adjective), numerals, and Dem in a full NP, but precedes Pl *yo*, discourse-function markers, and postpositions. Its functions resemble those of the English definite article, except that it can be used after demonstrative *woo* in *woo di* 'that'. Examples in (125).

- (125) a. *koyra di yo*
 town Def Pl
 'the towns'
- b. [*bor bibi hiŋka di*] *se*
 [person black two Def] Dat
 'for the two black persons'

Def frequently co-occurs with Dem *woo* (examples in §5.5), but cannot be added directly to personal pronouns: #*ni di* 'you', #*ŋga di* 'she'. For *ŋga woo di*, see §5.5.

KCh *di* has a much broader grammatical range than those of its cognates, KS *din* and HS *di*. KS and HS have a distinct suffixal definite category, to which *di(n)* may be added as a stronger discourse-anaphoric marker. Consider now (126).

- (126) *moreyda [alhoor di] muso foo na*
 now [limestone Def] manner which? Foc
wor o gar ga [dow di] čire ?
 2PlS Impf find 3SgO [sand Def] under?
 'Now the limestone, how do you find it under the sand?'

In the relevant text, 'limestone' has just previously been established as a topic, so *di* in *alhoor di* could be taken as marking discourse-internal definiteness. However, 'sand' is mentioned here for the first time, so Def *di* in *dow di* must reflect another kind of definiteness. Since it functions here to denote the surface of the ground (which happens to be sand in most of the Timbuktu region), it is entirely parallel to English *the ground*, French *le sol*, etc. It is "definite" in the sense that in any normal location there is exactly one surface of this type.

In "loose" compounds (§4.6.1), where the compound initial as well as the compound final is a NP, and in possessive constructions, we often get double *di* marking, as in (127).

- (127) [*dow di*] *soso di*
 [sand Def] potash Def
 'the earth's potash'

di is also attested as one of the right-edge markers specifying the end of a conditional antecedent (§9.5.10). This usage is rare in my Timbuktu data and is apparently not part of the grammar of most Timbuktu speakers. The usage is common in DjCh (Appendix 2).

5.7 Plural *yo*

Pl *yo* (variant *ye* when non-phrase-final, §3.8.5) follows the lexical stems (nouns, adjectives), Dem *woo*, and Def *di* in a full NP. It is not used immediately after a numeral or other quantifier except under specific circumstances (details in §5.4.1). The Pl morpheme is not used directly after a plural personal pronoun, though if

demonstrative *woo* is added to such a pronoun the morpheme does appear: *yer* 'we' (never #*yer yo*), but *yer woo yo* 'we here' (§5.5). *yo* precedes discourse-function markers and postpositions. It is commonly pronounced *ye* before a postposition (§3.8.4). Examples in (128); note the absence of *yo* in (128b) after a numeral.

- (128) a. *haw di yo*
 cow Def P1
 'the cows'
- b. *woy hinja*
 woman three
 'three women'
- c. *woy di ye se*
 woman Def P1 Dat
 'for the women'

yo freely co-occurs with a following *kul* 'all' (§5.4.3), but this is just one respect in which *kul* diverges from ordinary quantifiers. On the other hand, *yo* is often omitted with nouns in generic function (e.g. plant and animal species terms); cf. (245) in §7.1.4, below.

5.8 Markers of discourse status

5.8.1 Focus (Foc *na* and SFoc *ŋga*)

Focalized constituents (as we use the term here) are always fronted to a position preceding the remainder of the clause. This is most obvious with constituents that are otherwise postverbal, such as direct objects and adpositional complements. Since subjects are clause-initial anyway, their focalization does not produce an obvious "fronting," but one can argue nonetheless that fronting occurs here too.

The usual markers of focalization are Subject Focus (SFoc) *ŋga*, inserted obligatorily between a focalized subject and the following material (MAN morphemes, then VP), and non-subject Focus (Foc) *na*, which can be omitted under some conditions but is usually present after an NP (or adverbial) fronted from post-verbal position. Simple examples are in (129).

- (129) a. *ay ŋga gar ga*
 1Sg SFoc find 3SgO
 'It is I [*focus*] who found it.' (subject focus)
- b. *maa na no-o taasi*
 what? Foc 2SgS-Impf seek
 'What [*focus*] are you looking for?' (nonsubject focus)

For fuller discussion of the syntax, see §8.1.1-2. Historically, *na* reflects a weak demonstrative **no* 'there' and is therefore related etymologically to identificational

quasi-verb *nono* 'it is', §7.1.1. (KS has *no* as both a focalizer and a reduced 'there' demonstrative.) SFoc *ŋga* is intriguingly homophonous to 3SgF pronoun *ŋga* (§8.4.2). There is considerable variation in the form of SFoc morphemes throughout the KCh-DjCh-KS zone, permitting speakers of each dialect to make different morphemic associations (with attendant "deep" syntactic analysis) for the SFoc marker.

It is doubtful that either *na* or *ŋga* forms a surface constituent, strictly speaking, with the preceding focalized constituent. If it did, one would expect that the particle would occur as part of truncated WH questions ('who?') and as part of truncated replies to WH questions (Q: 'What did you find?'; A: 'The dog'). However, *na* and *ŋga* are never used in this way; the truncated interrogative or reply consists simply of the focalized interrogative pronoun or NP. The truncated form of (129b) is *maa* 'what?', not #*maa na*, and that of (129a) is *ay* 'I', not #*ay ŋga*.

NPs (and PPs) are not the only constituents that can be, in principle, focalized. VPs can be focal (Q: 'What did you do?'; A: 'I cried'), as can truth values ('Yes I did see him'). However, in KCh there is no overt grammatical marking of verb, VP, or truth-value focus. In practice, "focus" applies to NPs, PPs, and adverbials like 'here' and 'today' which can be analysed as reduced or defective NPs.

5.8.2 Topic (Top *bine*, Top *ta*)

Functionally topical NPs (and NP-like adverbials) may simply be preposed to the sentence proper, without overt morphological marking of topicality (examples in §8.4.1). However, there are two overt morphemes expressing topicality of one sort or another and which can occur in an NP (130). For more on *bine*, see §8.4.1.

(130)	Topic markers		
	<u>form</u>	<u>label and gloss</u>	<u>comments</u>
a.	<i>bine</i>	Top, 'as for...'	strong topic, usually preposed
b.	<i>ta</i>	(weak) Top	weak topic, preposed or <i>in situ</i>

bine and *ta* follow, and form a constituent with, an NP, or pronoun, or adverbial.

5.8.3 Other discourse-functional morphemes

Other discourse-functional morphemes which can occur at or near the end of NPs are those listed in (131).

(131)	<u>form</u>	<u>gloss</u>	<u>comments</u>
	<i>nin</i>	'only'	the normal Timbuktu form
	<i>tan</i>	'only'	<Fulfulde, in upriver dialects (rare in Timbuktu)
	<i>moo</i>	'also'	incremental 'also' or role-switching 'in turn'
	<i>yaa</i>	Emph	weak emphatic, e.g. in echoic confirmations
	<i>daa</i>	Emph	'precisely, exactly'
	<i>dee</i>	Emph	adversative (correcting, challenging, warning addressee)

These particles are deceptively complex semantically. Some of them can also appear at or near the end of the sentence, taking wide scope (e.g. over eventualities). Their syntax and semantics are described in detail in chapter 8. Here we will present some examples of their narrower usage with constituent scope over a NP. In this function, they occur at the end of the NP but precede postpositions, as shown in (132).

- (132) a. *[[a bomo lawal di nin] ra] hew keyna goo*
 [[3Sg head first Def **only**] Loc] wind little exist
 'Only in its (=storm's) onset was there a little wind.'
- b. *no-o didii [[banda di moo] ga] bundu keyna,*
 2SgS-Impfroll [[back Def **also**] at] stick small,
e! korfo keyna
 oops! rope small
 'You roll a small stick—I mean a small rope—, on its back also.'
- c. *[[yerkoy yaa] wane] mise*
 [[God **Emph**] Poss] way
 'God's way'
- d. *[[seeftaa di daa] kuna] a ċi allaara iiye nda jere*
 [[CFA Def **Emph**] Loc] 3SgS be riyal seven with part
 'Precisely in CFA (currency), it's seven riyals and change.'

The postpositions (*ra, ga, wane, kuna*) follow *nin* 'only' in (132a), *moo* 'also' in (132b), weak Emph *yaa* in (132c), and Emph *daa* in (132d). The ordering of discourse-function morphemes before postpositions appears to be fixed syntactically rather than semantically. There is a logically possible scope difference between, say, 'only [in [its first part]]' and 'in [only [its first part]]', but in practice the semantic difference is slight and a syntactic fixing of the order does not cause communicative problems.

- (133) *maa se [mobil ressort nin] na wor o taasi?*
 what? Dat [vehicle springs **only**] Foc 2Pl Impf seek
 'Why is it [only car springs] [focus] that you(Pl) seek?'

(133) has *mobil ressort* 'car springs' in focus (with Focus morpheme *na*), as well as being restricted by *nin* 'only'. For *maa se* in this example, see discussion of (307a-c) in §8.2.3.

5.8.4 Co-occurrence of discourse-functional morphemes

We limit our attention here to cases where two of the DF morphemes mentioned in the preceding sections occur within the same NP constituent. Since the Foc *na* and SFoc *nga* (§5.8.1) do not seem to be bracketed with the preceding constituent, we omit combinations involving them and a preceding NP ending with a DF morpheme

The weak Top marker *ta*, which is most common after after subject NPs (especially pronouns), can combine with a following discourse marker. The attested combinations, and textual examples, are given in (134).

(134) Combinations of discourse-functional morphemes

- a. *ta bine* (Top + Top)
 yer *ta* *bine*, ...
 1Pl Top Top
 'as for us, ...'
- b. *ta daa* (Top + Emph)
 [*woo di ta daa*] *na yer o tammahaa*
 [Dem Def Top Emph] Foc 1PlS Impf hope
 'Precisely that [*focus*] is what we hope (for).'

(134a) shows the weak Top marker followed by the stronger, topic-establishing or -switching morpheme *bine*. In (134b), the weak Top marker *ta* is added to demonstrative 'that', which refers discourse-anaphorically to a prior proposition, and *daa* has the function of emphasizing exactness.

5.9 Adpositions and case-marking

5.9.1 Unmarked case versus adpositions

The distinction between subject and direct object is expressed by constituent order. Subject NPs precede MAN morphemes and the verb, which is followed by direct objects and PPs. When a direct object is fronted in the focalization construction it precedes the subject NP and is normally followed by Foc morpheme *na*. Although subject and direct-object NPs lack case markers, there is rarely any difficulty in identifying these case functions. (135) is a simple transitive example.

- (135) [*har di*] *o* *guna* [*woy di*]
 [man Def] Impf see [woman Def]
 'The man sees the woman.'

Certain personal pronouns (3Sg, 3Pl) have distinct forms for subject and object function, the subject variants also being used before postpositions (§4.1.1).

Topic NPs ending with Top *bine* ('as for'), which precede the sentence proper, are also unmarked for case; see §5.8.2.

Many "adverbs" can be thought of as nouns or simplified NPs denoting times, locations, and similar concepts. If so, they can be analysed as NPs unmarked for case on the surface, though some kind of locative is implied ('tomorrow' = 'at tomorrow').

Most other grammatical relations are expressed by postpositions to be described in the following sections, though in some cases the postposition can be omitted.

5.9.2 Dative *se*

Dat *se* is the normal postposition for indirect objects. After *noo* 'give', the Dat NP denotes the receiver. 'Give' and 'show' also have an alternative case-frame with two apparent direct objects (§9.1.2). After *har* 'say', the Dat NP denotes the person spoken to. After *neere* 'sell', it denotes the person sold to (=the buyer). In (136) we have 'sell' with a pronominal Dat, while in (137) we have a fronted Dat NP functioning as focus.

- (136) *no-o neere ga [i se] allaara jember hinja*
 2SgS-Impf sell 3SgO [3Pl Dat] riyal thousand three
 'You sell it to them for 3000 riyals.'

- (137) *[mobil se] na yer har yer o kow ga*
 [vehicle Dat] Foc 1PlS say 1PlS Impf remove 3SgO
 'It's [to the truck (driver)] [focus] that we say we'll remove it.'

The Dat morpheme is always *se* at the end of a regular NP or after Dem *woo* (*di*) 'this, that'. It is also *se* after most pronouns, but there is a special 1SgDat form *yene* and a special 2SgDat form *mana ~ mane* (§4.1.1) in postverbal (i.e. enclitic) position. When fronted in the focus construction we get the regular forms, 1SgDat *ay se* and 2SgDat *ni se*.

There are occasional "ethical datives" in the texts, i.e., 1Sg or 2Sg datives that are not part of the reported eventuality and are best omitted from free English translations (138).

- (138) *ay hāā ga, wala a na kubey yene A*
 1SgS inquire 3SgO, or 3SgS Neg meet 1SgDat A
 'I asked him whether he hadn't met (lit. "met for me") A [man's name].'

5.9.3 Possessive *wane*

Possessor NPs or pronouns precede the possessed noun (or NP). The optional Possessive postposition *wane* follows a possessor NP or pronoun, as in (139a-b).

- (139) a. *[kokoy di (wane)] huu di*
 [chief Def (Poss)] house Def
 'the chief's house'
 b. *[ay (wane)] huu di*
 [1Sg (Poss)] house Def
 'my house'

When the possessed noun is missing, the postposition on the possessor is obligatory. In this case, *wane* is normally followed by Def *di* (which takes semantic scope over the missing noun), and the combination is pronounced *wan di* with the *e* dropped (§3.8.4), as in (140).

- (140) [woo di yo wan] Ø di
 [Dem Def Pl Poss] Ø Def
 'the one (=wage) of those (workers)'

For more on the use of *wane*, see §5.2.1.

To indicate temporary possession or custody, *ga* is used instead of *wane* (§5.9.5).

5.9.4 Locative *ra* and *kuna*

The two Loc postpositions *ra* and *kuna* are basically interchangeable, *ra* being more common. Their core sense is 'in (container or field)', denoting location inside or immediately attached to the object or zone denoted by the NP to which they are attached. Motion ('into, onto') may or may not be involved. Examples in (141). A more thorough analysis of the semantics, including partitive function, is given in §11.1.2.

- (141) a. *yee dam [ay wane humbal di ra] hari*
 1SgSImpf put [1Sg Poss waterbag Def Loc] water
 'I (will) put water in(to) my waterbag.'
 b. *nda i dam ga [hari kuna]*
 if 3PlS put 3SgO [water Loc]
 'if (when) they put it in(to) the water, ...'

A semantically expected Loc postposition and Def *di* are often omitted with nouns functioning as spatiotemporal adverbials (e.g. 'there', 'tomorrow'), and with certain high-frequency nouns denoting socially significant zones, such as *yoobu* 'market' and *ganji* 'wilderness' (§5.12).

Cognates of *ra* are DjCh *la* and KS *ra* (*la* after a nasal or liquid), and the postposition may be ancient. Locative postpositions usually derive historically from nouns meaning 'place', 'interior', or the like, but I can identify no specific noun stem as the likely etymological source for these forms. If **ra* is original, we should look for a noun roughly of the shape **CVra*, since tap **r* does not otherwise occur morpheme-initially in native Songhay vocabulary. If **la* is the older variant this consideration does not apply. *laabu* 'earth, soil' (KS *labu*) is perhaps a candidate, but it does not mean 'place'.

With *kuna* we have better luck. KCh itself has a frozen compound *haw-kuna* 'belt' including *haw* 'tie'. (Cf. KS *kuna-haw* 'belt' and HS *kun-haw* verb 'tie belt on'.) KCh also has a reduplicated noun *kuna-kuna* '(the) very bottom (of pit, well, etc.)', and a frozen instrumental phrase *nda kuna* 'internally, on the inside' (§5.11.4). These forms, and perhaps the verb *kun* 'be pregnant' suggest an original meaning complex for **kun(a)* on the order of 'deep interior, middle, womb, midsection, waist'. The bleaching of such a noun into a Loc adposition is natural.

5.9.5 *ga* 'on, by, from, out of'

ga has a short vowel in KCh. It is therefore clearly distinct from preverbal Presentative morpheme *gaa* (§7.2.3) and from the clause-final Emphatic *gaa* (<Arabic, §8.5.7).

The core sense of *ga* is probably 'on'. However, it can be translated as 'by, alongside' or 'from, out of' depending on the verb. It is also used, with a locational quasi-verb 'be', to indicate temporary possession or custody. For more details on the semantic range, see §11.1.2. Examples in (142).

- (142) a. *yee kar [a ga] guusu*
 1SgSImpf hit [3Sg by] hole
 'I knock (=make) a hole in it (stone).'
- b. *no-o bisa [a ga]*
 2SgS-Impf pass [3Sg by]
 'You'll pass by it (limestone).'
- c. *nda a gar [kuumu goo ay ga]*
 if 3SgS find [hoe exist 1Sg by]
 'if it happens that a hoe is on me (=in my possession)'

Being sensitive to verbal semantics, *ga* is prone to selection as a complement by particular verbs (§6.1.4). It has cognates in several other Songhay languages, and is perhaps derived historically from **gaa* 'body'.

5.9.6 *doo* 'chez, at (the place of)'

The other postposition calling for special commentary is *doo* 'at (the place of)'. It is often used like French *chez* in the specific sense 'at the house of', but it can also mean 'in the presence of (someone)' with no necessary reference to dwellings, and 'in the vicinity of (something)' with nonhuman complement. Examples in (143).

- (143) a. *saa kaa wor too [alhoor-ñaa di doo]*
 time Rel you(Pl) arrive [limestone-mother Def **chez**]
 'when you have arrived in the vicinity of the large limestone block'
- b. *yer o koy [mobil-koy di ye doo]*
 1PlS Impf go [vehicle-boss Def Pl **chez**]
 'We (will) go to the place where the vehicle owners (drivers) are.'

In (143b), the speaker was describing the area in town (a few blocks) where large vehicles are garaged and where spare parts and mechanics can be found.

For more on the semantics, see §11.1.2.

doo is related to an archaic noun stem *-doo* 'place' used as compound final in a few combinations like *kani-doo* 'bedding' (original sense probably 'sleeping place'), and to *doodi* ~ *dooti* 'there' (**doo di*). There is little or no synchronic connection among these forms. The proto-form may have been **dogV* or **doyV* (KS definite singular *dog-oo*, Bamba dialect *doy-aa*).

5.9.7 Postpositions of spatial orientation ('behind', 'facing', etc.)

There are several other, more concrete spatial postpositions. Most of them are just special uses of nouns. Examples in (144).

(144)	<u>form</u>	<u>gloss as postposition</u>	<u>gloss as noun</u>
	<i>banda</i>	'behind, among, beside, during, after'	'back'
	<i>beene</i>	'above, over, on top of'	'top, upstairs, sky'
	<i>čire</i>	'under'	'underside'
	<i>jere</i>	'beside, next to'	'side, part (of whole)'
	<i>jine</i>	'in front of, ahead of'	'front'
	<i>maasu</i>	'inside, amid'	'middle'
	<i>tenje - tanje</i>	'facing (Fr <i>en face de</i>)'	—

tenje is also a verb 'be straight; go straight for; be face to face with'. In upriver Niafunké the form is *tenji*, while KS has verb *tenji - tenje* and complex postposition *tenj-oo ra*. It is possible that this set (**tenjitenje*) has an etymological connection to the noun 'forehead' (Timbuktu *teñe*, Niafunké *tenje*, DjCh *tenje - tenje*, KS dialects *tenje - teña - teñe - teña*).

Examples of these postpositions are in (145).

- (145) a. *yee jow ay kuumu foo [ay banda]*
 1SgSImpf take 1Sg hoe one [1Sg **after**]
 'I take one of my hoes along with me.'
- b. *i-i gum ga [a beene]*
 3PIS-Impf use-as-cover 3SgO [3Sg **above**]
 "They put it (leather hide) on top of it (straw)."
- c. *ni čendu ga ... [a haŋa di čire]*
 2SgS pull 3SgO ... [3Sg ear Def **under**]
 'You have pulled it (hot iron) along ... under its (donkey's) ear.'
- d. *[ay nda ni] o key [čere jere]*
 [1Sg with 2SgO] Impf stand [friend **beside**]
 '[You and I] will stand [beside one another] (=side by side).'
- e. *nda ni key-ndi [a jine] hari*
 if 2SgS stand-Caus [3Sg **in-front**] water
 'if you have set some water in front of it (donkey)'
- f. *hal a ma beer*
 until 3SgS Subju be-big
ka boro foo go hin ka goro [a maasu]
 Inf person one Impf can Inf sit [3Sg **inside**]
 '... so that it (hole) becomes big (enough) so a person can sit inside it.'
- g. *a huu di goo poste tenje*
 3Sg house Def be post-office **facing**
 'His house is across from (=facing) the post office.'

A few of the forms are also common as adverbs without complements (*beene* 'above', *jine* 'in front, ahead').

5.9.8 Quasi-prepositions *jaa* 'since' and *hal* 'until'

The two morphemes *jaa* 'since' and *hal* 'until' are common as clause-initial morphemes, perhaps best analysed as adverbial complementizers (§9.5.6). However, they can also take narrow scope over NPs or adverbs specifying spatial or temporal points. *jaa* is used with the starting point, *hal* with the endpoint. The two forms may be used singly, or together in a *jaa ... , hal ...* parallel structure. Examples of these morphemes with NP or adverbial scope are in (146).

- (146) a. *hal hōō*
until today
 'even today (not just in the past)'
 b. *yer o nan ga [hal alaasar]*
 1Pl Impf leave 3SgO [**until** afternoon]
 'We will leave it until the afternoon (prayer).'
 c. [*jaa alfajar*] *yer o koy kata gi*
 [**since** dawn] 1PlS Impf go bring 3PIO
 'Starting at dawn we go fetch them.'

It is perhaps misleading to describe these morphemes as "prepositions" since they are most common as complementizers with clausal complements. One could argue that cases like 'since dawn' (146c) are reduced from clausal constructions like 'since dawn arrived'.

5.9.9 Prepositions *bilaa* 'without', *bara* or *kala* 'except'

bilaa 'without' (<Arabic) is another morpheme that can be followed by either a clause (in subjunctive form, §9.6.4) or an NP. In the latter case it can be described as a preposition (147).

- (147) *no-o hin ka koy bilaa kupkup wala ndooso?*
 2SgS-Impfcan Inf go **without** machete or pick-ax?
 'Can you go (to get limestone) without a machete blade or a pick-ax?'

One could also reconstruct this as a clausal complement ('without having a machete ...').

bilaa may be followed by a pronoun: *bilaa ey* 'without me', *bilaa ni* 'without you(Sg)'. A third person pronoun takes "3F" form: *bilaa ŋga* 'without him'.

An alternative to simple *bilaa X* is an expanded construction *bilaa nda X* containing *nda* 'with', as in *bilaa nda ey* 'without me'. The disjunction 'without X or Y' is expressed as 'without [X or Y]' using *wala* 'or', as in (147).

bara and (dialectally) *kala* occur with a following NP or NP-like constituent (pronoun, adverbial) X in the sense 'except X'. For examples and analysis see §8.5.3-4.

5.9.10 *game* 'between, among, amidst'

There are two constructions in which *game* occurs. First, it can be a simple postposition with preceding NP (or pronoun), as in (148).

- (148) a. *ay koy-nda kuumu di [fari di game]*
 1SgS go-with hoe Def [field Def amidst]
 'I took the hoe amidst (=into the midst of) the field.'
- b. *njerfu di kaa goo yer game*
 money Def Rel be 1Pl between
 'the money (=debt) that is between us'

The second construction involves an additional reciprocal phrase *nda čere* (§10.2.5-6), literally 'with friend' (i.e., 'with each other, mutually') intervening between the NP and *game*, hence *NP nda čere game*. This overtly reciprocal construction is much more common than the simple *NP game*. The reciprocal form occurs once in (149a) and twice in (149b).

- (149) a. *fahaam-ey, woo daa nga či [[aadama-jje wane]*
 understanding, Dem Emph 2Foc be [[human Poss]
kallasi dij kaa hin ka kallasi ga,
 protection Def] Rel can Inf protect 3SgO,
[[[ganji-ije di yo] nda čere] game]
 [[[forest-child Def Pl] with friend] among]
 'Intelligence_x, it is this_x which is a human's_y protection_z, which_z can protect him(her)_y, among the wild animals.'
- b. *subu di yo kaa jey-jey hayni di yo nda čere game,*
 grass Def Pl Rel Rdp-sprout millet Def Pl with friend among,
no-o jow kuumu no-o filla jafa gi no-o
 2SgS-Impf take hoe 2SgS-Impf repeat cut 3PIO 2SgS-Impf
kow gi, hayni di ye nda čere game
 remove 3PIO, millet Def Pl with friend among
 'The weeds_x that sprout among the millet plants, you(Sg) take a hoe, you slash (the ground around) them_x again, you remove them_x, (from) among the millet plants.'

One might expect the difference between *NP nda čere game* and *NP game* to correlate with the semantic-syntactic presence versus absence of a reciprocal structure. The relevant reciprocal structure would be of the type 'We_x are happy [among ourselves_x] (=together),' where the complement of 'among' is coindexed with a preceding NP such as the sentential subject. A nonreciprocal structure would be of the type 'They sat [among us],' with no coindexation. However, (149a-b) are semantically nonreciprocal constructions, yet show *NP nda čere game* instead of *NP game*, and

the much higher text frequency of *NP nda čere game* suggests that this combination is in the process of generalizing to all contexts.

True reciprocal examples are given in (150). The transcription of the second part of (150a) has been slightly edited to patch up a false start, but this does not affect the point at hand.

- (150) a. *muso kaa na yer či [[yer nda čere] game],*
 like-this Rel Ø 1PIS be [[1Pl with friend] among],
[[yer nda čere] game]
[[1PIS with friend] among]
boro yo goo yer ra kaa či boro bey-nte
 person Pl be 1Pl Loc Rel be person fine
 '... just as we are among ourselves; among ourselves, there are people
 in us (=in our midst) who are excellent people.'
- b. *i čii ga ŋgi-ye nda čere game*
 3PIS discuss 3SgO 3Ref1Pl with friend among
 'They discuss it among themselves.'

In (151), the NP in *NP nda čere game* is the conjunction of two plural pronominals denoting separate groups, hence $[NP_1 + NP_2]$ *nda čere game*. The sense of *game* is nonetheless 'between NP_1 (as a group) and NP_2 (as a group)' rather than 'among the set of members of NP_1 and NP_2 combined'.

- (151) *aywa atakurmi ta yee hongu yer koy nin ŋga dam*
 well Atakurmi Top 1SgSImpf believe God only SFoc put
jejow [[[yer nda gi] nda čere] game]
 barrier [[[1Pl and 3PIO] with friend] among]
 'Well, as for Atakurmi (=dwarf), I think it is God who put a barrier
 between us (=humans) and them (=dwarfs).'

Since the usual sense of *game* is 'between, among', the preceding NP (or pronoun) is normally plural, as in (148b), (149a-b), (150a-b), and (151). Much less commonly, the NP is grammatically singular. In (148a), the fact that the NP is singular ('the field') and is not coindexed with an earlier NP probably forces the use of *NP game* instead of the more common, overtly reciprocal *NP nda čere game*. However, *NP game* can be used with plural NP, such as the 1Pl pronoun in (148b). Combinations like #*ay game* 'among me' with singular human NP were rejected.

5.10 Apposition

5.10.1 Pronouns in apposition to NPs

Consider (152a-b).

- (152) a. *yer tubaabu di yo*
 1Pl white Def Pl
 'us white people'
- b. *wor gundam boro di yo*
 2Pl Goundam person Def Pl
 'you Goundam (a town) people'

Such combinations can be analysed as simple appositional combinations of a pronoun and a full NP. However, we cannot rule out another analysis, namely as possessive phrases ('our whites', 'your Goundam people'). In this view, *yer tubaabu di yo* is simply a reduced variant of the explicitly possessive [*yer wane*] *tubaabu di yo* 'our whites', with Poss *wane*. Informants accepted such explicitly possessive rephrasings. On the frequent omission of this postposition, see §5.2.1.

The Topic marker *ta* is fairly common after the pronoun, as in (153).

- (153) ... *jaa aljumaan han [yer ta tumbutu boro] si fari*
 ... since Friday day [1Pl Top Timbuktu person] ImpfNeg farm
 '... since on Friday(s), we Timbuktu people do not farm (=do farm work).'

Note that the "appositional" noun, like *boro* in (153), can be grammatically singular when it has generic reference, as an alternative to the pattern in (152a-b) where the noun has the same number marking as the preceding pronoun. The apparent independence of number marking on the pronoun and noun in (153) is evidence in favor of a possessive analysis ('our [typical] Timbuktu person').

A possessive analysis would be awkward with a singular pronoun denoting a person. A phrase like '1Sg chief' normally means 'my chief', and allowing it to also have an appositional reading 'I, the chief' would result in considerable confusion. In fact, such juxtapositions do not normally allow appositional readings, unless the noun is a personal name or other noun not ordinarily possessed, as in (154), where (as in some other examples) the original name has been replaced by the linguist's name for reasons of informant confidentiality. For 'I, the chief' see the following section.

- (154) [*ay Jeff*] *rga o har ga*
 [1Sg J] SFoc Impf say 3SgO
 'It is I, Jeff, who am saying it.'

5.10.2 Relative clauses with appositional function

Another common device for expressing (English) appositions, whether or not one of the elements is a pronoun, is a relative-clause construction of the type 'X which is Y' as in (155).

- (155) a. *ni kaa č̣i har di*
 2Sg Rel be male Def
 'you who are the man' (= 'you, namely, the man')
- b. [*ay kaa č̣i amiir di*] *ŋga har ga*
 [1SgS Rel be chief Def] SFoc say 3SgO
 'It was I, who am the chief, that said it.'
- c. *suba kaa č̣i assabdu*
 tomorrow Rel be Saturday
 'tomorrow, which is Saturday' (= 'tomorrow, namely Saturday')

The pronominal type (155a-b) is especially common when a second person pronoun is used in generic function in a context involving multiple referents, whereby the speaker must occasionally clarify which referent is indexed by this pronoun. (155a) was used in a general discussion of wedding rituals, and specifies that 'you' (at this point in the text) denotes the bridegroom.

5.11 Instrumental, comitative, and conjoined NPs

nda is very common as a clause-initial 'if' subordinator in the antecedent clause of a conditional (§9.5.1). However, in the present chapter we are concerned with the syntax and semantics of the sentence-internal phrase type *nda* NP. In the following sections we interpret "NP" broadly to include pronouns and NP-like adverbials, except when (as in §5.11.2) we speak specifically of "full NPs" (i.e., NPs headed by a noun stem).

In the conjunction *X nda Y*, where *X* and *Y* are NPs, the morpheme *nda* appears at first glance to be an operator which handles its left and right conjuncts symmetrically, producing a phrase of the same syntactic type as the conjuncts. In the following two sections we will question the apparent symmetry of *nda*.

The phrase type *nda* NP with a single overt argument NP is also common. It is the basic instrumental phrase, and can also be used as a comitative phrase. It usually functions semantically as part of a VP (see §5.11.3).

As an 'and' conjunction, *nda* is restricted to conjoining syntactic NPs (including pronouns) and NP-like adverbials. To a limited extent, it can also conjoin postpositional phrases involving postpositions with noun-like character, but it does not seem to work with the most highly grammaticalized postpositions and cannot conjoin prepositional phrases (with Instr-Comit *nda* or with *bilaa* 'without', §5.11.6). Furthermore, *nda* cannot be used as an 'and' conjunction linking two verbs, inflected VPs, or clauses. The closest functional equivalent to "conjunction" in such cases is the addition of an infinitival VP beginning in *ka* (§9.7.1, §6.3.2) to a preceding VP. When *nda* is clause-initial, it functions not as an 'and' conjunction, rather as an 'if' conjunction in conditional antecedent clauses (§9.5.1).

An apparent counterexample to the claim that *nda* 'and' is not used to conjoin clauses is (156).

- (156) *i-i* *ŋaa hāyši nda* [*ay si bey hay kaa yo*]
 3PlS-Impf eat dog and [1Sg ImpfNeg know thing Rel Pl]
 'They eat dog and [I don't know what (else)].'

The bracketed phrase in (156) has the form of a clause, but functions semantically and syntactically as an NP (as does its counterpart in the English translation). It is therefore just an NP conjoined to 'dog'.

5.11.1 Conjunction of personal pronouns

That the pattern *X [nda Y]* 'X and Y' is asymmetrical even when X (left conjunct) and Y (right conjunct) are of the same syntactic type is most clearly seen by studying the forms they take when X and Y are personal pronouns. There is a standardized ordering of the pronoun categories along a (grammaticalized) topicality hierarchy, and certain pronominal categories take different forms as left and as right conjuncts.

The ordering of categories normally follows the hierarchy in (157), as seen in (158). Counterexamples with ordering inverted occasionally occur in direct elicitation, probably reflecting interference from French cues, but are unidiomatic and do not occur in texts. Simple 3Sg or 3Pl pronouns never occur as left conjuncts since this is an "exposed" syntactic position forcing replacement of (unmarked) 3Sg by 3SgF and of 3Pl by 3PlF (§8.4.2).

- (157) Hierarchical ordering of pronominal categories in conjunctions with *nda*
 first person > second person > "3F" > {3Sg, 3Pl}

- (158) a. *ay* *nda* *ni*
 1Sg and 2SgO
 'I and you(Sg)'
 b. *yer* *nda* *ga*
 1Pl and 3SgO
 'we and she'
 c. *ni* *nda* *gi*
 2Sg and 3PlO
 'you(Sg) and they'
 d. *ŋga* *nda* *ga*
 3SgF and 3SgO
 'he_x and she_y'

Logophoric pronouns fit somewhat variably into the hierarchy (157), reflecting the fact that a (third person) logophoric pronoun in reported speech represents a first person pronoun in the original speech event ('I am coming' becoming reported-speech 'He_x said he_x (LogoSg) was coming'). See end of §10.1.2 for examples and discussion.

Some subdialects of KS express 'I_x and he_y' as 'we_{xy} and he_y' and so forth, the left conjunct being pluralized to subsume the denotation of the two conjuncts. This

construction does not occur, to my knowledge, in KCh, and combinations like (158a) with singular left conjunct are normal.

From (158c-d) we can see that the right conjuncts take the same form as direct-object pronominals. This is most obvious with 3PIO *gi - ji* and 3SgO *ga*, but all other pronominal right conjuncts are at least compatible with this morphological equation. The left conjunct might then be taken to be associated with subject status. There is some syntactic evidence for this, since expressions like 'he_x and his_x mother' require reflexivization of the possessor pronoun. However, (158d) shows that a 3Sg left conjunct appears as 3SgF *ŋga* rather than as ordinary 3SgS *a*. Left conjuncts are therefore an "exposed" syntactic position in the sense of §3.8.8 and §8.4.2, unlike the usual (proclitic) subject position.

The subject-object asymmetry supports a bracketing [X [*nda* Y]], in which the right conjunct is the immediate complement of *nda*. However, this judgement depends in part on our overall interpretation of the morphosyntactic status of object pronouns, on which see §9.1.1.

In "correct" English we say *he and I went, his and my (=our) house, and you saw him and me*. That is, case is assigned to the pronouns on the basis of their syntactic function in the larger sentence, as in [*you saw him*] and [(*you saw*) *me*]. In colloquial English, on the other hand, freezing of conjoined pronominal forms occurs as the old accusative forms generalize, resulting in e.g. [*him and me*] *went*. However, this is not usually extended to the possessive: ?#[*him and me's*] *house*.

In KCh, pronominal conjunctions are invariable in form and are therefore not sensitive morphologically to surrounding syntax, even when functioning as possessors. Consider (160).

- (159) a. *a* *huu* *di*
 3Sg house Def
 'his house'
- b. #*ga* *huu* *di*
- c. [[*ay* [*nda* *ga*]] *huu* *di*
 [[1Sg [**with** 3SgO]] house Def]
 '[his and my] house'

3SgO *ga* is used in (159c) instead of the usual 3Sg possessive *a*, seen in (159a), since in (159c) the 3Sg pronoun is the right conjunct of *nda* and must therefore take object ("O") form. In an unconjoined 3Sg possessive, *ga* is ungrammatical (159b). This justifies the bracketing in (159c).

An additional consequence of the freezing of pronominal conjunctions is that special clitic dative forms, 1Sg *yene* and 2Sg *mana* (§4.1.5, §5.9.2), cannot be used in conjunctions, as shown in (160).

- (160) a. *a* *čerbu* *ga* *yene*
 3SgS show 3SgO 1SgDat
 'She showed it to me.'

In theory, any such extended string allows for a range of bracketing possibilities as the initial *A* [*nda B*] is expanded. With a third conjunct we could have *A* [*nda* [*B* [*nda C*]]] or [*A* [*nda B*]] *nda C*, depending on whether *Z* is directly conjoined to *Y* or is conjoined to the preceding conjunctive NP as a whole. With a fourth conjunct, as in (162), the possibilities begin to increase exponentially. However, in (162) and in most similar examples, the alternative bracketings have no effect on the truth conditions for the overall sentence.

When a pronoun is conjoined with an NP, the pronoun (which is presumably always more topical) comes first, as in (163-64).

- (163) [*ay* [*nda* [*boro di yo*]]] *si* *kuboy a ra*
 [1Sg [and [person Def Pl]]] ImpfNeg meet 3Sg Loc
 'I and the people don't meet in it.'
- (164) [*ngi-ye* [*nda* [*baana di*]]] *nga o hanga* [*nda čere*]
 [3PIF [and [rain Def]]] SFoc Impf follow [with friend]
 'They (=God's reasons) and the rain follow each other (=are related).'

A pronoun can be conjoined to a WH interrogative stem in the same way (165).

- (165) [*ni* [*nda mey*]]] *nga o wirči?*
 [2Sg [and who?]] SFoc Impf be-sick?
 'You and who (else) are sick?'

In the previous section, we noted that pronoun plus pronoun conjunctions are frozen in form and are not sensitive to surrounding syntax. In the case of pronoun plus full NP, on the other hand, there is (weak) evidence that the pronoun can take a clitic form determined by the surrounding syntax (to its left only). The expression 'it and the floodplain' normally takes the form *nga* [*nda* [*banġu di*]] ('3SgF [and [floodplain Def]]') in isolation, as sentence subject, etc. As usual for left conjuncts, 3SgF *nga* rather than simple 3Sg *a* is required here. However, when this conjoined NP functions as direct object, it seems to be at least marginally possible to replace *nga* by the ordinary 3SgO postverbal clitic form *ga*, as in (166).

- (166) *no-o batu ga nda banġu di*
 2SgS-Impf await 3SgO and floodplain Def
 'You wait for it (millet seedbed) and the flooded area (paddy).'

However, such examples are rare, and their bracketing and semantic structure are unclear. It is possible that a) *nda banġu di* in (166) is an afterthought addition, or that b) it is an independent comitative (rather than conjoined) phrase (see below).

5.11.3 Instrumental and comitative phrases

The common instrumental phrase ('by means of X') is of the type *nda* NP, positioned somewhere after the verb. The complement may be a full (noun-headed) NP or a

pronoun. Occasionally, this construction has comitative function ('along with X'). However, comitative sense is usually expressed either by a postposition *banda* (core sense: 'behind', §5.9.8), or else by fusing *-nda* to the verb as a derivational suffix, giving a transitive structure of the type *VERB-nda ... X* where the direct object *X* may be separated from *-nda* by intervening constituents (§6.2.5). A third, somewhat clumsier alternative to a simple comitative *nda X* is a conjunction including the other associated referent, even if repeated: 'I went there [I and him]' meaning 'I went there with him.' A true, independent comitative constituent of the type *nda X* is therefore fairly rare, but occurs for example when a *VERB-nda* derivative is causativized to *VERB-Caus...[nda X]*, see *kuboy-ndi ... nda ...* 'cause to meet' in (213a) in §6.2.5, below. Our analysis here focuses chiefly on instrumental phrases, though we label *nda* flexibly as "Instr-Comit."

Instrumental phrases differ from superficially identical strings within NP conjunctions (§5.11.1-2) in that instrumentals have no left conjunct NP. Instead, Instr-Comit *nda* phrases expand the VP. They need not immediately follow the verb, and in fact they tend to come at or near the end of the sentences, following any PPs or object NPs that are present. This is because instrumental-comitative phrases often involve "new" information, which is generally positioned at the end of the string of postverbal constituents (§9.1.1). When an instrumental phrase happens to follow an NP, we must be careful to distinguish this sequence from NP conjunctions. Consider the instrumental example (167a). For reference, we include a typical comitative example as (167b), where the *-nda* is suffixed to the verb (and stays there if the direct object NP is extracted, §6.2.5).

- (167) a. *i-i* *haw-haw* *ga* [*nda* *kuuru*]
 3PlS-Impf tie-tie 3SgO [with skin]
 'They tie it up with leather.'
- b. *nda* *n* *kuboy-nda* [*toone-nte* *di*]
 if 2SgS meet-with [aggressive-Partpl Def]
 'if you(Sg) meet with the aggressive one'

If the relevant string in (167a) were a conjunction ('They tie [it and leather]'), we would not normally get the 3SgO pronominal *ga*. Instead, we would get *nga nda kuuru* 'it and skin', beginning with a 3SgF pronoun, which regularly replaces simple 3Sg pronouns in left conjunct position (§8.4.2). When the NP itself is extracted from its position following (unaffixed) *nda*, as in relative clauses and focus constructions, the *nda* remains stranded, usually at the end of the sentence. This is shown in (168), where we use trace notation.

- (168) [*woo yo kul*] *alkaafun* *daa* *na*
 [Dem Pl all] spice Emph Foc
i-i *safari* *gi* [*nda* *t*]
 3PlS-Impf cure 3PlO [with *t*]
 'All those (ailments), it's [*alkaafun* (a spice)]_x [*focus*] which they (people) cure them with *t_x*.'

Disregarding the preposed topic *woo yo kul*, note that *alkaafun* (a spice resembling fennelseed) is fronted as focus; the underlying instrumental phrase is *nda alkaafun* 'with spice'. As the free translation shows, English strands prepositions in a similar way (... *with*). However, KCh postpositions like *Dat se* cannot be stranded in the fashion of *nda*.

Because of their high text frequency, we call attention to combinations involving *mise* 'manner' and its variants, including deictic *musoo* 'this way, like this, thus' and interrogative *mise foo ~ muso foo* 'how?'. In all these adverbial uses, the full form of the phrase is of the type *nda mise ...* ('with manner ...'), plus some further ending or word. This sequence surfaces as such in adverbial phrases like *nda musoo* 'like this, in this way, thus'. However, the NP headed by *mise* is generally fronted, which strands *nda* in postverbal position. An example is (169), where *foo* 'one' in *mise foo* is apparently the numeral 'one' (here under the scope of negation) rather than the homophonous interrogative *foo* 'which?'.

- (169) *[saa di] fari ta [mise foo]_x war na lile-ndi*
 [time Def] field Top [manner one]_x 2PIS Neg prepare-Caus
 ga jinaa [sanda diki woo yo] [nda t_x]
 3SgO before [like dike Dem Pl] [with t_x]
 'So then, (concerning) the field, in no way have you have prepared it
 (field) yet, like those dikes.'

Here the widely separated *mise foo* 'one (=any) manner' and sentence-final *nda* form a single syntactic and semantic constituent, which can be reconstituted logically as *nda [mise foo]*, literally 'with [manner one]'. The NP *mise foo* is fronted by focalization.

Semantically, instrumental-comitative phrases do tend to have a particular association with one other referent mentioned in the sentential core. Instrumentals tend to be strongly associated with agents, representing a device (physical or abstract) which the agent uses to help carry out an action. Comitatives, on the other hand, express a more fluid relationship (association, accompaniment, co-presence) which may apply in principle to an agent, a patient, or other core referent. In practice, instrumentals are overwhelmingly inanimate, while comitatives are overwhelmingly animate. Instrumental phrases with *nda* are very common, while comitative phrases with *nda* are less common, since postposition *banda* 'after' can also be used in a kind of comitative sense (§11.1.2).

5.11.4 *nda* in idioms and adverbial phrases

There are numerous verbs which take a complement consisting of *nda* plus NP, which are best described in connection with verbal syntax and voice categories. In some cases, the *nda* is more or less suffixed to the verb, as in *koy-nda* 'deliver' (<'go with') and *sawa-nda* 'converge with, happen to come together' (<'be-equal with'). See §6.1.6 and §6.2.5 for discussion.

More relevant to this chapter are fixed adverbial phrases in which *nda* has instrumental or comitative force. Examples in (170).

(170)	<u>phrase</u>	<u>literal gloss</u>	<u>free gloss</u>
a.	<i>nda gomni</i>	'with good-fortune'	(greeting)
	<i>nda laafiya</i>	'with peace'	(greeting)
b.	<i>ni nda subu</i>	'you(Sg) and morning'	'good morning!' (greeting)
c.	<i>nda čere</i>	'with friend'	'together, mutually'
d.	<i>nda kuna</i>	'with in(-side)'	'internally'
e.	<i>nda ni bomo</i>	'with your head (=self)'	'by yourself (without help)'
f.	<i>nda a fondo di</i>	'with its road'	'properly, thoroughly'

The forms in (170a) are phrases used in the casual greeting rituals that permeate everyday life. The form in (170b) is an example of another type of greeting keyed to time of day; for *subu* one could substitute *hoy* 'midday' or another time-of-day expression, and for 2Sg *ni* one could substitute 2Pl *war* - *wor* for plural addressee. In (170e), the possessor position (here given as 2Sg) is likewise a variable; the possessed form of 'head' is a compound reflexive pronoun (§10.2.1).

nda is occasionally used with the deictic adverbials *nee* 'here' and *hentu* '(over) there', especially when the adverbial is followed by Approximative *here*, hence *nda nee here* 'around here' (171) and *nda hentu here* 'around there, somewhere over there'.

(171)	<i>korkor</i>	<i>di</i>	<i>ma</i>	<i>si</i>	<i>siiri</i>	[<i>nda nee here</i>]
	crate	Def	Subju	Neg	tilt	[with here around]
	<i>wala</i>	<i>a</i>	<i>ma</i>	<i>si</i>	<i>siiri</i>	[<i>nda nee here</i>]
	or	3SgS	Subju	Neg	tilt	[with here around]
	'The (donkey) crate should not tilt over to here _x , nor tilt over to here _y .'					

The two 'here' locations in (171) are distinct, as the speaker points to two imaginary locations (the two sides of the donkey). *nee here* by itself means '(around) here'. With deictic adverbials, *nda* usually indicates the measured distance from some reference location to the denoted location. This is clearer when both locations are overtly expressed, as in (172).

(172)	<i>a</i>	<i>koy</i>	[<i>nee nda nee</i>]
	3SgS	go	[here and here]
	'He went from here _x to here _y .'		

5.11.5 NP disjunction (*wala* 'or')

The basic disjunctive particle is *wala* 'or' (<Arabic). As with English, it can be exclusive (X or Y but not both) or inclusive (one or both of X and Y). However, the exclusive readings appear to be implied by certain contexts (e.g. where a choice has to be made) rather than inhering in *wala*. Examples are given in (173).

- (173) a. *korkor woo yo či bundu, garboy bundu,*
 crate Dem Pl be wood, wild-date wood,
wala duwey bundu, wala daarey bundu
 or *duwey wood, or jujube wood*
 'Those crates are (made of) wood, either date-palm wood, or *duwey* wood, or jujube wood.'
- b. *no-o hin ka koy bilaa [kupkup wala ndooso]?*
 2SgS-Impf can Inf go without [machete or pick-ax]?
 'Can you go (seeking limestone) without a machete or a pick-ax?'

In (173a) it is difficult to decide whether the reading is exclusive or inclusive. At the collective level, crates are constructed from wood of any of the three spp. mentioned. Individual crates are normally of one or the other, but the assertion would presumably be true even for crates made from mixed pieces of wood. In (173b), the disjunction 'machete or pick-ax' is under the scope of *bilaa* 'without'. Such negative contexts distinctly favor inclusive readings, which in this context are stronger than exclusive readings.

Indications of approximate quantity, expressed with numerals as the two disjuncts, may have *wala* before the second (174a-b) or may run the two together (174c).

- (174) a. *a-hinja wala a-taači*
 Absol-three or Absol-four
 'three or four'
- b. *nda yer duu [woo činne] hinja wala a-taači kul*
 if 1PlS get [Dem peer] three or Absol-four all
yer keydiya
 1Pl rainy-season
 'If we get three or four (rains) like that, our rainy season (will be OK).'
- c. *a-a jow ije guu iddu*
 3SgS-Impf take child five six
 'It takes five or six little pieces.'

In such disjunctions of numerals, the second numeral always takes Absol form. This is transparent in (174a-b), while *iddu* 'six' in (174c) has a zero Absol form (§4.5.1). The first numeral takes the Absol prefix under the same conditions as it would without the disjunction, thus *a-hinja* 'three' in (174a) but simple *hinja* following a noun in (174b).

Phrases with *wala* can be used in catch-all "etcetera" expressions, as in (175). In this case, the denotation of the catch-all expression arguably contains that of the prior expression(s). For *wala* in the emphatic sense 'even...', see §8.5.9.

- (175) *a na či a-a goro ka hantum*
 3SgS Neg be 3SgS-Impf sit Inf write
 [*wala [woo di taka]*]
 [or [Dem Def manner]]
 'It isn't (as though) he sits and writes or that kind of thing.'

5.11.6 Conjunction of adpositional phrases

Conjunction of two postpositional phrases by *nda* 'and' tends to be avoided. If the two PPs have the same postposition, it is usually easy to avoid the undesired construction by directly conjoining the two NP complements under the scope of a single instance of the postposition. Schematically, 'in X and in Y' is reduced to 'in [X and Y]', as typically in English.

However, there are of course situations where the two postpositions are distinct, in which case we can get conjoined PPs, as in (176).

- (176) *kooro yo čindi [[ay jine] [nda [ay banda]]]*
 hyena PI remain [[1Sg in-front] [and [1Sg behind]]]
 'There were hyenas in front of me and behind me.'

In the case of two PPs with *doo* 'at the place of, chez', if the reference is to clearly distinct places rather to a single location, an unreduced conjunction is again possible, as in (177).

- (177) *yer o ŋaa [[ni doo] [nda [ay doo]]]*
 1PlS Impf eat [[2Sg chez] [and [1Sg chez]]]
 'We'll eat at your place and at my place.'

Contrast *[ay nda ni] doo* 'at [my and your] place' implying joint ownership of one home.

Examples like (176-77) are produced somewhat grudgingly by informants in elicitation. The pattern is validated by occasional textual examples, but conjoined PPs appear to be limited to the more "nouny" postpositions, like *jine* and *banda* in (176), basically just special uses of body-part nouns, and *doo* in (177), which very often denotes a home or other place (not just a zone around the reference object). The most highly grammaticalized postpositions are Loc *ra* (and *kuna*), Dat *se*, and *ga* 'on', and I have been unable to elicit conjoined versions of any of them. For example, in (178a-b), the two NPs are directly conjoined under a single postposition. Informants rejected a proposed alternative version of (178a) ending in #... *yene nda mana* 'to me and to you'.

- (178) a. *a-a ta noo ga [[ay na ni] se]*
 3SgS-Impf Top give 3SgO [[1Sg and 2SgO] Dat]
 'She will give it to me and you.'
- b. *yee mey [[ni nda ga] ga] garow*
 1SgSImpf have [[2Sg and 3SgO] on] credit
 'I have a credit with you and him.'

We now consider conjunction of prepositional phrases. Since the conjunction *nda* 'and' and the Instr-Comit preposition *nda* 'with' are syntactically distinguishable, the issue arises whether they can be combined. Consider the translation equivalent of '... [[with X] [and [with Y]]]'. If *nda* 'and' can take instrumental-comitative phrases as its

conjuncts, this would show up as #... *[[nda X] [nda [nda Y]]]* with two adjacent *nda*'s. However, this is ungrammatical. In textual examples where this construction might be expected, we get the surface string ... *nda X nda Y*, as in (179).

- (179) *ni* *ŋga* *o* *koy* *goy* [*nda* [[[*a* *wan* *di* *yo*]
 2Sg SFoc Impf go work [**with** [[[3Sg Poss Def Pl]
nda [*ni* *wan* *di* *yo*]] *kul*]]
and [2Sg Poss Def Pl]] all]]
 'It's you who will go work, both with his (things) and (with) your
 (things).'

The bracketing of such examples is nonobvious and perhaps ambiguous. Clearly the first *nda* (directly after *goy*) is instrumental. In one analysis, following the bracketing shown in (179), this initial *nda* has scope over the following material, which is interpreted as an NP conjunction with a *nda* 'and' linking the two conjuncts. This can be schematized as ... *[nda [X [nda Y]]]*. There is no syntactic or semantic problem with this version. The second analysis takes the second *nda* as another instrumental preposition, parallel to the first *nda*, so that no actual conjunction is recognized. This can be schematized as ... *[nda X] [nda Y]*. This second analysis is also reasonable syntactically and semantically.

To resolve the issue, we need to invoke parallel constructions with *bilaa* 'without' (<Arabic). However, here the data are equivocal, supporting the view that (179) is indeed syntactically ambiguous. On the one hand, we get constructions of the type *bilaa [X wala Y]* 'without X or Y', with disjunctive particle *wala* 'or', supporting the first analysis of (179). An example of this is (173b) in §5.11.5, above. On the other hand, we have a few elicited examples like (180a) showing two parallel *bilaa*'s, exactly parallel to the second analysis of (179). One construction that was rejected was (180b), with *nda* 'and' conjoining two *bilaa* phrases.

- (180) a. *ay* *guna* *ga* [*bilaa* *taam*] [*bilaa* *fuula*]
 1SgS see 3SgO [without shoes] [**without** hat]
 'I saw him without shoes or a hat.'
 b. #*ay* *guna* *ga* [[*bilaa* *taam*] [*nda* [*bilaa* *fuula*]]]
 1SgS see 3SgO [[without shoes] [**and** [**without** hat]]]
 [=180a, but ungrammatical]

The data on Instr-Comit *nda* and *bilaa* 'without' show clearly that such preposition-like phrases cannot be conjoined with *nda* 'and'.

5.12 Locational Phrases and Temporal Phrases

The concept "Locational Phrase" (LP) is useful in discussing certain syntactic-semantic issues, such as the (optional) complement of motion verbs (§11.1.1). An LP may be any of the morphosyntactic entities in (181).

- (181) Locational Phrases
- a noun denoting a location (especially a place name or generic zone)
 - a deictic adverbial
 - a PP denoting a location (especially with *Loc ra* or *kuna*)

One might argue that (181a-b) are simply reduced forms of PPs.

In (182) we give examples of LPs as complements of motion verbs (see §11.1.3).

(182a) has a place name, (182b-c) show simple nouns denoting generic zones, (182d-e) illustrate demonstratives 'here' and 'there', and (182f-g) contain PPs with *doo* 'at (the place of)' and *Loc ra*.

- (182) a. *ay koy tumbutu*
 1SgS go **Timbuktu**
 'I went to Timbuktu.'
- b. *ni fatta ganji*
 2SgS exit **wilderness**
 'You emerged from the wilderness.'
- c. *no-o koy yoobu*
 2SgS go **market**
 'You (will) go to market.'
- d. *farru foo woo daa kaa hun nee ka koy ...*
 clearing one Dem Emph Rel leave **here** Inf go ...
 'this very same clearing which starts here and goes (extends) to ...'
- e. *yee koy doodi*
 1SgSImpf go **there**
 'I (will) go there.'
- f. *yer o koy [mobil-koy di ye doo]*
 1PlS Impf go [vehicle-boss Def Pl **chez**]
 'We go to the house of the vehicle owners.'
- g. *ay fatta [bargu woo ra] yee koy [yer doo]*
 1SgS exit [paddy Dem Loc] 1SgSImpf go [1Pl **chez**]
 'I left the paddy to go (back) to our (=my) home.'

The generic-zone type seen in (182b-c) involves a simple noun functioning adverbially. The abbreviated pattern occurs chiefly with a small set of nouns. In addition to 'wilderness' and 'market' we may mention *koyra* 'town' and *hoo* 'home'. The construction is like that in English *He went home (downtown, to market)*. Possible further examples are *fari* 'field; do manual farm work' and *hoo* 'hunt', as in *koy fari* 'go to the field(s)' and *koy hoo* 'go hunting'. However, *fari* and *hoo* can also be used as verbs ('do manual farm work' and 'hunt'), and with *koy* 'go' it is possible to construe them either as nouns or verbs.

Although generic-zone nouns like *ganji* 'wilderness' in (182b) function as spatial adverbials, like Locative PPs, replacing them by overt PPs can give a more specific spatial nuance and treats the reference location as an object rather than as an activity zone. Compare (183a) with simple *hoo* 'home', and (183b) with Locative PP *hoo di ra*.

- (183) a. *ay too huu*
 1SgS attain **house**
 'I arrived home.'
- b. *ay too huu di ra*
 1SgS attain **house Def Loc**
 'I arrived in the house.'

Valid use of (183b) requires entry into the house, while (183a) could simply mean that the agent reached its outer grounds.

The concept of "Temporal Phrase" (TP) I have in mind is parallel to that of Locational Phrase just described. As in other languages, many temporal expressions are parasitic on locationals. Representative TPs are *moreyda (čiino)* '(right) now', *manna* 'last year', and the PP *jiggar di banda* 'after the holiday'. TPs do not commonly function as required complements of particular verbs, but a TP is the typical complement, for example, of *jaa* 'since' and *hal* 'until' (§5.9.8, §11.1.5, §9.5.6).

Chapter 6 Verbal voice and verb derivation

6.1 Subcategorization for objects and adpositional phrases

6.1.1 Verbs, quasi-verbs, and the referentiality of subject NPs

Sentences with ordinary verbs contain at least the syntactic core shown in (184).

(184) (referential) subject NP - MAN morphemes - verb

The MAN (mood-aspect-negation) block contains from zero to two morphemes, zero being interpreted as perfective aspect, indicative mood, and positive (=absence of negation). The nonzero MAN morphemes are described in chapter 7. An example illustrating (184) is (185), whose MAN morpheme is Impf (imperfective).

(185) [*har* *di*] *o* *koy*
 [man Def] **Impf** go
 ‘The man will go.’

There are a few types of predication which appear to diverge from (184). The main culprits are copula-like elements which do not permit a preceding referential subject NP, do not allow separate MAN morphemes, or both. We will refer to any such defective predicator as a “quasi-verb,” but each type has its own particular pattern of defectivity.

Locational quasi-verbs *goo* ‘be’ and its negative counterpart *sii* ‘not be, be absent’ are usually followed by a Locational Phrase (§5.12), but do not co-occur with preceding MAN morphemes. Arguably they are themselves just stressed versions of MAN morphemes, Impf *o* ~ *go* and its negation ImpfNeg *si*. In this analysis, the deviation from structure (184) is not the absence of an MAN slot, rather the absence of a verb. See §7.1.2 for detailed discussion and examples.

Two quasi-verbs have copula-like functions. One is equational *či*, which occurs in the construction *X či Y* ‘X is (a) Y.’ *či* is not far from being a regular transitive verb, but there are some restrictions on its combination with MAN morphemes. The second construction is of the type *Y nono* ‘it is (a) Y,’ with implied but unexpressed referential “subject” NP. *nono* is incompatible with MAN marking and there are some difficulties in modeling the syntax of this construction. See §7.1.1 for details on *či* and *nono*.

There is another similar verb, *bara* ‘exist, be’. In copular and existential functions, it is essentially a regular verb and can be accommodated by schema (184). However, there is another *bara* construction where it is arguably another defective quasi-verb. Here *bara* occurs sentence-initially, followed either by a subjunctive clause in obligational sense ‘must’ (*bara [X ma koy]* = ‘X must go’), or less often by an

indicative complement. In both the subjunctive and indicative types, one could argue that *bara* is an impersonal predicative element that requires a clausal complement but does not itself co-occur with either a subject NP or preceding MAN markers. For detailed discussion and examples of *bara* see §7.1.3. The clause-initial complementizer *bara* ‘since ... , because ...’ (§9.5.7) has no verb-like formal traits (referential subject, MAN marking).

This completes our brief survey of “quasi-verbs” which depart in some way from the canonical clause structure (184) while possessing some attributes of verbs. Only in the cases of the one-place copula *nono* and the clause-initial impersonal *bara* do we appear to have systematic absence of a referential subject NP. It remains to consider whether any verbs, perhaps weather verbs or the like, have expletive (overt but nonreferential) 3Sg subjects, like *it* in *it is raining*. I know of no clear cases of expletive subjects in KCh. ‘It is raining,’ for example, is expressed as ‘the rain is striking’ (*baana di o kar*), and other verbs of weather or other ambient circumstance likewise have referential subjects; see §11.2.

For one verb, *gar* ‘find’, a case can be made for a 3Sg expletive subject in one construction roughly translatable as ‘it happens (happened) to be the case that ...’, but I do not favor this interpretation. Consider (186).

- (186) *nda a gar [yee ta hambur],*
 if 3SgS find [1SgSImpf Fut fear],
ay si bere ka yee moo
 1Sg ImpfNeg turn Inf return also
 ‘If it had happened that I was afraid, I wouldn’t have turned to go
 back.’
 (or: ‘Had I been afraid, ...’)

Literally this construction is of the type ‘3Sg found (that) X,’ where X is a clause expressing some state of affairs. However, the ‘it’ in the free English translation of (186) is arguably coindexed with the (extraposed) clause ‘that I was afraid’, rather than being a nonreferential expletive. In KCh, I think that 3SgS *a* in (186) is referential, but in another fashion, denoting a state of affairs established by the immediately prior discourse. I would paraphrase (186) then as ‘if it (=situation) had found that I was afraid, ...’ Compare sentences like *Last winter found me in Brazil*, occasionally used in English, and more idiomatic in KCh. Of course, this analysis motivates the use of the verb ‘find’. The ‘find’ construction can be used in a similar sense with obviously referential subjects, as in (187).

- (187) *nda ay gar [haya goo a ra]*
 if 1SgS find [thing be 3Sg Loc]
 ‘if I find that there is something in it (=limestone)’

In (188), where we expect two contrasting impersonal *a gar ...* clauses, the second switches from the plain 3SgS *a* to a demonstrative with Topic marking.

- (188) *a-a gar ay fatta,*
 3SgS-Impf find 1SgS exit,
woo bine o gar ŋgi ta na tun
 Dem Top Impf find 3PIF Top Neg arise
 'It happens that I've left, whereas it happens that they have not yet arisen.'

More literally: 'It (=my situation in the field) finds that I have left, (while) this (=their situation in the town) finds that they have not (yet) gotten up.' A free context fleshed out with contextual information: 'I have done my work in the field and gone home before they have even gotten out of bed.' The fact that the second clause begins with the contrastive *woo bine* 'as for that' rather than the same 3SgS *a* seen in the first clause is a further indication that the subject of *gar* is referential even when it denotes a situation rather than a concrete entity.

For a *gar* in antecedent clauses in counterfactual conditionals, see §9.5.1.

There is one further construction, used in proverb-like generalizations, which lacks a verb and MAN marking. The structure is of the type '[every X] and its_x Y' and means 'every X has its own (unique) Y.' An example is (189); compare Spanish *en cada tierra su uso*.

- (189) [*ganda foo kul*] *nda ŋgu kani di*
 [country one all] and 3ReflSg custom Def
 'Every country has its own (unique) custom.'

However, occasionally a fuller form with final identificational quasi-verb *nono* is attested, as in (190). So type (189) is best analysed as a truncated form of a *nono* construction.

- (190) [[*boro foo kul*] *nda [ŋgu neere taka di]] nono*
 [[person one all] and [3ReflSg selling manner Def]] it-is
 'Everyone has his own (unique) manner of selling.'

6.1.2 Underived simple intransitives

Intransitive verbs are those that characteristically occur with a subject NP but no direct object. We temporarily set aside certain verbs with other types of complement (postpositional phrases, instrumental-comitative phrases), discussed in other sections below. Examples of intransitives with no obligatory complements of any type are *meer* 'be ugly', *herey* 'be hungry', *horon* '(food) be bitter; (person) be in pain', *goro* 'sit', *bun* 'die', *jur* 'run', and *čangu* '(hen) squawk'. These verbs range from enduring adjectival qualities to abrupt events or actions.

Expressions of bodily experience ('I am hungry,' 'I feel cold,' 'I feel sad') show up as simple intransitives ('I hunger'), transitives ('hunger afflicts me'), or as existential-locational ('hunger is on me'). In some cases the same stem occurs in all of these frames.

For cases where the intransitive use of a verb is arguably derived from a lexical transitive, see §6.2.1 (zero derivation) and §6.2.3 (Mediop suffix *-ndi*).

6.1.3 Underived simple transitives

Lexical transitives include the usual agentive verbs of impact, production, and treatment ('hit', 'cut', 'break', 'tie', 'make', 'cook', 'treat medically'). The syntax is exemplified in (191).

- (191) *yer* *o* *kar* *gi*
 1PIS Impf hit 3PIO
 'We will hit them.'

A sample of other lexical transitives, hinting at the semantic types involved: *guna* 'see', *jisi* 'put down, set', *duu* 'get, obtain, get, earn', *hin* 'master, overcome', *too* 'reach, attain', *garsaka - gassaka* 'detest (person)', *jaabi* 'answer (person)', *kakow* 'dispute with, challenge verbally', *kallasi* '(God) protect (person)', *kate - kata* 'bring, fetch', and *kuboy - kubey* 'meet, encounter'.

As this array suggests, two-argument event types of many kinds are structured as simple transitives, with the more agentive or animate argument as subject. For example, perception verbs like *guna* 'see' are simple transitives. *kallasi* 'protect' is one of a number of stems, generally used in oaths, for which *yerkoy* 'God' is the usual subject.

Transitives which regularly have inanimate subjects operating on animate objects are rare, given the strong preference for animate subjects. However, when the "inanimate" referent is represented as an active agent, we can get such structures. The clearest cases involve diseases and similar afflictions, which can be expressed in the form 'X afflict Y' where X = affliction and Y = victim. The usual KCh verbs in this type of expression are *duu* 'get' and *din* 'take, seize', as in (192).

- (192) a. *maa* *nga* *duu* *ni* ?
 what? SFoc get 2SgO
 'What (disease, etc.) [focus] has afflicted you?'
 b. *čeeŋe* *nga* *din* *ga*
 fever 2Foc take 3SgO
 'The fever (=malaria) [focus] has afflicted her.'

A handful of transitive verbs require that the direct object be coindexed with the subject. For discussion of such "reflexive verbs" see §10.2.3.

Inspection of texts may suggest incorrectly that motion verbs such as *koy* 'go' and *hun* 'leave (depart)' are simple transitives. Typical VPs are *koy yoobu* 'go to (the) market' and *hun bamako* 'leave Bamako'. However, the postverbal NPs here cannot be replaced by e.g. 3SgO *ga*, as in #*koy ga* 'go to it'. Further analysis suggests that the NPs here function syntactically as LPs (Locational Phrases, §5.12). In effect, they function as PPs minus the relevant postposition (usually *Loc*)—an omission that is

common enough with place names and generic locationals like 'market'. Overt PPs are also attested as complements of these verbs, as in (193). However, the motion verb *too* 'arrive' (also 'attain, reach') can be a true transitive.

- (193) *jonkoto* *o* *hun* [*hari* *ra*]
lungfish Impf leave [water Loc]
'The lungfish left (=emerged from) the water.'

6.1.4 Ditransitives and other verbs with dative

The prototypical ditransitives taking both a direct object and a dative postpositional phrase are *noo* 'give', *čerbu* 'show', and *har* 'say'. The recipient of the gift, demonstration, or information is dative. Examples in (194).

- (194) a. *i* *noo* *ga* [*yer* *se*]
3PlS give 3SgO [1Pl Dat]
'They gave it to us.'
- b. *ay* *har* *ga* [*i* *se*]
1SgS say 3SgO [3Pl Dat]
'I said it to them.'
- c. *ay* *har* [*i* *se*] '...'
1SgS say [3Pl Dat] '...'
'I said to them, " ... "' (with quotation)
- d. *a* *čerbu* *ga* *yene*
3SgS show 3SgO 1SgDat
'She showed it to me.'

For *noo* 'give' and to a lesser extent *čerbu* 'show', an alternative construction involving two "direct object" NPs is possible if the recipient is a first or second person pronoun. This alternative construction is regular with 1Sg or 2Sg recipient. See §9.1.2 for discussion and examples. To my knowledge, no other verb allows this double-object construction.

Other verbs which commonly take both a direct object "O" and a dative "D" are *bini* 'importune O (person) for D (commodity)', *sufur* 'rent O to D', *hii* 'lend O to D', and *neere* 'sell O to D'. *sufur* and *hii* are also used in a different case frame, with direct object and a PP with *ga* 'by, from', to represent these transactions from the perspective of the renter or borrower. Compare (195a) with (195b).

- (195) a. *a* *sufur* *yene* *mobil*
3SgS rent 1SgDat vehicle
'He rented me a car.'
- b. *ay* *sufur* [*a* *ga*] *mobil*
1SgS rent [3Sg from] car
'I rented a car from him.'

neere 'sell' has the syntax of (195a). The counterpart from the purchaser's perspective is expressed by *dey* 'buy' with the syntax of (195b).

A handful of verbs involving complex interpersonal actions relations regularly take a Dat object "D" but no direct object. These include *gaara* 'bless D' and *hinje* 'pardon D'.

In addition to verbs which more or less require a dative indirect object, there are of course many others which can be optionally expanded by adding a dative PP to the basic case frame. Indeed, almost any action verb can be extended with a dative phrase in the sense 'for the benefit of D'. Some intransitives which take optional dative complements rather more often are those in (196).

(196)	<u>verb</u>	<u>intransitive gloss</u>	<u>gloss with Dat</u> (D = Dat)
	<i>guma</i>	'be affordable'	'be beneficial to D'
	<i>kaan</i>	'be sweet, nice'	'be pleasing to D'
	<i>n̄ama</i>	'be angry'	'be angry at D'
	<i>kaan</i>	'be sweet, nice'	'be pleasing to D'

A transitive verb with an interesting dative extension is *bey* 'know' in (197).

(197)	<i>yee</i>	<i>bey</i>	<i>ga</i>	<i>mana</i>
	1SgSImpf	know	3SgO	2SgDat
	'I am grateful to you.'			

This is literally 'I know it [for you].'

6.1.5 Verbs with postpositional complements (*ga*, Locatives)

Certain intransitive verbs commonly or obligatorily take postpositional phrases with *ga* 'by, from, out of' (§5.9.5, §11.1.2).

In the preceding section, we noted that *dey* 'buy', and the verbs meaning 'rent', 'lend' when phrased from the viewpoint of the renter or borrower, take a direct object and a *ga* PP. Some intransitives which often take *ga* complements are listed in (198), indicating their meaning with *ga* and (if they also occur without *ga*) their simple intransitive sense.

The three 'be angry' verbs in (198) less commonly take Dat instead of *ga* complement.

Notably absent from (198) is *hun* 'leave, depart from (location)'. The ablative force is built into the verb, which takes a Loc PP or other Locational Phrase (§11.1.2-3).

(198)	<u>verb</u>	<u>intransitive gloss</u>	<u>gloss with ga</u> (G = NP with <i>ga</i>)
	<i>dukur</i>	'be angry'	'be angry at G'
	<i>gaba</i>	—	'hold onto G'
	<i>hottu</i>	'(thing) be hot, spicy'	'(situation) be hard on G'
	<i>jeesi</i>	'tilt, lean over'	'lean on G, fall over on G'
	<i>kam</i>	'fall'	'attack G, descend in attack on G'
	<i>kaari</i>	—	'wait for G'
	<i>key</i>	'stand, stop'	'settle on G, be ready for G'
	<i>kula</i>	'(not) give a damn'	'(not) care (=give a damn) about G'
	<i>lafa</i>	—	'be right next to G'
	<i>lagara</i>	—	'stick (adhere) to G'
	<i>ñama</i>	'be angry'	'be angry at G'
	<i>sika</i>	—	'suspect G, have doubts about G'
	<i>susum</i>	—	'move away from G'
	<i>waasu</i>	'boil'	'be angry at G'
	<i>yaafa</i>	—	'(God) forgive G'
	<i>yangara</i>	—	'outsmart G, exploit G (= person)'

Certain verbs commonly take locational phrases (LPs) as complements. Among the common LPs are adverbs or PPs with Loc *ra* or *kuna*. *hirow* - *hurow* 'enter' and *fatta* 'exit' regularly take LPs, as in (199).

(199)	a.	<i>ay</i>	<i>fatta</i>	[<i>bargu</i>	<i>woo</i>	<i>ra</i>]
		1SgS	exit	[floodplain	Dem	Loc]
				'I exited that (rice) field.'		
	b.	<i>yee</i>	<i>hirow</i>	[<i>a</i>	<i>ra</i>]	
		1SgSImpf	enter	[3Sg	Loc]	
				'I enter it.'		

Stance verbs like *goro* 'sit', and especially the locational quasi-verbs *goo* 'be' and *sii* 'not be' (§7.1.2), are often little more than semantically "light verbs" fleshing out an LP which is the main point of the predication. The transitive equivalent of *goo* is *dam* 'do, make', which translates as 'put' in combination with a locational like *doodi* 'there', see (200).

(200)	a.	<i>ay</i>	<i>dam</i>	<i>ga</i>	
		1SgS	make	3SgO	
				'I did it; I made it.'	
	b.	<i>ay</i>	<i>dam</i>	<i>ga</i>	<i>doodi</i>
		1SgS	put	3SgO	there
				'I put it there.'	

nimsi 'regret' can take as complement either an LP or an instrumental-comitative phrase with *nda*.

6.1.6 Verbs with instrumental-comitative complements (*nda*)

A number of verbs commonly co-occur with instrumental-comitative complements consisting of *nda* and a following NP (§5.11). In §6.2.5, below, we consider cases where *nda* is fused to the verb, creating a derived transitive verb. In the present section we examine cases where the *nda* phrase need not be adjacent to the verb, or where the meaning of the VP is transparently compositional. The distinction between these ... VERB ... [*nda* X] constructions and the derivational fusions of the type ... VERB-*nda* ... X discussed in §6.2.5 may be gradient. Verbs occurring in the former construction are listed in (201); in the glosses, O = direct object and I = Instr-Comit (*nda*) object.

(201)	<u>verb</u>	<u>gloss w.o. <i>nda</i></u>	<u>gloss w. <i>nda</i></u>
a.	<i>baar</i>	'swap (two things)'	'swap O for I'
	<i>waafaku</i>	'(two persons) agree'	'(person) agree with I (=person)'
b.	<i>bisa</i>	'go past, continue on'	'surpass I, be ___-er than I'
c.	<i>baa-ndi</i>	—	'prefer O to I'
	<i>bere</i>	'change, flip' (intr.)	'turn into (=become) I'
	<i>goro</i>	'sit'	'expect I'
	<i>hãã</i>	'ask (inquire of) O'	'1) ask O about I'
	"	"	'2) ask O for I (=thing)'
	<i>huga</i>	—	'work intensely at I (e.g., job)'
	<i>kaalafu</i>	—	'dispute with I, contradict I'
	<i>kokoro</i>	'be recent, be last'	'end up with I'
	<i>seede-terey</i>	'bear witness'	'bear witness to I (=event)'
	<i>waay</i>	'espy' (with <i>ga</i>)	'become aware of I'
	<i>ton</i>	'be full'	'be full of I'

In (201a), the variant with *nda* complement is more precise than the simple variant, which lumps two entities into a single grammatical relation. In (201b), *bisa* is usually combined serially with another verb to generate the basic comparative construction (see §9.7.8). In (201c), the more common sense for the /hãã/ construction is 'ask O about I', illustrated in (202a), while the sense 'ask O for I' is more reliably expressed by a different construction with the object role expressed as a PP with *ga* (202b).

(202)	a.	<i>ay</i>	<i>hãã</i>	<i>ga</i>	[<i>nda</i>	<i>baana</i>]
		1SgS	ask	3SgO	[with	rain]
		'I asked her about rain.'				
	b.	<i>maa</i>	<i>na</i>	<i>n</i>	<i>hãã</i>	[Jeff <i>ga</i>]
		what?	Foc	2SgS	ask	[J on]
		'What _x did you ask Jeff for <i>t_x</i> ?''				

6.1.7 Cognate objects

Both intransitive and transitive verbs occasionally occur with a cognate object, i.e., a suffixed or zero-derived nominalization of the same verb stem. This construction typically has special rhetorical functions. The cognate object is often focalized or relativized. Examples in (203).

- (203) a. *koy di kaa ay koy*
going Def Rel 1SgS **go**
 'the going that I went' (i.e., 'with all my traveling')
- b. *koosu na i-i koosu war*
slaughtering Foc 3PlS-Impf **slaughter** 2PlO
 'a slaughtering [*focus*] is what they slaughter you'

(203b) refers to unscrupulous merchants: 'They'll skin you alive (with high prices).'

6.2 Derived voice forms

6.2.1 Zero derivation (simple verbs with variable valency)

Here we discuss cases where the same verb stem is used with variable valency. In §4.3.2 we discussed similar cases where a stem may be used as a verb or noun without derivational affixes. Subsequent sections will describe overt morphological derivations which change valency.

In (204), S and O stand for the referents functioning as subject and direct object, respectively, in the transitive case.

- | (204) | <u>verb</u> | <u>intransitive gloss</u> | <u>transitive gloss</u> (O = direct object) |
|-------|---------------|------------------------------|---|
| a. | <i>bere</i> | 'O change; flip' [intr] | 'S flip O' |
| | <i>feer</i> | 'O be open' | 'S open O' |
| | <i>fombu</i> | 'O (nuts) be cracked, hatch' | 'S crack O (nuts)' |
| b. | <i>fur</i> | 'O be released, be let go' | 'S release, drop, abandon O' |
| | <i>neere</i> | 'O be for sale' | 'S sell O' |
| c. | <i>fuuney</i> | 'S search, do a search' | 'S search through O, examine O' |
| | <i>ŋaarey</i> | 'S beg' | 'S beg from O, live off of O' |
| | <i>ñin</i> | 'S drink' | 'S drink O' |
| d. | <i>kaa</i> | 'S come' | 'S become (turn into) O' |

In (204a-b), the grammatical subject of the intransitive corresponds to the direct object of the transitive. In (204a), the intransitive events or states can occur in the absence of an external agent, so we might argue that the transitive usage is the semantic factitive-causative of the intransitive. On the other hand, in (204b) the intransitive events or states strongly imply the presence of an (unexpressed) agent, so

we could argue that here the intransitive usage is a semantic passive based on the transitive. In (204c), the intransitive omits the direct object of the transitive, so the intransitive can be thought of as a kind of antipassive.

In (204d), the connection between 'come' and 'become' is less transparent, but English *come to be*, and the use of motion verbs to mean 'become' in many other languages (Fr. *devenir*, Spanish *volverse*), makes the connection more reasonable. KCh *kaa* 'become' is formally a transitive verb, and the direct object can be a pronoun like 3SgO *ga*, as in (205).

- (205) *ay* *kaa* *ga*
 1SgS **become** 3SgO
 'I became it.'

6.2.2 Factitive-Causative *-ndi*

In the previous section we showed that some verbs can change valency (argument structure) without altering their own form. However, most valency changes involving addition or suppression of an argument NP are encoded morphologically on the verb. The suffix *-ndi* is used both to mark the addition of an argument NP, as in the Fact-Caus (this section), and to mark the suppression of an argument NP, as in the Mediop[assive] (following section). The phonology of both *-ndi* suffixes is generally regular; for minor irregularities in stem shapes, see §3.8.6.

I use the label "Fact[itive]" when the underlying intransitive eventuality is an adjectival state (206a), and "Caus[ative]" when the eventuality is an action, whether intransitive (206b) or transitive (206c). The distinction is not important morphologically in KCh.

(206)	<u>stem</u>	<u>gloss</u>	<u>Fact-Caus</u>	<u>gloss</u>	<u>function</u>
a.	<i>beer</i>	'be big'	<i>beer-ndi</i>	'magnify, honor'	Fact
	<i>čiina</i>	'be small, few'	<i>čiina-ndi</i>	'make small'	Fact
	<i>čirey</i>	'be red'	<i>čirey-ndi</i>	'make red'	Fact
b.	<i>čow</i>	'read, study'	<i>čow-ndi</i>	'educate, teach'	Caus
	<i>derey</i>	'be lost'	<i>derey-ndi</i>	'lose, waste'	Caus
	<i>dira</i>	'walk, travel'	<i>dira-ndi</i>	'cause to walk'	Caus
c.	<i>bey</i>	'know' [tr]	<i>bey-ndi</i>	'instruct, inform'	Caus
	<i>ŋaa</i>	'eat' [tr]	<i>ŋaa-ndi</i>	'feed, let eat'	Caus
	<i>tenje</i>	'face' [tr]	<i>tenje-ndi</i>	'orient (in a direction)'	Caus
	<i>ñin</i>	'drink' [tr]	<i>ñin-ndi</i>	'moisten, sprinkle on'	Caus

With transitive input (206c), we might expect the *-ndi* form to be doubly transitive, as in 'Y eat Z' → 'X cause Y to eat Z.' In fact, these *-ndi* forms commonly appear in texts as simple transitives with the lower subject Y surfacing (as direct object) and the lower object Z omitted. However, it is possible (and semantically reasonable) to specify both Y and Z. Z is generally expressed either as an instrumental

phrase with *nda*, as typically with *n̄in-ndi* ‘let drink, sprinkle, irrigate’ (207a), or as an unmarked NP following Y, as typically with *ḡaa-ndi* ‘feed’ (207b) and *bey-ndi* ‘let know, inform’ (207c). (207c) shows extraction (fronting) of Y to become the clause-initial interrogative ‘what?’.

- (207) a. *ay n̄in-ndi ga [nda hari]*
 1SgS drink-Caus 3SgO [with water]
 ‘I let him drink some water’ (or: ‘I irrigated it [earth] with water’)
- b. *ay ḡaa-ndi gi bita*
 1SgS eat-Caus 3PIO porridge
 ‘I fed her some porridge’
- c. *maa na n bey-ndi ga ?*
 what? Foc 2SgS know-Caus 3SgO ?
 ‘What_x did you teach her (=inform her of) t_x ?’

Causative *-ndi* forms from input transitives are generally homophonous to mediopassive *-ndi* derivatives from the same verbs. An example is *ḡaa-ndi* ‘be eaten, be edible’.

In cases where the simple stem has variable valency (§6.2.1), some care is needed in identifying the valency value of the input to the *-ndi* derivative. Consider *daabu-ndi* ‘cover (put a cover on), dress’. The simple stem *daabu* can be intransitive ‘be covered, closed’ or transitive ‘cover, enclose’. It would seem in this case that the intransitive valency value is the input to the causative derivation.

An alternative way to express a causative sense is to embed a clause under *kate* ‘bring’, in the sense ‘bring it about that ...’. This analytic construction allows the embedded clause to retain its grammatical categories, such as negation, which are lost in the morphological factitive-causative derivation. See (548) in §9.6.1.

6.2.3 Mediopassive *-ndi*

By Mediop[assive] is meant an agentless detransitivized verb with no expressed agent. There is normally an implied agent in the sense that the event (‘be sold’, ‘be seen’) cannot be accomplished without an external agent. As noted in the preceding section, the suffix *-ndi* is used for this valency-reducing function (with lexical transitives), as well as for valency-increasing factitive-causative function (with lexical intransitives and a few weak transitives). Some Mediop examples are in (208), below.

Mediop *-ndi* covers the full aspectual range: individual event (‘the tea will be poured now’), resultative (‘the gift has been given’), and potential (‘the mountain is visible’). Correspondingly, the suppression of the agent may be due to mystery (‘my wallet was stolen’), to obviousness or irrelevance (‘the tea has been poured’), or to genericness (‘the mountain is visible’). The potential reading with generic agent is most common with negation, as in (209).

(208)	<u>stem</u>	<u>gloss</u>	<u>Mediop</u>	<u>gloss</u>
a.	<i>dey</i>	'buy'	<i>dey-ndi</i>	'be bought, for sale'
	<i>dookorey</i>	'd disdain'	<i>dookorey-ndi</i>	'be disdained'
	<i>duu</i>	'get, earn'	<i>duu-ndi</i>	'be obtained, available'
	<i>gar</i>	'find'	<i>gar-ndi</i>	'be found, located'
	<i>guna</i>	'see'	<i>guna-ndi</i>	'be seen, be visible'
	<i>hīsa</i>	'make, fix'	<i>hīsa-ndi</i>	'be fixed'
	<i>jow</i>	'take away'	<i>jow-ndi</i>	'be taken (e.g. stolen)'
	<i>soo</i>	'pour'	<i>soo-ndi</i>	'be poured (decanted)'
	<i>tibi</i>	'put on (stove)'	<i>tibi-ndi</i>	'be put on (stove)'
b.	<i>har</i>	'say'	<i>har-ndi</i>	'be said, sayable'
	<i>noo</i>	'give'	<i>noo-ndi</i>	'(gift) be given'
(209)	[<i>woo</i>	<i>di]</i>	<i>si</i>	<i>har-ndi</i>
	[Dem	Def]	ImpfNeg	say-Mediop
	'That isn't said.'			

With ditransitive simple stem (208b), the subject of the mediopassive normally corresponds to the direct (not dative) object of the simple stem.

6.2.4 Minor uses of *-ndi*

In a few cases, a segmentable *-ndi* functions neither as factitive-causative nor as mediopassive.

In one case, *-ndi* acts as a denominal verbalizer: *čiwsi* – *čipsi* 'sacrificial ram' (<Ar.), *čiwsi-ndi* 'slaughter (sacrificial ram)'.
čerbu 'show' (cf. §6.1.4) and *čerbu-ndi* 'demonstrate, explain' are both ditransitives. *čerbu* is preferred when a physical entity is shown (ostension), while *čerbu-ndi* is preferred when an abstract matter is explained verbally.

From *čii* 'speak' (intransitive or transitive) we get regular mediopassive *čii-ndi* 'be said', pronounced [tʃi(:)ndi] with vowel length unreliably expressed (§3.7.9). The very common verb *čindi* 'remain, keep (doing)' is perhaps historically related to the equational copula *či* 'be', but both are intransitive.

In addition to these grammatically unusual verbal examples, there are a few cases where *-ndi* occurs in a derived noun. *bita* is the term for 'millet porridge' (a staple food), while *bita-ndi* denotes another type of porridge made from millet pudding (local Fr. *tô*). In two cases, the noun is probably a zero nominalization (§4.3.2) of a verbal derivative with *-ndi*. These are *noo-ndi* 'gift' (homophonous with mediopassive *noo-ndi* 'be given') and *waasu-ndi* 'dish made with boiled meat' (homophonous with causative *waasu-ndi* 'bring to a boil').

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The noun *faraandi* means 'quarter (section of city)'. The form suggests *faraa* 'fatigue' (noun) or 'be tired' and its causative *faraa-ndi* 'bother, weary', but there is no obvious semantic link.

6.2.5 Suffixation of *-nda* to verb stem

In §6.1.6 we discussed verbs which commonly take an instrumental-comitative complement (*nda* 'with' plus NP), perhaps separated from the verb by an intervening constituent. There are also some combinations where the *-nda* seems to act as a suffix on the verb, creating a derived transitive. The two constructions can be schematized as in (210a-b).

- (210) a. [subject NP] V ... [*nda* [NP]]
 b. [subject NP] V-*nda* ... [NP]

There is no clearly audible difference between (210a) and (210b) when no other constituents intervene, but when there is such an intervening constituent the distinction is clear. It is probable that the type (210b) is historically derived from (210a) by redrawing of word boundaries. (210b) is typical of comitative function ('along with, together with'), whereas the instrumental function of ('by means of') is normally expressed as (210a).

The examples which we ascribe to (210b), with derivational verb suffix *-nda*, are given in (211). "S" and "O" denote the referents functioning as subject and direct object, respectively, in the derived form.

- | (211) | <u>stem</u> | <u>gloss</u> | <u>derivative</u> | <u>gloss</u> |
|-------|---------------|---------------------------|-------------------|--------------------------|
| a. | <i>koy</i> | 'S go' | <i>koy-nda</i> | 'S take O, deliver O' |
| | <i>kaa</i> | 'S come' | <i>kaa-nda</i> | 'S bring O' |
| | <i>yee</i> | 'S go or come back' | <i>yee-nda</i> | 'S take or bring back O' |
| b. | <i>gey</i> | 'S endure, be long time' | <i>gey-nda</i> | 'S be long away from O' |
| | <i>fey</i> | 'S diverge; S divorce O' | <i>fey-nda</i> | 'S be separable from O' |
| | <i>hima</i> | '(ought to ...)' | <i>hima-nda</i> | 'S resemble O' |
| | <i>kubey</i> | 'S encounter O' | <i>kubey-nda</i> | 'S encounter O' |
| | <i>sawa</i> | '(two entities) be equal' | <i>sawa-nda</i> | 'S coincide with O' |
| | <i>tilasu</i> | 'O be necessary' | <i>tilasu-nda</i> | 'S need O' |

Sentential examples showing other postverbal constituents (e.g. datives) intervening between *-nda* and the direct object are given in (212).

- (212) a. *ay kaa-nda mana attee*
 1SgS come-with 2SgDat tea
 'I have brought some tea for you(Sg).'
- b. *yee ta fey-nda mana [ni wande di]*
 1SgSImpf Fut diverge-with 2SgDat [2Sg wife Def]
 'I'll stay away from your wife for you.'
- c. *yee hima-nda a se hāyši*
 1SgSImpf resemble 3Sg Dat dog
 'I resemble a dog for him (=from his point of view).'

There are similar examples involving *koy-nda*, *yee-nda*, *gey-nda*, *sawa-nda*, and *tilasu-nda*. For *kubey-nda* I have no example of the type seen in (212), since with object separated from verb by an intervening dative, informants preferred to use the synonymous underived *kubey*.

The fusion of *-nda* with the verb is strong in the case of the motion verbs in (211a). Note that in cases like 'S brings O', both subject and object are in most cases jointly in motion. The apparent historical shift from 'S came [with O]' to 'S brought O' is therefore straightforward and is known from many languages. The remaining examples, lumped together in (211b), are fairly diverse in type. Aside from the smallish number of verbs affected, we notice considerable semantic divergence. In the case of *hima*, the simple stem is a serial verb used in the 'ought to' construction, which has little connection to 'resemble'. Note that *tilasu-nda* has a different logical relation to the corresponding simple stem than do the other examples.

When a causative is made from *VERB-nda Y*, we get *VERB-Caus X [nda Y]*, where *nda* 'with' is liberated from the verb and forms an independent constituent with its (comitative) complement NP, generally not immediately adjacent to the causative verb. Compare *kubey-nda* 'encounter' in (211b) with causative *kuboy-ndi ... nda* 'cause to meet' in (213); cf. beginning of §5.11.3, above. (*kubey* and *kuboy* are variants of the same stem.) The complement of *nda* has been extracted by relativization in (213a), but this is irrelevant to the point at hand.

- (213) a. *hay di kaa yer koy kuboy-ndi ey [nda t] či woo yo*
 thing Def Rel God meet-Caus 1SgO [with t] be Dem Pl
 'The thing_x that_x God caused me to meet with *t_x* was those (people).'
- b. *yer koy taalaa na kuboy-ndi ey [nda ga]*
 God be-He-exalted Neg meet-Caus 1Sg [with 3SgO]
 'God, may He be exalted, has not caused me to run into him.'

In Timbuktu, *bey* 'know' does not normally take the form *bey-nda* 'be aware of'. Instead, *bey* is usually followed by a PP with postposition *ga* 'on', hence *bey a ga* 'be aware of it'.

6.3 Compounds

6.3.1 Noun-verb compounds

Noun-verb compounds are rare, but they are easy to spot on grounds of word order (N-V) and semantic skewing. The examples I know of are in (214). The compounds function syntactically as verbs.

- | | | | | |
|-------|----------------------|--------------|-------------------|--------------------------|
| (214) | <u>N-V cpd.</u> | <u>gloss</u> | <u>gloss of N</u> | <u>gloss of simple V</u> |
| | <i>hew-gumba-ndi</i> | 'smother' | 'wind, air' | — |
| | <i>hari-gur</i> | 'draw water' | 'water' | 'draw water' |

The verb *hammee* 'fast (from food)' is perhaps still synchronically recognizable as *haw-mee* 'tie-mouth' (for assimilation of *w* to *m* see §3.6.3). This would then be a V-N rather than N-V structure, functioning as an intransitive verb.

There are many other combinations which have some resemblance to such N-V compounds as (214). These are cases where the second stem is a verb, which is followed by an Adj or (nominalizing) Abstr ending. The sequence N-V-Adj can theoretically be bracketed either as [N-V]-Adj, with a N-V compound feeding into adjectivization, or as N-[V-Adj], with a noun stem added as compounding initial to an already adjectivized verb. Likewise for the sequence N-V-Abstr. In the cases known to me, the inner N-V compound is not independently attested, and in view of the productivity of N-N (and "loose" NP-N) compounds I am strongly inclined to favor the N-[V-Adj] (and N-[V-Abstr]) bracketings. Examples in (215-16). Zero-derived nominals (217) are less easy to bracket.

(215)	<u>N-[V-Adj]</u>	<u>analysis</u>	<u>free gloss</u>
	<i>kamba-waaw-o</i>	hand-[left-Adj]	'left-handed'
	<i>kamba-send-o</i>	hand-[difficult-Adj]	'miser, tightfisted one'
	<i>kuuru-koon-Ø</i>	skin-[mere-Adj]	'naked'
	<i>moo-laaw-o</i>	eye-[?-Adj]	'cross-eyed'
(216)	<u>N-[V-Abstr]</u>		
	<i>bomo-haw-ey</i>	head-[tie-Abstr]	'astonishment'
	<i>bine-dumb-oy</i>	heart-[cut-Abstr]	'heartbeat, pulse'
	<i>gaa-feer-ey</i>	body-[open-Abstr]	'joy'
	<i>moo-yeen-ey</i>	eye-[cold-Abstr]	'self-control, calmness'
	<i>teñe-kaan-ey</i>	luck-[good-Abstr]	'good luck'
	<i>tira-feer-ey</i>	talisman-[open-Abstr]	'religious ceremony'
(217)	<u>N-V-Ø</u>		
	<i>bomo-bere</i>	head-flip-Ø	'rite reaffirming marriage'
	<i>hari-ñin</i>	water-drink-Ø	'water drinking'
	<i>junubu-jow</i>	sin-take-Ø	'commission of sins'

For morphological noun-verb compounds in a less common pattern where the verb functions as a modifier of the noun, see §4.6.8.

6.3.2 Verb-verb compounds

It is very easy to combine VPs, by putting the second one in infinitival VP form (beginning with Inf *ka*); see §9.7.1. This can be used to combine two VPs, both of reasonable internal complexity. It can also be used to combine a specialized serial verb with an internally complex second VP (§9.7.2).

The limiting case is a tightly-knit combination of two verb stems linked by *ka* with no further frills, or with following postverbal material (direct object, PPs) that

appears to be attached to the verb-combination as a whole rather than just to the second verb. In such combinations, which we refer to as verb-verb compounds, the order of elements is usually fixed, and the compound as a whole can be nominalized or form other verbal derivatives.

A common example is *sar ka julli* 'do somersaults', with *sar* 'jump' and a second verb that is not attested outside of this compound. Other examples generally involve paired actions that commonly occur together in some activity (cf. English *cut and run*). That the system is potentially productive is shown by (218).

- (218) *a* *na* *či* [*jokoro* *ka* *sakara*] *nono*
 3SgS Neg be [turn-over Inf thin-out] it-is
 'It isn't turning over (earth) and thinning out (seedlings).'

The speaker's point is that planting millet by digging up a little (flat) earth and sowing seeds is not combined into a single agricultural method with another procedure by which millet seedlings are grown on the upper bank of a seasonal pond and then transplanted lower down as the water evaporates. The addressee had misunderstood this and (218) was offered as a clarification. The nonce compound *jokoro ka sakara* functions in (218) as a zero-derived nominalization.

Another textual example in (219), where the verb-verb compound is nominalized, and takes a preceding possessor ('you') and a following Def *di*.

- (219) *ni* *ta* [*koy* *ka* *kaa*] *di*
 2Sg Top [go and come] Def
 'your going and coming'

6.3.3 Centripetal *-kate*

A verbal derivational suffix *-kate* indicates motion toward the deictic center. The most common combination is *yee-kate* 'come back', cf. *yee* 'return, go back'. Further examples where the centripetal motion is simultaneous with the motion denoted by the verb are *too-kate* 'arrive here', *maan-kate* 'come close (to here)' from *maan* 'approach' and *kabey-kate* 'bring back'. When the verb denotes a non-motion activity, or a noncentripetal motion, the sense is '[verb] and come'. Allowing for a discourse-internal (not "here-and-now") deictic center, a gloss '[verb] and go back' is sometimes possible. Examples of *-kate* are in (220).

- (220) a. *no-o* *koy dogo-kate* [*hayni* *woo* *ra*]
 2SgS-Impf go uproot-Centrip [millet Dem Loc]
 'You go and uproot some of that millet (and come back with it).'
- b. *bii* *daa na ay* *hun-kate* *i* *doo*
 yesterday Emph Foc 1SgS leave-Centrip 3Pl chez
 'It was just yesterday [*focus*] that I got up and went back to their place.'

- c. *i na yee-kate [ŋgu-ye banda koon]*
 3PIS Neg return-Centrip [3Ref1Pl back bare]
 'They (=donkeys) have not come back (with) their backs empty.'

When the verb is transitive, the combination with *-kate* remains transitive and the direct object follows the entire verb (220a). Likewise, in (220b) the PP *i doo* must be construed with *hun*. In (221), both direct and indirect object NPs follow the entire derived verb.

- (221) *noo gi [A se] a ma kabey-kate [yer se]*
 give 3PIO [A Dat] 3SgS Subju bring-Centrip [1Pl Dat]
[athey jiney di yo]
[tea gear Def Pl]
 'Give them to A (=a girl), so she may bring back to us the tea-making equipment.'

So *-kate* has no effect on the larger syntax of the clause, and certainly does not form a VP of its own. This eliminates the possibility of analysing *-kate* as ... *ka te* '... and come' with Inf *ka* and a suppletive form *te* for the usual *kaa* 'come', parallel to ... *ka koy* '... and go' or ... *ka kaa* 'and come' (§9.7.1, §9.7.7), which follow entire VPs.

There are a few textual examples of *-kata* as an alternative to *-kate* when attached to a transitive verb: *jow-kata* or *jow-kate* 'carry here' (also 'bring up' a conversational topic).

The causative of *yee-kate* 'come back' is *yee-ndi-kate*, as in *yee-ndi-kate ga!* 'bring it back!'. We can likewise cite *maan-ndi-kate* 'bring close to here', causative of *maan-kate* 'come close'. *-kate* precedes the Participle suffix in *yee-kate-nte* 'coming back', used like English *next* in connection with cyclical (i.e. periodically "returning") time expressions: *alhaddi yee-kate-nte* 'next Sunday'.

In texts from a riverine village near Timbuktu, *kate* is a separable postverbal particle, as shown by causative *yee-ndi ga kate* 'bring it back' (compare the Timbuktu form given in the preceding paragraph).

Centrip *-kate* (variant *-kata*) is perhaps related etymologically to the verb *kate -kata* 'bring'. However, the Centripetal morpheme is quite ancient and even occurs (as *kat*) in Tadaksahak.

6.4 Verb-stem reduplication

A verb that normally occurs as a simple stem can be reduplicated to indicate iteration or prolongation. Such reduplication is not very common, and applies chiefly to verbs expressing simple physical actions or events which can form patterned sequences. Bisyllabic stems are especially prone to reduplication, for verbs as for nouns and adjectives (§4.7).

Our examples are from the Timbuktu texts. The gloss of the unreduplicated stem is indicated by "<" if not obvious from that of the reduplication. Action verbs:

bere-bere 'pour (tea) back and forth' <'flip, invert', *dumbu-dumbu* '(heart) beat' <'be cut', *haw-haw* 'tie (all) up', *hina-hina* 'cook (food)', *jamna-jamna* 'distribute, dole out', *kumna-kumna* 'gather up', *tasa-tasa* 'push around', and *wangga-wangga* 'go around, walk in circles'. There are a few stative examples with distributive or intensive value: *dunggu-dunggu* 'be lukewarm (all over)', *kara-kara* 'be yellow (all over)'. *boto-boto* '(liquid, mud) thicken' is recorded only in this quadrisyllabic form, but may be a synchronic reduplication in light of *boto-ndi* 'cause to thicken'.

There are a number of verbs which occur only in quadrisyllabic reduplicated form, most of them denoting patterned repetitive (or distributive) events. In such cases we omit the internal hyphen. A few examples are *kotokoto* 'cough', *kulikuli* 'wrap up', *kulumkulum* 'fold up', *longolongo* 'carry (child) on shoulder', *petepete* 'be oversized', and *wiliwili* 'wrap around'.

Chapter 7

VP structure

7.1 Types of predicates

7.1.1 Quasi-verbs *či* (equational) and *nono* (identificational)

Two-place equational predicates equate the denotation of a predicate NP with the denotation of the overt subject NP. This involves the equational quasi-verb *či* 'be' (222a-b).

- (222) a. *no-o* *bey* *kaa* *woo* *či* *alhoor*
2SgS-Impf know that Dem **be** limestone
'You(Sg) know that this is limestone.'
- b. *nda* *ma* *na* *či* *faraa-kom* *moo, ...*
if 2SgS Neg **be** toil-Char also, ...
'and if you(Sg) are not a manual worker, ...'

Since *či* links a subject NP with a postverbal NP, it resembles a transitive verb. In many languages, an equational sentence with copula would be distinguished from a transitive by case marking (copular 'X-Nominative be Y-Nominative' versus transitive 'X-Nominative hit Y-Accusative'), but KCh has no overt case marking for the postverbal NPs in either case. If a third person pronoun functions as predicate NP after *či*, it takes the form 3Sg *ga* or 3Pl *gi*, just like direct object pronouns, as in (223), a particularly common phrase.

- (223) *nda* *a* *na* *či* *ga, ...*
if 3SgS Neg **be** 3SgO, ...
'otherwise, ...' (lit. 'if it isn't it, ...')

či is clearly a verb syntactically, but behaves differently from ordinary verbs with reference to MAN marking. Ordinary verbs freely allow the full set of preceding MAN possibilities (§7.2): zero (interpreted as perfective indicative positive), Neg *na*, Impf *o ~ go*, ImpfNeg *si*, Subju *ma*, and Subju + Neg *ma si*. By contrast, *či* combines easily only with zero and with Neg *na*. For *či*, these aspectually unmarked forms are used indiscriminately for both present and past time reference. The other MAN possibilities, while attested, are uncommon in texts. Attempts to elicit imperfective forms in future contexts ('I'm chief this year, and next year I'll still be chief') yield constructions with inchoative *kaa* 'become' or continuative *čindi* 'remain' rather than stative *či*. However, there are occasional occurrences of Impf *o ~ go* with *či* in the texts, indicating that the Impf marker is at least grammatical with *či*. Examples in (224).

- (224) a. *hay di kaa čow-koy di yo har ... ,*
 thing Def Rel study-Char Def Pl say ... ,
a go či čiiimi daa
 3SgS Impf be truth Emph
 'What the learned people said ... , it is the truth.'
- b. *yaaha di kaa čindi, yaaha di o či*
 eight Def Rel remain, eight Def Impf be
jere di yo kaa windi-windi ga
 side Def Pl Rel Rdp-encircle 3SgO
 'the eight (sticks) that remain, the eight are (=function as) the sides
 that flank it.'

In such examples, Impf *o - go* could be omitted with no significant change in meaning. For example, *a či čiiimi* 'it is the truth' is much more common than the *a go či čiiimi* in (224a).

It is also difficult to elicit subjunctive *ma či* and its negation *ma si či*. In contexts construable as involving transitions such as 'he wants me to be[come] chief,' inchoative *kaa* 'become' usually appears instead of stative *či*. However, subjunctive *ma či* and its negation do occasionally occur in texts, as in (225a). In direct elicitation, I obtained such combinations most reliably in subjunctive complements of the optative particle *yela* 'hopefully', as in (225b), since this particle is compatible with non-inchoative 'be'.

- (225) a. *wala nda a baa a ma či*
 or if 3SgS want 3SgS Subju be
addama-jje kaa či sportif
 person Rel be athlete
 'On the other hand, if he wants to be person who is athletic, ...'
- b. *yela a ma či suka,*
 hopefully 3SgS Subju be sugar,
a ma si či čiiiri
 3SgS Subju Neg be salt
 'Let's hope it may be sugar, (and) that it may not be salt.'

Another copula-like construction involves the predicator *nono* instead of *či*. Its word-class status is rather unclear; we refer to it nontechnically as a "quasi-verb." Whereas *či* always occurs in a construction of the type *X či Y* equating an overt NP (X) with another NP (Y), the *nono* construction is just *Ynono* with a single preceding NP. The free English translation is 'it is (or was) (a) Y' where 'it' is a referent established by previous discourse (or by a preposed topic NP); this referent is not expressed overtly, even by a third person pronoun, within the *nono* clause itself. Examples are in (226). (226a) illustrates clearly the presence of a prior discourse referent. (226b) is likewise an answer to 'Who is it (knocking at the door)?'

- (226) a. *no-o* *guna ga* *moo hal* *no-o* *horgu*
 2SgS-Impf see 3SgO also until 2SgS-Impf believe
 [*alhoor* *nono*]
 [limestone **it-is**]
 'You also look at it (=stone), until you are convinced (that) it is limestone.'
- b. *ay* *nono*
 1Sg **it-is**
 'It's me.'

We will expand briefly on the usage of *nono* and then assess its syntactic status. Broadly speaking, *X či Y* is favored when Y adds descriptive information to our representation of the referent of X, whose identity is already clear. The Y position is often filled by a simple common noun of a descriptive nature, such as *talka* 'poor person'. By contrast, *Y nono* is most commonly used when the Y is an NP that adds fundamental identificational information about a previously mentioned but not yet fully identified referent.

As telltale symptoms of this identificational use of *Y nono*, two facts may be mentioned. First, *Y nono* often occurs in the complement of verbs of knowledge and belief, as in (226a). Second, the NP in the Y position of *Y nono* is often accompanied by Emph *daa*, which stresses precise identity. In (227) we see both of these features.

- (227) *nga* *ta* *o* *horgu* [*dow* *di* *daa*] *nono*
 3SgF Top Impf believe [sand Def Emph] **it-is**
kaa *ga* *na* *ngu* *o* *dira*
 Rel by Foc LogoSgS Impf walk
 'It (animal) was thinking that it was just (solid) ground [on which] [*focus*] it was walking.'

We now look more closely at the deceptively tricky syntax of *Y nono*. The first point to make is that this construction cannot directly take any preverbal MAN morpheme (Impf *o*, Subju *ma*, Neg *na*). This suggests that *nono* is not a verb. Moreover, *nono* has none of the normal verbal derivatives (participle, factitive-causative, abstractive).

Second, when the NP in the Y position of *Y nono* is head of a relative clause, the relative clause always follows *nono*. In fact, the combination in (228) is very common in texts.

- (228) *haya* *nono* *kaa* ...
 thing **it-is** Rel ...
 'It is a thing that ...'

Ordinarily a relative clause immediately follows its head NP. However, in (319) in §8.3, below, we will see that extraposition of the relative clause is normal in predications of location or existence.

Third, *nono* is itself common within relative clauses, the Y position in Y *nono* being relativized on, as in (229).

- (229) [wirči woo ta] yer monggo ka bey [haya kaa [nono]
 [disease Dem Top] 1PlS fail Inf know [thing Rel [it-is]]
 'That disease_x, we were unable to discover the thing_x which_x it_x was t_x.'

Fourth, while Emph *daa* normally follows Y and precedes *nono*, as in (227), it can also (though rarely) follow *nono*, as in (231).

- (230) ... wala addama-jje nono daa čiiimi-čiiimi,
 ... or human it-is Emph truth-truth,
 wala aljinni nono
 or djinn it-is
 '(I was curious) whether it really was a human, or it was a djinn.'

More normal would be [addama-jje daa] *nono* 'it is (or was) a human,' cf. (385a) in §8.5.1. The addition in (230) of *čiiimi-čiiimi* 'truly', in adverbial function, suggests that the focus is on the propositional truth value rather than on the constituent 'human', so this may be a case where *daa* takes the core clause in its scope. This is unusual for *daa*, which normally has narrower scope over a single constituent (§8.5.1).

Fifth, it is actually possible to combine the two predicate types X *či* Y and Y *nono* into a single equational predication of the form X *či* Y *nono* 'X is (or was) (a) Y.' An example is (231), where a *či* [i-tey-nte di] *nono* (lit., 'it is the wet one') is the relevant sequence.

- (231) nda n kumna ga moreyda, no-o nan a ma
 if 2SgS gather 3SgO now, 2SgS-Impf leave 3SgS Subju
 koo, wala jaa a či [i-tey-nte di] nono,
 be-dry, or since 3SgS be [Absol-wet-Partpl Def] it-is,
 no-o dam ga haya ra
 2SgS-Impf put 3SgO thing Loc
 wala musa foo na no-o dam a se?
 or manner which? Foc 2SgS-Impf do 3Sg Dat?
 'When you(Sg) gather it (=pile of melon seeds), do you let it dry off,
 or (even) back when it is in (its) wet state do you(Sg) put it in
 something, or what do you do to it?'

The composite construction X *či* Y *nono* occurs chiefly in the negative form X *na* *či* Y *nono*, which functions as the usual negative counterpart of Y *nono*, with the emphasis on identification rather than description. Although the relevant part of (231) is positive, it is in a yes-no question, which may have favored the longer construction. A typical negative example is (232).

- (232) *a* *na* *či* *addama-jje* *ta* *nono*
 3SgS Neg be human Top it-is
 'It isn't a human.'

The parsing of *X na či Y nono* is tricky. One possibility is to take *is* as a single clause, with *či* as the basic verb and *nono* as a kind of redundant, nonclausal supplement. However, we could alternatively parse it as *a na či [Y nono]*, glossable as 'it is not the case (that) [it is (a) Y].' This is because *a na či* commonly functions as a higher-order negation with a complete proposition as its complement (§9.3.2).

Sixth, discourse-functional (DF) morphemes like *moo* 'also, moreover', and the quantifier *kul*, can be added to *Y nono* either after the NP (Y) or after the *nono*, apparently with different scope readings. (232) shows the "Y" constituent with weak Top *ta*, which in ordinary sentences is most typical of subject NPs and preposed topical constituents (§8.4.3). In (233a), *moo* in the sense 'moreover' has scope over and follows the entire equational clause *addabba ye nono*. However, in (233b), which follows immediately on (232) in the relevant text, *moo* takes narrow scope over and immediately follows the "Y" NP *jinni* 'djinn, genie', and so precedes *nono*.

- (233) a. *addabba ye nono moo kaa,*
 animal Pl it-is also Rel,
 i-i *hīsa* *ka* *mey* *alkadar*
 3PlS-Impf do-much Inf have power
 'They (=elephants) are animals moreover which—, they have a lot of
 power.'
- b. ... *mere* *a* *na* *či* [*jinni moo*] *nono*
 ... but 3SgS Neg be [djinn also] it-is
 '... but it isn't a djinn either.'

The syntactic facts adduced above seem to give us mixed signals about the syntactic status of *Y nono*. The two basic analytical possibilities seem to be a) *Y nono* is an intransitive sentence with subject Y and a defective, uninflectable quasi-verb as predicate, and b) *Y nono* functions as the reduction of a larger underlying structure of the type *X BE Y nono*, whose understood subject X is deleted along with the abstract BE verb. In support of (b), one could argue that the *X či Y nono* construction of (231-32) is the surface realization of the fuller underlying structure. However, as noted above we must also consider the possibility that some or all cases of *X či Y nono* actually constitute biclausal structures of the type *X či [Y nono]*, in which case they shed no new light on the internal syntax of *Y nono*.

The crucial test for choosing between analyses (a) and (b) is whether Y has subject properties. In theory, this should be easy to decide—just focalize this Y NP and see whether we get SFoc *ŋga* or (nonsubject) Foc *na* in the resulting surface structure (§5.8.1, §8.1.1-2). Unfortunately, I have not been able to elicit such a focalization structure with *nono*. Instead of the hoped-for choice between subject-focus #*maa ŋga nono* and nonsubject focus #*maa na nono* in the sense 'It is what?', I always get a construction with equational *či* rather than *nono*. Likewise, there is no infinitival VP version of *Y nono* with Inf *ka* (§9.4, §9.7). I conclude that *Y nono* is a unique, sui

generis construction which defies any simple effort to integrate it into the productive clausal syntax.

7.1.2 Locational quasi-verbs *goo*, *sii*

The basic locational predicators are *goo* 'be (in a place)' and its negation *sii* 'not be (in a place), be absent'. Each is normally followed by a more concrete LP (locational phrase, §5.12) such as a place name, adverbial, or PP. I refer to them loosely as "quasi-verbs," but their peculiarities are different from those of other quasi-verbs described in the adjoining sections. Examples in (234).

- (234) a. *i* *goo* *nee*
 3PIS **be** here
 'They are here.'
- b. *a* *sii* [*huu* *di* *ra*]
 3SgS **be-absent** [house Def Loc]
 'He (She, It) is not in the house.'

goo is clearly related to Impf (positive) *o - go* (<**go*), as is *sii* to ImpfNeg *si*. In sentences with ordinary verbs, *o* and *si* are members of the set of MAN (mood-aspect-negation) morphemes that intervene between subject NP and verb (§7.2.1). That the connection between {*goo* *sii*} and the cognate imperfective morphemes *o - go* and *si* is synchronically real is shown by the fact that the imperfective morphemes are pronounced *goo* and *sii* in the one situation where they are clause-final; namely, in truncated replies to yes-no questions and similar echoes (§8.2.1). Moreover, locational {*goo* *sii*} cannot be preceded by MAN morphemes (#*o goo*, #*ma goo*, etc.).

If we were to assume that the "verb" position is obligatorily filled in any predicate, the preferred analysis of (234a-b) would be to take {*goo* *sii*} as verbs, albeit a special type of verbs which do not allow MAN morphemes. Alternatively, since these quasi-verbs are apparently morphemically identical to the cognate preverbal MAN morphemes, one could argue that {*goo* *sii*} in (234a-b) are simply stressed allomorphs of Impf (positive) *o - go* and ImpfNeg *si*, used when the following verb position is vacant (a possibility limited to locationals). The two analyses lead to the alternative parsings in (235a-b) for sentence (234a).

(235)	<u>subject NP</u>	<u>MAN morphemes</u>	<u>verb</u>	<u>locational</u>
a.	<i>i</i>	∅	<i>goo</i>	<i>nee</i>
b.	<i>i</i>	<i>goo</i>	∅	<i>nee</i>
c.	<i>i</i>	<i>goo</i>	BE	<i>nee</i>
d.	<i>i</i>	<i>t_x</i>	<i>goo_x</i> + BE	<i>nee</i>

I favor (236b) over (236a). However, we might also consider additional variations on the general approach (235b), represented here as (235c-d). In (235c), *goo* is a MAN morpheme as in (235b), but the verb position is filled by a "light" (i.e. low-content) verb BE that happens to be phonologically null. In (235d) we have started out with the

same structure, but the MAN morpheme *goo* has then been fused or adjoined to BE, perhaps leaving a (coindexed) trace t_x behind.

In (235c-d), we might equate the BE verb specifically with *bara* 'be, exist' (following section). In any event, forms with overt *bara* are closely related syntactically to the *goo* and *sii* sentences we have been discussing. There are three syntactic contexts where *goo* and *sii* are syntactically impossible, and where constructions involving *bara* are used instead. First, *goo* and *sii* cannot be used in subjunctives, where they are replaced by, respectively, the positive and negative subjunctive of *bara*. The subjunctive equivalent of (234a) is therefore *i ma bara nee* 'that they be here.' Second, *goo* and *sii* cannot be used in imperatives, so we again make use of the subjunctive of *bara* to fill the void; see (266) in §7.3. Third, *goo* is not allowed in infinitival VPs, again requiring the use of *bara*, as in ... *ka bara nee* '... to be here.' We can therefore get a very close approximation to the surface facts by arguing that there is an underlying existential-locative BE verb which is realized as zero following imperfective morphemes, and as *bara* elsewhere. In order to actually formalize this analysis, we would have to distinguish this BE, realized as $\{\emptyset - \text{bara}_1\}$, from *bara*₂ in the sense 'exist', since *bara*₂ can occur after Impf as well as other MAN morphemes (following section). In any event, existential-locative BE is clearly distinct from equational or identificational quasi-verbs (*či* 'be', *nono* 'it is') described above.

Although *goo* and *sii* in (234a-b) are basically locational rather than pure existentials, in some textual occurrences the following LP seems to be nearly pro forma, and the clause comes close to a pure existential predication with little emphasis on location. The favorite "bleached" locationals used for this purpose are *doodi* ~ *dooti* 'there' and third person pronominal Locative PPs such as *a ra* 'in it, therein'. Both occur in (236), which describes how one detects limestone deposits in the bush; the key phrases are bolded in the free translation as well as in the interlinears.

- (236) *jombu-jombu woo di ye na nda yer gurguma*
 Rdp-debris Dem Def Pl Foc if 1PIS bend
yer guna gi yer taar gi,
 1PIS see 3PIO 1PIS touch 3PIO,
yer o gar kuntur keyna yo goo [a ra]
 1PIS Impf find lump small Pl **be** [3Sg Loc]
kuntur di yo o fey, kuntur foo yo goo doodi
 lump Def Pl Impf vary, lump one Pl **be there**
kaa či yaada, kuntur foo yo goo doodi
 Rel be worthless, lump one Pl **be there**
kaa nda n taar gi kul
 Rel if 2SgS touch 3PIO all
no-o bey kaa woo či alhoor
 2SgS-Impf know that Dem be limestone

'It's those bits [*focus*] that, if we bend over and we see them and we touch them, we'll find that some (small) chunks **are in it**; the chunks are variable; some chunks **are there** which are no good; some (other) chunks **are there** which, if you (Sg) touch them, you'll know that this is limestone.'

Unlike English bleached *there* in *there is (are) ...*, the locationals *a ra* 'in it' and *doodi* 'there' have at least vestiges of a locational denotation, but in passages like this the location has already been established in prior discourse. In other cases, the location is vague or indefinite, making the existential function even harder to miss, as in (237). Even when there is no overt LP, a locational is implied, as in (238).

(237) *wirči foo moo goo doodi, kaa č̣i wirči jaas-o*
 disease one also **be there**, Rel be disease bad
 'There is also another (donkey) disease there, which is a dreadful disease.'

(238) *a goo*
 3SgS **be**
 'Here she is!' or 'There she is!'

(238) is usually rendered as *la voilà* or *la voici* in local French and has a similar presentative quality. For more on presentatives, see §7.2.3.

There is another, completely different use of *a goo* and similar combinations of a pronoun with *goo* or *sii*, only superficially identical to the presentative type (238). This is the pattern exemplified by *a goo* '(Yes) it is' and *ay sii* '(No) I don't' used in truncated replies to yes-no questions and in similar echoing contexts (§8.2.1). This type has no presentative or locational-existential connotations.

Locational quasi-verbs have no difficulty occurring in relativized or focus constructions. Examples in (239).

(239) a. *maa ŋga goo nee ?*
 what? SFoc **be** here ?
 'What [focus] is here?'
 b. *har di kaa goo nee*
 man Def Rel **be** here
 'the man who is here'
 c. *man na a goo ?*
 where? Foc 3SgS **be** ?
 'Where [focus] is he?'

(239c) and similar instances with clause-final *goo* (or *sii*) only superficially resemble the presentative type (238). (239c), unlike (238), does have an overt LP complement, the only difference being that in (239c) the LP (*man* 'where?') has been fronted as part of the focalization process that is regular with WH interrogatives. We could represent (239c) as *man_x na a goo t_x* with a phonologically unrealized trace to make this clear.

7.1.3 Existential and impersonal quasi-verb *bara*

The form *bara* occurs in several constructions. We disregard here the 'except' construction with following NP (§8.5.3) and the clause-initial use as a 'because' complementizer (§9.5.7), in order to focus on its verbal and quasi-verbal uses.

First, *bara* is used in the normal verb position (following a subject NP and MAN morphemes) as an existential predicator 'exist'. We have noted in the preceding section that locationals of the type 'be there' or 'be in it' can also be used in a fashion approaching existential predications, so the use of *bara* as an existential is somewhat circumscribed. In general, *bara* is preferred when the existant is abstract, unlocalized, or too diffuse to be meaningfully localized. Examples in (240).

- (240) a. *saa kaa keydiya o bara*
 time Rel monsoon Impf be
 'when there is a (good) rainy season'
- b. *saa kaa keydiya si bara*
 time Rel monsoon ImpfNeg be
 'when there is no rainy season'

Note that *bara* can be preceded by Impf *o* or ImpfNeg *si*. The ability to appear after MAN morphemes distinguishes *bara* from locational quasi-verbs *goo* and *sii* (§7.1.2) and from identificational *nono* (§7.1.1). Note also that *bara* does not require a following LP (locational phrase), though such a phrase could be added to (240a-b).

bara replaces locational *goo* in certain constructions where *goo* is syntactically impermissible. This use of *bara* does not translate easily as 'exist', so it may be useful to recognize a distinct abstract locational BE that is realized as \emptyset after imperfective morphemes and as *bara*₁ elsewhere, distinct from *bara*₂ 'exist', as suggested in the preceding section. Negative locational *sii* is likewise replaced by a negated form of *bara*₂. These replacements occur in the subjunctive mood with *ma*, which cannot co-occur with {*goo sii*} or with the imperfective morphemes related to the latter; an example is (241a). Using "L" to represent the locational, *X goo L* 'X is in L' has subjunctive counterpart *X ma bara L* 'that X may be in L,' while its negation *X sii L* 'X is not in L' becomes *X ma si bara L* 'that X may not be in L'. Likewise, in the infinitival VP construction with Inf *ka*, *bara* replaces *goo*. In (241b), the infinitival construction is required by serial verb *hima*.

- (241) a. *yee baa ay ma bara nee jirgar han*
 1SgSImpf want 1SgS Subju be here holiday day
 'I want to be here on the day of the (Muslim) holiday.'
- b. *a-a hima ka bara bamako*
 3SgS-Impf ought Inf be Bamako
 'He ought to be in Bamako.'

Like the locationals *goo* and *sii*, *bara* 'exist' has no difficulty occurring in relativized or focalized clauses. A relative clause is seen in (242).

- (242) *ije-meyre* *woo* *yo* *kaa* *bara*
 child Dem Pl **Rel** exist
 'those children who exist'

bara also has a different syntactic function as a sentence-initial bare impersonal expression meaning 'must'. In this construction it permits no subject NP or MAN morphemes, and is immediately followed by a clausal complement with no intervening complementizer or other material. For the obligational 'must' construction with subjunctive complement, see §9.6.2. For an epistemic 'it must be the case that ...' construction with indicative complement, and a related 'by God, (I swear that) ...' construction, see §9.5.9.

Conceivably we might connect existential *bara* with one or both of these complementizing functions. For example, epistemic *bara* plus indicative could be analysed in event-semantic terms as e.g. 'exist (e): e = [I went],' the event-level existential functioning as an emphatic assertion of truth. It is harder to see how this might apply to the obligational type with subjunctive complement. In any event, we must recognize the possibility that clause-initial *bara* in the complement constructions functions as an uninflectable predicator (i.e., a kind of quasi-verb).

7.1.4 Possessive predications

Ownership can be expressed in several ways. Consider how we might express 'X has Y,' where X is the possessor and Y the possessed. The most basic choice is whether to make X or Y the grammatical subject. If X is the subject, as in English, the usual KCh verb is *mey* 'have, own'. If the emphasis is on the process of acquisition, *duu* 'get, obtain, earn' is used instead. Examples in (243).

- (243) a. *nda* *i* *har* *ngu-yo* *o* *mey* *ga*
 if 3PlS say LogoPlS Impf **have** 3SgO
 'if they say that they have it'
 b. *ay* *si* *duu* *haya*
 1SgS ImpfNeg **get** thing
 'I won't get (=obtain) anything.'

If Y is the subject, on the other hand, one possibility is a 'be' verb plus a complement including X. Indeed, the pattern *Y goo [X ga]* with postposition *ga* 'by, from' is the common way to describe temporary physical possession or custody.

- (244) *nda* *a* *gar* *kuumu* *goo* [*ay ga*] *moreyda*
 if 3SgS find hoe **be** [1Sg by] now
 'if I had happened to have a hoe on me then'

Locational *goo* is replaced by *bara* here under the syntactic conditions described in §7.1.3 (after Subju *ma* and in infinitival VPs). It is also possible to use *bara* 'exist' instead of *goo* in sentences like (244) to indicate a more enduring possession, but this

seems uncommon; it is preempted by the productive type *X mey Y* ‘X has Y’ seen in (243a).

There are also some examples of postpositions other than *ga* in the general structure represented by (244), though none has the abstract “custody” connotations of *ga*. In (245) we have Loc *ra* in a context where “possession” has a strongly locative flavor.

- (245) *nkanji* *goo* [*hāyši* *di* *ra*]
 tick **be** [dog Def Loc]
 ‘There are ticks on the dog.’ (= ‘Dogs have ticks.’)

For *banda* ‘behind, with’ in a kind of temporary-possession sense, see §11.1.2.

To express the sense ‘Y belongs to X,’ we get *Y či [X wane]* ‘Y is of X,’ with possessive postposition *wane*, as in (246).

- (246) Q: *woo či mey wane?* ‘This is whose?’
 A: *ay wane* ‘(it is) mine.’

The KCh system of possessive predications is quite different from that of KS and other Songhay languages to the east.

7.1.5 *haya foo* ‘(do) anything’ and other apparent verbless predicates

There is one construction where an NP with indefinite or interrogative reference appears to be used as a verb. We first consider *haya foo* ‘one thing’, which can be used as a negative polarity NP ‘(not) ... anything’ (§9.3.4). However, it appears to function as a verb in (247a-b).

- (247) a. *woo* *či* *ferey* *kaa* *si* *jafa*,
 Dem be brick Rel ImpfNeg be-cut,
a *si* [*haya* *foo*]
 3SgS ImpfNeg [**thing** **one**]
 ‘This is a (type of) brick which cannot be cut or anything else.’
- b. *addama-jje* *kaa* *ni* *si* *faraa*,
 human Rel 2SgS ImpfNeg get-tired,
ni *si* *surgey*, *ni* *si* [*haya* *foo*]
 2SgS ImpfNeg sweat, 2SgS ImpfNeg [**thing** **one**]
bara *no-o* *goro* *no-o* *ñin* *attey*
 except 2SgS-Impf sit 2SgS-Impf drink tea
 ‘A human (=you) who you don’t get tired, you don’t break a sweat
 you don’t anything, except you sit (and) you drink tea.’

Essentially, *haya foo* here functions as a kind of “etcetera” verb that can be roughly glossed ‘be or do anything’. Its clause is generally the last in a series of negative clauses, and caps them by generalizing the negation to the set of imaginable

propositions of the same general sort as the preceding ones. In (247a) the preceding verb *jafa* 'cut, carve' is used in a mediopassive sense 'be cuttable', so here *haya foo* represents 'be X-able' for any similar transitive action verb, for example 'carve' or 'break'. In (247b), *haya foo* caps the series 'get tired ... , break a sweat ...' and by implication denotes the set of similar expressions involving fatigue or other discomfort.

Like *haya foo* in (247), interrogative *maa* 'what?' (§8.2.2) can be used as an apparent verb, as in (248).

- (248) *a-a* *maa ?*
 3SgS-Impf what?
 'She (is or does) **what?**' (= 'She whats?')

The 'whatchamacallit' words *haywana*, *hajje*, and *haya-jje* (§8.2.6) have the same capacity. When used as verbs, they are usually intransitive, but can also be transitive as in (249a-b).

- (249) a. *yee* *haya-jje* *ga*
 1SgS-Impf whatcha 3SgO
 'I will whatchamacallit him.'
- b. *nda* *no-o* *wir* *ka* *kar* *kupkup*,
 if 2SgS-Impf try Inf hit blade,
 musa *foo* *na* *no-o* *hajje* *ga* *nda ?*
 manner which? Foc 2SgS-Impf whatcha 3SgO with?
 'When you want to fashion a machete, how [*focus*] do you whatchamacallit it?'

One way to analyse (247-49) is to posit a phonologically unrealized low-content ("light") verb DO or BE. This would work fairly well in (247-48), where *haya foo* and *maa*, respectively, could be taken as postverbal direct objects. However, the analysis would not work in (249). In both (249a) and (249b), 3SgO *ga* is clearly the direct object, and as an enclitic pronominal must directly follow the verb (§9.1.1). There is no way to insert a DO verb into (249a-b) and produce a grammatical sentence. Therefore we must take the 'whatchamacallit?' word as a verb, not as an NP following a phonologically unexpressed verb.

One might compare the verb-like use of the ordinarily nominal *haya foo*, *maa*, and *haya-jje* with the use of original morphological nominalizations *diya-terey* and *seede-terey* as verbs, see (87f) in §4.6.4, above.

7.2 Mood-aspect-negation (MAN)

The categories distinguished by the MAN morphemes that intervene between subject NP and the verb are those in (250). The unmarked categories are expressed by the absence of a MAN morpheme.

- (250) a. mood: marked subjunctive versus unmarked indicative (§7.2.4);
 b. aspect: marked imperfective versus unmarked perfective (§7.2.2);
 c. negation: marked negative versus unmarked positive

We do not usually indicate the morphologically unmarked categories indicative, perfective, or positive in interlinear glosses.

Aside from the three basic binary oppositions in (250), there are some special forms for presentative imperfectives (§7.2.3), future tense (§7.2.5), and progressives (§7.2.6).

7.2.1 MAN morphemes and sequences

Aside from the fact that each categorial subsystem (mood, aspect, negation) has an unmarked value, there is one further neutralization (aspect is unmarked when the mood is subjunctive), and one case of morphological fusion of marked categories (Impf + Neg). The result is that surface MAN strings are extremely simple, only one basic combination being expressed by a two-morpheme sequence. The surface forms are those in (251), the MAN forms following the subject NP and immediately preceding the verb.

(251)	<u>MAN form</u>	<u>categorial value</u>	<u>interlinear label(s)</u>
	—	Indic Perf Pos	—
	<i>o - go</i>	Indic Impf Pos	Impf
	<i>na</i>	Indic Perf Neg	Neg
	<i>si</i>	Indic Impf Neg	ImpfNeg
	<i>ma</i>	Subju Pos	Subju
	<i>ma si</i>	Subju Neg	Subju Neg

We omit imperatives here (see §7.3).

It is clear that *o - go* is basically an imperfective marker, and that *ma* is a subjunctive modal. The distribution of the negatives *si* and *na* makes precise analysis difficult. On the one hand, indicative perfective negative *na* should be a simple Neg morpheme, since indicative and perfective are zero categories. This would imply that indicative imperfective negative *si* is the surface expression of two marked categories, Impf plus Neg (also interpreted as indicative due to the absence of subjunctive marking). This in turn would lead us to expect that the negative marker used with Subju *ma* would be the categorially simpler Neg *na* rather than the more complex ImpfNeg *si*, but in fact we get *si* in the negative subjunctive *ma si*. To avoid arbitrary reductionism, I conservatively label *na* as “Neg.” In the indicative, I label *si* as “ImpfNeg,” but in the combination *ma si* (where aspect is neutralized) I label *si* simply as “Neg.”

In KCh (particularly in Timbuktu), the variant *o* is vastly more common than the other variant *go*. Irregular contractions of *o* with a word-final vowel in the preceding (subject) NP or pronoun are discussed in §3.7.1.

As noted in §7.1.2 and §8.2.1, *o ~ go* and *si* are arguably identical to the locational quasi-verbs *goo* (positive) and *sii* (negative).

The 2Sg pronoun, elsewhere *ni*, shows some irregularities. The 2SgS (perfective) Neg sequence is *ma na* instead of *#ni na*. The 2Sg *ma* allomorph is also possibly present in 2SgSSubj *ma* (if reduced from *#ma ma*) and is clearly present in 2SgDat *mana ~ mane*. See §3.8.2 for discussion.

The 1Sg pronoun, usually *ay*, has an optional 1SgSSubj variant *ye* alongside regular *ay ma*, see §3.8.1.

7.2.2 Perfective and imperfective

The basic Impf morpheme is *o ~ go*. By far the predominant form in Timbuktu is *o*. The Impf morpheme follows the subject and is followed by the verb; the only morpheme which may intervene between Impf and the verb is Future *ta* (§7.2.5). Since all pronouns, NP-final grammatical morphemes (e.g. Def *di* or Pl *yo*), and SFoc *nga* end in a vowel, as do many noun stems, *o* usually undergoes VV-Contraction. In the case of pronouns, some of the contractions are irregular, see (35) in (§3.7.1).

The combination of Impf plus Neg is expressed by the portmanteau morpheme *si*, glossed ImpfNeg (§7.2.1). The imperfective-perfective opposition is neutralized in the subjunctive mood (§7.2.4), and with identificational quasi-verb *nono* (§7.1.1). It is only unreliably expressed with equational *či* 'be' (§7.1.1).

There are two situations where *o ~ go* is replaced by *goo*, and ImpfNeg *si* by *sii*. The first situation is in truncated replies to yes-no questions (§8.2.1). The second situation, in our preferred analysis, is locational predications of the type 'be (in a place)', where we get apparent quasi-verbs *goo* and *sii* (§7.1.2).

There is no true tense marking in KCh. However, the basic aspect categories, perfective (unmarked) and imperfective (*o ~ go*), have temporal as well as aspectual implications. We first consider ordinary sentences (without complementizers or special serial verbs), then discuss aspectual usage in specialized syntactic constructions. We focus first on action and process verbs, returning below to verbs of adjectival quality, which have special features.

In both hypothetical and counterfactual conditionals, the antecedent ('if ...') clause is most often perfective, though it may be imperfective under limited conditions. The consequent clause is always imperfective. Since the antecedent may contain more than one clause, the perfective-to-imperfective transition is often a crucial clue in identifying the break between antecedent and consequent (§9.5.1).

In ordinary past-tense narratives, perfective and imperfective may alternate in the fashion familiar from many languages. Perfective is associated with abrupt or otherwise bounded events of the sort that are usually foregrounded in narrative. Imperfective applies prototypically to prolonged, incomplete or otherwise unbounded situations or processes of the sort commonly used in narrative as backgrounds, their temporal intervals encompassing those of superimposed foregrounded events. Consider (252).

- (252) category
- | | | | | | | |
|----|-------------|--------|---------|------------|--------|--------------|
| a. | Perf | ay | fatta | banggu | woo | ra |
| | | 1SgS | exit | floodplain | Dem | Loc |
| b. | Impf | yee | koy | yer | doo, | |
| | | 1SgS | Impf | go | 1Pl | chez, |
| c. | Perf (2) | ay | kaa | hal | ay | too |
| | | 1SgS | come | until | 1SgS | arrive |
| | | | | | | here |
| d. | Rel | kaa | X | huu | di | gaa |
| | | Rel | X | house | Def | Presentative |
| | | | | | | be |
| e. | Perf, topic | ay | kaa | ta | gar, | farru |
| | | 1SgS | come | Inf | find, | clearing |
| | | | | | Dem | Def |
| | | | | | Top | all, |
| f. | Impf | a-a | ton | nda | allaa | feeji |
| | | 3SgS- | Impf | be-full | with | just |
| | | | | | sheep | white, |
| g. | Perf | ay | kaa | ta | gar | feeji |
| | | 1SgS | come | Inf | find | sheep |
| | | | | | Dem | Pl, |
| h. | Impf | boro | go | key | i | maasu |
| | | person | Impf | stand | 3Pl | amid |
| i. | Rel (Impf) | kaa | si | hima | bara | allaa |
| | | Rel | ImpfNeg | resemble | except | just |
| | | | | | | Fula |
| j. | Impf | a-a | dam | bomo-fendu | a-a | dam |
| | | 3SgS- | Impf | put | hat | 3SgS- |
| | | | | | | Impf |
| | | | | | | put |
| | | | | | | cloak ... |

'(a) I went out from that inundated field;

(b) I was going home;

(c) I came and arrived here

(d) where X's house is over here;

(e) I came and found (that), all that clearing,

(f) it was full of nothing but white sheep;

(g) I came and found (that) those sheep,

(h) someone was standing in the middle of them,

(i) who resembled nothing if not a Fula;

(j) he was wearing a straw hat and a wool cloak; ...'

Since this narrative describes a single episode, each foregrounded action is expressed in the perfective, while the imperfective is reserved for unbounded activities that provide background for these actions (252b) and for statives (252f,h,j).

When describing recurrent episodes from the past, there is a certain tension between two aspectual patterns. Since each event occurred many times, one tendency is to put all action clauses in the imperfective. The countervailing tendency is to assign aspect in a manner sensitive to local interclausal relations. Consider (253), a continuous textual sequence which describes a recurrent episode type from the distant past. Subordinated clauses (subjunctive, relative) are indented.

- (253) category
- a. topical NP *yinaa* *boro* *di* *yo*
old-time person Def Pl
- b. Perf *nda* *i* *wir* *ka* *hoo* *tarkunda*
if 3PIS seek Inf hunt elephant
wala *hilli-foo* *woo* *yo*,
or rhinoceros Dem Pl,
- c. Impf *guusu* *beer* *yo* *na* *i-i* *faani*,
pit big Pl Foc 3PIS-**Impf** dig,
- d. Impf *guusu* *woo* *yo* *i-i* *faani* *ga*,
pit Dem Pl 3PIS-**Impf** dig 3SgO
- e. Impf *i-i* *taasi* *subu-subu* *yo*,
3PIS-**Impf** seek Rdp-grass Pl,
nda *bundu-bundu* *yo*
and stick-Rdp Pl
- f. Impf *i-i* *daabu* *ga* *nda* *guusu* *di* *mee* *di*,
3PIS-**Impf** close 3SgO with pit Def mouth Def,
- g. Perf *nda* *a* *kaa* *kul*,
if 3SgS come all,
- h. Impf *nga* *ta* *o* *hongu* *dow* *di* *daa* *nono*
3SgF Top **Impf** think ground Def Emph it-is
- i. Rel (Impf) *kaa* *ga* *na* *ngu* *o* *dira*
Rel by Foc LogoSg **Impf** walk
- j. Impf (2) *a-a* *hanga* *a-a* *dira*
3SgS-**Impf** follow 3SgS-**Impf** walk
- k. Subju *hal* *a* *ma* *soroku* *guusu* *di* *ra*,
until 3SgS Subju fall-in pit Def Loc
- l. Perf *nda* *a* *faati* *ka* *soroku* *guusu* *di* *ra* *dee*,
if 3SgS do-already Inf fall-in pit Def Loc Emph,
- m. Perf (2) *nga* *ta* *a* *čee* *baa* *a* *kamba* *baa*
3SgF Top 3Sg foot break 3Sg hand break

'(a) The old time people, (b) when they wanted to hunt those elephants or rhinos, (c) it was large pits [*focus*] that they would dig; (d) those large pits they would dig it (earth), (e) they would look for some grasses and some sticks, (f) and they would cover up the opening of the pit with it; (g) when it (animal) came along, (h) it would think that it was (solid) ground (i) on which [*focus*] it was walking; (j) it would continue walking along, (k) until it fell into the pit; (l) when it had fallen into the pit, (m) as for it (animal), its leg(s) broke and its hand(s) broke.'

After the initial topical NP, we get a string of foregrounded imperfective action clauses (253c-f,h,j), interrupted by perfective clauses (253b,g,l) which denote background events that set the stage for the foregrounded actions. All of the perfective clauses are conditional antecedents in form, with *nda* 'if' (here better glossed 'when ...'). In (253l) the perfectivity is reinforced by the serial verb *faati* 'have already done'.

The relative clause (253i) is likewise imperfective. However, in (253m) the narrator shifts out of the (habitual) imperfective pattern. While the subjunctive in (253k) is aspect-neutral, and the perfective in (253l) functions like the English perfect ('had fallen'), the perfective (253m) denotes another foregrounded event parallel to the earlier imperfective clauses like (253c). This aspectual "inconsistency" is, of course, justified in the context of verbal art. During the narrative, dramatic tension gradually builds up. In the climactic clause (253m), the speaker shifts from the generic (habitual) imperfective into the more vivid and concrete perfective aspect.

Imperfective is naturally characteristic of "present-tense" sentences, i.e., those where the VP denotes a process or recurrent situation that overlaps the moment of speaking. Imperfective is, however, also normal for "future-tense" sentences, i.e., those where the VP denotes an eventuality whose entire temporal interval follows the moment of speaking. In translating non-narrative conversational recordings, it is sometimes difficult to determine whether a given imperfective clause should be translated with present or future tense (254).

- (254) *a-a* *goro* *doodi*
 3SgS-**Impf** sit there
 'He is sitting there' or 'He will sit there.'

If necessary, the future may be overtly marked by adding another morpheme *ta* to the **Impf** marker; see §7.2.5.

Expressions like 'a way [for X to escape]' or 'something [for X to eat]' include embedded clauses denoting hypothetical events. There is little need for aspectual oppositions within such embedded clauses. In KCh such expressions are formulated as relative clauses: 'a way_x [that X escape by *t_x*]' or 'something_x [that X eat *t_x*].' Impersonals like 'there is nothing to eat' are formulated with a specific agent, e.g. 'there is nothing_x [that we (you, they) eat *t_x*].' Both perfective (255a-b) and imperfective (255c) aspects are attested in the embedded clauses, with no obvious semantic difference. Since the **Impf** morpheme is expected on grounds of futurity (relative to the time interval of the main clause) and temporal unboundedness, the perfective variants can be interpreted as cases of optional neutralization into the morphologically unmarked category. The perfective option is more common in texts.

- (255) a. *ma* *taasi* *addibaara_x* [*ni* *lakal* *di* *ra*]
 2SgSSubju seek method_x [2Sg mind Def Loc]
 kaa *n* *fatta* *nda* *t_x*
 Rel 2SgS exit with *t_x*
 'You must seek in your mind a way (strategem)_x by which_x you get out.'

(255, cont.)

- b. *nda ay baba wirči*
 if 1Sg father be-sick
hal a si hin ka koy goy,
 until 3SgS ImpfNeg can Inf go work,
yer si ta duu haya foo kaa yer ηaa t_x
 1PIS ImpfNeg Fut get thing one Rel 1PIS eat t_x
 'If my father is sick and cannot go to work, we'll have nothing_x for
 us to eat t_x.'
- c. *yer na duu haya kul kaa yer o ηaa t_x*
 1PIS Neg get thing all Rel 1PIS Impf eat t_x
 'We couldn't find anything_x for us to eat t_x.'

Predicates of adjectival quality ('it is red') often appear in perfective form in apparent present-tense stative function. Imperfective aspect is also possible but is not required in the way that we might expect. One way to construe such examples is that the expressions literally denote past-tense transitions to the denoted quality, implying rather than denoting the continuing state. In other words, they function semantically like perfects ('it has become red'). Examples in (256).

- (256) a. *a boori*
 3SgS be-good
 'It is (=has become) good.'
- b. *a na jeen*
 3SgS Neg be-old
 'She is not (=has not become) old.'

For a marked Progressive construction, see §7.2.6.

7.2.3 Presentative imperfectives (preverbal *gaa* or *goo*)

The Presentative morpheme (always imperfective aspectually) is normally *gaa*. The variant *goo* (as in KS) is occasionally attested in combination with *kaa*, though in the KCh zone *goo kaa* occurs mainly in the upriver dialects. *gaa* should not be confused with a (usually clause-final) Emph particle *gaa* (<dialectal Arabic *gaf*, §8.5.7). The use of Presentative *gaa* emphasizes the proximate, abrupt perceptual manifestation to speaker (or addressee) of the referent of the subject NP, and it is most common with *kaa* 'come' though it is grammatical with any verb.

gaa replaces the usual Impf morpheme *o - go* in the preverbal MAN complex. Alternatively, we could say that *gaa* contracts with a following Impf *o* to give surface [ga:]. This is not supported by comparative data, and is dubious synchronically since the regular VV-Contraction rule (35) would produce #[go:] instead of [ga:]. However, there is one other case of //ao// contracting to surface [a:], namely 3Sg Impf *a-a* (§3.7.1), so a contraction analysis of *gaa* is not completely outlandish. We will, however, transcribe the Presentative as a simple morpheme *gaa*.

Examples of *gaa* are in (257).

- (257) a. *a gaa kaa*
 3SgS Presentative come
 'Here she comes!'
- b. *ay gaa kaa*
 1SgS Presentative come
 'I'm coming!' (French: j'arrive!)
- c. *a gaa goo [jirbi ra]*
 3SgS Presentative be [sleep Loc]
 'Here he is, asleep.' [cf. §7.2.6]
- d. *a gaa hina taas*
 3SgS Presentative cook meal
 'Here she is cooking a meal.'
- e. *a gaa goo*
 3SgS Presentative be
 'Here he (she) is.'

Note that *gaa* is compatible with a following locational quasi-verb *goo* (§7.1.1), as in (257c,e). In the combinations like (257d) with a more substantial VP, the English translation is fairly awkward, but French is better: *La voilà qui prépare un repas.*

7.2.4 Subjunctive mood

I use the term "subjunctive" to denote the mood category expressed by preverbal MAN morpheme *ma*. The negative counterpart is *ma si*. *si* is elsewhere specifically Imperfective Negative (ImpfNeg), but in *ma si* we gloss it simply as "Neg."

Unwary readers of texts might confuse Subju *ma* with the 2SgS allomorph *ma*. When *ma* is preceded by an overt subject NP (or pronominal), it can only be the Subju morpheme. The 2SgS interpretation is possible only when no other subject NP is present. Moreover, Subju *ma* is always followed either by the verb or by Neg *si* plus the verb, while 2Sg *ma* occurs visibly only in 2Sg (perfective) Neg *ma na VERB ...*. When 2SgS and Subju combine, we get a simple *ma VERB ...*, and one could argue about whether the *ma* in this construction is a 2SgS or Subju morpheme; we gloss it in this case as "2SgSubju" (§3.8.3).

The only other irregular subjunctive form is the optional, and fairly uncommon, 1SgSubju variant *ye*. The more common variant, *ay ma*, is regular in form. Some subjunctive examples are in (258).

- (258) a. *boro woo di ma kaa*
 person Dem Def **Subju** come
 '(that) this person come'
- b. *ay ma guna wor*
 1SgS **Subju** see 2PIO
 '(that) I see you(Pl)'
- c. *yer ma si goro nee*
 1PlS **Subju** Neg sit here
 '(that) we not sit (=live) here'
- d. *nda boro fatta haya se nin,*
 if person exit thing Dat only,
ma dam ga nda a fondo di
 2SgSSubju do 3SgO with 3Sg path Def
 'If one (=you) goes out (to the fields) for something, you should do it
 the right way.'
- e. *ni si yadda ay ma koy ka nan ni*
 2SgS ImpfNeg consent 1SgS **Subju** go Inf leave 2SgO
 'You do not consent that I go leave you.'
- f. *bara ye yee ka koy kow kūfa di*
 must 1SgSSubju return Inf go remove curiosity Def
 'I had to go back and remove (=satisfy) the curiosity.'

The following are the primary syntactic-semantic uses of subjunctive clauses:

- complements of particular matrix-clause verbs, especially desideratives ('want');
- complements of sentence-initial obligational *bara* 'must';
- jussive (reported imperative) complements in reported speech;
- associated with particular complementizers, chiefly *hal* 'so that' and *bilaa* 'without';
- in the "delayed" scope of a distant negation;
- in irrealis contexts like the above but with no overt subjunctive trigger.

Examples and detailed syntactic analysis are given in the relevant subsections of §7.2. We may comment, though, that in comparison with "subjunctive" moods in some other languages, in KCh the subjunctive clusters around the deontic (desiderative, obligational, purposive) area of modal space, rather than the epistemic area. Moreover, KCh does not make frequent use of the subjunctive to express habitual aspect.

7.2.5 Future *ta*

We disregard here the very common use of *ta* as a weak Top particle after pronouns or other NPs (see §8.4.3). The *ta* we are interested in here is a particle that occurs between Impf *o* ~ *go*, ImpfNeg *si*, or (rarely) Subju *ma* and the verb; note that in this position it cannot be mis-parsed as the Top morpheme. To demonstrate that the two morphemes are independent of each other, we note that both occur in the same clause

ngi ta si ta tun ... in (259), where the first *ta* is the Top morpheme attached to the pronoun *ngi* (variant of 3PIF *ngi-yo*) and the second *ta* is the preverbal one.

- (259) *[woo bine] o gar ngi ta na tun,*
 Dem Top Impf find 3PIF Top Neg arise,
ngi ta si ta tun bara quatre heures ...
 3PIF Top ImpfNeg Fut arise except 4:00
 'That (=my departure) finds that (=occurs while) they have not gotten up; they won't get up until 4:00.'

I gloss preverbal *ta* as Future (Fut). However, many statements denoting future events are expressed in the simple imperfective without *ta*, as indicated in §7.2.2. Examples of Fut *ta* are in (260).

- (260) a. *nda hirri dam kul*
 if thunder be-done all
i-i har 'woo go ta kaa hew'
 3PIS-Impf say 'Dem Impf Fut become wind'
 'When thunder occurs, they say, "that will (soon) turn into a windstorm."'
- b. *wor guna čee čiina woo, woo nga o ta gana-ndi yer*
 2PIS see foot small Dem, Dem SFoc Impf Fut move-Caus 1PIO
 'You(Pl) have seen this little foot(-print); it's this [focus] that will (eventually) expel us.'
- c. *hay kul kaa kali nga o ta kamba*
 thing all Rel pen SFoc Impf Fut hold
boro o hin ka gaay ga
 person Impf can Inf restrain 3SgO
 'Anything a pen [focus] will (=can) hold, a person can restrain (=tame, control) it.'
- d. *wala mey nga o garow ga ngu wane,*
 Interrog who? SFoc Impf lend 3SgO 3ReflSg Poss,
a ma ta hasara ga ngu se yaada?
 3SgO Subju Fut waste 3SgO 3ReflSg Dat for-nothing?
 'Who_x would lend his_x (money) to him_y, for him_y to subsequently waste it on himself_y, for nothing?'

Note the range of "future" nuances here: (260a) clearly involves near future (thunder heralds an approaching dust-storm), (260b) clearly involves distant future (animals in the legendary past foresee that humans will eventually master them), (260c) clearly involves a diffuse potentiality, and (260d) is in an irrealis context.

This use of *ta* is confined to the imperfective aspect. This makes sense grammatically if we have correctly identified *ta* as an optional Fut marker, since the imperfective is required in main clauses with future time reference anyway. Requiring Impf *o - go* (or *si*) is also functionally convenient, since it excludes any possible misparsing of *ta* as Top *ta*.

Unlike the other MAN morphemes, *ta* may occur in infinitival VPs after Inf morpheme *ka*. Though the combination is fairly rare, we can cite the textual example (261).

- (261) *a* *yee-kate* *ka ta filla* [*ngu* *goy* *di*]
 3SgS return-CentripInf Fut repeat [3Ref1Sg work Def]
 ‘He has come back to repeat (=continue) his work.’

Since *kaa* ‘come’ can be associated with future time reference, the fact that *kaa* has a special form *kaa ta* when used as a serial verb with following VP (§9.7.7) is interesting. One might well interpret *ta* in *kaa ta VP* as a special case of Fut *ta*. See §9.7.7 for discussion.

7.2.6 Marked Progressive constructions

In addition to the grammaticalized imperfective aspect category, a stronger durative-progressive construction is available, though its text frequency is fairly low. This involves locational *goo* ‘be’ and the Loc form of a verbal noun (which is often zero-derived from the underlying verb). An example is (262); see also (257c) in §7.2.3, above.

- (262) *a* *goo* [*kaa* *ra*]
 3SgS be [come Loc]
 ‘She is in the process of coming (=is on her way).’

Marked duratives in narrative (‘I kept waiting, until finally ...’) are usually expressed in Timbuktu by *čindi* as a serial verb; see (592a) in §9.7.5. For an alternative dialectal construction with initial *jaa* used in nearby villages, see (522) in §9.5.6.

7.3 Imperatives

Special Impera[tive] forms are limited to second person subject and occur in the positive only. Expressions used as negative imperatives are identical to negated subjunctive clauses. It is possible to distinguish the negative-imperative usage from other subjunctive uses on the grounds that negative imperatives require no external subjunctive trigger.

There is no aspect marking in imperatives; Impf *o* is not allowed. The forms are shown in (263), with indicative counterparts (perfective aspect) provided for comparison.

(263)			<u>positive</u>	<u>negative</u>
	indicative	2SgS	<i>ni</i>	<i>ma na</i>
		2PlS	<i>wor ~ war</i>	<i>wor (~ war) na</i>
	imperative	2SgImpera	∅	<i>ma si</i>
		2PlImpera	<i>wo</i>	<i>wor (~ war) ma si</i>

While the usual 2Pl morpheme *wor ~ war* has variable vocalism, the vowel in 2PlImpera *wo* is consistently and clearly *o*.

Examples in (264) with *kaa* ‘come’, *koy* ‘go’, and *nee* ‘here’.

- (264) a. *kaa nee!* ‘Come here!’ (Sg)
 b. *wo kaa nee!* ‘Come here!’ (Pl)
 c. *ma si koy!* ‘Don’t go!’ (Sg)

In spite of the zero 2SgImpera form ∅, the syntax treats the subject as 2Sg, as the usual agreement tests show. In (265), *bere* is a reflexive verb, whose direct object is coindexed with its subject (§10.2.3). Note the 2SgO clitic.

- (265) *bere ni nda čirow!*
transform 2SgO with bird!
 ‘Turn yourself into a bird!’

The locational quasi-verbs *goo* ‘be’ and *sii* ‘not be’ (§7.1.2) are not used in imperatives. Instead, we get a subjunctive form of *bara* ‘exist, be’, as in (266).

- (266) *ma bara nee suba*
 2SgSSubju **exist** here tomorrow
 ‘Be here tomorrow!’

Chapter 8

Discourse-functional constructions and relativization

In this chapter we consider overtly marked discourse functions (DF) such as topic, focus, and emphasis, along with other syntactic phenomena that can be thought of as involving fronting of a NP or other constituent from the core of a sentence.

Formally, DF marking involves a) a concrete DF morpheme or b) fronting or preposing a constituent, or both. The Emphatic categories, along with 'only', 'also', and 'like', are expressed by adding a morpheme to a constituent in an already well-formed sentence. Topicality is expressed by various combinations of preposing and morphemic marking. Focus (as we use the term here) is expressed by a clause-level syntactic process. There can be at most one focused constituent (in this sense), while emphasis and topicality are usually more local and are easier to multiply and combine.

Although we cannot here provide an exhaustive coverage of the discourse uses of all of these forms, we will comment on important aspects of their syntax and semantics. In particular, we will note that some of the DF particles, such as *mo* 'only', can have either local (e.g., NP) or higher-level (clausal or pragmatic) scope.

8.1 Focus constructions

Many sentences have no special focus marking. There are, however, productive devices for marking a particular non-verb constituent (pronoun, full NP, PP, lexical adverbial) as grammatical "focus." The semantic-pragmatic point of marking a focus is to highlight it as a choice made among two or more logically possible options. The focused constituent therefore bears the most contestable, unexpected, or novel information. WH-questions, and answers to them, are the prototypical examples.

Syntactically, the focused constituent is fronted to the left of the obligatory core of the sentence (subject NP, MAN morphemes, verb). In most cases a focus morpheme [SFoc or Foc] is inserted between the focused constituent and the core of the sentence. Nonsubject and subject focus constructions must be distinguished.

8.1.1 Nonsubject focus constructions

Suppose that X is some constituent following the verb, as shown schematically in (267a). The corresponding focus construction is (267b).

- (267) a. subject NP - MAN morphemes - verb - ... X ...
b. X - *na* - subject NP - MAN morphemes - verb - ... t_x ...

Here " t_x " is an empty category ("trace") coindexed with X. We do not insist on the "reality" of such empty categories but they are at least expositoryly useful. We will see that in some cases there is a resumptive third person pronoun instead of a trace.

The Foc marker *na* precedes the subject NP and should not be confused with the Neg MAN morpheme *na*, which always occurs directly preceding a verb. Focus *na* in (267b) can be omitted under some circumstances. Some examples of the focus construction are given in (268).

- (268) a. *saa kaa yer susum-di ga [saa di]*
 time Rel 1PIS move 3SgO [time Def]
na yer o duu ka kaa ta goro
 Foc 1PIS Impf proceed Inf come Inf sit
 'When we have hauled it (stone) away, it's then_x [focus] that we proceed to come and sit *t_x*...'
- b. *[woo yo] na yer o hīsa gi [nda t]*
 [Dem Pl] Foc 1PIS Impf make 3PIO [with *t*]
 'It is those_x (=various materials) [focus] that we make them (=crates) with *t_x*.'
- c. *[mobil se] na yer har yer o kow ga*
 [vehicle Dat] Foc 1PIS say 1PIS Impf take 3SgO
 'It's [to the truck (driver)]_x [focus] that we said we'll haul it *t_x*.'
- d. *woo di na wirči woo di o din t*
 Dem Def Foc disease Dem Def Impf take *t*
 'It's that one_x (=weak donkey) [focus] that this disease afflicts *t_x*.'
- e. *hal ma hongu kala, huri na a kaa t*
 until 2SgSSubju believe that, knife Foc 3SgS become *t*
 '... so you might think that, it's a knife_x [focus] that it (=metal) has become *t_x*.'
- f. *bere-bere woo daa na a čī t*
 Rdp-change Dem Emph Foc 3SgS be *t*
 '[Precisely this instability]_x [focus] is what it is *t_x*.'

Here the traces occur in a variety of grammatical functions: temporal adverb (268a), instrumental (268b), Dat PP (268c), direct object (268d-f). The NP following equational quasi-verb *či* (268f) is no different in this respect from other direct objects. Note that postpositions like Dat *se* are fronted along with their complement NP (268c), but that Instr-Comit *nda* (§5.11.3) does not move and remains stranded in postverbal position, normally directly after any postverbal pronominals (268b).

When the fronted constituent functions as a spatiotemporal adverb, and would therefore ideally appear as a PP with a spatial postposition, the postposition is sometimes simply omitted and the NP by itself appears as the fronted constituent, as in (269). Omission of an implied spatial postposition can occur even when the NP remains in its postverbal position (§5.12, §6.1.3), so no special postposition-deletion process is needed for the focalization construction. We will see below, discussing (279-80), that when an entire PP appears in focus position, the Focus morpheme *na* is sometimes omitted.

- (269) *nda n kaa [a huu] na no-o čirkaare*
 if 2SgS come [3Sg house] **Foc** 2SgS-Impf breakfast
 'If you(Sg) come, it's [(in) his house]_x [focus] that you(Sg)'ll eat
 breakfast *t_x*.'

The focused constituent may be a complex NP including a relative clause (270).

- (270) *[handi di kaa n kow gi] na no-o baa gi*
 [day Def Rel 2SgS take 3PIO] **Foc** 2SgS-Impf break 3PIO
 'It's [on the (same) day that you pick them (=melons)]_x [focus] that
 you break them *t_x*.'

The material following the focused constituent may also be rather complex. The fronted constituent and the clause containing its trace may be separated by intervening material, such as a conjoined clause that does not contain a coindexed trace (271).

- (271) *[hay di kaa yer o duu a ra daa] na*
 [thing Def Rel 1PlS Impf get 3Sg Loc Emph] **Foc**
yer o kaa, yer o jamna t
 1PlS Impf come, 1PlS Impf share *t*
 '[Whatever we earn in (=as a result of) it]_x [focus] we come (and) we
 share *t_x*.'

When the trace is widely separated from the fronted constituent, or is located in a subordinated clause, it may be replaced by a resumptive pronoun (272).

- (272) a. *jombu-jombu woo di ye na nda yer gurguma*
 Rdp-debris Dem Def Pl **Foc** if 1PlS bend-over
yer guna gi yer taar gi,
 1PlS see **3PIO** 1PlS touch **3PIO**
yer o gar kuntur keyna yo goo a ra
 1PlS Impf find chunk small Pl be 3Sg Loc
 'It's [those bits_x (of stone, brought out by ants)]_x [focus] that, if we
 bend over and we look at them_x and we touch them_x, we find that
 small chunks (of stone) are in it.'
- b. *tabaa na [ay maata kaa [a ben ay ga]]*
 tobacco **Foc** [1SgS notice that [3SgS end 1Sg on]]
 'It's tobacco_x [focus] that I notice that I am out of it_x.'

In (272a), the NP positions clearly coindexed with the focused constituent are in the second and third clauses of a three-clause sequence ('we bend over, we look at them_x, we touch them_x') which functions *en bloc* as a conditional antecedent bound by *nda* 'if'. Note *gi* 'them' twice as a resumptive pronoun coindexed with the focused constituent 'bits'. There is no clearly coindexed trace in the main clause ('we find that small chunks are in it'), although one might argue adventurously that 'bits' occurs

logically in this clause in some way ('on the basis of ...'). In (272b), the resumptive pronoun 'it' is the subject of a 'that' clause subordinated to the verb 'notice'.

There remains the question whether Foc morpheme *na* forms a constituent with the preceding fronted constituent, serves as a complementizer introducing the following core sentence, or has an independent syntactic status. In other words, is English *Beans I like* or clefted *It's beans that I like* (with complementizer *that*) the better syntactic parallel to the KCh *na* construction? I find it difficult to make this decision on empirical rather than theory-internal grounds.

In the focus construction, the fronted constituent and the core sentence are, in general, tightly knit prosodically. There are occasional textual examples where one detects a brief pause after *na*, but hesitations can also occur after *that* in English clefts due to processing considerations, cf. the free translation of (272b). Examples like (271) could be taken as evidence that *na* is bracketed with the preceding focalized constituent, but only if we consider the material intervening between *na* and the trace-containing clause as being completely outside the focalization construction. However, it is preferable to bracket the type in (271) as 'NP_x *na* [[we come] and [we share *t_x*]]' with the 'come' and 'share' clauses fused together (cf. §9.5.2), in which case we have no new information about how to bracket the *na*.

If *na* formed a constituent with the focalized constituent, it would be reasonable to expect the two to occur together in truncated replies to WH questions. But *na* cannot surface after a bare focalized constituent. This is shown by the exchange in (273).

- (273) Q: *mey na a kar t ?*
 who? Foc 3SgS hit *t ?*
 'Whom_x did she hit *t_x* ?'
 A: *ay*
 'Me.'

#*ay na* with Foc *na* would be ungrammatical. (A morphemically distinct *ay na* 'no I didn't' with Neg *na* functions as an echoic answer to a yes-no question, §8.2.1).

On the other hand, if *na* were a complementizer bracketed with the core clause following the focalized constituent, we might expect *na* to be repeated in a second core clause attached to the same fronted focus. However, this putative construction, of the type #[Millet pudding [*na* we bought] (and) [*na* we ate]], did not occur in texts and was rejected by informants. Instead, we get a single *na* directly following the focused constituent, before the two parallel core clauses, as in (274). This casts doubt on the complementizer analysis of *na*.

- (274) *hāyši di na [ay kar t] [ay wii t]*
 dog Def Foc [1SgS hit *t*] [1SgS kill *t*]
 'It was the dog_x [focus] that I struck *t_x* .and (that) I killed *t_x* .'

So *na* always occurs in the seam between the fronted constituent and the first following core sentence. This suggests that it has an independent syntactic position, not tightly bracketed with either.

(275) shows that the trace may be in an infinitival VP that is separated from the focalized NP by an intervening serial verb.

- (275) *hāyši* *di* *na* *ay* *baa* *ka* *wii* *t*
 dog Def **Foc** 1SgS want **Inf** kill *t*
 ‘It was the dog_x [*focus*] that I nearly killed *t_x* .’

In (274), the two post-focus main clauses have the same subject, and in (275) we have a serial verb construction where both the serial verb *baa* and the VP *ka wii* are required to share a logical subject. Attempts to elicit variants of the type (274) with two distinct subject NPs (‘What [*focus*] was it that I saw *t_x* and you heard *t_x* ?’, or ‘It was the dog_x [*focus*] that I hit *t_x* and you killed *t_x*’) produced asymmetrical constructions (276a-b).

- (276) a. *maa* *na* [*ay* *guna* *t*] [*kaa* *n* *ta* *mom* *t*] ?
 what? **Foc** [1SgS see *t*] [**Rel** 2Sg Top hear *t*] ?
 ‘What_x [*focus*] did I see *t_x* that you heard *t_x* ?’
 b. *kooro* *na* *ay* *maata* *t* [*ni* *ta* *guna* *ga*]
 hyena **Foc** 1SgS perceive *t* [2Sg Top see **3SgO**]
 ‘It was the hyena_x [*focus*] that I perceived that you saw it_x.’
 (from cue: ‘It was the hyena that I heard and you saw.’)

In (276a), the second of the hoped-for parallel main clauses took the form of a delayed relative clause with the focalized NP as head. In (276b), the ‘see’ clause with 2Sg subject is either an embedded indicative complement of *maata* or a clause outside the scope of the focalization construction; in any event, we get an overt 3SgO pronoun *ga* instead of a trace.

Wide-scope negation of a focalization construction (‘It was not X that ...’) is expressed by embedding the entire positive focus construction under the higher-level negation *a na či* ... ‘it is not (the case) that ...’ (§9.3.2), as in (277).

- (277) *a* *na* *či* [[*kooro* *di* *kaa* *ay* *guna*] *na*
 3SgS **Neg** **be** [[hyena Def Rel 1SgS see] **Foc**
 ni *maata* *t*]
 2SgS hear *t*]
 ‘It was not [the hyena_x which I saw *t_x*] [*focus*] that you heard *t_x* .’

I.e., ‘you heard something other than the hyena which I saw.’

This is logically and syntactically distinct from a construction with a focus extracted from a core sentence with narrow scope negation, as in (278).

- (278) *kooro* *di* *na* *ay* *na* *wii* *t*
 hyena Def **Foc** 1SgS **Neg** kill *t*
 ‘It was the hyena_x [*focus*] that I did not kill *t_x* .’

A focused PP often omits the Foc morpheme *na*. When the postposition is *kuna*, as in (279), one can suspect haplology, *kuna na* reducing to surface [kuna]. In this case it is debatable which of the two underlying *na* syllables is deleted.

- (279) *wallaahi bara [[[yerkoy hinni] nda [a mise]] daa kuna]*
 by-God must [[[God pity] with [3Sg manner]] Emph Loc]
yer o kamba gi
 1PlS Impf hold 3PIO
 'By God, it is [in God's pity and (in) His manner] [*focus*] that we
 treat them (=donkeys).'

However, Foc *na* can also be omitted after some other postpositions, though perhaps not so frequently as with *kuna*. It is often omitted after Dat *se* even when the dative PP functions as an argument of the verb, as with *mey se* 'to whom?' in a clause with verb 'give', see (295c) in §8.2.2. *maa se* 'why?' usually omits *na*, though this is partly because REASON as a thematic relation may be syntactically external to the core clause within which focalization operate, see discussion of (307c) in §8.2.3, below. Omission of *na* is not usual after the other Locative postposition, *ra*, as seen in (280).

- (280) [*nga kamba ra*] *na* *a* *goo* *t*
 [3SgF hand Loc] Foc 3SgS be *t_x*
 'It's [in His (God's) hand_x] [*focus*] that it (=rain) is *t_x*.'

8.1.2 Subject focus constructions

The *na* construction (preceding section) is used for focus on any NP, PP, or adverbial that would ordinarily follow the verb. This includes all NPs other than the subject, which alone of basic arguments always precedes the verb. When the subject NP is focused, simple fronting of this NP (leaving a coindexed trace) would be string-vacuous, (281a) being converted into (281b):

- (281) a. [NP] - MAN morphemes - verb - ...
 b. [NP]_x - *t_x* - MAN morphemes - verb - ...

If the Foc morpheme *na* were added to (281b) in order to differentiate the subject-focus construction (281b) from the simple (281a), there would be a serious risk of ambiguity, since *na* is also the (perfective) Neg morpheme. A subject-focus construction (282a), with null MAN marking (indicative perfective positive) would be homophonous with a simple Neg sentence (282b).

- (282) a. [NP]_x - *na* - *t_x* - (null MAN marking) - verb - ...
 b. [NP] - *na* - verb - ...

Whether or not such language-specific functional considerations played the role of evolutionary filter, preventing (281b) or (282a) from becoming established as the basic subject-focus construction, Koyra Chiina has a quite different construction (283).

(283) [NP] - *ɲga* - MAN morphemes - verb - ...

The *ɲga* morpheme, which we label SFoc (Subject Focus), can arguably be morphemically identified with the 3SgF morpheme *ɲga* (Pl *ɲgi-yo*), see §4.1.1 and §8.4. However, in the subject-focus construction (283), the *ɲga* is invariant, regardless of the pronominal person or number of the fronted subject. The fronted subject may itself be a true 3SgF *ɲga* as in (284a). We have a singular NP in (284b), a plural NP in (284c), and a 1PIS pronoun in (284d).

- (284) a. *haya di yo kul, ɲga ɲga taka gi*
 thing Def Pl all, 3SgF SFoc create 3PIO
 'All things, it's He (=God) [focus] who created them.'
- b. *jaman di ɲga kata ga*
 season Def SFoc bring 3SgO
 'It's the season (=current situation) [focus] which brought it about.'
- c. [*yer junubu yo*] *ɲga jendi baana ma kar*
 [1Pl sin Pl] SFoc prevent rain Subju hit
 'It's our sins [focus] that have prevented rain from falling.'
- d. [*margazæ woo di yo*] *yer daa ɲga goy gi*
 [warehouse Dem Def Pl] 1PIS Emph SFoc work 3PIO
 'Those warehouses, it was we ourselves [focus] who worked on (=built) them.'

In (285a-d), a nonzero MAN morpheme intervenes between *ɲga* and the verb, as the schema in (283) allows. The nonzero MAN morphemes are Subju *ma* (285a), ImpfNeg *si* (285b), Neg *na* (285c), and Impf *o* (285d). In the cases with negation, the negative has scope only over the backgrounded core sentence. Thus (285c) means 'it's my whole head that did not bring it up' rather than 'it's not my whole head that brought it up.'

- (285) a. *nda a na či jaman di ɲga ma hasara*
 if 3SgS Neg be season Def SFoc Subju be-ruined
 'if it is not (the case that) it is [the times (= economic situation)]
 [focus] which are bad'
- b. *i hayni di ye nin ɲga si hin ka kaa a-foo*
 3Pl millet Def Pl only SFoc ImpfNegcan Inf become Absol-one
 'Its [just their (millet) grains] [focus] that cannot turn out the same.'
- c. *sanda ay bomo di kul ɲga na jow-kata ga*
 like 1Sg head Def all SFoc Neg take-Centrip 3SgO
 'That is to say, it's [my whole head] [focus] that did not bring it up
 (=pay attention).'

- d. a čī haya kaa
 3SgS be thing Rel
 ntende ŋga o fatta-ndi ga dow di čire
 ants SFoc Impf exit-Caus 3SgO sand Def under
 'It (=limestone) is a thing which it's ants [*focus*] that bring it out
 from under the ground.'

The combination *ŋga* plus Impf *o* is transcribed *ŋga o* but pronounced [ŋgo:]. It is homophonous with *ŋgu o*, consisting of Logo/3ReflSg pronoun plus Impf.

SFoc *ŋga* always appears in the seam between an overt subject NP (which may be a pronoun) and an immediately following overt core sentence. This is the same pattern we saw in the preceding section with Foc *na*. Therefore *ŋga* is not present in truncated (echoic) answers, consisting of just the focalized subject NP, to WH ('who?', 'what?') questions (286).

- (286) Q: *mey ŋga koy?*
 who? SFoc go?
 'Who [*focus*] went?'
 A: *ay*
 'I (did).'

As with Foc *na*, presumably *ŋga* would not be repeated before the second of two parallel main clauses associated with a single fronted focal NP. However, this point may be moot, since efforts to elicit such sentences always produced asymmetrical constructions in which the second clause appeared in the form of an infinitival VP beginning with Inf *ka*, as in (287).

- (287) *mey ŋga o ta kar hāyši di [ka wii muši di]?*
 who? SFoc Impf Fut hit dog Def [Inf kill cat Def]?
 'Who [*focus*] will hit the dog to kill the cat?'
 (from cue: 'Who will hit the dog and kill the cat?')

In short, SFoc *ŋga* parallels non-subject Foc *na*, which likewise occurs only between a nonzero fronted constituent and a nonzero core sentence. So we have the same difficulty deciding how *ŋga* is to be bracketed syntactically that we had with *na*.

However, in the case of *ŋga* there is an additional option, namely, to treat it as the surface subject of the core sentence. Note that SFoc *ŋga* directly precedes MAN morphemes (if any) and then the verb, exactly as does the subject NP of a simple sentence. It would then be a kind of specialized, resumptive pronoun invariant in form but nonetheless coindexed with the NP fronted out of its original subject position. The homophony in the Timbuktu dialect between SFoc *ŋga* and 3SgF *ŋga* is interesting in this connection.

One difference between SFoc *ŋga* and Foc *na* is that *ŋga* does not allow intervening clauses between itself and the core sentence for which the fronted NP is the logical subject. I have no textual examples with an intervening conditional antecedent (#'It's millet, *ŋga*, if you cook it, *t_x* gets soft'), nor any examples with an intervening

conjoined sentence that has a distinct subject NP (#‘It’s millet, *ŋga* you eat it, and *t_x* is delicious’). In other words, SFoc *ŋga* occurs in precisely the surface positions where the original subject NP would occur had it not been fronted. The idea that *ŋga* is a special resumptive subject pronoun would also account for its absence in truncated answers (#‘My mother *ŋga*’) noted above. The one weakness of this analysis is that, since SFoc *ŋga* must immediately follow the fronted constituent with no intervening material, the fronting process for subject-focus must be constrained in a way that does not apply to non-subject-focus fronting (see end of preceding section).

As with Foc *na*, wide-scope negation of SFoc constructions (‘it was not X [*focus*] who ...’) requires a higher-level negation *a na či* ... ‘it is not (the case) that ...’ under which is embedded the positive focalization construction, as in (288a). The logically distinct type with narrow-scope negation is illustrated in (288b).

- (288) a. *a na či [ay ŋga o ta wii hāyši di]*
 3SgS Neg be [1Sg SFoc Impf Fut kill dog Def]
 ‘It’s not I [*focus*] who will kill the dog.’
- b. *mey ŋga na wii [war ra] rebelle foo?*
 who? SFoc Neg kill [2Pl Loc] rebel one?
 ‘Who among you (=which of you) has not killed a rebel?’

In (288b), the *war ra* ‘in you(Pl)’ is a delayed partitive for the fronted ‘who?’.

The identificational quasi-verb *nono* (§7.1.1), as in *Y nono* ‘it is (a) Y,’ does not permit its sole overt NP to be focalized. We therefore cannot tell on this basis whether the “Y” NP is a syntactic subject (requiring SFoc *ŋga*) or a nonsubject (requiring Foc *na*). It is also not possible to focalize out of the main clause in an impersonal *bara* construction, of the form *bara* plus embedded clause (§7.1.3). This is an obvious consequence of the lack of any NP in the main (as opposed to embedded) clause.

On the other hand, focalization is possible with the locational quasi-verbs, positive *goo* and negative *sii* (§7.1.2), and with the identificational copula verb *či* (§7.1.1). See the interrogative examples (295a) and (296b-c) in §8.2.2, below. However, in the case of *či*, an emphatic and apparently focalized subject NP may dispense with SFoc *ŋga*, as seen by the absence of this morpheme in (289).

- (289) *[alhawa di yo daa] či woo di*
 [passion Def Pl Emph] be Dem Def
 ‘Passion(s) is exactly what that (behavior) is.’

8.2 Questions and answers

8.2.1 Polar (yes-no) questions and answers

KCh has no reliable polar interrogative morpheme. The usual simple polar question has the form of an assertion, usually with rising terminal intonation (290a). Some younger speakers use clause-initial *eskə* (Fr *est-ce que ...?*), which is widespread in

Malian languages. A morpheme *kona* (variants *koni*, *kooni*) is attested as an apparent clause-initial polar interrogative marker (290b), but it is very rare in my data and is probably a dialectal borrowing from Fulfulde.

- (290) a. [saa di] jiiroo wor o tammahaa
 [time Def] this-year 2PIS Impf hope
 kaa wor o fari hondu?
 that 2PIS Impf farm dune?
 'So, this year you(Pl) hope that you will raise crops on the dune?'
- b. aywa, kona war na tey?
 well, yes-no? 2PIS Neg get-wet
 'Well, didn't you(Pl) get wet?'

When a set of alternative propositions is presented to the addressee, the conjunction *wala* 'or' is normal at the beginning of the noninitial clauses, as in (291).

- (291) a wane i-boyro di ċi
 3Sg Poss Absol-good Def be
 sukal di ma hīsa ka mom a ra,
 sugar Def Subju do-very Inf be-sensed 3Sg Loc,
 wala a ma sawa a ra, wala
 or 3SgS Subju equal 3Sg Loc, or
 fita di gaabi di ma bisa sukal di gaabi di?
 leaf Def power Def Subju pass sugar Def power Def?
 'Is it best for it (=tea) that sugar be very noticeable in it, or that it (=sugar) be moderate in it, or that the power (=taste) of the (tea) leaves exceed the power of the sugar?'

In the case of simple polar questions, there is a logical choice between a proposed assertion and its negation. 'Did the blacksmith go to the market?' asks the addressee to choose between 'The blacksmith went to the market' and 'The blacksmith did not go to the market.' The full logical form of the question is therefore something like 'Is "the blacksmith went to the market" true, or is "the blacksmith did not go to the market" true?' In KCh, even though the second disjunct is normally omitted, the 'or' conjunction *wala* is frequently added to the first proposition (292).

- (292) a. ċiimi daa nono wala?
 truth Emph it-is or?
 'It's quite true, or?'
- b. bor mey a ra haya kaa n har wala?
 person have 3Sg Loc thing Rel 2SgS say or?
 'One(=you) has something that you have said in (=about) it, or?'

Although *wala* logically connects two disjunct clauses, in (292) it functions indirectly as a kind of polar interrogative marker. German ..., *oder?* '..., or?' following an affirmative sentence has a similar polar interrogative function.

The morpheme *ŋga!* can be used in isolation to mean 'yes!'. Note that *ŋga* elsewhere functions as the 3SgF pronoun, and as the SFoc (subject-focus) morpheme, but the etymological connection of the 'yes!' interjection to these grammatical morphemes is unclear. The form *kalaa!* means 'no!', again as an isolation form.

However, *ŋga!* and *kalaa!* are not the preferred responses to polar questions. Instead, wherever possible, the response to a yes-no question is a truncated echo clause consisting of a pronominal subject and a nonzero MAN morpheme, the remainder of the clause being omitted. (293a) shows positive and negative responses to a question in imperfective aspect, while (293b) shows a negative reply to a question in the unmarked perfective aspect.

- (293) a. Q: *no-o* *dira* *suba* *wala?*
 2SgS-Impf travel tomorrow or?
 'Will you(Sg) travel tomorrow?'
 A: *ay* *goo*
 1SgS Impf
 '(Yes) I will.'
 A: *ay* *sii*
 1SgS ImpfNeg
 '(No) I will not.'
- b. Q: *n* *dira* *bii* *wala?*
 2SgS travel yesterday or?
 'Did you travel yesterday?'
 A: *ay* *na*
 1SgS Neg
 '(No) I did not.'

It is possible to add the Emph particle *yaa* to such an answer, hence *ay goo yaa* 'Yes I will.'

The one case where such a truncated answer is not possible is a positive answer to a perfective aspect question, since here the MAN slot is vacant, both positive polarity and perfective aspect being unmarked. In this case, the only possibility is *ŋga!* 'yes!'

It follows that *kalaa!*, the corresponding 'no!' interjection, is not obligatory as an answer to any yes-no question, and is not particularly common in this function. However, *kalaa!* can also be used to contradict or challenge an assertion by an interlocutor.

In (293a), note that Impf *goo* and its negation *sii* have their full forms, in contrast to *o ~ go* and *si* when followed by an overt VP. These same full forms are also used as locational quasi-verbs meaning 'be (present)' and 'not be (present), be absent' (§7.1.2).

8.2.2 WH-questions

The morphologically simple interrogative stems are given in (294); we mention some important interrogative compounds ('how?', 'why?', 'when?' in the following section).

(294)	<u>form</u>	<u>gloss</u>	<u>comments</u>
	<i>mey</i>	'who?'	homophone: 'have, own'
	<i>maa</i>	'what?'	homophone: 'name'
	<i>man</i>	'where?'	—
	<i>marje ~ merje</i>	'how much?'	adjective or noun (also 'how many?')
	<i>foo</i>	'which?'	adjective; homophones: 'one', 'greet'
	<i>mote</i>	'how?'	(in greeting formulae)

WH-interrogative forms are normally fronted, and occur in either the nonsubject or subject focus constructions described above. Exceptional cases involving lack of fronting (i.e., *in situ* WH interrogatives) are discussed in §8.2.4. For *maa* used as a verb '(be, do) what?', see discussion of (248) in §7.1.5, above.

Examples of the first three stems in (294) are given in (295-97).

- (295) a. *mey nga sii nee ?*
who? SFoc not-be here?
 'Who [*focus*] is not here?'
- b. *mey yo na n guna hentu ?*
who? Pl Foc 2SgS see over-there?
 'Whom_x(Pl) [*focus*] did you see *t_x* over there?'
- c. *mey se n noo njerfu di ?*
who? Dat 2SgS give money Def?
 'To whom [*focus*] did you give the money?'
- (296) a. *maa na wor o fari hondu jiiroo ?*
what? Foc 2PlS Impf grow dune this-year
 'What (crop) [*focus*] will you(Pl) grow on the dune this year?'
- b. *maa yo nga či hay di yo kaa wor o*
what? Pl SFoc be thing Def Pl Rel 2PlS Impf
tammahaa kaa i-i hin ka boori, hondu ?
 hope that 3PlS-Impf can Inf be-good, dune?
 'What [*focus*] are the things (=crops) that you(Pl) hope they can turn out well, on the dune?'
- c. *maa nga či hay di kaa no-o hin ka dam*
what? SFoc be thing Def Rel 2SgS-Impf can Inf do
kaa kate n jaari di ma si mussu ?
 Rel bring 2Sg day Def Subju Neg be-lost?
 'What [*focus*] is the thing that you(Sg) can do to insure that your day is not wasted?'
- (297) a. *man na a-a koy koyne ?*
where? Foc 3SgS-Impf go again
 'Where [*focus*] will he (=sick donkey) go any more?'
- b. *man na ni hun ?*
where? Foc 2SgS leave
 'Where [*focus*] did you come from?'

man 'where?' is not normally followed by a Locative postposition.

Note, incidentally, that focalization and therefore WH-formation is possible with locational quasi-verb *goo* 'be' or *sii* 'not be' (295a) and with equational *či* (296b-c). In the case of *či*, overt focalization with SFoc *ŋga* is optionally omitted, as in (298a-c), contrast (298d) with *ŋga* present. With *ŋga* absent, the WH-word may occur in preverbal (298a-b) or postverbal (298c) position.

- (298) a. *mey či woo?*
 who? be Dem
 'Who is that?'
 b. *mey či ni?*
 who? be 2Sg
 'Who are you?'
 c. *woo či mey?*
 Dem be **who?**
 'That is who?'
 d. *mey ŋga či amiir di?*
 who? SFoc be chief Def
 'Who [*focus*] is the chief?'

The freedom with which the two NPs in an equational *či* clause switch positions reflects the fact that this is the only transitive verb which is commutative in the mathematical sense, *A či B* being logically interchangeable with *B či A*. Another syntactic consequence of this is that when one of the equated constituents is focalized, it is always treated as the subject. Therefore we can get overt SFoc *ŋga* but never (nonsubject) Foc *na* in WH interrogatives and other focalized *či* sentences. Corresponding to the pattern *A ŋga či B* 'it is *A* [*focus*] that is *B*' seen in (296b-c), we never get #*A na B či* 'it is *A_x* [*focus*] that *B* is *t_x*.'

mey 'who?' and *maa* 'what?' may occur in the conjoined NP construction *X nda Y* 'X and Y'. They take the "Y" position following *nda* 'and, with'. The entire conjunction is normally fronted, as in (299).

- (299) a. [*ni nda mey*] *na a kar t?*
 [2Sg and **who?**] Foc 3SgS hit *t?*
 '[You and whom (else)]_x did she hit *t_x*?'
 b. [*ni nda mey*] *ŋga wii ga?*
 [2Sg and **who?**] SFoc kill 3SgO?
 'You and who (else) killed it?'

mey 'who?' and *maa* 'what?' normally take singular form, even when it is not known what the number of denoted referents is. However, they may take Pl *yo* to specify plurality (295b, 296b).

We next consider *marje* ~ *merje*. This form can be used syntactically as a full-fledged NP (300a,d-e), or it may quantify over an indefinite noun (300b) with no change in form. When denoting the price of a commodity ('for ten riyals'), there is generally no 'for' postposition although the constituent with *marje* ~ *merje* functions

as a kind of adverbial phrase (300c). In this unit-price context, a distributive reduplication is also possible (§5.4.4).

- (300) a. *woo di o koy sawa-nda marje*
 Dem Def Impf go be-equal-with **how-much?**
 [*seefaa woo ra*] ?
 [CFA Dem Loc] ?
 'That (price in riyals) equals how much, in CFA francs?'
- b. [*gurumba merje*] *na yee hima ka jow t ?*
 [piece **how-many?**] Foc 1SgSImpf ought Inf take *t* ?
 'How many pieces_x should I take *t* ?'
- c. [*alhoor-ije foo kul*]
 [limestone-child one all]
marje na no-o neere ga ?
how-much? Foc 2SgS-Impf see 3SgO
 'Each limestone block, how much (=at what price) do you sell it?'
- d. *marje nga sii nee ?*
how-many? SFoc not-be here ?
 'How many (of them) are not here?'
- e. *merje nga či lokkol-ije yo ?*
how-many? SFoc be school-child Pl ?
 'How many (of them) are students?'

The question arises whether to take *marje* ~ *merje* as basically an adjective or a noun. If we take it as a lexical adjective, the modifying use (300b) is unproblematic. The use as NP head (300a,d-e) would then be interpreted as involving a zero Absol prefix (§4.4.3, §4.5.1), which is slightly awkward but not outlandish. If we take it as a noun, the head-noun use is straightforward, but the apparently modifying use would have to be reinterpreted as involving a loose compound NP *marje* in which the NP has partitive function ('how much of NP?').

With equational *či* 'be', *merje* takes postverbal position, as in the question in (301a), or it may be fronted in the usual focalization construction, as in (301b).

- (301) a. Q: *yer či merje ?*
 1PlS be **how-many?**
 'We are how many?'
- A: *yer či i-taači*
 1PlS be Absol-four
 'We are four' (= 'There are four of us.')
- b. Q: *marje nga goo nee ?*
how-many? SFoc be here
 'How many (of them) are here?'

Interrogative *foo* 'which?' is sometimes difficult to distinguish from the numeral *foo* 'one'. Both occur as modifying adjectives after a noun, so that *ije foo* can mean either 'one child' or 'which child?'. When used as heads of NPs in the absence of a

noun, Timbuktu speakers distinguish absolute forms *a-foo* 'one' and *i-foo* 'which one?', though this test is not reliable in other dialects (Appendixes 1,2). Nevertheless, there are further diagnostics through which one can usually distinguish 'one' from 'which?'. First, 'which?' phrases are generally fronted and focalized, while NPs containing 'one' have no special tendency in this direction. Second, 'which?' phrases often co-occur with a Locative PP in partitive function, which may precede the fronted 'which?' phrase or may occur in postverbal position. Third, many occurrences of 'which?' are in a few high-frequency combinations discussed in the next section: *saa foo* 'which time?, when?', *mise foo* and variants '(in) which manner?, how?', and *hinne foo* 'which quantity?, what size?'. Some examples of *foo* 'which?' are in (302), the first two containing Loc PPs in partitive function.

- (302) a. *a-foo* *ɲga* *baa* [*i* *ra*] ?
 Absol-**which?** SFoc be-better [3Pl Loc] ?
 'Which of them is better (or: the best)?'
- b. [*yer* *kuna* *a-foo*] *ɲga* *jeen-nda* ?
 [1Pl Loc Absol-**which?**] SFoc be-old?
 'Which of us is older (or: is the oldest)?'
- c. *farka* *foo* *na* *n* *dey* ?
 donkey **which?** Foc 2SgS buy ?
 'Which donkey did you buy?'

The form *mote* 'how?', which is also found in other Songhay languages (especially HS), seems confined to certain not-very-common greetings in KCh, like those in (303).

- (303) a. *war* *čiji* *kani* *mote* ?
 2Pl night sleep **how?**
 'How did you sleep?'
- b. *huu* *boro* *di* *yo* *mote* ?
 house person Def Pl **how?**
 '(And) how are your relatives?'

As often with greetings ('How do you do?'), this formula is difficult even to parse grammatically (is *kani* 'sleep, go to bed' here a verbal noun?). The positioning of the WH-word *mote* at the end of the sentence is also aberrant. The productive 'how?' construction in KCh is described in the following section.

8.2.3 Composite WH-interrogatives ('how?', 'why?', 'when?')

The most important compound interrogative phrases are those in (304).

(304)	<u>form</u>	<u>free gloss</u>	<u>literal gloss</u>
a.	<i>mise foo</i> – <i>musa foo</i>	a) how?	manner which?
	<i>taka foo</i>	b) what sort (of thing)?	
	<i>hinne foo</i>	(= <i>mise foo</i>)	way which?
		what amount?	amount which?
b.	<i>maa se</i>	what for? why?	what? Dat
c.	<i>saa foo</i>	when?	time which?

mise foo (variants *musa foo*, *muso foo*) ‘how? what manner?, what kind?’ is the common form for (304a) ‘how?’ or ‘what sort (of thing)?’ in the Timbuktu dialect. The sense ‘how?’ is typically expressed by *mise foo*_x ... *nda t_x* ? with a stranded postverbal Instr-Comit preposition *nda*. Without this *nda*, *mise foo* normally functions as an NP and is best glossed ‘what sort (of thing)?’ Both *mise* and its dialectal equivalent *taka* are abstract, semantically “light” nouns meaning ‘way, manner, nature, kind (of thing)’, and require additional modification to have real semantic substance.

The NP function of *mise foo* is illustrated in (305). Note that as a simple NP, it may be subject or nonsubject in the core clause, resulting in subject focus (305a) and nonsubject focus (305b) constructions, respectively.

- (305) a. *mise foo nga či humbar di taka di*
manner which? SFoc be waterbag Def manner Def?
 ‘What kind of thing is a (goatskin) waterbag?’
- b. *no-o dam ga haya ra, wala*
 2SgS-Impf put 3SgO thing Loc, or
musa foo na no-o dam a se?
manner which? Foc 2SgS-Impf do 3Sg Dat?
 ‘Do you put it (=melon) in something? Or what kind of thing do you do to it?’

(305a) is literally ‘It is what manner (of thing) that is the (essential) manner of the waterbag?’ (*mise* and *taka* are near-synonyms).

The instrumental type *mise foo* ... (*nda*) ‘how?’ is illustrated in (306a) with stranded *nda* present, and in the less common type (306b) with *nda* omitted. Since the fronted NP cannot be the subject of the core sentence, the nonsubject focus construction is required.

- (306) a. [*musa foo*] *na a-a hīsa ga [nda t]*?
 [**manner which?**] Foc 3SgS-Impf make 3SgO [with t]?
 ‘[What way]_x [*focus*] does it (=rain) make it with t_x?’
 (= ‘How does it make it?’)
- b. [*musa foo*] *na wor o kow ga t*?
 [**manner which?**] Foc 2PlS Impf remove 3SgO t?
 ‘[What way]_x [*focus*] do you(Pl) remove it [(with) t_x]?’
 (= ‘How do you remove it?’)

maa se 'why?' ('what? Dat') has a somewhat ambiguous syntactic relationship to the core of its clause. It is normally fronted like other WH-interrogatives representing core relations like direct object. It can take the usual Focus morpheme *na*, as in (307b), but most often this morpheme is absent, as in (307a). Moreover, a fronted *maa se* (without *na*) may actually co-occur with an immediately following second fronted constituent which does have a following *na*, as in (307c). (307c) suggests that REASON as a thematic relation is, or at least can be, somewhat external to the core of the clause and therefore outside of the framework of clause-internal focalization. The two very different syntactic statuses of 'why?' in (307b) and (307c) make it difficult to interpret the very common simple pattern (307a). One could interpret 'why?' in (307a) as being focalized, the Focus morpheme *na* simply being omitted (always a possibility with focalized PPs). Or one could interpret it as belonging to an outer syntactic layer as in (307c).

- (307) a. [*maa se*] *n* *koy?*
 [what? Dat] 2SgS go
 'Why did you go?'
- b. [*maa se*] *na yer o koy?*
 [what? Dat] Foc 1PIS Impf go
 'Why [focus] are we going?'
- c. [*maa se*] [*mobil ressort nin*] *na wor o taasi?*
 [what? Dat][vehicle spring only] Foc 2PIS Impf seek?
 'Why is it [only car springs] [focus] that you(Pl) seek?'

Clause-initial *maa se* is also used by some speakers in the sense 'because ...'
 (308).

- (308) *mere tarkunda yer margo a se*
 but elephant 1PIS fail 3Sg Dat
mise kul kaa yer hin ka koor ga nda
 manner all Rel 1PIS can Inf seize 3SgO with
 [*maa se*] *a-a hīsa ka beer,*
 [what? Dat] 3SgS-Impf do-very Inf be-big,
a beer di bow
 3Sg bigness Def be-big
 'But an elephant, we have failed (to find) for it any way with which we can capture it, because it is extremely large, its size is great.'

saa foo 'when?', unlike *maa se* 'why?', is regularly focalized, as in (309).

- (309) *saa foo na yer o dira?*
 time which? Foc 1PIS Impf travel?
 'When [focus] will we go (away)?'

8.2.4 *In situ* (non-fronted) WH-interrogatives

As we have pointed out in the two preceding sections, WH-interrogative words are normally fronted and occur in one of the focus constructions. This pattern is very strong for 'who?', 'what?', 'where?', 'when?', and 'how?'. On the other hand, the interrogatives *foo* 'which?' and *merje* 'how much? how many?', when functioning as modifiers within larger NPs, optionally remain in place (*in situ*) in the core sentence. This is probably because the larger NP would have to be fronted as a whole, and "heavy" NPs are less easy to front than are simple interrogatives like 'who?'. Examples of *in situ* interrogative *foo* and *merje* are in (310).

- (310) a. *saa kaa wor o kow ga*
 time Rel 2PIS Impf remove 3SgO
ka fatta-ndi ga terey, a či [hinne foo]?
 Inf exit-Caus 3SgO outside, 3SgS be [quantity which?]
 'When you(Pl) remove it (=limestone) and take it outside, it is what size?'
 b. [*saa di*] *nda war hīsa gi,*
 [time Def] if 2PIS prepare 3PIO,
a-foo kul go hima ka jow [ije merje]?
 one all Impf should Inf take [child how-many?]
 'So, when you(Pl) have made them, each one should take how many pieces?'

In (310b), the interrogative quantifier *merje* is under the logical scope of the quantified subject NP *a-foo kul*. The *merje* phrase can be fronted (without changing the logical scope relations), but speakers seem to prefer the pattern in (310b), which harmonizes the syntactic and logical relationships. *ije* 'child' is used in certain contexts as a kind of unit marker with quantifiers.

8.2.5 Questions embedded under matrix verbs ('know', 'ask', etc.)

Interrogatives are often embedded under verbs of uncertainty. 'Wonder, be curious', 'find out', and 'inquire' are the most obvious, but 'know' and 'see' may also take interrogative complements ('I don't know who hit me,' 'I want to see whether he comes').

Embedded polar (yes-no) questions can be glossed with 'whether'. The construction is basically a disjunction ('I don't know whether he hit me' can be expanded as 'I don't know whether he hit me, or he didn't me'). In KCh, *wala* is used before each such embedded clause, in both monoclausal and biclausal cases. For examples and discussion see §9.5.4.

We now consider what happens to the WH-interrogative forms (§8.2.2). The general principle is that the WH-interrogative stem or phrase is replaced by a non-interrogative generic NP (normally indefinite in form) which functions as direct object or other complement of the higher verb. The remainder of the WH-interrogative clause

surfaces in the form of a relative clause with the generic NP as head. For example, embedded 'who?' and 'what?' are replaced by '(a) person who ...' and '(a) thing which ...', as in (311).

- (311) a. *ay si bey [bor kaa koy]*
 1SgS ImpfNeg know [person Rel go]
 'I don't know who has gone.'
- b. *wirči woo ta yer monggo ka bey [haya kaa nono]*
 disease Dem Top 1PlSbe-unable Inf know [thing Rel it-is]
 'That disease_x, we have been unable to discover what it is.'

Likewise, embedded 'where?' is expressed as '(a) place (in) which ...'. The logically complete form would include a Loc postposition, but this is normally omitted, as in (312).

- (312) *ndooso woo, ni bey ka guna*
 pick-ax Dem, 2SgS know Inf see
[nan kaa i-i kar ga?]
 [place Rel 3PlS-Impf hit 3SgO?]
 'Well, that pick-ax_x, have you(Sg) ever seen where they forge it_x?'

Similarly, *marje - merje* 'how much? how many?' is replaced by an NP involving generic *hinne* 'amount, extent, quantity', either as head of a relative clause, or *in situ* as in (313).

- (313) *saa di kaa ngu guna*
 time Def Rel LogoSgS see
[[[a wane] alkadar di] hinne di]
 [[[3Sg Poss] size Def] amount Def]
 '(He_x said:) when he_x saw how much his_x size was ...'

foo 'which?' is the one morphologically simple interrogative which has no noninterrogative counterpart. In embedded questions, *foo* can be retained but *wala* 'or, whether' may be added at the beginning of the clause to make its interrogative status clear, as in (314).

- (314) *yee kaa ta hãã ga*
 1SgSImpf come Inf inquire 3SgO
[wala [addelijil foo ga] [yee sallam [a ga]]]
 [or [reason which?on] [1SgSImpf greet [3Sg on]]]
[a si tuuri]]
 [3SgS ImpfNeg reply]]
 'I was coming to ask him for what reason did he not respond when I greeted him.'

Alternatively, (314) could be rephrased with *hãã* 'inquire' as a doubly-transitive verb, the direct object being expressed as the noun *addeliil di* 'the reason' with an attached Rel clause ('I asked [to him] the reason for which ...').

The compound interrogatives (§8.2.3) are generally quite easy to embed, since most of them already consist of a generic noun plus *foo* 'which?'. The corresponding embedded questions omit the *foo* and show up as heads of relatives. For *mise foo* (and variants) 'how?' and *taka foo* 'how?', both literally 'way (=manner) which?', we get embeddings like those in (315).

- (315) a. *bara addama-jje ma bey*
 must human Subju know
[muso, kaa ngu hin ka duu ga nda t]
[manner Rel LogoSgS can Inf get 3SgO with t]
 'A person must know how (lit.: the manner by which) he (or she) can get it.'
- b. ... *ka bey [taka, kaa yer o jow ga nda t]*
 ... Inf know [manner Rel 1PISImpf take 3SgO with t]
 '... to know the manner by which (=the best way) for us to take it.'

maa se 'why?' ('what? Dat') can be replaced by *hay kaa se ...* 'thing for which ...,' or by expressions like *addeliil foo* 'which reason?' in (314).

8.2.6 'whatchamacallit?'

The basic 'whatchamacallit?' expressions are *hajje* (variant *haya-jje*) and *haywana*. Both are probably related to *haya* 'thing'. The first is analysable as *haya* or its reduced variant *hay* plus compound final *-ije* 'child' in diminutive sense (for the phonology see §3.8.3). The second form may be a variant of *hay wane* with Poss *wane*.

These forms are used as indefinites ('something or other, gizmo, thingamajig') or in self-directed questions ('whatchamacallit?'). In either case, they replace more precise expressions that have been temporarily forgotten (316).

- (316) *ay kar ga nda haywana ?*
 1SgS hit 3SgO with whatchamacallit?
 'I hit it with whatchamacallit.'

The 'whatchamacallit?' stems can also be used as verbs, intransitive or transitive; see discussion of (249a-b) in §7.1.5.

8.2.7 Tag questions

The tag question is *n bey ?*, literally 'did you(Sg) know?' can be used regardless of the form of the preceding assertion. It does not seem to be very common, at least in Timbuktu. The yes-no interrogative *wala* can be used after (as well as at the beginning

of) an assertion used as a yes-no interrogative (§8.2.1), so a special tag question is not desperately needed.

8.3 Relative clause constructions

Relative clauses are characterized by Rel morpheme *kaa*. This is homophonous with *kaa* 'come, become' and, more interestingly, with an indicative 'that' complementizer *kaa* (§9.5.8). Rel *kaa* can be distinguished from the 'that' complementizer in that the Rel morpheme is always preceded by an overt NP functioning as head. There is no productive headless relative construction of the type '(one) who ...,' though in some of its uses the 'that' complementizer *kaa* (§9.5.8) might be construed as a headless relative or as having a phonologically unrealized FACT noun as head.

The primary relative construction is of the general type NP_x Rel [... t_x ...] where the head NP (which is itself part of the higher, "matrix" clause) is coindexed with an argument of the lower clause shown within brackets, although only a phonologically null "trace" occurs in the original syntactic position within the relative clause. However, under certain conditions we can get an overt (resumptive) pronoun within the relative clause. In general, relative clauses have the same type of extraction seen in focalization (including WH-interrogatives).

The head NP preceding Rel *kaa* has the maximal structure in (317), that is, it may be any "core NP" (in the sense of §5.A) with the further possibility of adding *kul* 'all' (in relatives better glossed 'every' or 'any'). A few examples are in (318a-c).

(317) possessor - N - Adj - Num - Dem - Def - Pl - *kul*

- (318) a. [haya di yo] kaa wor o dooney
 [thing Def Pl] Rel 2PIS Impf be-accustomed
 ka gar alhoor guusu woo ye ra
 Inf find limestone hole Dem Pl Loc
 'the things_x that you(Pl) commonly find t_x in those limestone pits'
- b. [hay kul] kaa nono, a-a bana ga
 [thing all] Rel exist, 3SgS-Impf buy 3SgO
 'Everything_x that it is t_x, it (=donkey) will repay (=compensate for) it_x.'
- c. [hay] kaa jaman kate, no-o hanga ga [nda ga]
 [thing] Rel season bring, 2SgS-Impf follow 3SgO [with 3SgO]
 'Whatever_x the current situation_y brings t_x, you(Sg) will accept it_y in spite of it_x.'

These examples illustrate three basic possibilities for the head NP: definite (318a), universal (318b), and indefinite (318c). They also show how "light" (low-content) nouns can be used as head NPs, accounting for the absence of headless relatives. Some of these light nouns have specialized shortened forms when directly followed by Rel *kaa* (or by *kul* 'all'), see §3.8.7.

Postpositions and certain discourse-functional (DF) morphemes, however, are not normally added directly to the head NP. Instead, they follow complete NPs and so are positioned at the end of the relative clause (§8.3.10).

The fact that Rel *kaa* can occur with either a trace t_x or a pronoun in the original position of the relativized NP causes analytical difficulties. If we consistently got the trace, we would be inclined to take *kaa* as a true relative pronoun that has been fronted (extracted) from its original position inside the relative clause ('the man **whom** I saw'). If we consistently got a pronoun (coreferential to the head NP), we would be inclined to take *kaa* as a more abstract, nonpronominal complementizer ('the man **such that** I saw him'). There seems to be a certain tension between these two analyses in KCh. The fact that phonological processes can neutralize the difference between *kaa t* ('Rel t_x '), *kaa a* ('Rel 3SgS'), and even *kaa a-a* ('Rel 3SgS-Impf'), does not make the analysis any easier (§8.3.1).

The best evidence for a relative-pronoun analysis is the fact that postpositions are regularly attached to *kaa* rather than remaining stranded in postverbal position within the relative clause (§8.3.3). On the other hand, taking Rel *kaa* as a more abstract nonpronominal complementizer might enable us to reconcile it with the indicative complementizer *kaa* (§9.5.8).

There are a fair number of textual examples which seem to require the more abstract reading. We can gloss Rel *kaa* in these cases as 'in such a way that ...' or 'when ...'. Some examples are given in §8.3.10. However, these are arguably reduced from e.g. *saa di kaa ...* 'the time when ...', *musoo di kaa ...* 'the way that ...', and other genuine relative constructions, the logical "head NPs" being omitted. If these examples can be incorporated into an analysis involving extracted relative pronoun *kaa*, then the only remaining problem is how to handle the cases with resumptive pronouns coreferential to a (true) head NP. Our general approach will be to consider such cases as responses to production and processing difficulties, whether due to "island" constraints (cf. §8.3.8) or reflecting simple "restarts" whereby the relative clause takes the form of an unsubordinated main clause.

Although relative clauses normally directly follow the head NP, sometimes a relative clause is delayed (extraposed) so that it follows the main clause containing the head NP. This is apparently obligatory with identificational *nono* (319a), and is common with simple existential or locational predications (319b).

- (319) a. *nda haya nono kaa no-o bey*
 if thing **it-is** **Rel** 2SgS-Impf know
 'if it is something that you know (of)'
- b. [*wirči bobo yo*] *goo dooti kaa i si safari gi ...*
 [disease many Pl] be there **Rel** 3PlS ImpfNeg treat 3PlO ...
 'There are many ailments_x that they can't cure them_x (unless ...).'

For a variation on the type (319a) where the relativized NP is also the focus of the Rel clause, see (432) in §8.6.5, below. The Rel clause in (319b) has an overt resumptive pronoun, 3PlO *gi*, and may have been restarted as a main clause; such restarts are presumably common in extraposed relatives.

Head NPs may be personal pronouns ('you who ...') or nouns functioning as surrogates for them ('you are a person who ...'). In such cases, the pronoun sometimes recurs inside the relative clause ('you_x who you_x were sitting here'). Examples are given in §8.3.1. When the head NP is generic *boro* 'someone', coreferential pronouns inside the relative clause are often expressed as 2Sg pronouns in generic function; see §10.3.1.

Some high-frequency "light" nouns tend to have shortened forms before Rel *kaa* (§3.8.7).

8.3.1 Relativization of subject NPs

If Rel *kaa* is fronted (extracted) from the relative clause, we should get subject relatives of the form (320a). If *kaa* is a nonpronominal complementizer, we should get a nonzero pronominal subject as in (320b).

- (320) a. head NP_x - *kaa*_x - *t*_x - MAN morphemes - verb - ...
 b. head NP_x - *kaa* - [3Sg or 3Pl]_x - MAN morphemes - verb - ...

It is not so easy as it might appear to distinguish these two constructions. Consider (321).

- (321) *alhawa di kaa__ čendu [boro di yo]*
 craving Def Rel__ pull [person Def Pl]
ka dam ga a ra
 Inf put 3SgO 3Sg Loc
 'the impulse that induces the people to put it (=spice) in it (tea).'

There is nothing phonetically audible in the blank in (321), suggesting a trace as in (320a). But the *ga a ra* at the end of (321), pronounced [ga:ra], reminds us that vocalic contractions occur in this language. One could therefore rewrite the critical part of (321) as *alhawa di kaa a čendu* with 3SgS *a*, which would point to the pattern (320b). In fact, since the context suggests imperfective aspect, we could elaborate this representation further as underlying //alhawa di kaa a o čendu// with Impf *o*. Since 3SgS *a* and Impf *o* combine to give *a-a* (§3.G.1), this could reasonably yield *alhawa di kaa a-a čendu*, where *kaa a-a* is realized phonetically as [ka:].

Impf *o* has a variant *go* (rather uncommon in Timbuktu). Though not obligatory after *kaa*, as (321) shows, *go* when pressed into service conveniently avoids contraction: [*tarkunda woo yo*] *kaa go kaa dooti* '[those elephants] which come (*kaa*) there.' Here once again, it is phonologically possible to posit a 3SgS pronoun *a* between Rel *kaa* and Impf *go*, i.e., ... *kaa a go* See also (325), below, where versions with and without *go* were elicited.

To decide between (320a) and (320b), we consider cases where a plural subject is relativized on. Here, if an underlying subject pronoun is present it should be 3PlS *i* or 3PlS Impf *i-i*, either of which should contract with *kaa* to give phonetic [ki:]. In fact we regularly get [ka:] and not #[ki:], as seen in (322a). This strongly suggests the

absence of a subject pronoun, favoring (320a) as the correct representation. Compare the subject relative (322a) with a nonsubject relative (322b), the latter clearly including a 3PIS pronoun (not coreferential to the head NP). In (322a), we hear [ka:] before the verb. In (322b), we hear either [ka: i:] with separate articulation of the pronominal, or contracted [ki:], but in either case we can detect the presence of the 3Pl morpheme.

- (322) a. *jere di yo kaa windi-windi ga*
 side Def Pl Rel Rdp-encircle 3SgO
 'the sides that go around it'
- b. *woo di kaa i-i kow frigidaire di ye ra*
 Dem Def Rel 3PIS-Impf take refrigerator Def Pl Loc
 'that (stuff)_x which_x they_y take *t_x* out from refrigerators'

While (322a) is the usual pattern for plural-subject relatives, there are some textual examples where the subject pronoun (coreferential to the head NP) does show up on the surface. This appears to be the case when there is a slight hesitation after Rel *kaa*, whether or not the pause is conspicuous enough to be represented with a dash or comma in my transcription. Examples in (323); cf. (392f) in §8.5.2, below.

- (323) a. *boro foo yo goo dooti*
 person one Pl be there
kaa i-i gangga baana ma kar
 Rel 3PIS-Impf prevent rain Subju hit
 'Some men_x are there who_x they_x can prevent rain from falling.'
- b. *alkaafun či tuuri-ije moo kaa—,*
alkaafun be tree-child also Rel—,
a-a mey nafa beer
 3SgS-Impf have usefulness big
 'alkaafun (a spice) is a tree product_x also which_x—, it_x has a great benefit.'

While one might conclude from the examples in (323) that overt subject pronouns should be recognized in all subject relatives, and retranscribe e.g. (322a) accordingly, it is a dubious practice to base the analysis of smoothly pronounced constructions on the form of interrupted and perhaps internally restarted counterparts. Moreover, hesitations result in overt subject pronouns not only in relative clauses as in (323), but also in main clauses where a kind of resumptive subject pronoun appears when a pause occurs during or just after the utterance of a subject NP, as in (324a-b).

- (324) a. *nda gaabi—, a bisa gaabi, dee a-a hin ga*
 if force—, 3SgS exceed force, then 3SgS-Impf master 3SgO
 'If a force_x exceeds a (=another) force_y, then it_x overwhelms it_y.'
- b. *nda baali di—, a mon, dee a-a hasara*
 if flesh Def, 3SgS be-removed, then 3SgS-Impf be-ruined
 'If the flesh_x—, (if) it_x is erased (=gets rotten), then it_x's ruined.'

I doubt that a competent syntactician would use (324a-b) to demonstrate that the fluently spoken counterparts (e.g. *nda gaabi bisa gaabi*) have underlying third person pronouns following the subject NPs (#//*nda gaabi a bisa gaabi//*). Similarly, it should not be rashly concluded from (323) that subject relatives require subject pronouns following Rel *kaa*.

When the head NP is a first or second person pronoun ('I who ...', 'you who ...'), or a surrogate for such a pronoun ('I am are a person who ...'), the coreferential arguments within the relative clause may be expressed by the same pronominal category as the head (325a), or may follow the apparently subjectless construction described above (325b-c).

- (325) a. *ma na či har, kaa no-o bey yenje*
 2SgS Neg be man, Rel 2SgS-Impf know fighting
 'You(Sg) are not a man who you know (about) fighting.'
- b. *ma na či boro kaa bey fari*
 2SgS Neg be person Rel know farming
 'You are not a man who knows farming.'
- c. *ni kaa go bey fari*
 2SgS Rel Impf know farming
 'you who know farming'

Again the type (325b-c) without overt subject pronoun appears to be normal. The type in (325a) seems to be favored by a hesitation (indicated by the comma), and did not occur in elicitation.

When the relativized noun is itself focalized within the Rel clause, it appears in the form of a "3F" pronoun such as 3SgF *ŋga*; see (432) in §8.6.5. However, one can again suspect that a restart has occurred.

A further argument against underlying representations with resumptive third person subject pronouns is the grammaticality of *kaa nono* 'which it is', see (467a) in §9.3.3. This is because the identificational quasi-verb *nono* does not allow surface expression of the implied "subject" referent, and hence disallows e.g. #*a nono* 'it is' or an imperfective variant #*a-a nono*.

The data seem to point to two distinct analyses for subject relatives. One the one hand, there are occasional examples where *kaa* is clearly followed by an overt subject pronominal, suggesting that *kaa* is a nonpronominal relativizer. The relevant examples include (323a-b) and (325a). However, these and other similar examples arguably involve mid-stream restarts, resulting in main-clause instead of embedded structures for the "relative" clause. In the great majority of smoothly uttered examples, textual or elicited, *kaa* in subject relatives is followed by no audible pronominal subject marker, and in the case of *nono* 'it-is' no such pronominal subject is possible underlyingly. Although a surface [ka:] is in many cases phonologically compatible with a contracted multi-morphemic underlying string including 3SgS *a*, e.g. *kaa a* or imperfective *kaa a-a*, absence of an anticipated parallel pronunciation [ki:] in cases where the (resumptive) subject pronoun should be 3Pl *i* is a serious blow to such an analysis. So the bulk of the evidence favors the view that *kaa* is a relative pronoun extracted out of subject position, leaving (at most) a phonologically null trace in the

original subject position. Though this is our preferred analysis, we will not use trace notation t_x in transcriptions except where it is specifically relevant.

8.3.2 Relativization of direct objects and complements of 'give'

Relatives from simple transitive clauses are straightforward formally. The normal pattern is seen in (326).

- (326) a. *boro di kaa [yer ta] guna t [yer koyroo kuna]*
 person Def Rel [1PlS Top] see t [1Pl this-town Loc]
 'the man_x who(m)_x we saw t_x in this town of ours'
- b. *ay kaa no-o guna t*
 1Sg Rel 2SgS-Impf see t
 'I_x whom_x you see t_x (in front of you)'

The relativized NP is not overtly realized within the relative clause, even when it is a non-third-person pronoun (326b). We indicate its location by the trace notation t_x . A resumptive object pronoun appears exceptionally in a few textual examples (327).

- (327) *a či haya kaa ntende nga o fatta-ndi ga*
 3SgS be thing Rel ant SFoc Impf exit-Caus 3SgO
 [*dow di čire*]
 [sand Def under]
 'It (=limestone) is something_x which_x ants [*focus*] bring it_x out (from) under the ground.'

In elicitation, informants reject resumptive pronouns in simple direct-object relatives. When a resumptive pronoun does occur, it is generally attributable to a sentence-internal restart, or to the effect of an intervening non-direct-object focalization as in (327), which we return to as (431a) in §8.6.5, below. In short, the type in (326) with traces (not resumptive pronouns) for the direct-object NPs is regular.

The verbs *noo* 'give' and *čerbu* 'show' semantically require a theme (patient) and a recipient ('... gave the book to him'). Relevant sentences either express the theme as direct object and the recipient as dative PP, or use an alternative construction unique to these verbs with both complements expressed as direct objects ('... gave him the book'), see §9.1.2. The available examples indicate that the object-plus-dative alternative is required as the basis for relativizing the theme NP (328), the effect being that the recipient is expressed in dative form.

- (328) a. *taam di kaa ay noo [A se]*
 shoe Def Rel 1SgS give [A Dat]
 'the shoes which I gave to Abba'
- b. *huu di kaa ay čerbu [A se]*
 house Def Rel 1SgS show [A Dat]
 'the house_x which I showed t_x to A [name]'

As for relativization on the recipient NP, the object-plus-dative construction (329) is strongly preferred. Alternatives based on the double-object construction were sometimes rejected (330a), sometimes accepted (330b). The observable difference is the presence of *Dat se* after the *Rel* morpheme *kaa* (see following section for relativization on PPs).

- (329) a. *har di kaa se ay noo njerfu di*
 man Def **Rel** Dat 1SgS give money Def
 'the man to whom I gave the money'
- b. *ay kaa se n noo njerfu di*
 1Sg **Rel** Dat 2SgS give money Def
 'I, to whom you gave the money'
- (330) a. *?#har di kaa ay noo njerfu di* (= 329a)
 b. *ay kaa n noo njerfu di* (= 329b)

8.3.3 Relativization of NP complements of postpositions

In this section we consider relatives of the type 'the man_x whom_x we gave the money to *t_x*', where the relativized NP functions as complement of dative or another postposition.

While *Rel kaa* is always fronted, the postposition may either be fronted along with it or else remain *in situ*. In the latter case, a resumptive pronoun is obligatory.

- (331) a. *banggu di yo [kaa ra] na hari di o ta hun*
 swamp Def Pl [**Rel Loc**] Foc water Def Impf Top leave
 'the flooded areas_x in (=from) which_x the water has receded'
- b. *banggu kaa hari si hun [a ra] tamba*
 swamp **Rel** water ImpfNeg leave [**3Sg Loc**] quick
 'a flooded area_x which_x water doesn't recede quickly in (=from) it_x'

In (331a), *kaa ra* 'in which' is fronted as a whole, leaving nothing stranded in the relative clause (except arguably for a PP trace, not shown). In (331b), *kaa* is fronted as usual, but *Loc ra* remains within the relative clause and requires a resumptive 3Sg pronoun. A version of (331b) with a trace instead of a pronoun in the postverbal PP would be ungrammatical.

As with subject and object relatives treated in the two preceding sections, the different output possibilities for PP relatives appear to point to two different syntactic structures. In (331a), *kaa* is a true relative pronoun, forming part of a surface PP which has been fronted as a unit, leaving behind at most a PP trace. In (331b), *kaa* is a nonpronominal relativizer, allowing an overt pronoun to occur in the postverbal PP.

The type (331a) is preferred. It is clearly more common than the type (331b) when the PP in question is grammatically central (e.g. a *Dat* object, or an abstract spatial PP functioning as complement of a verb of position or motion). PPs expressing more peripheral or complex meanings, like the partitive *Loc* PPs in (332), are more likely to remain in postverbal position and therefore require the relative pattern (331b).

- (332) *yer o taasi nanggu keyna, kaa yer baa [a ra]*
 1PIS Impf seek place small, Rel 1PISbreak [3Sg Loc]
hal yer ma foti [a ra] haya keyna
 until 1PIS Subju knock-off [3Sg Loc] thing small
 'We look for [a small place (=quarry)]_x that_x we have worked (some)
 of it_x, so that we may knock off a little of it_x.'

The point relates to the first *a ra* 'in it'; the second *a ra* belongs to a subjunctive clause not under the scope of the relative operator.

Among other combinations attested in texts of *kaa* and a postposition are Dat *kaa se* 'to whom, for which', Loc *kaa kuna* 'in which', *kaa ga* 'by (from) which', and *kaa banda* 'after (behind) which'.

8.3.4 Relativization of NP complements of *nda* 'with, and'

Unlike postpositions, Instr-Comit preposition *nda* (§5.11) is readily stranded postverbally when its NP complement is relativized. *nda* is never fronted with *kaa*, just as it is never fronted with a WH-interrogative stem (§9.V.3) or other focalized constituent. In (333a), the stranded instrumental *nda* is associated with *taka* 'manner'. In (333b), the stranded comitative *nda* is associated with *hay di* 'the thing'.

- (333) a. *saa di yer o hima ka yee-ndi a se alakal,*
 time Def 1PIS Impf should Inf return-Caus 3Sg Dat mind,
ka bey taka kaa yer o jow ga nda t
 Inf know manner Rel 1PIS Impf take 3SgO with t
 'So, we should be wary of it (=tea), to know the (best) way_x to
 take it [with t_x].'
 b. *[hay di kaa yer koy kuboy-ndi ey [nda t]] ěi woo yo*
 [thing Def Rel God meet-Caus 1SgO [with t]] be Dem Pl
 'The thing_x that_x God caused me to meet [with t_x] was those (people).'

The stranded *nda* typically occurs in immediate postverbal position, following any postverbal pronominal direct objects or pronominal PPs. The fact that *nda* is not followed in (333a-b) by 3SgO *ga* (coindexed with the fronted NP) strongly suggests that here *kaa* is a relative pronoun extracted from the instrumental-comitative phrase, leaving behind at most a trace.

In a conjunction of the form *A nda B* 'A and B', relativization out of one of the conjuncts is somewhat awkward, and my impression is that such relative clauses often take main-clause form (i.e. with resumptive pronoun), as in 'I saw the man_x who_x [[he_x and you] are neighbors],' or else are reformulated in ways which avoid conjunction. Consider the textual example (334a) and the elicited sentence (334b).

- (334) a. a wannasu [ŋgu boro di yo se]
 3SgS chat [3ReflSg person Def Pl Dat]
 kaa nda gi o maan
 Rel with 3PIO Impf be-near
 'He_x spoke to his relatives_y, who_x (t_x) and they_y are close (kin).'
- b. a čii-nda woo di ye
 3SgS speak-with Dem Def Pl
 kaa [ŋga nda gi] o maan
 Rel [3SgF and 3PI] Impf be-near
 'He_x spoke with those (persons)_y, who_y he_x and they_y are close.'

In the grammatical but uncommon pattern (334a), the (extraposed) relative clause follows the Dative postposition, and its head NP is coreferential to the 3Sg subject of 'chat'. If this is correct, we could represent the relative clause as ... *kaa*_x [*t_x nda gi* ...], with a trace in the left conjunct position. Native speakers might alternatively analyse it as ... [*kaa* [*nda gi*]] ..., with *kaa* actually in left-conjunct position. In either case, a literal translation is bad English because of subjacency (island) constraints (cf. #*the man who [t_x and I] went*). But since the KCh "conjunction" *nda* 'and' (better glossed 'with') induces stronger asymmetries between left and right conjuncts than does English *and*, it is not impossible that a KCh left conjunct would be accessible to relativization (cf. §5.11.1).

In the more common pattern (334b), on the other hand, the conjunction has nonzero pronominal conjuncts on both left (3SgF *ŋga*) and right (3PIO *gi*). By virtue of position, Rel *kaa* in (334b) is likely to be coreferential to 'those (persons)' rather than to 'he', but the following material has main-clause form. It is difficult even to be sure that *kaa* in (334b) is a true Rel morpheme, since *kaa* can also be used as a clause-initial complementizer (§8.3.10, §9.5.8). Further examples of main-clause form for the "embedded" clause are in (335).

- (335) a. woo či har di kaa [ŋga nda ay baba]
 Dem be man Def Rel [3SgF and 1Sg father]
 o hima ka koy
 Impf ought Inf go
 'This is the man_x who [he_x and my father] are supposed to go.'
- b. woo či har di kaa [ay nda ga]
 Dem be man Def Rel [1SgS and 3SgO]
 o hima ka koy mowti [nda čere]
 Impf ought Inf go Mopti [with friend]
 'This is the man_x who [I and he_x] are supposed to go to Mopti together.'
- c. ay na duu bor kaa [ay nda ga]
 1SgS Neg get person Rel [1SgS and 3SgO]
 o ñin hari-futu
 Impf drink water-bad
 'I haven't found anyone to drink beer with.'

I know of no examples where a right conjunct is expressed as zero (i.e., as a trace) due to relativization. The only attested zeroes are in left conjunct position (334a), and even this is uncommon.

(333) and (334a) support the analysis of *kaa* as a relative pronoun extracted out of the core sentence, leaving (at most) a trace. (334b) and (335), whose relative clause has main-clause form except for the initial *kaa*, can be taken as supporting the analysis with *kaa* as a nonpronominal complementizer requiring resumptive pronouns. However, (334b) and (335) can also be thought of as cases where island constraints block or disfavor normal relativization strategies, requiring speakers to restart the embedded clause as a main clause.

8.3.5 Relativization of possessor NP

When the relativized NP is a possessor, the possessed noun is often fronted along with *kaa*. A resumptive possessive pronoun is normally not present, as shown in (336).

- (336) *har nono kaa kaabe di o korey*
 man it-is Rel beard Def Impf be-white
 ‘It is a man whose beard is white.’

This is a common and fully grammatical construction. However, there are other examples where *kaa* is fronted alone, leaving the possessed noun behind. In (337a), the possessed NP is clause subject, so the 3Sg possessive pronoun *a* immediately follows Rel *kaa*. In (337b), the possessed NP is postverbal.

- (337) a. *har dungura nono kaa [a kaabe woo] o kurru*
 man short it-is Rel [3Sg beard Dem] Impf drag
 hal dow woo ra
 until sand Dem Loc
 ‘It (=dwarf) is a short man who, this beard of his drags down to the ground.’
- b. *har nono kaa ay kow [a kaabe di]*
 man it-is Rel 1Sg take-out [3Sg beard Def]
 ‘It is a man who_x I pulled out his_x beard.’

On the whole, (336) is the preferred pattern. The type in (337) could be taken as another “restart” pattern (‘the man who—, his beard ...’). However, the subtype (337b) with postverbal possessed NP seems rather more fully grammatical (and textually common) than some other “restart” examples mentioned in earlier sections. The problem is that extracting an entire possessed NP, especially out of postverbal position, is rather more “costly” in terms of cognitive effort than most other relativization extractions. The simple example (336) is relatively easy to process on-line since *kaa kaabe di* turns out to be the subject of the relative clause. If we use a similar construction in (337b), giving *har nono kaa kaabe di ay kow*, the listener doing real-time processing must first recognize that *kaabe di* is a possessed noun

rather than a separate subject NP, i.e., parsing as *har nono [kaa kaabe di] ...* instead of *har nono [kaa] [kaabe di] ...*, which might well be the initial guess. Then the listener must recognize that *kaa kaabe di* is not the subject of the sentence as initially hypothesized; it is, rather, an NP fronted from an original postverbal complement position. In (337b) as uttered, on-line processing would seem to be easier.

Further complexity (and cognitive strain) is risked by combining a possessor with a postposition. In such cases there are several possible outputs: a) front the entire PP, b) front just the possessed NP, or c) front just the possessor. Alternatives (b-c) but not (a) require a resumptive pronoun in the residual postverbal PP. Examples of (a) and (b) are given in (338).

- (338) a. *woo či har di [kaa ñaa se]*
 Dem be man Def [Rel mother Dat]
ay noo njerfu di
 1SgS give money Def
 'This is the man to whose mother I gave the money.'
- b. *har nono [kaa bomo di] hambir sij a ga*
 man it-is [Rel head Def] hair be-not 3Sg on
 'He is a man whose head_x there is no hair on it_x.'

In (338b), one could argue that *bomo di* is really a preposed topical constituent, so that no real extraction is present.

8.3.6 Adverbial relatives without postpositions

Locational and temporal adverbials within core sentences are often really truncated PPs that lack explicit spatial postpositions. Corresponding relative clauses likewise usually lack postpositions. Some of the relevant relative constructions function as high-frequency adverbial clauses; these are listed in (339).

(339)	<u>form</u>	<u>morphemes</u>	<u>free gloss</u>
a.	<i>saa kaa</i>	time Rel	'when ...'
	<i>saa di kaa</i>	time Def Rel	'when ...'
	<i>saa kul kaa</i>	time all Rel	'whenever ..., any time ...'
b.	<i>nan kaa</i>	place Rel	'where ..., when ...'
	<i>nangu di kaa</i>	place Def Rel	'the place where ...'
	<i>nan kul kaa</i>	place all Rel	'wherever ..., whenever ...'
c.	<i>han kaa</i>	day Rel	'when ...'
	<i>handi di kaa</i>	day Def Rel	'the day (time) when ...'
	<i>han kul kaa</i>	day all Rel	'whenever ..., any time ...'
d.	<i>mise (~ muso) kaa</i>	manner Rel	'how ...'
	<i>mise (~ musoo) di kaa</i>	manner Def Rel	'the way ...'
	<i>mise kul kaa</i>	manner all Rel	'any way ..., however ...'

The Rel *kaa* is optionally extended as *kaa na* with no change in meaning. This is attested chiefly in adverbial relative phrases like *saa di kaa na* 'when ...', see (513b) in §9.5.5, below, and in *muso kaa na* 'the way ...', see (151) in §5.9.10, above. There are also some cases of *kaa na* as an extension of 'that' complementizer *kaa* ... (§9.5.8). *kaa na* is rather uncommon in any of these functions in Timbutku itself. Using internal reconstruction, we might conclude that the optional *na* is historically the (nonsubject) Focus morpheme. However, no focalization is involved, and the occurrence of *ne* as a variant of *na* in this combination in DjCh makes us hesitate about the historical connection with the Focus morpheme. In interlinear morpheme glosses, we represent this optional *na* as Ø. Fortunately, there is little likelihood of confusion between this *na* and (perfective) Negative *na*, the latter being unlikely to follow *saa di kaa* or *muso kaa* directly.

mise has variants *muso*, *musoo*, etc. On the forms of the nouns in (339b-c), cf. §3.8.7.

Some speakers use *taka* 'manner' as an alternative to *mise*, hence *taka di kaa* 'the way ...'. The extended form *taka di kaa na* is also attested. However, *mise* is overwhelmingly predominant in Timbuktu in these adverbial relatives (and WH-interrogatives).

There is fairly little difference between the simple variants and those with *di*, especially in *saa (di) kaa*, where I suspect that the variant without *di* (between two long syllables) may simply be a syncopated pronunciation. A few examples of the forms in (339) are given in (340).

- (340) a. *saa kaa a tibi gi yene, yer o din fondo*
time Rel 3SgS put-on 3PIO 1SgDat, 1PIS Impf take road
 'When he has saddled them (donkeys) up for me, we will take the road.'
- b. *saa di kaa addabba di yo o čii*
time Def Rel animal Def Pl Impf speak
 '(back) when the animals spoke'
- c. *nan kul kaa woo go dam jirbi-iiye*
place all Rel Dem Impf do sleep-seven
 'whenever it (=rain) lasts a week'
- d. *no-o kow gi, [handi di kaa n kow gi]*
2SgS-Impf take 3PIO, [day Def Rel 2SgS take 3PIO]
na no-o baa gi
Foc 2SgS-Impf break 3PIO
 'You harvest them (=melons). The (same) day on which you harvest them, you break them.'
- e. *boro foo si bey musa kaa nono*
person one ImpfNeg know manner Rel exist
 'Nobody knows how it will be.'

For a specifically instrumental or comitative reading, *mise* and its variants co-occur with a stranded (usually clause-final) *nda* 'with', as in (341).

- (341) *bara a ma hin ka mey lakal kuna*
 must 3SgS Subju can Inf have mind Loc
[misa]_x kaa ngu o hin ka koor ga nda t
manner Rel LogoSgS Impf can Inf catch 3SgO with t
 'He must be able to have in his mind a way_x to handle it [by t_x].'

Infrequently, *mise* (or variant) takes a Loc postposition, as in (342).

- (342) *hal ngi-ye ta ma hin ka n̄aa,*
 until 3PIF Top Subju can Inf eat,
musa kaa kuna hal i ma duu ka goy
manner Rel Loc until 3PIS Subju do-then Inf work
 '(We starve) so they (=donkeys)_x may be able to eat, in such a way that
 they_x may proceed to work (later).'

Spatial deictic adverbials *nee* 'here' and occasionally *doodi* - *dooti* 'there' are relativizable (343a-b), as are temporal expressions like *moreyda* 'now' (343c).

- (343) a. *ay too nee kaa X Y huu di gaa goo*
 1SgS arrive **here Rel X Y** house Def Presentative be
 'I arrived right here where the house of X and Y (names) is.'
- b. *yee bisa yee koy doodi kaa yer o goy*
 1SgSImpf pass 1SgSImpfgo **there Rel 1PIS Impf work**
 'I go past (it) and go there where we will (be able to) work.'
- c. *moreyda kaa baana woo kar*
now Rel rain Dem hit
 'now that this rain has fallen'

8.3.7 Multiple relative clauses (conjoined or recursive)

In a conjoined relative, two or more relative clauses beginning with Rel *kaa* follow a single head NP. In (344), four relative clauses (a direct-object relative and three subject relatives) follow a single instance of the head NP *boro di* 'the person'.

- (344) *boro di [kaa yer ta guna yer koyroo kuna]*
 person Def [**Rel 1Pl Top see 1Pl this-town Loc**]
[kaa guna ga], [kaa yenje a banda],
[Rel see 3SgO], [Rel fight 3Sg behind],
[kaa yenje a banda moo] a-a huna hōō
[Rel fight 3Sg behind also] 3SgS-Impf live today
 'The man_x whom_x we have seen t_x in this town of ours, who_x saw it
 (=dwarf), who_x fought with it, (and) who_x fought with it also, he_x is
 alive today.'

There is no 'and' or 'but' conjunction that can be used to conjoin multiple relative clauses. The closest thing to such a conjunction is *nda* 'and, with', but this takes NPs and similar constituents (such as adverbials) rather than clauses, VPs, or verbs as its conjuncts. Due to the absence of such a conjunction, it is impossible to determine whether the multiple RCs (relative clauses) in (344) are jointly subordinated to the same head NP, as in NP [RC₁] [RC₂] [RC₃] [RC₄], or are hierarchically nested, each RC taking the entire preceding complex in its scope, as in [[[NP RC1] RC2] RC3] RC4]. The overall denotation is the same in either case.

In a recursive (or stacked) relative construction, a relative clause RC₁ attached to NP₁ in the matrix clause itself contains an NP₂ to which a second relative clause RC₂ is appended, and so forth ('This is [the cat that ate [the rat that lived in [the house that [Jack built]]]]'). In (345), 'man' is head of a (complex) relative clause containing 'secrets', which heads its own relative clause.

- (345) *ma na či har, kaa no-o bey yenje,*
 2SgS Neg be man, Rel 2SgS-Impf know fighting,
no-o mey moo sirri yo
 2SgS-Impf have also secret Pl
kaa no-o hin ka kamba a se
 Rel 2SgS-Impf can Inf hold 3Sg Dat
 'You are not a man_x who [(you_x) know fighting, (or) you_x have secrets_y, that [you_x can hold *t*, (in reserve) for it (=dwarf)]].'

8.3.8 Relativization out of complex syntactic structures

Most serial-verb constructions (§9.G) involve a high-frequency verb, often with aspectual value, followed by Inf[initive] *ka* and a substantive VP containing the main propositional information. In other words, these serial verbs resemble English modals (*can, may, have, be*). In such cases, the whole construction functions as a tightly knit though composite VP. It is easy to relativize out of the substantive VP across the intervening serial verb. Examples are in (346), the serial verbs being *hin* 'can' and *dooney* 'be accustomed'.

- (346) a. *maa ŋga či hay di kaa no-o hin ka dam t?*
 what? SFoc be thing Def Rel 2SgS-Impf can Inf do *t*?
 'What is the thing_x that_x you(Sg) can do *t*_x?'
 b. *maa ŋga či haya di yo kaa wor o dooney*
 what? SFoc be thing Def Pl Rel 2PlS Impf be-accustomed
ka gar t [alhoor guusu woo ye ra]?
 Inf find *t* [limestone hole Dem Pl Loc]?
 'What are the things_x that_x you(Pl) are accustomed to find *t*_x in the limestone pits?'

In such tight-knit serial-verb constructions, only occasionally do we find a resumptive pronoun suggesting a mid-sentence "restart," as in (347).

- (347) a *či haya kaa yer si hin ka fur ga*
 3SgS be thing Rel 1PIS ImpfNeg can Inf abandon 3SgO
 'It (=tea) is something_x that_x we can't leave (=go without) it_x.'

Other serial-verb constructions are more diffuse, involving two or more independently structured VPs. Here, relativization by extraction out of noninitial VPs eventually becomes too complex to achieve.

Consider now the rather complex example (348), with relative clauses indented.

- (348) NP [*farka čiimi-čiimi di*]
 [donkey truth-truth Def]
- Rel1 *kaa i-i har mana farka nono,*
 Rel 3PIS-Impf say 2SgDat donkey it-is,
- Rel2 *kaa [nda n kaar a ga a-a koy,*
 Rel [if 2SgS mount 3SgO on 3SgS-Impf go,
- " *nda n jeeje ga a-a koy, ni*
 if 2SgS load 3SgO 3SgS-Impf go, 2SgS
- " *si jow bundu, ni si jow barju,*
 ImpfNeg take stick, 2SgS ImpfNeg take strap],
- allaara jember guu no-o kow ga*
 ryal thousand five 2SgS-Impf take 3SgO
- 'A real donkey_x, [Rel1:] (of) which_x they tell you it's a (real) donkey,
 [Rel2:] which_x [if you(Sg) mount on it_x it_x will go, (and) if you load
 it_x it_x will go, without your taking a stick, without your taking a
 whipping strap], for 5000 riyals you will take (=can purchase) it.'

Here we have two conjoined relative clauses attached to the same initial head NP; the complex NP including these relative clauses functions as a preposed topical NP, corresponding to 3Sg 'it' in the following clause ('for 5000 riyals ...'). In the first relative clause (Rel1), we could argue that the relativized NP is the logical "subject" of the identificational quasi-verb *nono* (§7.1.1). However, *nono* does not allow surface expression of the understood "subject," so we cannot take such an NP as part of the syntax of the clause in Rel1. In the longer and internally quite complex Rel2, note particularly the two conditional sequences, each of which contains resumptive 3Sg pronouns (coreferential to the head NP) in both antecedent and consequent clauses. This suggests that a) relativization out of a conditional antecedent is not permitted on syntactic grounds (cf. "island" constraints), and b) relativization by extraction is not permitted out of a conditional consequent because of production-processing complications due to the separation between the consequent clause and the fronted relative pronoun. The situation is the same in English as the free translation suggests.

There does not seem to be any difficulty extracting a relative pronoun out of nonsubject position in a subjunctive clause (§9.6) subordinated to a matrix verb like *baa* 'want' or *har* 'say', as seen in (349).

- (349) a. *woo či margoro di kaa yee baa*
 Dem be mango Def Rel 1SgSImpf want
 [ay ma ŋaa t]
 [1SgS Subju eat t]
 'This is the mango_x that I want to eat t_x.'
- b. *woo či margoro di kaa [ay baba] har*
 Dem be mango Def Rel [1Sg father] say
 [ay ma ŋaa t]
 [1SgS Subju eat t]
 'This is the mango_x that my father told me to eat t_x.'

However, it appears that the subject of a subjunctive clause cannot be extracted by relativization. This makes sense since subjunctive clauses are always finite (i.e. have overt subjects). An example showing a resumptive pronoun in an embedded subjunctive is (350).

- (350) *boro di kaa ay har [a ma batu ey dooti]*
 person Def Rel 1SgS say [3SgS Subju await 1SgO there]
 'a person_x whom I told to (lit. "said that he_x") wait for me there'

For relativization of focused NPs, see §8.6.5.

8.3.9 DF morphemes and postpositions operating on the head NP

The entire structure consisting of the head NP and the following relative clause beginning with *kaa* constitutes an expanded NP, which functions as an argument in the higher (matrix) clause. This matrix NP is, in principle, treated like any other NP in the matrix clause in terms of constituent ordering and addition of any applicable DF (discourse-functional) morphemes or adpositions.

With prepositions or quasi-prepositions that precede the NPs to which they attach (primarily *nda* 'with', also *jaa* 'since', and *hal* 'until'), there is no way to tell whether the head NP alone or the entire expanded NP including the RC (relative clause) is the relevant constituent. The structures *nda [NP RC]* and *[nda NP] RC*, for example, are indistinguishable. However, postpositions and most DF morphemes follow rather than precede the constituents over which they have scope. For any such morpheme X, we should have no difficulty distinguishing the structures *[NP X] RC* and *[NP RC] X*.

Before proceeding to the data, we should also recognize that the pattern *[NP RC] X*, while more natural syntactically, might cause processing difficulties, since the X morpheme might be misanalysed as having narrow scope over the relative clause or some constituent thereof. For example, if the RC ends in NP₂, the sequence *[NP₁ [_{RC} ...NP₂]] X* might be mis-parsed as *NP₁ [_{RC} ...[NP₂ X]]*, where X takes narrow scope over NP₂ rather than broad scope over the extended NP headed by NP₁.

Basically, the DF morphemes work as follows: a) the emphatic morphemes (including 'only' and 'also') attach directly to the head NP, preceding the relative clause; b) focus morphemes come after the entire extended NP; c) topic marking

appears to occur preferentially at the end of the entire extended NP but occasionally occurs on the head NP.

The texts have many examples of Emph *daa*, *moo* 'also', and *nin* 'only' directly following the head NP, preceding Rel *kaa*. Examples are in (351).

- (351) a. a *jumbu-jumbu* *albarka-nte* *di* *daa*
 3SgS Rdp-descend powerful Def **Emph**
kaa *yer* *o* *dooney* *ka* *bey* *t*
Rel 1PlS Impf be-accustomed Inf know *t*
 'It (=rain) fell, the same powerful one_x that we are accustomed to experience *t_x*.'
- b. a *na* *či* [*woo* *dungura* *futu* *woo*] *moo* *kaa*
 3SgS Neg be [Dem shortness bad Dem] **also** **Rel**
 [*boro* *di* *yo*] *o* *taameysa* *nga* *na* *a* *dam* *t*
 [person Def Pl] Impf distinguish 3SgF Foc 3SgS put *t*
 'It isn't that terrible shortness_x either, (by) which_x the people distinguish (him), (thinking) it (=this)_x is what_x he presents *t_x*.'
- c. *šeytaan* *taka* *nono* *kaa* *a-a* *mey* *saa* *yo* *nin*
 devil kind it-is Rel 3SgS-Impf have time Pl **only**
kaa *a-a* *tun* *ka* *dira*
Rel 3SgS-Impf arise Inf walk
 'It's a kind of devil that just has times (in) which it gets up and walks.'

The fact that these morphemes are directly attached to the head NP may reflect a strategy to avoid the processing problems mentioned above. However, their emphatic flavor may also favor a conspicuous site next to the head NP (rather than at the tail end of a following relative clause).

Foc *na* and SFoc *nga* always occur in the seam between the fronted focalized constituent and the remainder of the clause (§8.1). This ordering is respected when the fronted constituent is an extended NP including a relative clause, as in (352).

- (352) [*iije* *keyna* *di* *kaa* *wii* *ay* *hāyši* *di*]
 [child small Def **Rel** kill 1Sg dog Def]
na *yee* *ta* *kar*
Foc 1SgS-Impf Top hit
 'It's [the child_x who killed my dog]_x [*focus*] that I will hit *t_x*.'

The Foc or SFoc morpheme cannot be inserted between the head NP, here *iije keyna di*, and an immediately following RC. The only alternative to (352) would be to delay (extrapose) the heavy relative clause ('It's the child_x [*focus*] that I will hit, who_x killed my dog'). Such "afterthought" relatives do occur, as in any language, but they are irrelevant to the point at hand.

Our examples of topic morphemes involve weak Top *ta*. Consider (353).

- (353) a. *ammaa [hay di kaa nafa] ta, ɕi alkaafun*
 but [thing Def Rel be-useful] Top, be *alkaafun*
 'But the thing that (really) is beneficial (to tea) is *alkaafun* (spice).'
- b. *[wannasu kaa ra na i kar ni] ta,*
 [story Rel Loc Foc 3PlS hit 2SgO] Top,
woo di wannasu ni si dam ga
 Dem Def story 2SgS ImpfNeg do 3SgO
 'A story in which they hit you, the story_x of that you won't do (=tell) it_x.'

As the bracketing shows, *ta* takes scope over the entire extended NP that precedes it. In (353b), one might be tempted to interpret *ta* as having narrow scope over the immediately preceding 2SgO pronoun *ni*, but clause-internal *ta* is uncommon with postverbal constituents, especially direct object enclitic pronouns. The natural parsing strategy, then, is to take *ta* at the end of a relative clause as having the broad scope shown by the bracketing. A similar default parsing strategy would not work so well with the Emph and other DF morphemes in (351a-c), which are readily amenable to either narrow- or wide-scope readings when clause-final.

However, I have found a handful of examples of *ta* directly following a head NP, as in (354).

- (354) *ammaa mise ta kaa sii boro kamba,*
 but manner Top Rel be-not person hand,
boro si hin a ra hin-ey
 person ImpfNeg master 3Sg Loc power
 'But a condition that isn't in the hands of man, no-one can have control over it.'

We now consider what happens when the extended NP is part of a matrix-clause PP. If the relative clause happens to end in a simple NP (in direct-object or adverbial function), the postposition might be mis-parsed as taking narrow scope over this relative-clause-final NP instead of wide scope over the entire extended NP. In other words, (355a) might be mis-parsed as (355b).

- (355) a. [NP_x *kaa*_x [... *t*_x ... NP_y]] Postp
 b. [NP_x *kaa*_x [... *t*_x ... [NP_y Postp]]]

Nevertheless, the pattern (355a) is grammatical, as in (356). In (356a), the listener might have a brief processing problem, but will eventually make the correct parse since 'kill' requires a direct (not Dat) object and since a recipient NP with 'give' takes Dat form. In (356b-c) the morphology provides telltale clues about constituent structure. In (356b), the fact that the 3Sg marker is *ga* rather than *a* uniquely identifies it as a direct object marker (not a postpositional complement). In (356c), the failure of the category combination 1Sg-Dat to take its usual postverbal enclitic form *yene* likewise forces the listener to identify *ey* as direct object.

- (356) a. *ay noo njerfu di [har di kaa wii hāyši di] se*
 1SgS give money Def [man Def **Rel** kill dog Def] **Dat**
 'I gave the money to the man who killed the dog.'
- b. *ay noo njerfu di [har di kaa kar ga] se*
 1SgS give money Def [man Def **Rel** hit 3SgO] **Dat**
 'I gave the money to the man who hit it.'
- c. *ay noo njerfu di [har di kaa kaati ey] se*
 1SgS give money Def [man Def **Rel** call 1SgO] **Dat**
 'I gave the money to the man who called to me.'

There are no particular processing difficulties when the relative clause ends in a constituent which rarely or never occurs as postpositional complement—e.g. a verb, certain adverbials (357a), or an already formed PP (357b).

- (357) a. *ay noo njerfu di*
 1SgS give money Def
[har di kaa goy nee] se
 [man Def **Rel** work here] **Dat**
 'I gave the money to the man who works here.'
- b. *ay noo njerfu di*
 1SgS give money Def
[alfaa di kaa gaara yene] se
 [holy-man Def **Rel** bless 1SgDat] **Dat**
 'I gave the money to the holy man who blessed me.'

Although the type (355a), exemplified in (356-57), is always possible and seems to be preferred, we also find examples where the postposition is added directly to the head NP, with the relative clause following, as in (358). I interpret this as a delayed (extraposed) relative-clause construction.

- (358) *ay noo njerfu di alfaa di se [kaa gaara yene]*
 1SgS give money Def holy-man Def **Dat** [**Rel** bless 1SgDat]
 (= 357b)

8.3.10 *kaa* 'when ...' or 'such that ...' (abstract adverbial relatives)

Some apparent relative constructions permit or require a resumptive pronoun; see especially §8.6.5 for the partial incompatibility of focalization with relative-pronoun extraction. However, there are also some cases where *kaa* does not seem to function as a true relative pronoun, coindexed with a specific head NP and with a specific NP within the subordinated clause. Accordingly, there is no extraction and we find no "trace" in the relative clause proper. For example, in (359), we get an overt 3PIO pronominal *gi*, which we would expect to appear as zero if *kaa* were a true relative pronoun coindexed with 'the people'. This suggests that *kaa* in such examples has a more abstract sense ('when ...', 'in a situation where ...', 'in case ...').

- (359) *boro di yo o humoy i ra*
 person Def Pl Impf bathe 3Pl Loc
 [*kaa hari di yo si maan gi*]
 [Rel water Def Pl ImpfNeg be-near 3PIO]
 'The people_x bathe in them (pools), in case the waters (=rivers) are
 not near them_x.'

One way to interpret (359) is in terms of a "restart" of the relative clause in main-clause form. Taking the *kaa* clause as a restrictive relative modifying 'the people', we could argue that the ideal form of (359) would have the relative clause immediately follow this head NP: 'the people [whom the rivers are not near] bathe in them (pools)'. The delayed appearance (extraposition) of the relative clause might then have facilitated the restart. Indeed, quite often in texts there are hesitations after *kaa* in a context clearly calling for a restrictive relative reading; schematically, 'I ate the mango which—, you brought it.' In such instances, a restart analysis is appropriate. My assistants would often repeat such examples in more fluent syntactic form, without the restart and with the regular relative clause syntax (including traces): 'I ate the mango which you brought.' However, in other examples like (359) there is no evident hesitation, and assistants did not modify them during transcription sessions.

In (360), the second *kaa* can be glossed 'when ...'.

- (360) [*jaa saa di kaa ay sinti mana [a wannasu di]*]
 [since time Def Rel 1SgS begin 2SgDat [3Sg talk Def]]
na ay dumbu mana a wane čini di,
 Foc 1SgS cut 2SgDat 3Sg Poss discussion Def,
kaa ay har mana atey si mey haya kul
 Rel 1SgS say 2SgDat tea ImpfNeg have thing all
kaa ga na a doo kala faraa
 Rel on Foc 3SgS originate except fatigue
 'Right from the time I began the talk of it (=tea) with you, I analysed
 ("cut") for you the discussion of it, when I told you (that) tea has
 nothing on which it originated (=was founded) other than fatigue.'

This example begins with *saa di kaa ...* 'when ...' (literally, 'the time which ...'), itself a relative construction (§8.3.6). This prompts us to consider the possibility that the medial *kaa ...* 'when ...' is in fact compatible with a relative analysis, provided that we posit a phonologically unrealized head NP with spatiotemporal or other adverbial sense—if not *saa di* 'the time' itself, then perhaps a more general and more abstract head NP.

A further example of abstract *kaa* is (361), below; we translate 'in such a way that ...'.

- (361) *no-o hanga ga nda kuuru korfo di*
 2SgS-Impf follow 3SgS with skin rope Def
ka didii ga a ga hal a ma yekuwa
 Inf roll 3SgO 3Sg on until 3SgS Subju be-strong
a ma mey-ndi ga gaabi,
 3SgS Subju have-Caus 3SgS strength,
kaa nda n kaa ta dam a ra ferey di moo,
that if 2SgS come Inf put 3Sg Loc brick Def too,
nda farka di jur nda ga wala a jirfiti ngu
 if donkey Def run with 3SgO or 3SgS lurch 3ReflSgO
nda ga, a ma si koy sey ...
 with 3SgO, 3SgS Subju Neg go scatter ...
 ‘You will follow it with the leather rope, and roll it (=rope) up on it
 until it (=rope) is firm (=tight) and gives it strength; **in such a
 way that** if you also come and put brick(s) on it, if the donkey
 runs with it (=load) or lurches around with it, it (=load) won’t go and
 be spilled ...’

The abstract use of Rel *kaa*, allowing glosses like ‘when ...’ and ‘in such a way that ...’ is much less typical of KCh than of other Malian Songhay languages. In KS, the Rel morpheme *kaŋ* is also extremely common as a ‘when ...’ subordinator, and ditto for HS *ga*. These counterparts are often used where KCh would use fuller expressions, particularly *saa di kaa ...* ‘when ...’.

For *kaa* as a ‘that’ complementizer after verbs like ‘say’ and ‘know’, see §9.5.8.

8.4 Topic constructions

Topicality may be signaled by marking the relevant constituent with an overt “Top” morpheme *bine* or *ta*, preposing a constituent (to precede the clause proper), or both. In addition to these clear cases of topicality (§8.4.1, §8.4.3), we also consider “3F” pronouns, which are not specifically topical but have some relevant uses.

8.4.1 Preposed topical constituents, with or without Topic *bine*

A pronoun, full NP, or adverbial (but not a PP) may be uttered in isolation to establish a discourse topic or frame for a following complete sentence. The preposed topical constituent may be prosodically separated from the following clause by a pause or by falling intonation.

In the extended passage in (362), we observe several topics (and a focalized constituent).

- (362) a. FOCUS: [hay di kaa yer o duu a ra daa] na
 [thing Def Rel 1PIS Impf get 3Sg Loc Emph]Foc
 yer o kaa, yer o jamna, jamna hinja
 1PIS Impf come, 1PIS Impf divide, share three,
 TOPIC jamna foo di, yer o koy
 share one Def, 1PIS Impf go
 yer o dey i se a ra subu,
 1PIS Impf buy 3Pl Dat 3Sg Loc grass,
 yer o dey i se a ra doobu keyna
 1PIS Impf buy 3Pl Dat 3Sg Loc bran small
 wala saaba keyna, haya taka-taka yo
 or sorghum small, thing Rdp-manner Pl
 kaa yer duu koyra di ra keyna
 Rel 1PIS get town Def Loc small
 yer o dey ga i se a ra,
 1PIS Impf buy 3SgO 3Pl Dat 3Sg Loc
 TOPIC jere foo di, yer moo go ŋaa ga,
 part one Def, 1PIS also Impf eat 3SgO,
 TOPIC i-dumb-o foo di kaa čindi
 Absol-small-Adj one Def Rel remain
 yer o jisi ga
 1PIS Impf put-down 3SgO

'[What we earn in it (=work)] [focus] is what we come and we divide into three parts. **The one (=first) part_x**, we go buy from it_x some grass for them (=donkeys); we buy from it_x a little bran or a little sorghum for them, a little of the various things that we get in the town, we buy it for them from it_x. **Another part_y**, we eat it, (=spend it on our own food). **The bit that remains_z**, we save it_z.'

The first part of the passage introduces as discourse referents three parts of a sum of money that has been earned. The speaker then explains in turn how each part is used, each segment beginning with an autonomous topical NP which is followed (after a prosodic break) by a sentence or short discourse span in which this referent is mentioned in the form of third person pronouns, anaphoric to the topical NP.

Preposed topical constituents are syntactically external to the clauses that follow them. In this respect they differ from fronted focused constituents, which are tightly fused with the following core sentence prosodically and whose referents are normally expressed within the core sentence by traces (i.e. zero) rather than by anaphoric pronouns. As usual, we speak of "preposed" topics but of (syntactically) "fronted" focused constituents.

As (362) shows, preposed topics require no explicit topicalizing morpheme. However, the Top morpheme *binc* is available when overt marking is required. It may be glossed in context as 'concerning X', 'speaking of X', or 'as for X'. It is most common following short constituents (such as pronouns and short NPs), and tends to occur at abrupt topical switchpoints. (363) occurred at the beginning of an interview, immediately following the opening greetings.

- (363) [čiji baana woo bine]
 [night rain Dem Top]
 [muso foo] na war guna ga [nda t]?
 [manner which?] Foc 2PIS see 3SgO [with t]?
 '(Concerning) last night's rain, how did you(Pl) see it?'

In (364), the interviewee H introduces several types of (water-)melon as discourse referents, of which the interviewer D selects the last one for further discussion.

- (364) H: [yer gandoo ra] hay di kaa hin ka boori
 [1Pl this-country Loc] thing Def Rel can Inf be-good
 a ra, a ci kaŋkani, nda fombu,
 3Sg Loc, 3SgS be melon₁, and melon₂,
 nda musamusa, nda kaney, woo yo kul
 and melon₃, and melon₄, Dem Pl all
 go hin ka boori yer gandoo ra
 Impf can Inf be-good 1Pl this-country Loc
 D: [kaney bine] nda boro дума ga,
 [melon₄ Top] if person sow 3SgO,
 musa foo na boro o hejey ga nda?
 way which? Foc person Impf harvest 3Sg with?
 H: 'In this land of ours, what can do well is melon₁, melon₂,
 melon₃, and melon₄ (four cultivars); all these can do well in this
 our land.'
 D: '(Speaking of) melon₄, when one has planted it, how does one
 harvest it?'

In the lead-in (not reproduced here) to (365), the speaker has commented that in (morally upright but arid) Timbuktu, if people's behavior is displeasing to God the result is a lack of rain during the wet season. The speaker proceeds to contrast this enviously with the situation in the monsoon-drenched southwest of Mali.

- (365) [weyna-kaŋ-ey bine], keydiya waati haya kul go
 [sun-setting Top], wet-season time thing all Impf
 dam-di a si jendi baana o kar čiji ilaa jaari
 be-done 3SgS Impf prevent rain Impf hit night until day
 'As for the (south-)west, (in) the wet season, anything (even bad
 behavior) is done, (but) it doesn't keep the rain from falling night
 and day.'

Occasionally, the *bine* constituent functions as subject NP with no actual preposing (so there is no resumptive pronoun). In (366), *woo bine* 'as for that' is immediately followed by the MAN morpheme (Impf *o*).

- (366) [woo bine] o gar ŋgi ta na tun
 Dem Top Impf find 3PIF Top Neg arise,
 'That (=my departure) occurs while they have not (yet) gotten up.'

However, *bine* does not occur as part of a postverbal constituent such as direct object NP, or a PP functioning semantically as a complement of the verb. Such NPs may, however, be preposed with (or without) *bine* as topical NPs, to be followed by the core clause with a resumptive pronoun. Topic preposing is therefore quite different from fronting rules (focalization including WH-interrogatives, and Relativization), which regularly front complete PPs and avoid resumptive pronouns. (367a) has a resumptive direct object pronoun, (367b) a resumptive pronoun in a postverbal PP.

- (367) a. [čiji baana woo bine] musa foo na
 [night rain Dem Top] way which? Foc
 war guna ga nda?
 2PlS see 3SgO with?
 'As for this rain of last night, how (lit., "with which way") did you(Pl) see it?'
 b. huu woo (bine), ay goro a ra
 house Dem (Top), 1SgS sit 3Sg Loc
 'This house, I lived in it.'

(367b) differs in this respect from (365), which does have a preposed Loc PP. But the preposed PP in (365) functions to define a general spatial setting, while the PP in (367b) functions as a kind of locational complement to the verb 'sit'.

bine does not seem to occur in my Timbuktu texts as a clause-final 'however' morpheme.

Because of its tendency to mark topical switchpoints, *bine* is a more forceful marker of topicality than *ta* (§8.4.3). The latter may be used either at the end of preposed topical constituents, or after ordinary sentence-internal constituents (especially subject NPs).

While preposed NPs can generally be taken (syntactically and semantically) as outside the frame of the sentence or proposition, there are occasional examples where scope relationships force a reading where the preposed NP is inside the scope of a sentence-internal quantifier. This is the case with *ije foo* 'one child (=piece)' in (368), which is preposed (and corresponds to a resumptive 3Sg pronoun in the following sentence), but is under the scope of the sentence-internal negation.

- (368) [ije foo] ni si hin ka kow ga
 [child one] 2SgS ImpfNeg can Inf take-away 3SgO
 'You(Sg) could not remove a single piece (of it).'

8.4.2 Use of "3F" pronouns

The "3F" (Full third person) pronouns are 3SgF *ŋga* and 3PlF *ŋgi-yo* (and its variants), the latter presumably containing the nominal Pl morpheme *yo* (§4.1.4). For more on the forms, see §3.8.8. "3F" is a special case of the usual 3Sg and 3Pl ("3") pronouns. None of them is bound by a syntactically specified antecedent.

Two basic uses of "3F" pronouns should be distinguished (369).

- (369) a. obligatory “3F”: used in “exposed” positions where 3Sg3Pl are not allowed;
 b. facultative “3F”: used where both “3” and “3F” are allowed.

Simple “3” pronouns are not permitted in the “exposed” syntactic positions in (370), which therefore have obligatory “3F” pronouns:

- (370) a. in isolation
 b. preceding Top *bine* (§8.4.1);
 c. preceding weak Top *ta* (§8.4.2);
 d. fronted focused constituent before SFoc *nga* or Foc *na* (§8.1);
 e. emphatic constituent with following ‘only’, ‘also’, or Emph morpheme (§8.5);
 f. preceding a modifier such as demonstrative *woo* ‘this’ or a numeral;
 g. left conjunct in X *nda* Y conjunction (§5.11.1).

With 3SgF *nga*, for example, we can get *nga* (isolation form), *nga bine* (Top), *nga ta* (weak Top), *nga nga* (SFoc), *nga na* (nonsubject Foc), *nga daa* (Emph), *nga nin* (‘only’), *nga moo* (‘also’), *nga woo* with demonstrative, and *nga nda gi* (‘...and they’). Contrast the ungrammatical alternatives with regular 3Sg *a*: #*a bine* (grammatical in another sense ‘his or her heart’), #*a ta*, #*a nga*, #*a na*, #*a daa*, #*a nin*, #*a moo*, #*a woo*, #*a nda gi*.

In these exposed positions, the “3F” pronoun is highlighted by virtue of an accompanying overt modifier or attachment, or by virtue of syntactic position. By contrast, regular “3” pronouns like 3Sg *a* occur without modifiers in nonexposed, clitic-like positions within larger phrases or sentences (subject, object, possessor, complement of postposition, complement to the right of *nda* ‘with, and’). Subject, possessor, and postpositional complement are proclitic, while object and right complement of *nda* are enclitic.

“3F” can optionally be used instead of “3” pronouns in possessor function and as postpositional complement (especially with noun-like postpositions); see (54a) in §4.1.1, above. We may speak of this as the “facultative” use of “3F.” It is fairly uncommon, except before V-initial noun stems where a simple 3Sg *a* or 3Pl *i* might disappear due to VV-Contraction (36), §3.7.1.

Since “3F” pronouns are used in isolation and before DF morphemes, there is some association between this pronominal category and the expression of topicality (as well as that of focus). An example is (371).

- (371) *nga ta alhoor di nda n kow ga*
 3SgF Top limestone Def if 2SgS remove 3SgO
ni kata ga koyra
 2SgS bring 3SgO town
 ‘As for it, the limestone, when you’ve removed it and brought it to town ...’

The limestone was part of the prior discourse. Preposing *ŋga ta* 'as for it' and a repetition of 'limestone' establishes it as the topic of the following clauses.

The Timbuktu dialect, however, makes less extensive use than KS of preposed topical expressions based on *ŋga*. In particular, in Timbuktu KCh, a preposed 3SgF *ŋga* generally denotes a person or other simple discourse referent. In KS, by contrast, a preposed *ŋga* phrase often has more abstract reference, denoting the preceding situation (or proposition), suggesting translations like 'that being the case, ...'

8.4.3 Use of weak Topic marker *ta*

The morpheme *ta* is quite common and versatile, so much so that it is difficult to gloss. We will label it "Top," but will often refer to it as a "weak" topic marker to contrast it with Top *bine* and 3SgF *ŋga* (see the preceding two sections).

This *ta*, which follows the topical constituent in question, is to be distinguished from two other common *ta* morphemes. One is a variant, used after *kaa* 'come', of Inf[initival] *ka*, hence *kaa ta VP* (§9.G.7). The other is a Future morpheme used only after Impf *o ~ go* (§7.2.5). Any *ta* in the texts which does not follow *kaa* 'come' or Impf *o ~ go* can be safely identified as the Top morpheme

Weak Top *ta* is common with preposed topical NPs, as in (372). In this case, if the referent in question recurs (in any syntactic function) in the following core sentence, we get a resumptive pronoun. If the preposed constituent is a spatiotemporal adverbial there is no resumptive element. The structures are the same as the preposed topics, with or without *bine*, described in §8.4.1.

- (372)
- a. *[[woo yo ta] kul] bara ni nda gi ma harŋa*
 [[Dem P1 Top] all] must 2SgS and 3PIO Subju follow
 'All these (tools)_x, you and they_x must be inseparable.'
 - b. *[kuumu ta] a si hima ka moor ni far!*
 [hoe Top] 3SgS ImpfNeg should Inf be-far 2SgO at-all!
 'A hoe_x, it_x shouldn't be away from you ever.'
 - c. *moreyda ta attey kaa yer kani*
 now Top tea become 1Pl custom
 '(By) now, tea has become a custom of ours.'

One speaker added Emph *gaa* (§8.5.7) to *ta* in three instances involving preposed topics. I did not observe this with other speakers. For the record, the preposed topical constituents were *woo yo ta gaa* 'those (=tools)', *kuumu ta gaa* 'a hoe', and the time adverbial in (373).

- (373)
- saa di ta gaa, yer si filla wir*
 time Def Top Emph, 1PlS ImpfNeg repeat seek
hay kaa yer ŋaa gaa
 thing Rel 1PlS eat Emph
 'Then (=in that situation), we do not any longer seek anything that we (might) eat.'

While *ta* and *bine* (§8.4.1) can be used with preposed topical constituents, only the much weaker *ta* can also be used sentence-internally, where it usually follows a NP.

By far the most common sentence-internal use is with subject NPs, a variety of which (from simple pronouns to complex NPs) are illustrated in (374).

- (374) a. *woo di ta o meer*
 Dem Def **Top** Impf be-ugly
 'That is ugly.'
- b. *yer ta na guna ga*
 1PlS **Top** Neg see 3SgO
 'We haven't seen him.'
- c. *ammaa [[hay di kaa nafa] ta], či alkaafun*
 but [[(thing Def Rel benefit) **Top**], be *alkaafun*
 'But what really helps (with tea), is *alkaafun* (a spice).'

Especially with pronominal subjects, *ta* is so common that it may be disregarded in free translation. With third person pronouns, the ordinary 3Sg *a* and 3Pl *i* must be replaced by 3SgF *nga* and 3PlF *ngi-yo* when followed by *ta* or other DF morphemes (§8.4.2), as illustrated in (375).

- (375) *nga ta o hin ka dam handu foo ...*
 3SgF **Top** Impf can Inf do month one ...
 'It (=limestone) can spend (=last) a month ...'

While *ta* is common with subject NPs, the only cases in my data where *ta* is attached to a postverbal constituent involve pronouns, and even these cases are uncommon. Most cases of postverbal *ta* are really clause-final, with scope over the entire clause under certain conditions (see below); if a direct object full NP happens to be (otherwise) clause-final we will get the linear sequence (object) NP + *ta*, but this is not a case of object topic.

ta is rare, but attested, with PPs. The available examples show *ta* preceding the postposition, suggesting that *ta* takes the NP, not the larger PP, as its complement, and that the postposition treats NP + *ta* just like a simple NP. See (376).

- (376) a. *boro foo na hin ka mey [a ra]*
 person one Neg can Inf have [3Sg Loc]
fahaam-ey foo, [[[yer wane] koyroo] ta] ra],
 understanding one, [[[[1Pl Poss] this-town] **Top**] **Loc**],
nda a na či G
 if 3SgS Neg be G
 'No-one has been able to acquire any understanding of him, in this town of ours, if it was not (=apart from) G [*man's name*].'
- b. *yerkoy na čerbu ga [ay ta se]*
 God Neg show 3SgO [1Sg **Top** **Dat**]
 'God hasn't showed him to me.' (= 'I have never encountered him.')

ta may also occur after lexical adverbials, even when they are not preposed as topical constituents. An apparent example is (377), though one might argue that *jaari di ta* functions here as a preposed topic for the following clause.

- (377) mais, a-a hoy [jaari di ta], war wane
 But, 3SgS-Impf spend-midday [day Def Top], 2Pl Poss
 almušakka di yo kul ŋga ŋga o jow ga
 daily-need Def Pl all 3SgF SFoc Impf take 3SgO
 'But, he spends (it), the day, all your(Pl) needs, it's he [focus] who delivers it.'

The versatile *ta* topic marker can also be used inside a complex NP, taking scope over one of its component NPs. There are textual examples for each of the types listed in (378), where *ta* has scope over the element that precedes it.

- (378)
- | <u>element preceding ta</u> | <u>element following ta</u> |
|---------------------------------|--|
| a. head NP | relative clause |
| b. possessor NP or cpd. initial | head noun |
| c. possessor NP | Poss postposition <i>wane</i> plus head noun |
| d. NP <i>kul</i> 'all' | |
| e. NP (second conjunct) | (unrestricted) |
| f. NP (first conjunct) | <i>nda</i> 'and' plus NP (second conjunct) |
| g. pronoun (in apposition) | NP (in apposition) |

As with the other postpositions mentioned above, Poss *wane* (if present) follows *ta* when the latter is attached to a possessor NP. Examples of the types in (378) are given in (379a-g), in order.

- (379)
- a. ammaa [mise ta] kaa sii boro kamba ...
 but [manner Top] Rel be-not person hand ...
 'But a condition that is not in the hand(s) of humans ...'
- b. maa na no-o hin ka har a ga
 what? Foc 2SgS-Impf can Inf say 3Sg by
 sanda [[[ni ta] guna di] ra] ?
 like [[[2Sg Top] see Def] Loc] ?
 'What can you(Sg) say about it (=tea), like, in your view?'
- c. gaabi di kul bisa [[[ni ta] wane] faraa di]
 power Def all pass [[[2Sg Top] Poss] fatigue Def]
 'The power (of tea) exceeds your(Sg) fatigue.'
- d. ay kaa ta gar, [[[farru woo di] ta] kul],
 1SgS come Inf find, [[[clearing Dem Def] Top] all],
 a-a ton nda allaa feeji korey
 3SgS-Impf be-full with only sheep white
 'I came and found (that) this whole open space, it was full with just white sheep.'

(379, cont.)

- e. *yerkoy na kuboy-ndj ey [nda [atakurmi ta]] far!*
 God Neg meet-Caus 1SgO [with [A Top]] at-all!
 'God has never caused me to encounter Atakurmi (=dwarf).'
- f. *[[ni ta] nda ey] si mey hii-hay*
 [[2SgS Top] and 1Sg] ImpfNeg have vehicle-price
 'You and I don't have the fare'
- g. *jaa aljumaa han [yer ta] [tumbutu boro] si fari*
 since Friday day [1PIS Top] Timbuktu person ImpfNeg farm
 'since on Fridays (=Muslim sabbath) we Timbuktu people don't do farm work'

In (379e), one might argue that we really have a conjoined NP 'I and Atakurmi' as direct object of 'cause to meet', and that *ta* has scope over this conjoined NP, not just over *atakurmi*. There are other examples with simple conjunctions like *[ay nda ni] ta* 'I and you(Sg)' where *ta* probably does have wide scope.

The "appositional" construction (379g) may really be a possessive (literally, 'our Timbuktu person'), see §5.10.1.

It is reasonable to allow *ta* to attach to possessors (379b-c), conjuncts (379e-f), and appositionals (379f), since these NPs are referentially autonomous. It is less obvious why *ta* may occur between the head NP and a relative clause, the two parts of a single constituent denoting one referent. But relative clauses are often delayed (extraposed), and most DF markers attach to the head NP rather than appearing at the end of the relative clause (§8.3.9). This accounts for (379a), but *ta* may also occur at the end of the relative clause as in (380). Note that *ta* in (380) has wide scope, not narrow scope over just *ni* 'you'.

- (380) *[[wannasu kaa ra na i kar ni] ta],*
 [[talk Rel Loc Foc 3PIS hit 2SgO] Top],
woo di wannasu ni si dam ga
 Dem Def talk 2SgS ImpfNeg do 3SgO
 'A story in which they knock you (down), that story you won't do (=tell).'

It is also not immediately obvious why *ta* precedes *kul* in (379d), but follows it in (381).

- (381) *ammaa [[boro kul] ta] na hin ka key*
 but [[person all] Top] Neg can Inf stop
ka yenje a banda
 Inf fight 3Sg behind
 'But every person was not able to stop and fight with it (=dwarf).'

Perhaps the difference is that *kul* in (381) is distributive, operating over the common noun *boro* 'person' to give the sense 'every person'. Since *boro* by itself does not denote a specific person in this sentence, it may be that Top *ta* cannot be

directly attached to it, and must follow *kul*. In (379d), on the other hand, *farru woo di* 'this open space' already denotes a concrete location, so *kul* just emphasizes its totality; here *ta* could be meaningfully added either before or after *kul*.

We are still not done in describing the locations where *ta* may occur. It is also fairly common at the end of conditional antecedent clauses, as in (382). It is normally clause-final in this usage, though in (382a) there is a further DF morpheme *nin* following *ta*. Care should be taken not to bracket clause-final *ta* incorrectly with the final constituent of the core of the clause.

- (382) a. *aywa, nda* [[*baana bow*] *ta nin*] *gomni o bow*
 well, if [[rain be-much] Top only] blessing Impf be-much
 'Well, only if the rain is abundant will prosperity be abundant.'
 b. *nda* [[*albarka hirow [i ra]*] *ta*], *woo činne hiŋka*
 if [[power enter [3Pl Loc] Top], Dem peer two
wala a-hinja, a hima ka kurŋu yer
 or Absol-three 3SgS ought Inf sate 1PIO
 'If force enters into it (=rain), two or three (rains) like this one, it
 should be enough for us.'

If we failed to recognize clausal scope for *ta* in these examples, we would have to explain how a verb (382a) or the PP argument of a motion verb (382b) could function as topics, violating generalizations we have made above.

Consider now the rather complex passage in (383).

- (383) *mais nda* [[*yerkoy kar ŋgu baana, a key-ndi*
 but if [[God hit 3ReflSg rain, 3SgS stop-Caus
ŋgu hari] *ta*], [[*no-o hiŋ ka bilimbilim*
 [3ReflSg water] Top], [[2SgS-Impf can Inf roll
ni bargō] *ta*]
 [2Sg drum] Top]
 [[*ka koy—, ka koy ton ga ka koy goy*] *ta*],
 [[Inf go—, Inf go fill 3SgO Inf go work] Top],
saa di n bey kaa woo či nafa beer
 time Def 2SgS know that Dem be benefit big
 'But if God hits (=makes) His rain, (and) He stops His water, (and)
 you(Sg) can roll your (Sg) metal drum, and go—, and go fill it
 (=drum) and go and work; then you know that this (=rain) is a great
 benefit.'

At first sight, without the overlaid bracketing, this looks like a tissue of counterexamples to our generalizations about where *ta* can and cannot occur; *ta* appears to follow a direct object *ŋgu hari* 'His water', another direct object *ni bargō* 'your drum' (large, cylindrical metal gas drum), and *goy* 'work' (ambiguously a verb or noun). However, as I analyse (383), the several clauses intervening between the initial *nda* 'if' and *saa di* 'then' constitute a string of parallel conditional antecedents bound by *nda*. All three *ta* morphemes, therefore, are clause-final as in (382) rather than

having scope over the immediately preceding low-level constituent. This example shows how *ta*, as well as the summative *saa di* ‘then’, can function to indicate the continuation and eventually the right edge of an extended conditional antecedent complex. We will return to this issue later while discussing conditionals (§9.5.10).

Finally, topical constituents with *ta* are occasionally appended to the sentences they relate to, probably as afterthought elaborations (384).

- (384) *saa di a si mey torro foo, kufu di ta*
 time Def 3SgS ImpfNeg have trouble one, froth Def Top
 ‘So, it_x causes no trouble, the (tea’s) froth_x.’

8.5 Emphatics and similatives

The morphemes we label *Emph* are semantically close to “focus” in that they emphasize the precise identity of a referent, either instead of or in addition to other referents. We reserve the term “focus” in this grammar for clause-level focalization including fronting, and the labels *SFoc* and *Foc* for morphemes associated with such operations. Emphatic morphemes (glossed “*Emph*”) can be added locally to individual constituents without affecting the syntax of the rest of the sentence, though of course there may be wider logical interactions involving scope. An exception is the ‘nobody (nothing) ..., except X’ construction (§8.5.3), which does involve the sentence as a whole.

We also include a brief discussion of similative expressions (‘like X’, ‘sort of X’) in §8.5.6.

8.5.1 Simple emphatics (*daa*, *jaati(r)*, *huneyno*, *yaa*)

The most common *Emph* morpheme is *daa*. It has the syntax typical of other DF morphemes such as *Top*, see §5.1. It directly follows the affected constituent and is strongly stressed. It emphasizes that the referent or spatiotemporal entity denoted is precisely correct. It is used, for example, in strong confirmations of a previous assertion (by the same or another speaker), as in the common phrase (385a), and to emphasize a precise identity or spatiotemporal location, as in (385b). In some sentences it could be loosely translated as ‘only’, see discussion of (398) in the next section, but *daa* is not primarily exclusive in the fashion of true ‘only’ morphemes.

- (385) a. [*woo di daa*] *nono*
 [Dem Def **Emph**] it-is
 ‘That is precisely it!’
 b. [*nee daa*] [[[*yer farru foo-foo woo*] *daa*] *ra*]
 [here **Emph**] [[[1Pl clearing one-one Dem] **Emph**] Loc]
 ‘right here, right in these various open spaces of ours’

Co-occurrence with the identificational quasi-verb *nono* as in (385a) is naturally common (§7.1.1). The constituent marked by *daa* may also be a syntactically focused constituent; see §8.1 for discussion and examples

daa is not common clause-finally with scope over the whole clause, or over the VP. However, there do seem to be rare examples of clausal scope, as in (230) in §7.1.1, above. For *daa* spilling into the sense 'only, merely' see end of §8.5.2.

jaati – *jaatir* is syntactically a noun, and is usually preceded by an NP (often a pronoun). In the sequence *X jaati(r)*, the NP (*X*) might be analysed syntactically as a possessor ('*X*'s self'), the initial of a loose compound ('*X* self'), or an appositional NP ('*X*, himself'). *jaati(r)* can also be used as a kind of adverbial with clausal scope ('indeed'), but even here it is nominal in form and allows Def *di*. We will gloss it as 'self' or 'indeed' according to context. It is probably derived from Ar. *šaat* 'self', perhaps via other African languages. The variant with final *r* is used chiefly in the Def form *jaatir di*, pronounced [dʒaːtidɪ] (§3.6.2), but it occurs optionally in other contexts. The stem is sometimes reduplicated as *jaati-jaati* or *jaati-jaatir* (the first part has never been recorded as #*jaatir*-).

Some speakers make frequent use of *jaati(r)*, others do not. Overall, it is less common and less fully grammaticalized than possessed forms of *bomo* 'head', which are described later under the rubric of reflexives (§10.2.1). A few examples of *jaati(r)* are given in (386).

- (386) a. *a ċi bita boyro, a-a kaan [jaatir di]*
 3SgS be porridge good, 3SgS-Impf be-sweet [indeed Def]
 'It (=melon seeds) makes a good porridge, it is sweet indeed.'
- b. *[[[a wane] albarka di] jaatir] o bow*
 [[[3Sg Poss] force Def] self] Impf be-big
 'Its (=melon's) very power (=value) is great.'
- c. *moreyda i-i fari a ra moo,*
 now 3PlS-Impf farm 3Sg Loc also,
[ay ta jaatir di] ċindi ka goy dooti
 [1SgS Top self] Def remain Inf work there
 'Now they raise crops in it (=swamp) too; I myself continue to work there.'
- d. *aywa atakurmi woo [ay ta jaati-jaatir di],*
 well A Dem [1SgS Top Rdp-self Def],
ay na bey ka guna ga
 1SgS Neg know Inf see 3SgO
 'Well, this A (=dwarf), me personally, I have never seen it (=A).'
- e. *mais atakurmi ta ay na guna ga [ŋga jaati-jaati]*
 but A Top 1Sg Neg see 3SgO [3SgF Rdp-self]
 'But A (=dwarf), I didn't (actually) see it itself (=in the flesh).'
- f. *[ay jaatir di se] na a noo ga*
 [1Sg self Def Dat] Foc 3SgS give 3SgO
 'It was to me myself [focus] that he gave it.'

(386a) illustrates the ‘indeed’ adverb-like sense, emphasizing the truth of the proposition; note the (optional) Def *di* pointing to its continuing nominal status. The other examples involve attachment to an NP. In (386b), *jaatir* merely reinforces the strong word *albarka* ‘power, force’, but in (386c-e) it emphasizes the direct, unmediated, or unassisted role of the referent of the preceding NP within the eventuality. (For an alternative expression of unassisted activity, see *bomo* reflexives in §10.2.1.) In (386c) we can paraphrase the translation ‘I myself’ as ‘even I (not just others).’ (386d) and (386e) occur in the context of an evidentially hedged second-hand account of sightings of a djinn-like dwarf; the speaker has heard about the sightings but hasn’t himself seen the dwarf (386d); the speaker has seen similar creatures but not the dwarf itself (386e). In (386d) the constituent with *jaati-jaatir di* seems to be a preposed topic constituent, and the following core sentence repeats the 1Sg subject pronoun. However, in (386c) the corresponding phrase with *jaatir di* itself functions as subject NP, which seems to be the more common pattern in the texts. In (386e), the *jaati-jaati* constituent is in apposition to the regular 3SgO enclitic *ga*, which functions as direct object. It appears that the enclitic cannot directly take a following *jaati(r)*, so an extra 3SgF pronoun is added. (386f) shows that the constituent including *jaati(r)* may serve as complement of a postposition.

In some examples which appear at first sight to have a *jaati(r)* constituent functioning as direct object, I suspect that the *jaati(r)* is actually used adverbially with clausal scope. Thus I use the model of (386a) to interpret (387).

- (387) *nda n tooñe gi jaatir i-i nan ga mana*
 if 2SgS provoke 3PIO self 3PIS-Impf leave 3SgO 2SgDat
 ‘If you(Sg) indeed provoke them (=nice people), they will disregard it
 for you.’

Another form *huneyno*, used by some but not all speakers, may be related etymologically to *huna* ‘life’, but the morphology is not regular. It is attested a few times in the texts, always with a pronominal possessor, the phrase being used as an adverbial in connection with a motion verb (388a-c).

- (388) a. *a-a bisa n ga*
 3SgS-Impf pass 2Sg by
a-a dam ŋgu koy [ŋgu huneyno]
 3SgS-Impf do 3RefISg going [3RefISg self]
 ‘It (=dwarf) will go past you, it will go on its way alone.’
- b. *boro bobo guna ga i jur [[ŋgi-ye huneyno] se]*
 person many see 3SgO 3PIS run [[3RefPl self] Dat]
i si batu ga gaa
 3PIS ImpfNeg await 3SgO Emph
 ‘Many people have seen it (=dwarf), (but) they ran away by
 themselves, they didn’t wait for it at all.’

- c. *yee hīsa ay yentesu di yee fatta*
 1SgSImpf do 1Sg occupation Def 1SgSImpf exit
 [*ay huneyno*] *yee fur i se bargu di*
 [1Sg self] 1SgSImpf abandon 3Pl Dat floodplain Def
 'I (will) do my work, I (will) go out by myself, I (will) leave the
 (inundated) field to them.'

These *huneyno* phrases have a particular narrative flavor. In a translation with more literary flourishes I would render them as 'it will go on its merry way,' 'they took to their heels,' and 'I (will) clear out of the field.' (Cf. KS *hine*).

The Emph particle transcribed *yaa* generally has a clear long vowel except when prepausal (clause-final), where I usually heard [ja]. One clear usage of this morpheme is clause-finally, emphasizing the truth of the proposition. It is used, for example, in echoic confirmations of another speaker's assertion or of one's own suspicions (389).

- (389) a. D: *nafa beer na i-i mey*
 use great Foc 3PlS-Impf have
 'It's a great value they (=swamps) have.'
 H: *i goo yaa!*
 3PlS be **Emph**
 'They do indeed!'
- b. *ay har kala musoo yaa!*
 1SgS say unless thus **Emph**
 'I said (to myself), it must be so!'

For *i goo* in H's truncated reply in (389a), see §8.2.1.

However, *yaa* is also used sentence-internally. It is considerably less common than *daa* overall, and it is somewhat difficult to tease out a clear gloss or rule of use from the available examples. For example, it can occur between a pronoun (or any NP) and a postposition, as in (390a-b).

- (390) a. *yer o koy dey ga [[ŋgi-ye yaa] ga]*
 1PlS Impf go buy 3SgO [[3PlF **Emph**] by]
 'We (will) go buy it from them.'
- b. *boro si hin a ra hin-ey,*
 person ImpfNeg can 3Sg Loc power,
a či [[yerkoy yaa] wane] mise]
 3SgS be [[[God **Emph**] Poss] manner]
kaa [[ŋga kamba] ra] na a goo
 that [[3SgF hand] Loc] Foc 3SgS be
 'A human has no control over it (=rain). It's God's way that it's in
 His hands [*focus*] that it (=rain) is.'

In both examples, the constituent with *yaa* is mildly emphatic. In (390a), 'them' denotes an ethnic group (Bellás) that had been mentioned a few sentences earlier, so the nuance is something like 'we go buy it from those same (people).'

8.5.2 'Only' (*nin*, *tan*, *allaa*, *koon*, *daa*, *kus!*)

In the exclusive sense of *only*, the English expression *only X* has a logical representation of the general shape 'X but not also Y, Z, ...' where the members of the set {X, Y, Z, ...} are of the same logical type and where at least some of these are contextually plausible. The quantitative ("ceiling") sense of *only X*, where X denotes a quantity ('five dollars'), is 'X but not more than X'. The logical expansions indicate that 'only' in these senses has affinities to "focus" ('X instead of Y, Z, ...') and "emphatic" ('precisely X'). We will use this logical analysis of English *only* as our starting point, making adjustments where needed for KCh. Most of the examples are exclusive, while quantitative 'only' is treated at the end of the section.

In this section we discuss 'only' expressions that are attachable to already well-formed phrases and clauses. In §8.5.4 we deal with a more elaborate syntactic construction with similar meaning. For *foo* 'one' (hence 'singly, alone') see §4.5.1 and §5.4.1. The primary morphemes are those in (391).

(391)	a.	<u>morpheme</u>	<u>gloss</u>	<u>position</u>	<u>source</u>
		<i>nin</i> (~ <i>nĩ</i>)	'only'	postposed	native
		<i>tan</i>	'only'	postposed	<Fulfulde
		<i>allaa</i>	'only'	preposed	<Arabic
		<i>koon</i>	'bareness; lone'	follows possessor	native
		<i>kus!</i>	'merely'	postposed Intens	?

The basic morpheme in Timbuktu KCh is the particle *nin*. Some upriver dialects, under stronger Fulfulde influence, use *tan* in substantially the same constructions.

nin 'only' is very common in Timbuktu; a variant *nĩ* occurs in upriver dialects. There is a homonym *nin* 'be ripe, be ready to eat' which we disregard here.

Like some other discourse-functional (DF) particles (§5.A), *nin* attaches to the end of a phrase (NP, adverbial, VP, clause), over which it has scope. In a PP, it follows the NP and is followed in turn by the postposition. It may also be clause-final with scope over the VP or clause. In (392) we see some cases, readily translated with 'only', 'just', 'simply', or 'merely', attached to a variety of constituent or clause types. The sense of 'only' here is exclusive rather than quantitative.

- (392) a. *woo či [[[boro di yo] wane] tonton] nin*
 Dem be [[[person Def Pl] Poss] addition] **only**
 'That (rumor) is merely the people's exaggeration.'
- b. *haya kaa boro yo na jow-kate wannasu kuna,*
 thing Rel person Pl Neg take-Centripconversation Loc,
boro si hin ka jow ga [nda [ni bomo]] nin
 person ImpfNeg can Inf take 3SgO [with [2Sg head]] **only**
 'Whatever (story) people (=others) have not begun to bring up in a conversation, one (=you) cannot begin it just by yourself.'

- c. D: ... *ay bey kaa hew sij a ra*
 ... 1SgS know that wind not-be 3Sg Loc
 'I realized that there was no wind in it (=rainstorm).'
- H: [[[a *bomo lawal di] nin] ra] hew keyna goo*
 [[[3Sg head first Def] **only**] Loc] wind small be
 'Only in its (=rain's) beginning was there a little wind.'
- d. *ay na bey ka guna ga, yee mom nin*
 1SgS Neg have Inf see 3SgO, 1SgSImpf hear **only**
i-i wannasu [nda [[a wane] wannasu]]
 3PIS-Impf speak [with [[3Sg Poss] story]]
 'I have never seen it (=dwarf), I only hear them (=people) speak about it.'
- e. *yer o taasi nin moreyda farka di ma ŋaa,*
 1PIS Impf seek **only** now donkey Def Subju eat,
hal a ma yekuwa
 until 3SgS Subju get-strong
 'We now seek only that the donkey may eat, so that it may get healthy.'
- f. *a si kaa haya kaa, a-a jiti-ndi ni,*
 3SgS ImpfNeg become thing Rel, 3SgS-Impf startled-Caus 2SgO,
[maa se] a-a kaa [n ga] nin
 [what? Dat] 3SgS-Impf come [2Sg on] **only**
 'It (dwarf) doesn't become something_x that, it_x frightens you, because it simply comes to you.'
- g. *mere ma koroši addama-jje woo kaa si mey*
 but 2SgSSubju notice human Dem Rel ImpfNeg have
 sport *foo kaa a-a dam, kala a-a goro nin*
 sport one Rel 3SgS-Impf do, except 3SgS-Impf sit **only**
 'But you should notice that person who has no sport that he does, except (that) he simply sits.'
- h. *[[ni nda alhoor-koy di] kul] o kaa a-foo,*
 [[2Sg and limestone-owner Def] all] Impf become Absol-one,
a wan di o serre nin,
 3Sg Poss Def Impf be-straight **only**,
ni wan di si serre
 2Sg Poss Def ImpfNeg be-straight
 'You (=one who has cheap limestone rubble mixed with mud) and one who has limestone (blocks) become one (=are equal), it's just that his (house) is straight, (while) yours isn't straight.'
- i. *[ay nin se] na a noo ga*
 [1Sg **only** Dat] Foc 3SgS give 3SgO
 'Only to me [*focus*] did she give it.'

The semantic scope appears to be over the following: the NP 'the people's exaggeration' (392a), the instrumental phrase 'by yourself' (392b), the NP complement of the PP or perhaps (in spite of the syntax) the PP as a whole (392c,i),

the verb 'hear' excluding its clausal complement (392d), the matrix verb 'seek' excluding its subjunctive complement (392e), the VP 'it comes to you' (392f), 'sits' either as verb or as one-word VP (392g). In (392h), one could argue that 'only' has a higher-order pragmatic scope; in context we may expand the relevant portion as 'the only consequence of your using a mixture of cheap odd-shaped limestone pieces and mud-and-gravel cement, and of someone else's using expensive rectangular limestone blocks, is that his house will have perfectly flat walls, while yours will be irregular.'

In these examples, *nin* translates easily as 'only' (or a near-synonym like 'merely', 'simply', 'just'). In some other textual examples, like (393), such a translation would be forced.

- (393) *nda boro fatta [haya se] nin,*
 if person exit [thing Dat] **only**,
ma dam ga [nda a fondo di]
 2SgSSubju do 3SgO [with 3Sg path Def]
 'If one (=you) goes out (to the fields) for something_x, you should do
 it_x properly.'

In (393) and in a few other textual examples *nin* seems to mark the right edge of a conditional antecedent (or, more generally, any sentence giving background information). This right-edge marking is, however, more typically carried out by *kul* (§9.5.10). Consider now (394).

- (394) *saa di kaa a din ngu moo*
 time Def Rel 3SgS grab LogoSgO also
a čendu ngu moo ngu dam haya kul gaa,
 3SgS pull LogoSgO also LogoSgS do thing all indeed,
[[[huna nin] wala bun] ga] na ngu din,
 [[[life **only**] or death] on] Foc LogoSgS grab,
maa ngu bun wala ngu huna
 either LogoSgS die or LogoSgS live
 '(He_y said:) When it (=dwarf)_x seized him_y, (and) it_x pulled him_y, he_y
 did everything, it was [(for) life or death] [*focus*] that he_y grabbed,
 either he_y died or he_y lived.'

The victim was fighting off the malicious dwarf's attack for dear life. Here *nin* is attached to the first disjunct 'life' in '(for) life or death'. In English, we would not say [*only life*] or *death*, with *only* specifically bracketed with one of the disjuncts, at least when the disjuncts are mutually exclusive. The fact that *nin* can be used in KCh suggests that the logical expansion here is 'X instead of Y', rather than 'X and not also Y' as in most earlier examples.

A somewhat similar example is (395), where the exclusive sense 'X (=God) instead of Y, Z, ...' is made clearer by the use of the focus construction.

- (395) *yee* *hoŋgu* [*yer**koy* *nin*] *ŋga* *dam* *jejow*
 1SgSImpf believe [God **only**] SFoc put barrier
 [*yer* *nda* *gi*] *čere* *game*
 [1PIS and 3PIO] friend between
 'I think that it is God (alone) who put a barrier between us and them
 (dwarves).'

'Only God' would be an infelicitous translation here, but if we were to add a capacitative verb 'can' we could make *nin* and English *only* converge ('Only God can put ...'). Compare (396).

- (396) *almisilmi* *di* *yo* *nin* *ŋga* *o* *hin* *ka* *hirow* *jinggar-ey*
 Muslim Def Pl **only** SFoc Impf can Inf enter mosque
 'Only Muslims may enter a mosque.'

The less common particle *allaa* can be glossed 'only' (exclusive) but also has other contextual functions ('nothing but' or 'just like'), and is discussed in §8.5.6.

koon can be glossed 'be bare' (verb), 'bare, naked' (adjective), or 'bareness' (as noun). It occurs most commonly in "small clauses" functioning as adverbial adjuncts to already complete VPs, either in the literal sense 'bare' (397a) or in the more abstract sense 'alone, by oneself' (397b-c). That *ŋgu-ye banda koon* in (397a) is not an independent clause is shown by the fact that it is clearly under the scope of the negation in the preceding VP; the meaning is of the type 'they did not come back empty-backed' rather than 'they did not come back, (and) they were empty-backed.' Moreover, the use of 3RefIP1 *ŋgu-ye* rather than simple 3Pl *i* in the *koon* phrase would be unexplained if this phrase were an independent clause.

- (397) a. *i* *na* *yee-kate* [*ŋgu-ye* *banda* *koon*]
 3PIS Neg return-Centrip [3RefIP1 back **bare**]
 'They (donkeys) haven't come back with their backs bare (=without loads).'
- b. *no-o* *dumbu* *ga* [*woo* *di* *hinne* *koon*]
 2SgS-Impf cut 3SgO [Dem Def size **bare**]
 'You cut it (wood) to no more than that length.'
- c. *no-o* *hin* *ka* *kulba* [*ŋga* *koon* *di*]
 2SgS-Impf can Inf knead [3SgF **bare** Def]
 'You can knead it by itself (without adding millet).'

The minimal "small clause" generally consists of just a NP (often a pronoun) plus *koon*, and it is not immediately obvious whether this is a subject-verb, noun-adjective, or possessor-noun sequence. However, in a case like *ŋga koon di* (397c), Def *di* excludes the subject-verb reading, and the use of 3SgF *ŋga* instead of simple 3Sg *a* seems to argue against the possessor-noun reading, leaving noun-adjective (here: pronoun-adjective) as the preferred analysis; see §8.4.2 on the use of "3F" rather than simple third person pronouns with following modifiers. We therefore tentatively extrapolate from (397c) and suggest the same noun-adjective analysis for e.g. (397a-b).

For the reflexive pronoun in (397a), see discussion of the same sentence as (649a) in §10.2.4. A further example of *koon* is (494b) in §9.5.1.

The basic sense of the Emph particle *daa* (preceding section) is 'precisely', but a gloss 'only' is appropriate in some contexts where implicature is at work. *daa* can be quantitative, as in (398), as well as exclusive.

- (398) *joŋgu hiŋka daa ŋga goo ay ga*
 hundred two **Emph** SFoc be 1Sg on
 'Exactly (=a mere) 200 (riyals) is what I have on me.'

Another 'only' expression that is primarily quantitative, rather than exclusive, is an Intensifier (interjection) *kus!*, which normally follows the relevant quantified expression (399).

- (399) *joŋgu kus!*
 hundred **only!**
 '100, period!'

8.5.3 'Unless' (*nda a na či*) and 'except' (*bara, kala*)

The expression *nda a na či ...* is formally a conditional antecedent clause meaning 'if 3Sg is not ...' (logically equivalent to 'unless 3Sg is ...'), with following predicate nominal (400). It is very common and is sometimes reduced phonetically to [ndantʃi], [nantʃi], or the like.

- (400) *nda a na či alhindi kul*
 if 3SgSNeg be steel all
a si mey [alhoor di se] hin-ey
 3SgS ImpfNeg have [limestone Def Dat] power.
 'If it isn't steel, it will have no power over (=ability to cut)
 limestone.'

nda a na či ... can also take a following subjunctive clause as its complement, in which case we may gloss it as 'unless ...' (i.e., as 'if it is not the case that ...'). The phrase *a na či ...* without conditional *nda* is often used as a higher-level negation (§9.3.2), and *nda a na či ...* builds on this, but shifts the MAN marking to subjunctive (cf. §10.6.5). Like simple *a na či ...*, the conditional version *nda a na či ...* often takes a focalized clause as its complement, allowing the negation to include the focused constituent in its scope, as in (401), cf. also (285a) in §8.1.2, above.

- (401) *nda a na či [aŋaara ŋga ma hasara ga]*
 if 3SgS Neg be [pest SFoc Subju ruin 3SgO]
 'unless it's a pest that may ruin it (=crop)'

The gloss ‘otherwise’ without a complement is expressed by *nda a na či ga* ‘if it_x is not it_y’ with 3SgO pronoun *ga*, anaphoric to a preceding proposition, as in (402). This high-frequency phrase, like *nda a na či ...* itself, has various contracted pronunciations.

- (402) *fahaam-ey, woo daa nga či*
 understanding, Dem Emph SFoc be
aadama-jje wane kallasi di kaa hin ka kallasi ga,
 human Poss protection Def Rel can Inf protect 3SgO,
[ganji-ije di yo] nda čere game,
 [forest-child Def Pl] with friend between
nda a na či ga, ganji-ije foo ..., wala
 if 3SgS Neg be 3SgO, forest-child one ..., or
a wane čee foo di o hin ka derey-ndi aadama-jje
 3SgPoss foot one Def Impf can Inf lose-Caus human
 ‘Intelligence, precisely this [*focus*] is the defence of a human, which
 can protect him (her), among wild animals; **otherwise**, a wild
 animal ... , or (even) its single paw could destroy a human.’

Of the two ‘except’ particles in KCh, *bara* is much more common than *kala* in Timbuktu (§5.9.9). Both particles also have other functions (or homophones); for *bara* see §7.1.3 (existential quasi-verb), §9.5.9 (indicative ‘since’ complementizer), and §9.6.2 (impersonal obligational with subjunctive); for *kala* see §9.5.8 (rare indicative ‘that’ complementizer).

In the ‘except X’ construction that concerns us here, *bara* or *kala* precedes the attached constituent. Often they identify a positive exception to a preceding negative proposition; see the following section. However, *bara* or *kala* can also identify an exception to a positive proposition, as in (403).

- (403) *i-kul kaa [bara A]*
 AbsolPl-all come [except A]
 ‘They all came, except A (name).’

A third person pronominal linked with *bara* or *kala* takes “3F” form: *bara nga* ‘except her’.

For *bilaa* ‘without’ see §5.9.9 (simple NP complements) and §9.6.4 (subjunctive clausal complements).

8.5.4 ‘Nobody (nothing) except X’ = ‘only X’

We noted in §8.5.2 that *nin* ‘only’ approximates English *only*, with a logical representation for *only X* of the type ‘X but not also Y, Z, ...’ where Y and Z are implied alternatives to X. In the special case where X is the only entity, or the only member of a substantial class of entities, of whom a predication is made, there is an alternative two-part construction that may be used. It is more complex syntactically

but also more explicit logically and more forceful. The general forms can be schematized as (404), where (404a) is the predominant type.

- (404) a. 'Nobody (Nothing, No dog, etc.) came here, except X.'
 b. 'If it wasn't X, nobody (nothing, no dog, etc.) came here.'

Unlike English (e.g. [*Nobody except X*] came here), in KCh we typically get a complete negative sentence, followed by the truncated clause which introduces the exception, here 'except X' representing 'except that X came here'. Because of this, the exception phrase has considerable rhetorical force, and is put to good use by storytellers.

The 'except' morphemes in type (404a) are *bara* and *kala* depending on dialect (see end of preceding section). The examples generally involve subject NPs, but the construction works in principle for NPs in any syntactic position held constant over the two clauses. The negated correlative expression in the first clause is generally an NP (or adverbial); it may be a bare common noun, or it may take a quantifier (*foo* 'one' or *kul* 'all') in the sense '(not) any'. In (405) we give examples of type (404a) involving subject NPs (405a) and direct object NPs (405b-c)

- (405) a. [*haya foo*] *na fey yer bara tuuri di*
 [thing one] Neg separate 1PIO except tree Def
kaa goo [[*i ganda di*] *ra*]
 Rel be [[3Pl land Def] Loc]
 'Nothing distinguishes us (northerners, from the southerners), except the tree(s) which are present in their land.'
- b. *yer si mey [čee fe se] safari bara alkaafun daa*
 1PIS ImpfNeg have [fever Dat] cure except alkaafun Emph
 'We don't have a remedy for fever, except that very alkaafun (spice).'
- c. *athey si mey [haya kul]*
 tea ImpfNeg have [thing all]
kaa ga na a doo kala faraa
 Rel by Foc 3SgS be-based except fatigue
 'Tea has nothing on which it is based, except fatigue.'

The examples in (405) show clear separation between the negative clause and the following exception phrase. This is always found with subject NPs, since the subject NP of the negative clause is always separated from the 'except' phrase by other material. However, optionally in the case of clause-final direct objects, and even more commonly with other clause-final constituents (spatiotemporal adverbials, instrumental phrases), the correlative constituent in the negative clause is dispensed with and we get what looks like a single clause. Examples in (406).

- (406) a. *wirči woo si din bara farka kul kaa yekuwa*
 disease Dem ImpfNeg seize except donkey all Rel be-solid
 'That disease doesn't afflict (any donkey), except any donkey that is healthy.'

- b. *boro go key [i maasu] kaa si hima*
 person Impf stand [3Pl amid] Rel ImpfNeg resemble
bara allaa fulan
except just-like Fula
 'Someone was standing among them who resembled none but a Fula.'
- c. *boro di yo kaa guna ga kul yer koyroo ra*
 person Def Pl Rel see 3SgO all 1Pl this-town Loc
i na guna ga bara [čiji kuna]
 3PlS Neg see 3SgO **except** [night Loc]
 'The people who have seen it, in our town, they didn't see it except at night.'
- d. *a si mey safari, kala nda yer koy daa*
 3SgS ImpfNeg have remedy, **except** with God Emph
 'It (=malaria) has no cure, except by (the intervention of) God.'
- e. *wirči bobo yo goo dooti kaa i si safari gi*
 disease many Pl be there Rel 3PlS ImpfNeg treat 3Pl
nda bara alkaafun
 with **except** *alkaafun*
 'There are many ailments that they can't cure except with *alkaafun* (spice).'

(406a-b) involve direct object NPs, (406c) a spatiotemporal adverbial, and (406d-e) instrumental NPs. When the constituent in question is a direct object, the fuller two-part construction (405b-c) appears to be grammatically preferable to the single-clause pattern (406a-b). In (406a), for example, the quantifier *kul* 'all' (= 'any') shows up on the NP in the 'except' phrase, though it would make more sense on the (omitted) correlative NP in the initial negative clause ('That disease doesn't afflict any donkey, except a donkey that is healthy'). I think, then, that we can regard the single-clause type (406a-b) as a truncated version of the fuller construction.

The two instrumental examples (406d-e) show different word orders, *kala* 'except' preceding *nda* in (406d), while *bara* 'except' follows *nda* in (406e). Follow-up elicitation with Timbuktu informants showed that *nda bara X* and *bara nda X* are interchangeable.

There are some textual examples where *bara* or *kala* takes scope over a following clause denoting an eventuality that serves as an exception to that expressed by the preceding negative clause. Here we gloss *bara* or *kala* freely as 'except that ...'. This is arguably the case in (407a-c).

- (407) a. *bana sij a ra, haya foo sij a ra bara*
 wages be-not 3Sg Loc, thing one be-not 3Sg Loc **except**
a-a hina war se hay kaa war ŋaa, a ben
 3SgS-Impfcook 2Pl Dat thing Rel 2PlS eat, 3SgS end
 'There's no pay for it (=job), there's nothing for it, except that he (=boss) will cook for you(Pl) something for you to eat, that's all.'

(407, cont.)

- b. *mere ma koroši addama-jje woo kaa si mey*
 but 2SgSSubju notice human Dem Rel ImpfNeg have
 sport *foo kaa a-a dam, kala a-a goro nin*
 sport one Rel 3SgS-Impf do, except 3SgS-Impf sit only
 'But you should notice that person who has no sport that he does,
 except (that) he simply sits.'
- c. *a si dam haya foo bara a-a jirbi*
 3SgS ImpfNeg do thing one except 3SgS-Impf sleep
 'She does nothing except she sleeps.'

See also (247b) in §7.1.5, above. *bara* can also be used as a clause-initial 'because ...' particle (§9.5.9), and in examples like (407a) one could possibly construe *bara* in this way. *kala*, for its part, is sometimes used as a 'that' complementizer (§9.5.8). Close attention to context is required in analysing textual occurrences of *bara* and *kala*.

In (407b-c), English would normally omit the repeated subject NP and the tense inflection in the exception clause, which would therefore be syntactically a VP ('She does nothing except sleep'). In KCh, complete clauses including subject NPs are required.

Although the construction with *bara* or *kala* is quite productive, we also find textual examples with *nda a na či* ... 'if it (he, she) is not ...' expressing exceptions to negative clauses. In this case, the exception clause may precede (408a) or follow (408b) the main negative clause.

- (408) a. *nda a na či sanda alwakati addaruura-nte yo*
 if 3SgS Neg be like time dangerous-Partpl Pl
čiji maasu dira-koy woo yo wala haya tanaa,
 night middle walk-Agent Dem Pl or thing other,
boro foo si hin ka har mana moo, kaa...
 person one ImpfNeg can Inf say 2SgDat also, that ...
 'If it is not, like, those who walk around at dangerous times late at
 night, or something else (like that), no-one can (truthfully) tell you
 that ...'
- b. *yer na hin ka guna boro kul kaa hin ka noo yer*
 1PIS Neg can Inf see person all Rel can Inf give 1PIO
a wane fahaam-ey di nda a na či G,
 3Sg Poss understanding Def if 3SgSNeg be G,
kaa kar ga
 Rel hit 3SgO
 'We have not been able to find anyone who can give us information
 about it (=dwarf), if it is not (=except for) G (=man's name), who
 struck it.'

8.5.5 'Also' (*moo*)

moo 'also, too' is very common. We focus here on its use in positive clauses; for its interaction with negation see §9.3.5. We disregard its homonyms meaning 'eye' and 'rice'.

moo is a typical DF morpheme which follows the constituent over which it has primary scope. This constituent may be an NP (full NP or pronoun) or adverbial. In the case of a PP, *moo* attaches to the NP and therefore precedes the postposition, as in (409).

- (409) *nda aššaraa kaa hay kaa a-a dam-di*
 if Islamic-law come thing Rel 3SgS-Impf do-Mediop
 [[a-foo kul] se] i-i dam ga [[ni moo] se]
 [[Absol-one all] Dat] 3PlS-Impf do 3SgO [[2Sg also] Dat]
 'If (Islamic) law comes, whatever is done for each one (=of them),
 they will do it for you(Sg) too.'

Logically, an assertion like 'they do it for [you too]' makes no sense except by juxtaposition to a parallel assertion of the general form 'they do it for X.' The narrow scope of 'too' in '[you too]' is allowed because the residual portion of the parallel assertion ('they do it for __') is more or less held constant.

As (409) suggests, *moo* can attach to NPs in any syntactic position. However, *moo* can also be clause-final with scope over the entire eventuality, as in (410).

- (410) *ban̄gu beɛɛr, hari-ham yaa goo a ra,*
 swamp bi:::g, water-meat Emph be 3Sg Loc,
 [i-i fari a ra] moo
 [3PlS-Impf farm 3Sg Loc] also
 '... a big floodplain (seasonally inundated land). There are fish in it.
 They farm in it too.'

Here *moo* is not locally attached to the PP *a ra*, which in fact is precisely the one constituent shared by 'there are fish in it' and 'they farm in it.' As (409), shows, when *moo* is connected to a specific PP, it attaches to the NP preceding the postposition, whereas in (410) *moo* follows the entire PP. Therefore, in (410) *moo* has clausal scope.

There are a small number of textual instances where *moo* is positioned after a verb before postverbal constituents, but none where *moo* can really be described as having narrow scope over the verb. In (345) in §8.3.7, above, positioning of *moo* after a transitive verb may be due to the heaviness of the following direct object NP (which includes a long relative clause).

Examples like (410) are common, but there are also quite a few textual examples where *moo* is physically attached to the subject NP (or a preposed topical NP) but where the context suggests clausal scope. In other words, *moo* can attach to the subject or preposed topical NP for convenience, allowing the speaker to specify at the

beginning of the current sentence its additive relationship to the preceding discourse. This seems to be typical when *moo* functions at the pragmatic level ('I tell you moreover that ...'), where the absence of overtly realized pragmatic material forces the speaker to attach *moo* (which cannot stand alone) to a surrogate constituent. Consider (411).

- (411) ... *bara i ma jirfiti a bomo woo ka ŋaa ga,*
 ... must 3PIS Subju snatch 3Sg head Dem Inf eat 3SgO,
tuuri sii kul kaa i gar dooti bara i ma hasara,
 tree kind all Rel 3PISfind there must 3PISSubju ruin,
aywa tarkunda di ye moo, kokoy-terey si yadda
 well elephant Def Pl also, authority ImpfNeg consent
boro ma wii gi
 person Subju kill 3PIO
 '... they (=elephants) will certainly snatch its (=tree's) top and eat it;
 every kind of tree that they (=elephants) find there they will certainly
 ruin; well, the elephants, by the way, the government won't allow
 anyone to kill them.'

Here the *moo* basically indicates that a new point is being made; one could gloss it 'moreover' or 'by the way', which brings out the pragmatic nuance. In this passage, the elephants are already the main discourse referent, and there are no parallel propositions of the form 'the government won't allow anyone to kill X' (X = alligators, gazelles, etc.) that would justify a narrow-scope gloss '[the elephants too]'.

It follows that when *moo* is attached to a subject or preposed topical NP, the construction is semantically ambiguous (narrow scope over this NP, or pragmatic scope over the entire sentence). An example of a subject NP with narrow-scope *moo* is (412).

- (412) *nda baana kar, ŋga moo go hay a-a nin*
 if rain strike, 3SgF too Impf bear 3SgS-Impf ripen
 'When it rains, it (=millet in field) too will bear fruit, it will ripen.'

The speaker uses 'too' here to indicate the parallel behavior of millet grown in a dry field with millet grown in another type of terrain described earlier.

We can already see that *moo* is used more broadly than English *too*. Another situation where the two languages diverge is in cases where two referents or eventualities are contrasted (rather than combined additively). In KCh, *moo* is often attached to the second of two paired alternatives, either two sharply contrasted referents (413a) or two mutually exclusive antecedents in parallel conditionals (413b). Here the best gloss is 'on the other hand' or 'by contrast'.

In some passages, *moo* can be glossed freely as 'even' in an escalating progression, as in (414).

- (413) a. *taajir o koy dey alhoor boyro di,*
 merchant Impf go buy limestone good Def,
a-a hīsa ga nda, hay kaa ŋgu dam
 3SgS-Impf make 3SgO with, thing Rel 3ReflSgS make
nda salanga, talka moo go koy dey
 with toilet, pauper also Impf go buy
alhoor bakabaka woo daa...
 limestone debris Dem Emph ...
 'A rich man will go buy nice limestone (blocks), he will make it
 into a thing which he will make into an outhouse; a poor man, on
 the other hand, will go buy that limestone debris (odd-shaped
 chunks) ...'
- b. [*nda a dey*] *a boori [nda a na dey]*
 [if 3SgS be-sold] 3SgS be-good [if 3SgS Neg be-sold]
moo no-o gurum ga...
 also 2SgS pile 3SgO ...
 'If it (=limestone) sells, fine; if on the other hand it doesn't sell, you
 pile it up ...'
- (414) *no-o kaa ta gar alhoor no-o fatta-ndi ga*
 2SgS-Impf come Inf find limestone 2SgS-Impf exit-Caus 3SgO
no-o koy no-o taasi ga [no-o guna ga]
 2SgS-Impf go 2SgS-Impf seek 3SgO [2SgS-Impf see 3SgO]
moo hal no-o horngu alhoor nono,
 also until 2SgS-Impf believe limestone it-is,
a-a kaa yaada
 3SgS-Impf become worthless
 'You go and find limestone, you take it out (=quarry it), you go and
 you seek it and you even look at it until you believe it is limestone,
 but it turns out worthless.'

The gloss 'you even look at it' is misleading syntactically, since *moo* has scope over the entire clause, not just over the verb. The sense of 'even' applicable to (414) is additive; the miner not only locates the limestone but also scrutinizes it visually, but is still fooled by its appearance and is disappointed when it then crumbles. A more common expression glossable as 'even' is *wala* (§8.5.9, end of §9.5.1).

8.5.6 Similative 'like X' (*sanda, allaa, taka, činne*)

We discuss here the two basic Similative particles, *sanda* and *allaa*, and combinations involving compound finals *taka*, *mise*, and *činne*.

sanda is a particle that can sometimes be glossed 'like', preceding the constituent in question. Examples in (415).

- (415) a. *a či sanda attaam*
 3SgS be like grain
 'It (=tea) is like grain.'
- b. *a-a hem sanda guuru*
 3SgS-Impf weep like metal
 'It (=limestone) makes a scraping noise like metal.'

Here the contexts are quite compatible with the literal sense 'like, similar to'. However, in many other examples *sanda* functions as a hedging or qualifying device operating at the pragmatic level, and can be glossed as 'sort of', 'so to speak', or 'shall we say'. In this usage it often precedes the whole sentence, focusing on no constituent in particular, though it may also occur at an internal phrase boundary. Note that English *like* can also be used in this way in colloquial speech. *sanda* can also precede explanatory or clarificatory statements, and in this context it can be glossed 'for example' or 'in other words'. Perhaps in all of these pragmatic cases it is also being used as a filler while the speaker formulates an expression thoughtfully. Some examples are in (416).

- (416) a. *yer ta bey kaa sanda [mobil di neere di],*
 1PlS Top know that like [vehicle Def selling Def],
a na či haya kaa guma [yer se]
 3SgS Neg be thing Rel benefit [1Pl Dat]
 'We know that, like, selling (limestone) to truck drivers, it isn't something that we get much out of.'
- b. *a-a kaan [jaatir di]*
 3SgS-Impf be-sweet [self Def]
sanda no-o maata a ra kaan-ey foo ...
 like 2SgS-Impf feel 3Sg Loc sweetness one ...
 'It is quite sweet, that is to say, you feel in it a sweetness ...'
- c. *saa di yer o harga i banda nin,*
 time Def 1PlS Impf follow 3Pl behind only,
sanda hōō jaman woo činne,
 like nowadays season Dem peer,
yer o harga gi nin
 1PlS Impf follow 3PIO only
 'Then, we just follow after them (=donkeys); for example, at this time of year (=July), we just follow them.'

The particle *allaa* (of dialectal Arabic origin) precedes rather than follows the constituent to which it attaches, which is an indefinite NP in descriptive function in all of the textual examples. It occurs in contexts of the general type '(X) is (was) strictly (=nothing but) Y' or '(X) is (was) just like Y,' where X is a previously established discourse referent and Y is a descriptive NP (often semantically colorful). The sense 'just like' seems more common; some examples are in (417).

- (417) a. *a na či a-a goro ka hantum wala woo di taka*
 3SgS Neg be 3SgS-Impf sit Inf write or Dem Def manner
allaa gaabi-goy maa a-a fari wala a-a kur
 just power-work either 3SgS-Impf farm or 3SgS-Impf herd
 'It isn't (as though) he sits and writes or something like that, (he does) strictly hard labor; either he toils in the fields, or he herds (animals) ...'
- b. *no-o kottu-kottu ga no-o dam ga*
 2SgS-Impf Rdp-rip 3SgO 2SgS-Impf make 3SgO
nda i-kuku allaa korfo
 with Absol-long just rope
 'You(Sg) will rip it (=cowhide) up, you will make it into strips, just like rope.'
- c. *woo di a-a din gi [i jese di ye ra]*
 Dem Def 3SgS-Impf grab 3PIO [3Pl shoulder Def Pl Loc]
a či wirči taka foo, kaa a-a kaa
 3SgS be disease type one, Rel 3SgS-Impf become
allaa hay kaa sanda [nooni taka] nono
 just thing Rel like [worm type] it-is
 'That one (=disease) afflicts them (=donkeys) in their shoulders; it is a kind of disease, which becomes just like something which is, let's say, a kind of worm.'

So neither *sanda* nor *allaa* means simply 'like, similar to'. Further examples of *allaa* are (252f,i) in §7.2.2 and (670) in §10.3.1.

The two nouns *taka* 'manner, (essential) type' and *činne* ~ *čilde* ~ *čille* 'peer, equal' are common as compound finals (or possessed nouns) in expressions that can be translated freely as 'like X', where X is the compound initial (or possessor). The compound type X *taka* means, more precisely, 'something of the same type as X, something like X', while X *činne* means 'a peer or equal of X, the likes of X'. These finals often co-occur with *sanda* or *allaa* preceding the compound, as in (416c) with *sanda ... činne* and as in (417c) with *taka ... allaa ... sanda ... taka*. Further examples in (418).

- (418) a. *ay horgu a go či sanda allaa šeytaan taka*
 1SgS believe 3SgS Impf be like just devil type
 'I think it (=dwarf) is, so to speak, like a kind of devil.'
- b. *a-a čindi a-a tun-ndi i ra kaaji taka*
 3SgS-Impf continue 3SgS-Impf rise-Caus 3Pl Loc rash kind
 'It (=disease) keeps raising a kind of rash on them (=donkeys).'
- c. *yer gey-nda [a činne]*
 1PlS endure-with [3Sg peer]
 'We've gone a long time without the likes of it (=recent rainstorm).'

činne and its variants (*čille* and less often *čilde*) are quite common in negative contexts, including implied negative contexts as in (418c).

8.5.7 *dee, mee, gaa*

dee is a particle that can be used a) clause-finally as an emphatic with no necessary relationship to any following material, or b) linking two clauses (often pronounced at the onset of the second clause).

In the clause-final use, *dee* emphasizes the proposition as a whole and may have an adversarial pragmatic nuance (cf. English unstressed *now* with warning tone in *Don't stay out late now!*). It can be used to give a tone of finality to an assertion that contradicts or challenges a position taken by the addressee, or to an assertion likely to be disbelieved. It can also give an admonishing tone to an imperative. It is common in rhetorically charged contexts such as haggling in the marketplace (419).

- (419) *no-o koy yoobu, i-i neere ga doodi,*
 2SgS-Impf go market, 3PIS-Impf see 3SgO there,
yoobu moo i-i har mana jongu hinja dee,
 market also 3PIS-Impfsay 2SgDat hundred three **indeed**,
wala jongu taači dee, yoobu borō o terme nin
 or hundred four **indeed**, market person Impf haggle only
hal nan kaa yer koy noo ni
 until place Rel God give 2SgO
hay di kaa hajje
 thing Def Rel do-whatchamacallit
 'You(Sg) go to market; they sell it (waterbags) there; (at) the market
 moreover they (=sellers) will tell you 'definitely 300 (riyals)', or
 'definitely 400'; a market person (=seller) just haggles (over prices)
 until the point where God has given you(Sg) the thing that
 whatchamacallits (=is needed).'

Here one has to picture the vendors trying to insist on their prices in the face of much lower counteroffers by their customers.

As a clause-linker, *dee* seems to indicate that the eventuality E_2 denoted by the second clause follows and in some sense is the logical or causal outgrowth as well as temporal successor of the eventuality E_1 denoted by the preceding clause. E_2 is a climactic event and may be dramatic. In most cases, *dee* occurs between antecedent and consequent clauses in a conditional construction with *nda* 'if'. We will gloss *dee* here as '(only) then', though it can often be omitted in free translations. In this usage it functions rather like *jinaa* 'first; then', cf. (457a) in §9.3.1. Examples in (420).

- (420) a. [*maa se*] *nda i kar ga dee i-i dam ga*
 [what? Dat] if 3PIS hit 3SgO **then** 3PIS-Impf put 3SgO
 [*hari ra*] ?
 [water Loc] ?
 'Why, when they've struck it (=metal), do they then put it in water?'
 b. *nda baali di—, a mon, dee a-a hasara*
 if flesh Def, 3SgS be-removed, **then** 3SgS-Impf be-ruined
 'If the flesh_x—, (if) it_x is erased (=gets rotten), then it_x's ruined.'

- c. *nda a faati ka soroku guusu di ra dee,*
 if 3SgS do-already Inf fall pit Def Loc **then**,
nga ta a čee baa a kamba baa
 3SgF Top 3Sg foot be-broken 3Sg hand be-broken
 'When it (=animal) had already fallen into the pit, its leg(s) and
 forelegs(s) were broken.'
- d. *nda gaabi—, a bisa gaabi, dee a-a hin ga*
 if force—, 3SgS exceed force, **then** 3SgS-Impf master 3SgO
 'If a force_x exceeds a (=another) force_y, then it_x overwhelms it_y.'
- e. ... *a ma kaa nan kaa kuna bundu di o hin*
 ... 3SgS Subju become place Rel Loc wood Def Impf can
ka hirow, dee bundu di a-a siiti ga
 Inf enter, **then** wood Def 3SgS-Impf squeeze 3SgO
 '... (so that) it (axe) becomes a place where the wood (=handle) can
 go in, then the wood, it (=axe) holds it (=handle) tightly.'

mee is a clause-final particle with a somewhat stronger adversarial pragmatic force. It is used especially to reinforce commands, as when an imperative must be repeated to a recalcitrant child or subordinate: *koy!* 'go!', reinforced *koy mee!* 'go, dammit!'

gaa (<dialectal Arabic *gaʕ*) is another Emphatic morpheme, generally clause-final, used by some Timbuktu speakers. It is a rather strong particle, suggesting surprise or disgust. It should not be confused with the preverbal MAN particle *gaa* used in Presentatives (§7.2.3).

8.5.8 *baada, wallaahi, laabudda*

baada (<Ar. *baʕda*, used in Maghrebi Arabic as a discourse marker) is found occasionally as a particle with clause-level emphatic force. In (421a) and (421b) it appears to occur in the juncture between an assertion and its emphatic repetition. In (421c) it is attached to the head NP of an expanded subject NP, but seems to function semantically at the clause-level.

- (421) a. *aywa [woo di] na yer o tammahaa baada,*
 well [Dem Def] Foc 1PIS Impf hope **indeed**
[woo di ta daa] na yer o tammahaa
 [Dem Def Top Emph] Foc 1PIS Impf hope
 'Well, that's what we hope, indeed, that's exactly what we hope.'
- b. *yer gey-nda woo činne baana,*
 1PIS endure-with Dem peer rain,
baada yer gey-nda a činne
indeed 1PIS endure-with 3Sg peer
 'We've gone a long time without a rain like that; indeed we've gone a
 long time without its like.'

(421, cont.)

- c. *jaa ay ta baada kaa wannasu ga moreyda*
 since 1SgS Top indeed Rel speak 3SgO now
na bey ka guna ga
 Neg know Inf see 3SgO
 'since indeed I myself who speak it now have never seen it (=dwarf)'

wallaahi 'by God' (<Ar., compare the native noun *yerkoy* 'God') and *laabudda* 'necessarily' (also <Ar.) are clause-initial forms expressing certainty or strong probability. They may be used alone, as exclamations, or with a following clause. In the latter case, *bara* 'must' commonly intervenes (*wallaahi bara ...*, *laabudda bara...*). See the discussion of *bara* in §9.5.9.

8.5.9 *wala* 'or' in emphatic sense 'even ...'

wala is the basic disjunctive conjunction 'or' with a following NP (§5.11.4) or sentence (§9.5.4). It can also be used in the emphatic sense 'even ...' with following NP (or adverbial).

- (422) *alhoor di saa kaa a goo [dow di čire],*
 limestone Def time Rel 3SgS be [sand Def under],
haya goo doodi kaa yekuwa [nda [wala šimoo]]
 thing be there Rel be-solid [with [even cement]]
 'The limestone, when it's under the ground, there is something there
 (=in it) which is harder than even cement.'

Here *nda* 'with' is used in the comparative sense 'than ...'. In more idiomatic English translation, 'even' would be shifted ('... which is even harder than cement'). In KCh, *wala* in this emphatic sense remains closely attached to the focal constituent. Perhaps shifting it out of this constituent to any earlier position where *wala* is syntactically permitted would risk confusion with this particle's more common sense 'or'.

wala is common in negative sentences ('[not] even'), as in (423).

- (423) *ay si mey wala allaara*
 1SgS ImpfNeg have even riyal
 'I don't have even a riyal (small coin).'

For *wala* with following clause in the similar sense 'even if ...', see end of §9.5.1.

wala can be used with a following VP after a negation. Depending on the speaker, the VP is either simple (in which case *wala* is analysed as a simple particle inserted between MAN marking and VP), or has the form of an infinitival VP (in which case *wala* appears to function as a serial verb). The two constructions are seen in (424a-b).

- (424) a. a na wala foo
 3SgS Neg even greet
 'He didn't even say hello.'
- b. a na wala ka foo
 3SgS Neg even Inf greet
 [=424a]

8.6 Co-occurrence of major discourse-functional categories

The DF categories discussed in this chapter are in many cases very productive, to the point where multiple DF marking may occur in a sentence or even on a single constituent.

There is no syntactic or logical problem in having more than one Emph constituent, or in having multiple topics. However, focus marking in the sense of §8.1.1-2 is expressed by a clause-level syntactic operation (fronting, plus insertion of an SFoc or Foc particle between the fronted constituent and the rest of the core sentence), so there can only be one focalized constituent per clause in this sense. In examples like (307c) in §8.2.3, above, one could argue that there are two (functional) foci, but only one constituent is syntactically marked as focus.

8.6.1 Topic plus another DF morpheme on same constituent

The combinations involving two DF morphemes clearly attached to the same constituent are given in (425). We are concerned here only with DF morphemes that follow their attached constituent. In all cases we have the weak Top particle *ta* followed by a stronger DF morpheme. These combinations seem to occur mainly with personal pronouns and Dem *woo*.

(425)	<u>type</u>	<u>morphemes</u>	<u>example</u>	<u>gloss</u>
	Top + Top	<i>ta bine</i>	<i>yer ta bine</i>	'as for us'
	Top + 'also'	<i>ta moo</i>	<i>nga ta moo</i>	'he (she) too'
	Top + Emph	<i>ta daa</i>	<i>woo di ta daa</i>	'that very one'
	Top + Emph	<i>ta jaatir di</i>	<i>ay ta jaatir di</i>	'I myself'

In focus constructions, it is not clear whether the SFoc or Foc morphemes are syntactically part of the fronted constituent, so we leave combinations involving these morphemes for the following section.

8.6.2 Emphatic plus focus

Emph particles, especially the very common *daa*, are quite common in fronted focused constituents in either the subject or nonsubject focus constructions. The attested combinations are given in (426).

(426)	<u>type</u>	<u>morphemes</u>
	Emph + Foc	<i>daa na</i>
	Emph + SFoc	<i>daa nga</i>
	'only' + Foc	<i>nin na</i>
	'only' + SFoc	<i>nin nga</i>

Examples are given in (427).

- (427) a. *[[hay di kaa yer o duu [a ra]] daa] na*
 [[thing Def Rel 1PIS Impf get] [3Sg Loc]] **Emph** **Foc**
yer o kaa, yer o jamna t
 1PIS Impf come, 1PIS Impf share *t*
 'What we earn from it_x [*focus*] we come and we divide *t_x*.'
- b. *[maa se] [mobil ressort nin] na wor o taasi t?*
 [what? Dat] [vehicle spring **only**] **Foc** 2PIS Impf seek *t?*
 'Why is it [only car springs_x] [*focus*] that you(Pl) seek *t_x*?'
- c. *i hayni di ye nin nga si hin ka kaa a-foo*
 3Pl millet Def Pl **only** **SFoc** ImpfNegcan Inf become Absol-one
 'It's just their (millet) grains [*focus*] that cannot turn out the same.'
- d. *[mangazæ woo di yo] yer daa nga goy gi*
 [warehouse Dem Def Pl] 1PIS **Emph** **SFoc** work 3PIO
 'Those warehouses, it was we ourselves [*focus*] who worked on (=built) them.'

(427b) is discussed in another connection in §8.2.3, where it appears as (307c).

8.6.3 Topic plus focus

It is not common for a topical constituent to function as the focused constituent. I have no such examples involving Top *bine*, but with weak Top *ta* I can cite a few textual examples with *ta daa na*. In (428), there is an initial sentence with a simple nonsubject focus structure, followed by a repetition where the focused constituent 'that' also gets Top *ta* and Emph *daa*.

- (428) *aywa [woo di] na yer o tammahaa t baada,*
 well [Dem Def] Foc 1PIS Impf wish *t* indeed,
[woo di ta daa] na yer o tammahaa t
 [Dem Def **Top** **Emph**] **Foc** 1PIS Impf wish *t*
 'Well, that_x is what we hope *t_x* indeed; that_x is precisely what we hope *t_x*.'

Weak Topic *ta* can also be followed by *nin* 'only' or *moo* 'too'.

Although topic and focus do not often mix on the same constituent, there are a very large number of cases where a sentence has both a preposed topic NP and a following clause-initial focalized NP, as in (429).

- (429) *moreyda* [*alhoor di*] [*musa foo*] *na*
 now [limestone Def] [manner which?] **Foc**
wor o gar ga ... ?
 2PlS Impf find 3SgO ... ?
 'Now the limestone_x, how do you(Pl) locate it_x ... ?'

Here *musa foo* '(in) what way?, how?' is the nonsubject focus requiring *Foc na*, while *alhoor di* 'the limestone' is a preposed topical NP; arguably *moreyda* 'now' is a second preposed topic specifying the temporal setting.

8.6.4 Multiple topics

Sentences often have more than one NP which function as topics. Either we have two preposed topical NPs, followed by a complete sentence, as in (430a) with a resumptive pronoun representing the second topical NP, or we have one preposed topical NP and a subject NP marked with weak *Top ta* as in (430b).

- (430) a. [*ay ta*] *moreyda*, [[*war wane*] *assanaa woo*]
 [1Sg **Top**] now, [[2Pl Poss] trade Dem]
yee baa ye hirow a ra
 1SgSImpf want 1SgSSubju enter 3Sg Loc
 'I now, this occupation_x of yours(Pl), I want to enter into it_x.'
 b. [*wirči woo*] [*yer ta*] *si bey ga*
 [disease Dem] [1Pl **Top**] ImpfNeg know 3SgO
 'That disease_x, we don't know it_x.'

We might also consider preposed adverbial expressions ('now', 'here', 'in this country') which specify the spatial or temporal setting to be topics, though of a different functional type than expressions which establish discourse referents as topics. If so, (430a) actually has three preposed topical expressions, including 'now'.

8.6.5 Relativization and focus

In many languages, relative clauses make use of a construction that operates, in main clauses, as either a topicalizing or a focalizing mechanism. That is, a construction that functions in main clauses to indicate more or less clearcut discourse categories is appropriated in relatives to indicate coreference between the relativized NP and the head NP. It follows that the relevant construction is not available to mark true topic or focus in relative clauses.

In KCh, relativization formally resembles the main-clause focus constructions, since both front (extract) an NP, leaving at most a phonologically null trace in the original site. Nonetheless, relativization and focalization are autonomous and may co-occur. We need to consider in turn four cases defined by the intersection of two

variables: a) the relativized NP (or a PP containing it) is the same as or different from the focalized constituent; and b) the focalized constituent is subject or nonsubject.

When a nonsubject NP is relativized on, it is fairly common for the subject NP to be separately focalized, as in (431).

- (431) a. *a či haya kaa ntende ŋga o fatta-ndi ga ...*
 3SgS be thing Rel ants SFoc Impf exit-Caus 3SgO ...
 'It (=limestone)_x is a thing_x which_x ants [focus] bring it_x out ...'
- b. *boro yo kaa ni ŋga kate t*
 person Pl Rel 2Sg SFoc bring t
 'people_x whom_x you [focus] have brought t_x'

'Ants' (431a) and 'you' (431b) are the focalized subjects, with SFoc *ŋga*. (431a) has a resumptive pronoun (3Sg *ga*), suggesting that the intervening focalization has blocked extraction of the relative pronoun. The result is that the relative clause has the form of a main clause, and one can argue that a "restart" has occurred. The type in (431b), where extraction has occurred in spite of the intervening focalization (note the phonologically unrealized trace), is less common but is attested several times.

It is not so common for a relativized subject NP to also be overtly focalized. However, (432) shows that this can be done when the relativized subject NP is expressed as an overt (i.e. resumptive) pronoun. In the usual situation where this is a third person pronoun, it takes "3F" form (3SgF *ŋga*, 3PIF *ŋgi-yo*) since it is focalized (by the following SFoc *ŋga*). This construction, seen in (432), perhaps really involves a "restart" resulting in main-clause form.

- (432) *haya nono kaa ŋga ŋga či guuru yekuwa-nte*
 thing it-is Rel 3SgF SFoc be metal solid-Partpl
 'It_x is a thing_x which it_x [focus] is solid metal.'

It is also possible to focalize a nonsubject NP distinct from the relativized NP, but this again seems to require a resumptive pronoun (433a) and main-clause form, unless the relativized NP is a possessor or complement of a noun-like postposition (433b).

- (433) a. *woo či har di kaa [bii na a kaa]*
 Dem be man Def Rel [yesterday Foc 3SgS come]
 'This is the man_x who_x it was yesterday [focus] that he_x came.'
- b. *saddaasu di yo kaa jere na ay goro*
 soldier Def Pl Rel beside Foc 1SgS sit
 'the (particular) soldiers [beside whom] [focus] I sat'

The fourth combination of relativization and focalization is when a nonsubject NP or PP is both relativized on and focused. Foc *na* is fairly common with relativized PPs, as in (434).

- (434) a. *ŋga ta o hoŋgu dow di daa nono*
 3SgF Top Impf believe sand Def Emph it-is
[kaa ga] na ŋgu o dira
 [Rel on] Foc LogoSgS Impf walk
 'It (=animal) thought that it was (solid) ground on which it was walking.'
- b. *a čere di yo [kaa se] na a wannasu ga*
 3Sg friend Def Pl [Rel Dat] Foc 3SgS talk 3SgO
 'his friends, to whom he described it'

For optional *na* in *saa di kaa na ...* 'when ...' and *muso kaa na ...* 'the way ...', see §8.3.6. This optional *na* has no focalizing function and will be glossed simply as \emptyset in interlinears; there may or may not be a historical relationship between it and Focus *na*.

8.6.6 Relativization and topic

Since there are few syntactic restrictions on the weak Top morpheme *ta*, it is not surprising that it may occur on the subject NP in a relative clause where a nonsubject NP has been relativized on, as in (435).

- (435) a. *boro di kaa [yer ta] guna yer koyroo kuna*
 person Def Rel [1Pl Top] see 1Pl this-town Loc
 'the man whom we've seen in this town of ours'
- b. *saa di kaa [ay ta] bey*
 time Def Rel [1Sg Top] know
 'when I knew'

Topic particles may not, however, be attached directly to the Rel morpheme *kaa*. Preposed topical constituents also appear to be avoided within relative clauses, since such preposed constituents are really outside the syntactic boundaries of the juxtaposed sentences.

8.6.7 Subjunctive mood and focus

Subjunctive clauses tend to be less "vivid" than main clauses, since they typically denote hypothetical event types. Overt focalization is uncommon in subjunctive clauses. However, textual examples of nonsubject focus (436a) and subject focus (436b-c) do occur, and there is clearly no syntactic restriction on them.

- (436) a. *woo di duu-rey na ma duu—*
 Dem Def gain-Abstr **Foc** 2SgSSubju get—
 'it is [the profit of that (activity)] [*focus*] that you should earn—'
- b. *i si nan ga woo di ye ga*
 3PlS ImpfNeg leave 3SgO Dem Def Pl on
ŋgi-ye ŋga ma hina ga
 3PlF **SFoc Subju** cook 3SgO
 'They_x don't leave it (cooking) to them_y, for it to be they_y [*focus*]
 who cook it.'
- c. *bara ni ŋga ma samba a čipsi di*
 must 2Sg **SFoc Subju** send 3Sg sacrificial-ram Def
 'It must be you [*focus*] who sends his sacrificial ram (for the feast).'

Chapter 9

Sentence-level syntax and semantics

9.1 Object NPs and other postverbal constituents

9.1.1 Ordering and cliticization of postverbal constituents

The ordering of postverbal constituents is basically determined by two main factors. First, certain types of constituents must occur at or near the end of the clause. This applies most rigorously to DF morphemes with clausal scope, where clause-final positioning is obligatory. However, even full phrasal constituents may gravitate toward the end of the clause, either because they are semantically peripheral or because they represent afterthought-like elaborations of referents which are represented earlier in the sentence. Moreover, “heavy” constituents that might otherwise occur closer to the verb may be shifted (extraposed) to clause-final position.

The second generalization is that, after hiving off these clause-final elements, the remaining phrasal constituents are normally ordered in such a way that pronominalized, “old,” or otherwise backgrounded referential material occurs in immediate postverbal position, followed by noun-headed, “new,” or otherwise relatively foregrounded material. Consider (437a-b).

- (437) a. *n si mey [a se] hin-ey [ni foo]*
2SgS ImpfNeg have [3Sg Dat] mastery [2Sg one]
'You can't have mastery over it (=handle it) by yourself.'
- b. *yer o ta koosu [a doo] feeji čijoo*
1PIS Impf Fut slaughter [3Sg chez] sheep tonight
'We will slaughter a sheep tonight at her place.'

In (437a), *ni foo* 'by yourself' is a kind of delayed elaboration on the preverbal 2SgS pronoun, so it occurs finally. This leaves two other postverbal constituents, the Dat PP *a se* 'to (for) it' and the indefinite direct object NP *hin-ey* 'mastery'. Although the interpretation of the Dat PP is dependent on that of *hin-ey*, which would seem to favor the ordering ... *hin-ey[a se]* ..., the preference for putting backgrounded (especially pronominal) material first prevails, so we get ... *[a se] hin-ey* Likewise, in (437b), one might expect the direct object 'sheep' to follow the verb immediately, on grounds of semantic bracketing, but instead the pronominal PP 'at her place' intervenes. In both (437a) and (437b), with a pronominal PP preceding a noun-headed direct object NP, informants strongly disapprove of the reverse ordering.

One possible analysis is that a pronominal PP is enclitic to the verb. An “enclitic” is an unstressed morpheme (or morpheme string) which is attached to a preceding full-fledged word. We could hypothesize that object pronominals and pronominal PPs are cliticized to the verb, while full NPs (and full-NP-headed PPs) cannot be. Consider now (438).

- (438) *ay* *har* *ga* [*war se*]
 1SgS say 3SgO [2Pl Dat]
 'I said it to you(Pl).'

Here there are not one but two pronominal postverbal constituents, direct object *ga* and Dat *war se*. We may consider this to be an enclitic string, attached as a whole to the verb *har*. In such cases, the direct object enclitic obligatorily precedes any cliticized PP.

The cliticization analysis is useful in accounting for pronominal morphology as well as constituent order. In (438) we have an instance of 3SgO *ga*, which differs in form from a short 3Sg allomorph *a*. The longer *ga* is used in direct object function, in which case it immediately follows the verb (for a 'give' construction with two such object clitics, see the following section). *ga* is also the 3Sg form following the preposition *nda* 'and, with'. The *a* variant is used in other functions including subject, possessor of NP, and object of postposition. The 3Pl variants *gi* and *i* follow the same pattern (§4.1.1). We could argue that the *gV* variants are required when the third person pronominal is a) enclitic (to a verb or *nda*), and b) is not bracketed with another following morpheme (i.e., a postposition).

Alternatively, we could limit enclitic status to direct-object pronouns, in which case condition (b) could be dispensed with since PPs would not be covered. But a good case can be made for taking certain pronominal PPs as clitics. First, the ordering of pronominal PPs before nonpronominal complements, as in (437), seems to be obligatory with certain postpositions; the rare counterexamples in texts probably reflect clause-internal repairs and are not confirmed in elicitation. Second, irregular forms for the 1Sg and 2Sg dative combinations, used only in postverbal position, are best analysed as special enclitic forms. Consider (439).

- (439) a. *a-a* *jafa* *yene* *alhoor* *di*
 3SgS-Impf carve 1SgDat limestone Def
 'He cuts the limestone for me.'
- b. *ay* *har* *ga* *mana*
 1SgS say 3SgO 2SgDat
 'I said it to you.'
- c. [*ni se*] *na* *ay* *har* *ga*
 [2Sg Dat] Foc 1SgS say 3SgO
 'It was [to you] [focus] that I said it.'

Irregular 1SgDat *yene* and 1SgDat *mana* (§3.8.1-2) occur not only when immediately following a verb (439a), but also as part of a larger postverbal clitic complex as in (439b), which is structurally parallel to (438). On the other hand, when the Dat PP is fronted by focalization, as in (439c), we revert to regular, non-clitic forms such as 2Sg Dat *ni se*. This suggests that pronominal Dat PPs are enclitics, like pronominal object morphemes.

It is more difficult to determine whether pronominal spatial PPs with postpositions *ra*, *kuna*, and *ga* should also be considered enclitics when they occur postverbally, since there are no similar irregularities with these postpositions.

However, a case can be made for enclitic status on the grounds that such pronominal PPs normally precede full NPs functioning as direct objects. Parallel to (437) with Dat PP, we have many textual examples of spatial PPs like those in (440a-b). In the textual passage (440c), the first clause shows the PP *a ra* 'in it' in the usual postverbal enclitic position, but the second clause seems to be a counterexample with *a ra* following the postverbal NP *jombu yo* '(melon) gardens'. However, in this second clause there is a hesitation pause after the verb *dam*. To have continued with *a ra* after the pause would have put an enclitic in a maximally exposed position not suitable for an enclitic. So *a ra* has relocated after the first postpausal constituent, which happens to be *jombu yo*. This "counterexample" therefore actually supports the enclitic analysis, and further "counterexamples" which readers may encounter in the texts may actually involve similar internal repairs, whether or not the transcription catches the hesitations perfectly.

- (440) a. *ay jaati si jen ka mey [a kuna] haya kaa...*
 1Sg self ImpfNeg fail Inf have [3Sg Loc] thing Rel ...
 'I myself do not fail to have something in it which ...'
- b. *ni koy kaa [i ga] ham dooti*
 2SgS go become [3Pl on] meat there
 'You went and became meat (=became useless) on them there.'
- c. *i-i fari [a ra] saaba,*
 3PlS-Impf farm [3Sg Loc] sorghum,
i-i dam — [jombu yo] [a ra]
 3PlS-Impf put — [garden Pl] [3Sg Loc]
 'They raise sorghum in it, they make—(melon) gardens in it.'

The more noun-like postpositions such as *banda* (as noun: 'back'; as postposition: 'behind' or 'together with') produce PPs which are formally identical or similar to possessed nouns: *ay banda* 'my back' or 'behind me'. It is more difficult to think of these as enclitics than the shorter, high-frequency Dat and abstract spatial shown above, and they do not consistently gravitate to immediate postverbal position. PPs with *doo* 'at (the place of)' likewise show no strong enclitic tendencies.

Instrumental-Comitative *nda* 'with' plus a pronominal complement can also, arguably, be considered part of enclitic complexes. However, such forms as *nda ga* 'with it' follow pronominal direct objects, and typically follow simple pronominal PPs (such as datives). In other words, pronominal *nda* phrases come at the end of the enclitic sequence. When e.g. *nda ga* precedes a pronominal dative PP, we are generally not dealing with an independent Instr-Comit phrase, rather with a fused (suffixal) *-nda* and its direct object pronoun (§6.2.5).

The enclitic status of *nda* plus pronominal complement is also applicable to stranded *nda* in cases where its complement (pronoun or full NP) has been fronted, as in non-subject focalization (§8.1.1), WH-interrogatives (§8.2.3), and relativization (§8.3.4).

While only pronominals and certain pronominal adpositional phrases can be described as actual enclitics, postverbal full NPs expressing old (and other relatively

accessible) referential material also precede NPs introducing new material, as shown in (441).

- (441) a. *ay dam [ije keyna di se] safari*
 1SgS do [child small Def Dat] treatment
 'I administered treatment to the young child.'
- b. *ay sufur [Jeff ga] mobil*
 1SgS rent [Jeff on] vehicle
 'I rented a vehicle from Jeff.'
- c. *no-o filla dam [albarraada di ra] hari*
 2SgS-Impf repeat put [kettle Def Loc] water
 'You again put some water in the tea-kettle.'

In (441a-c), putting the indefinite direct-object NP before the semantically definite PPs would be unidiomatic. However, such inversions are not totally ungrammatical, and if the PP contains a "heavy" NP it is not unusual for the PP to follow the indefinite direct-object NP, as in (442).

- (442) *ay dam safari [har di se [kaa kaa nee]]*
 1SgS do treatment [man Def Dat [Rel come here]]
 'I administered treatment to the man who came here.'

Sentences with two semantically definite full NPs as direct object and complement of a postposition are rare in texts, since in most contexts one or the other would be pronominalized. Elicited examples suggest that in such cases, speakers tend to fall back on an ordering that reflects decreasing grammatical centrality. The direct object therefore usually precedes PPs, but verbs like 'give' and 'show' where a Dat PP is obligatory and grammatically central may put this PP before the direct object. Representative examples are in (443).

- (443) a. *ay sufur [mobil woo] [Jeff ga]*
 1SgS rent [vehicle Dem] [Jeff on]
 'I rented this vehicle from Jeff.'
- b. *ay čerbu [Jeff se] huu di*
 1SgS show [Jeff Dat] house Def
 'I showed Jeff the house.'

9.1.2 Double-object constructions ('give', 'show')

With the verb *noo* 'give', on the other hand, the morphological distinction between direct and indirect (dative) object is neutralized under certain conditions. There are three surface possibilities, shown schematically in (444), where X denotes the transferred entity and Y denotes the recipient. In the schemas, *Y se* includes the morphologically irregular postverbal 1SgDat and 2SgDat combinations.

- (444) a. *noo X [Y se]*
 b. *noo [Y se] X*
 c. *noo Y X*

The choice between (444a) and (444b) is describable in terms of the more general rules and tendencies given in the preceding section. Pronominals strongly tend to precede noun-headed NPs, pronominal object-markers obligatorily precede PPs (including pronominal ones), and an NP denoting old referential material tends to precede one introducing new material. So we get type (444a) in (445a-c) and type (444b) in (445d).

- (445) a. *ay noo ga [i se]*
 1SgS give 3SgO [3Pl Dat]
 'I gave it to them.'
- b. *ay noo ga [woy di se]*
 1SgS give 3SgO [woman Def Dat]
 'I gave it to the woman.'
- c. *ay noo hari di [woy se]*
 1SgS give water Def [woman Dat]
 'I gave the water to a woman.'
- d. *ay noo [woy di se] hari*
 1SgS give [woman Def Dat] water
 'I gave the woman some water.'

The alternative construction unique to *noo* 'give' is (444c), where both Y and X take the surface form of direct objects, with Y (logical recipient) preceding X. There are some syntactic restrictions on this pattern (§8.3.2), but in simple sentences where Y is 1Sg or 2Sg, it is virtually obligatory. Examples in (446).

- (446) a. *ay noo ni ga*
 1SgS give 2SgO 3SgO
 'I gave it to you.'
- b. *i noo ey njerfu*
 3PlS give 1SgO money
 'They gave me some money.'

noo ey in (446b) regularly has the contracted pronunciation [nej]. This construction is used whether X is expressed by a second pronominal (446a) or by a full NP (446b). So in (446a) we get the strange combination of two consecutive direct-object pronominals, a sequence allowed nowhere else in the language. One should not confuse *ni ga* in (446a) with the homophonous PP meaning 'on you'. The verbs 'give' and 'show' do not normally co-occur with the postposition *ga*, so there is little risk of confusion.

Pattern (444c) is also common when Y is a pronoun other than 1Sg or 2Sg, and when in addition X is expressed by a full NP. Examples in (447).

- (447) a. *boro kul kaa hin ka noo yer [a wane fahaam-ey di]*
 person all Rel can Inf give 1PIO [3Sg Poss understanding Def]
 'anyone who can give us information about it'
- b. *no-o noo gi njerfu*
 2SgS-Impf give 3PIO money
 'You give them some money.'
- c. *no-o noo ga [a čirkose]*
 2SgS-Impf give 3SgO [3Sg lunch]
 'You give him his lunch.'

Such combinations result less commonly in pattern (444b), as in (448). The only difference is the appearance of the Dat morpheme on the Y pronominal.

- (448) *yer o har i se i ma noo yer se i-dumb-o*
 1PlS Impf say 3Pl Dat 3PlSSubju give 1Pl Dat Absol-small-Adj
 'We tell them to give us a piece.'

However, when Y is a pronoun other than 1Sg or 2Sg, and when X is expressed by a third person pronoun rather than a full NP, we seem to get type (444a), as in (449).

- (449) a. *ngu si hin ka noo ga [yer se]*
 LogoSgS ImpfNeg can Inf give 3SgO [1Pl Dat]
 '(He says) he can't give it to us.'
- b. *no-o noo ga [i se]*
 2SgS-Impf give 3SgO [3Pl Dat]
 'You give it to them.'

Examples with first or second person in the X (transferred object) role, as in 'They gave you to him,' do not occur in my data.

The syntax of 'give' also works for *čerbu* 'show'. (450a,c) show the double-object pattern, while (450b) has a dative indirect object. The double-object pattern is somewhat less common for 'show' than for 'give'. *samba* 'send' is often a well-behaved transitive-plus-dative verb, but textual examples like (450d) show that it can express a pronominal indirect object as a direct-object enclitic before a full NP functioning as theme (object sent).

- (450) a. *ngi-ye na čerbu ga [ngi-ye bomo]*
 LogoPlS Neg show 3SgO [3RefPl head]
 '(They_x said) they_x didn't show themselves_x to him.'
- b. *yer koy na čerbu ga [ay ta se]*
 God Neg show 3SgO [1Sg Top Dat]
 'God hasn't shown it to me.'
- c. *ay čerbu ni [huu di]*
 1SgS show 2SgO [house Def]
 'I showed you the house.'

- d. *i-i* *samba gi* [*hanjire* *tuu*]
 3PIS-Impf **send** 3PIO [parent-in-law plate]
 'They send them (=parents-in-law) a ceremonial parent-in-law plate.'

ñin 'drink', *ɲaa* 'eat', and *bey* 'know' are transitive verbs: *ɲaa ga* 'eat it' (with 3SgO *ga*). The direct object is often omitted as in English ('I have drunk', 'I have eaten', 'I know'). They are thus only weakly transitive, and accordingly can be made causative by adding Fact-Caus suffix *-ndi* (§6.2.2), hence *ñin-di* 'give to drink', *ɲaa-ndi* 'feed', and *bey-ndi* 'inform, teach'. *ñin-di* tends to be used in special senses including 'irrigate'. The causatives of 'eat' and 'know' are recorded in VPs of the type *ɲaa-ndi Y Z* and *bey-ndi Y Z*, with two unmarked postverbal NPs, one (Y) representing the underlying agent of 'eat' or 'know', the other (Z) representing the underlying object. As usual with postverbal constituents, the linear order of Y and Z is variable (§9.1.1). No adposition is present in the available examples, whether both Y and Z remain in place, or one of them is extracted (e.g. as a WH-interrogative). An example involving extraction is (451); see also (207b-c) in §6.2.2.

- (451) *mey na ni* *ɲaa-ndi* *t* *bita?*
 who? Foc 2SgS **eat-Caus** *t* porridge?
 'Who(m)_x did you feed *t_x* porridge?'

The verb *ton* 'fill' takes instrumental complements showing overt preposition *nda* 'with' (452), so this verb has no true double-object construction.

- (452) a. *ay ton čaaku di nda tondi*
 1SgS **fill** sack Def **with** stone
 'I filled up the sack with stones.'
 b. *maa na n ton nda t čaaku di?*
 what? Foc 2SgS **fill with** *t* sack Def?
 'What_x did you(Sg) fill the sack with *t_x* ?'

9.2 Adjectival intensifying interjections

The unmarked way to intensify any VP is to add the serial verb *hīsa* to get *hīsa ka* VP 'VP very much' (§9.7.6). This is serviceable, but stylistically colorless.

Some intransitive verbs of adjectival quality, and a few other verbs, have an associated intensifying interjection. The intensifier commonly follows the basic verb, or the related adjective: a *bibi tirik!* 'it was pitch black.' In conversations, the listener may complete the speaker's sentence by adding an intensifier, a move which demonstrates the listener's involvement. Such lexically specific intensifiers can be compared roughly to English expressions such as *snow white*, *pitch black*, *dead drunk*, and *brand new*, but the grammatical structure is different.

The precise set of intensifiers is somewhat variable from speaker to speaker, and in general these intensifiers belong to the expressive and therefore non-rigid side of the language. A representative set of intensifiers is given in (453).

(453)	<u>basic verb</u>	<u>gloss</u>	<u>intensifier</u>
a.	<i>bibi</i>	'be black'	<i>tirik!</i>
	<i>korey</i>	'be white'	<i>far!</i>
	<i>čirey</i>	'be red'	<i>jaram!</i>
	<i>kara</i>	'be yellow'	<i>buy!</i>
	<i>firji</i>	'be green, blue'	<i>jeti!</i>
b.	<i>hottu</i>	'be spicy'	<i>tey!</i>
	<i>tar</i>	'be tasteless'	<i>batak!</i>
	<i>koron</i>	'be hot'	<i>jow!</i>
	<i>yey</i>	'be cold, slow'	<i>sa]bey!</i>
	<i>kaan</i>	'be sweet, sharp'	<i>gey!</i>
	<i>ton</i>	'be full'	<i>met!,pet!</i>

On the whole, my Timbuktu speakers made less use of such intensifiers than did speakers of other Songhay varieties (e.g. HS). Two intensifiers were elicited in combination with several verbs and appear to have a kind of "default intensifier" status. One is *gey!*, which one informant gave with several verbs ('be distant', 'be near', 'be small', 'be big', 'be fast') in addition to 'be sweet, sharp' as shown in (453b). The other is *far!*, which may well be the normal intensifier for 'white' as shown in (453a), but is also an all-purpose intensifier attested in texts with many types of VP.

As in many languages, such expressive interjections may diverge from phonological patterns. The examples in (453) diverge from normal stem shapes in two major respects. First, intensifiers may end in a stop (*tirik!*, *batak!*). Second, intensifiers (but not other stems) allow the diphthong *uy* (*buy!*), cf. §3.3.1.

9.3 Operators and scope

9.3.1 Types of adverbials

In (454) we give a rough, Jackendoff-style classification of semantic (and possibly syntactic) types of adverbial expressions in various languages based primarily on the type of (semantic) constituent that they modify.

(454)	<u>type</u>	<u>English example</u>
	pragmatic	<i>frankly; hopefully</i>
	quantificational	<i>again; at first; twice</i>
	spatiotemporal	<i>here; tomorrow</i>
	VP-oriented (manner)	<i>softly; loudly</i>
	subject-oriented	<i>on purpose; carefully</i>
	NP-oriented	<i>(girl) with a dog, (boy) in the house</i>

Pragmatic adverbs relate to the speech act (especially the speaker's attitude) rather than to the narrated eventualities. Quantificational adverbs operate on eventualities

(usually events rather than states). Spatiotemporal adverbs provide a setting for eventualities. Subject-oriented adverbs focus on the subject NP, especially in connection with volitionality and attention. VP-oriented adverbs include most of the classic “manner” adverbials. Finally, NP-oriented adverbials are usually instrumental-comitative or spatiotemporal adverbials that function as reduced relative clauses attached to a particular NP.

KCh appears to be thin in pragmatic adverbials. Equivalents of English *frankly* and *hopefully*, for example, are separate full clauses like ‘I tell you the truth’ or ‘I hope (that ...)’. In elicitation, *soobey* was obtained as a preposed ‘frankly, ...’ adverbial; this stem is elsewhere used as a verb meaning ‘be serious’. See also the discussions of DF particles *moo* ‘also, too’ (§8.5.5), *nin* ‘only’ (§8.5.2), and *sanda* ‘like’ (§8.5.6), all of which seem to have some uses that relate to pragmatic structure.

Adverbs that quantify over events include the obvious ‘X times’ phrases. We will also consider under this rubric expressions like ‘again’ and ‘for a while’.

(455) Quantificational adverbials

	<u>form</u>	<u>gloss</u>
a.	<i>čee foo</i>	‘once’
	<i>čee hiŋka</i>	‘twice’
b.	<i>koyne</i>	‘again’
c.	<i>jinaa</i>	‘for a while, at first’

The “X times” adverbials in (455a) are straightforward; see §5.4.9. They take the entire eventuality including both subject and VP in their scope, as in English.

Examples of *koyne* ‘again, further’ are in (456).

- (456) a. *[saa di] i-i duu ka dam ga*
 [time Def] 3PlS-Impf proceed Inf put 3SgO
[nuune di ra] koyne
 [fire Def Loc] **again**
 ‘Then, they (blacksmiths) proceed to put it (axe) into the fire again.’
- b. *[woo di banda] [alfajar here di ra]*
 [Dem Def behind] [dawn around Def Loc]
a filla kar koyne
 3Sg repeat hit **again**
 ‘After that (=first rain), around dawn it (=rain) recommenced falling again.’
- c. *nan kul kaa woo go dam jirbi-iiye*
 place all Rel Dem Impf be-done day-seven
nda a duu hay kaa tun-ndi ngu koyne
 if 3SgS get thing Rel arise-Caus 3ReflSgO **again**
 ‘any time that (=rain) lasts a week, if it finds something that raises (=reinforces) it further’

These examples show that *koyne* is used in contexts of repetition of an event, as in (456a), and prolongation or other augmentation of an eventuality, as in (456c) and

perhaps (456b). It should be noted that the serial verbs *yee* 'return' and *filla* 'repeat' with a following infinitival VP (§9.7.5) are often used in contexts involving repetition; *filla* co-occurs with *koyne* in (456b). *koyne* interacts interestingly with negation; see §9.3.5 for details.

jinaa 'first, at first, for a while, for the time being' is exemplified in (457).

- (457) a. *i-i* *jokoro* *jinaa* *i-i* *dam* *a* *ra* *hayni* *di*
 3PIS-Impf slash first 3PIS-Impf put 3Sg Loc millet Def
 'They slash holes in the ground first, (then) they put millet (seeds) in it.'
- b. *i-i* *har* *a-woy-čindi-guu,*
 3PIS-Impf say Absol-ten-remainder-five,
jinaa *a-foo* *i-i* *har* *waraŋka*
 first Absol-one 3PIS-Impf say twenty
 'They (buyers) say (=offer to buy) fifteen, then for each one some say twenty.'

These examples illustrate the frequent use of *jinaa* as a linker between two clauses denoting events that are strictly ordered chronologically. The construction is thus *A jinaa B* where *A* and *B* represent clauses. The prosodic break (shown as a comma) can be either before or after *jinaa*. In the case of *A jinaa, B* where *jinaa* behaves prosodically as a clause-final particle for *A*, we may translate fairly literally as 'A first, (then) B.' In the case of *A, jinaa B* we could translate as 'A (first), then B.' The parenthesized adverbials (first, then) can be derived inferentially in either translation. In these constructions, *jinaa* closely resembles parallel uses of the Emph particle *dee* (§8.5.7). However, *jinaa* has distinct properties under negation, where it means '(not) yet' (§9.3.5).

Other English quantificational adverbs are rendered in KCh by specialized serial verbs followed by infinitival VPs. Some relevant serial verbs are *filla* 'repeat', *yee* 'return, do again', and *dooney* 'be accustomed to' (§9.7.5).

Spatiotemporal adverbials usually provide a setting (in space or time) for the entire eventuality denoted by the sentence. They may follow the verb, be fronted (extracted) in the nonsubject focus construction (§8.1.1), or be preposed as topic-like constituents preceding the sentence (§8.4.1). Preposing is typical of temporal rather than spatial adverbials; it is standard with *saa di* 'then, at that time, in that situation, so', which connects the time or situation of the following sentence with that of prior discourse. In the case of *moreyda* 'now', preposing is fairly common, but it tends to follow another preposed topical constituent ('[The man] now, he came here'), suggesting a kind of enclitic status. The primary spatial adverbials like *nee* 'here' and *doodi* ~ *dooti* 'there' generally follow the verb or, if highlighted, are focalized.

Spatiotemporal PPs with (mainly spatial) postpositions like *ga* 'by, on, from', or Loc *ra* or *kuna*, are tricky because they are often complements of verbs (of motion, stance, etc.), as in 'they entered [into the house],' rather than stage-setters for the entire eventuality. Their interactions with verbs are described, with many examples, in §11.1.

English lexical manner adverbials, with VP scope, are generally rendered by constructions involving two verbs, either in two separate clauses or in a serial-verb combination. Thus 'we dig deeply into the ground' comes out in KCh as 'we dig, so that (subjunctive) we go far under the ground,' while 'it rises rapidly' is expressed in serial-verb form as KCh 'it hurries to arise.' There are, however, some forms that are commonly added to VPs in the fashion of English lexical manner adverbs, notably those in (458).

- | | | |
|-------|---------------------------|-------------------------------------|
| (458) | <u>form</u> | <u>gloss</u> |
| | <i>mooso, mooso-mooso</i> | 'gently, slowly, delicately' |
| | <i>tamba, tamba-tamba</i> | 'fast, quickly, immediately, early' |

Examples of the two adverbials are (459a-b). (459c) shows that the negation of *tamba* is the common way to translate '(come, be) late'.

- | | | | | |
|-------|----|---|-----------------|--------------|
| (459) | a. | <i>nda ni waay</i> | <i>[nda ga]</i> | <i>tamba</i> |
| | | if 2SgS be-aware | [with 3SgO] | fast |
| | | 'if you(Sg) become aware of it promptly' | | |
| | b. | <i>a-a fana mooso-mooso</i> | | |
| | | 3SgS-Impf crawl | Rdp-slow | |
| | | 'He crawls slowly.' | | |
| | c. | <i>a na kaa tamba</i> | | |
| | | 3SgS Neg come | fast | |
| | | 'He came late.' (lit., 'He didn't come early.') | | |

tamba can also be used as a verb 'hurry, do fast, go fast', and can therefore occur in imperatives like (460a). *mooso*, on the other hand, remains adverbial in the sense 'do slowly' and combines with the "light" verb *dam* 'do', as in (460b).

- | | | | | |
|-------|----|---|----------------|--|
| (460) | a. | <i>wo tamba</i> | | |
| | | 2PIImpera | do-fast | |
| | | 'You(Pl) do it quickly!' (imperative) | | |
| | b. | <i>wo dam mooso</i> | | |
| | | 2PIImpera do | slow | |
| | | 'You(Pl) do it slowly (gently)!' (imperative) | | |

Subject-oriented adverbials resemble manner adverbials in their syntactic position, but have a specific semantic relationship to the subject NP. KCh appears to lack lexical subject-oriented adverbials ('on purpose', 'carefully'). 'On purpose' is expressed not by an adverbial, rather by a serial-verb construction, as in (461), which could be literally glossed as e.g. 'she meant to hit me' but which has a stronger implication that the intended action was carried out.

- | | | | | |
|-------|--------------------------|----------------------|---------|------|
| (461) | <i>a murey ka kar ey</i> | | | |
| | 3SgS | do-on-purpose | Inf hit | 1SgO |
| | 'She hit me on purpose.' | | | |

Instrumental-comitative phrases consisting of *nda* 'with, and' and a following NP (§5.11.3-4) function in some cases as subject-oriented adverbials, in other cases as manner (VP-oriented) adverbials, in still others as regular complements of particular verbs (§6.1.6). In (462a), the associates (even though inanimate) are strongly connected with the agent-subject, hence a paraphrase like '[You and they (=tools)] will go and work.' Instrumental phrases like that in (462b) are a little harder to massage into a similar paraphrase, but the instrument (here 'limestone' as a building material) is a necessary link between the agent and the denoted activity ('build it'). On the other hand, idiomatic phrases with *nda* like 'by its road' (= 'properly') in (462c) are best described as manner adverbials, and in this particular case the 3Sg pronoun possessor is probably coreferential to the direct object 'it' (=wall).

- (462) a. *ni nga o koy goy nda [[[a wan di yo]*
 2Sg SFoc Impf go work with [[[3Sg Poss Def Pl]
nda [ni wan di yo]] kul]
 and [2Sg Poss Def Pl] all
 'It's you who will go work, both with his (things) and (with) your
 (things).'
- b. *no-o hin ka čen ga [nda ga] [musoo di daa]*
 2SgS-Impfcan Inf build 3Sg [with 3Sg] [like-this Def Emph]
 'You(Sg) can built it (=wall) with it (=limestone) in this way.'
- c. *ma dam ga [nda a fondo di]*
 2SgSSubju do 3SgO [with 3Sg path Def]
 'You(Sg) should do it thoroughly.'

KCh does not appear to allow NP-oriented adverbials like the English PPs in *the man in the beaver hat* or *the woman with the gun*. These English expressions function like reduced relative clauses ('the man who has the beaver hat'). KCh uses explicit relatives clauses as in (463a), or Characteristic derivatives ('gun person') as in (463b).

- (463) a. *har di [kaa dam budeli di] koy*
 man Def [Rel put baggy-pants Def] go
 'The man in (=who has put on) the baggy pants left.'
- b. *malfa-koy di koy*
 gun-Char Def go
 'The person with a gun (gun-person) left.'

9.3.2 Clause-internal and higher-level (metalinguistic) negation

Ordinary (clause-internal) negation is expressed primarily by the morphemes in (464).

(464)	form	gloss	comments	positive counterpart
	<i>si</i>	ImpfNeg	preverbal MAN morpheme	<i>o ~ go</i>
	<i>sii</i>	'not-be'	locational quasi-verb	<i>goo</i>
	<i>na</i>	Neg	preverbal MAN morpheme	(zero)

For the MAN system in general, see §7.2. On the status of locational quasi-verb *sii* and its positive counterpart *goo*, see §7.1.2 and §8.2.1.

Some lexical stems with one kind or another of built-in negative sense, though not grammatically negative, are given in (465).

(465)	<u>form</u>	<u>gloss</u>	<u>comments</u>
	<i>jen</i>	'fail (to ...)'	serial verb plus infinitival VP
	<i>jeŋey</i>	'absence, lack'	compound final
	<i>morgo</i>	'fail (at), be unable'	intr. or tr. verb, or serial verb
	<i>yaada</i>	'be worthless, free'	verb or adjective

jen is useful in that it can itself be preceded by Inf[initive] *ka* in an infinitival VP, where the preverbal MAN morphemes in (464) are not allowed. Likewise, the (etymologically related) compound final *jeŋey* is the nearest approximation of negation within a NP.

In addition to clause-internal negation, there is a more complex construction that can be used with either a NP (466c) or a clause in its scope. The construction begins with a *na č̣i* ... 'it is not ...' When the complement is a clause, the 'that ...' conjunction *kaa* is occasionally used (466a), though more often omitted (466b). This higher-level construction can be used for "metalinguistic" negation, e.g., to correct a phrase or sentence previously uttered by the current speaker (self-correction) or by someone else. As we will see, a higher-level negation may result in more transparent scope relationships vis-à-vis a quantifier. For now, note the split-level negation in (466b).

- (466) a. *a na č̣i kaa ay guna har foo*
 3SgS Neg be that 1SgS see man one
 'It's not the case that I saw one man.'
- b. *a na č̣i [ay ŋga na bana]*
 3SgS Neg be [1Sg SFoc Neg pay]
 'It wasn't I [*focus*] who did not pay.'
- c. *a na č̣i hāyši*
 3SgS Neg be dog
 'It's not a dog.'

Under certain conditions a higher-level negation, or other syntactically "distant" negation, can trigger a shift from indicative to subjunctive mood. See §9.6.5.

9.3.3 Negation and quantifiers

A negative morpheme {*si sii na*} often co-occurs intrasententially with a quantifier. We begin by considering *foo* 'one', which often functions as an indefinite in existential contexts (467).

- (467) a. [boro foo] si bey musa kaa nono
 [person one] ImpfNeg know manner Rel it-is
 'Nobody knows what (sort of thing) it will be.'
- b. [haya foo] si filla duu ga
 [thing one] ImpfNeg repeat get 3SgO
 'Nothing can afflict it again.'
- c. [yekuwa foo] si čindi a ra
 [strength one] ImpfNeg remain 3Sg Loc
 'No strength remains in it.'
- d. ma na bana [haya foo]
 2SgS Neg pay [thing one]
 'You(Sg) haven't paid anything.'
- e. ammaa [ije foo] ni si hin ka kow ga
 but [child one] 2SgS ImpfNeg can Inf remove 3SgO
 'But you can't extract a single piece.'

Semantically, the negation has wide scope in all cases, even when the indefinite is in subject position, preceding the negation, as in (467a-c), or when the indefinite is a preposed topical constituent, as in (467e). Thus (467a) can be paraphrased as 'It is not the case that for some x, x knows' but not as 'For some x, x doesn't know.' The combinations *boro foo* 'someone, anyone, no-one' and *haya foo* 'something, anything, nothing' are very common.

When the indefinite NP consists of a bare noun without *foo*, we get examples like those in (468).

- (468) a. hew sij [a ra]
 wind be-not [3Sg Loc]
 'There is (was) no wind.'
- b. boro si hin [a ra] hin-ey
 person ImpfNeg can [3Sg Loc] mastery
 'One can have no control over it.'

With a mass noun like 'wind' in (468a), it is clear that the negation again has wide scope ('it is not the case that there was some wind'). With a countable noun like *bor(o)* 'person' in (468b), on the other hand, we can construe it generically, in which case there is no clear truth-conditional difference between wide-scope negation ('for no representative x is it the case that x could control it') and narrow-scope negation ('for a representative x, x could not control it'). However, even such cases are at least compatible with a wide-scope reading.

The other high-frequency quantifier in negative sentences is *kul* 'all, every, each'. Some examples are in (469).

- (469) a. yer na hin ka guna [boro kul]
 1PIS Neg can Inf see [person all]
 'We couldn't see anyone.'

- b. *attey si mey [haya kul] kaa...*
 tea ImpfNeg have [thing all] Rel ...
 'Tea has nothing which ...'
- c. *[hambur kul] na hirow [ay ra]*
 [fear all] Neg enter [1Sg Loc]
 'No fear entered into me.'

Here the negative ordinarily has narrow scope regardless of the syntactic role (subject or nonsubject) of the quantified NP; (469a) can be paraphrased as 'for all x, we could not see x' rather than 'It is not the case that we could see everyone.'

Comparing the behavior of *foo* and *kul*, the generalization is that their combinations with a negation are interpreted in the manner which produces the strongest assertion (that with the most precise truth conditions). In the case of *foo* 'one', the strongest reading is the one with wide-scope negation ('not [... one ...]'), but in that of *kul* 'all' the strongest reading is the one with narrow-scope negation ('all [... not ...]'). The result is that there is no truth-conditional difference between *foo* and *kul* in negative contexts. One factor favoring *kul* is that, unlike *foo*, it can be freely used with mass (as well as count) NPs, as in (469c). Replacing *kul* with *foo* here would be awkward, though perhaps not impossible, cf. (467c).

The truth-conditionally weaker interpretations of Neg plus *kul* 'all' can be elicited provided the context is favorable, as in (470). The preceding material makes it clear that *i-kul na bun* means 'they did not all die' (i.e., 'it is not true that, for all x, x died'), not 'none of them died' (i.e., 'for all x, x did not die').

- (470) *hāyši hinja di bun, a-foo čindi,*
 dog three Def die, Absol-one remain,
saa di, i-kul na bun
 time Def, AbsolPl-allNeg die
 'Three dogs died, the other remained; so, they did not all die.'

However, weak readings are more reliably and frequently expressed by means of higher-level negation with *a na či ...* 'it is not ...,' introduced at the end of the preceding section. Examples in (471).

- (471) a. *a na či [hāyši foo na ay guna],*
 3SgS Neg be [dog one Foc 1SgS see],
hāyši hiŋka na ay guna
 dog two Foc 1Sg see
 'It's not the case that it was one dog [focus] that I saw; (rather), it was two dogs [focus] that I saw.'
- b. *a na či [i-kul bun]*
 3SgS Neg be [3AbsolPl-all die]
 'It's not the case that they all died.'

The same effect can be achieved in constructions that already involve higher and lower clauses, as in (472).

- (472) *ay na har ma wii häyši di yo kul,*
 1SgS Neg say 2SgSSubju kill dog Def Pl all,
ay har ma wii a-foo daa
 1SgS say 2SgSSubju kill Absol-one Emph
 'I didn't tell you to kill all the dogs, I told you to kill (just) one.'

However, combinations of a VP with a preceding specialized serial verb are treated like single VPs with respect to negation, as in (473), which has two serial verbs (*yee* and *filla*) along with the VP 'do anything well again'.

- (473) *a si yee ka filla hīsa*
 3SgS ImpfNeg return Inf repeat do-well
[haya foo] koyne
 [thing one] again
 'It will never be good for anything again.'

A slightly different logical interaction between negation and *foo* 'one' is seen in (474). The point is that one needs helpers in hosting a large banquet.

- (474) *[boro jorgu ŋaa], boro foo si hin ka hīsa ga*
 [person hundred meal], person one ImpfNeg can Inf cook 3SgO
 'a meal for 100 people, one person cannot cook it (alone).'

9.3.4 Equivalents of negative polarity items

KCh does not appear to have any lexical items that are used exclusively as negative polarity items in the fashion of English (*not*) *any*, (*not*) *ever*, (*not*) *a red cent*, etc. (but cf. §5.4.7). The forms that can be used to translate such English expressions are also used in ordinary positive contexts. The main ones are listed in (475).

- | (475) | <u>form</u> | <u>gloss (positive)</u> | <u>gloss (negative contexts)</u> |
|-------|----------------|-------------------------|---------------------------------------|
| | <i>foo</i> | 'one, a(n)' | '(not) any, non' [preceding section] |
| | <i>kul</i> | 'all, every, each' | '(not) any, none' [preceding section] |
| | <i>abada</i> | 'always' [rare] | '(not) ever, never, absolutely not' |
| | <i>far!</i> | 'indeed!' | '(not) at all!' |
| | <i>wala...</i> | 'even ...; or ...' | '(not) even ...' |

Other such expressions are combinations of a noun with *foo* or *kul*, like *boro foo* 'someone, anyone, no-one' (475a) and *haya foo* 'something, anything, nothing' (475b); we may add *nongu foo* 'somewhere', *saa foo* 'some time', *han foo* 'some day', etc. For *haya foo* as a verb '(do) anything', see §7.1.5.

In (476a), *abada* (<Ar. 'never') is an autonomous adverbial particle which is far more common in negative than positive contexts. *far!* can be thought of as a default intensifying interjection (§9.2), and is used both in positive ('..., period!') and negative ('[not] ..., at all!') sentences, as in (476b-c).

- (476) a. *a si din farka fuuya-nte abada*
 3SgS ImpfNeg seize donkey be-weak-Partpl **always**
 'It (=disease) never afflicts a weak donkey.'
- b. *kuumu ta a si hima ka moor ni far!*
 hoe Top 3SgS ImpfNeg ought Inf be-far 2SgO **at-all!**
 'A hoe, it should never be far from you, period!'
- c. *nda n kar ga nda ndooso di no-o hongu*
 if 2SgS hit 3SgO with axe Def 2SgS-Impf think
guuru hinka na n kar čere ga, kaa hem, far!
 metal two Foc 2SgS hit friend by, Rel weep, **indeed!**
 'If you strike it (=limestone) with the pick-ax, you'll think that (=it's
 as though) it was [two pieces of metal] [focus] that you struck
 together, which screech, indeed!'

For *wala* in the sense 'even' (in positive or negative clause), see §8.5.9.

9.3.5 Negation, adverbials ('again', 'first'), and DF morpheme 'only'

jinaa 'first, at first, for the time being' was introduced in §9.3.1, with examples in positive contexts. It associates an eventuality whose time interval precedes that of another eventuality, or whose time interval is not seen as permanent.

The combination of *jinaa* with a preceding negative results in the sense 'not yet'. A sentence of the general type 'he has not eaten yet' can be paraphrased (however awkwardly) as 'for now [it is not the case that [he has eaten]],' but not as 'it is not the case that [he ate first],' which would require a higher-level negation. This shows that *jinaa* rather than the negation has wide scope in single-clause combinations. Examples in (477).

- (477) a. *a na hantum jinaa*
 3SgS Neg write **at-first**
 'He hasn't written yet.'
- b. *haya lawal kaa no-o dam a se,*
 thing first Rel 2SgS-Impf do 3Sg Dat,
no-o tibi a se, a gar
 2SgS-Impf put-on 3Sg Dat, 3SgS be-found
ma na noo ga wala hari kaa nin jinaa
 2SgS Neg give 3SgO even water Rel be-drunk **at-first**
 'The first thing that you do for him (guest) is, you put (tea) on for
 him, (at a time when) it happens that you have not yet even given
 him water to drink.'
- c. *saa di fari ta misc foo*
 time Def farming Top manner which?
war na lilendi ga jinaa?
 2PIS Neg prepare 3SgO **at-first**
 'Then, the planting, how come you(Pl) have not prepared it yet?'

For *ka jinaa* ... as serial verb, see §9.7.5.

koyne 'again, further' was likewise introduced in §9.3.1 with positive examples. Combining this with a negation gives the sense 'not again, no longer, no more, not any more' in the great majority of cases. A sentence of the type 'he no longer danced' can be paraphrased as 'it is not the case that [he danced further]' but not as 'again [it is not the case that [he danced]].' Therefore in this case the negation has wide scope. Examples in (478).

- (478) a. *ni si yee koyne*
 2SgS ImpfNeg return **again**
 'You(Sg) wouldn't have returned again.'
- b. *ni si hin ka goy koyne*
 2SgS ImpfNeg can Inf work **again**
 'You(Sg) can't work any more.'

However, when the sentence with negation and *koyne* follows a parallel negative clause ('not X'), we occasionally get the reading '... not [Y] either', paraphrasable as 'again [it is not the case that [Y]]', where *koyne* rather than the negator has wide scope. The final *koyne* in (479) appears to be an example of this. The first *koyne* after *alhoor* 'limestone' is probably anticipatory, giving a 'neither X, nor Y' construction.

- (479) *a-a kaa sanda haya kaa hasara,*
 3SgS-Impf become like thing Rel be-ruined,
a na kaa alhoor koyne,
 3SgS Neg become limestone **again**,
a na či laabu, a na či ferey koyne
 3SgS Neg be banco, 3SgS Neg be brick **again**
 'It (deposit of poor-quality limestone) turns out to be something that is no good; it has turned out to be neither (good) limestone, (nor) is it (good) mud-gravel mix, nor is it bricks either.'

The sense 'not ... either' = 'neither' is more typically expressed by *moo* 'also' (§8.5.5) with a negation, as in (480).

- (480) a. *a na či addama-jje ta nono*
 3SgS Neg be human Top it-is
mere a na či jinni moo nono
 but 3SgS Neg be djinn **also** it-is
 'It (=dwarf) isn't a human, but it isn't a djinn (=genie) either.'
- b. *a si goy, [a na či tubaabu] moo*
 3SgS ImpfNeg work, [3SgS Neg be white] **also**
 'He doesn't work, nor is he a white man (i.e., rich).'
- c. *a na či tubaabu, [a si goy] moo*
 3SgS Neg be white, [3SgS ImpfNeg work] **also**
 'He isn't a white, nor does he work (=have a job).'

(480b) and (480c) are simply inversions of each other. In both cases, *moo* clearly has wide scope over the second clause. In (480a), whose second clause is similar to that of (480b) but which includes identificational quasi-verb *nono* at the end following *moo*, one might argue that *moo* is locally attached to *jinni* 'djinn'. However, in (480a) as in (480b), *moo* has logical scope over the whole second clause including its negation ('also is not' rather than 'is not also'). Informants did not accept a variation on the negated second clause of (480a) with final #... *nono moo* instead of ... *moo nono*, though ... *nono moo* is occasionally attested in positive clauses.

The sense 'not only' is generally expressed by means of higher-level negation (§9.3.2), with *nin* or *daa* in the lower clause (481).

- (481) *a na či [čee foo daa na ay nin hari-futu]*
 3SgS Neg be [time one **Emph** Foc 1SgS drink water-evil]
 'It is not only once [*focus*] that I drank alcoholic beverages.'

This example also illustrates another point, namely, that higher-level negation, plus focalization in the embedded clause, is necessary to focus the negation on a particular constituent.

9.3.6 Quantification over possessed nouns

Numerals are compatible with possessed nouns. The sense may be partitive ('two of my hoes'), as in (482a), or totalizing ('my two hoes'), as in (482b). The Def morpheme is generally omitted in the former sense, generally present in the latter sense.

- (482) a. *yee jow [ay kuumu foo] [ay banda]*
 1SgSImpf take [1Sg hoe one] [1Sg behind]
 'I (will) take one hoe of mine along with me.'
- b. *a mee hiŋka di*
 3Sg mouth two Def
 'its (=knife's) two ends'

We can bring out the semantic difference by bracketing the NPs in (482a) and (482b) differentially, as in (483a-b), which disregard the Def morpheme. (483a) has more semantic structure than this simple bracketing device brings out, since the inner portion *ay kuumu* 'my hoe' must be understood as potentially denoting the set of hoes owned by the speaker, from which *foo* selects just one.

- (483) a. [[*ay kuumu*] *foo*]
 b. [*a [mee hiŋka]*]

9.4 Overview of complement clause types

Complement clauses can be divided into three basic classes based on the type of preverbal MAN marking involved, as indicated schematically in (484).

(484)	<u>clause type</u>	<u>subject NP?</u>	<u>MAN morphemes</u>
	indicative	√	Impf or zero (=perfective)
	subjunctive	√	Subju <i>ma</i> or zero (=indicative)
	infinitival VP	no	(none)

Indicative complement clauses are identical in form to main clauses, except that some of the former begin with a 'that' complementizer. So the indicative complements permit Impf *o - go*, and the absence of MAN morphemes is interpreted as (positive) perfective. Subjunctive clauses have a special Subju morpheme *ma* and lack aspect marking. Both indicative and subjunctive complement clauses may be internally negated.

Infinitival VPs are sharply different from these two types. They lack a subject NP and the major MAN markers Impf, Subju, and Neg (though they do permit Future *ta*). Instead, they normally begin with a complementizer *ka* which we label Inf[initive]. This *ka* should not be confused with *kaa* 'that ...'. One could argue whether or not *ka* occupies the syntactic position filled in finite clauses by MAN morphemes, or whether it is a true complementizer, but there is no clear empirical basis for making the judgement.

Examples of the three types are given in (485), omitting complementizers. "Perf" represents the unmarked perfective.

(485)	<u>type</u>	<u>example</u>	<u>gloss</u>
a.	indicative (Perf)	<i>yer guna gi</i>	'... we saw them'
	indicative (Impf)	<i>yer o guna gi</i>	'... we see them'
	indicative (Perf Neg)	<i>yer na guna gi</i>	'... we didn't see them'
	indicative (Impf Neg)	<i>yer si guna gi</i>	'... we don't see them'
b.	subjunctive	<i>yer ma guna gi</i>	'... we may see them'
	subjunctive (Neg)	<i>yer ma si guna gi</i>	'... we may not see them'
c.	infinitival VP	<i>ka guna gi</i>	'... to see them'

9.5 Clause conjunction and indicative complement clauses

9.5.1 Conditionals (*nda ...*, *wala ...*)

Conditional constructions consist of an antecedent ('if ...') and a consequent ('then ...'). In KCh, the consequent is usually an ordinary main clause, while the antecedent is marked by an initial *nda ...* 'if ...'. *nda* is also used in instrumental-comitative phrases ('with, by means of, together with') before NPs, and can be used to conjoin two NPs (§5.11). We return to the connections among these uses of *nda* below. Near the end of this section we cover counterfactuals with *nda a gar ...*, and emphatic 'even if ...' conditionals with *wala ...* instead of *nda ...*. For 'unless ...', see §8.5.3.

Antecedents, which consist of one or more clauses, are frequently terminated by one of several morphemes that elsewhere have quantificational or discourse-functional uses, but here function mainly to mark the right edge of the antecedent. Similar right-edge markers occur in other kinds of background clauses. In the case of conditional antecedents, the most common right-edge marker is *kul* 'all' (usually without Absolute prefix); others include Emph *dee*, *nin* 'only', and *moo* 'also'. For discussion and examples of right-edge markers, see §9.5.10.

Conditionals in KCh have a number of notable properties, some quite different from those of English counterparts. These properties can be summarized as follows: a) an antecedent bound by a single *nda* may consist of one or more than one clause; b) the right edge of the antecedent is optionally marked by a particle; c) the antecedent of a single consequent may be complex, consisting of two or more segments, parallel or hierarchically nested, each beginning with its own *nda*; d) the consequent optionally begins with a 'then ...' expression; e) there is usually an aspectual difference, perfective being common (though not obligatory) in the antecedent or at least its initial clause, imperfective being regular in the consequent; f) the antecedent can be translated either as 'when ...' or 'if ...' depending on context; g) counterfactuals are simply a special subtype of the basic conditional construction; h) a topical constituent often precedes the antecedent.

Points (a), (b), (d), and (e) are functionally interrelated. Given a sequence of *nda* followed by three clauses $S_1 S_2 S_3 \dots$, (a) warns us that the semantically crucial break between antecedent and consequent might be after S_1 , S_2 , or even a later clause. Features (b), (d), and (e), though each arguably has some independent semantic motivation, are useful in helping listeners locate this break. For example, *nda S_{1-Perf} S_{2-Perf} saa di S_{3-Imprf} ...* would ordinarily be interpreted as having S_1 and S_2 in the antecedent, S_3 in the consequent, the clues being the perfective-imperfective divide and *saa di* 'then'. We would make the same call if, instead of *saa di* marking the beginning (left edge) of the consequent, we had *kul* as a right-edge marker for the antecedent, as in *nda S_{1-Perf} S_{2-Perf} kul, S_{3-Imprf} ...*.

(486) is a typical, simple conditional construction (A = antecedent; C = consequent).

- (486) A *nda a kaa kul,*
 if 3SgS come all,
 C *nga ta o horgu ...*
 3SgF Top Impf think ...
 '(A) When it (=animal) came, (C) it thought'

The context was an imagined recurrent scene involving animals in the distant past, so 'when ...' is a more felicitous gloss than 'if ...' in this instance. Note that *kul* at the end of the antecedent is untranslated and functions as a right-edge marker.

Consider now the more complex antecedent in (487).

- (487) A1 *nda [[a kaaree ga yene]*
 if [[3SgS square 3SgO 1SgDat]
 [a hīsa ga yene ka ben]],
 [3SgS prepare 3SgO 1SgDat Inf end]],
 A2 *nda [yer din fondo]*
 if 1PlS take road
 C *yee har a se ...*
 1SgSImpf say 3Sg Dat ...
 '(A1) When he has cut it (=stone) into blocks for me, and has finished making it for me, (A2) when we hit the road, (C) I will tell him (to ...).'

Here we have a two-clause antecedent segment A1 followed by a single-clause antecedent segment A2, which leads into the consequent C. A2 is the direct antecedent, temporally and causally, while A1 describes the more general situational background, but there is no formal difference between the two antecedent types. Note that the perfective-imperfective break is the crucial clue that the transition from antecedent to consequent has occurred, there being no overt marker of edges in this instance.

Consider now (488).

- (488) — *albarka beer goo [a ra], kaa*
 strength big be 3Sg Loc, Rel
 A *nda [ma na čj assajaa ma na či har,*
 if [2SgS Neg be hero 2SgS Neg be man,
kaa no-o bey yenje, no-o mey moo
 Rel 2SgS-Impf know fighting, 2SgS-Impf have also
sirri yo kaa no-o hin ka kamba [a se]],
 secret Pl Rel 2SgS-Impf can Inf hold [3Sg Dat],
 C *ni si hin ga*
 2SgS ImpfNeg master 3SgO
 'There is a great strength_x in it (=dwarf)_y which_x, (A) if [you aren't a hero, (and) you aren't a man who [is experienced in fighting (or) have secrets that you can hold (in store) for it_y]], (C) you can't overcome it.'

Here the entire conditional (A plus C) functions as a relative clause with head NP *albarka beer* 'great strength'. There is some ambiguity as to whether the 3Sg of Dat *a se* at the end of A, and of 3SgO *ga* at the end of C, refer back to 'dwarf' (as I believe) or to 'strength' (i.e., of the dwarf). In any event, the antecedent contains several clauses; its structure may be schematically represented as 'you are not X, (that is to say) you are not a Y who [[knows ...] or [has secrets which [...]]].'

Now look at (489).

- (489) — [*boro foo yo*] *goo dooti*
 [person one PI] be there
 A1 *nda i kaa [n doo], wala[a koy di] či yow,*
 if 3PIS come [2Sg at], or [3Sg boss Def] be stranger,
 A2 *nda n baa ma hina [a se],*
 if 2SgS want 2SgSSubju cook [3Sg Dat],
ma ŋaa-ndi ga, ma koosu a se,
 2SgSSubju eat-Caus 3SgO, 2SgSSubju slaughter 3Sg Dat,
ma dam a se yaarey sii di kul,
 2SgSSubju do 3Sg Dat fine-meal kind Def all,
 A3 *nda ma na tibi a se attey woo,*
 if 2SgS Neg put-on 3Sg Dat tea Dem,
 C *a-kul go kaa [a ga] yaada*
 AbsolSg-all Impf become [3Sg by] useless
 'There are some people there, (A1) when they come (=drop in) at your home, or (if) the guy is an out-of-town guest, (A2) if you want to cook for him, to feed him, to slaughter (an animal) for him, to set any kind of festive meal down for him, (A3) if you haven't put on that tea for him, (C) the whole thing (=cooking) will be useless to him (=guest).'

The basic point is that some guests will be offended if tea is not served to them; even a sumptuous repast will not make up for the lack of tea. One could argue that the initial existential, which introduces a set of discourse referents, contains a covert relativizer ('there are some people there who ...'), in which case the entire conditional construction functions as a relative clause as in (488), but we leave this aside here. The conditional itself consists of a string of antecedents (A1, A2, A3) and a single, terse consequent (C). A1 is internally complex, containing the disjunction of two clauses linked by *wala* 'or', both clauses being bound by a single *nda*. A2, which elaborates on the situation inherited from A1, is also syntactically complex—but only because it has several subjunctive clauses serving as complements of *baa* 'want'. With A1 and A2 having presented the background, A3 presents the centrally important condition (tea is not made for the guest) which directly causes C (the guest is dissatisfied). One could gloss *nda* in A1 or A2 either 'if ...' or 'when ...', but only 'if ...' is appropriate for A3. *a-kul* 'all, the whole thing' in C is anaphoric to the cooking activities in A2 and is not an antecedent right-edge marker.

In (490), the translation 'when ...' as opposed to 'if ...' is clearly called for in the free translation. Both antecedents, A1 and A2, repeat previously asserted material.

- (490) — *joori, no-o dam ga [a ra],*
 swill, 2SgS-Impf put 3SgO [3Sg Loc]
 — *hal a ma dam [a ra] [jirbi hinja],*
 until 3SgS Subju do [3Sg Loc] [day three]
 A1 *nda a dam a ra jirbi hinja,*
 if 3SgS do 3Sg Loc day three
 C1 *no-o mun ga,*
 2SgS-Impf pour 3SgO
 — *saa di no-o dam [a ra] hari,*
 time Def 2SgS-Impf put [3Sg Loc] water
 A2 *nda n dam [a ra] hari,*
 if 2SgS put [3Sg Loc] water
 C2 *a-a yey haml no-o hongu kaa*
 3SgS-Impf be-cold until 2SgS-Impf think that
 [[[tubaabo di yo] wane] hisa di] nono
 [[[white-man Def Pl] Poss] making Def] it-is
 ‘Swill (grain residue mixed with water), you(Sg) put it (=swill) in it
 (=waterbag), until it (=swill) has spent three days in it; (A1) when it
 has spent three days in it, (C1) you pour it (out); then you put
 water in it; (A2) when you have put water in it, (C2) it gets so cold
 you would think it was the making of white men.’

In both antecedents in (490), the point is not the hypothetical status of the denoted eventuality, rather the sequential relationship between antecedent and consequent eventualities. The fact that *nda* clauses may denote eventualities whose truth is not seriously in doubt distinguishes *nda* from English *if*, and readers should appreciate that we use the term “conditional construction” loosely. The focus on sequencing (often accompanied by causality) accounts for the very strong tendency for the antecedent to be in perfective aspect and for the consequent to be in imperfective aspect, in the fashion of juxtaposed “past” and “future” sentences.

Counterfactual conditionals (‘if he had seen me, he would have killed me’) have the same basic structure as future-oriented hypothetical conditionals. The consequent is a simple main clause, normally in imperfective aspect, and is indistinguishable in form from the consequent of a hypothetical conditional. The antecedent clause likewise follows the usual pattern, beginning with *nda* ... and continuing with a perfective indicative clause, but in a counterfactual this clause consists of an invariant *a gar* ‘it happened (that)’ plus an embedded indicative complement clause carrying the propositional substance, either imperfective (491a) or perfective (491b) as semantically appropriate. For a *gar* in other contexts, see §6.1.1 (and cf. §9.5.9).

- (491) a. A *nda a gar [yee ta hambur],*
 if 3SgS happen [1SgSImpf Fut fear],
 C *ay si bere ka yee moo*
 1SgS ImpfNeg turn Inf return also
 ‘(A) If I had been afraid, (C) I would not have turned to go back.’

- b. A *nda a gar [baana na kar bii],*
 if 3SgS happen [rain Neg strike yesterday],
 C *yer o bun [nda koron]*
 1PlS Impf die [with heat]
 'If it hadn't rained yesterday, we would have died of heat.'

Perfective aspect is normal in the first clause of the antecedent, but this is not a rule, and there are a few textual examples with *nda* 'if' plus imperfective clause (492).

- (492) — *saa di ay bey kaa woo ta,*
 time Def 1Sg know that Dem Top
 A *nda haya kul o či targari, wala sika wala haya-jje,*
 if thing all Impf be lie, or doubt or
 whatchamacallit
 C *woo ta či čiimi*
 Dem Top be truth
kaa ay ŋga guna ay ŋga dam ga
 that 1Sg SFoc see 1Sg SFoc do 3SgO
 'So, I knew that this (person), (A) (even) if everything (else) is a lie,
 or is unreliable, or whatever, (C) this is the truth, that it was I who
 saw (him) and it was I who did it.'

Here the "antecedent" operates at the pragmatic level: 'If there is only one true statement in the world, it is that I saw him.' There is no sequential or causal connection between antecedent and consequent; indeed, the consequent is true only in spite of the antecedent. Since the antecedent is a sweeping generalization not restricted to a finite temporal interval, it is appropriately put in the imperfective aspect.

Another type of pragmatic use is illustrated in (493).

- (493) — *maa se*
 what? Dat
 A *nda ay na guna atakurmi moo*
 if 1SgS Neg see Atakurmi also
 C *ay guna jinni*
 1SgS see djinn
 'Because, although I didn't see Atakurmi (=dwarf) for its part, I did
 see a djinn (=genie).'

Here the 'if' is concessive ('while admittedly ...' = 'although ...'). The interviewer had asked the speaker whether he had laid eyes on the elf-like dwarf Atakurmi, and having seen a djinn was second-best.

In addition to the usual conditionals in *nda ...*, an emphatic type translatable as 'even if ...' (= 'no matter if ...', 'regardless of whether ...') with initial *wala ...* is available. *wala* is the basic disjunctive particle ('or', 'whether') with a following NP (§5.11.4) or sentence (§9.5.4), and has a similar emphatic use 'even ...' before NPs (§8.5.9). Examples of the emphatic conditional are in (494).

- (494) a. *ni linji bun ni si hin ka goy*
 2SgS muscle die 2SgS ImpfNeg can Inf work
[wala n duu haya gaa],
 [even 2SgS get thing indeed],
ni si hin ka goy koyne
 2SgS ImpfNeg can Inf work again
 'Your(Sg) muscles are exhausted, you can't work even if you have gotten something (=a job), you can't work further.'
- b. *ma si hongu [wala no-o guna ga],*
 2SgSSubju Neg think [even 2SgS-Impf see 3SgO],
a goo ngu gaa-koon
 3Sg be 3RefISg naked
 'You shouldn't think that, even if you do see it (=dwarf), it'll be naked.'

Although (494b) has imperfective aspect after *wala*, where a typical *nda* antecedent would have perfective aspect, follow-up elicitation did not bring out any systematic aspectual differences between the two, perfective being typical of antecedents with *wala* as well as *nda*. Moreover, in elicitation, the combination *wala nda ...* 'even if ...' was common. We might therefore analyse simple *wala ...* in (494a-b) as a simplification of *wala nda*.

Disjunctive 'whether ... , or ...' antecedents can be expressed as *nda ...* , *wala ...* , as in (495). This use of *wala ...* does not seem to be closely related semantically to its use in the sense 'even if ...' seen in (494).

- (495) *nda ni či woy wala ni či har*
 if 2SgS be woman or 2SgS be man
 'whether you are a woman or (you are) a man, ...'

These examples suffice to illustrate the kinds of conditional constructions that we find in the texts. It remains, however, to explain why *nda* is used in antecedents, recalling that *nda* is also used as an Instr-Comit preposition before an NP, and as a conjunction 'and' between NPs (§5.11). The gloss 'and' is misleading, since *nda* is not used to conjoin simple sentences or VPs, and since even between NPs it is more asymmetrical than is English *and*. So the gloss 'with', in either instrumental or comitative (associative) sense, best captures the use of *nda* with NPs. One can now imagine an extension of the sense 'with' to conditional antecedents, especially if temporal sequencing and causality are more strongly emphasized than hypothetical modal value: 'with the murderer (being) safely put behind bars, the citizenry breathed a collective sigh of relief.' Compare also the Shakespearean use of *and* as 'if'. The suggestion that *nda* 'if' is a preposition would also mesh with the use of *kul* 'all' (or a DF morpheme) as a right-edge marker at the end of the antecedent clause, since the frame *nda X kul* can also be used with X = NP in the sense 'with all (of) X'.

There are some syntactic difficulties in applying this analysis to KCh. Since the material following *nda* has the form of a main clause, a formal analysis of conditional antecedents as prepositional phrases would presumably require positing a

phonologically unrealized nominalizer. But this would leave unexplained the fact that *nda* plus main-like clause does not occur postverbally as an instrumental-comitative phrase. Although a formal equation of conditional antecedent *nda* and postverbal preposition *nda* is dubious, there is one piece of evidence for a PP-like status for conditional antecedents. This is that, admittedly rarely, such an antecedent can serve as (nonsubject) focus, followed by Focus morpheme *na*, as in (496).

- (496) *[nda n mey ga daa] na no-o dam ga*
 [if 2SgS have 3SgO Emph] **Foc** 2SgS-Impf do 3SgO
 'It's [(only) in case you have it] [*focus*] that you (can) do it.'

9.5.2 Juxtaposed clauses ('and', 'but', 'or', etc.)

Since there is no basic 'and' conjunction linking sentences, clauses denoting linked events are often simply juxtaposed, as in (497a-b).

- (497) a. *yee jum-di doodi yee goy*
 1SgSImpf descend-Caus there 1SgSImpf work
 'I take (donkeys) down there and I work.'
 b. *ay kaa ay kottu [[feeji di yo] maasu di]*
 1SgS come 1SgS tear [[sheep Def Pl] middle Def]
 'I came and I crossed through the middle of the sheep.'

Examples like these with identical subject NPs can also be expressed by putting the second VP in the infinitive form with *ka* ('I take the donkeys down there to work,' etc.). Simple juxtaposition and the infinitive construction differ slightly in semantic nuances; for the infinitives see §9.7.

The absence of an overt 'and' conjunction with sentences causes potential problems in identifying the right boundary of a string of clauses under the scope of a modal operator such as *nda* 'if' or a quotative or volitional verb, as in (498).

- (498) a. *nda [[yer gar ga] [yer taar ga]*
if [[1PIS find 3SgO] [1PIS touch 3SgO]
[yer gar a ċi alhoor]], yer o jow kuumu ...
 [1PIS find 3SgS be limestone], 1PIS **Impf** take hoe ...
 'When we have found it, we have touched it, (and) we have found that it is limestone, (then) we take a hoe ...'
 b. *yee har a se [[a ma koy kate*
 1SgSImpf say 3Sg Dat [[3SgS **Subju** go bring
farka di yo], [a ma maan-ndi-kate gi],
 donkey Def Pl], [3SgS **Subju** approach-Caus-Centrip3PIO],
[a ma tibi gi yene]]
 [3SgS **Subju** put-on 3PIO 1SgDat]
 'I tell him to go bring the donkeys, bring them near, (and) saddle them for me.'

As noted above, the boundary between antecedent and consequent can usually be identified by observing an aspectual shift or a left- or right-edge marker; see also §9.5.10. The aspectual shift to imperfective identifies the onset of the consequent in (498a). In (498b), the issue is where the reported speech embedded under 'say' ends and the regular narrative resumes. Since all three clauses following 'say' are subjunctive, we conclude that they are conjoined to form a single embedded jussive complement.

Sentences conjoined without an overt conjunction may also relate to each other logically in ways other than simple summation or temporal sequencing. In (499) we give examples requiring translations with 'but' (499a-b) and 'whereas' (499c). In (500) optimal translations are with 'or' (500a), 'whether ... , or ...' (500b), and 'nor' (500c).

- (499) a. *[n dira ka kar guusu] [ma na duu haya]*
 [2SgS walk Inf hit hole] [2SgS Neg get thing]
 'You(Sg) have hiked to dig a (limestone) quarry, **but** you didn't get anything.'
- b. *no-o baa alhoor kaa hīsa [ni huu di]*
 2SgS-Impf want limestone Rel fix [2Sg home Def]
[baana ma si hasara ga]
 [rain Subju Neg ruin 3SgO]
[ni si mey [a hin-ey]]
 [2SgS ImpfNeg have [3Sg power]]
 'You(Sg) want limestone that will fix your house so rain won't damage it, **but** you don't have the means of (buying) it.'
- c. *[a wan di] o serre nin,*
 [3Sg Poss Def] Impf be-straight only,
[ni wan di] si serre
 [2Sg Poss Def] ImpfNeg be-straight
 'It's only that his (house) is straight, **whereas** yours isn't straight.'
- (500) a. *yee jum-di [ay farka di yo],*
 1SgSImpf descend-Caus [1Sg donkey Def Pl],
[ije keyna di] o jum-di ga yene
 [child small Def] Impf descend-Caus 3SgO 1SgDat
 'I take my donkeys down, **or** the boy takes it (=donkeys) down for me.'
- b. *a-a kar, [nda a baa a ma haw]*
 3SgS-Impf hit, [if 3SgS want 3SgS Subju be-tied]
[nda a baa a ma feer]
 [if 3SgS want 3SgS Subju be-open]
 'It (=rain)_x will hit, **whether** he (=magician) wants it_x to be bottled up **or** he wants it_x to be released.'
- c. *[ngu ta] na har 'a na či boro nono',*
 [LogoSg Top] Neg say '3SgS Neg be person it-is',
ngu na har 'boro nono'
 LogoSgS Neg say 'person it-is'
 '(He_x thought:) he_x did not say that it was not a human, **nor** did he_x say that it was a human.'

The absence of overt conjunctions or logical operators in these examples can be attributed to the obviousness of the logical relationships. In (499a-b), the final clause denotes an unfortunate situation that is clearly in an adverse relationship to the wishes and efforts described by the preceding clause(s). In (499c) and (500b-c), the relevant juxtaposed clauses directly contrast ('straight, not straight', 'be bottled up, be released', 'not be human, be human'), and in (500d) the two clauses denote functionally equivalent alternatives.

That juxtaposed clauses can function as syntactic units, in spite of their lack of special formal interactions (e.g. cross-clause reflexive binding), is suggested by extraction phenomena. See discussion of (502) in the following section.

For all of the logical relationships illustrated in (499-500), speakers may also use an overt conjunction or other logical operator, and when the relationship between the clauses is less obvious than in those examples such a morpheme is called for (see §9.5.4).

Juxtaposed clauses involving temporal relationships ('while', 'after', 'before', etc.) are described in the next section.

9.5.3 Juxtaposed clauses in adverbial function ('while', 'without')

When two clauses are juxtaposed, the second sometimes functions as a temporal adverbial clause translatable as 'while' (if positive) or 'without' (if negative), as in (501). 'While' is to be taken in its temporal (= 'during') rather than adversative sense (= 'whereas'). Note that 'without knowing' is logically equivalent to 'while not knowing', so the 'while' is consistent.

- (501) a. *ammaa [saa di kaa] a kar,*
 but [time Def Rel] 3SgS hit,
[a kar] [hew sii] [a ra]]
 [3SgS hit] [wind be-not [3Sg Loc]]
 'But when it (=rain) struck, it struck **while** there was no wind.'
- b. *[no-o bisa [a ga]] [ni si bey]*
 [2SgS-Impf pass [3Sg by]] [2SgS ImpfNeg know]
 'You'll pass by it **without** knowing'

This type of construction normally consists of an initial clause denoting a foregrounded event, followed by a brief second clause denoting a temporally extended state or process that is not caused by the first event. The best way to make sense of such a combination is to infer that the second clause denotes a background situation whose temporal interval contains that of the event denoted by the first clause. The second clause is most often in imperfective aspect. It can, however, be in the unmarked perfective aspect, for example when this clause is negated, as in (648a-b) in §10.2.4.

There is no overt morpheme meaning precisely 'while ...'. Both *saa di kaa ...* 'when ..., (at) the time that ...' and *nda ...* 'if (when) ...' are strongly associated with temporal sequence rather than overlap. The only obvious alternative to (501a), then, is

to invert the order ('There was no wind; the rain struck'). In the case of 'without', there is an alternative construction involving *bilaa* 'without' (<Ar.) and a subjunctive clause, see §9.6.4.

When two juxtaposed clauses are both imperfective, they may be fused in somewhat the same way as in (501), but it is not always the case that the second clause functions as an adverbial modifier of the first. Consider (502).

- (502) *yee* *kaa* *ta* *hāā* *ga* [*wala* [*addeliil* *foo* *ga*]
 1SgSImpf come Inf ask 3SgO [or [reason which? on]
 [*yee* *sallam* [*a* *ga*]] [*a* *si* *tuuri*]]
 [1SgSImpf greet [3Sg on]] [3SgS ImpfNeg reply]]
 'I was coming to ask him_x, for which reason (=why) did he_x not
 respond when I greeted him_x.'

Literally, this is '... for which reason [I greeted him_x he_x did not reply],' both verbs in the embedded question being imperfective. Clearly the WH interrogative has been extracted from 'he did not reply,' while 'I greeted him_x' functions as background.

The verb *jow* can be used as a simple transitive 'take', or a serial verb meaning 'do energetically'; see (594) in §9.7.5. It is rarely attested with a following imperfective indicative clause in the sense 'keep doing (a long time)', as in (503).

- (503) *i* *jow* *i-i* *dira,* *hal* *i* *too ...*
 3PIS take 3PIS-Impf walk, until 3PIS arrive ...
 'They walked and walked, until they arrived ...'

Some other verbs with intrinsically durative sense can be used with a following imperfective indicative clause, as an alternative to the more common serial-verb construction (§9.7.5,7). This applies to *hoy* 'spend the daytime', *hanna* 'spend the night', *čindi* 'remain', and *dooney* 'be accustomed, do frequently'. An example is (504).

- (504) *a-a* *hoy* *a-a* *dira*
 3SgS-Impf spend-daytime 3SgS-Impf walk
 'He spends the middle of the day walking (around).'

The other temporal relationships among clauses involve the notions 'before ...' and 'after ...'. For *hal* in the sense 'before ...' ('before it dries up, that is when you plant them'), see the end of §9.5.6. 'After ...' ('after he came, we started to talk') can be expressed by beginning the second clause with *woo di banda* 'after that' (§5.5; 'He came; after that we started to talk').

9.5.4 Clausal disjunctions (*wala* 'or, whether', *maa* 'either')

When two or more clauses are in a disjunctive relationship, the conjunction *wala* 'or' (<Ar.) is normally placed at the beginning of the noninitial disjuncts. The 'or' may be

exclusive or inclusive, as in English. A strictly exclusive reading in a particular example is due to a logical or inferred mutual exclusion (505).

- (505) *[[wor o dey ga] [a či humbar]] wala*
 [[2PIS Impf buy 3SgO] [3Sg be waterbag]] or
[wor o noo kuuru] [i ma hīsa ga [war sc]]
 [2PIS Impf give skin] [3PIS Subju make 3SgO [2Pl Dat]]
 ‘Do you(Pl) buy it (=goatskin waterbag) when it is (already) a waterbag,
 or do you give the (goat) skin (to them) for them to make it (waterbag)
 for you?’

See also (609) in §9.7.8, with several parallel subjunctive clauses.

When the two disjuncts function as embedded polar (yes-no) interrogatives under a verb of thinking or speaking (‘know’, ‘find out’, ‘wonder’, ‘inquire’), it is usual to put *wala* before all disjuncts. In this case the best translation is ‘whether ..., or ...’, as in (506).

- (506) *bara a ma sii ni ka guna ni*
 must 3SgS Subju test 2SgO Inf see 2SgO
wala [n či har] wala [ma na či har]
 or [2SgS be man] or [2SgS Neg be man]
 ‘He (=dwarf) will undoubtedly test you(Sg), to look at you, (to see)
 whether you are a man, or you are not a man.’

If the second disjunct in an embedded polar interrogative is simply the negation of the first, as in (506), one of them may be omitted, the *wala* ‘whether’ on the overt disjunct implying the second. In this case, the overt clause may be either the negative or the positive version. The negative version is actually preferred, as in (507), the literal translation of which is awkward in English.

- (507) *ay si bey wala [ni si bey ga]*
 1SgS ImpfNeg know or [2SgS ImpfNeg know 3SgO]
 ‘I don’t know whether you don’t know him.’

A freer English translation: ‘... whether (or not) you know him.’

Normally, two or more disjuncts linked by *wala* must be of the same syntactic and semantic types (e.g., both are clauses, or both are NPs). However, the same kinds of nominal catch-all expressions used to end an NP disjunction (§5.11.5) may be used in the same function with clausal disjunctions, especially in a negative context, as in (508).

- (508) *a na či a-a goro ka hantum*
 3SgS Neg be 3SgS-Impf sit Inf write
wala [woo di taka]
 or [Dem Def kind]
 ‘It isn’t as though he sits and writes, or something like that.’

One could argue, though, that this represents ‘... or HE DOES something like that,’ with some phonologically unrealized material.

The sequence ‘either ... , or ...’ can also be expressed asymmetrically, with another particle *maa* (<Ar. *'immaa* ‘either ... , or ...’) at the beginning of the first conjunct and *wala* at the beginning of the second, as in (509).

- (509) *maa a-a fari wala a-a kur wala—*
either 3SgS-Impf farm **or** 3SgS-Impf herd **or—**
 ‘Either he toils (in the fields), or he herds (animals), or—’

For *wala* as a polar interrogative marker (yes-no), see §8.2.1.

9.5.5 Adversative conjunctions *mere*, *ammaa*, *mais* ‘but’

As seen in §9.5.2, when two clauses are in a transparently adversative relationship, they may be simply juxtaposed without an explicit ‘but’ morpheme. However, three adversative morphemes are available: *mere*, *ammaa*, and (French) *mais* (pronounced [me:]).

mere is variable in position. It may occur, like English *but* and French *mais*, at the beginning of a clause in an adverse relationship to the preceding clause (510).

- (510) *a na či addama-jje ta nono*
 3SgS Neg be human Top it-is
mere a na či jinni moo nono
but 3SgS Neg be djinn also it-is
 ‘It (=dwarf) isn’t a human, but it isn’t a djinn (=genie) either.’

mere may precede a preposed topical NP, as in (511), though it logically relates to the following sentence.

- (511) *bara a ma hin ka mey [lakal kuna] [misa kaa]*
 must 3SgS Subju can Inf have [mind Loc] [manner Rel]
ngu o hin ka koor ga [nda ga],
 LogoSgS Impf can Inf restrain 3SgO [with 3SgO],
mere tarkunda yer monggo [a se] mise kul
but elephant 1PIS be-unable [3Sg Dat] manner all
kaa yer hin ka koor ga nda
 Rel 1PIS can Inf restrain 3SgO with
 ‘He (she) must be able to find in his (her) mind a way in which he (she) can control it (any difficult situation); but an elephant, we cannot (find) for it any way in which we can control it.’

In (512a), *mere* appears to be sandwiched between two repetitions of a topical NP. More generally, as seen in (512b-c), *mere* may occur at a phrase boundary in the middle of a sentence, in the fashion of English *though* or *however*.

- (512) a. *kuumu mere kuumu ta gaa [saa kul]*
 hoe but hoe Top Emph [time all]
a-a boori a ma harga ni banda
 3SgS-Impf be-good 3SgS Subju follow 2Sg after
 'But a hoe_x, speaking of a hoe_x, it's always good that it_x be with you.'
- b. *han foo go bara mere boro foo o kaa*
 day one Impf exist but person one Impf come
a-a hāā ni
 3SgS-Impf ask 2SgO
 'There will be a day, though, (when) someone will come and will ask you (for it).'
- c. *bor kaa si bey mere, no-o bisa [a ga]...*
 person Rel ImpfNeg know but, 2SgS-Impf pass [3Sg by] ...
 '(If you are) someone who doesn't know, however, you'll go right past it ...'

Another particle, *ammaa* (<Ar. 'as for ...'), is also used in the sense 'but'. It is always clause-initial in my data (513a-b), and may precede a preposed topical constituent (513c).

- (513) a. *no-o koy hal ma too nin,*
 2SgS-Impf go until 2SgSSubju arrive only,
ammaa ije foo ni si hin ka kow ga
 but child one 2SgS ImpfNeg can Inf remove 3SgO
 'You(Sg)'ll just go so you arrive, but you can't extract a single piece (of stone).'
- b. *saa di kaa na a sinti, a sinti nda hew,*
 time Def Rel Ø 3SgS begin, 3SgS begin with wind,
ammaa a kokoro di, a kaa labaas
 but 3Sg last-part Def, 3SgS become fine
 'When it (=rainstorm) began, it began with wind; but its latter part, it became fine.'
- c. *ammaa baana ta, boro foo a sii [a kamba] mee*
 but rain Top, person one 3SgS be-not [3Sg hand] Emph
 'But as for rain_x, it_x isn't in the hands (=control) of any person.'

The remaining morpheme is French *mais* 'but', pronounced [me:]. Aside from accidental homonymy (*mee* 'mouth'), there is a more significant overlap with clause-final Emph *mee*, used chiefly after imperatives (§8.5.7), and for native speakers the two *mee* particles are possibly thought of as the same morpheme. I transcribe *mais* rather than *mee* when the particle expresses a semantically adversarial relationship between two clauses ('A, but B'). In this usage, *mais* is generally the onset of the B clause, as in (514a). In (514b), the particle is prosodically the termination of the A clause, where one usually finds Emph *mee* rather than *mais*, but the sense points to 'but'. Apparently the speaker began a 'but' clause with *mais* and then restarted this clause with *ammaa* in order to edit out the half-assimilated French borrowing.

- (514) a. *no-o hin ka čen ga [nda ga]*
 2SgS-Impf can Inf build 3SgO [with 3SgO]
[musoo di daa] mais a si jafa
 [this-way Def Emph] **but** 3SgS ImpfNeg be-shaped
 'You(Sg) can build it (wall) with it (irregular limestone chunks) like that, but it (wall) isn't (properly) shaped.'
- b. *yerkoy dam sabab mais—, ammaa a ma gar moo ...*
 God put reason **but—, but** 3SgS Subju find also ...
 'God has established a reason, but—, but it must be the case moreover that ...'

ammaa may be combined with either *mais* or *mere*. (514b) shows *mais* and *ammaa*, separated by a hesitation pause. We get *ammaa mere* in (515).

- (515) *musoo di kaa i čindi nda daa na*
 like-this Def Rel 3PIS remainwith Emph Foc
yer o kamba gi nda,
 1PIS Impf grasp 3PIO with,
ammaa mere atakurmi woo daa,
but but A Dem Emph
boro foo na hin ka mey [a ra] fahaam-ey foo
 person one Neg can Inf have [3Sg Loc] understanding one
 'It is in the very manner in which they remain (=are) by which we grasp them; but this Atakurmi (=dwarf)_x indeed, nobody has been able to get any understanding of it_x.'

9.5.6 *jaa* 'since' and *hal* 'until, before'

The two opposing particles *jaa* 'since, from (time), as early as, starting at' and *hal* 'until, so that, all the way to' have been described in §5.9.8 in their usage as quasi-prepositions with following NP. More commonly, however, they function as clause-initial subordinating conjunctions. The two are logically complementary, denoting the beginning and endpoint, respectively, of a time interval. In this section we discuss combinations of *jaa* or *hal* with indicative clauses.

'Since' is a good all-purpose gloss for *jaa*, which has both temporal ('from the time that ...') and causal ('because ...') readings. In my texts, causal examples seem a little more frequent than temporal examples, though some cases straddle the distinction. For examples of the causal reading, see the following section. Examples involving a basically temporal sense are in (516).

In (516d), we can translate *jaa moreyda* as 'by now', emphasizing that the situation in question has already begun. In past contexts, *jaa* likewise emphasizes how early an eventuality occurred or began, as in (516a-c); in some of these cases a gloss including 'back (then)' or 'even (then)' may catch the right nuance.

- (516) a. *nda n kumna ga moreyda, no-o nan*
 if 2SgS gather 3SgO now, 2SgS-Impf leave
a ma koo, wala jaa a či
 3SgS Subju be-dry, or since 3SgS be
[i-tey-nte di] nono, no-o dam ga haya ra
 [Absol-wet-Partpl Def] it-is, 2SgS-Impf put 3SgO thing Loc
wala musa foo na no-o dam a se?
 or manner which?Foc 2SgS-Impf do 3Sg Dat?
 'When you(Sg) gather it (=pile of melon seeds), do you let it dry off,
 or (even) back when it is in (its) wet state do you(Sg) put it in
 something, or what do you do to it?'
- b. *jaa yenea [yer baaliki di yo] kaa čindi ka bara,*
 since before [1Pl adult-man Def Pl] Rel remain Inf exist,
bor kul kaa na či albanna, nda n koy,
 person all Rel Neg be mason, if 2SgS go,
nda ma na derey fondo,
 if 2SgS Neg lose road,
nda n koy n si hin ka goy
 if 2SgS go 2SgS ImpfNeg can Inf work
 'Back in the past, our adult men (=ancestors) who used to exist, (if
 you were) anyone who was not an (authorized) mason, if you went
 (to look for limestone), (even) if you didn't lose your way, if you
 went, you couldn't (weren't allowed to) work.'
- c. *nda haya nono kaa no-o bey jaa [saa di]*
 if thing it-is Rel 2SgS-Impf know since [time Def]
na n baa ka hirow [i ra],
 if 2SgS want Inf enter [3Pl Loc],
no-o koy no-o hirow [kondey di ra]
 2SgS-Impf go 2SgS-Impf enter [guild Def Loc]
 'If it is something that you(Sg) know, from then on, if you are about
 to go in with them (masons), you will go and you will join in the
 guild.'
- d. *wallaahi bara [woo ye] či haya kaa yer gey-nda,*
 by-God must [Dem Pl] be thing Rel 1PlIS endure-with,
jaa moreyda, [boro di yo] too nan kaa kuna
 since now, [person Def Pl] arrive place Rel Loc
tumbutu ta nda hirri dam kul i-i har
 Timbuktu Top if thunder be-done all 3PlIS-Impf say
'woo go ta kaa hew'
 'Dem Impf Fut become wind'
 'By God, these (rainstorms) are something which we have gone a
 long time without; by now, the people have reached the point in
 which, concerning Timbuktu, when thunder claps, they say, "this
 will become wind (=duststorm)."'

Leaving aside its quasi-prepositional use with a following NP, *hal* occurs in two distinct constructions involving a following clause. We are here concerned with the

type with indicative clause, which denotes a temporal endpoint or logical outcome. For the much more common purposive type with a following subjunctive clause, see §9.6.4.

Examples of *hal* with indicative complement are in (517).

- (517) a. *no-o koy no-o taasi ga no-o guna ga*
 2SgS-Impf go 2SgS-Impf seek 3SgO 2SgS-Impf see 3SgO
moo hal no-o horgu alhoor nono
 also until 2SgS-Impf believe limestone it-is
 'You(Sg) go and you look for it (=limestone); you look at it
 moreover, until you think it's (solid) limestone.'
- b. *woo ċi a nin hal a hasara*
 Dem be 3SgS ripen until 3SgS be-ruined
 'That is, it (=crumbly limestone) rotted until it was ruined.'

When *hal* precedes a clause expressing an incipient or imminent activity, the best gloss is 'before ...' or 'by the time that ...'. That is, the *hal* clause functions as a background clause, as in (518).

- (518) a. *saa kaa hari a mun, hal a kaa ta*
 time Rel water 3SgS be-poured, until 3SgS come Inf
koo, saa di na no-o fari ga
 dry, time Def Foc 2SgS-Impf farm 3SgO
 'When the water_x, it_x has poured in (inundating the plains), before it_x
 has evaporated away, it is then that you(Sg) will grow it (=millet).'
- b. *i-i jisi ga [war se]*
 3PlS-Impf put 3SgO [2Pl Dat]
hal wor o kaa ta foo gi,
 until 2PlS Impf come Inf greet 3PIO,
hal wor o ta foo gi kul
 until 2PlS Impf Fut greet 3PIO all
i-i dam war se albarka nda woo di
 3PlS-Impf do 2Pl Dat thanks with Dem Def
 'They set it (=food) down for you(Pl) before you come to greet them;
 by the time you greet them, they express their gratitude to you for
 that (=volunteer work).'

In (518a), the first two clauses jointly define a brief temporal interval at the peak of seasonal flooding, the first clause specifying the interval's beginning (water fills the floodplains), the second specifying its ending (water level drops as water evaporates). This interval is picked up by *saa di* 'then' in the third clause. In the second clause of (518a), *hal* precedes a serial-verb combination with *kaa ta ...* 'come and ...', here with inchoative or future sense (cf. English *be going to ...*). This combines with *hal* to give a translation 'before ...'. In (518b) there are two parts, each with a *hal* clause serving as background to a foregrounded event clause. The first *hal* clause has the same *kaa ta ...* combination as in (518a). The second *hal* clause has preverbal Fut marker *ta*.

Another way to express the sense 'before ...' is to juxtapose two clauses, of which the second is negative in form and functions as a 'while' adverbial clause ('I was working [while] you were not [yet] up' = 'I was working before you got up'). A somewhat complex example of this general type is (519), where both parts are subordinated to *gar* 'be found (that ...), happen (that ...)'.¹

- (519) *a-a* *gar* *ay* *fatta*,
 3SgS-Impf find 1SgS exit,
woo bine o gar rgi ta na tun
 Dem Top Impf find 3PIF Top Neg arise
 'It happens that I've (already) left, while they have not (yet) arisen.'

(520) shows *jaa* and *hal* clauses defining the start and the end of an interval.

- (520) *jaa* *Jeff* *kaa* *hal* *a* *koy*,
 since J come until 3SgS go,
hari-futu daa na a-a ñin
 water-bad Emph Foc 3SgS-Impf drink
 'From the time Jeff came until he left, booze is all he drank.'

Here *jaa* and *hal* are parallel. This should be distinguished from superficially similar sequences involving *jaa* in the causal sense 'because ...', as in (521). In this example, the *hal* clause happens to be embedded within the 'because' complex.

- (521) *yee* *jow* *ay* *kuumu* *foo* *ay* *banda*, *jaa* *yee*
 1SgSImpf take 1Sg hoe one 1Sg behind, since 1SgSImpf
dooney ka dira, hal ye guna boosu
 be-accustomed Inf walk, until 1SgSSubju see gravel
 'I take one of my hoes with me, since I am used to walking until I see (limestone) gravel.'

For a speaker from a village near Timbuktu, I recorded *jaa* plus imperfective VP in a narrative context emphasizing prolongation of a backgrounded activity. Neighboring KS has a very common construction of this type with the cognate morpheme *zaa*, but the construction did not occur in my Timbuktu texts. The sequence of *jaa* plus VP has a singsong tonal contour and is repeated for emphasis, setting up a new, foregrounded event (522).

- (522) *ay* *čindi* [*jaa* *yee* *goro* *yee* *batu* *ga*]
 1SgS stay [since 1SgSImpf sit 1SgS await 3SgO]
[jaa yee goro yee batu ga],
 [since 1SgSImpf sit 1SgSImpf await 3SgO],
hal woyna koron a na kaa
 until sun get-hot 3SgS Neg come
 'I stayed, I sat (there) waiting for him, I sat (there) waiting for him,
 until the sun got hot (=until mid-day), (but) he didn't come.'

9.5.7 'Because' clauses

Among younger speakers, French *parce que*, pronounced [paskə], is fairly common as a clause-initial 'because' particle. One also hears *puisque*, again from French. Both occur widely in West African languages. The native expressions are *jaa ...* 'since ...' (see the preceding section for this particle's temporal uses), *hay di kaa se* (literally 'the thing due to which ...'), and *maa se* (literally 'why?'), often extended as *jaa maa se*. Clause-initial *bara ...* with following indicative clause means 'because (since) ...', though this morpheme also has several other uses (or homophones). There is considerable interspeaker variation as to the preferred 'because ...' form.

Syntactically, all 'because' expressions (native and French) are clause-initial, except that they may precede a preposed topical constituent if present. They are followed by a complete indicative sentence. The native forms are exemplified below, with two examples of *jaa* (523a-b) followed by two of *maa se* (523c-d). The point of (523a) is that the smiths would not be able to stand the heat of the forge in the already sweltering daytime.

- (523) a. *garaasa di yo čiji here na i-i kar ga*
 blacksmithDef Pl night Approx Foc 3PlS-Impf hit 3SgO
ka bow, jaa a wane gaabi di o hīsa
 Inf be-much, since 3Sg Poss force Def Impf be-much
ka bow a koron di o bow
 Inf be-big 3Sg heat Def Impf be-big
 'The blacksmiths, it's at night [focus] that they strike it (=metal)_x,
 since its_x strength is very great, (and so) its_x heat is great.'
- b. *nda a kam dee a-a baa*
 if 3SgS fall Emph 3SgS-Impf be-broken
jaa a-a hīsa ka tin
 since 3SgS-Impf be-much Inf be-heavy
 'When it (=beast) falls (=into a pit trap), it (=it's bones) will break,
 because it's very heavy.'
- c. *[[a wane] albarka di jaatir] o bow*
 [[3Sg Poss] force Def self] Impf be-big
[maa se] a-a jii-jii
 [what? Dat] 3SgS-Impf Rdp-be-oily
 'It's (=melon seeds') very value is great, because it is oily.'
- d. *ay hongu a go či sanda allaa šeytaan taka,*
 1SgS think 3SgS Impf be like like devil kind
[maa se] a na či [addama-jje ta nono]
 [what? Dat] 3SgS Neg be [human Top it-is]
 'I think it (=dwarf) is like a kind of devil, because it's not a human.'

'Because' forms may have scope over fairly complex following constructions, including those beginning with conditionals or other background material, as in (524).

- (524) a. *a-a soo, jaa bor kaa si ŋaa,*
 3SgS-Impf waste-away, **since** person Rel ImpfNeg eat,
hay kaa si ŋaa a si ñin hari,
 thing Rel ImpfNeg eat 3SgS ImpfNeg drink water,
man na a-a koy koyne?,
 where? Foc 3SgS-Impf go again?,
yekuwa foo si čindi [a ra]
 strength one ImpfNeg remain [3Sg Loc]
 'He (=sick person) wastes away, because one who doesn't eat—
 anyone who doesn't eat and doesn't drink water, where will he go
 further? There's no strength left in him.'
- b. *jaa ŋga ta moo har-terey di*
since 3SgF Top also man-hood Def
a-a mey [a ra] addeliil
 3SgS-Impf have [3Sg Loc] cause
 'Because it (=dwarf) too, manhood has a cause (=importance) to him.'
- c. *jaa nda baana kar, ganji-ije di yo o ñin*
since if rain hit, forest-child Def Pl Impf drink
 'Because, if rain falls, the wild animals will drink.'

9.5.8 'That' complements (*kaa, kala, kaa na*)

kaa 'that ...' is used as a complementizer after certain matrix verbs denoting mental activity. (For the variants *kaa na* and *kala*, see below.) At the end of this section we mention some cases where *kaa* occurs without specific licensing from a matrix verb. One obvious issue is whether this *kaa* is the same morpheme as Relative *kaa* (§8.2).

kaa is fairly common, but optional, after *har* 'say'. For examples involving indicative complements (reported assertion), see §10.1.1-4. When *har* is followed by a subjunctive clause in jussive function (reported imperative, §9.6.3), *kaa* is again optionally present. In the present section we will focus on indicative *kaa* complements with other verbs.

Such a complement is especially common after the verb *bey* 'know'. Other verbs attested with indicative *kaa* complements are *maata* 'feel, perceive', *kan-ndi* 'plan, decide, determine' (irregular Caus of *kani* 'lie down'), *horngu* 'believe, reckon, remember', and *guna* 'see' (in the sense 'determine or infer from perceptual clues' with propositional complement).

Indicative *kaa* complements are illustrated in (525a-f). The complement has the form of an ordinary main clause in all respects.

- (525) a. *no-o bey kaa [woo či alhoor]*
 2SgS-Impf know **that** [Dem be limestone]
 'You(Sg) know that this is limestone.'
- b. *hal ma maata kaa [woyne woo baa ka kam]*
 until 2SgSSubju perceive **that** [sun Dem want Inf fall]
 '... so that you(Sg) perceive that the sun is about to set'

(525, cont.)

- c. *ni kan-ndi kaa [no-o hima ka koy alhoor]*
 2SgS determine **that** [2SgS-Impf should Inf go limestone]
 'You(Sg) determine that you ought to go (looking for) limestone.'
- d. *no-o horgu kaa [tubaabo di yo wane hīsa di nono]*
 2SgS-Impf think **that** [white-man Def Pl Poss making Def it-is]
 'You(Sg) (will) think it's the making of white men.'
- e. *haya lawal di kaa [no-o horgu kaa*
 thing first Def Rel [2SgS-Impf think **that**
[no-o dam a se]]
 [2SgS-Impf put 3Sg Dat]
na ċi bara attey woo
 Neg be except tea Dem
 'The first thing_x that [you(Sg)]'ll decide that [you'll offer *t_x* to him (=guest)] is none other than this tea.'
- f. *ay guna kaa [woyne woo baa ka kam]*
 1SgS see **that** [sun Dem want Inf fall]
 'I saw that the sun was about to set.'

Note that the complement clause may denote a (known or perceived) fact, as in (525a-b,d) or an idea for future actuation, as in (525c,e).

The complementizer *kaa* is clearly distinct from the Inf[initive] morpheme *ka* (§9.7), which has a short vowel and is followed by a VP rather than by a full sentence (i.e., *ka* cannot be followed by a subject NP or by preverbal MAN morphemes). It is particularly important to note this distinction in the case of *bey*, which takes an indicative *kaa* complement in its basic lexical sense 'know (that ...)' but which takes *ka* plus VP as a serial verb in the experiential-perfect sense 'have (once, ever) VP-ed' (§9.7.5). We may also note that *bey* 'know', like its English counterpart, can take a direct-object NP and can also be used intransitively, as well as taking a clausal complement. Most of the other mental-activity verbs that permit *kaa* complements can also be used as transitive verbs with NP object.

The relationship between the complementizer *kaa* 'that ...' and the Rel marker *kaa* is more intriguing (compare English *that*, which is used both as a complementizer and as a substitute for relative *which* ... or *who* ...). Whether to equate the complementizer to the Rel morpheme depends on decisions about how we model the two constructions syntactically. We pointed out in §8.3, above, that *kaa* relative clauses seem to hover between two syntactic structures, a predominant one in which *kaa* is a relative pronoun extracted from its original site (leaving behind at most a trace), and a secondary one favored by special factors (restarts, interference from syntactic constraints on extraction) in which Rel *kaa* is a nonpronominal complementizer that co-occurs with resumptive pronouns. To the extent that this secondary system is productive, we could correlate the nonpronominal Rel complementizer with the homophonous 'that ...' complementizer. Alternatively, one could attempt to engineer a "deep" syntactic analysis of 'that ...' complements whereby *kaa* was reanalysed as a special case of the relative pronoun, say with a phonologically

unrealized head NP (e.g., 'she knew THE FACT that ...'). Since the verbs that take indicative *kaa* complements are, in most cases, also attested as simple transitive verbs, such an analysis is at least conceivable. However, in this grammar I will distinguish Rel *kaa* from the 'that ...' complementizer *kaa*.

The verbs that take indicative *kaa* complements (at least those attested in reasonable numbers of textual examples) may also occur without *kaa*, that is, with bare indicative complements (discussed in the following section). Bare indicative complements are attested with *bey* (526a) but are fairly rare. In the case of *horgu*, the indicative complement often omits the *kaa* (526b).

- (526) a. *ma bey [farka yekuwa-nte nono]*
 2SgSSubju know [donkey be-solid-Partpl it-is]
 'You(Sg) should know it's a solid donkey.'
 b. *yer horgu [hew nono]*
 1PIS believe [wind it-is]
 'We thought it was wind (=a donkey disease).'

In 'that' complementizer function, variant forms of *kaa* are recorded. For a few speakers, a form *kala* occurs as an apparent alternative to the indicative complementizer *kaa*, as in (527).

- (527) *hal ma horgu kala, huri na a kaa t*
 until 2SgSSubju believe that, knife Foc 3SgS become *t*
 '... so you might think, it's a knife_x that it (=metal) has become *t_x*.'

Another similar example of *horgu kala* ... was obtained from the same speaker, who nevertheless also used *horgu kaa* These are the only two cases of complementizer *kala* in my corpus, and it is possible that it represents a secondary, phonologically mediated crossing between *kaa* and *kala* ... , a dialectal alternative to *bara* ... 'since ...' (§8.5.3).

Another minor dialectal variant is *kaa na*, presumably involving an original nonsubject Focus morpheme *na* that has lost its original function. It is attested after *har* 'say' (528), though it is quite rare.

- (528) *boro di yo o har kaa na [har durgura nono]*
 person Def Pl Impf say that Ø [man short it-is]
 'The people say that he is a short man.'

kaa na also appears dialectally as an optional elaboration of *kaa* in nonsubject relatives, particularly adverbial relatives (§8.3.6) like *saa di kaa (na)* ... 'when ...' (literally, 'the time which ...' with *saa* 'time'). In this case *kaa* is the Rel morpheme, and one could use these data to buttress the argument that Rel *kaa* and 'that' complementizer *kaa* are synchronically associated. However, *kaa na* (in these functions) is found only spottily in my Timbuktu data and some speakers do not use it at all. It should not be confused with a more common combination *kaa na* consisting of Rel *kaa* plus Neg *na*, as in *bor kaa na koy* 'a person who did not go'.

For *kaa* ... in the abstract relative sense 'when ...' or 'in such a way that ...', see §8.3.10.

9.5.9 Bare indicative complements (e.g. *gar*, *čiimi*, *či*, *guna*, *bara*)

As noted in the preceding section, some and perhaps all verbs of mental activity ('know', 'think', etc.) that commonly take indicative *kaa* complements optionally omit the complementizer, resulting in a bare indicative complement clause with no overt complementizer. Indicative complements without *kaa* are regular after some other matrix verbs (or predicative NP), including those listed in (529). However, *kaa* is occasionally attested in these cases as well.

(529) Verbs and other predicates regularly taking bare indicative complements

<u>form</u>	<u>gloss</u>	<u>comments</u>
<i>gar</i>	'find, be found'	generally impersonal ('it is the case that ...')
<i>guna</i>	'see'	'see that ...'
<i>či</i>	'be'	'be the case that ...'
<i>čiimi</i>	'truth'	as predicative NP ('be the truth that ...')
<i>kaabu</i>	'count, reckon'	'count (=consider) NP to ...'

The verb *gar* can be a simple transitive verb 'find, encounter', as in (530).

(530) *moreyda alhoor di muso foo na wor o*
 now limestone Def manner which? Foc 2PIS Impf
gar ga [dow di čire]?
find 3SgO [sand Def under]?
 'Now, limestone_x, (in) what way do you(Pl) find it_x under the ground?'

In the construction we are interested in here, *gar* takes an indicative clause as complement. The subject of *gar* may be a discourse referent (531b-c), but it is usually 3Sg in (apparently) impersonal function (531a). We have argued that this 3Sg subject retains a suggestion of referentiality (§6.1.1). The translation is 'it is (was) the case that ...' or 'it happens (happened) that ...' in the impersonal cases, and e.g. 'I found it to be the case that ...' with a more clearly referential subject.

(531) a. *a gar [dow di daa ŋga o faar]*
3SgS find [sand Def Emph SFoc Impf thirst]
 'It happened that the ground [focus] was parched.'

b. *nda ay gar [haya goo [a ra]]*
 if **1SgS find** [thing be [3Sg Loc]]
 'if I find that there is something in it'

c. *yer o gar [kuntur keyna yo goo a ra]*
1PIS Impf find [ball small Pl be 3Sg Loc]
 'We'll find that there are small chunks (balls) in it.'

Although the 3Sg impersonal type *a gar* is difficult to analyse, on the basis of examples like (531b-c) it seems best to take *gar* as a transitive verb 'find' with the complement clause functioning as direct object. This is in spite of the semantic attractiveness of a passive analysis of the impersonal type, cf. standard French *il se trouve que ...*. Compare vernacular West African French *ça trouve que ...*.

Occasionally we find a construction in which *gar* is followed first by a direct object, then by the indicative clause (containing a pronominal coindexed with the direct object), as in (532).

- (532) *no-o gar ga [a kaa tolli čiina, čombu di ra]*
 2SgS-Impf find 3SgO [3SgS become drop small, glass Def Loc]
 'You(Sg) find that it (=tea froth) becomes little drops on the
 (drinking) glass.'

Literally, 'You find it_x [it_x has become ...]'. Here the complement clause could also be analysed as an adverbial clause (§9.5.3), i.e., "you find it when it has become ..."

guna 'see' has similar syntactic possibilities. (533a) has the simple indicative clause complement, while (533b) additionally has a main-clause direct object.

- (533) a. *n guna [yer koy-nda gi Élevage]*
 2SgS see [1PIS go-with 3PIO veterinary-service]
 'You saw that we took them (=donkeys) to the vet.'
- b. *bara a ma sii ni ka guna ni*
 must 3SgS Subju test 2SgO Inf see 2SgO
[wala n či har wala ma na či har]
 [or 2SgS be man or 2SgS Neg be man]
 'He must test you, to see (=determine) whether you are a man, or you
 aren't a man.'

Equational quasi-verb *či* 'be' (§7.1.1) often occurs with an indicative clause as its complement. This is very common when the main clause is negated: *a na či [...]* 'it is not the case that ...', cf. (466b) in §9.3.2. Another common pattern is *woo či [...]* 'this is [...]' introducing explanatory elaborations, freely translatable as 'this means that ...' or 'in other words, ...'

čiimi 'truth' often occurs as predicate nominal in *čiimi nono* 'it is true.' In (534), it occurs without *nono* and (arguably) takes an indicative clause as complement.

- (534) *čiimi [ay nda ga o dooney ka wannasu]*
 truth [1SgS and 3SgO Impf be-accustomed Inf converse]
mere a na wannasu yene
 but 3SgS Neg speak 1SgDat
[[ngu nda atakurmi woo yo] wannasu]
 [[3ReflSg and A Dem Pl] story]
 'It is true that he and I often converse, but he didn't tell me the story
 of himself and these Atakurmis (=dwarves).'

There is a concessive flavor here ('admittedly, he and I ...'), and it is not entirely clear that *čiimi* is really a complement-taking constituent.

Clause-initial *bara* 'must, it must be that ...' is most common with a subjunctive complement clause in obligational sense ('it must be that you go' = 'you must go'), see §9.6.2. With a bare indicative complement, *bara ...* can mean 'because ...; since ...' (§9.5.7). We are here interested in yet another use of *bara ...*, generally preceded by an expression of epistemic certainty like *laabudda* 'definitely' or by an Islamic oath such as *wallaahi* 'by God' (i.e., 'as God is my witness'). We may gloss it here crudely as 'indeed' or 'probably', but the modal force is carried chiefly by the preceding expression (535).

- (535) a. *laabudda bara a-a ta kow dow di soso di*
 definitely indeed 3SgS-Impf Fut take-away sand Def potash Def
 'It (=rainstorm) will definitely remove (leech out) the potash in the ground.'
- b. *wallaahi bara, yer gey-nda [[woo činne] baana],*
 by-God indeed, 1PlS endure-with [[Dem peer] rain],
baada yer gey-nda [a činne]
 indeed 1PlS endure-with [3Sg peer]
 'By God, we've certainly gone a long time without a rain like this, indeed we've gone a long time without its like.'

For the emphatic use of *wala* in (535a), see §8.5.9. In (535c), note that the *wallaahi bara ...* sentence is echoed in a slightly different form involving emphatic *baada* (§8.5.8).

bara is also common in indicative complements of *tammahaa* in the sense 'expect (that ...)', as in (536).

- (536) *yee tammahaa bara a-a ta noo ga njerfu*
 1SgSImpf expect indeed 3SgS-Impf Fut give 3SgO money
 'I expect that he'll give her some money.'

9.5.10 Right-edge marking in antecedents and background clauses

In conditional constructions, the antecedent ('if ...') sometimes contains more than one clause. The left edge (onset) of the antecedent is marked by *nda ...* 'if ...', but since *nda* need not be repeated in each clause of a multi-clause antecedent, the question arises how the addressee knows where the antecedent ends and the consequent begins. Although there is no obligatory marking of the right edge of the antecedent, the forms listed in (537), and perhaps on occasion others, may be used in this function. *kul* and *dee*, unlike the others, can also be pronounced at the onset of the following consequent clause (cf. English *then* in 'if ..., then ...' conditionals).

(537)	<u>particle</u>	<u>usual sense</u>	<u>reference</u>
	<i>kul</i>	'all'	§5.4.3
	<i>dee</i>	Emphatic	§8.5.7, example (420)
	<i>nin</i>	'only'	§8.5.2, example (393)
	<i>moo</i>	'also'	§8.5.5, example (413b)
	<i>di</i>	Definite	§5.6

The common right-edge marker is *kul* 'all', in bare form without Absolute prefix *a-* or *i-*. If we wish to attribute the usual universal quantificational sense to this use of *kul*, two possibilities come to mind. One is that *kul* means something like 'any time ...', a stronger version of 'if ...'. The second is that *kul* here works at a higher pragmatic level, indicating that the exposition of the antecedent material is completed ('that is all'). However, the frequency of *kul* at the right edge of antecedents, or at the onset of consequents, suggests that this usage is grammaticalized (538).

(538)	<i>nda</i> [<i>n</i>	<i>taar</i>	<i>gi</i>]	<i>kul</i>	<i>no-o</i>	<i>bey</i>	<i>kaa</i>
	if	[2SgS	touch	3PIO]	all	2SgS-Impf	know that
	<i>woo</i>	<i>čj</i>	<i>alhoor</i>				
	Dem	be	limestone				
	'If you(Sg) touch them (=stones), you know that that is limestone.'						

Since *kul* as quantifier is not normally attached to an object pronominal like 3PIO *gi*, it is clear that *kul* in (538) is a right-edge marker, terminating the antecedent. The listener will then interpret the following material unhesitatingly as the consequent. Without *kul*, the listener would initially have to consider the possibility that *no-o bey kaa ...* is an elaboration of the first clause of the antecedent: 'if you have touched them (and so) you know ...'

In processing texts, readers should distinguish the right-edge marking use of *kul* from instances of true quantificational *kul* attached to an NP that happens to be clause-final (e.g., a direct object). If instead of 3PIO *gi* in (538) we had an NP like *har di yo* 'the men', an immediately following *kul* could be parsed either as the right-edge marker (*nda* [*n taar* [*har di yo*]] *kul*) or as a local NP quantifier (*nda* [*n taar* [*har di yo kul*]]). In principle, we can get two adjacent *kul* morphemes carrying out these different functions. Such combinations are easily elicited, but in such examples speakers pronounce the edge-marking *kul* at the onset of the consequent, as in (539).

(539)	<i>nda</i>	<i>n</i>	<i>ŋaa</i>	<i>a-kul,</i>	<i>kul</i>	<i>no-o</i>	<i>koy</i>
	if	2SgS	eat	AbsolSg-all,	all	2SgS-Impf	go
	'When you have eaten all of it, then you will go.'						

The other three forms listed in (537) are less frequent and more specialized than *kul* as right-edge markers. *moo* at the end of a conditional antecedent is best glossed 'on the other hand' and is used with an antecedent that is mutually incompatible with the antecedent of an immediately preceding conditional. *dee* has fairly low text frequency, and is generally reserved for cases where the consequent denotes an especially climactic event. *nin* 'only' suggests finality and is therefore appropriate as a

right-edge marker for reasons similar to those applicable to *kul*. For examples of these three in conditional antecedents, see the references in (537).

Def *di* is extremely rare in my Timbuktu data as a right-edge marker, but does seem to have this function in the textual example (540). This usage is far more common in DjCh and some other Songhay varieties.

- (540) *a na hantum jinaa,*
 3SgS Neg be-written at-first,
[nda a hantum di] a-a kar ...
 [if 3SgS be-written Def] 3SgS-Impf strike ...
 'It hasn't been written (by God) yet; when it is written, it (=rain) will strike ...'

We have considered so far the right-edge of a conditional antecedent or similar background clause. Since the point is to indicate where the antecedent gives way to the consequent, the same effect can be achieved by using a left-edge (onset) marker in the consequent. Although no left-edge marker is grammatically required, expressions are available for this purpose. Even the right-edge markers already described are sometimes uttered in a way that connects them prosodically with the following consequent rather than with the end of the antecedent. This is especially true of Emph particle *dee*. A similar prosodic pattern is occasionally observed for *kul*.

The common left-edge marker for conditional consequents is *saa di* 'time Def', i.e. '(at) that time, (in) that situation, then, so'. This expression is quite appropriate, since it effectively sums up the situation resulting from the eventualities denoted by the clauses in the antecedent in a manner that serves naturally as background for the consequent. In (541) it need not be translated.

- (541) *nda n guna ga saa di a či i-baan-o-baan-o*
 if 2SgS see 3SgO time Def 3SgS be Absol-Rdp(2)-soft-Adj
 'When you see it, it is soft.'

In addition to actual conditionals with *nda ...* 'if ...', the right-edge markers described above, especially *kul*, are also common in other types of backgrounded clauses that establish a setting for a following foregrounded clause. Setting clauses may begin with *saa (di) kaa* 'when ...' (542a), *nan kaa* 'where ..., when ...' (542b), or *hal* 'until' in the sense 'as soon as' (542c).

- (542) a. *saa kaa [n duma [hayni di yo]] kul*
 time Rel [2SgS plant [millet Def Pl]] all
no-o sey hayni woo moo, i-kul o či čere
 2SgS-Impf sow millet Dem also, AbsolPl-all Impf be friend
 'When you have (trans-)planted the millet plants, you will sow millet (seed) also; the two (=transplants and new sprouts) are mixed together.'

- b. *nan kaa [hari hun [ni bargu di ra]] kul,*
 place Rel [water leave [2Sg marsh Def Loc]] **all**,
no-o koy dogo-kate hayni woo ra
 2SgS-Impf go uproot-Centrip millet Dem Loc
 'Where water has receded from your (inundated) field, you go and
 uproot some of that millet (from the seedbed near the water line) and
 come back with it.'
- c. *i-i jisi ga war se hal wor o kaa*
 3PIS-Impf put-down 3SgO 2Pl Dat until 2PIS Impf come
ta foo gi, hal [wor o ta foo gi] kul,
 Inf greet 3PIO, until [2PIS Impf Fut greet 3PIO] **all**,
i-i dam war se albarka nda woo di
 3PIS-Impf do 2Pl Dat thanks with Dem Def
 'They put it down for you, before you come to greet them; once you
 have greeted them, they give thanks to you for that (=work).'

In (542a), with another bracketing we could interpret *kul* as being attached to *hayni di yo*, but in the text there seems to be no point in particularly stressing 'all the millet plants,' and I believe that *kul* here is a right-edge marker. This is clearer in (542b), where *kul* comes after a postposition; if it had been a local quantifier it would have followed the NP inside the PP (*ni bargu di kul ra* 'all of your [inundated] field'). In (542c), we may disregard the first *hal* clause (glossed 'before' with Future VP). It is the second *hal* clause, *hal [wor o ta foo gi] kul*, that serves as a de facto conditional antecedent, and here we get the right-edge marking *kul*.

9.6 Subjunctive complements

The subjunctive mood is expressed by a preverbal morpheme *ma*, which directly follows a subject NP. For the irregular 2SgSubj *ma* replacing the rare fuller sequence *?#ni ma*, and the optional irregular 1SgSubj *ye* alongside regular *ay ma*, see §7.2.4. The mood marker is always *ma* after other pronouns and after all full NPs. The subjunctive may be directly negated, with *si* following *ma*. The subjunctive is therefore a full-fledged, finite clause, lacking only aspectual marking.

In the following sections we describe in greater detail the syntactic and semantic contexts in which subjunctive clauses occur. We distinguish five construction types involving an identifiable "subjunctive trigger" which calls for this type of clause: specific matrix-clause verbs like 'want' (§9.6.1); obligational *bara* (§9.6.2); jussive reported speech (§9.6.3); certain complementizers (§9.6.4); a distant negative marker (§9.6.5). In §9.6.6 we discuss cases where there is no (overt) subjunctive trigger. Finally, in §9.6.7 we consider syntactic issues that cut across these types of cases, such as multiple subjunctive clauses associated with a single subjunctive trigger.

There are two basic semantic clusters here. The most obvious one is deontic modality (desiderative, obligational, purposive), which is oriented toward possible future action. A less conspicuous one involves epistemic modality, specifically, the suspension of truth-value assertion of a clause under the scope of negation. Both the

deontic and the epistemic uses of the subjunctive can be pre-empted by the presence of stronger modal elements. The deontic use of the subjunctive is pre-empted by an overt imperative, but this still leaves plenty of deontic “space” for the subjunctive to appear in. On the other hand, the epistemic uses of the subjunctive are mainly associated with negation, but an overt negative within the clause pre-empts the subjunctive. As a result, we find an epistemic subjunctive clause most often in syntactic contexts involving a distanced negation that takes scope over, but is not part of, the subjunctive clause (§9.6.5). There are, however, some cases of non-negative epistemic subjunctives (§9.7.8).

9.6.1 Subjunctive complements to matrix-clause verbs

The verbs listed in (543) can take subjunctive clauses as complements. All of them can also be used as simple transitives. Note that all are oriented toward future eventualities.

(543)	<u>verb</u>	<u>gloss</u>	<u>comments</u>
a.	<i>baa</i>	‘want’	not in sense ‘be about to’
	<i>baa-ndi</i>	‘prefer’	
	<i>taasi</i>	‘seek’	
	<i>wir</i>	‘seek’	
	<i>niya</i>	‘intend’	
	<i>tammahaa</i>	‘hope, expect’	
	<i>batu</i>	‘wait for’	
b.	<i>kate</i>	‘bring about, cause’	as transitive: ‘bring, fetch’
c.	<i>jendi</i>	‘prevent’	
	<i>nan</i>	‘let, allow’	as transitive: ‘leave’
	<i>yedda ~ yadda</i>	‘consent to, allow’	
	<i>dooney</i>	‘be accustomed to’	
	<i>konno</i>	‘dislike, hate’	
	<i>šendu-ndi</i>	‘encourage’	
	<i>jinaa</i>	‘precede (event)’	

All of the verbs in (543a-c) allow complements whose subject NP is noncoreferential to the subject of the matrix verb. In this case, the complement must appear as a finite subjunctive clause (‘I want that you go,’ ‘I brought it about that they come,’ ‘they prevented that I sleep’). An exception is that a negated *jendi* occasionally occurs with an indicative complement whose truth is presupposed (‘... does not prevent [the fact] that ...’), as in (365) in §8.4.1, above (cf. French *n’empêche que ...*).

Some of these matrix verbs (‘want,’ ‘seek,’ ‘intend,’ ‘consent,’ ‘be accustomed’) also allow complements whose subject NP is coreferential to that of the matrix verb. In this case, the speaker may have two options. In the first, we again get a finite subjunctive clause (‘I want that I go’). If the matrix-clause subject is not a first or second person pronoun, the coreferential subjunctive clause subject must be expressed as a Logo/3Refl (singular or plural) pronoun, hence ‘the man_x wants that

Logo/3RefISg_x go,' which distinguishes this from the noncoreferential case 'the_x man wants that 3Sg_y go.' The subjunctive option is regular for *baa* in the core sense 'want (to ...)', as well as with *tammahaa* 'hope, expect', and it is available as an option with the 'seek' verbs, as in (544a-d). It also occurs with *batu* 'wait' (544e). It is not attested in my data with 'intend', 'consent', or 'be accustomed'.

- (544) a. *ay si baa [ay ma ñin attey]*
 1SgS ImpfNeg **want** 1SgS **Subju** drink tea
 'I don't want to drink tea.'
- b. *yee tammahaa (nda) [ay ma kaa yeesi]*
 1SgSImpf **hope** (with) [1SgS **Subju** come next-year]
 'I hope to come back next year.'
- c. *a-a taasi ngu ma kaa président*
 3SgS-Impf **seek** LogoSgS **Subju** become president
 'He seeks to become president.'
- d. *yee wir ay ma koy*
 1SgSImpf **seek** 1SgS **Subju** go
 'I seek to go.'
- e. *i si batu ni gaa [ma tooñe ngu-yo]*
 3PIS ImpfNeg **wait** 2SgO Emph [2SgSSubju provoke LogoPIO]
 'They_x don't even wait for you to provoke them_x.'

The second option for *baa* and the 'seek' verbs, and the only output attested for *niya* 'intend', *yedda* 'consent' and *dooney* 'be accustomed to', is an infinitival VP complement when the subjects of the two clauses are coreferential. Especially for *baa* this involves a semantic shift ('be on the verge of' instead of 'want'). This serial-verb pattern is analysed in §9.7.2-3.

For the verbs *waaju* 'advise' (<Ar.), *šendu-ndi* 'encourage', and *gaabi* 'compel', the syntax is a little more complex than for the verbs in (543). Here the usual constructions are of the types 'X advise Y [that Y go]' (545a), 'X encourage on Y [that Y ...]' (545b), and 'X compel Y [that Y ...]' (545c), though for 'compel' one can also use a serial-verb construction 'X compel Y [to go]' (545d). Note the (Y) argument (direct object, or complement of postposition) in the matrix clauses.

- (545) a. *ay waaju ga [a ma koy bamako]*
 1SgS **advise** 3SgO [3SgS **Subju** go B]
 'I advised her to go to Bamako.'
- b. *ay baba šendu-ndi [ay ga] [ay ma čen huu di]*
 1Sg father **encourage** [1Sg on] [1SgS **Subju** build house Def]
 'My father encouraged me to build the house.'
- c. *ay gaabi ga [a ma koy bamako]*
 1SgS **compel** 3SgO [3SgS **Subju** go B]
 'I forced her to go to Bamako.'
- d. *ay gaabi (#waaju) ga [ka koy bamako]*
 1SgS **compel** (#advise) 3SgO [Inf go B]
 (=545c)

Some speakers can insert *nda* between the subjunctive trigger and the subjunctive clause. This appears to be limited to certain matrix verbs, and these speakers also produce or accept versions without *nda*. The following combinations are attested: *yedda nda [...]* 'consent that [...]', *niya nda [...]* 'intend that [...]'. For *bilaa nda ...* 'without', see §9.6.4.

The first important cluster in (543) is the verbs of desire (543a). Subjunctive complements are shown in (546a-d). (546d) shows that *baa* uses the subjunctive in its core sense 'want' even with coreferential subjects.

- (546) a. [yer farka buun-o woo] yer ta baa-ndi
 [1PIS donkey exhausted-Adj Dem] 1PIS Top prefer
 [yer ma koy-nda gi]
 [1PIS Subju go-with 3PIO]
 'These exhausted donkeys of ours, we prefer to take them (along).'
- b. yer o taasi nin moreyda [farka di ma ηaa]
 1PIS Impf seek only now [donkey Def Subju eat]
 'We just seek (=want, hope) now that the donkey will eat (something).'
- c. ay si baa [a ma kottu]
 1SgS ImpfNeg want [3SgS Subju be-torn]
 'I don't want it (=hide) to be torn.'
- d. [war wane assanaa woo]
 [2Pl Poss occupation Dem]
 yee baa ye hirow a ra
 1SgS Impf want 1SgS Subju enter 3Sg Loc
 'This trade of yours(Pl), I want to go (lit.: that I go) into it (as an apprentice).'

As in English, "negative raising" is common with 'want'. In (544a) and (546c), the negation arguably belongs in the subjunctive clause ('I want that it not be torn'), but surfaces on the matrix verb ('I don't want that it be torn'). However, with other matrix verbs, negation works differently in matrix and subjunctive clauses, as in (547a-b).

- (547) a. a na yedda [ay ma kaa]
 3SgS Neg consent [1SgS Subju come]
 'She did not consent that I come.'
- b. a yedda [ay ma si kaa]
 3SgS consent [1SgS Subju Neg come]
 'She consented that I not come.'

We now consider *kate* (543b). This is a high-frequency transitive verb meaning 'bring, fetch, go get and bring'. It is also attested in an analytic causative construction, which we can translate 'bring it about (that ...)', as in (548).

- (548) *maa nga či hay di kaa no-o hin ka dam*
 what? SFoc be thing Def Rel 2SgS-Impf can Inf do
kaa kate [ni jaari di ma si mussu]?
 Rel bring [2Sg day Def Subju Neg be-lost]?
 'What is the thing you can do which brings it about that your day not
 be wasted?'

The vast majority of causatives are expressed by using the productive Caus[ative] derivation (§6.2.2), or by simply switching valency with no overt change in the verb stem (§6.2.1). However, (548) is an appropriate use of the more complex (but more transparent) analytic causative construction, since the lower clause contains an internal negation which could not be precisely captured in a compressed monoclausal version.

Next we consider verbs of allowing and preventing (543c). In these constructions, the subject of the subjunctive clause is almost always distinct from the subject NP of the matrix clause. Examples in (549).

- (549) a. *yer junubu yo nga jendi [baana ma kar]*
 1Pl sin Pl SFoc prevent [rain Subju hit]
 'It's our sins [focus] that have prevented [rain from falling].'
 b. *no-o nan [a ma koo]*
 2SgS-Impf let [3SgS Subju dry]
 'You(Sg) will let it dry out.'
 c. *n si yedda [ay ma koy ka nan ni]*
 2SgS ImpfNeg consent [1SgS Subju go Inf leave 2SgO]
 'You(Sg) won't consent that I go and leave you.'
 d. *nda a noo boro se haya*
 if 3SgS give person Dat thing
ka jinaa [a ma bun]
 Inf precede [3SgS Subju die]
 'if he_x gave someone_y a thing before he_x died'

Note that "positive" *nan* 'let' and *yedda* 'consent', as well as "negative" *jendi* 'prevent' (= 'not let'), have the subjunctive complement. This is a further indication that deontic modality (here: intention) is more significant than degree of likely truth in determining the use of the subjunctive mood.

For *nan* 'let', I have also recorded a construction with an intervening *hal* 'so that' (in other contexts 'until'), as in (550a). For *hal* as subjunctive trigger see §9.6.4. In villages near Timbuktu, *nan* can take indicative as well as subjunctive complements; an indicative example is (550b). I did not hear such a construction in Timbuktu itself.

- (550) a. *ni si nan hal [i ma hīsa ka nin kul]*
 2SgS ImpfNeg leaveuntil [3PIS Subju do-muchInf ripen all]
 'You don't let them (=melons) get overly ripe.'
 b. *ay nan [i koy]*
 1SgS leave [3PIS go]
 'I allowed them to go.'

Though not real subjunctive triggers, *noo* 'give' and *kate* – *kata* in the literal sense 'bring, fetch' are often immediately followed by a bare subjunctive complement denoting a projected follow-up action, as in (551).

- (551) ... *wala wor o noo kuuru*
 ... or 2PIS Impf give skin
[i ma hīsa ga [war se]]
 [3PIS Subju make 3SgO [2Pl Dat]]
 '... or do you(Pl) give (them) the skin for them to make it
 (=waterbag) for you?'

9.6.2 Subjunctive complements of obligational *bara*

bara occurs in various functions: verb of existence (§7.1.3), 'except' particle (§8.5.3), and 'because ...' particle (§9.5.7). Leaving these aside, it occurs sentence-initially in two impersonal constructions, one with following bare indicative complement associated particularly with oaths and other strong assertions (§9.5.9), the other with a following subjunctive complement, usually in obligational sense (*bara* [X Subju see Y] = 'X must see Y').

In the subjunctive (mainly obligational) construction that concerns us here, nothing precedes *bara* within the sentence. Negation is expressed inside the subjunctive clause (*bara* [X Subju not see Y] = 'X must not see Y'). Focus too is expressed, if at all, inside the subjunctive clause, as in the elicited examples (552a-b).

- (552) a. *bara ni nga ma koy, a na č̣i ey*
 must 2Sg SFoc Subju go, 3SgS Neg be 1SgO
 'You [focus] must go, not I.'
 b. *bara hāyši di na ma wii, a na č̣i muši di*
 must dog Def Foc 2SgSSubju kill, 3SgS Neg be cat Def
 'You must kill the dog [focus], not the cat.'

In the absence of direct inflection it is difficult to identify the word-class status of *bara*; I label it as one of the "quasi-verbs," my all-purpose expression for defective or deviant verb-like elements (§7.1.3). The interlinear gloss will be 'must'.

Some examples of obligational *bara* are given in (553).

- (553) a. *bor kaa si mey hin-cy ka goy,*
 person Rel ImpfNeg have power Inf work,
bara [[a koy di] ma goy]
 must [[3Sg boss Def] Subju work]
 '(If) someone_x has no (other) means to work, the fellow_x must work.'
 b. *bara [ye yee ka koy kow kūfa di]*
 must [1SgSSubju return Inf go take-away curiosity Def]
 'I had to go back to remove (=satisfy) the curiosity.'

- c. [woo yo ta kul] bara [ni nda gi] ma harga
 [Dem Pl Top all] **must** [2Sg and 3PIO] Subju follow
 'All those (tools), you(Sg) and they (=tools) must go with (each other).'

(553c) involves a preposed topical constituent that is not syntactically part of the sentence beginning with *bara*. (553b) illustrates the 1SgSSubju variant *ye* (for *ay ma*).

The weaker obligational sense 'should, ought to' is expressed by the serial verb *hima* plus infinitival VP complement (§9.7.4). On the other hand, the obligational sense of *bara* can be capped by a stronger obligational predicate like a *tilasu* 'it is obligatory (that ...)', as in (554).

- (554) a *tilasu* [ni ma koy]
 3SgS **be-obligatory** [2SgS Subju go]
 'You are obligated to go.'

As noted above, *bara* with subjunctive complement occasionally has the epistemic sense 'it is certain that ...' or 'it is very likely that ...'. The assertion is only slightly less strong than in the oaths containing *bara* and indicative complements (§9.5.9). This use of *bara* plus subjunctive is much less common than the obligational usage illustrated in (554), but there are a respectable number of textual examples such as those in (555).

- (555) a. *bara* [ma guna mongoro hun dooti]
must [2SgSSubju see mango leave there]
 'You(Sg) will undoubtedly see that mangoes are no longer there.'
- b. *bara* [ma guna koyroo banda woo kul
must [2SgSSubju see this-town behind Dem all
nga kaa subu firji
 SFoc become grass green]
 'You(Sg) will undoubtedly see that [the whole back of (=area around) this town] [*focus*] has become green grass.'
- c. *tuuri sii kul kaa i gar dooti*
 tree kind all Rel 3PIS find there
bara [i ma hasara]
must [3PIS Subju ruin]
 'Every kind of tree, they (=elephants)_x find there, they_x will certainly destroy it_y.'

9.6.3 Subjunctive clauses in jussive reported speech

Reported speech is generally introduced by the quotative verb *har* 'say', immediately followed by the quotation with no intervening complementizer. The quoted material can appear in either the (unmarked) indicative mood or in the subjunctive mood. When

the original utterance was assertive (as in a narration), it remains indicative when reported. Aside from the preceding *har*, reported indicative speech is indexed by deictic adjustments, notably the logophoric pronouns (§10.1.1-2).

However, when the original utterance was imperative (§7.3), the reported version takes the subjunctive mood. We refer to this construction as “jussive.” Contrast indicative (556a) with jussive (556b).

- (556) a. *i har [ŋgu-yo o mey ga]*
 3PIS say [LogoPIS Impf have 3SgO]
 ‘They_x said that they_x had it.’
- b. *yee har a se*
 1SgSImpf say 3Sg Dat
[a ma koy kate [farka di yo]]
 [3SgS Subju go fetch [donkey Def Pl]]
 ‘I will tell him to go fetch the donkeys.’

The direct-speech utterance underlying (556b) is most likely the overt imperative (557).

- (557) *koy kate [farka di yo]*
 go bring [donkey Def Pl]
 ‘Go fetch the donkeys!’

However, the direct-speech utterance could conceivably have been something like (558), already in subjunctive form in spite of the absence of an overt “subjunctive trigger” (see §9.6.6).

- (558) *ma koy kate [farka di yo]*
 2SgSSubju go bring [donkey Def Pl]
 ‘(I suggest) that you go fetch the donkeys.’

The fact that original subjunctive clauses like (558) and original imperatives like (557) are collapsed, in reported speech, into jussive subjunctive clauses is our first indication of a certain tension between a) a tendency for the subjunctive to generalize to all semantically appropriate deontic contexts; and b) the blocking of overt subjunctive morphology in certain constructions containing a stronger modal element (here “imperative”). In a syntactic context where the stronger modal cannot appear for some reason, the weaker subjunctive marking materializes. In §9.6.5 we will bring out a similar pattern involving negative contexts.

9.6.4 Subjunctive clauses with complementizers (*hal*, *bilaa*)

The particle *hal* can be used as a quasi-preposition before a (spatiotemporal) NP or NP-like adverbial in the sense ‘until, all the way to’ (§5.9.8). As a clause-initial

complementizer it can precede an indicative clause (§9.5.6) or a subjunctive clause. The subjunctive type, to be analysed in this section, is extremely common. It is the basic purposive and result clause construction and can be glossed 'so that ... , in order that ... , with the result that ...'. Examples in (559).

- (559) a. *yer o faani, hal [yer ma moor [dow di čire]]*
 1PIS Impf dig, until [1PIS Subju be-far [sand Def under]]
 'We dig, until (=so that) we go deeply under the (surface of) the sand.'
- b. *a-a harga a-a dira*
 3SgS-Impf follow 3SgS-Impf walk
hal [a ma soroku [guusu di ra]]
 until [3SgS Subju fall [pit Def Loc]]
 'It (=animal) just kept on walking with the result that it fell into the (hidden) pit.'

In most cases, as in (559a), the *hal* clause denotes an eventuality that is both a factual and an intended result of the eventuality denoted in the preceding clause. However, in (559b) the result is quite unintended by the unfortunate animal. There are also examples where the intended result was not in fact actualized, as in (560).

- (560) *ay faani hal ay ma duu wuraa,*
 1SgS dig until 1SgS Subju get gold,
mere ay na gar ga
 but 1SgS Neg find 3SgO
 'I dug in order to get some gold, but I didn't find it.'

The particle *bilaa* 'without' (<Ar.) can be used as a preposition before an NP (§5.9.9). When used before a clause, the latter takes the subjunctive mood, as in (561a-c). Note the disjunction 'or' in (561a). *bilaa* is optionally expanded as *bilaa nda* ... (literally "without with ...") when it takes a clausal complement (561b-c).

- (561) a. *muso kaa ngu hin ka duu ga nda, ka din ga,*
 way Rel LogoSgS can Inf get 3SgO with, Inf take 3SgO,
bilaa [a ma marey ngu
without [3SgS Subju injure LogoSgO
wala a ma too ngu]
 or 3SgS Subju reach LogoSgO]
 '(... to know) a way with which he (=a man) can get it (=animal)_x,
 and take (=capture, kill) it_x, without it_x hurting him or it_x reaching
 him.'
- b. *ay ñafu gorongo di,*
 1SgS seize chicken Def,
bilaa nda ay ma marey ga
without with 1SgS Subju wound 3SgO
 'I grabbed the chicken, without hurting it (in the process).'

(561, cont.)

- c. *ay ηaa hani di,*
 1SgS eat electric-fish Def,
bilaa nda ay ma hina ga
without with 1SgS Subju cook 3SgO
 'I ate the electric fish, without cooking (=having cooked) it.'

Since *bilaa* 'without' is intrinsically negative, it is reasonable to connect this use of the subjunctive with those described in the following section.

An alternative way of expressing 'X, without Y' where X and Y are clauses, is by simple juxtaposition of X with the negative form of Y (§9.5.3).

9.6.5 Subjunctive clauses under the scope of a distant negative

Simple negative clauses ('she didn't see him,' 'I am not sick') are expressed in the unmarked indicative mood. That is, the negative morpheme itself is the only indication of the truth-value status of the underlying (positive) proposition. In this respect, KCh resembles English and other western European languages, and diverges from the pattern seen in some (e.g. Australian) languages where ordinary negation is marked by the combination of a negative morpheme and an irrealis mood form ('it wasn't that she see-Irrealis him,' 'It's not that I be-Irrealis sick').

However, there are indications that even in KCh, clauses under the scope of a negation have latent tendencies to take subjunctive rather than indicative form. In other words, while the KCh subjunctive is predominantly a future-oriented deontic modal (desiderative, obligational, purposive), it has a second function, admittedly less conspicuous, as an irrealis (nonactualized) epistemic modal.

We got a hint of this in the use of subjunctive complements after *bilaa* 'without' (§9.6.4). Since 'without' has a built-in negative semantic component, perhaps this (weak) negation rather than deontic modality is responsible for the subjunctive mood.

- (562) *yee yena gi nin i na bey ka kaa ta*
 1SgSImpf precede 3PIO only 3PIS Neg know Inf come Inf
gar ey [a ra] gaa, sanda boro ma kaa ta
 find 1SgO [3Sg Dat] Emph, like person Subju come Inf
gar ey bargu di maasu-maasu ta
 find 1SgO swamp Def middle Top
 'I precede them (=leave before they come). They have never come and found me in it (=field), like for someone to come and find me in the middle of the rice field.'

In (562), the phrase beginning *sanda* 'like' (or 'for example') is an elaboration or paraphrase of the underlying proposition 'they come and find me' that is overtly negated in the preceding clause. The elaboration clause lacks the overt Neg marker, but shifts to subjunctive mood to indicate (indirectly) that it remains under the (semantic) scope of the earlier negation in spite of the syntax. Consider now (563).

- (563) *a si hasara [n ga] haya foo*
 3SgS ImpfNeg hurt [2Sg on] thing one
nda a n či [ni daa nda n bomo di] ŋga—
 if 3SgS Neg be [2Sg Emph and 2Sg head Def] SFoc—
ma jiti [n bomo kuna] kul
 2SgSSubju be-startled [2Sg head Loc] all
 'It (=dwarf) won't harm a thing on you, if it is not you yourself
 [focus] who—, you may be frightened in your head (=mentally).'

Here we focus on the conditional antecedent beginning with *nda a n či ...* 'if it is not (the case that) ...'. This is a higher-level negation, taking a complete sentence as its complement (§9.3.2). In this example, the Neg marker is further distanced from the main proposition it negates ('you be frightened') by an intervening fronted focal subject NP which is itself internally complex ('you indeed and your head' = 'you yourself'); note SFoc morpheme *ŋga*. On the tape there is a brief hesitation after *ŋga*, then a subjunctive clause, '(you) be frightened in your head.' Because a Subju *ma* is homophonous with 2SgSSubju *ma*, it is unclear whether *ma jiti ...* is a restarted clause with 2Sg subject, or just part of the grammatical larger clause *ni daa ... ŋga ma jiti ...*.

In (564) we have a similar example with no interrupting hesitations.

- (564) *čiimi nono, nda a na či [jaman di] ŋga ma hasara*
 truth it-is, if 3SgS Neg be [season Def] SFoc Subju be-bad
 'It is true, unless it's the season [focus] that is bad.'

A more literal translation is 'it's the truth, if it is not (the case that) [it's the season which be ruined],' cf. (285) in §8.5.3. (564) shares with (563) the use of a higher-level negation and the subject-focus construction in the lower clause, and there are additional textual examples of exactly this type.

What (562-64) seem to have in common is that a negative operator has semantic scope over a clause X, but does not appear directly in the normal (preverbal) position within X itself. Either X is an elaboration or paraphrase of a preceding negated proposition (minus the Neg marker), or X is negated by a higher-level negation and itself has a focalized subject NP intervening between this negation and its own VP.

I have no textual examples where non-subject focus, as opposed to subject focus as in (563-64), combines with higher-level negation to force a shift to subjunctive mood. For example, (481) in §9.3.5, above, is 'it is not [[only once] [focus] (that) I drank alcohol]' with indicative mood.

9.6.6 Bare subjunctive clauses with no overt trigger

Subjunctive clauses do not seem to be used in "indicative" (assertive) contexts with habitual or progressive function, as in some other Songhay languages. However, there are quite a few textual examples where a subjunctive clause occurs in the absence of a

“subjunctive trigger,” that is, a complementizer or a matrix-clause verb that specifically licenses the subjunctive mood.

In general, such “bare” subjunctive clauses can be interpreted as cases where a subjunctive trigger that could have appeared overtly is omitted (or phonetically unrealized). However, a bare subjunctive clause may also represent a neutralization of two or more constructions with different overt triggers. This pattern is familiar from other languages with a subjunctive (e.g. Spanish).

In some cases, the “bare” subjunctive clause is merely a simplified repetition of a previously uttered construction involving the subjunctive and an overt trigger. This is common when one speaker repeats another speaker’s (occasionally, his or her own) utterance, for purposes of verification or to indicate comprehension. Such echoic repetitions are eminently characteristic of conversational structure in all societies of this region. An example is given in (565).

- (565) H: ... *bara* [*a ma har ga*]
 ... must [3SgS **Subju** say 3SgO]
 ‘... he must say it.’
 D: *bara* [*a ma har ga*]
 H: *a ma har ga* [*rgu se*]
 ‘... he_x must say it to him_y (LogoSg)’

Here speaker H concludes a turn with a subjunctive clause following the overt subjunctive trigger *bara* ‘must’ (§9.6.2). Speaker D echoes this verbatim, whereupon H repeats just the subjunctive clause, without the *bara*, adding an indirect object pronominal.

A subjunctive clause is also used in similar repetitions of an imperative, as in (566).

- (566) X: *koy kate hari di!*
 go fetch water Def!
 ‘Go fetch the water!’
 Y: *ay ma koy kate hari di?*
 1SgS **Subju** go fetch water Def?
 ‘I am to go fetch the water?’

This shift from imperative to subjunctive form in repetitions is analogous to the same shift in jussive reported speech (§9.6.3). Indeed, the repetition in Y’s turn in (567) could be analysed as containing a covert quotative (‘are you telling me that I am to go ...?’).

In (567a) the subjunctive clause (‘they not eat’) is an intended result of the herding (guiding) mentioned in the preceding clause, so it is a (negated) purposive clause. The full form would involve clause-initial *hal*. (567b) involves an involuntary result, but this too is well within the normal semantic range of *hal* (§9.6.4).

- (567) a. *nda a gar haya nono kaa boro hin ka kur*
 if 3SgS find thing it-is Rel person can Inf herd
no-o hin ka kur gi, i ma si gaa—
 2SgS-Impf can Inf herd 3PIO, 3PIS **Subju** ImpfNeg eat—
ka dam hasar-ow
 Inf do damage
 'If it were the case that it (=elephant) was something that one could herd (=guide), you(Sg) would be able to herd them (=elephants), (so that) they would not eat (trees) and do damage.'
- b. *saa di boro o hin ka koy,*
 time Def person Impf can Inf go,
ni jaari di goy di kul ma kaa bakabaka?
 2Sg day Def work Def all **Subju** become chunks?
 'So, one can go (and dig for limestone all day), (with the result that) your whole day's output may turn out to be (merely) debris?'

Another recurrent pattern is to use the subjunctive with 2Sg or 2Pl subject in a watered-down imperative or obligational sense. This hortative function seems to be fairly common with verbs like 'know' and 'notice', as in (568).

- (568) a. *ma koroši ga, [ay wane šiini woo ga]*
 2SgSSubjnotice 3SgO, [1Sg Poss word Dem on]
kaa ay gaa har mana moreyda,
 Rel 1Sg Presentative say 2SgDat now,
ma koroši addama-jje woo kaa...
 2SgSSubjnotice human Dem Rel ...
 'You(Sg) should notice it, on the basis of my words (to you), which it is I who say them to you now; you should notice this person who ...'
- b. *ammaa farka kul kaa n guna woo di din,*
 but donkey all Rel 2SgS see Dem Def seize,
ma bey farka yekuwa-nte nono
 2SgSSubjknow donkey be-strong-Partpl it-is
 'But every donkey which_x you've seen this (disease) afflict _x, know that it_x is a strong (=healthy) donkey.'

This construction is also found with other verbs, as in (569).

- (569) *nda boro fatta haya se nin,*
 if person exit thing Dat only,
ma dam ga [nda a fondo di]
 2SgSSubjdo 3SgO [with 3Sg path Def]
 'If one (=you) goes out for something_x, you should do it_x properly.'

Simple subjunctive clauses are also ideal for first person plural (inclusive) hortatives, as in (570).

- (570) *maa na yer ma dam hal jaari di ma si hasara?*
 what? Foc 1PIS **Subju** do until day Def **Subju** Neg be-bad?
 'What shall we do, so the day isn't wasted?'

In §9.6.5 we commented that clauses under the scope of a negation seem to be latently subjunctive despite their usual surface indicative form, and that when the Neg is sufficiently distanced syntactically, the clause may adopt subjunctive form. Consider (571) in this light.

- (571) *maasu taači di kaa čindi no-o jow bundu*
 inside four Def Rel remain 2SgS-Impf take stick
 [*ma haw ga a ga*]
 [2SgSSubju tie 3SgO 3Sg on]
 'The four inner pieces that remain, you take a stick_x and tie it_x on it (=crate).'

Leaving aside the preposed topical constituent (*maasu ... čindi*), this example consists of an indicative clause ('you take a stick_x') and a subjunctive clause ('you tie it_x on it'). One way to analyse this is to suppose that the subjunctive clause is a purposive or result clause attached to the preceding indicative clause. In this case, we could take *ma haw ga a ga* as having omitted an implied *hal* 'so that' complementizer, as in several examples discussed in the preceding section. However, from a semantic point of view it is hard to see 'you tie it_x on it' as the purpose or result of 'you take a stick_x'; it is simply the next instruction in the speaker's complex 'recipe' for building a crate for a donkey to carry. A trick-of-the-trade description like this hovers between a report of a habitual and generic activity ('you [=someone] take a stick ...'), a prediction of the addressee's future action ('you will take a stick ...'), and a deontic modal (imperative 'take a stick ...', hortative 'you should take a stick ...', obligatory 'you must take a stick ...'). It is therefore possible that the relevant sequence in (573) began as an indicative with generic 2Sg subject, then "lapsed" into a pragmatically more appropriate weak deontic form using the subjunctive without an explicit trigger. For a somewhat different type of indicative-to-subjunctive shift, see discussion of (574) in §9.6.8.

9.6.7 Multiple subjunctive clauses

Many of the examples above show an overt subjunctive trigger followed by a single subjunctive clause. However, in texts we often find a string of subjunctive clauses bound to a single subjunctive trigger. Because of this, the subjunctive has an important function in parsing text. Schematically, given a sequence of the type T X_{Subj} Y_{Subj} Z_{Indic}, where T is a subjunctive trigger and X, Y, and Z are the next three clauses, the subjunctive mood marking in X and Y indicates that both of these clauses are bound to T, while the indicative clause Z is clearly outside the scope of T. If Y had been Indic, it too would have been interpreted as outside the scope of T. Consider (572).

- (572) ... *ka didii ga [a ga] hal [[a ma yekuwa]*
 ... Inf roll 3SgO [3Sg on] until [[3SgS **Subju** be-firm]
[a ma mey-ndi ga gaabi]
 [3SgS **Subju** have-Caus 3SgO force]
 '... to roll (=tie) it_x (=rope) around it_y (=crate), so that it_x is tight and
 it_x gives it_y strength.'

Here the subjunctive trigger is *hal* 'so that'. The fact that both immediately following clauses ('be tight' and 'give it strength') are subjunctive indicates that both are under the scope of *hal*. The free translation shows how English relies on the conjunction *and* to help make the scope relationships clear. (Prosodic clues are also important in both languages.)

The clause juxtaposition in (572) is still rather simple, but in other textual examples we get discontinuous subjunctive clauses bound to a single subjunctive trigger, with intervening indicative clauses of various sorts. In (573), an extended chunk of reported speech begins with a subjunctive clause (jussive), then shifts to indicative (reported assertion), then back to the subjunctive (another jussive).

- (573) *ngu har a se kaa [a ma fur ngu],*
 LogoSgS say 3Sg Dat that [3SgS **Subju** release LogoSgO],
ngu ta—, [ngu na či bara atakurmi], moreyda,
 LogoSg Top—, [LogoSgS Neg be except A], now,
[a ma fur ngu]
 [3SgS **Subju** release LogoSgO]
 '(The dwarf_x said) it_x had told him_y to set it_x free, it_x—, (that) it_x was
 none other than Atakurmi (=dwarf), now, and to set it_x free.'

Note that the free translation given is rather shaky English, where jussive and indicative segments of reported speech under the same quotative verb do not mix well.

9.6.8 Further epistemic subjunctive constructions ('maybe')

Consider now a construction of the schematic type 'X, or maybe Y' where X and Y are clauses and where Y expresses a less likely alternative to X. Such constructions often appear with ordinary indicative clause X followed by a subjunctive clause Y, as in (574). The Y clause is often added as an afterthought.

- (574) *nda n bun, boro yo o bana ga*
 if 2SgS die, person Pl Impf pay 3SgO
[wala ni ije yo ma bana ga]
 [or 2Sg child Pl **Subju** pay 3SgO]
 'If you die (with a debt), the relatives will pay it, or maybe your kids
 will pay it.'

We also have examples like (575), where a subjunctive clause denoting a hypothetical eventuality functions as one argument of equational quasi-verb *či* 'be':

- (575) *a-meer či [i ma har [ni koy...]]*
 Absol-ugly be [3PIS Subju say [2SgS go ...]]
 'The ugly thing is (=would be) that they say that you went ...'

Another way to say 'maybe X' with X a clause is to say *a goo a ra*, literally 'it is in it' (i.e., 'it is in the realm of possibility'), and follow this with a subjunctive clause expressing the propositional substance. An example is (576).

- (576) *[a goo a ra] [a ma nafa ni]*
 [3SgS be 3Sg Loc] [3SgS Subju benefit 2SgO]
 'It could be that he will do good things for you.'

9.7 Infinitival VPs and serial verbs

In this section we begin our analysis of infinitival VPs, which consist of Inf morpheme *ka* plus a VP (without subject NP or any MAN morphemes). Examples of Inf VPs are *ka koy* 'to go' and *ka noo ga i se* 'to give it to them'. Infinitival complements lack Impf or Subju markers and cannot take normal negation; for a rough functional equivalent of negation see the discussion of serial-verb *jen* in §9.7.6.

The regular constructions involving Inf *ka* can be classified as in (577).

- | (577) | <u>first part</u> | <u>second part</u> | <u>comments</u> |
|-------|-------------------|--------------------|---------------------------------|
| a. | VP | Inf + VP | event sequence |
| b. | serial verb | Inf + VP | common serial-verb pattern |
| c. | VP | Inf + serial verb | less common serial-verb pattern |
| d. | verb | Inf + verb | verb-verb compound |
| e. | NP | Inf + VP | in certain idiomatic phrases |

By "serial verb" we mean a verb that is specialized to occur in combination with a fuller VP, which we will call the "substantive VP." Most serial verbs occur in pattern (577b). The less common pattern (577c), where the substantive VP precedes the specialized serial verb, is found with *ben* 'end, finish' (§9.7.5) and in the comparative construction with *bisa* 'exceed' (§9.7.8). The full VP represents the core scenario ('boy kill dog'), while the attached serial verb adds a grammatical category (aspect, mood), motion, or a higher predicate (e.g. 'try').

In the following sections we consider in turn the various formal subtypes shown in (577a-c,e). Several sections are devoted to serial verbs, which encompass several distinct semantic complexes. For the relatively few verb-verb compounds of type (577d), see §6.3.2.

Notably absent from these sections are desideratives ('I want to go'), verbs of allowing and preventing ('I let him eat,' 'I prevented him from eating'), and for the most part purposives ('I slaughtered the sheep in order to eat it'). Though these often

take infinitive form in English and other familiar languages, they are expressed in KCh by finite subjunctive clauses, e.g., 'I want that I go' (§9.6).

Certain serial-verbs in pattern (577b) take zero or *ta* instead of *ka* as the Inf marker. See (§9.7.2) for a full inventory of serial verbs and of their syntactic peculiarities.

Rarely, Inf *ka* is used to overtly nominalize a VP which is fronted as a focused NP constituent. See §4.3.5.

Infinitival VPs cannot be conjoined by *nda* 'and', and cannot be complements of adpositions (e.g. preposition *nda* 'with' or Dative postposition *se*). However, *wala* 'or' may be used, as in (578).

- (578) *a ma si koy har ngu o guna gi*
 3SgS Subju Neg go say LogoSgS Impf see 3PIO
ka jow ferey ka warra gi [nda ga]
 Inf take brick Inf throw 3PIO [with 3SgO]
wala [ka jow bundu] ka har ...
 or [Inf take stick] Inf say ...
 'He should not go and think that he sees them, and take a brick and
 throw it at them, or take a stick and think (intend) ...'

9.7.1 Infinitival VPs in event sequences

There is a device used selectively in narratives whereby two or more successive events with shared subject NP are expressed by an initial main clause followed by one or more infinitival VPs. Consider the sequence in (579).

- (579) E1 *yer o taasi ka dam [a ra] fune, hal yer ma bisa,*
 1PIS Impf seek Inf make [3Sg Loc] hole, until 1PIS Subju pass,
 E2 *ka koy ganda,*
 Inf go ground,
 E3 *ka filla ka koy too [dow foo di]*
 Inf repeat Inf go arrive [sand one Def]
 '(E1) We try to make a small hole in it (=limestone deposit), so that
 we go through; (E2) and (we) go into the ground; (E3) and (we)
 again reach a (layer of) earth (under the limestone).'

There are two ways to construe the syntax. In one, the events E2 and E3 are parallel to the event E1, but are attached to E1 in the form of infinitival VPs (taking advantage of the fact that the underlying subject NP is shared). The alternative construal is that E2 and E3 are really parallel to the infinitival VP *ka dam ...* within E1, all three being embedded in parallel under the serial verb *taasi* 'seek'. Another example of this ambiguous type is (580).

- (580) E1 ... *yer o duu ka kaa ta goro*,
 ... 1PIS Impf proceed Inf come Inf sit,
 E2 *ka jafa-jafa ga*
 Inf carve-carve 3SgO
 E3 *ka hīsa ga, hal a ma sawa*
 Inf fix 3SgO, until 3SgS Subju be-equal
 '... (E1) we proceed to come and sit, (E2) and (we) work it (=stone),
 (E3) and (we) fix it, well, so that it is smooth-surfaced.'

Again we could take E2 and E3 as parallel either to E1 as a whole, or to the infinitival VP *ta goro* 'to sit' which forms part of E1, following the motion verb *kaa* 'come'. In (579), the two analyses are about equally plausible, but in (580) it seems unlikely that E2 and E3 are subordinated to the motion verb, so I strongly prefer the first analysis. Consider now (581).

- (581) E1 *yer dumbu bargō mee*,
 1PIS cut metal-drum mouth,
 E2 *ka ton gi nda hari*,
 Inf fill 3PIO with water,
 E3 *yer—, yer dam i ra hari-ham di*
 1PIS—, 1PIS put 3Pl Loc water-meat Def
 '(E1) We cut open the metal drums (=former gasoline containers),
 (E2) and (we) filled them with water; (E3) we—, we put the fish in
 them.'

Here E1 contains no internal serial-verb construction, so the only possible analysis is that the events E2 and E3 are parallel to the event E1. Examples (579-81) in combination demonstrate the validity of the infinitival-VP narrative sequence, but also show how difficult it can be to distinguish it from constructions with several infinitival VPs attached to a serial verb.

In KCh narrative, event sequences are normally expressed by strings of complete sentences ('I came, I saw, I conquered'). However, the construction illustrated above, where E1 appears as a full sentence and is then quickly followed by one or more other event predications (E2, ...) in infinitival VP form, is available when the (understood) subject NP remains constant, when the events are in a structured sequence, and when the speaker chooses to accelerate the narrative. A sequence like that in (581) allows the speaker to build up rhythmical energy, and strings like this are especially common in energetic narrative climaxes.

It should be noted that literal translations with English infinitives ('I came, to see, to conquer'), while they partially capture the rhythms, inappropriately suggest purposive clauses. So the most stylistically revealing translations are of the type 'I came and saw and conquered,' but it should be understood that the KCh infinitival VPs do not include MAN marking.

9.7.2 Inventory of serial verbs

The few serial verbs in (582) follow the substantive VP. The much larger set of serial verbs in (583) precede the substantive VP. Note the *ta* after *kaa* 'come' in (583e).

(582)	<u>Inf plus SerV</u>	<u>gloss as serial verb</u>	<u>gloss as simple verb</u>	
	... <i>ka ben</i>	finish VP-ing	end, be used up	
	... <i>ka bisa</i> ...	VP more than ...	pass, go past, go on	
	... <i>ka jinaa</i> ...	VP before ...	precede	
(583)	<u>SerV</u>	<u>Inf</u>	<u>gloss as serial verb</u>	<u>gloss as simple verb</u>
a.	<i>taasi</i>	<i>ka</i>	'try to VP'	'seek, look for, try to get'
	<i>yedda</i>	<i>ka</i>	'consent to VP'	'consent, accept'
	<i>lobbe</i>	<i>ka</i>	'VP as one pleases'	'do as one pleases'
	<i>niya</i>	<i>ka</i>	'intend to VP'	(noun <i>anniya</i> 'intention')
	<i>wir</i>	<i>ka</i>	'plan to VP, seek to VP'	'seek, plan, try to get'
b.	<i>hima</i>	<i>ka</i>	'ought to VP'	(cf. <i>hima-nda</i> 'resemble')
	<i>hin</i>	<i>ka</i>	'can VP, is able to VP'	'master, overpower'
c.	<i>baa</i>	<i>ka</i>	'be about to VP'	'want' (with subjunctive)
	<i>sinti</i>	<i>ka</i>	'begin to VP'	'begin'
	<i>bey</i>	<i>ka</i>	'have ever VP-ed'	'know'
	<i>faati</i>	<i>ka</i>	'have already VP-ed'	'pass away (=die)'
	<i>kokoro</i>	<i>ka</i>	'have VP-ed recently'	'be the last,+ most recent'
	<i>čindi</i>	<i>ka</i>	'keep VP-ing'	'remain'
	<i>dooney</i>	<i>ka</i>	'be used to VP-ing'	'do frequently or usually'
	<i>yee</i>	<i>ka</i>	're-VP, VP again'	'return, go back'
	<i>filla</i>	<i>ka, Ø</i>	're-VP, VP again'	'repeat, narrate'
	<i>duu</i>	<i>ka</i>	'proceed to VP'	'get, earn'
	<i>jow</i>	<i>ka</i>	'VP energetically'	'take, take possession of'
d.	<i>hīsa</i>	<i>ka</i>	'VP very much, VP a lot'	'fix, make (well), prepare'
	<i>laafriiti</i>	<i>ka</i>	'VP a hell of a lot'	(oath with emphatic force)
	<i>jen</i>	<i>ka</i>	'fail to VP, not VP'	'fail at'
	<i>moggo</i>	<i>ka</i>	'fail (be unable) to VP'	'fail at, lose to'
	<i>dinaa</i>	<i>ka</i>	'forget to VP'	'forget'
	<i>faaba</i>	<i>ka</i>	'help X to VP'	'help'
e.	<i>koy</i>	<i>Ø</i>	'go and VP'	'go'
	<i>kaa</i>	<i>ta</i>	'come and VP'	'come'
	<i>dira</i>	<i>ka</i>	'go along VPing'	'walk, travel, depart'
	<i>tun</i>	<i>ka</i>	'get up (and go) and VP'	'get up, get up and go'
	<i>jur</i>	<i>ka</i>	'run and VP, VP running'	'run'
	<i>jiti</i>	<i>ka</i>	'VP abruptly, hasten to VP'	'be startled, rush'
	<i>key</i>	<i>ka</i>	'stop and VP'	'stop, stand'
	<i>biyaa</i>	<i>ka</i>	'VP in early morning'	'go in early morning'
	<i>hoy</i>	<i>ka</i>	'VP in mid-day, VP all day'	'spend mid-day'
	<i>hanna</i>	<i>ka</i>	'VP at night, VP all night'	'stay up late at night'

In the following sections we discuss these groupings in turn.

For the occasional use of *wala* 'even' as a serial verb, see (424b) in §8.5.9, above.

9.7.3 Control verbs

In this section we exemplify cases where the serial verb appears to denote a separate eventuality (usually an act of will) in which the eventuality denoted by the infinitival VP complement is embedded. By contrast, most of the serial verbs mentioned in later sections do not denote a separate eventuality. The boundary between this class and some of the others to follow is gradient. See the list (583a) in the preceding section.

Some of the volitional verbs (*taasi* 'seek', *yedda* 'consent') can also occur with noncoreferential subjects, in which case subjunctive rather than infinitival VP complements are required (§9.6).

In (584) we give examples of two of these verbs with infinitival VP complements, which presuppose that the (implied) subject of the lower verb is coreferential to the subject of the matrix clause.

- (584) a. *yer o taasi [ka dam [a ra] fune]*
 1PlS Impf **seek** [Inf do [3Sg Loc] hole]
 'We try to make a hole in it (stone).'
 b. *a si yedda [ka ŋaa ga]*
 3SgS ImpfNeg **consent** [Inf eat 3SgO]
 'He can't bring himself to eat it.'

In (585) we illustrate the other less common control verbs recorded with infinitival VP complements. They seem to have the same syntax as the verbs in (584).

- (585) a. *ay lobbe [ka dam ga]*
 1SgS **do-brazenly** [Inf do 3SgO]
 'I did it as I pleased.'
 b. *yee niya [ka koy]*
 1SgS Impf **intend** [Inf go]
 'I intend to go.'
 c. *no-o wir [ka koy alhoor]*
 2SgS-Impf **plan** [Inf go limestone]
 'You(Sg) plan to go (for) limestone.'

We get the same construction with *faaba* 'help' except that there is also a direct object after this verb. 'Help' is semantically unusual in that its syntactic subject and object have joint agentive status in the embedded clause: 'X help Y [for X&Y] to ...' This joint agency suffices to justify the infinitival complement (586). On the other hand, *šendu-ndi* 'X encourage (on) Y [that Y ...]' does not involve joint agency, and this verb takes a subjunctive complement (§9.6.1).

- (586) a faaba cy ka čen huu di
 3SgS help 1SgO Inf build house Def
 'He helped me to build the house.'

9.7.4 Modal serial verbs

hima denotes weak obligation ('should', 'ought to'), while *hin* is the basic verb of capability ('can', 'be able to'). These verbs cannot take subjunctive complements.

- (587) a. *no-o hima [ka koy alhoor]*
 2SgS-Impf should [Inf go limestone]
 'You ought to go (for) limestone.'
- b. *boro foo go hin [ka goro a maasu]*
 person one Impf can [Inf sit 3Sg amidst]
 'One can sit down inside it.'
- c. *wala fufu waati baana o hin ka kar nee*
 even cold time rain Impf can Inf strike here
 'Even in the winter, rain can fall here.'

As in English, 'can' has both a primary capacitative sense 'is capable of' (587b) and a secondary epistemic sense 'be possible' (587c). However, the latter can also be expressed by *a-a kuboy* (literally, 'it meets') plus subjunctive clause, as in (588).

- (588) a-a kuboy [a ma či kokoy di]
 3SgS-Impf meet [3SgS Subju be chief Def]
 'It's possible that he's the chief.'

9.7.5 Aspectual serial verbs

The basic clause-internal grammatical apparatus specifies only a simple imperfective vs. (unmarked) perfective distinction. Even this opposition is neutralized in subjunctive clauses. More precise aspectual notions can be expressed by combining the substantive VP with one of the serial verbs listed in (583c) in §9.7.2, above.

Most of these serial verbs precede the substantive VP ('begin to VP', 'set about VP-ing', 'have ever VP-ed', 'have already VP-ed', 'keep VP-ing', 'VP habitually', 'proceed to VP', 'have VP-ed recently', 'VP again'). However, intransitive *ben* 'finish VP-ing' and transitive *jinaa* 'VP before (s.o.)' follow the substantive VP (589a-b).

- (589) a. a hīsa ga yene [ka ben]
 3SgS fix 3SgO 1SgDat [Inf end]
 'He has finished fixing it for me.'
- b. a koy [ka jinaa ni]
 3SgS go [Inf precede 2SgO]
 'She went before you (did).'

For *ben* this ordering is iconically justified by natural temporal sequencing: 'I finished dancing' = 'I danced, then I stopped.' *ka jinaa...* can also take a subjunctive complement denoting a forestalled event (§9.6.1). We now exemplify the pre-VP serial verbs, beginning with the inceptives *baa* 'be about to' and *sinti* 'begin' (590).

- (590) a. *nda boro baa [ka hīsa attey moreyda]*
 if person want [Inf fix tea now]
 'if one is about to prepare tea now'
- b. *ay sinti [ka doon]*
 1SgS begin [Inf sing]
 'I began to sing.'

That *baa* 'want' has a special sense 'be about to' as serial verb is shown by examples with inanimate subjects ('the wall wanted to [=was about to] collapse'). For 'want' plus a subjunctive complement clause, see §9.6.1.

Next we have some serial verbs which specify that the core eventuality occurred before the temporal reference point: *bey* 'know' ('have ever VP-ed'), *faati* 'have already VP-ed', and *kokoro* 'have VP-ed recently'. Examples in (591).

- (591) a. D: *aywa, ndooso woo, ni bey*
 well, pick-ax Dem, 2SgS know
[ka guna nan kaa i-i kar ga]?
 [Inf see place Rel 3PIS-Impf hit 3SgO] ?
 'Well, this (type of) pick-ax, have you(Sg) ever seen where they forge it?'
- H: *ay guna nan kaa i-i kar ga yaa*
 1SgS see place Rel 3PIS-Impf hit 3SgO Emph
 '(Yes) I have seen where they forge it.'
- b. *ay na bey [ka guna ga]*
 1SgS Neg know [Inf see 3SgO]
 'I have never seen him (her, it).'
- c. *a faati [ka dam gi]*
 3SgS pass [Inf put 3PIO]
 'He (=God) has already determined them.'
- d. H: *a ma gar a na faati [ka hantum]*
 3SgS Subju find 3SgS Neg pass [Inf be-written]
 'It may be that it (=rain) has not already been written (=fated).'
- D: *a na hantum jinaa*
 3SgS Neg be-written first
 'It hasn't been written yet.'
- e. *haya nono kaa daame daa nga kokoro*
 thing it-is Rel elegance Emph SFoc be-recent
[ka dam [a ra] moo]
 [Inf put [3Sg Loc] also]
 'It (=mint) is something that [elegance (=fine living)] [focus] has recently been introducing into it (=tea).'

bey 'know' is used in experiential perfects, which nicely fits its basic sense. As a serial verb it is most common in negatives ('I have never ...') as in (591b), and questions ('have you ever ...'), as in D's query in (591a). Note that H's response in (591a) omits *bey*, just as 'ever' is omitted in the corresponding translation. The translation 'have never' in (591b) shows that the negation takes scope over the experiential perfective ('it is not the case that [I have ever seen him]').

faati 'pass' (<Ar.) is uncommon as a simple verb (cf. *bisa* 'pass'), but is more common as a serial verb meaning 'already', as in (591c). A negative takes scope over it, as in (591d), giving the sense 'not [... already]'. This is close to the sense 'not yet', but the usual way to express this is negation plus *jinaa* 'first, for now', which is fact is used in D's repetition of H's point in (591d).

Serial verbs expressing habituality or iteration are *čindi* 'remain', *dooney* 'do habitually', *yee* 'return', and *filla* 'repeat'. In all cases the serial-verb use is closely related to the core lexical sense. Examples are in (592a-h).

- (592) a. *ije-keyna di o čindi [ka jafa yene]*
 child-small Def Impf **remain** [Inf cut 1SgDat]
 'The boy keeps cutting (the stone) for me.'
- b. *maa ŋga či wirči di yo kaa dooney*
 what? SFoc be disease Def Pl Rel **do-usually**
[ka din farka di yo]?
 [Inf seize donkey Def Pl]?
 'What are the diseases that commonly afflict the donkeys?'
- c. *a si yee [ka filla [hīsa haya foo koyne]]*
 3SgS ImpfNeg **return** [Inf **repeat** [do-well thing one again]]
 'It (=crumbly limestone) will not again be good for anything.'
- d. *bara ye yee [ka koy [kow kūfa di]]*
 must 1SgS-Subju **return** [Inf go [remove curiosity Def]]
 'I had to go back to remove (=satisfy) the curiosity.'
- e. *a filla [kar koyne]*
 3SgS **repeat** [hit again]
 'It began raining again.'
- f. *ni assobon di si filla [hin gi koyne]*
 2Sg body Def ImpfNeg **repeat** [master 3PIO again]
 'Your body won't overcome them (disease, fatigue, caffeine) again.'
- g. *a si filla [yee [ka marey farka di banda di]]*
 3SgS ImpfNeg **repeat** [**return** [Inf hurt donkey Def back Def]]
 'It (=crate) will not again hurt the donkey's back.'
- h. *a si hin [ka filla [ka ŋaa]]*
 3SgS ImpfNeg can [Inf **repeat** [Inf eat]]
 'It (=donkey) can't eat any more.'

čindi 'remain' can be used with imperfective aspect, as in (592a), to indicate present-time continuity. However, this serial verb is especially common with unmarked (perfective) aspect, indicating past habitual ('used to'). *dooney* can often be glossed 'be accustomed to', but as (592b) shows it need not have a sentient agent and the most appropriate general gloss is 'do usually'.

yee 'return' is semantically weak, and even in simple motion contexts it nearly always combines with either Centripetal *-kate* in the sense 'come back' (§6.3.3), or with another motion verb in a serial construction, like *yee ka koy* (592d). In the more abstract sense 're-VP, VP again' with a non-motional substantive VP, we generally get either *filla* 'repeat' by itself (592e-f,h) or a combination of *yee* and *filla* in either order (592c,g). *filla* is notable in that it optionally omits the usual Inf *ka* before the following substantive VP. *ka* is absent after *filla* in (592c,e,g), but present in (592h). Both *yee* and *filla* combine easily with a negative in the sense 'not VP again' or 'no longer VP'. In both positive and negative contexts, *yee* and *filla* are often reinforced by the adverbial particle *koyne* 'again' (§11.1.5), as in (592c,e-f).

duu 'get, earn' as serial verb is best glossed 'proceed to VP' or '(and) then VP'. This hopefully captures the flavor of this combination, which indicates sequencing after the previously described event but also adds a little extra foregrounding (593).

- (593) a. *saa foo yo yer o kani i se hawey, hal*
 time one Pl 1PIS Impf sleep 3Pl Dat foodlessly, until
ngi-ye ta ma hin ka ŋaa, musa kaa kuna
 3PlF Top Subju can Inf eat, manner Rel Loc
hal i ma duu [ka goy]
 until 3PlS Subju get [Inf work]
 'Sometimes we sleep on an empty stomach, so they (=donkeys)_x can eat, in a way (such) that they_x may proceed to work (the next day).'
- b. *i-i čindi ka kar, i-i čindi ka kar ga*
 3PlS-Impf remain Inf hit, 3PlS-Impf remain Inf hit 3SgO
hal a mee di ma tefe, hal ma hongu kala,
 until 3Sg mouth Def Subju be-flat, until 2SgSSubju think that,
huri na a kaa, i-i duu [ka siiri-ndi]
 knife Foc 3SgS become, 3PlS-Impf get [Inf bend-Caus
a mee hiŋka di] ka dam ga nda i-tefe
 3Sg mouth two Def] Inf put 3SgO with Absol-flat
 'They (=blacksmiths) keep striking, they strike it (=pick-ax) so that its end flattens, so you might think that it's a knife [*focus*] that it has become; they proceed to bend its two ends, and make it flat.'

In (593a), the point is that the donkeys must be fed so they will be capable of working the next day, even if the donkey driver himself has to starve. The working is subsequent to the eating, and there is some causal connection, but the working is highlighted and is not merely a routine follow-up to the eating. In (593b), the description of the blacksmith's technique is interrupted by the interpolated evaluative comment ('so you might think ... become'), then resumes with a *duu ka* ... sentence ('they proceed to bend ...').

jow ka ... (cf. *jow* 'take') means something like 'do energetically', as in (594). *jow* can also be used with an imperfective indicative complement in the sense 'keep doing (a long time)'; see (503) in §9.5.3.

- (594) *i jow [ka gaani]*
 3PIS take [Inf dance]
 'They danced energetically.'

9.7.6 Quantifying and negative serial verbs

Here we are concerned with serial verbs listed in (583d) in §9.7.2, above, that specify the extent (positive or negative) to which the eventuality in question was realized.

As a simple verb, *hīsa* can mean 'fix, prepare, cook (food), make, make well'. Sometimes it simply denotes production, sometimes it stresses the thoroughness or high quality of the work of production or repair. As a serial verb, the general sense is 'VP very much, VP a lot'. It is common with verbs denoting gradient adjectival qualities, as in (595a), but it also occurs with other kinds of VP denoting measurable activities, as in (595b).

- (595) a. *a hīsa [ka šendu]*
 3SgS do-very [Inf be-difficult]
 'It (=food) has become very expensive.'
- b. *woo čī baana kaa yer hīsa [ka gey-nda—, a činne]*
 Dem be rain Rel 1PIS do-very [Inf endure-with—, 3Sg peer]
 'This was a rain, which we have gone a very long time without the likes of it.'

A much more colorful and slightly vulgar alternative is *laafriiti*, which can be used as a serial verb meaning roughly 'VP a hell of a lot'. This stem (from an Arabic noun denoting a type of djinn) is also used after a noun or adjective as an intensifier ('a hell of a N').

The serial verbs denoting failure to accomplish an expected or intended event are *jen* 'fail at' and *monggo* 'have no power over, fail at'. As serial verbs, *jen* indicates nonperformance of an action, while *monggo* (596c) indicates inability to perform the action. *jen* is most common in the negative 'not fail to VP' (596a) but also occurs in the positive; *monggo* is usually positive (596b). *jen* is etymologically related to the noun *-jerjey* 'lack', used as a compound final (§4.6.5).

- (596) a. *ay jaati si jen [ka mey [a kuna]*
 1Sg self ImpfNeg fail [Inf have [3Sg Loc]
haya kaa yee bey]
 thing Rel 1SgSImpf know]
 'I myself don't fail to have (=am not without) something therein that I know.'

(596, cont.)

- b. *yer jen ka din ga*
 1PIS fail Inf catch 3SgO
 'We failed to catch it.'
- c. *wirči woo ta yer mogo [ka bey haya kaa nono]*
 disease Dem Top 1PIS be-unable [Inf know thing Rel it-is]
 'This disease_x, we have been unable to determine the thing which it_x
 is.'

9.7.7 Motion and time-of-day verbs as serial verbs

For the list, see (583e) in §9.7.2, above. The basic motion verbs *kaa* 'come' and *koy* 'go' are very common with a following VP, but the usual Inf morpheme *ka* is not normally used in these combinations. Instead, *kaa* is extended as *kaa ta ...* 'come and ...', while *koy* is almost always immediately followed by the verb of the following VP. Examples in (597).

- (597) a. *no-o kaa [ta sinji ga hari di mee di ra]*
 2SgS-Impf come [Inf plant 3SgO water Def mouth Def Loc]
 'You(Sg) come and implant it (=millet seedlings) at the edge of the
 water.'
- b. *yee har a se a ma koy [kate farka di yo]*
 1SgSImpf say 3Sg Dat 3SgS Subju go [fetch donkey Def Pl]
 'I (will) tell him to go fetch the donkeys.'

Aside from *koy* 'go', the only other serial verb repeatedly documented with zero Inf marker is *filla* 'repeat' (as serial verb 're-VP, VP again'), which can also take *ka*, see §9.7.5. As it turns out, *koy* is well documented with *ka* in one compound-like combination, *koy ka nan ...* 'go and leave ...' (i.e., 'leave behind ...', 'abandon ...'). One of several textual examples is given in (598).

- (598) *n si hin ka koy [ka nan humbar]*
 2SgS ImpfNeg can Inf go [Inf leave waterbag]
 'You(Sg) can't leave the (goatskin) waterbag behind.'

The expression *koy ka nan ...* 'go and leave ...' is different in one important respect from the more usual type exemplified in 'go fetch' in (597b). In the more usual type, the act of going either precedes the second action ('go fetch') or accompanies it throughout its trajectory ('go sing' = 'go while singing'). In 'go and leave', however, the act of abandoning or leaving behind either immediately precedes the motion, or is coextensive with the onset of motion.

The analysis of *kaa ta ...* 'come and ...' is even more difficult, both morphologically and semantically. The analysis proposed above is that *ta* is just a special variant of the usual Inf morpheme *ka*, used only after *kaa* 'come'. However, *kaa ta* always seems to be pronounced as a unit (without intervening hesitation

pauses or phrase-final prosodic patterning), and one could therefore argue that we should recognize *kaata* as a special allomorph of *kaa* used in serial-verb function, directly preceding (like *koy*) the verb of the following substantive VP. A third possible analysis is that the *ta* is not the Inf morpheme, rather the Fut morpheme *ta*, which elsewhere must follow Impf *o ~ go* and directly precede verbs (§7.2.5).

There is actually some justification for this third analysis, since *kaa ta ...* 'come and ...' often seems to be less a motion construction than a temporal one, indicating a time interval in the future (or following a reference time established by the immediately preceding discourse). In practice, it is difficult to distinguish motional from temporal cases, since in many textual passages both features are plausibly present. However, the sheer frequency of *kaa ta ...* is an indication that the motional sense is rather watered-down. Consider the passage in (599).

- (599) *no-o fari bargu di yo no-o jafa [i dow] di,*
 2SgS-Impf farm swamp Def Pl 2SgS-Impf cut [3Pl sand] Def,
no-o kaa [ta dura [i ra] hayni di]
 2SgS-Impf come [Inf sow [3Pl Loc] millet Def]
 'You(Sg) farm the (inundated) fields; you slash their (=millet plants)
 ground (with a hoe); you come and sow in them the millet.'

Slashing the ground and sowing millet seeds in the slashed spots are normally done as a single operation, by one person or by a pair (one slashing, the other coming behind to drop the seeds). In this light there seems little point in adding 'come' to 'sow' immediately after a clause with 'slash'. It is possible that a better translation would be '... you will then sow ...' (or '... you then proceed to sow ...').

These observations give some credence to the idea that the *ta* in *kaa ta ...* might have some connection to preverbal Fut *ta*. However, *kaa ta ...* occurs freely in perfective as well as imperfective contexts, as in (600), while preverbal Fut *ta* occurs (elsewhere) only after Impf *o ~ go*.

- (600) *sanda war kaa [ta foo a huu-boro di yo]*
 like 2PlS come [Inf greet 3Sg house-person Def Pl]
 'Like, you(Pl) came and greeted his relatives.'

While the connection between preverbal Fut *ta* and the similar morpheme in *kaa ta ...* is intriguing, the evidence is insufficient for a confident morphemic identification. I will therefore continue to gloss *ta* in *kaa ta ...* as an Inf[initive] allomorph.

For substantive VP plus ... *ka kaa* or ... *ka koy*, where the motion verb is the second (not first) part of the serial-verb construction, see §9.7.9.

Other motion verbs are also sporadically used as serial verbs (with *ka*). I have not observed *too* 'arrive' or *hun* 'leave, go from' in such constructions. For *yee* 'return', see §9.7.5. Other motion-related verbs occasionally found in serial-verb function are exemplified in (601).

- (601) a. *a-a* *dira* [ka *tenje* *ŋgu*]
 3SgS-Impf **walk** [Inf head-for LogoSgO]
 '(He_x said:) he_y walked toward him_x.'
- b. *a-a* *tun* [ka *dira*]
 3SgS-Impf **arise** [Inf walk]
 'He got up and went away.'
- c. *a-a* *jur* [ka *kaa*]
 3SgS-Impf **run** [Inf come]
 'It (limestone) comes rushing out.'
- d. *a-a* *jiti* [ka *tun*]
 3SgS-Impf **rush** [Inf arise]
 'It (=crop) rises (=grows) rapidly.'
- e. *i-i* *key* [ka *gaay-gaay* *gi* *nee*]
 3PlS-Impf **stop** [Inf Rdp-restrain 3PlO here]
 'They were stopping to pen them (=sheep) in here.'

Note that some of the combinations in question involve a second verb of motion in the infinitival VP. Such combinations are likely to be semi-frozen and idiomatic, and might be described as compounds. *jur* 'run', for example, seems to occur as serial verb chiefly in *jur ka kaa* 'come running' and *jur ka koy* 'go running'.

Another set of verbs that are commonly combined with a following infinitival VP are verbs denoting actions that take place at particular times of day: *biyaa* 'VP in early morning', *hanna* 'VP all night, VP at night, stay up at night VP-ing', and *hoy* 'VP in the middle of the day'. An example of this construction is (602), and variations with *hanna* and *hoy* are also possible.

- (602) *ay* *biyaa* [ka *koy*]
 1SgS **do-in-morning** [Inf go]
 'I went (away) early in the morning.'

When the sense is durative ('spend the daytime VPing'), the time-of-day verb can be used with a juxtaposed imperfective indicative clause; see (504) in §9.5.3, above.

9.7.8 Comparative constructions

Comparisons ('better than..', 'more than ...') are often expressed with the verb *bisa* 'pass'. (At the end of this section we discuss other comparative constructions.) In the simple motional sense 'pass by (and keep going)', *bisa* is used intransitively or before a PP with postposition *ga* 'by', as in (603).

- (603) *no-o* *bisa* [a *ga*]
 2SgS-Impf **pass** [3Sg by]
 'You(Sg) go past it.'

In comparisons, other constructions involving *bisa* are used. The simplest is a transitive structure in which *bisa* means 'surpass, exceed', as in (604).

- (604) *wala* [*fita di gaabi di*] *ma bisa*
 or [leaf Def strength Def] Subju pass
 [*sukal di gaabi di*] ?
 [sugar Def power Def]?
 '... or that the taste of the tea should exceed the taste of the sugar?'

A more idiomatic translation would be '... or that the flavor of the tea should be stronger than the (flavor of the) sugar?' Note that the lexical head of the subject NP ('strength') must be repeated in the parallel object NP, only the possessors (or compound initials) being changed.

More compact constructions not requiring such duplication are also available. In each of the three parallel sentences in the textual passage (605), the comparison involves the extent to which two groups perform certain activities ('the extent to which A VP's exceeds the extent to which B VP's').

- (605) *a na či [gomni na i-i bisa yer [ka dam]],*
 3SgS Neg be [goodness Foc 3PIS-Impf pass 1PIO [Inf do]],
a na či [saraa na i-i bisa yer [ka saraa]],
 3SgS Neg be [alms Foc 3PIS-Impf pass 1PIO [Inf give-alms]],
a na či [hanga na i-i bisa yer [ka hanga]]
 3SgS Neg be [following Foc 3PIS-Impf pass 1PIO [Inf follow]]
 'It isn't goodness [*focus*] that they surpass us in doing; it isn't alms
 [*focus*] that they surpass us in giving; it isn't the practice (of
 religion) [*focus*] that they surpass us in practicing.'

If we factor out the complicating effects of the nonsubject-focus construction with *na*, each comparison in (605) is of the general type 'A surpass B [to VP]' with infinitival VP following the direct object B.

It is also possible to put *bisa* in an infinitival VP following the substantive predication (606).

- (606) *a-a hīsa ka hin aadama-jje*
 3SgS-Impf do-a-lot Inf overwhelm person
 [*ka bisa [haya kul]]*
 [Inf exceed [thing all]]
 'It really overwhelms humanity, more than anything else (does).'

The first part of (606) is already a strong expression, with *hīsa* 'do a lot, do very much' as a serial verb. The ending *ka bisa ...* may well have been added as an afterthought, as the free translation suggests. This type of construction, with *ka bisa ...* following an already complete and self-standing sentence, is favored in superlatives like (606) where the second comparandum is *haya kul* 'anything', *boro kul* 'anyone', or a similar expression including *kul* 'all, any'.

In such examples with postposed *bisa* phrase, if the preceding clause has multiple arguments, there may be several readings depending on which argument is construed as parallel to the second comparandum expressed as the direct object of *bisa*. An example is (607), where the second comparandum 'you' can be taken as parallel to the giver or to the recipient.

- (607) *a-a* *noo ey ŋaa [ka bisa ni]*
 3SgS-Impf give 1SgO food [Inf exceed 2SgO]
 a) 'She gives me more food than you (give me).'
 b) 'She gives me more food than (she gives) you.'

Still another comparative construction involves a simple clause of the type A VP followed by an instrumental phrase consisting of *nda* 'with' plus the second comparandum. This construction is most typical of simple intransitive predicates, such as the verbs of adjectival quality in (608).

- (608) a. *a boori [nda ay]*
 3SgS be-beautiful [with 1Sg]
 'She is more beautiful than I (am).'
 b. *wala šimoo a yekuwa nda ga*
 even cement 3SgS be-strong with 3SgO
 'Even cement_x, it (=limestone) is stronger than it_x.'

In all asymmetrical comparative expressions found in my data, the first comparandum A (i.e., the subject) is the one that exceeds the second comparandum B. That is, they are all of the form 'A surpasses B' ('A is or does ... more than B'). There is no (nonnegative) construction in common use which reverses the relationship ('A is or does ... less than B'); the speaker simply switches subjects and says 'B is or does ... more than A.' This switch is illustrated in (609), the fuller textual passage containing (604), above. "O1," "O2," and "O3" represent mutually exclusive options.

- (609) *aywa attey woo nda—, moreyda n jaraa-ndi ga*
 well tea Dem if—, now 2SgS boil-Caus 3SgO,
a wane i-boyro di či
 3Sg Poss Absol-good Def be
 O1 *sukal di ma hīsa ka mom [a ra],*
 sugar Def Subju do-a-lot Inf be-felt [3Sg Loc],
 O2 *wala a ma sawa [a ra],*
 or 3SgS Subju be-equal [3Sg Loc]
 O3 *wala [fita di gaabi di] ma bisa [sukal di gaabi di]?*
 or [leaf Def power Def] Subju pass[sugar Def power Def]
 'Well, this tea, if you(Sg) now have boiled it, is the best thing for it
 (O1) that the sugar_x be very strongly tasted in it (beverage),
 (O2) or that it_x be equal in it (beverage),
 (O3) or that the taste of the (tea) leaves exceed that of the sugar_x.'

The three options are of the schematic types (O1) 'A is more than B,' (O2) 'A equals B,' and (O3) 'A is less than B.' In English, the sequence could be expressed without changing the order of the comparanda, facilitating syntactic reduction: 'should the flavor of the sugar be more than, equal to, or less than that of the tea leaves?' In KCh, however, the O3 option requires reversal of the ordering ('B is more than A') if the *bisa* construction is adhered to.

Another option for 'A is less than B' is a main-clause negation plus an attached infinitival VP with *too* 'attain, reach, be the equal of', as in (610). Note that the infinitival VP is included in the scope of the negative, otherwise the translation would be 'I equal him in (extent of) not eating.'

- (610) *ay* *si* *ɲaa* [*ka* *too* *ga*]
 1SgS ImpfNeg cat [Inf attain 3SgO]
 'I do not equal him in eating'. (= 'I eat less than he [does].')

The more basic function of this verb *too* 'attain' is to express equality of the two comparanda in some respect, but another verb *sawa* 'be equal' is also possible. *too* in egalitarian comparative contexts is strictly a transitive verb, but *sawa* without further derivation is intransitive. Therefore the construction with *too* is of the type 'X equal Y (in ...)' (611a), while that with *sawa* is of the type 'X and Y be equal (in ...)' or, with the two comparanda merged into a plural, 'they_{xy} be equal (in ...)' (611b). However, *sawa* can be transitivized by adding *-nda* 'with' as a derivational suffix (§6.2.5), resulting in a construction syntactically parallel to that with *too* (611c).

- (611) a. *yee* *too* *ga* *gaabi*
 1SgSImpf attain 3SgO strength
 'I am equal to him in strength.'
 b. *yer* *o* *sawa* *jiiri*
 1PIS Impf be-equal year
 'We are of the same age.'
 c. *yee* *sawa-nda* *ga* *njerfu*
 1SgSImpf be-equal-with 3SgO money
 'I am equal to him in money (=wealth).'

The three examples in (611) illustrate the use of final bare nouns ('strength', 'year', 'money') playing the Z role in 'X and Y are equal with respect to Z.' This construction is regular, and causes no interpretive problems since a handful of high-frequency nouns are very common in the Z role (two others are *key* 'height' and *hinne* 'amount, size'). The bare nouns are best thought of as truncated adverbial expressions. We get occasional examples with either an overt Loc postposition (612a-b) or an overt Instr-Comit preposition *nda* (612c).

- (612) a. *yee sawa-nda Jeff [jiiri ra]*
 1SgSImpf **be-equal-with** J [year Loc]
 'I am the same age as Jeff.'
- b. *maa ra no-o too ga?*
 what? Loc 2SgS-Impf **attain** 3SgO
 'In (respect to) what are you equal to him?' [cf. (9c)]
- c. *maa_x na n bisa ga [nda t]?*
 what? Foc 2SgS **surpass** 3SgO [with *t*] ?
 'What_x do you surpass her [in *t*_x] ?'

(613) shows that the same bare-noun complement seen in (611a-c) is also used with *bisa*. (613) additionally illustrates the use of a universal quantifying PP ('in all the town') in superlative comparisons.

- (613) a *bisa [koyra di kul] njerfu*
 3SgS **exceed** [town Def all] money
 'He is the richest (person) in all the town.'

It is also possible for the Z expression in an egalitarian comparison to be a complete VP denoting an eventuality type, just as was the case with asymmetrical *bisa* comparatives in (605-7). With *too*, *sawa*, and *sawa-nda*, the usual pattern is for the comparative expression to be added as an infinitival VP with Inf *ka* to the main predication, as in (614), which is therefore structurally parallel to (606-7) rather than (605).

- (614) *yee mey njerfu [ka too ga]*
 1SgSImpf have money [Inf **attain** 3SgO]
 'I have as much money as he (does).'

9.7.9 *ka kaa* and *ka koy* after VP or noun

In §9.7.7 we showed how *kaa* 'come' and *koy* 'go' can be used as serial verbs preceding a substantive VP. It goes without saying that *kaa* and *koy* can also occur in substantive VPs following another serial verb like *hin* 'can' or *hima* 'should', since substantive VPs are basically open-ended. When *kaa* and *koy* occur in substantive VPs, they are understood in their normal lexical sense and are often followed by locational expressions.

However, the minimal infinitival VPs *ka kaa* and *ka koy*, without further following material, also occur in specialized uses when following an ordinary, substantive VP. A revealing example is (615), where the two occur in parallel.

- (615) *ngi-ye jow čere [ka koy], ngi-ye jow čere [ka kaa]*
 LogoPlS take friend [Inf go], LogoPlS take friend [Inf come]
 '(He_x said:) They_{xy} took each other that way, they_{xy} took each other this way.'

In other words, 'they wrestled each other this way and that.' *čere* here functions as a reciprocal direct object (§10.B.5-7).

In examples like (615), *ka kaa* and *ka koy* function like adverbials indicating motion and direction. However, there is no sharp break between the normal lexical sense of *kaa* and *koy* and their quasi-adverbial use. *ka kaa* seems more common than *ka koy* in quasi-adverbial function following a substantive VP. This is, one presumes, partly because 'come' provides more concrete directional information than 'go', but it may also reflect the fact that putting *kaa* 'come' before the substantive VP (*kaa ta* VP) can lead to non-motional interpretations, whereas *koy* VP has strictly motional sense (§9.7.7).

The combination *ka kaa* 'to come' is also part of a construction involving identical preceding and following temporal nouns. It is illustrated twice in the passage (616). In both instances, the entire *X ka kaa X* phrase functions as a focalized NP (or adverbial).

- (616) *[jiiri ka kaa jiiri] na i-i guna hari,*
 [year Inf come year] Foc 3PlS-Impf see rain,
[keydiya ka kaa keydiya], na i-i guna hari
 [wet-season Inf come wet-season], Foc 3PlS-Impf see rain
 'Year after year [*focus*] they see (=experience) rain; wet season after wet season [*focus*], they see rain.'

9.7.10 (*ka*) *gar* ... '(to) find ...' plus indicative clause

As noted in §9.5.9, *gar* 'find' is commonly used with following indicative clause, as in 'I found [(that) they had already left].' The referent functioning as subject of 'find' is rarely the subject of, and is often entirely absent from, the embedded clause. Because of this, *ka gar* ... 'to find' is a convenient topic-switching device, as in 'I arrived, to find [(that) they ...].' Free English translations of such passages often involve two main clauses, the second beginning with a logical connective (*but*) or relational adverb (*meanwhile*). Occasionally the *ka* is omitted and we get just *gar* as a kind of topic-switching clause-introducer.

- (617) *keydiya hiŋka wala a-hinja o hin ka dam,*
 wet-season two or Absol-three Impf can Inf be-done,
gar ma na sōwfa wala čee foo?
 find 2SgS Neg replaster even time one?
 '(You mean to say that) two or three rainy seasons can go by, during which you have not even replastered (walls, after rain damage) even once?'

Chapter 10

Anaphora, logophorics, and reported speech

10.1 Reported speech and logophoric pronouns

By “reported speech” we mean the representation of speech or thought attributed to another person, or to the same speaker in a different time and place. There is no systematic difference between reported speech and reported propositional thought, both being regularly introduced by the quotative verb *har* ‘say’.

10.1.1 Reported speech and thought

We have elsewhere (§9.6.3) discussed jussive reported speech (i.e., reports of imperatives and perhaps other strong deontic modals), which take the form of subjunctive clauses. The expression of reported (and other embedded) interrogatives was discussed in §8.2.5. We are concerned in the present chapter with more general issues involving reported speech, including reported narratives and other assertive (indicative) quotations.

Reported thought is often treated exactly like reported speech. In the case of speech, the introductory phrase is commonly of the form ‘A said to B: “...”’ with *har* ‘say’ and a dative PP (‘to B’) preceding the quoted material itself. In the case of reported thought, the introductory phrase is just ‘A said’ with no overt dative PP, though a reflexive Dat occasionally occurs. We will normally use the term “reported speech” loosely to cover both speech and articulate thought.

It is true that reported thought can also be expressed in other ways. Verbs like *hongu* (‘think, believe, remember’) and *kaabu* (in the sense ‘consider’) denote mental rather than speech activity. However, such verbs are generally not used to introduce extended articulate quotations, which strongly prefer *har* ‘say’. Rather, the complement of verbs like *hongu* is normally a simple assertion (e.g., an identificational sentence), and its phrasing is not necessarily attributed to the other party, as in (618).

- (618) *no-o* *guna ga moo hal no-o hongu*
2SgS-Impf see 3SgO also until 2SgS-Impf believe
[*alhoor nono*]
[limestone it-is]
‘You also look at it (=stone), until you are convinced (that) it is limestone.’

With *har*, on the other hand, the wording (except for adjustments of indexicals) is at least nominally attributed to the original speaker or thinker. It does not appear, though, that there are any differences in the syntactic form of the quoted material; complements of *hongu* and other specifically mental verbs show the same indexical behavior as complements of *har*.

The usual distinction between “direct” and “indirect” reported speech is not terribly useful in KCh. The distinction revolves primarily around the verbatim reproduction versus adjustment of indexicals (personal pronouns, spatiotemporal adverbials), and around the retention or omission of the original prosodic features and personal speech characteristics. In KCh, virtually all quotations more than a sentence or two in length show indexical adjustments, above all the use of logophoric pronouns replacing the first person pronouns of the original. On the other hand, even such pronominally adjusted reported speech commonly includes interjections (‘ah!’), especially at the onset.

Occasionally the introductory quotative expression with *har* ‘say’ is omitted, especially in reported thought. The sudden appearance of logophoric pronouns is then the key indicator that one has jumped into a quotative context.

10.1.2 Logophorics and deictic shifts in reported speech

We begin by noting that KCh has no analogue to the tense shifts that typically occur in reported (past) speech in languages like English, where ‘I want a mango’ is reported as ‘she said she wanted a mango.’ The basic KCh VP categories are imperfective and (unmarked) perfective aspect, which require no adjustment due to the temporal displacement of reporting past speech. Schematically, ‘I Impf want [mango one]’ becomes [3Sg say, Logo/3ReflSg want [mango one]].

The most systematic indexical shift in reported speech is the replacement of original first person pronouns by a type of pronoun known as “logophoric,” which is used only for this purpose. In KCh, logophoric pronouns are identical in form to third person reflexive (“3Refl”) pronouns. The basic Logo/3ReflSg pronoun is *ŋgu*, with plural counterpart *ŋgu-yo* or *ŋgi-yo*, the latter variant homophonous to the plural of 3SgF pronoun *ŋga* (§5.8.2, §8.4.2). For analysis of the forms, with further variants, see §3.8.8.

Logo/3ReflSg *ŋgu* – *ŋu* is easy to distinguish from 3SgF *ŋga* in most environments. However, both combine with a following Impf *o* to give phonetic [ŋgo:]. Our transcriptional system uses underlying representations plus a ligature to indicate that contraction (§3.7.1) has occurred, hence we write *ŋgu* *o* or *ŋga* *o* depending on which pronoun is involved. Readers working through published texts presented with this ligature format should appreciate that each such transcription represents an interpretation of the text fragment in question. On occasion a serious analyst of KCh texts may disagree with the transcriber’s interpretation, or conclude that alternative readings are possible.

In interlinear glosses, I not only distinguish between “3F” and “Logo/3Refl” forms, I also try to specify logophoric and reflexive functions of the latter. This functional distinction is often straightforward, but in quite a few textual instances the pronoun in question has both functions. For example, in ‘she_x said [she_x would prepare herself_x],’ ‘herself_x’ is both 3Refl (within its clause) and Logo (coindexed with the quoted speaker). In ambiguous or doubly-marked cases we will use the noncommittal “Logo/3Refl” label in interlinears. It is also possible to have doubly logophoric pronouns, as in ‘she_x said [she_x would tell him [to hit her_x]],’ where the final pronoun

has the same referent as antecedent at two higher levels, but we do not distinguish double from single logophoricity in interlinears.

Examples of (nonreflexive) logophoric pronouns are in (619).

- (619) a. *i-i har [ŋgu-yo gaazwal hay] goo a ra,*
 3PIS-Impf say [LogoPl diesel cost] be 3Sg Loc,
maneevir di yo kaa ŋgu-yo bana kaa šaržee ga ...
 laborer Def Pl Rel LogoPIS pay Rel load 3SgO ...
 'They (=drivers)_x say, the cost of their_x diesel (fuel) is (included)
 therein, (and) the (casual) laborers, whom, they_x pay *t*,, who, load it
 ...'
- b. *i-i kaabu ni moreyda kaa ni moo goo*
 3PIS-Impf count 2SgS now that 2SgS also be
[ŋgu-ye ra], ni či [ŋgu-yo attanaa foo]
 [LogoPl Loc], 2SgS be [LogoPl member one]
 'They (=masons)_x will consider you now that (=as though) you are
 among them_x, (that) you are one of their_x members.'

The logophoric pronoun is used in any syntactic position whatever (e.g. possessor, object of PP, subject of embedded relative). See the following section for more on the syntax. Note also that a single quotative clause with *har* 'say' (or *kaabu* 'consider, reckon') can bind any number of logophoric pronouns. In fact, a single chunk of reported speech may be a long second-hand story, in which case logophoric pronouns can (in theory) be used throughout the narrative.

Logophoric pronouns are not used when the quoted speaker also happens to be the current speaker or hearer. Instead, first or second person pronouns are used in the quoted segment. With first person plural or singular speaker, we get examples like (620a-b). There is no alternative construction.

- (620) a. *yer o har [i se] [i ma noo [yer se]*
 1PIS Impf say [3Pl Dat] [3PIS Subju give [1Pl Dat]
i-dumb-o]
 Absol-meager-Adj]
 'We tell them to give us the part(s).'
- b. *ay har [a ma kate yene mootoo di]*
 1SgS say [3SgS Subju give 1SgDat motorcycle Def]
 'I told him to bring me the motorcycle.'

When the quoted speaker is second person, we likewise usually get a 2Sg or 2Pl pronoun in the quotation (621a). The less common alternative is a "direct" quotation with the original first person pronoun preserved inside the quote (621b). In neither case does coreferentiality with the quoted speaker result in logophoric pronouns.

- (621) a. *ni har yene [ay ma kata mana sukal di]*
 2SgS say 1SgDat [1SgS Subju bring 2SgDat sugar Def]
 'You told me to bring you the sugar.'

- b. *wor o har filaan ta jiiroo yer o bey kaa*
 2PIS Impf say so-and-so Top this-year 1PIS Impf know that
a si hin ngu ganda di,
 3SgS ImpfNeg can 3RefISg land Def,
yer ma kan-ndi [ije-meyre di yo ga] feewa,
 1PIS Subju lie-down-Caus [child-small Def Pl by] group-labor,
yer ma koy dam a se feewa,
 1PIS Subju go do 3Sg Dat group-labor,
yer ma koy faaba ga
 1PIS Subju go help 3SgO
 'You(Pl) (will) say, "(as for) So-and-So_x, this year we know that he
 can't manage his land; let's organize a collective volunteer work
 party among the youngsters, let's go do a collective volunteer work
 party for him, let's go help him.'"

Since logophoric pronouns cannot be coindexed with a quoted speaker who is expressed as a first or second person pronoun, Logo should be thought of as a special type of third person pronoun. However, within the quotation itself it has affinities with first person, since Logo is the reported-speech replacement of a direct-speech first person pronoun.

The relationship of logophoric pronouns to the classic 1st-2nd-3rd persons can also be analysed by studying the normal relative order of two pronouns conjoined by *nda* 'and, with'; see (157) in §5.11.1. Leaving logophoric pronouns aside for the moment, the ordering hierarchy is 1st > 2nd > "3F" > {3Sg, 3Pl}. There are two logical ways, a priori, to fit logophoric pronouns into this system. One would be to take Logo as a relatively high-ranking 3rd person pronoun, preceding ordinary {3Sg, 3Pl} and perhaps even "3F" pronouns but following all 1st and 2nd person categories. The other approach would be to treat Logo as an embedded 1st person pronoun, and so locate it hierarchically ahead of 2nd person. In fact, the data show examples of both possible hierarchizations. The textual example (622a) shows Logo *ngu* following 2Sg, while the elicited example (622b) shows the opposite ordering. Textual example (622c) shows that Logo precedes ordinary 3rd person pronouns, while the elicited (622d) has Logo following a true 1st person pronoun.

- (622) a. *ni nda ngu ...*
 2Sg and LogoSg ...
 '(She_x said:) "you(Sg) and she_x..."'
 b. *a har [ngu nda ni] goo kaa*
 3SgS say [LogoSg and 2SgO] Presentative come
 'She_x said that she_x and you were coming.'
 c. *ngu nda ga ...*
 LogoSg and 3SgO ...
 '(He_x said:) "he_x and she_y..."'
 d. *a har mane [ay na ngu] goo kaa ?*
 3SgS say 2SgDat [1SgS and LogoSgO] Presentative come?
 'Did he_x tell you that I and he_x are coming?'

10.1.3 Logophorics and recursive reported speech

We may formalize an idealized rule for logophoric pronouns on the basis of the data in the preceding section as (623).

- (623) Rule for logophoric pronouns
 Throughout the scope of a quotation Q attributed to a speaker X (who is neither the speaker nor the addressee of the current speech event), any referent coindexed with X is expressed as a logophoric pronoun.

For the possibility of opting out of logophoric pronouns in long quotations, see the following section. For cases involving sloppy (partial) coreference, as in 'he_x said they_{xy} would come' and 'they_{xy} said she_y would come,' see §10.4.2.

It is not at all uncommon for an extended quotation to itself include embedded second-order quotations. Suppose we have a sequence of the schematic type (624).

- (624) X said to Y [Q₁ ... Y said to X [Q₂ ... X ... Y ...]].

If we use pronouns for all occurrences of X and Y, this will be expressed as (625).

- (625) 3SgS say to 3Sg
 [Q₁ ... 3SgS say to LogoSg
 [Q₂ ... LogoSg ... LogoSg ...]].

Consider first that portion of Q₁ which is external to Q₂. In this zone, any mention of X is expressed as LogoSg on the grounds that it is coindexed with the quoted speaker; Y is expressed in this zone as a simple 3Sg pronoun. Within Q₂, which is also part of Q₁, any mention of either X or Y will be expressed as LogoSg, since each is coindexed with a quoted speaker, albeit at different levels. To the listener, the surface structure corresponding to Q₂ in (625) is ambiguous, since each LogoSg pronoun in Q₂ could correspond to either X or Y.

Because Logo is an obligatory category when its conditions are met, the use of ordinary 3Sg or 3Pl pronouns within a quotation specifically indicates that the referent in question is distinct from that of the attributed speaker. Consider (626), a modification of (625) with a 3Sg pronoun in the embedded quotation.

- (626) 3SgS say to 3Sg [... 3SgS say to LogoSg [... LogoSg ... 3Sg ...]].

Within the embedded quotation, the LogoSg pronoun is again ambiguous, being coindexed either to X or Y. The 3Sg pronoun, however, must denote yet a third referent (neither X nor Y).

In (627) we show how LogoSg and 3Sg pronouns interact within a moderately long quotation. In the free gloss, I use masculine 'he' ('him') and neuter 'it' to keep the referents straight, but in KCh there is no gender or animacy distinction in the pronouns. Rather, LogoSg (coindexed to the quoted speaker) and ordinary 3Sg

(specifically not coindexed to the quoted speaker) are used here as indexes. The indexing is exaggerated in this passage by the parallel sentences with roles reversed, but indexing is very important even in less stylistically ornamented quotations. Therefore logophoric pronouns are very important in referential tracking.

- (627) *a har saa di kaa [ɲgu nda ga] kuboy,*
 3SgS say time Def Rel [LogoSg and 3SgO] meet,
a dira ka kaa hal a too ɲgu doo
 3SgS walk Inf come until 3SgS arrive LogoSg chez
a sallam ɲgu ga ɲgu sallam a ga
 3SgS greet LogoSg on LogoSgS greet 3Sg on
a dam [ɲgu kamba ra] kamba
 3SgS put [LogoSg hand Loc] hand
ɲgu dam [a kamba ra] kamba
 LogoSgS put [3Sg hand Loc] hand
a jirfiti ɲgu hal ɲgu jeesi [a ga],
 3SgS tug LogoSg until LogoSgS tilt [3Sg on],
ɲgu jirfiti ga hal a jeesi [ɲgu ga]
 LogoSgS tug 3SgO until 3SgS tilt [LogoSg on]
 'He said, when he and it (=dwarf) met, it came walking up to where he was; it greeted him (and) he greeted it; it put a hand in his hand (=shook hands) (and) he put a hand in its hand; it jerked him until he fell over on it (and) he jerked it until it fell over on him.'

In (628) we have an example of an embedded quotation resulting in double LogoSg pronouns with distinct antecedents, as schematized above. The passage is a small part of an extended second-hand narrative Q1 attributed to the "x" referent ('he' in the free translation), so all "x" mentions throughout are LogoSg. The brief quotation Q2 within Q1 is attributed to the dwarf, the "y" referent ('it' in the free translation), so "y" mentions are LogoSg within Q2 but 3Sg elsewhere. There is also another embedded quotation Q3 attributed to the masculine "x" referent, so "x" mentions in Q3 are doubly logophoric (coindexed to the same speaker X at two distinct quotative levels). The embedded quotations Q2 and Q3 are indented.

- (628) Q1 ... *ɲgu siiti ga, a har [ɲgu se]*
 ... LogoSg squeeze 3SgO, 3SgS say [LogoSg Dat]
 Q2 *ɲgu ma fur ɲgu,*
 LogoSgS Subju release LogoSg,
 Q1 *ɲgu har a se*
 LogoSg say 3Sg Dat
 Q3 *abada! bara addeliil di kaa ga na a din*
 never! must reason Def Rel on Foc 3SgS seize
ɲgu ta, bara a ma har ga
 LogoSg Top, must 3SgS Subju say 3SgO
 '(Q1) ... he_x squeezed it_y; it_y told him_x (Q2) that he_x should let it_y go;
 (Q1) he_x told it_y, (Q3) not at all, the reason_z for which it_y had seized
 him_x, it_y must reveal it_z.'

The main potential problem for the listener is Q2, which has two LogoSg pronouns with distinct referents. Fortunately, Q2 is a subjunctive clause, suggesting that the original utterance was an imperative ('let me go!'), and from here it is an easy step to infer the respective referents.

10.1.4 Pragmatic functions of logophorics and narrative fade-out

In some texts, a long narrative attributed to another speaker is recited. At least in the initial "scenes" of the drama, logophoric pronouns are systematically used for any mention of the quoted speaker, as in the examples given in previous sections. However, in some such texts, the current speaker eventually switches out of the reported-speech mode into a straightforward narrative involving no logophoric pronouns (except in embedded quotations as they arise).

This device is reminiscent of films that begin with a "framing" scene which eventually fades out. An old man is sitting in an easy chair in front of a crackling fireplace, his young grandson on his knee. Grandpa starts talking about his youthful adventures as a Barbary pirate, and launches into a particular adventure. The camera wanders to the mantle above the fireplace and zooms in on a painting of Grandpa in his younger days brandishing a cutlass. This dissolves into an actual moving scene with a real pirate and a real cutlass, and off we go for an hour or two of excitement.

In the case of KCh, one might well ask why a speaker would abruptly drop logophoric pronouns in a narrative, given their reference-tracking functions described in the preceding section. Two rational explanations come to mind. One is that if the narrative includes numerous embedded quotations (e.g., describing thoughts, conversations, or arguments), we might reach a point of "logophoric clutter" of the sort suggested by our analysis of (628), above. However, there is also another factor at work.

In addition to reference-tracking, logophoric pronouns have the function of continuously marking the narrated material as being attributed to another speaker, i.e., as hearsay for which the current speaker does not personally vouch. Of course, it is the initial quotative predication ('Grandpa said, ...') that most directly establishes this deniability, but logophoric pronouns are the only grammatical forms which sustain it throughout the narrative.

Dropping logophoric pronouns midway through a narrative therefore does not seriously jeopardize the current speaker's evidential distance, the initial framing having assigned testimonial authority to another speaker. A shift out of Logo constructions is reasonable in the context of telling an ordinary second-hand story with no special interpersonal complications. However, if the current speaker has especially powerful reasons for maintaining his or her distance from the narrative, the Logo system may be retained to the bitter end of the narrative. In my material, I noticed that the text recounting a neighbor's claimed encounter with a leprechaun-like dwarf (Atakurmi), which the speaker himself had never seen, was scrupulous in maintaining logophoric pronouns to the end, rather like the crime-reporting newscaster who puts *allegedly* in every sentence. This is text 7 in the KCh texts volume, which has footnotes commenting on shifts in logophoric reference.

10.2 Reflexives and reciprocals

Reflexive constructions involve either a possessed form of the noun *bomo* 'head', or the special 3Refl pronouns (identical in form to logophorics). Reciprocal constructions involve the noun *čere* 'mate, friend, peer' (§10.2.5-6). We now consider them in turn.

10.2.1 Compound reflexives (*bomo* 'head')

The noun *bomo* 'head' occurs commonly with a possessor in its literal sense. It is also used in slightly extended function to denote one's intellect or consciousness, as in (629) where it is parallel to *hunde* 'soul, spirit'.

- (629) *lawal di ay na bey,*
 first Def 1SgS Neg know,
ay na kamba ga [ay hunde di ra] gaa,
 1SgS Neg hold 3SgO [1Sg soul Def Loc] indeed,
sanda [ay bomo di kul] nga na jow-kata ga
 like [1Sg head Def all] SFoc Neg take-Centrip3SgO
 'At first I didn't know (it was him), I didn't hold him in my soul
 (=conscious attention) at all; that is to say, [my whole head
 (=consciousness)] [focus] didn't register it.'

As a further extension, possessed forms of *bomo* are used as composite reflexive pronouns like English forms in *-self*, as in *ay bomo* 'myself'. These forms occasionally take Def *di* but usually omit it, though they are semantically definite. Plural counterparts do not take Pl morpheme *yo*, hence *yer bomo* 'ourselves', literally 'our head' rather than 'our heads'.

The usage of *bomo* reflexives is limited by the existence of an alternative simple reflexive pronoun for the third person (3Refl), discussed in the following two sections. In general, *bomo* reflexives are more highlighted than the simple reflexives. One might think of the difference as follows: simple reflexives are unstressed anaphoric pronouns coindexed to an antecedent, while the *bomo* reflexives are introduced as "new" discourse referents that are then explicitly connected to an antecedent.

Moreover, taken literally, 'you' and 'your head' are not quite identical. The literal sense of the *bomo* reflexive as a possessed body part is less fully suppressed, even in reflexive contexts, than in English counterparts. In other words, it may be more accurate to say that 'you' and 'your head' are spatiotemporally inseparable than to say that they are coreferential.

Consider the two 2Sg *bomo* reflexives in (630). The young apprentice who has been working for his master will now be able to work 'with his head' (=on his own); he will bring the master two days' earnings for each days' earnings he 'takes to his head' (=keeps for himself). In both cases, the *bomo* reflexive is highlighted, as the apprentice comes to fill two previously separate and hierarchically asymmetrical roles. The speaker could, in principle, have used another *bomo* reflexive in the possessive 'your ones (=donkeys)' but did not. It appears that *bomo* reflexives are rarely used in

possessor function, perhaps because unnecessary stacked possessives ('the X of the Y of ...') are stylistically awkward (§5.2.2).

- (630) *a-a kamba ni hal han kaa, a-a fur*
 3SgS-Impf hold 2SgO until day Rel, 3SgS-Impf release
ni hin ka goy [nda n bomo],
 2SgS can Inf work [with 2Sg head],
[ni ga] farka di yo, ni nga o koy goy
 [2Sg on] donkey Def Pl, 2Sg SFoc Impf go work
nda [[a wan di yo] nda [n wan di yo] kul],
 with [[3Sg Poss Def Pl] and [2Sg Poss Def Pl] all],
no-o kate [a se] jaari hin ka
 2SgS-Impf bring [3Sg Dat] day two
no-o kate [[ni bomo] se] jaari foo
 2SgS-Impf bring [[2Sg head] Dat] day one
 'He (=master) will take care of you(=apprentice) until the day when
 you can work on your own; he'll release the donkeys into your
 custody; you will go work both with his ones and with your ones
 (=donkeys); you'll bring him two days' (work) (and) you'll bring to
 yourself (=you'll keep) one day's (work).'

Some similar examples are in (631). As (631b) shows, when the antecedent is a third person pronoun (or NP), the corresponding possessive pronoun preceding *bomo* takes 3Refl form (here 3ReflPl *ngi-ye*), obeying the regular rules for use of 3Refl pronouns (see the following sections). (631c) is an apparently similar case, but here *ngi-ye* is LogoPl as well as 3ReflPl since the whole passage is part of a quotation.

- (631) a. *ni kate [[ni bomo] ga] addaruura*
 2SgS bring [[2Sg head] on] disadvantage
 'You(Sg) have brought a problem on yourself.'
 b. *i si naaney [ngi-ye bomo]*
 3PlS ImpfNeg trust [3ReflPl head]
 'They don't trust themselves.'
 c. *yer guna boro yo kaa har ngu-ye guna ga,*
 1PlS see person Pl Rel say LogoPlS see 3SgO,
ngu-ye guna ga, ngi-ye low, ngi-ye na čerbu ga
 LogoPlS see 3SgO, LogoPlS hide, LogoPlS Neg show 3SgO
[ngi-ye bomo] hal a bisa ngu-ye ga
 [Logo/3ReflPl head] until 3SgS pass LogoPl by
 'We found people_x who_x said they_x had seen it (=dwarf); they_x had seen
 it, they_x had lain out of sight, they_x had not shown themselves_x to
 it, until it went past them_x.'

bomo reflexives are especially common after *nda* 'with', presumably in comitative (rather than instrumental) sense. The type *ni ... nda n bomo* 'you(Sg) ... with your head' (= 'you ... by yourself'), illustrated in line 2 of (630), is the standard

way to emphasize the isolation or unassisted independence of a referent in the context of some eventuality. Consider (632).

- (632) a. *yer ta bine nda [yer tun [nda [yer bomo]]] kul,...*
 1Pl Top Top if [1PlS arise [with [1Pl head]]] all, ...
 'As for us, if we get up by ourselves, ...'
- b. a *si hasara [n ga] haya foo nda n ċi*
 3SgS ImpfNeg ruin [2Sg on] thing one if Neg be
ni daa [nda [n bomo di]]
 2Sg Emph [with [2Sg head Def]]
ŋga—, ma jiti [[n bomo] kuna] kul
 SFoc—, Subju be-startled [[2Sg head] Loc] all
 'It (=dwarf) won't hurt anything on you, unless it's you yourself
 [focus] who—, may be startled inside your head.'

(632a) is literally '... we get up with our head.' In (632b) we have 'you with your head' in subject-focus form, with a further Emph *daa*. The second *n bomo* after *jiti* in (632b) may simply be a literal 'your head' since emotions are being discussed. (For an alternative way to express unassisted activity, see *jaati(r)* in §8.5.1.)

Similar constructions with possessed forms of 'head' occur in Maghrebi Arabic.

10.2.2 Simple reflexive pronouns

Leaving aside the rather marked *boro* reflexives (preceding section), we have another syntactic category of reflexives, the forms of which are given in (633).

- (633) Forms of the simple reflexive pronouns
- first and second person: same as the regular forms
 - third person: 3ReflSg *ŋgu*, 3ReflPl *ŋgu-yo ~ ŋgi-yo*

The forms of the 3Refl pronouns are completely identical to those of Logo pronouns; for further variants see §3.8.8. For the many speakers who use *i* rather than *u* vocalism in the Logo/3ReflPl *ŋgi-yo*, this is additionally homophonous to 3PlF. The corresponding singulars are easily distinguished by vocalism (Logo/3ReflSg *ŋgu* versus 3SgF *ŋga*) unless contraction occurs with a following Impf *o*, in which case what we transcribe as *ŋgu o* and *ŋga o*, respectively, are merged as [*ŋgo:*].

We have noted before that the Logo/3Refl pronouns are sometimes overdetermined, in that a given mention of a referent is locally reflexive (coindexed with the subject NP) and is additionally coindexed with a quoted speaker (§10.1.2). Consider the referential patterns (634a-c), where X has a constant reference, and their KCh surface realizations schematized in (635a-c).

ŋgu is 3ReflSg in (635a), and LogoSg in (635b). In (635c), the first *ŋgu* is LogoSg, but the second is both LogoSg (coindexed with the attributed source of the quotation) and 3ReflSg (coindexed with the subject of its own clause).

- (634) a. X saw X's mother.
 b. X said [X is coming]
 c. X said [X saw X's mother].
- (635) a. X see *ŋgu* mother.
 b. X say, *ŋgu* come.
 c. X say, *ŋgu* see *ŋgu* mother.

If we replace any instance of *ŋgu* in (635) by 3Sg *a*, the pronoun is understood as being neither reflexive nor logophoric, i.e., as referentially distinct from X.

When 1st or 2nd person pronouns are involved, there is no overt distinction between reflexive and nonreflexive possessor. Compare 3ReflSg *ŋgu* in (636a) with 1Sg *ay* (636b) and 2Sg *ni* (636c).

(636)	<u>form</u>	<u>translation</u>
a.	<i>a guna</i> [<i>ŋgu ñaa</i>]	'He (She _x) saw his (her) _x mother.'
b.	<i>ay guna</i> [<i>ay ñaa</i>]	'I saw my mother.'
c.	<i>ni guna</i> [<i>ni ñaa</i>]	'You(Sg) saw your mother.'

We could mark the possessors in (636b-c) as [+reflexive], as in (636a), with the proviso that the feature is morphologically vacuous with 1st or 2nd person pronouns.

10.2.3 Reflexive verbs

We will cover reflexive syntax fully in §10.2.4. Here we observe that the 3Refl direct object construction [X see 3Refl] (= 'X saw herself') is highly restricted in KCh. For verbs whose meaning makes it accidental for the same referent to be agent and patient ('see', 'hit', etc.), when this coreferentiality does occur we get the highlighted *bomo* reflexive (for all pronominal persons). However, even *bomo* reflexives (unlike *bomo* in the literal sense 'head') are uncommon in texts in direct object function. It seems that alternative formulations are preferred, e.g., 'I saw my image' or 'I hit my leg.'

There are, however, a number of verbs that occur (some exclusively so) in simple reflexive transitives, with 3Refl or (covertly reflexive) first or second person object pronoun. Those known to me are given in (637).

(637)	<u>verb</u>	<u>usual gloss</u>	<u>gloss as reflexive verb</u>
	<i>barraku</i>	'be welcomed' [intr]	'be welcomed!'
	<i>bere</i>	'flip, change' [intr or tr]	'convert oneself (into ...)'
	<i>haabu</i>	'pack up' [intr]; 'gather' [tr]	'get ready, be packed'
	<i>hisa</i>	'fix' [tr]; 'be made' [intr]	'get ready'
	<i>jeesi</i>	'put alongside' [tr]	'bring oneself alongside'
	<i>jirfiti</i>	'snatch' [tr]	'wrench oneself away'
	<i>kufu</i>	'suds' [noun]; 'lather' [intr, tr]	'lather up, get frothy'
	<i>lilendi</i>	'get ready' [intr], 'prepare' [tr]	'get ready'
	<i>taaram</i>	'embellish, beautify' [tr]	'beautify oneself'

Examples are in (638). *lilendi* in (638e) has the same gloss with or without the 3Refl pronoun *ŋgu*.

(638)	<u>form</u>	<u>translation</u>
a.	<i>a bere ŋgu [nda čirow]</i>	'He turned himself [into a bird].'
b.	<i>barraku ni!</i>	'Be welcomed! (sg)'
c.	<i>yer haabu yer</i>	'We got (ourselves) ready.'
d.	<i>wo hīsa war [ka koy]!</i>	'You(Pl) get ready [to go]!'
e.	<i>a lilendi (ŋgu) [ka koy]</i>	'She got ready [to go].'
f.	<i>i warra ŋgi-yo</i>	'They threw themselves.'

The use of simple reflexive pronouns like 3Refl in direct-object function is therefore basically limited to verbs where agent-patient merger is common, and indeed where the two roles are not sharply distinguished in the event structure. Even within this semantic type, reflexive transitive verbs are nowhere near as common as in French, Spanish, and other European languages.

10.2.4 Syntax of reflexive pronouns

In this section we complete the analysis of the syntactic configurations requiring reflexive pronouns. We will focus on third person constructions, since only 3Refl is overtly distinct from corresponding nonreflexive pronouns. For first and second persons we can imagine covert [+reflexive] marking if we wish, but no empirical issue is involved. We consider in turn simple clauses, then conjoined NPs beginning with (646), then adverbially juxtaposed clauses beginning with (647), then relative clauses beginning with (650), and finally subjunctive clauses beginning with (654).

The configuration accounting for most examples of reflexives is of the general type (639).

(639)	[_S NP _x - verb - ... NP _x ...]
	where the first NP _x is the subject of the sentence S

We will refer to the subject NP_x as the "antecedent," and to the postverbal NP_x as the "coindexed NP." If the antecedent succeeds in "binding" the coindexed NP, we get an anaphoric (3Refl) pronoun. We first consider simple cases where the coindexed NP is not part of an embedded clause, and is not a possessor to another NP. This applies to direct objects, objects of postpositions, and complements of prepositions like Instr-Comit *nda* 'with'.

In these syntactic functions, the coindexed NP is usually realized as a *bomo* reflexive, in which case the anaphor is expressed as the 3Refl "possessor" of *bomo* 'head'. In §10.2.1, above, (630) shows instances following Instr-Comit *nda* (line 2 of KCh text) and preceding Dat postposition *se* (line 6), while (631b-c) illustrate direct objects. *bomo* is indeed normal in all of these syntactic functions.

The less common alternative is to use simple pronouns, including 3Refl for third person. I have no textual or elicited examples of such pronouns following *nda* 'with,

and'. In direct object function, we noted in the preceding section that the construction with simple reflexive pronoun such as 3Refl occurs only with a handful of verbs for which subject-object coreference is very common. Likewise, pronouns such as 3Refl are used instead of *bomo* reflexives in certain PPs where coreference to the subject NP is expectable rather than accidental. The chief example of this is *doo* 'at (the place of), chez', which occurs very often in combinations like (640) with a motion or locational verb and with a subject NP coreferential to the complement of the postposition.

- (640) *i koy [ŋgi-ye doo]*
 3PlS go [3ReflPl at]
 'They_x went to their_x home.' (= 'They went home.')

One can say *i koy [ŋgi-ye bomo doo]* 'They_x went to their_x own home,' but except in contrastive contexts this phrasing is awkward since it excessively highlights the coreferentiality. A more idiomatic English equivalent (*they went home*) omits the second pronoun entirely.

However, if the possessor of one of these postverbal NPs is coreferential to the subject, this possessor is regularly expressed as a simple reflexive pronoun such as 3Refl. The basic pattern is therefore X [_{VP} Verb ... [X's Y]] for some possessed NP Y. This applies to the *bomo* reflexives themselves, since they are formally possessed NPs of the type 'X's head'. When a *bomo* reflexive has a third person antecedent, it takes the form *ŋgu bomo* ('3ReflSg head'), or its plural *ŋgi-ye bomo* ('3ReflPl head'), an example of the latter being (631b) in §10.2.1. This is just a special case of a more general pattern by which simple reflexive pronouns are strongly preferred to the more highlighted *bomo* reflexives in possessor function, whether or not the Poss postposition *wane* is present. Further examples are given in (641), where the possessor is attached to a direct object (641a), a postposition (641b-c), or the complement of preposition *nda* (641d).

- (641) a. *a-a mey [[ŋgu wane] kottu yo]*
 3SgS-Impf have [[3ReflSg Poss] cut Pl]
 'It (stone)_x has its_x cuts (=notches).'
- b. *i-i dam ga [ŋgu-ye huu di ra]*
 3PlS-Impf put 3SgO [3ReflPl house Def Loc]
 'They_x put it in their_x house.'
- c. *a-a jeeje-kate čiiri di [ŋgu farka di ga]*
 3SgS-Impf load-Centrip salt Def [3ReflSg donkey Def on]
 'He_x loads and brings the salt on his_x donkey.'
- d. *a kar ey [nda [ŋgu taam di]]*
 3SgS hit 1SgO [with [[3ReflSg shoe Def]]]
 'He_x hit me with his_x shoes.'

In (642), the 3Refl pronoun is the left conjunct of a conjoined NP which functions as the possessor of a direct object NP ('story').

- (642) *a na wannasu yene*
 3SgS Neg speak 1SgDat
[ŋgu nda atakurmi woo yo] wannasu
 [3ReflSg and A Dem Pl] story
 'He_x did not tell me the story of [himself_x and these Atakurmis (dwarfs)].'

The antecedent subject NP may bind a coindexed 3Refl pronoun in spite of an intervening serial verb, like *dooney* 'do usually' in (643). This is consistent with the more general syntactic fusion of serial verbs with the attached substantive VPs.

- (643) *boro yo goo doodi kaa dooney ka koy-nda*
 person Pl be there Rel do-usually Inf go-with
[ŋgu-yo farka di yo] Élevage
 [3ReflPl donkey Def Pl] veterinary-service
 'There are people_x there who usually take their_x donkeys to the veterinarian.'

If the possessor of the subject NP is coindexed with a postverbal NP, we get nonreflexive 3Sg or 3Pl pronoun rather than 3Refl. In other words, the antecedent must be expressed by the lexical head of the subject NP for 3Refl to be applicable. In (644) we show that a subject possessor cannot serve as antecedent for 3Refl.

- (644) *[a ŋaa] noo ga fuula*
 [3Sg mother] give 3SgO hat
 'His_x mother gave him_x a hat.'

Moreover, one postverbal NP may not serve as antecedent for a second postverbal NP for purposes of binding a 3Refl pronoun. For example, in patterns like X [_{VP} Verb Y [[Y's Z] Postp]] and X [_{VP} Verb [Y Postp] [Y's Z]] the second Y is expressed by nonreflexive pronouns rather than 3Refl, since coindexation with the preceding postverbal Y does not suffice to bind 3Refl. Examples are in (645).

- (645) a. *[a ŋaa] din [a ga] [a kaddasu di]*
 [3Sg mother] take [3Sg on] [3Sg paper Def]
 'His_x mother took from him_x his_x book.'
- b. *ay yee-ndi [a se] [a hāyši di]*
 1SgS return-Caus [3Sg Dat] [3Sg dog Def]
 'I returned to him_x his_x dog.'
- c. *yer o noo gi [i hīsa hay]*
 1PlS Impf give 3PIO [3Pl making cost]
 'We'll give them_x their_x labor fee.'

The pattern by which an antecedent NP binds the possessor of another NP to its right is relevant not only when the antecedent is a subject NP but also within NP conjunctions of the schematic type 'X and [X's Y]' (§5.11.1-2), for any possessed NP Y. In fact we do get 3Refl pronouns in possessive function in this combination, as in

(646a,c). However, if the order of the conjuncts is reversed (a dispreferred but elicitable pattern), we get nonreflexive third person instead of 3Refl possessor (646b).

- (646) a. [ɲga nda [ɲgu ñaa]] koy mowti
 [3SgF and [3ReflSg mother]] go Mopti
 'She_x and her_x mother went to Mopti.'
- b. [[a ñaa] nda ga] koy mowti
 [[3Sg mother] and 3Sg] go Mopti
 'Her_x mother and she_x went to Mopti.'
- c. ay guna [ɲga nda [ɲgu harme di]]
 1SgS see [3SgF and [3ReflSg brother Def]]
 'I saw her_x and her_x brother.'

Recall in this connection that "conjunction" in KCh is more asymmetrical than in English, especially with regard to pronouns (§5.11.1).

This completes our analysis of 3Refl pronouns bound by an antecedent within the same clause (subject NP) or conjoined NP. We now consider the conditions under which 3Refl pronouns can be bound by an antecedent in a preceding or superordinated clause. We begin with the clause juxtapositions described in §9.5.3, where two apparently independent main clauses are directly juxtaposed in such a way that one of them (usually the second) functions in discourse as an adverbial clause: '[you'll pass by dwarf] [you don't know]' = 'you'll pass by a dwarf without realizing it.'

The subject of S_1 is coreferential to the subject of S_2 in (647a) and with a postverbal NP in (647b).

- (647) a. [_{S1} X passed by] [_{S2} X didn't see Y]
 b. [_{S1} X passed by] [_{S2} Y didn't see X]

The regular outputs are exemplified in (648a-b), respectively.

- (648) a. [a hirow] [a na guna ni]
 [3SgS enter] [3SgS Neg see 2Sg]
 'He_x came in without (him_x) seeing you.'
- b. [a hirow] [a ñaa na guna ga]
 [3SgS enter] [3Sg mother Neg see 3SgO]
 'He_x came in without his_x mother seeing him_x.'

In both cases, the coindexed NP is not bound by the subject of S_1 . We get ordinary 3Sg pronominals rather than 3ReflSg for X in S_2 . We also get a simple 3Sg S_2 subject possessor in (648b). We conclude that cross-clause reflexive binding does not occur in such clause juxtapositions.

An apparent counterexample is (649a), repeated from (397a), where the first clause's subject seems to bind the subject of the bracketed second clause. Contrast (649b) where the subject of the second clause is coreferential to a non-subject NP in the first clause.

- (649) a. *i na yce-kate [[ŋgu-ye banda] koon]*
 3PIS Neg return-Centrip [[3ReflPl back] bare]
 'They (=donkeys)_x haven't come back with their_x backs bare
 (=without loads).'
- b. *ay guna gi [[i gaa] koon]*
 1SgS see 3PIO [3PI body] bare
 'I saw them_x naked_x.'

The type (649a) has been verified in elicitation. However, such *koon* phrases are best analysed as adverbial "small clauses" tightly bound to the preceding VP, since negation and other inflectional categories of the main clause include the *koon* phrase in their scope; see discussion of the same example as (397a) in §8.5.2. So there is a reason why (649a) has a 3Refl pronoun while (648a-b) have simple 3Sg pronouns.

We now turn to relative clauses. Here we need to keep track of two potential antecedents—the head NP (which can play any role in the matrix clause) and the subject NP of the matrix clause. The two are sometimes one and the same ('the man_x [who_x hit me] has come'), but need not be ('the man_x saw the boy_y [who_y was eating the mango]').

The head NP is coindexed with some NP within the relative clause. However, this coindexed NP usually appears as zero (we often represent it as a trace, reflecting extraction in the form of the Rel morpheme *kaa*), rather than as a 3Refl (or other) pronoun. Even when the corereferential NP is expressed in the form of a resumptive pronoun, the pronominal category is nonreflexive 3Sg or 3Pl rather than a 3Refl form (§8.3.2-3, §8.3.8). We disregard cases where the pronoun is 3Refl by virtue of coindexation to a clause-mate antecedent, as in 'I saw the dog_x [which_x bit its_x (own) tail],' where 'its' is expressed in KCh by a 3ReflSg pronoun because of its coindexation with the clause-mate subject (not because of coindexation with the head NP of the relative clause).

So coindexation of a relative-clause NP with the head NP does not result in reflexive binding. However, coindexation of a relative-clause NP with the matrix-clause subject (if the latter is not also the head NP) does result in its expression as a 3Refl pronoun under most conditions. This is seen in (650). There are several textual examples involving 3Refl pronouns functioning within the relative clause as subject (650a-b) and direct object (650c). However, 3Refl marking within relative clauses, with matrix-subject as antecedent, is not as rigorous as Logo marking in reported speech. In particular, 3Refl marking seems to be avoided in left or right conjuncts, whereupon we get instead a "3F" pronoun as left conjunct (650d) or a simple third person pronoun as right conjunct (650e). 3Refl marking is also disfavored in complements to PPs (650f), though the informant accepted a 3Refl version ending in *ŋgu beene*. In assessing the use of 3Refl pronouns in this syntactic context, it is essential to weed out examples like (650g-h), where it can be argued that singular *ŋgu* or plural *ŋgu-yo ~ ŋgi-yo* has logophoric function.

- (650) a. *talka moo go koy dey alhoor bakabaka woo daa*
 pauper also Impf go buy limestone debris Dem Emph
allaara hiŋka-hiŋka ŋga moo go čen ga nda
 riyal Rdp-two 3SgF also Impf build 3SgO with
[hay kaa [ŋgu hiŋsa nda salanŋa]]
 [thing Rel [3ReflSgS make with toilet]]
 'A poor man_x, however, goes and buys that (mediocre) limestone debris for two riyals a chunk; he_x too will build it into a thing, which_y he_x has made into an outhouse.'
- b. *a gar ŋgu taalibi-ije hiŋka woo*
 3SgS find 3ReflSg pupil two Dem
kaa ŋgu nan isa di mee
 Rel 3ReflSgS leave river Def mouth
 'He_x found his_x two pupils, whom he_x had left on the side of the river.'
- c. *nda a duu hay kaa tun-ndi ŋgu koyne*
 if 3SgS get thing Rel arise-Caus 3ReflSg again
 'if it (=rain)_x finds something_y which_y raises (=reinforces) it_x again'
- d. *Jeff na gar woo di kaa [ŋga nda X] kar t*
 J Neg find Dem Def Rel [3SgF and X] hit t
 'Jeff_x couldn't find that (guy) whom_y he_x and X (man's name) had hit t_y.'
- e. *ay baba duu huu di kaa ra*
 1Sg father get house Def Rel Loc
[ay nda ga] o ta goro
 [1Sg and 3SgO] Impf Fut sit
 'My father_x obtained a ('the') house in which [I and he_x] will live.'
- f. *Jeff na duu ferey di kaa kam [a beene]*
 J Neg get brick Def Rel fall [3Sg on]
 'Jeff_x couldn't get the brick which fell on him_x.'
- g. *woo se na muso kul kaa addabba či, bara addama-ije*
 Dem Dat Foc manner all Rel animal be, must human
ma bey [muso kaa ŋgu hiŋ ka duu ga nda]
 Subju know[manner Rel Logo[?]SgS can Inf get 3SgO with]
 'For that reason whatever (species) an animal is, a human_x must (certainly) know a way_y in which_y he (she)_x can get (=catch) it.'
- h. *a-a taasi boro kaa [ŋgu nda ga]*
 3SgS-Impf seek person Rel [Logo[?]Sg and 3SgO]
o hiŋ ka kaa a-foo
 Impf can Inf become Absol-one
 'He_x's looking for a man_y who_y he_x and he_y (=the two of them_{xy}) can become alike.'

The 3Refl pronouns in (650) present no real processing difficulties. The relative-clause subject cases (650a-c) must have their antecedent in the matrix clause, so if the head NP cannot induce reflexive binding, the antecedent must be the matrix subject. The same logic applies to the left conjunct in the relative-clause subject NP in (650e). In (650d), the relative-clause direct object might appear to be ambiguous (coindexation with matrix subject or with relative-clause subject?). However, since clause-internal

subject-object coindexation is expressed by a *bomo* reflexive object, the simple 3ReflSg object in (650d) must be coindexed with the more distant matrix subject.

There is, however, a potentially serious problem involving the types (651a-b).

- (651) a. X hit Y [Rel, eat Y's dog]
 e.g. 'The woman_x hit the man_y who_y ate his_y [own] dog.'
- b. X hit Y [Rel, eat X's dog]
 e.g. 'The woman_x hit the man_y who_y ate her_x dog.'

The regular output of (651a) has a 3Refl possessor for 'dog', on clause-internal grounds (coindexation with the subject of 'eat'). The question then is whether the possessor of 'dog' is also expressed as 3Refl in (651b) on the grounds of coindexation with the more distant matrix subject. If so, (651a) and (651b) will be indistinguishable on the surface.

It appears that long-distance reflexive binding usually does not occur in (651b), so the two constructions generally remain distinct. An example of (651b) is (652).

- (652) *a-a* *ta wii har di kaa jow [a wane njerfu di]*
 3SgS-Impf Fut kill man Def Rel take [3Sg Poss money Def]
 'She_x will kill the man_y who_y took her_x money.'

However, apparent long-distance reflexive binding is occasionally attested in spite of the syntactic ambiguity it causes, as in the textual example (653).

- (653) *mais a-a hin ka hīsa*
 but 3SgS-Impf can Inf make-well
 hay [kaa bisa [ngu hasar-ow di]]
 thing [Rel pass [3ReflSg damage Def]]
 'But it (=rain)_x can produce a (good) thing_y which_y exceeds (=more
 than compensates for) its_x harm.'

The prior discourse has been about the damage to homes caused by rain, and (653) changes the subject by shifting the focus to the benefits of rain for farming and herding. As I construe (653), the possessor of 'damage' is 'rain' (i.e., is coindexed with the matrix subject). If so, the syntax parallels that of (652), and we must recognize fluctuation between two possible output types. However, it is conceivable that (653) is structured differently, with 'thing' as the antecedent of the possessor of 'harm', in which case there is no conflict between (652) and (653).

It remains to see whether long-distance reflexive binding can occur in combinations of a matrix clause and an attached subjunctive clause. We must first toss out constructions where a *ngu* pronoun or its plural counterpart in the subjunctive clause can be explained as Logo rather than 3Refl. This applies to jussive complements, since they involve a verb of speaking ('the man_x told me [to look at LogoSg_x]'). We must also disregard the obligational construction with *bara* followed by subjunctive clause, since even if *bara* is considered to be a clause it has no subject

NP. This leaves subjunctive clauses with purposive *hal* 'so that', and those with *bilaa* 'without', as the most promising data. Consider (654).

- (654) *a-a* *hanga* *a-a* *dira*
 3SgS-Impf follow 3SgS-Impf walk
hal [*a* *ma* *soroku* [*guusu* *di* *ra*]]
 until [3SgS Subju fall [pit Def Loc]]
 'It (=animal) just kept on walking with the result that it fell into the
 (hidden) pit.'

Here the subjunctive clause begins with a nonreflexive 3SgS pronoun, in spite of its coindexation with the matrix subject. This and similar examples show that long-distance reflexive binding into a subjunctive clause is not standard. In apparent counterexamples like (655), Logo rather than 3Refl pronouns are probably at hand.

- (655) *boro* *foo* *si* *yadda*
 person one ImpfNeg consent
 [[*ŋgu* *čere*] *ma* *koy* *ka* *nan* *ŋgu*]
 [[LogoSg friend] Subju go Inf leave LogoSgO]
 'No man_x will accept that his_x friend go (to work) and leave him_x
 behind.'

yadda 'consent' is a verb of thinking or saying, and can reasonably take logophoric pronouns in its propositional complement. Therefore (655) does not challenge the generalization that reflexive binding does not occur between matrix and subjunctive clauses. Likewise, in (656) the subjunctive clause represents the intention of the customers, even though there is no overt quotative verb, so I take its *ŋgi-ye* to be LogoPl rather than 3ReflPl.

- (656) *i* *kate* *yene* *ŋjerfu-korey*
 3PlS bring 1SgDat silver
hal *ay* *ma* *hisa* *ŋgi-ye* *se* *jinde-hiiri*
 until 1SgS Subju make LogoPl Dat neck-bead
 'They brought me (=goldsmith) some silver, for me to make them a
 necklace with.'

'Without' clauses are another source for data concerning restrictions on long-distance reflexive binding into subjunctive clauses, and here there is usually no question of logophoric function of the sort seen in (655-56). Consider (657).

- (657) *boro* *di* *yo* *o* *hin* *ka* *ñin* *ga*,
 person Def Pl Impf can Inf drink 3SgO,
bilaa *a* *ma* *kukur* *gi*
 without 3SgS Subju burn 3PIO
 'People_x are able to drink it (cooled-off tea), without it, burning
 them_x.'

Here the matrix subject ('people') reappears in the subjunctive clause as the direct object, while the matrix object ('tea') reappears as the subjunctive-clause subject. Both occur in nonreflexive pronominal form, reaffirming our view that reflexive binding is not normal across matrix-subjunctive clause boundaries.

We may sum up the basic distribution of *bomo* reflexives, simple reflexive pronouns (like 3Refl), and nonreflexive pronouns as in (658). "S" = subject.

(658)	<u>antecedent</u>	<u>function of coindexed NP</u>	<u>form of coindexed NP</u>
	clause-mate S	direct object	<i>bomo</i> reflexive
	"	dative complement	"
	"	<i>nda</i> complement	"
	left conjunct	right conjunct	simple reflexive
	clause-mate S	possessor of postverbal NP	"
	"	complement of <i>doo</i> 'chez'	"
	matrix S	direct object of relative	"
	"	dative complement of relative	"
	"	<i>nda</i> complement of relative	"
	matrix S	NP in subjunctive clause	nonreflexive pronoun
	"	NP in attached adverbial clause	"

10.2.5 Reciprocals

The central element in reciprocal constructions is the noun *čere* 'friend, peer, mate'. There is also a specialized postposition *game* which occurs chiefly in combination with this noun.

There are several nouns meaning 'friend' or the like, most of them indicating a stronger or more specific social and emotional bond than *čere*. These include *baa-koy* 'close friend, best friend' (cf. *baa* 'want', §4.6.5), and several compounds with final *-kasine* (§4.6.7). *čere* can be glossed as 'friend' in many contexts but can also mean, less affectively, 'associate, colleague, interacting partner' or the like. In (659a-b) we give examples where *čere* is clearly used as an ordinary noun, denoting a specific—rather than distributively abstracted—referent (singular or plural).

- (659) a. *mere [a čere di yo] kaa se na a wannasu ga*
 but [3Sg friend Def Pl] Rel Dat Foc 3SgS speak 3SgO
nda [a baa-koy di yo] kaa wannasu ga i game
 and [3Sg friend Def Pl] Rel speak 3SgO 3Pl among
kaa se a wannasu ga
 Rel Dat 3SgS speak 3SgO
 'Rather, it was [to his friends] [*focus*] that he told it (=story), and his companions who have told (=repeated) it among them to whom he told it.'

(659, cont.)

- b. [a *dira di almaana di kul*] a *či a-a taasi*
 [3Sg walking Def meaning Def all] 3SgS be 3SgS-Impf seek
čere, a-a taasi boro kaa [ŋgu nda ga]
friend, 3SgS-Impf seek person Rel [3RefISg and 3SgO]
o hin ka kaa a-foo
 Impf can Inf become Absol-one
 'The meaning of its (=dwarf's)_x walking, it is (that) it_x is looking for
 a companion_y; it_x is looking for a man_y who_y he_x and he_y (=the two
 of them_{x,y}) can become alike.'

In (659a), *čere* has a possessor as well as Def *di* and Pl *yo*. These accretions are absent in true reciprocal use. *čere* is exactly parallel to *baa-koy* in (659a). In (659b), we have a construction *a-a taasi čere* 'he seeks a companion' where *čere* is a bare noun forming an NP by itself. This ordinarily favors a reciprocal reading, but in this case the singular subject and the context clearly indicate a nonreciprocal reading as a simple indefinite (and nonspecific) NP.

Transitional between its use as a simple noun 'friend' and true reciprocal uses are cases where *čere* functions as predicate nominal after *kaa* 'become' or *či* 'be'. While we might expect Pl *yo* when the subject is plural ('they are friends'), in fact *čere* is often bare in this construction, and in some examples the sense is also rather watered down ('they are associated' or 'they are spatiotemporally together'). Examples in (660).

- (660) a. *saa kaa [n duma [hayni di yo]] kul*
 time Rel [2SgS plant [millet Def Pl]] all
no-o sey hayni woo moo, i-kul o či čere
 2SgS-Impf sow millet Dem also, Absol-all Impf be **friend**
 'When you have (trans-)planted the millet plants, you will sow millet
 (seed) also; the two (=transplants and new sprouts) are associates
 (=are interspersed).'
- b. *wor o kaa čere (yo)*
 2PIS Impf become **friend** (Pl)
 'You(Pl) will become friends.'

čere is already partially grammaticalized in this usage. That the semantics is being stretched is shown by (660a), where the 'friends' are sets of millet plants.

When the possessor of 'friend' is indefinite or generic, we can get a construction that remains close to the sense 'friend' but approaches reciprocal function, as in (661).

- (661) *boro foo si yadda*
 person one ImpfNeg consent
[[ŋgu čere] ma koy ka nan ŋgu]
 [[LogoSg **friend**] Subju go Inf leave LogoSgO
 'No man_x will accept that his_x friend go (to work) and leave him_x
 behind.'

Since this was intended as a general statement applying to any member of a set of (male) neighbors or friends, it is very nearly 'none (of them) will accept that any other go ...'.

In true reciprocal function, *čere* is always morphologically unmarked (no possessor, no Def *di*, no Pl *yo*), and is in a distributive relationship to a semantically multiple antecedent (i.e., a plural, or a grammatically singular NP like 'grass' denoting a collectivity). For example, 'the dogs bit *čere*' (= 'the dogs bit each other') can be roughly paraphrased as 'for each member e_i of the relevant set DOG, e_i bit one or more other members of this set.' The form *čere* may be associated with any pronominal person. As in other languages, when the set of entities is more than two, it is difficult to formalize the minimum number and distribution of underlying singular-on-singular subevents which are needed to insure the truth of the reciprocal assertion. In practice, as long as a respectable number of the dogs were involved in biting, or trying to bite, one or more other dogs, we can validly use a reciprocal.

An example of a true reciprocal is (662). Note that *čere* occurs in bare form, and that it is a (distributive) anaphor for a plural antecedent.

- (662) *wor* *o* *faaba* *čere*
 2PIS Impf help **friend**
 'You(Pl) help each other.'

10.2.6 Syntax of reciprocals

The plural antecedent is frequently expressed as the subject NP, with *čere* playing any postverbal NP role, such as direct object (662), complement of postposition (663a), or complement of Instr-Comit preposition *nda* 'with' (663b).

- (663) a. *a* *ma* *si* *koy sey* [*ka* *hun* [*čere* *ra*]]
 3SgS Subju ImpfNeg go scatter [Inf leave [**friend** Loc]]
 'so they (=bricks) won't go scatter and get separated from each other'
 b. *kul* *či* *aloomur*, *i-i* *tun* [*nda* *čere*]
 all be age, 3PlS-Impf arise [with **friend**]
 'They (=plants) are all of (the same) age; they grow up with each other.'

However, the relevant plural referent need not be the subject NP. Especially with Instr-Comit *nda* (664a), but also sometimes with postpositions (664b), the plural referent functioning as antecedent is expressed as a preceding postverbal NP, usually the direct object. (664c) is a good example of a mass (rather than plural) NP serving as antecedent for reciprocal *čere*. While 'straw' is here grammatically singular as a mass noun, its actual raw material consists of separate stems (or blades) that need to be "sewn" together, like the rags in (664b).

- (664) a. *a hamni di na no-o maraa nda hayni di*
 3Sg flour Def Foc 2SgS combine with millet Def
no-o kulba gi [nda čere]
 2SgS-Impf knead 3PIO [with friend]
 'Its (=melon seeds) flour [*focus*] is what you(Sg) combine with the
 millet (flour); you knead them (two flours) with each other.'
- b. *no-o hīsa-hīsa gi no-o taa-taa gi*
 2SgS-Impf Rdp-prepare 3PIO 2SgS-Impf Rdp-sew 3PIO
[čere ga] ka dam ga nda i-woro
 [friend on] Inf make 3SgO with Absol-thick
 'You(Sg) work on them (=rags), you sew them onto each other, to
 make it (cushion) thick.'
- c. *i-i duu ka taa-taa ga [čere ga]*
 3PlS-Impf proceed Inf Rdp-sew 3SgO [friend on]
 'They sew (=braid) it (=straw) together.'

Frequently a phrase with *čere* combined with either Instr-Comit *nda* or with an abstract Loc postposition can be more freely translated as 'together'. This would work in (663b) ('they grow up together') and in (664a-b). This suggests the possibility that some instances of *nda čere* are not true instrumental reciprocals, in the set-theoretic definition of reciprocals given above, rather that *nda čere* can be a kind of quantifying adverb ('together, collectively, as a group'). That this reading is present for some instances of *nda čere* is strongly suggested by the (admittedly uncommon) occurrence of *nda čere* as part of NPs, even subject NPs (i.e., in preverbal position, where true instrumental-comitative phrases with *nda* should not occur), as in (665).

- (665) *saa di woo di nga či feewa woo,*
 time Def Dem Def SFoc be voluntary-work-party Dem,
[war nda čere daa] nga o guna čere
 [2PlS with friend Emph] SFoc Impf see friend
[war baaliči di yo]
 [2Pl adult-man Def Pl]
 'Then, this is voluntary collective labor. It is you all together who
 see each other, you able-bodied men.'

Here *war nda čere* (plus Emph *daa*) is a fronted focalized NP in subject function. Since a true Instr-Comit prepositional phrase cannot occur in such a position, we might consider taking *nda* here as the NP conjunction 'and', but this makes no sense since *war* '2Pl' is plural and already denotes the full set of able-bodied men in question, which is expressed as an afterthought by *war baaliči di yo* 'you adult men'. So there is no alternative to taking *nda čere* as a quantifying expression, not unlike *kul* 'all' but emphasizing joint (cooperative) action rather than simple universality. Incidentally, the predicate *guna čere* 'see each other' (by extension 'compete as rivals for public approval') in the same sentence is a true reciprocal.

čere may occur in deverbal nominalizations, preserving its reciprocal functions, as in (666). We hyphenate these compounds.

- (666) a. *[[[war wane] faaba-čere dij] addeliil dij] či maa?*
 [[[2Pl Poss] help-friend Def] usefulness Def] be what?
 'What is the usefulness of your mutual help?'
 b. *feewa woo yo ra, guna-čere moo goo [a ra]*
 collective-labor Dem Pl Loc, see-friend also be [3Sg Loc]
 'Those collective work parties, there is also some rivalry involved in it.'

In (666a), *faaba čere* 'help friend' is nominalized to mean 'mutual assistance'. For the underlying verbal predicate meaning 'help each other', see example (666) in the preceding section. In (666b) above, *guna čere* 'see friend' (= 'see each other') is likewise nominalized, here focusing on anxiety about being publicly outdone by others (by impressive feats in voluntary work parties to help neighbors). Another example is *bey-čere* 'getting acquainted' (cf. *bey čere* 'know each other'). *gum-čere* (*gum* 'cover top of') means 'eating bowl with a cover'.

The postposition *game* 'among' occurs chiefly in the phrase *nda čere game*. For discussion and examples, see §5.9.10.

(667) shows avoidance of the overtly reciprocal construction when a singular WH-interrogative is extracted from postverbal position in a comparative (§9.7.8).

- (667) *a-foo rga horon nda?*
 Absol-which? SFoc be-hot with?
 'Which (of them) is more painful (than the other)?'

The problem here is that using reciprocal *nda čere* 'than friend' (= 'than each other') does not work with a singular subject, even if the referent of this subject NP has not yet been picked out of the pool.

10.3 Generic and indefinite reference

10.3.1 *boro* 'person' and 2Sg pronouns

The primary term used to introduce an indefinite or generic human discourse referent ('someone, anyone') is the bare indefinite noun *boro* '(a) person'. The initial introduction of such a discourse referent may be in any syntactic position. Among the common sites for an initial introduction are conditional antecedents ('if someone comes, ...' or 'if you see someone, ...'), and the head of a relative clause ('someone who ...'). The latter is expressed as *bor kaa ...* (§3.8.7).

Subsequent mentions of the indefinite referent often take the form of 2Sg pronouns. Generic *you* is familiar enough from English; what is distinct about KCh is that the introduction is often in the form *boro* 'a person', with 2Sg then used as a kind of anaphoric pronoun—whether in the same clause or in an embedded or following clause. Some examples combining *boro* and 2Sg pronoun in generic function are in

(668); the “free” translations retain the original pronominal categories, so the English is awkward.

- (668) a. *boro o mey [a ra] hay kaa n har wala?*
person Impf have [3Sg Loc] thing Rel **2SgS** say or?
 ‘Does [anyone (=you)]_x have something which you(Sg)_x have said about it?’
- b. *saa di boro o hin ka koy,*
 time Def **person** Impf can Inf go,
ni jaari di goy di kul ma kaa bakabaka?
2Sg day Def work Def all Subju become chunks?
 ‘So, [someone (=you)]_x can go, (with the result that) your_x whole day’s output may turn out to be (merely) debris?’

This pattern is very common and may be considered the normal treatment of generic referents in simple passages. However, it is also possible for *boro* in generic function to be repeated in subsequent mentions as *boro* or as a 3Sg pronoun. This pattern can be applied when for some reason it is inappropriate to offer the addressee an opportunity to symbolically enter the role of the generic personage in question, or (more cogently) in passages where the 2Sg category has been pre-empted by a distinct discourse referent, denoting either the addressee as such or a second generic discourse referent.

This is the case in the examples in (669). In (669a), 2Sg is initially used to denote the addressee in a (meta-)pragmatic comment, after which 2Sg is used generically. When a second generic discourse referent is introduced as *boro* ‘someone’ in ‘you call for someone,’ it must remain distinct from 2Sg and so is mentioned in 3Sg form (a) in the following subjunctive clause. In (669b), two distinct generic discourse referents (subscripted indices “p” and “t” in the free translation) are introduced as *boro*. The first is then repeated in 2Sg form, which forces the second to adopt 3Sg agreement (a in a *na dam*).

- (669) a. *woo daa na yee har mana nga!*
 Dem Emph Foc 1SgSImpf say 2SgDat yes!,
ni dey [[ni wane] hančin], n ta či
2SgS buy [[**2Sg** Poss] goat], **2SgS** Top be
bor kaa koy alhoor, nda n dey [n hančin],
person Rel go limestone, if **2SgS** buy [**2Sg** goat],
nda n kaati boro a ma koosu ga mana, ...
 if **2SgS** call **person** 3SgS Subju slaughter 3SgO**2SgDat**, ...
 ‘That’s just what I’m telling you(Sg), yes; (when) you_x buy your goat—(suppose) you are someone_x who_x goes (for) limestone; (then) when you_x have bought your_x goat, if you_x call for someone_y, so that he_y slaughter it for you, ...’

- b. *boro haya kul kaa ni jow ni alhawa di kul*
person thing all Rel **2SgS**take **2Sg**desire Def all
ni dam ga [ŋga daa ra] hay kul kaa boro
2SgSput **3SgO** [**3SgF**Emph Loc] thing all Rel **person**
hin ka dam mana [adduŋaa huu woo ra], nda a
 can Inf do **2SgDat** [world house Dem Loc] if **3SgS**
na dam mana haya woo di, a či mana yaada
 Neg put **2SgDat** thing Dem Def, **3SgS** be **2SgDat** no-good
 ‘Someone_p, anything (e.g., tea)_q that you(Sg)_p take (as) your_p
 passion_r, you have put it_r in that very thing_q; no matter what (else)_s
 in this world anyone_t can do for you_p, if he(she)_i hasn’t done for
 you_p that thing_q, it_s is of no value to you_p.’

The common use of 2Sg agreement for generic *boro* is syntactically problematic. One possible approach is to argue that there is really a covert initial 2Sg pronoun, so that *boro* ‘person’ is a characterization thereof rather than itself representing the first introduction of a new discourse referent. This is an ideal analysis in cases where we have an initial relative clause that seems to function like a conditional antecedent containing an existential predication, as in (670).

- (670) *ntende foo-foo a-a fatta-ndi ga, a či allaa*
 ant one-one **3SgS**-Impf exit-Caus **3SgO**, **3SgS** be like
jombu-jombu, bor kaa si bey mere,
 small-bits, **person** Rel ImpfNeg know but,
no-o bisa a ga ni si bey
2SgS-Impf pass **3Sg** by **2SgS** ImpfNeg know
 ‘Ants individually bring it (=bits of limestone) out; it is like little
 bits; anyone_x who_x doesn’t know, you(Sg)_x will pass by it without
 your_x knowing.’

The segment glossed here as ‘anyone who doesn’t know’ (relative clause with the generic *boro* as head NP) would in this context make more sense in English as ‘if you are someone who doesn’t know.’ If we analyse the KCh syntax in this light, we could reconstruct the “deep” structure of this segment as in (671).

- (671) *nda ni či bor kaa...*
 if **2SgS** be **person** Rel ...
 ‘if you(Sg) are a person who ...’

Though in (670) this is reduced to just *bor kaa ...* ‘a person who ...,’ in the corresponding segment of (669a) we get *n ta či bor kaa ...* ‘you(Sg) are a person who ...’. For our purposes, the omission of *nda* ‘if’ is not important, since our concern here is with pronominal agreement.

Taking ‘someone who ...’ in (670) as reduced from ‘if you are someone who ...’ solves the problem of inconsistent agreement for *boro*, sometimes 2Sg and sometimes 3Sg. We simply take 2Sg agreement as reflecting the underlying ‘if you are ...’

construction, with later pronominals being anaphoric to the underlying 'you'. 3Sg agreement for *boro* would apply in all other cases.

Alas, assuming the 'if you are ...' underlying structure for cases with 2Sg agreement for *boro* does not seem to be viable in all instances. It would be difficult to recast (668a) or (668b) with a covert 2Sg pronoun, since here *boro* is introduced in subject position (rather than as head NP of a relative clause). I conclude, therefore, that we simply have two agreement options for a generic *boro*, namely 2Sg and 3Sg (the latter allowing occasional repetition of the nominal form *boro*).

When generic *boro* is head of a relative clause, and its coindexed NP in the relative clause is the subject ('a person_x who_x runs', 'a person_x who_x eats fish'), the subject may be realized as zero (i.e. as a trace) as usual for subject relatives, or it may appear in 2Sg form. The two possibilities are shown in the effectively synonymous (672a) and (672b). The decision to shift the subject of 'kill' into 2Sg form, as in (672b) but not (672a), also entails the use of a 2Sg pronominal as possessor of the following direct object 'dog'. Thus (672a) has a 3RefISg possessor, while (672b) has a (covertly reflexive) 2Sg possessor. Because the subject of 'kill' and the (coindexed) possessor of 'dog' must be pronominalized in a consistent way, when we find a 2Sg pronominal as possessor of 'dog' but not as subject of 'kill', as in (672c), we must adopt an interpretation where *bor* and 2Sg are noncoreferential.

- (672) a. *bor kaa wii ngu hāyši di*
 person Rel kill 3RefISg dog Def
 'one_x who_x has killed his_x dog'
- b. *bor kaa ni wii ni hāyši di*
 person Rel 2SgS kill 2Sg dog Def
 'one_x who_x you_x have killed your_x dog'
- c. *bor kaa wii ni hāyši di*
 person Rel kill 2Sg dog Def
 'one_x who_x has killed your_y dog'

Types (672a) and (672b) both occur even when *bor(o)* is preceded by a 'if you are ...' phrase, as shown by the textual examples (673a-b). (673a) is a fragment repeated from (669a).

- (673) a. *n ta či bor kaa koy alhoor*
 2SgS Top be person Rel go limestone
 'you are someone_x who_x goes (for) limestone.'
- b. *nda ma na či assajaa ma na či har,*
 if 2SgS Neg be hero 2SgS Neg be man,
kaa no-o bey yenje
 Rel 2SgS-Impf know fighting
 'If you(Sg) aren't a warrior, if you aren't a man_x who_x (you)_x know
 (=have experience in) fighting.'

The sequence of coreferential *boro* 'someone' and 2Sg pronoun *ni* may occur in conjunctions and disjunctions (674).

- (674) [[*boro foo wane dam*] [*wala [n kow]] kuna*
 [[**person** one Poss doing] [or [2Sg remove]] in
 'in someone_x's putting in or your_x taking out'

10.3.2 Indefinite human *a koy di*

The expression *a koy di* literally means something like 'his owner, boss', cf. *yerkoy* 'God' (<**yer koy* 'our Lord'). *a koy di* is used, however, to refer back to a previously introduced indefinite or generic human referent, generally in a preceding sentence (or conditional antecedent). It is only moderately common since 3Sg *a* can always be used in such contexts; cf. also generic 2Sg discussed in the preceding section. I gloss *a koy di* freely as e.g. 'the fellow, the guy' but it has no derogatory sense.

In (675), it is hard to say whether *a koy di* is used in its literal sense 'its owner' or as a discourse anaphor; this ambiguity is helpful in understanding the origin of the anaphoric usage.

- (675) *bor kaa har ngu si hin ka noo ga yer se,*
 person Rel say LogoSgS ImpfNegcan Inf give 3SgO 1Pl Dat,
nda yer waafaku yer o dey ga [a koy di ga],
 if 1PlS agree 1PlSImpf buy 3SgO [3Sg boss Def on],
yer o koy-nda ga garaasa di ye doo
 1PlS Impf go-with 3SgO smith Def Pl at
 'Someone_x who_x says he cannot give it (=spare part)_x to us, if we_{xy}
 (eventually) come to an agreement, we_y'll buy it_x from the owner_x
 (or: the guy_x) (and) we_y'll take it_x to the blacksmiths.'

(676) is a more typical indefinite example. Here there are two occurrences of *a koy di*, each denoting an indefinite human referent introduced just previously as *bor(o)* 'a person'. The dwarf (a kind of djinn) is the main protagonist of the discussion, and *a koy di* is used to denote any generic human referent who might have had the misfortune of tangling with it. Because of the generic quality, the issue whether the two instances of *a koy di* (both uttered by H across an intervening echoic confirmation by D) are coreferential is moot.

- (676) D: *saa di ma na bey ka mom bor kaa,*
 time Def 2SgS Neg know Inf hear person Rel,
ɾga ɾga kar ganda?
 3SgF SFoc hit ground?
 'So, haven't you(Sg) ever heard (of) anyone_x, whom_x it (dwarf)
 knocked down?'
- H: *a! woo ta wala a kar boro ganda moo*
 ah! Dem Top even 3SgS hit person ground also
[a koy di] si kaa ta har ga
 [3Sg boss Def] ImpfNeg come Inf say 3SgO
 'Ah! That (dwarf), even if it knocked a person_x down, the guy_x
 wouldn't come and say (=report) it.'
- D: *a si har ga*
 3SgS ImpfNeg say 3SgO
 'He won't say it.'
- H: *a-a šendu bor kaa a kar ganda kaa*
 3SgS-Impf be-difficult person Rel 3SgS hit ground that
[a koy di] mee go hin ka čii ga,
 [3Sg boss Def] mouth Impf can Inf speak 3SgO,
[maa se] jiti si nan ga
 [what? Dat] fright ImpfNeg leave 3SgO
 'It's rare, one_x whom_x it (=dwarf) has knocked down, that the guy_x's
 mouth would be able to say (=report) it, because (his_x) fright won't
 leave him_x.'

10.4 Sloppy (partial) coreferentiality

"Sloppy" coreferentiality or coindexation is present when two NPs denote, respectively, a set and one of this set's proper subsets. Thus 'we' and 'I' are in a sloppy relationship, since the denotation of the former strictly contains that of the latter (the denotation of 'I' is a strict subset of the denotation of 'we'). The combination of such sloppily coreferential NPs poses problems, since some grammatical mechanisms are based on the coreferential-noncoreferential distinction. This applies to reflexive constructions (antecedent is usually the clause-mate subject NP), logophoric pronouns (antecedent is the quoted speaker), and relative clauses (antecedent is the head NP).

In the following sections, a subscripted index "xy" indicates that the denotation in question strictly contains that represented by "x" or "y," as in 'we_{xy}' vis-a-vis 'I_x'.

In theory, we should also consider cases involving the complex intersection of two overlapping sets, e.g., 'they_{xy}' and 'they_{yz}', where only "y" is shared.

10.4.1 Sloppy coreferentiality in reflexives

We first consider cases of the type ‘she_x went to their_{xy} house’ and ‘She_x brought it for them_{xy}’ involving a subject NP whose denotation is a strict subset of that of a postverbal possessor or postpositional complement. In such constructions, the partially coindexed NP is expressed as 3ReflPl, as in (677). This construction is quite common, cf. §4.1.3.

- (677) a. *a koy [ŋgi-ye doo]*
 3SgS go [3ReflPl at]
 ‘She_x went to their_{xy} house.’
- b. *a kate ga [ŋgi-ye se]*
 3SgS bring 3SgO [3ReflPl Dat]
 ‘She_x brought it for them_{xy}.’
- c. *a koosu [ŋgi-ye feeji di]*
 3SgS slaughter [3ReflPl sheep Def]
 ‘She_x slaughtered their_{xy} sheep.’

The basic principle here can be summarized as: ‘3ReflSg + 3Sg (or 3Pl) → 3ReflPl.’ Note that the morphologically simple 3ReflPl (not a *bomo* reflexive) is used. We have seen earlier that ordinary first and second person pronouns are used in syntactic contexts requiring 3Refl pronouns for third person reference. It is therefore predictable that 1Pl and 2Pl can be used in examples comparable to (677a-c), as in (678).

- (678) *ay kate ga yer se*
 1SgS bring 3SgO 1Pl Dat
 ‘I_x brought it for us_{xy}.’

When the set-inclusion relationship is reversed, so that the denotation of the antecedent contains that of the coindexed NP, we get nonreflexive pronouns. We see this clearly in (679a) with 3Sg rather than 3ReflSg dative, and we infer from this that the 1Sg in (679b) likewise has no reflexive feature (even covertly).

- (679) a. *i kate ga [a se]*
 3PlS bring 3SgO [3Sg Dat]
 ‘They_{xy} brought it for him_x.’
- b. *yer kate ga yene*
 1PlS bring 3SgO 1SgDat
 ‘We brought it for me.’

Attempts to elicit the complex-intersection type ‘you(Pl)_{xy} went to their_{yz} house’ succeeded only in confusing informants. However, if reflexive pronouns are not used in the simpler type (679) it seems quite certain that they would not be used in complex-intersection cases.

10.4.2 Sloppy coreferentiality in logophorics

The principle '3RefISg + 3Sg3Pl → 3RefIPl' (preceding section) can be adapted to logophoric pronouns, hence 'LogoSg + 3Sg3Pl → LogoPl.' Quotations are usually attributed to a single speaker, in which case any instance of 'we' in the original utterance will show up in reported speech as LogoPl. Examples in (680).

- (680) a. a har ŋgu-yo o koy koyra
 3SgS say LogoPIS Impf go town
 'He_x said they_{xy} would go to town.'
- b. a har i guna ŋgu-yo
 3SgS say 3PIS see LogoPIO
 'He_x said that they_z had seen them_{xy}.'

The original utterances would have been 'we will go to town' and 'they saw us.'

The inverted pattern with plural speaker and a subsequent singular referent is expressed with nonlogophoric 3Sg pronoun, as in (681).

- (681) i har a-a ta kaa
 3PIS say 3SgS-Impf Fut come
 'They_{xy} said that he_x will come.'

10.4.3 Sloppy coreference in relative clauses

When the denotation of the head NP (NP_x) is strictly included in that of a partially coindexed NP (NP_{xy}) in the relative clause, the latter is expressed by a conjunction (one conjunct of which corresponds to NP_x) attached to Rel *kaa*. The conjunct coindexed with NP_x takes nonreflexive pronominal form. The conjoined NP may then be "resumed" by the appropriate plural pronoun within the relative clause proper, as in (682).

- (682) saa di no-o soo boro di yo kaa
 time Def 2SgS-Impf pour person Def Pl Rel
 [ni nda gi] war gar-ndi,
 [2SgS and 3Pl] 2PIS find-Mediop,
 nangu woo di ra alwakati woo di
 place Dem Def Loc time Dem Def
 'Then, you(Sg)_x pour (for) the people_y who_y you(Sg)_x and they_y,
 you(Pl)_{xy} have been found in that place (at) that time.'

The head NP is the plural *boro di yo* 'the people_y'. The 2Pl subject of the relative clause strictly includes the denotation of 'the people_y', so we get *ni nda gi* 'you(Sg) and they_y' with nonreflexive 3Pl pronoun. The conjunction *ni nda gi* is then recapitulated in the form of 2Pl *war*.

Chapter 11 Semantic topics

11.1 Spatiotemporal structures

11.1.1 Spatial deictics

Basic deictic adverbs are in (683). For discussion of the forms see §4.2.3.

- (683) a. *nee* 'here'
b. *doodi ~ dooti* 'there' (anaphoric)
c. *hentu* 'over there' (deictic)

doodi ~ dooti is the anaphoric 'there' adverb. That is, it denotes a location that has been established by the prior discourse or is otherwise cognitively accessible. For example, 'I went to Gao_x, but I didn't stay there_x' would use *doodi ~ dooti* since it refers back to the location established by the earlier, more concrete LP (location phrase) 'Gao'. *doodi ~ dooti* is normally referential, but in some contexts it shows signs of partial bleaching and verges on pro forma status (§7.1.2).

hentu is a deictic 'there' adverbial which introduces a new location as discourse referent. It must be used instead of *doodi ~ dooti* for nonproximal ostensive reference (pointing out a location).

nee is the basic proximal 'here' adverbial. Since every speech event presupposes a 'here' space, the distinction between deixis and anaphora is blurred with this adverbial. Moreover, *nee* is quite often repeated in parallel phrases, ostensibly denoting two or more locations: 'the cow stepped here₁, and here₂, and here₃.' *nee* is also often used to denote a displaced 'here' from the perspective of an agent in a narrative.

Two important modifiers of deictic locative adverbials are Emphatic *daa* and Approximative *here*. Locative postpositions *ra* and *kuna* cannot be added directly to *nee*, *doodi ~ dooti*, or *hentu*, but can be added when *daa* intervenes. See §4.2.4.

11.1.2 Semantics of spatial adpositions

The spatial adpositions can be treated in three groups, as shown in (684), below. Only their spatial senses are given in the glosses.

The prepositions in (684c) are primarily temporal rather than spatial, and will be analysed in §11.1.5, below. In this section we consider first the concrete postpositions in (684b), then the more abstract ones in (684a).

Most of the postpositions in (684b) are transparently related to body-part nouns; see §5.9.7 for details.

(684)	<u>form</u>	<u>gloss</u>	<u>pre- or postposition?</u>
a.	<i>ra</i>	'in' (Locative)	post
	<i>kuna</i>	'in' (Locative)	"
	<i>ga</i>	'by, from, out of'	"
	<i>doo</i>	'at (the place of), chez'	"
b.	<i>banda</i>	'behind, among, alongside'	post
	<i>beene</i>	'above, over, on top of'	"
	<i>čire</i>	'under'	"
	<i>jine</i>	'in front of, on this side of'	"
	<i>jere</i>	'beside, next to'	"
	<i>maasu</i>	'inside, amid'	"
	<i>tenje ~ tanje</i>	'facing'	"
	<i>game</i>	'between'	"
c.	<i>jaa</i>	'starting from'	pre
	<i>hal</i>	'all the way to'	"

The semantic subsystem in (684b) can be said to treat the reference object as an idealized hollow cube, enclosing an interior space and having six external sides. The PPs denote the region in which the secondary entity or position is located. This region is projected outward from the relevant side of the cube, except of course for 'inside'. The cube is oriented in three-dimensional space, one dimension being vertical. One of the horizontal sides is privileged as the front. The front is intrinsic to the reference object if the latter has a built-in face (person, house, vehicle, etc.). Either *jine* 'in front of' or *tenje* 'facing' may be used to denote a location defined by this face, with *jine* much more common. If the reference object has no built-in face, a front may be superimposed by the relationship between reference object (e.g., a tree) and the secondary entity or position ('in front of the tree' = 'on this side of the tree'). In this case, *jine* (but not *tenje*) may be used.

The postposition *jere* in the sense 'beside' differs slightly from the others in that it denotes the area defined by either of two sides of the "cube," namely the left and right horizontal sides adjoining the front. In contexts where the front-back-side opposition is inapplicable, *jere* 'beside' may be used for any location near the reference object and neither above nor below it.

banda 'behind' rather than *jere* 'beside' is the preferred postposition indicating accompaniment (i.e., socially significant co-presence). In this context, *banda* is best glossed 'among, alongside, along with', as in (685), since the precise orientational relationship of the secondary entity to the reference object is moot.

(685)	<i>yee</i>	<i>jow</i>	<i>ay</i>	<i>kuumu</i>	<i>foo</i>	[<i>ay banda</i>]
	1SgS-Impf	take	1Sg	hoe	one	[1Sg behind]
	'I take one of my hoes with me.'					

The connection between 'behind' and 'along with' is generalized from constructions with the verb *hanga* 'follow', which takes a PP with *banda* 'after, behind' as its complement. This is used not only in the literal motion sense, but also to denote interpersonal subordination (child to parent, apprentice to master). This

construction with *harga* can even be applied to temporary possession of an inanimate object, as in (686), from the same text as (685).

- (686) *kuumu mere kuumu ta gaa [saa kul]*
 hoe but hoe Top Emph [time all]
a-a boori a ma harga ni banda
 3SgS-Impf be-good 3SgS Subju follow 2Sg after
 'But a hoe_x, speaking of a hoe_x, it's always good that it_x be with you.'

The relevant part of (686) is basically of the type 'hoe follow behind me.' In (685), 'hoe' is direct object of 'take', so there is no (overt) verb 'follow'. However, one could argue that the surface form of (685) conceals a covert 'hoe follow behind me' (or 'hoe MOVE behind me' with an abstract motion verb); perhaps *jow* 'take' could be decomposed into CAUSE and MOVE components.

With an inanimate referent like 'hoe', the pattern 'hoe follow behind X' is less common than another construction for temporary possession, 'hoe be by X' with postposition *ga* 'by' (§5.9.5, §7.1.4). Nonetheless, examples like (686) are instructive in analysing the use of *banda* 'behind' to indicate accompaniment in (685).

The more abstract and therefore more interesting postpositions are those in (684a). The most straightforward of them is *doo* 'at (the place of), chez'. For the form and etymology see §5.9.6. This postposition is most often used to denote the dwelling of a person or persons: *yer doo* 'at our house' (French *chez nous*). We may note parenthetically that in this usage, the NP or pronoun in question generally takes plural form, denoting the full set of inhabitants (§4.1.3).

Among the abstract postpositions in (684a), the semantic distinction between stationary locational ('in, at, on'), allative ('to'), and ablative ('from') is largely irrelevant, as we will see. Instead, these distinctions are expressed (if at all) by verbs or inferred from context. One manifestation of this is that *X doo* can be glossed, in different contexts, 'at the place of X', 'to (into) the place of X', or 'from (out of) the place of X'. These glosses are suggested, respectively, by the verbs *goro* 'sit, stay', *too* 'arrive', and *fatta* 'exit', for example.

doo is not limited to dwellings, and may be used to define a zone around and immediately adjacent to a reference object. Examples ('around the limestone block' and 'to the place where the drivers are') are given in §5.9.6. Additional examples of *doo* include (46b) in §3.8.2, (54a) in §4.1.1, and (57a-b) in §4.1.3.

For the forms and etymologies of Loc *ra* and *kuna*, see §5.9.4. *ra* is much more common than *kuna*; in one Timbuktu textual corpus checked there were 262 tokens of *ra* versus 40 of *kuna*, which works out to 87% versus 13%. There appears to be little or no semantic difference between the two. Often, as in (687), a single textual passage uses first one and then the other postposition with the same referent in the same spatial sense, suggesting that they are primarily stylistic variants. Usually *ra* comes first, with the less common (and therefore stylistically marked) *kuna* following.

- (687) D: *woo di o koy sawa-nda marje [seefaa woo ra]?*
 Dem Def Impf go equal how-much? [CFA Dem Loc]?
 ‘How much is that worth in (=converted into) CFA (currency)?’
 M: *[seefaa di daa kuna] a či allaara iiye nda jere*
 [CFA Def Emph Loc] 3SgS be riyal 7 and part
 ‘[In CFA (currency)] it is (worth) seven and a half riyals.’

There are probably some combinations in which the frequency ratio of *ra* to *kuna* diverges from the overall norm. For example, *Rel kaa* seems to take *kuna* about as often as *ra*. But these local stylistic idiosyncrasies do not seem to be based on semantic differences.

The semantic range of these *Loc* postpositions is quite broad. The core can be expressed as ‘in (container or field)’. Representative contextual glosses are stationary locational ‘at, in’, allative ‘into’ (with motion verbs), and ablative ‘from, away from, out of’ (with ablative verbs like *fatta* ‘exit’, *hun* ‘leave’, and *kow* ‘take out’). A few examples are in (688).

- (688) a. *maa nga goo [n huu di ra]?*
 what? SFoc be [2Sg house Def Loc]
 ‘What is there in your house?’
 b. *nda i dam ga [hari di ra] kul, ...*
 if 3PIS put 3SgO [water Def Loc] all, ...
 ‘when they have put it (metal) in water, ...’
 c. *a kow [kusu di ra] hari di*
 3SgS take-out [jug Def Loc] water Def
 ‘She took the water out of the jug.’
 d. *a dey ga [ngu jiiba di ra]*
 3Sg buy 3SgO [3ReflSg pocket Def Loc]
 ‘He paid for it out of his own pocket.’

As in other languages, the core spatial sense (location in a container or field) has many “metaphorical” extensions as the “container” or “field” becomes abstract. This is exemplified in (687) in connection with currency. Other examples involve times (“at the harvest [time]”), verbal abstractions (“in coming”), and so forth. For the pattern “be [VERB Loc]” with durative or progressive sense, see the end of §7.2.3.

When associated with an NP (not necessarily contiguous), such as a bare plural, a mass noun, or a quantified NP, *Loc* PPs are often partitive in function, as in (689).

- (689) *n si hin ka koy ka nan [[i kuna] foo]*
 2SgS ImpfNeg can Inf go Inf leave [[3Pl Loc] one]
 ‘You can’t go and leave any one of them (tools) behind.’

Loc postpositions are sometimes omitted after nouns that function syntactically as LPs (and semantically as locative, allative, or ablative phrases). This is consistent with the fact that KCh verbs express most of the locative, allative, and ablative relationships. Place names like *bamako* (capital of Mali) usually occur without

adpositions in these semantic functions, the spatial nuance being inferrable from the verb. Certain nouns optionally occur in bare form in similar adverbial functions: *huv* 'home', *koyra* 'town, city', *yoobu* 'market', *ganji* 'wilderness, bush', *isa* 'river'.

The trickiest of the abstract postpositions is probably *ga*. Its primary spatial senses are 'on' and 'by, along'. Like other spatial, it may be (stationary) locative, allative, or ablative depending on the context and especially on the verb. (690) is a clear case of 'on' or 'onto' (limestone blocks loaded on the back of the donkeys).

- (690) *no-o dira ka harğa musoo di*
 2SgS-Impfwalk Inf follow thus Def
hal ma duu haya kaa ni dam-dam i ga,
 until 2SgSSubju get thing Rel 2SgS put-Rdp 3Pl on,
ma kaa-nda ga
 2SgSSubju come-with 3SgO
 'You'll keep walking around like that, until you get something to put
 (=load) onto them (donkeys) and you bring it (home).'

A number of abstract uses of *ga* are natural extensions of 'on' and have parallels with English *on*. The construction *Y goo [X ga]*, lit. 'Y be on X', is used for custody or temporary possession (§5.9.5), cf. English *I have five dollars on me*. The examples in (691) can also be translated with English 'on'. In (691a), the afflictions are a burden put on people. In (691b), tea's original *raison d'être* was to counter fatigue.

- (691) a. *woo yo kul i har*
 Dem Pl all 3PlS say
atthey daa ngga o dam ga boro ga
 tea Emph SFoc Impf put 3SgS person on
 'All those things (dizzy spells, etc.), they said it's tea [*focus*] that put
 them on people.'
- b. *atthey si mey haya kul kaa ga na a doo*
 tea ImpfNeg have thing all Rel on Foc 3SgS originate
kala faraa
 except fatigue
 'Tea has nothing on which [*focus*] it was originally based except
 fatigue.'

ga is often translatable as 'out of, from', for example with *kow* 'take out, remove'. Recall that apparent ablative glosses of other postpositions like *doo*, *ra*, and *kuna* turn out to be translation artifacts, and that the ablative element is really attributable to a verb ('exit', 'leave', 'take out'). Consider (692).

- (692) *no-o musey ga*
 2SgS-Impf rub 3SgO
hal a ma kow [a ga] dow di
 until 3SgS Subju take-out [3Sg from] sand Def
 'You rub it (melon seeds) until it (=this) removes the dirt from it.'

The *ga* in question is of course the postposition in a *ga*, not the 3SgO clitic. Since *kow* 'take out, remove' has a built-in ablative component, it is possible to take *ga* here as locative 'on', cf. 'there is some dirt on the melon seeds.'

ga is apparently glossable as 'by' in connection with the verb *bisa* 'pass' (693a), and as 'in' or 'into' in (693b).

- (693) a. *no-o* *bisa* [*a ga*] *ni* *si* *bey*
 2SgS-Impf pass [3Sg by] 2SgS ImpfNeg know
 'You'll pass by it without knowing.'
- b. *yec* *kar* [*a ga*] *guusu*
 1SgSImpf hit [3Sg by] hole
 'I knock a hole in it (stone).'

However, the English glosses are misleading, and to understand these examples we need to look carefully at the semantics of the verbs. *bisa* 'pass' in (693a) puts more focus than does English *pass* on the portion of the trajectory where the referent of the subject NP moves away from the reference object. By contrast, English *pass* tends to focus on the moment of closest proximity (except in temporal contexts). Therefore *by* is the appropriate preposition in English, but a postposition which can mean 'away from' is most appropriate for KCh. In (693b), the problem is that English treats a *hole* as something put into the reference object (here, a stone), whereas KCh treats *guusu* 'concave hole, pit' (distinct from *fune* 'hole, perforation') as something excavated out of the reference object. Thus in both (693a) and (693b) *ga* is compatible with a literal gloss 'out of'.

11.1.3 Motion and path structure

Although spatial adverbials, especially postpositional phrases, play a role in expressing path structure, verbs have a greater role in this respect than in English.

Let us take as our prototype an event consisting of a person going from location A to location B. The major lexical resources for describing this event or some portion of it are shown in (694).

(694)	<u>verb</u>	<u>gloss</u>	<u>other senses</u>
	<i>kaa</i>	'come'	'become'
	<i>koy</i>	'go'	—
	<i>bisa</i>	'pass by, proceed further'	'surpass, be or do more (than ...)'
	<i>dira</i>	'be in motion, set off'	'walk, travel'
	<i>too</i>	'arrive (at), reach'	'be equal; suffice'
	<i>hun</i>	'leave, depart from (place)'	'come off, (e.g. leaf) fall off'

The verbs *kaa* and *koy* resemble their primary English glosses in that *kaa* denotes motion toward a deictic center (usually the "here" of the speech event), while *koy* is used for motion in any other direction (or for motion when no deictic center is active). *kaa* is often used to denote an undifferentiated complete trajectory including final

arrival, and is optionally accompanied by the deictic adverb *nee*, as in *ni kaa (nee)* 'you(Sg) have come (here).'

The situation with *koy* is subtly different. With no overt Locational Phrase (LP), as in simple *i koy* 'they went,' the emphasis is on the fact of going (as opposed to not going, i.e., staying). The endpoint is therefore not highlighted. To denote a completed trajectory including arrival at an endpoint, the preferred expression is a VP with *too* 'arrive' (or *hirow* 'enter') plus the overt LP. This means that 'they went to B' may have to be expressed in a two-clause sequence in KCh, 'they went (*koy*), they arrived (*too*) at B.'

An exception is that *koy* rather than *too* is regular before an LP denoting a generic zone type, or an activity implying such a zone (see §5.12 for an inventory). Examples are *koy ganji* 'go into the wilderness (bush)' and *koy yoobu* 'go to market'.

Both *kaa* and *koy* are extremely common as serial verbs with a following infinitival VP of any type. Instead of the usual Inf[initive] *ka* between serial verb and infinitival VP, after *kaa* we get a special form *ta*, and after *koy* in most cases no Inf morpheme appears (§9.7.7). *kaa* and *koy* may also be appended in the form of infinitival VPs (*ka kaa*, *ka koy*) to a preceding VP, and in some idioms these sequences may also follow an NP (§9.7.9).

The verb *hun* 'leave, depart from' is very important since KCh has no postposition translatable as 'from' in the directional sense. Therefore 'I came from A' must be translated by a two-VP sequence of the type 'I left (*hun*) A to come (*kaa*) here.' To express noncentripetal 'I went from A to B,' one says 'I left (*hun*) A to go (*koy*) to B.' This construction can also be used to indicate in motional terms the extent of a space, defined as 'leaving' (=starting at) one point and 'going' to another, as in (695).

- (695) *farru foo woo daa kaa hun nee ka koy,*
 lot one Dem Emph Rel leave here Inf go,
saarey woo yo nda cere game
 cemetery Dem Pl with friend among
 'this same lot which goes from here to (a point) between the (two)
 cemeteries.'

bisa 'pass by, proceed further', is appropriate when location A is an intermediate point in a longer trajectory. It does not matter whether the entity in motion stops at A before proceeding farther. The emphasis is on the continuation of the trajectory rather than the proximity of a point in the trajectory to A, as might be suggested by the gloss 'pass by'.

The remaining verb in (694) is *dira*, which can mean 'walk (go on foot)', 'travel', or 'be in motion'. To a greater extent than *koy*, *dira* emphasizes the fact of being in motion. In a minimal sentence in perfective aspect, like *i dira* 'they travelled,' there is little practical difference between *dira* and *koy* and either can be freely glossed as 'departed'. However, when prolongation of the motion is emphasized, as with preceding serial verb *čindi* 'continue', we regularly get *dira* rather than *koy* (or *kaa*): *i čindi ka dira* 'they kept going.'

The verbs in (694) may be complemented by a Locational Phrase (see §5.12). An LP is essentially obligatory with *hun*, but may be omitted with any of the others if the locations in question are contextually understood. An overt LP may be a deictic adverb (§11.1.1), a simple NP denoting a location, or a spatial PP. In the case of a PP, the unmarked postposition is Loc *ra* or *kuna* even with *hun* 'leave'. An example is (696).

(696)	<i>hal</i>	<i>a</i>	<i>ma</i>	<i>hun</i>	[<i>a</i>	<i>ra</i>]
	until	3SgS	Subju	leave	[3Sg	Loc]
	'until he leaves it (=the world)'					

The other postpositions commonly used with these basic motion verbs are *doo* 'at (the place of)' and *ga* 'on'. Like the Loc postpositions, they can be used in allative and ablative as well as stationary locational contexts.

A number of other motion verbs are listed in (697).

(697)	<u>verb</u>	<u>gloss</u>	<u>other senses</u>
a.	<i>yaara</i>	'take a walk, hike, travel'	—
b.	<i>fatta</i>	'go out, exit'	'turn out well'
	<i>hirow</i>	'go in, enter'	—
	<i>doo</i>	'go in or to (river etc.)'	'originate'
c.	<i>yee</i>	'return, go or come back'	'repeat'
d.	<i>jiji</i>	'go up'	'(e.g. bird) alight (on tree)'
	<i>jumbu</i>	'go down'	'go home after work'
	<i>tun</i>	'get up, stand up, arise'	'get up and go, set off'
	<i>goro</i>	'sit, sit down'	'dwell; expect'
	<i>kani</i>	'lie down, go to bed'	'spend night; be at rest'
e.	<i>wanga, kooli</i>	'go around [tr]'	—
	<i>windi</i>	'go in a circle'	—
	<i>tenje</i>	'head for, go toward'	'be straight; be facing'
f.	<i>jur</i>	'run, speed, (liquid) flow'	'flee'
	<i>dira</i>	'walk', cf. (694)	'be in motion'
	<i>deesi, firri</i>	'fly, fly away'	—
	<i>jii</i>	'swim'	(unrelated homonyms)
	<i>fana</i>	'crawl'	—

yaara resembles *dira* 'walk' but suggests a more sustained or aimless trip or hike.

The first two verbs in (697b), which involve transitions between inside and outside of a reference enclosure, have exactly the same syntax as the verbs in (694), i.e., they can be followed by the same set of LPs. A Loc PP is typical after 'go out' as well as after 'go in', as in (698a-b). In (698b), 'climb up out of ...' is a free gloss for literal 'we go up to exit ...'.

- (698) a. *no-o koy no-o hirow [kondey di ra]*
 2SgS-Impf go 2SgS-Impf enter [association Def Loc]
 'You (will) go, you (will) enter into (=join) the association.'
- b. *yer o susum yer o jiji ka fatta*
 1PlS Impf move-away 1PlS Impf go-up Inf exit
[guusu di ra]
 [hole Def Loc]
 'We move away, we climb up out of the hole.'

yee in (697c) is most common as first member of a serial-verb pair (699a), though it occasionally occurs as second member (699b). As first member, *yee* can mean 'repeat' and may therefore often be translated as s prefix 're-', as in the somewhat redundant *yee ka filla* 're-repeat' in (699a).

- (699) a. *a si yee ka filla hīsa [haya foo] koyne*
 3SgS ImpfNeg return Inf repeat be-good [thing one] again
 'It (brittle limestone) will not again be good (for) anything.'
- b. *ay si bere ka yee moo*
 1SgS ImpfNeg turn Inf return also
 'I would not have turned (around) and gone back.'

The stems in (697d) involve vertical motion and stance. The most interesting is *tun* 'get up, stand up, arise', since in narratives it can be used in a way best translated freely as 'get up and go' or 'set off'. The point is that in general one arises from sitting or prone position in order to go somewhere, and this implication is more systematically exploited in KCh than in English.

No special comments are needed on the other stems in (697d), on the verbs of straight or circular motion in (697e), or on the verbs of mode of propulsion in (697f).

11.1.4 Time expressions (nouns and verbs)

In this section we consider overt temporal expressions, generally adverbial in function. For more complex relational expressions and constructions, see the following section.

The nouns for '(point or, interval of) time' are *alwakati* ~ *waati*, *jaman*, and *saa*, all derived from Arabic. For quantified 'time (instance)' as in 'three times' see *čee* (§5.4.9).

alwakati ~ *waati* most commonly means 'time' in the sense of a point or bounded interval of time. It frequently occurs with a demonstrative: *alwakati woo di* '(at) that time' and the Loc PP *alwakati woo di ra* 'in (=at) that time'. The form *alwakati* seems more common in Timbuktu KCh. Both are from Ar. *al-waqt* 'the time', perhaps via different intervening languages.

jaman usually denotes a longer period of time and can often be glossed 'season', 'era' or '(the) times'. While *alwakati* ~ *waati* is evaluatively neutral, *jaman* occurs in expressions ('the colonial era', 'whatever the [next] era brings') which evoke the

culture, lifestyle, socioeconomic circumstances, or other attributes of a period of time. The etymon is Ar. *zamaan* 'time; era'.

The third stem, *saa* (<Ar. *saaʔ-a* 'hour'), can mean 'time' or 'situation (at a given time)'. It can be pluralized as in [*saa yo*] *bara kaa* ... 'there are times (=situations) that ...' with existential verb *bara* and Rel *kaa*. However, by far the most common occurrence is in the phrase *saa di* 'then', with Def *di*. Although Dem *woo* conspicuously fails to co-occur with *saa* in my data (contrast *alwakati woo di*, just cited), the phrase *saa di* is used as though the demonstrative were present, i.e., in the sense 'at that time, in that situation, then, that being the case, so'. Generally preposed to a sentence, it refers back to the state of affairs described by prior discourse and implies that this state of affairs is relevant to the following proposition in some causal or other explanatory fashion. For purely temporal-sequential 'then' ('He came into the house, then he sat down'), the phrase used is either *jinaa* (§9.3.5) or *woo di banda* 'after that' ('Dem Def behind').

Aside from preposed *saa di*, *saa* occurs in the 'when?' interrogative *saa foo* ('time which?'), cf. §8.2.3. It is also used as head of a relative clause in *saa di kaa* ... ('time Def Rel ...'), the standard conjunctive 'when ...' complementizer. Def *di* is occasionally omitted in this combination (§8.3.6). In the sense 'when ...', *saa di kaa* ... competes with *han kaa* ... ('day Rel ...') and even *nan kaa* ... ('place Rel ...', contracted from noun *nangu* 'place'), the respective notions of 'day' and 'place' having been bleached out.

With *kul* 'all' we get *saa kul* 'every time, always' and relativized *saa kul kaa* ... 'whenever ..., any time that ...'. The expression *saa di hinne* ('time Def quantity') is a fixed phrase meaning 'immediately, right away'.

To express the general sense 'a duration of time', two options are available. The sense '(short) while' is expressed by the NP *haya keyna* ('thing small'), used adverbially. The sense 'long time' is expressed by the verb *gey* 'endure, last; do for a long time'. We may also mention *tamba* 'quickly' and *mooso* 'slowly, softly, gently', both of which are often reduplicated.

Some additional expressions that can function as time adverbials are in (700).

(700)	<u>form</u>	<u>gloss</u>
a.	<i>moreyda</i>	'now (immediate)'
b.	<i>hõõ</i>	'today, nowadays'
	<i>bii</i>	'yesterday; the day before'
	<i>bii foo</i>	'day before yesterday, a few days ago'
	<i>suba</i>	'tomorrow; the following day'
	<i>subasii</i>	'day after tomorrow; two days later'
c.	<i>jaaroo</i>	'today, nowadays'
	<i>čijoo</i>	'tonight'
	<i>jiiroo</i>	'this year'
d.	<i>manna</i>	'last year'
	<i>manna foo</i>	'year before last, a few years ago'
	<i>yeesi</i>	'next year'

moreyda 'now' is extremely common. It emphasizes immediacy, and can be expanded with little change in force as *moreyda čiino*.

The terms in (700b) focally denote days, but *hōō* can be used more broadly ('nowadays, these days'). The terms *bii* 'yesterday' and *suba* 'tomorrow' can also be adjusted to a past deictic center ('the previous day', 'the following day').

In (1c) we have some of the closed set of forms with fused deictic **wo* 'this' (§4.2.2). *jiiroo* 'this year' is complemented by the terms for adjacent years in (700d).

'Day' is expressed variously as *jaari* 'daytime, day's work' (singular, opposed to 'night'), *han* 'day, date' (in temporal locating expressions like 'the day when ...' or 'one fine day, ...'), and *jirbi* 'day, 24-hour unit' (with nonsingular quantifier, as in 'five days' or 'how many days?', related to the verb *jirbi* 'sleep'). Terms for days of the week are all from Arabic. Terms for (Roman calendar) months are from French. There is a full set of terms for lunar months of the Islamic calendar, but most younger speakers no longer know them. *handu* 'month' (quantifiable) has the basic sense 'moon'. Expressions like '(the moon) stood up' (*key*) or 'died' (*buu*) denoting points in the lunar cycle are still heard, especially in villages (see texts volume, pp. 237, 265-67, with a Niafunké speaker). 'Year' is *jiiri*. Roman calendar years like '1975' are given in abbreviated French (*soixante-quinze*).

Precise clock times (9:30, 1PM, 18:45) are now generally expressed in French (§5.4.7) on either the 12- or 24-hour cycle. Some speakers still use phrases with *guuru* 'metal' (hence 'clock') and a numeral, e.g. *guuru hinja* 'three o'clock'. The more traditional manner of denoting larger intervals of time, still fairly common, is to use the five daily Muslim prayers as reference points, supplemented by a few other time-of-day expressions. The terms for the daily prayers are *alfajar* 'pre-dawn prayer', *aluula* 'early afternoon prayer', *alaasara* 'mid-afternoon prayer', *fitirow* 'twilight prayer', and *assaafoo - saafoo* 'evening prayer'. The most common complementary terms are *subaahi* 'morning', *adduhaa* 'late morning', *wičir* 'mid-afternoon', and *čiji* 'night'. There are also various compounds like *čiji maasu* 'late at night, middle of the night'.

There are also some verbs denoting events or states that are confined to particular times of day. These are given in (701). Upriver dialects have *jaaje* instead of *gulli*.

(701)	<u>verb</u>	<u>gloss</u>
	<i>biyaa</i>	'go in early morning'
	<i>hoy</i>	'spend the mid-day hours (hot part of the day)'
	<i>gulli</i>	'arrive or return in evening'
	<i>woyme, woyma</i>	'go or arrive in the afternoon'
	<i>hanna</i>	'stay up late, do all night'

Weekday terms like *attinni* 'Monday' are all from Arabic. One of these, *aljumaa* 'Friday prayer, Friday', can be quantified to denote week-length units ('four Fridays' = 'four weeks'). This is now less common than expressions involving the noun *jirbi-iye* 'week' ('day-seven'), as in *jirbi-iye hinka* 'two weeks'.

Seasons of the year are *keydiya* 'rainy season' (June-Sept., local French *hivernage*), *anneema* 'mild season after rains' (Oct.-Dec.), *fufu* 'coldness, winter' (Dec.-Feb.), and *konn-ey* 'heat, hot season' (March-June).

11.1.5 *jinaa* 'first', *koyne* 'again', *jaa* 'since', *hal* 'until'

For *jinaa* 'first, at first, for a while, for the time being', see discussion beginning with (457) in §9.3.1, above. This word combines with negation to mean 'not yet' (§9.3.5).

For *koyne* 'again' see discussion of examples (456a-c) in §9.3.1. It combines with negation to mean 'no longer', 'not again', and occasionally 'nor' (= 'again not'), see §9.3.5.

The particles *jaa* 'since' and *hal* 'until' can take either a following clause, or a following spatiotemporal phrase (NP, PP, adverbial), as a complement. In concrete temporal contexts, *jaa* is glossable as 'since, ever since, from (a certain time)', *hal* as 'until, up until, as late as, even (now)'. Both particles also have more abstract syntactic-semantic uses as clause-initial complementizers (§9.5.8, §9.6.4).

jaa and *hal* may also take apparently narrower scope over a temporal phrase (NP, PP, adverbial) within a larger sentence. The two are paired, indicating starting and ending points for an activity, in (702).

- (702) *yer o fari [jaa subasuba], [hal fitirow]*
 1PIS Impf farm [since morning], [until dusk]
 'We labor (in the fields) from morning to dusk.'

Although *jaa* and *hal* form surface adverbial phrases in (702), one could argue for a deeper structure involving complete clauses, from which a somewhat redundant verb has been dropped ('since morning BROKE, until dusk FELL'). These fuller variants are quite grammatical and are attested in texts. For the indicative clausal construction see §9.5.2. There is no difficulty in pairing *jaa* and *hal* with these (apparently) distinct types of complements, as in (703).

- (703) *jaa suba-suba, hal ma maata*
 since morning, until 2SgSSubju notice
kaa woyné woq o baa ka kam
 that sun Dem Impf want Inf fall
 'from morning until you notice that the sun is about to set'

An example of *hal* in the spatial sense 'all the way to' with following locational phrase is (704).

- (704) *[hal tavaarus] na yer kata mobil*
 [until Gourma-Rharous] Foc 1PIS bring vehicle
 '[All the way to Gourma Rharous (town)] [focus] we brought a vehicle.'

As with (702), one could argue for a deeper structure with clausal complement: 'until WE REACHED Gourma-Rharous.' This could also permit us to interpret *hal* as strictly temporal, despite the apparent spatial sense 'all the way to' in (704).

11.1.6 Temporal uses of spatial and motion expressions

Some spatial expressions discussed in §11.1.1-3, above, also have temporal applications. In the case of verbs *yee* 'return, go or come back', there is an intrinsic cooccurrence of motion (from points A to B) and temporal cyclicity (reverting to a prior state, such as being located at B, over an intervening interruption). In the usage of *yee* as serial verb, the notion of temporal repetition ('repeat, do again') displaces the spatial sense (§9.7.5).

Some additional motion verbs can be mentioned. *hirow* 'enter' can mean 'enter into, get involved in (activity)'. *hun* 'leave, go from' can also be used intransitively to mean '(phenomenon) cease to exist'. *too* 'arrive, reach' is common with subject NPs denoting daily prayers (used to indicate time of day), as in (705).

- (705) *alaasara* *too*
 afternoon-prayer arrive
 'The afternoon prayer arrived (=took place).'

The concrete spatial postposition *banda* 'behind' can also be used after an NP in the temporal sense 'after'. This is most common in *woo di banda* 'after that, afterwards' ("Dem Def behind"), a phrase that prefaces a clause S_2 to indicate that the eventuality it denotes followed that of the preceding clause S_1 . *woo* here is discourse-anaphoric, denoting the eventuality described by S_1 . The sequence is therefore of the type ' S_1 ; after that, S_2 .' There is no construction of the type 'after S_1 ' with a conjunction 'after' taking clausal scope. A more complex example is (706), where the simple PP 'behind me' requires considerable semantic expansion.

- (706) *ay* *gar* *bangu* *di* *taawo* [*ay* *banda*]
 1SgS find floodplain Def be-new [1Sg behind]
 'I found that the flooded area (=ricefield) is new since I was last there.'

Loc *ra* or *kuna* can be used with verbal nouns (or anaphoric pronouns denoting eventualities). Here the "location" is temporal rather than spatial, and the result is a progressive-durative imperfective (see end of §7.2.2). The noun is usually indefinite in form, in generic-activity function. This is exemplified in (707a), where *goy* 'work' is a verbal noun. In (707b) we get a superficially similar expression with a Def noun and a different postposition *doo* 'at (the place of)'. Here the spatial sense is to be taken literally.

- (707) a. *yer* *goo* [*goy* *ra*]
 1PIS be [work Loc]
 'We are at work (=engaged in working).'
- b. *yer* *goo* [*goy* *di* *doo*]
 1PIS be [work Def chez]
 'We are at work (=at the work location).'

11.2 Weather and ambient condition

In §6.1.1 it was suggested that all sentences in KCh have a referential subject, with the (qualified) exceptions of impersonal obligational *bara* and simple equational clauses with *nono*. To support this claim it must be shown that predications of ambient condition (such as weather conditions) have referential rather than nonreferential (expletive) subject NPs.

The regular 'rain' predication in (708a) has the noun 'rain' in the subject NP. The residents of northern Mali are in little danger of being snowed on, but using the French noun *neige* 'snow' a 'snow' predication can be constructed (708b).

- (708) a. *baana di kar*
rain Def strike
'It rained.'
- b. *neige dam*
snow be-done
'It snowed.'

Other weather conditions are also expressed chiefly by nouns, so we get subject NPs with the weather information and a simple action or motion verb, or a locational quasi-verb. More examples in (709a-d).

- (709) a. *anneema kaa jumbu yer ga*
pleasantness Rel descend 1Pl by
'the pleasant weather that has come down on us.'
- b. *hew keyna goo*
wind small be
'There is (was) a little wind.'
- c. *baana di dam [sinji boyro]*
rain Def make [sticking-in pretty]
'The rainclouds massed up (=made sky overcast).'
- d. *neleku dam*
lightning be-done
'Lightning struck.'

11.3 Perception

Perception predicates, as in English, have a subject NP representing the perceiver and a direct object representing the perceived object or its sensory emanation. The primary verbs, all transitive, are given in (710). *mom* normally means 'hear, listen, understand (words, language)', but has the sense 'smell' in connection with an object like *hew* 'wind, air, odor'. The verb *maata* is a more abstract stem meaning 'become aware of', through unspecified sensory channels.

(710)	<u>verb</u>	<u>gloss</u>
	<i>guna</i>	'see'
	<i>maata</i>	'become aware of (feel, sense, notice, hear)'
	<i>mom</i>	'hear, listen, understand (words); smell (odor); notice'
	<i>mani</i>	'smell (odor)'
	<i>taba</i>	'taste'

We might also mention *bey* 'know, notice, recognize', *koroši* 'notice', *taameysa* 'notice (as distinguishing sign of object)', *honno* 'catch sight of, espy (from afar)', and *joo* 'look back' [intr].

Percept nouns include *hew* in the sense 'odor' and *tembe* 'taste'. Representative phrases are *a si mey tembe* 'it has no taste' and *a tembe di či muso foo?* 'its taste is like what?' For '(characteristic) voice or sound (of an entity)' the usual term is *jinde* (core sense: 'neck').

11.4 Emotion and personality

We begin with a comprehensive list of verbs of transient emotional state or pain (711a), along with a few terms for more complex object-directed emotions (711b) and intelligence or personality attributes (711c).

(711)	a.	<i>dukur</i>	'be angry'
		<i>ñama</i>	'be angry, be upset, be disturbed'
		<i>waasu</i>	'boil; be angry'
		<i>hemme</i>	'feel sad'
		<i>hujun</i>	'feel sad'
		<i>hottu</i>	'feel sharp pain'
		<i>horon</i>	'feel heat; feel sharp pain'
		<i>tujur</i>	'feel pain (mental or physical)'
		<i>jelleju</i>	'ache'
		<i>ñaali</i>	'joy; be joyful'
	b.	<i>nimsi</i>	'feel regret'
		<i>čěse</i> [X <i>ga</i>]	'be jealous [of X]'
		<i>bibi-ndi</i>	'feel exasperated, frustrated'
		<i>tammahaa</i>	'be hopeful'
	c.	<i>futu</i>	'be nasty, naughty, violent, angry, furious'
		<i>fuuye</i>	'be lazy, idle'
		<i>ladab</i> [n.]	'polite person'
		<i>mey lakal</i>	'have intelligence (=be smart)'
		<i>neeri</i> [n.]	'stupid person'

Aside from the simple lexical items in (711a), emotional states can also be expressed by more complex "metaphorical" phrases. Common expressions for happiness and sadness involve a possessed form of *bine* 'heart' as subject NP. Examples in (712).

(712)	<u>transcription</u>	<u>literal sense</u>	<u>free translation</u>
a.	<i>a bine kaan</i>	"his heart was sweet"	'he was happy, satisfied, delighted'
b.	<i>a bine baa</i>	"his heart broke"	'he was crestfallen, devastated'
c.	<i>a bine hun</i>	"his heart left"	'he has lost hope'

Expressions like 'X tied Y's head' or 'Y's head is tied' are used to indicate that Y is confused, tongue-tied, in a dilemma, or otherwise incapacitated by an external situation. An example is *a-a haw ni bomo* 'it puts you (i.e., anyone) in a dilemma' (lit., 'it ties your head').

Euphoric and dysphoric moods can also be expressed by the construction in (713).

(713)	<u>transcription</u>	<u>literal sense</u>	<u>free translation</u>
a.	<i>a goo jaari boyro ra</i>	"he is in a nice day"	'he is feeling good (today)'
b.	<i>a goo jaari futu ra</i>	"he is in a bad day"	'he is feeling bad (today)'

11.5 Kinship

We commented on compound-like or otherwise segmentable kin expressions in §4.6.6. Here our focus is on the semantic system. Abbreviations are Fa[ther], Mo[ther], Br[other], Si[ster], So[n], Da[ughter], Hu[sband], Wi[fe]. "+" before a kintype means 'elder', "-" means 'younger'. Thus Fa+Si means 'father's elder sister'.

The speaker must choose on each occasion between two coexisting subsystems for sibling terms, one based on gender and one based on seniority (birth-order). The forms are given in (714).

(714)	<u>transcription</u>	<u>kintype(s)</u>	<u>related forms</u>
a.	<i>harme</i>	Br	cf. <i>har</i> 'man'
	<i>woyme</i>	Si	cf. <i>woy</i> 'woman'
b.	<i>beere</i>	elder sibling	cf. <i>beer</i> 'big'
	<i>keyna</i>	younger sibling	cf. <i>keyna</i> 'small'

While there is no fixed rule, the usual pattern is to use the seniority subsystem for parallel-sex siblings and the gender subsystem for cross-sex siblings. Thus 'his Si' is usually a *woyme*, but 'his Br' is most often expressed as either a *beere* 'his elder sibling' or a *keyna* 'his younger sibling' depending on relative age.

The parallel-cross and seniority oppositions ramify throughout the kinship system. In the first ascending generation, FaBr is partially merged with Fa, and MoSi with Mo. However, the adjectives 'big, old' and 'small, young' are generally added in reference (though not address) to indicate seniority vis-a-vis the actual Fa or Mo. *baaba ~ baba* 'father' may be reduced to *baa* in these combinations, especially in address, and the same reduced *baa* occurs as the initial in certain compound personal (nick-)names. Special stems are used for cross-kin (MoBr, FaSi) without reference to seniority. Hence the forms in (715).

(715)	<u>transcription</u>	<u>kintype(s)</u>	<u>analysis</u>
a.	<i>baaba, baba</i>	Fa	—
	<i>baaba beer</i>	Fa+Br	'father big'
	<i>baa beer</i>	Fa+Br	'father big' (esp. as personal name)
	<i>baaba čiiina</i>	Fa-Br	'father small'
	<i>baa keyna</i>	Fa-Br	'father small' (esp. as personal name)
b.	<i>ñaa</i>	Mo	—
	<i>ñaa beer</i>	Mo+Si	'mother big'
	<i>ñaa keyna</i>	Mo-Si	'mother small'
c.	<i>hasey</i>	MoBr	—
d.	<i>hawey</i>	FaSi	—

In the first descending generation, the term 'child' (also used as a non-kinship term, as with English *child*) is applied to one's own offspring or that of one's brothers. There is a special term for Si's child. The basic stems are gender-neutral, but compound finals 'man' and 'woman' can be added to specify gender (§4.6.3).

In the first descending generation, *ije* 'child' is the basic term for one's own So or Da. It is often extended to one's siblings children, especially by men to their brother's children. There is a special "nibling" (nephew or niece) term *tuba* for Si's children, used by men. Women often use composite expressions meaning 'Br's child' or 'Si's child' for their siblings children. The 'child' and 'nibling' terms are optionally gender-specified by adding compound finals (§4.6.3). Relevant forms are in (716).

(716)	<u>transcription</u>	<u>kintype(s)</u>	<u>composition</u>
a.	<i>ije</i>	So, Da	—
	<i>ije-har</i>	So	"child-man"
	<i>ije-woy</i>	Da	"child-woman"
b.	<i>tuba</i>	SiSo,-SiDa	—
	<i>tuba-har</i>	SiSo	"nibling-man"
	<i>tuba-woy</i>	SiDa	"nibling-woman"
c.	<i>har-me-ije</i>	BrSo,-BrDa	"Br-child"
	<i>woy-me-ije</i>	SiSo,-SiDa	"Sis-child"

In the second ascending generation, there is a single basic stem *kaaga* 'grandparent'. Likewise, there is a single reciprocal term *haamaa* 'grandchild'. As with the terms in (716) and others to follow, *-har* and *-woy* may be used as finals to specify gender.

Parallel cousins (FaBr's or MoSi's children) are referred to by the sibling terms (714). Cross-cousins, who are eligible as marriage partners and may engage in joking relationships, are called *baase* with the usual optional gender marking.

The primary spousal and affinal categories are those in (717). The affinal categories in (717b) are optionally gender-marked by adding *-har* or *-woy*.

(717)	<u>transcription</u>	<u>kintype(s)</u>
a.	<i>kuñe ~ kurñe</i>	Hu
	<i>wande</i>	Wi
b.	<i>hanjire ~ hanjire</i>	parent-in-law

ferge

sibling-in-law

In this predominantly Islamic region, men commonly take more than one wife. From the husband's viewpoint the wives are ranked by seniority (marriage order, not birth order) as *wande beer* 'senior wife' and *wande čiina* 'junior wife' (*čiina* 'small'). From the perspective of one wife, another wife is called *wočče* (<*woy-če) 'co-wife'. Since polyandry is not practiced, there is no comparable relationship of 'co-husband'; the male counterpart of *wočče* is *harče* 'male lover; (male) suitor (of a woman)'.

The term *konde* can denote 'FaWi who is not one's Mo' (i.e., a co-wife of one's mother), or 'MoBrWi'.

This sketch suffices to describe the basic consanguineal and affinal categories. More distant kintypes can be incorporated into the system either by composite expressions ('my cousin's child') or by semantic extension, respecting the parallel-cross distinction (e.g., FaFaBrSoSo = 'brother').

More general expressions for 'kin' are illustrated in text fragment (718).

- (718) *war* *či* *arrahiim* *yo* *war* *či* *fafa-jje* *yo*
 2PIS be kinsman Pl 2PIS be breast-child Pl
kaa *goo* *koyra* *di* *ra* *nda* *čere*,
 Rel be town Def Loc with friend,
war *kul* *či* *harme* *yo*, *wor* *o* *faaba* *čere*
 2PIS all be brother Pl, 2PIS Impf help friend
 'You are kin (of each other), you are breast-mates who are together in
 the town, you are all brothers, you help each other.'

Here we see three successive expressions with the same basic contextual meaning. *arrahiim* (<Ar.) is a simple noun meaning 'blood relative'. It is followed by *fafa-jje*, a compound consisting of *fafa* 'breast' and *-jje* (</ije/) 'child'. Its literal sense is therefore 'child suckled by the breast', but in practice it is used as a general term for 'blood relative' and is not limited to a single nuclear family. Finally, 'brother' is used in the plural in an extended sense, brotherhood being the exemplar of the social obligations of kin to each other.

Other terms of this general type include *baba-jje* ('father-child') and *ñaa-jje* ('mother-child'). Though ostensibly referring only to uterine kinship, *ñaa-jje* is actually used as a general term for 'blood relative', like *fafa-jje*. For its part, *baba-jje* generally denotes a relationship of cautiously respectful rivalry among same-generation adult males; hence the common expression *baba-jje-terey* 'male rivalry' (for *-terey* see §4.6.4).

In the compounds *baba huu* ('father house') and *ñaa huu* ('mother house'), the term 'house' is used (as in archaic English) to denote the set of blood relatives of the respective parent.

Other social relationships which we may briefly mention are those of friendship and of social and occupational subordination. Terms for 'friend' include the general term *čere* 'friend, agemate, peer', various compounds ending in *-kasine* (§4.6.7), and the stronger term *baa-koy* 'close friend (or kinsman)' (<*baa* 'want, love', see §4.3.3).

For '(man's) sweetheart, girlfriend, concubine' the usual term is *woy čiiina* 'little woman'). For '(woman's) suitor, lover' see *wočče*, described above.

Aside from kinship itself, social subordination at the person-to-person level can involve slavery or apprenticeship. The key terms are those in (719).

(719)	<u>transcription</u>	<u>gloss</u>	<u>comment</u>
	<i>maale</i>	'master'	of slave or apprentice (<Ar.)
	<i>bañña</i>	'male slave'	<* <i>barña</i>
	<i>koŋŋa</i>	'female slave'	
	<i>maale-bañña</i>	'apprentice'	lit., "master-slave"

By 'apprentice' here we refer to the traditional long-term subordination of a child to a tradesman or artisan. This is distinct from the current local sense of French *apprenti* 'assistant to bus or truck driver'. Slavery has long been officially abolished, but *bañña* and *koŋŋa* are still in use to denote what are still caste-like statuses, and as personal (nick-)names. Their approximate antonym is *borčin* 'free-born, noble'.

11.6 Flora-fauna

The common life-form terms are those in (720).

(720)	a.	<i>tuuri</i>	'tree, woody plant; wood'
		<i>subu</i>	'grass, herb'
	b.	<i>addabba</i>	'animal'
		<i>birmey</i>	'domestic animal' (e.g. pigeon)
		<i>hari-ham</i>	'fish' (lit., "water-meat")
		<i>čirow</i>	'bird'
		<i>ganda-korfo</i>	'snake' (lit., "ground-rope")

Most of the basic-level terms are unremarkable and unsegmentable. The following terms are at least partly analysable. Linnean identifications, usually omitted here, will be given in the projected dictionary. It should be noted that many Timbuktu residents have very little knowledge of flora-fauna spp., and that terminology in this domain differs widely from town to town along the river.

Birds: *alfaa-kundurusu* 'grey-headed sparrow' and *alfaa-waaliya* 'stork' begin with *alfaa* 'holy man' (<Ar.); *deeli-goon* 'bustard' is literally "gum-swallow" ("swallow" as verb, not ornithological term; the bustard feeds on acacia resin); *niinagaari* 'knob-billed goose' may contain *niine* 'nose' (the knob is over the male bird's eyes); *ñandeyboori* 'crowned crane' may contain *boori* ~ *buuri* 'beautiful' (the bird is spectacularly multicolored); *kaarey-wande* 'pelican' ("crocodile-wife"); *jirbi-jirbi* and *jirbi-dafe* 'nightjar' contain *jirbi* 'sleep' (the bird "sleeps" in the daytime in tall grass); and several compounds of the life-form term *čirow* including *čirow-bii* 'guinea-fowl' (cf. *bibi* 'black'), *čirow-futu* and *čirow-čerkow* 'owl' (*futu* 'bad, evil', *čerkow* 'sorcerer'), *čirow-korey* 'cattle egret' (*korey* 'white'), *čirow-meysa* 'grain-eating flock birds' (also called *meysa-meysa*), and *jirgar-ey-čirow* 'swift' ('mosque-

bird'). Parallel domestic and wild spp. are distinguished by using the initial *ganji*- 'wilderness' for the latter: *ganji-tonkono* 'wild duck (shoveler)' and *ganji-tuujum* 'wild pigeon (speckled pigeon)'. Several stems are reduplicated but otherwise unanalysable, e.g., *gubaguba* 'dove'.

Fish: aside from the addition of color adjectives to differentiate spp. called by the same basic-level term, we may mention *duu-kurumbu* as a variant of *duu* 'Labeo spp.', *ham-korey* ("meat-white") and synonym *ham-ije* ("meat-child") 'captain fish', and *jawey-hāyši* 'fish sp.' (*jawey* 'tigerfish' plus *hāyši* 'dog').

Fauna: *ham-karji* 'porcupine' ("meat-thorn"), and *hilli-foo* 'rhinoceros' ("horn-one," a non-local sp. known from images). Some informants use an expression *ganji-hāyši* ("wilderness-dog"), presumably the wild dog (*Lycaon pictus*); another uncommon term is *hari-hāyši* ("water-dog"), perhaps the otter. *ganji-haya* 'lion' is literally "wilderness-thing", but historically may be a corruption of **ganji-hayla* 'wilderness-cat' (*hayla* 'cat' survives in KS but has been replaced in KCh by onomatopoeic *muši*, cf. dialectal Ar. *mūšš*).

Insects: *baana-jje* 'red insect sp.' ("rain-child"; this insect surfaces after a rain).

In the case of flora, one interesting compound type involves a wild animal as initial (semantic possessor). This type is used for an inedible or otherwise unutilized sp. that physically resembles a more useful one: *farka-taba* 'bush sp.' ("donkey-tobacco"), *kooro-kaney* 'wild melon sp.' ("hyena-watermelon"), and *kooro-karsan* (~*kassan*) 'bush sp.' ("hyena-card"; the spiked globular fruit resembles a weaver's carding implement). A fourth example with a different semantic structure is *farka-teeli* 'aquatic grass sp.' ("donkey-intestine"), explained variously as resembling intestines or as being popular fodder for donkeys). Some other composite flora terms are *gargani-kottu* 'herb sp.' ("flatland-rip"; the plant's root must fight its way through hard-dried clay), *kaarey-kanda* 'aquatic legume sp.' (contains *kaarey* 'crocodile', perhaps here a corruption, cf. KS *kaarū* for this legume sp.), *koo-dungura-hamni* 'lemon-grass' ("baobab[tree]-short-powder"), and *maafe-jje* 'cumin' ("sauce-child"). Another spice, 'calabash nutmeg', is called *waggara-maafe-jje*, with a patronymic surname prefixed to the compound for 'cumin'. A few compounds involving the stem *tuuri* 'tree' were recorded: *tuuri-ferre* alongside *ferre* 'medicinal tree sp.' (cf. *ferre* 'stink'), *tuuri-čirey* 'shrub sp.' ("tree-red"), and *saaboy-tuuri* 'tamarix tree' (an exotic, newly planted sp. named after the native bush *saaboy*). The tamarix is also (transiently?) called *jaabira-tuuri* after the popular recent governor Diabira who planted it extensively in Timbuktu.

It should be noted that many apparent terms for flora spp. really denote the fruit or some other useful part or product. These terms are comparable to English *cotton*, *carrots*, etc., which require compounding to express unambiguously the source plant as a whole (*cotton tree*, *carrot plant*). In KCh, the term for the plant in such cases involves addition of the final *-āaa* 'mother' (§4.6.2). Thus *baani* 'medicinal acacia pod', *baani-āaa* 'acacia tree', parallel to *haabu* 'cotton' and *haabu-āaa* 'cotton tree' (not native to the area). A somewhat similar case is *maatiji* 'peanuts' and *maatiji-fita* 'peanut greens' (*fita* 'leaf'). In cases where the simple term does denote the entire plant, a compound with *-ije* 'child' may be used to denote the fruit or other separable part (§3.8.3, §4.6.2).

In two cases, the noun *hoy* 'sauce made from leaves' is an inseparable final for the plant sp. name, so there is no terminological distinction between the prepared sauce and the plant found in nature: *laa-hoy* 'okra' and *faku-hoy* 'herb sp.'

Among the noun-adjective combinations, the most lexicalized and widely-used appear to be *karji-korey* 'acacia sp.' ("thorn-white") and *gorboy-honno* 'native date' ("date-bitter").

kaabe is used to denote both a spice (a dried, shriveled lichen sp.) and a large tree sp. In the former but not the latter case, it is a development from *kaabe* 'beard, whisker'.

11.7 Body parts

On the whole, the semantics of body-part terms ("paronyms") is unremarkable. As in all languages there are extensions from human parts to animal parts, parts of objects, topography, and relative spatial orientation ('behind', etc.). There are also the usual associations between certain body parts and ethnopsychology. In (721) we indicate some of the ramifications of paronymics.

(721)	<u>basic term</u>	<u>primary sense</u>	<u>other senses or uses</u>
	<i>banda</i>	'back'	'rear'
	<i>bine</i>	'heart'	Topic (§8.4.1); emotions (§11.4)
	<i>biiri</i>	'bone'	'hardness'
	<i>bomo ~ bojo</i>	'head'	'ball'; reflexive pronoun (§10.2.1)
	<i>gurgu</i>	'belly'	'mound (in earth); island (in river)'
	<i>hambir</i>	'hair'	'feather'
	<i>jinde</i>	'neck'	'voice'
	<i>kamba</i>	'hand, arm'	'branch (of tree); hold onto [verb]'
	<i>kanje</i>	'knee'	'(exterior) corner or side'
	<i>kuuru</i>	'skin'	'hide, pelt'
	<i>linji</i>	'muscle, nerve'	'root'
	<i>mee</i>	'mouth'	'doorway (of house); bank (of river)'
	<i>niine</i>	'nose'	'pointed tip'
	<i>teñe</i>	'forehead'	'good luck'

Perhaps the most interesting semantic extensions are those of *mee* 'mouth'. In the sense 'doorway' it denotes the passageway rather than the door as a physical object (called *gambu*). In the compound *isa-mee* with the term for 'river' it denotes the bank (contrast English *river mouth* with very different sense). The common thread is the notion 'entranceway', the bank being the "entrance" to the river.

To understand the topographic extensions of *gurgu* to 'mound' and 'island', it is useful to note that most "islands" are alternately exposed and submerged (fully or partially) during the yearly flood cycle. An "island" is therefore simply a mound or rise, relative to surrounding lower terrain that is seasonally inundated.

'Egg' is expressed with compounds involving *tondi* 'stone', e.g., *gorongo-tondi* 'chicken stone (=egg)'. This probably reflects tabooing of **gunguri*, the old word for 'egg', due to its originally secondary (now primary) sense 'testicle'.

In the case of *bine*, the connection of 'heart' to emotions is natural, but its identity or homophony to Topic morpheme *bine* may reflect a recent convergence (some KS dialects distinguish *bine* 'heart' from *binde* Topic marker). Other cases of apparently accidental homophony, with no discernible semantic link, include *moo* ('eye', 'also', and 'rice crop', in upriver dialects also 'daybreak'), *čee* ('foot, leg' and 'time, instance'), *boy* ('[finger-, toe-]nail', 'millet soup', and 'herd [animals]'), and *tasa* ('liver' and 'push').

Some terms occurring in interesting compounds are *kuri* 'blood' (*kuri-buun-o* 'lazy', literally "blood-weak"), *moo* 'eye' (*moo-futu* 'wrongly placed, upside-down', literally "eye-bad"; *moo-koog-o* 'impolite person', literally "eye-dry"; *moo-konn-ey* 'bad mood', literally "eye-heat"; *moo-yeen-ey* 'coolness, self-control', literally "eye-coldness"). Other terms include *haja* 'ear', *deene* 'tongue', *hiŋe* 'tooth', *gande* 'chest', *hime* 'navel', *findi* 'buttocks', *bulle* 'anus', *kumbu* 'lung', *teeli* 'intestines, entrails', *foori* 'penis' (means 'testicles' or 'venereal disease' in some other Songhay languages), *tinji* 'waist', *bute* or *dofe* 'vagina', and *fafa* 'female breast'.

The usual term for '(living) body' is *gaa*, which may be the source of the postposition *ga* 'on'. (The homonym *gaa* 'camp, encampment' is a variant of *dagaa*.) For '(dead) body' the term *bukow* 'corpse' must be used. The key terms for spiritual and mental components of a person are *hunde* 'soul, life-force', *lakal* 'thought, mind, intelligence, memory, imagination', and *bii* 'shadow, (visual) image, reflection, photo'.

Appendix 1 Upriver dialects

As one goes up the Niger River westward from Timbuktu, the major KCh-speaking towns are, in order, Diré (D), Tonka (To), and Niafunké (N). Goundam (G) is actually a few miles north of Tonka in an area characterized by a few large seasonal lakes like Lake Fati. Tape recordings were made in Timbuktu with an N speaker who had just come for a regional cultural festival, and from three G natives (whose speech showed some Timbuktu dialectal influence). After these were provisionally transcribed, I went to N for three days to check some problematic words or phrases from the tapes, and to do lexical and some grammatical elicitation. I also stopped in G on the way back and did some lexical and grammatical elicitation there. The dialect from villages near Diré in the texts published by Zouber (1983) are close to that of G.

The following comments are based mainly on N. Lexical differences are given in the dictionary, and minor points are covered in notes to the text collection. We note briefly that there is very extensive Fulfulde (Fula) influence in N, and considerable Tamashek (Tuareg) and some Arab influence around G. Most of the comments below deal with differences vis-à-vis Timbuktu, but some confirm Timbuktu features for G and N where this seems useful in the context of comparative Songhay studies.

There are some similarities between the upriver dialects and KS, in spite of the fact that Timbuktu intervenes physically between them. Timbuktu is the major urban center in the region and is several kilometers off the river on sand dunes; most of its inhabitants have little to do with the riverine economy (fishing, rice growing, boat transportation). Some of the current population along the river in the area from Diré to Niafunké may have originally come from the KS zone along the river, rather than radiating out from Timbuktu.

§3.2. Original *a* is generally well-preserved in upriver dialects, in contrast to Timbuktu, where there are many cases of full or partial shift toward *o* and, more often, *e*: *talka* TGN 'poor person', in Timbuktu also heard as *telka*.

§3.4.2. GN have some stems that may end in velar nasal *ŋ*, as in *taŋ* - *tan* 'push off (boat)' versus Timbuktu *tana*, and *dam* - *daŋ* 'do' versus Timbuktu *dam*. Compare KS (*daŋ* in Gao and points east, but *dam* in Bamba). Final nasals in *CVN words tend to weaken to a nasalized *w̄* after {*o a*} in riverine dialects including GN: *moŋ* N 'hear' (Timbuktu *mom*), *noŋ* GN 'let, leave' (Timbuktu *nan*). There are a few cases of weakening after front vowels: *nī* GN 'only' (Timbuktu *nin*) and *jeŋ-ndi* G 'prevent'. N also has variants with nonetymological *m* in such cases (*jemdi* 'prevent', *nam* 'let'), perhaps hypercorrections.

§3.7.1. The combination of 3SgS *a* and Impf *go* - *o* is usually heard as *o-o* N and as *a-a* G (like Timbuktu). Other combinations of pronouns with *go* - *o* are as in Timbuktu, including 3Pl *i-i*.

§3.8.1. 1SgSSubju *ye* is attested in GN. The postverbal 1SgDat form *yene* occurred alongside *ay se* in N.

§3.8.4. Possessive postposition *wane*, definite *wan di*, occur in GN (like Timbuktu).

§3.8.8. The Logo/3ReflPI in GN is generally pronounced *ŋgi-yo* (or *ŋgi-ya*) with *i* not *u*, identical to 3PIF. This is often reduced to *ŋgi* GN in possessor function and before postpositions or DF morphemes. There were occasional possible cases of *ŋgu-yo* on tapes, but precise transcription was difficult.

These upriver dialects also use 3SgF *ŋga* and 3PIF *ŋgi(-yo)* in possessor function much more often than in Timbuktu, which strongly prefers 3Sg *a* and 3PI *i*. Examples: *i gar ga [ŋga huu mee daa]* N 'they found him_x [right (at) the door of his_x house]' versus Timbuktu ... [*a huu di mee daa*] for this sense. A similar G example is *hal i ma too-ndi ga [ŋga huu di doo]* 'for them to deliver him_x [to his house_x]' versus Timbuktu ... [*a huu di doo*]. The Timbuktu pattern with 3Sg *a* and 3PI *i* as possessor is grammatical in GN and occurs in texts, but is less common. In this respect, GN dialects have a partial affinity to KS, which does not allow *a* or *i* in possessor function.

The nasal in the 3F pronouns like 3SgF *ŋga* is sporadically dropped in N, where some speakers gave examples like *yee mey [[ga taka] hiŋka]* 'I have two like it (lit., two of its type)' were recorded, with (*ŋ*)*ga taka* 'its type'. The same pattern occurs with Logo/3Refl pronouns like Logo/3ReflSg *ŋgu*, which was heard as *gu* for some N speakers: *a har gu wii baŋa* 'he_x said he_x had killed a hippo.' The full forms *ŋga* and *ŋgu* are normal in my G texts and elicited material. However, Zouber's texts in a similar dialect show fluctuation between *ŋga* and *ga*.

§3.10.1. *jab* GN 'punch hard, kick' occurs along with a variant *jabu* N. The same forms also mean 'reduce, thin out', apparently conflating two etyma (compare KS *žab* and *žebu*, respectively). Retention of final *b* is also seen in *lab* GN versus Timbuktu *low* 'twist together', and in *dedeb* G versus Timbuktu *dedew* 'first Muslim lunar month'.

§3.10.5. *taaki* N 'four', *čigin* N 'night', *teki* N 'slash in ground', etc., show that palatalization of original velars before {*i e*} is not regular in N (compare Timbuktu *taači, čiji, toči*). My G data show Timbuktu-type forms (*taači, čiji*). The 3PIO form *gi* is not palatalized to *ji* in GN as it often is in Timbuktu.

§3.10.6. In contrast to Timbuktu (and DjCh), the upriver dialects generally preserve the full bisyllabic forms of stems like *beeri* 'big' and *taamu* 'shoes', of the shape *CVVLi* or *CVVLu* with sonorant L and a final short high vowel. Contrast *beer* (Timbuktu) and *beer* (DjCh) for the first, and *taam* (Timbuktu) and *taam ~ tãã* (DjCh) for the second.

§4.2.2. 'Today' is attested in the older form *hanoo* GN < **han woo*. Timbuktu-type *hõõ* is also attested in GN.

§4.3.3. An example (G) of Characteristic *-koy* taking a VP-like input: [*aljaka di yo se*] *taasi-koy* 'a seeker of the animals'.

§4.3.4. *a key-nte di* N 'while it is standing' is a participial background clause of the type common in DjCh but not in Timbuktu.

§4.4.2. *konn-o* GN 'hot' and *jeen-o* G 'old' exemplify the *-o* ending.

§4.5.1. *i-* GN is more common than *a-* as Absolute morpheme before the numerals greater than 'one' which allow this morpheme ('two', 'three', 'four', 'five',

and 'ten'). With *foo* 'one' we usually get *a-foo* G and *i-foo* N. For *foo* 'which?' see §8.2.3.

§4.6.6. G has *kaa-woy* 'grandmother' and *kaa-har* 'grandfather', with reduced forms of *kaaga* 'grandparent' (Timbuktu *kaaga-woy*, etc.).

§5.6. Def *di* may have a slightly different syntax than in Timbuktu. I noticed *yer kul di* N 'all of us' (always *yer kul* in Timbuktu). Another N text fragment, [*woy nda ar*] *di yo kul* 'both the women and the men', shows Def *di* (along with Pl *yo* and quantifier *kul* 'all') following a noun conjunction ('woman and man') in a manner uncharacteristic of Timbuktu.

§5.8.2. *binde* GN is the Topic morpheme (Timbuktu *bine*, KS usually *binde*).

§5.8.3. The usual morphemes for 'only' (cf. Timbuktu *nin*) are *nī* G and *tan* N, the latter from Fulfulde.

§5.9.2. G has a clause-initial phrase *see na ...* 'that is why ...', reduced from **woo di se na ...*

§5.9.9. *kala* GN 'except' (Timbuktu *bara*).

§6.1.7. Cognate objects: an N example is *a si hay ... [hay boyro di]* 'it (=grain crop) would not bear ... [a good bearing],' i.e., the plants did not produce a good grain harvest.

§6.2.2. The N texts have a good instance of the causative of a transitive: *haw-ndi gi [i derbe di yo]*, lit. "cause-to-tie them [their clothes]," i.e., 'make them put on their clothes'.

§6.3. In addition to the Timbuktu-type compounds, GN have some combinations of verb stem plus *-ganda* 'down' like *kar-ganda* GN 'knock down' and *kaw-ganda* N 'fall down', whereas Timbuktu *kar ... ganda* and *karj ... ganda* with similar meanings are not fused into single words. With 3SgO pronominal *ga*, compare GN *kar-ganda ga* 'knock it down' with Timbuktu *kar ga ganda*.

§7.1.1. The equational quasi-verb (Timbuktu *či*) was heard as *či* in G, usually *ti* in N (as in KS).

§7.2.3. The typical presentative 'here is X' of upriver dialects is not Timbuktu-type *X gaa goo*, rather *X goo ti* with equational *ti*. With other verbs, a presentative *goo* is attested with *kaa* 'come'.

§7.2.5. Future *ta* (following Impf morpheme) was verified GN.

§7.3. Imperative plural is *wo* GN.

§8.1.1. Nonsubject focalization is by fronting (extraction). G uses Focus *na* as in Timbuktu, but N generally has no overt Focus morpheme: [*woo di nin*] *yer o jow* 'just that_x [*focus*] is what we will take *t_x* out' (the bracketed NP is fronted and focalized).

§8.1.2. G has SFoc morpheme *ga*, cf. Timbuktu *ŋga*. This *ga* is also attested in N, but more commonly in the N texts we find Emph *yaa* or zero. Hence 'what's new?' is typically *maa ŋga taawo?* in Timbuktu, *maa ga taawo?* in G, and *maa yaa taago?* in N. An example from N with zero focus marking: *maa duu ni?* 'what

got (=afflicted) you?' The alternative *maa yaa duu ni?* is also attested in N; cf. Timbuktu *maa ŋga duu ni?*

Whereas Timbuktu (and Djenné) speakers might connect their SFoc morpheme *ŋga* with 3SgF pronoun *ŋga*, such a connection is less likely in GN, where (for many speakers) the pronoun is not reliably homophonous to the SFoc morpheme.

In some textual passages, *yaa* N in subject-focus function seems to have absorbed a following Impf *o* in somewhat the same way seen in Timbuktu (and G) with Relative *kaa*. See footnotes for the Niafunké texts in the texts volume (pp. 212, 216, 246, 248).

§8.2.3. *mise foo* GN is the common form for 'how'. *taka* 'manner, sort' is most common as a compound final, X *taka* meaning 'a sort of X'. 'Which' is *foo* GN, with Absolute prefix generally *a-foo* GN (not *i-foo* as in Timbuktu).

§8.2.6. *haydine* GN 'whatchamacallit?' corresponds to Timbuktu *haywana*.

§8.3. The basic relativization pattern is of the Timbuktu type in GN, with Rel *kaa* fronted and a phonologically zero trace *in situ*. There are some cases of Def *di* at the end of a relative clause in N: *herey kaa ay herey di*, lit., 'the hunger which I hungered.'

§8.3.1. In the G texts, *kaa VP* may be perfective or imperfective as in Timbuktu, the imperfective representing reduction of original **kaa go VP*. In N, on the other hand, the imperfective subject relative is *kaa o VP*, where *kaa o* tends to be heard as [*kaɔ*] or the like (with no sharp hiatus), involving at least some audible rounding.

§8.3.4. The Timbuktu-type pattern where Instrumental *nda* is stranded in postverbal position after its complement is fronted was verified in the G and N texts. An N example is (722), a parallel construction.

- (722) *mise* *kaa yer* *koy* *nda* *t*,
 way **Rel** 1PIS go **with** *t*,
 mise *yer o* . *kaa* *nda* *t*,
 way 1PIS Impf come **with** *t*,
 'The way_x in which_x we went (was) the (same) way_y in which_y we came.'

However, elicited material from another N speaker showed a KS-type pattern with the *nda* fronted along with Rel *kaa*, and switched from preposition to postposition, as in (723).

- (723) *ay* *si* *bey* *mise* *kaa* *nda* *yer* *o* *koy* *too*
 1SgS ImpfNeg know way **Rel** **with** 1PIS Impf go arrive
 'I don't know how we are going to arrive (at our destination).'

§8.3.6. The extension of Rel *kaa* to *kaa na* in spatiotemporal contexts is found in G, as in *handi di kaa na ...* '(on) the day when ...'. I have no such examples in the N texts.

§8.3.9. [*taasu di kaa wor o haw t*] *se* N 'to [the grain_x which you have tied *t_x*] confirms the Timbuktu pattern with a postposition following a complex NP.

§8.3.10. *kaa ...* is attested in GN in the sense ‘when ..., such that ...’: *ay too ñafuŋke, kaa ay too ñafuŋke, ...* N ‘I reached Niafunké; when I had reached Niafunké, ...’ This can easily be mistaken for a homonymous ‘but’ conjunction of distinct origin, see §9.5.4.

§8.4.1. In N, Top morpheme *bine* can be used at the end of a clause giving background to a following clause (724).

(724) *nda wor o dumbu* par exemple [*nda wor o*
if 2PIS Impf cut for example [if 2PIS Impf
dumbu bine], *wor o kan-ndi taasu di wala?*
cut Top], 2PIS Impf set grain Def or ?
‘When you cut, for example when you are cutting, do you lay down
the grain?’

§8.4.2. “3F” or Full third person pronouns (3SgF *ŋga*, 3PIF *ŋgi-yo* and variants) seem to be used more liberally at the expense of simple third person pronouns in N than in Timbuktu, especially as possessors. For example, Timbuktu *a koy di* ‘the (aforementioned) fellow’ occurs in N as *ŋga koy di*. Likewise, N has *ŋgi kul* as an alternative to *i-kul* ‘all of them’.

§8.5.1. Emphatic *yaa* is often used in N for focalization (§8.1.1-2). Other emphatics are *daa* GN and *jaati* GN (definite *jaatir di* N).

§8.5.2. For ‘only’ see §5.8.3.

§9.1.2. The double-object construction for ‘give’ also occurred in N: *noo ni ga* ‘give it to you’.

§9.5.5. A ‘but ...’ conjunction *kaa* GN is recorded. This is probably a borrowing from Fulfulde *ka(a)*. It is distinct from a ‘when ...’ conjunction of the same form *kaa*, see §8.3.10. *ammaa* is also used to mean ‘but ...’; G often reduces this to *maa ...*

§9.5.7. *bara* can mean ‘since ..., because ...’ in GN as in Timbuktu.

§9.6.2. The clause-initial ‘must’ form is *kala* N, *bara* G.

§9.7.5. N also has *bara ka VP* in the sense ‘keep VP-ing’. In GN, *VP ben* (without Inf *ka*) is a common alternative to *VP ka ben* ‘finish VP-ing, VP completely’. For ‘have VP-ed’, *faati ka VP* seems more common in GN than in Timbuktu.

§9.7.7. *kaa ta VP* ‘come and ...’ was verified GN.

§11.1.4. For ‘now’ (Timbuktu and G *moreyda*), a variant *mer-ta* is common in N. Less common N variants are *mer* and *morsa-ta*. An evidently archaic form “*marsa*” occurs in Zouber’s texts from villages near Diré, in a dialect close to that of G; cf. *marsanda* ‘now’ in Humburi Senni (Songhay of Hombori). Presumably **mar* and **sa(n)*, plus sources of Topic *ta* or Emph *daa*, are the original constituent morphemes.

‘There’ (anaphoric) is most often *dooti* GN (less often *doodi*), while ‘there’ (deictic) is recorded as *hentu* GN as in Timbuktu.

Appendix 2 Djenné Chiini

As with Appendix 1, the material in this appendix is organized on the same numbering section for chapters and sections as in the main body of the volume, to facilitate comparison. Numerous sections are therefore omitted in the appendices.

1.2 History and geography

The Niger and Bani rivers, flowing north, meet at the city of Mopti, where the major local ethnic languages are Fulfulde (Fula), Bozo, and to some extent Bambara. A three hour's drive to the southwest, in the well-watered zone between the two rivers, lies the city of Djenné. It is now known to foreigners for its lovely mosque and its bustling Monday market. Although the villages around it speak Fulfulde, Bozo, or Bambara, a Songhay variety closely related to Koyra Chiini is spoken in the city itself. It is referred to locally as *jenne čiini* 'Djenné language' (DjCh). Most natives of Djenné are bi- or multi-lingual. Bambara, which is not only one of the local village languages but also the major language of southern Mali and useful in Mopti, is gaining in importance and many younger people are DjCh-Bambara bilinguals.

The Songhay presence in Djenné may reflect the importance of the fertile zone it anchors in supplying agricultural provisions to Timbuktu during the latter's Medieval heyday. Contacts between Djenné and Timbuktu are rather slender these days, and Djenné is now to some extent an isolated Songhay-speaking enclave. Nevertheless, many adults have had some exposure to mainstream KCh and to KS, either from interacting with northerners who have moved to Djenné, or from traveling. Even in Mopti, the regional capital, there is a sizeable population of Songhay speaking migrants from the KCh, KS, and HS zones. This exposure to KCh (and KS) has had some effect on the speech of the urban elite of Djenné, and one can therefore speak informally of DjCh "basilect" and "acrolect," the latter showing some supraregional features. Our taped dialogues tend toward the basilect, especially since some of the speakers recorded were simple farmers and tradesmen, while our directly elicited material tends toward the acrolect. The differences are not as vast as these terms (typically used in post-creole continua) might suggest, but the style issue needs to be kept in mind by serious Songhayists.

It is probable that basilectal DjCh has been significantly influenced over the centuries by the local ethnic languages (Fulfulde, Bozo, Bambara). Linguistically, it is quite difficult to label the relationship between DjCh and KCh. Much of the basic lexicon is identical, there are very few sound changes involving consonants or syllabic structure of cognates, and the basic structure of NPs and simple clauses is largely shared. On the other hand, DjCh has seven vowels to five for KCh, and the whole syntactic complex of focalization, WH-interrogative formation, and relative-clause formation differs fundamentally between the two varieties. In this light, is DjCh a "dialect" of KCh or an autonomous language? You be the judge.

In this appendix we emphasize those respects in which DjCh diverges from KCh, though some mention is made of similarities. The KCh texts volume includes a large sample of DjCh texts. A DjCh-English-French dictionary will be part of the dictionary set published by l'Harmattan.

2.1 Brief outline of typical sentence and NP structures

The basic structure and internal ordering of NPs and simple clauses are the same as for KCh, though some small divergences will be noted in the relevant sections below. The most dramatic syntactic difference is that WH-interrogatives and relative clauses generally remain *in situ* (i.e., are not extracted to the front of the clause). This has no effect on subject NPs, which are preverbal anyway, but is conspicuous with all postverbal NPs.

SFoc *ŋga ~ ŋa* after focalized subjects is familiar from KCh, but it is occasionally replaced in DjCh by Emph *yaa*. This morpheme is also regular with semantically focal postverbal constituents. In view of this, DjCh lacks a productive counterpart to KCh Focus *na* (used only after fronted constituents), though apparent vestiges of this morpheme do occur.

We begin with a few examples of NP and PP. Def *di* and Pl *yoo* are common. Compounding may be loose, whereby the initial has its own postnominal morphemes like Def *di* (725b-c), or it may be tight, like the complex compound *woy-huu-boro* in (725e). Possessors (725a) precede possessed NPs. Numerals (725b) and adjectives (725c) follow the noun. Postpositions follow complete NPs (725d-e); note that *gaa* and *see* have long vowels in DjCh (cf. KCh *ga*, *se*). All of the DjCh structures illustrated are consistent with those of KCh.

- (725)
- a. *wor goy di yoo*
2Pl work Def Pl
'your jobs'
 - b. *hiij-ey di jirbi hinja di*
marriage Def day three Def
'the three days of the wedding (festivities)'
 - c. *jinggar beer*
holiday big
'a major holiday'
 - d. *goy di fondo di gaa*
work Def path Def on
'on (=concerning) the work methods'
 - e. *woy huu-boro di yoo see*
woman house-person Def Pl Dat
'to the woman's (=bride's) relatives'
 - f. *har di yoo kul*
man Def Pl all
'all of the men'

Some simple sentences, broadly consistent with KCh patterns, are in (726).

- (726) a. *čirow di yoo o hurow [huu di yoo kuna]*
 bird Def Pl Impf enter [house Def Pl Loc]
 'The birds go into the house.'
- b. *ma si gay doodi dee!*
 Subj Neg endure there Emph!
 'Don't spend too much time there, now!'
- c. *[bɔr foo kul] o ta warra ga a-foo-foo*
 [person one all] Impf Fut throw 3SgO Absol-Rdp-one
 'Every person will throw it in turn.'

3.1 Consonants

The inventory of consonants is identical to that of KCh in all material respects. Among the differences in distribution, we note that DjCh tends to simplify geminates and nasal-stop clusters to single consonants (§3.6.5), and that velar stops are generally stable (unpalatalized) before high and mid front vowels (§3.6.4).

3.2 Oral vowels

DjCh has seven phonemic vowel qualities to five for KCh. DjCh distinguishes *e* from *ɛ* and *o* from *ɔ* in both short and long vowels. To my knowledge, no other Songhay variety has such a seven-vowel system, and our working hypothesis must therefore be that it represents an innovation in DjCh, and may reflect contact with Bambara and other languages with phonetic open [ɛ] and [ɔ] vowels. However, working out the historical developments in detail is a matter for future research.

Minimal pairs include *čee* 'time (instance)' versus *čɛɛ* 'foot', and *moo* 'also' versus *mɔɔ* 'eye' (also *mɔɔ* 'rice'). The stems cited are native Songhay items and have cognates in KCh, KS, and other Songhay varieties. In other cases, one or both of the paired items has no obvious Songhay etymology and is suspected of being a loanword: *kɔɔ* 'become dry' and *kɔɔ* 'baobab fruit' have good Songhay pedigrees, but *koo* 'winnowing van' does not. In the case of *horso* 'type of griot' and *hɔrsɔ* 'scythe', both stems may be loans.

Certain speakers distinguish *ɲga o* [ɲgɔ:] '3SgF Impf' from *ɲgu o* [ɲgɔ:] 'LogoSg Impf', phonetically. Note the improbable crossing pattern, with //aɔ// ending up higher than //uɔ//. I verified this in elicitation with two speakers, one of them rechecked after a one-year interval. However, the (other) speakers who were taped pronounced both as [ɲgɔ:].

Assuming that the immediate proto-language had five vowels, and that **e* and **o* each split into open and closed phonemes in DjCh, we can make the following general points. First, the open-closed distinction is not made in diphthongs (§3.3.1-2, below). Second, it seems that a preceding *y* favored *e* over *ɛ*, and a preceding *w* favored *o* over *ɔ*, hence *yee* 'return' and *woo* 'this', but there are some counterexamples. Third, in

longer stems, a final-syllable high vowel {*i u*} favors a closed *e* or *o* in preceding syllables, as in *kobi* 'applaud', *fombu* 'crack (nuts)', *jengi* 'ring (jewel)', *heku* 'hiccough', and the trisyllabic *kogoti* 'hornbill'. A second-syllable *a*, on the other hand, favors an open first-syllable *ɛ* or *ɔ*, as in *wemba* 'be dismayed' and *gɔɔja* 'chew cud'. This correlation is not rigorous; counterexamples include *neesɪ* 'weigh'. Fourth, in monosyllables or other stems consisting only of mid-height vowels, open *ɛ* and *ɔ* are considerably more common (at least in native Songhay vocabulary) than closed *e* and *o*, hence *bɛ* – *ben* 'end', *berɛ* 'flip', *nɔɔ* 'give', *gɔm* 'swallow', *kɔkɔɔ* 'be last', and *kɔbe* 'finger'. Fifth, there is a tendency toward "harmony" within stems, *ɛ* and *ɔ* forming one harmonic set and *e* and *o* the other; in addition to the examples in the previous sentence, we have closed-vowel cases like *foolo* 'grain sack' and *beese* 'gazelle'. The second through fifth points in the list are all hedged with terms like "favor," "more common," and "tendency," and none is exceptionless. For example, we get *too* 'arrive' instead of *#tɔɔ* and *fee* 'announce' instead of *#fɛɛ*.

The form *bɛɛr* 'be big' suggests that the open-closed split occurred after the drop of final high vowels in **CVVLi* and **CVVLu* stems with sonorant **L*. Timbuktu KCh has *beer*, and a prototype **beer* would give DjCh *beer* by the generalization just given. On the other hand, if the open-closed split took place before this reduction, **beeri* (KS and upriver KCh *beeri*) would normally have given pre-DjCh **beeri* because of the stem-final high vowel, and this would incorrectly predict modern DjCh *#beer* with closed vowel after the reduction. The same argument applies to other stems such as *mɔɔr* 'be distant' or 'be sour' <**mooru*.

mɔroo 'excrement pellets' <**morgo* (KCh *moroo*, Zarma *mórgò*) and its near-homonym *mɔɔɔ* 'smash' <**motto* (KCh *morro*, KS *mott*) suggest complex interactions between consonantal shifts (like the loss of **g* and the degemination of **rr* to *r*), and the open-closed split.

The harmonic tendency noted above does not apply to compounds or to derivational suffixation. The Partpl suffix *-nte* generally retains its closed vowel even after stems with open vowels, and we have a minimal pair to show this: the participle *ben-nte* [bente] 'finished' differs audibly from the unanalysable *bente* 'good'. Likewise, Adj suffix *-o* does not usually harmonize with preceding stems: *mɔɔr-o* 'distant', *jeen-o* 'old'.

In addition to the basic seven vowel qualities, DjCh has at least two loanwords which have an [æ] vowel quality: *ɲkææ* ~ *ɲkææn* 'sardine sp.', *dagwææ* (and other variants) 'antelope sp.'.

3.3.1 Short-nucleus diphthongs

A major difference between DjCh and KCh is that DjCh distinguishes *ay* from *ey*, and *aw* from *ow*. The distinction is clear in monosyllables; we have a minimal pair in *say* 'fever' versus *sey* 'scatter, sow', and near-minimal pairs such as *gaw* 'tooth decay' or 'seize' versus *kow* 'take'. In noninitial syllables of longer stems, the distinction is present phonemically but less reliably expressed in surface phonetics, making transcription difficult: *kɔray* 'white' versus *-terey* (Abstractive nominalizing suffix); *garaw* 'credit' versus *samantow* 'goose sp.'.

The diphthongs *ow* and *ey* tend toward monophthongal [o:] and [e:], respectively, and my early transcriptions confused them at times with *oo* and *ee*. It is possible that these diphthongs are in the process of phonemically monophthongizing, but the process is not complete.

See §3.7.4 on contractions of diphthongs with following vowels.

3.3.2 Long-nucleus diphthongs

aay is attested in *gaay* 'catfish sp.' (KS *jagey* and variants) and its homophone *gaay* 'be bounded'. *aaw* occurs in a few loanwords like *kitaaw* 'tome (of Koran)' (<Ar. *kitaab*).

3.4.1 Nasalized vowels

Since word-final nasal consonants are often weakened to vowel nasalization (see following section), word-final phonetic nasalized vowels are very common in DjCh. This is in addition to true original nasalized vowels, as in *hãã* 'ask (inquire)'.

3.4.2 Word-final nasal consonants

The tendency is for original morpheme-final **...VN*, where N is a nasal, to appear in DjCh as a nasalized vowel, except when the word is immediately followed by a stop, liquid, or nasal, in which case the nasal consonant reappears. We therefore have many dictionary entries like *kãã/kaan* 'be sweet', as in *a kãã* 'it was sweet' and *a kaan dee!* 'it was indeed sweet'. This transcriptional variation is an idealization of a more complex phonetic reality, since what we write as *kaan* has some vocalic nasalization. The *n* also tends to assimilate in point of articulation to a following velar or labial, particularly in allegro speech. One can make a good case that the correct lexical representation is *kaan*, based on suffixal forms like Adj *kaan-o* 'sweet'.

There is no lexical distinction between *n* and *ŋ* in final position, and it seems likely that stems with these two original final consonants have merged into the pattern just mentioned. Because final nasals show some instability in other Songhay varieties as well, it is difficult to identify specific **ŋ*-final stems with certainty. However, if **tiŋ* is the correct reconstruction for 'be heavy', DjCh *tí ~ tin* shows that final **ŋ* is treated the same way as the final **n* of **kaan* 'be sweet'.

There are also some stems with fixed final *m*, like *kam* 'fall'. There are also a number of stems which have fixed final *m* for some speakers, while other speakers merge them into the alternating pattern described above: *dam* or *dã ~ dan* 'put, do'.

3.6.1 Nasal point-of-articulation assimilation

gɔm-ndi → *gɔm-di* 'be swallowed'. For reflexes of original **mn* see §3.10.9.

3.6.2 Liquid assimilation

r frequently assimilates to following {*n t d*} at morpheme boundaries or after syncope: *gar-ndi* [gandi] 'be found', *hɔnn-o* 'bitter' (<**horn-o*), adjective for verb *hɔrɔ̄ ~ hɔrɔn* 'be bitter'. See also §3.10.4.

3.6.3 Semivowel assimilation

y does not assimilate to a following palatal: *woyče* '(woman's) co-wife'. *w* does not assimilate to a following labial: *haw-mɛɛ* 'fast (abstain)'.

3.6.4 Palatalization of velars

Unpalatalized velar stops {*k g*} before high or mid front vowels are common in DjCh even when they are palatalized in KCh and KS. Among many examples we may cite *dergi* 'charcoal' (KCh & KS *denji*), *čigi* 'night' (KCh *čiji*, KS *čijin*), and *kilili* '(women) ululate with joy' (KCh & KS *čilili*).

3.6.5 Consonant cluster simplification

Like other Songhay languages, DjCh shows phonetically natural simplifications of the type *nnd* → *nd*, i.e. of a geminate to a simple consonant before another consonant. However, basilectal DjCh also has a number of stems which vary between geminated and ungeminated intervocalic consonants: *fatta* ~ *fata* 'exit' (**farta*), *yadda* ~ *yada* 'consent' (**yarda*). My impression is that intermediate articulations are also found, e.g. [*fata*] with slightly extended duration of the first vowel, in contrast to *fata* 'wing' with briefer first vowel.

DjCh has a number of cases where an old homorganic nasal-stop cluster has been simplified. DjCh has *nda* ~ *nna* ~ *na* for the Instr-Comit preposition (KS *nda*) as well as for the 'and' conjunction, and has *ŋgu* ~ *ŋu* for the Logo/3Ref1Sg pronoun (KS *ŋga*). KCh has the same variants, but in DjCh the simplified variants have especially high frequency. Moreover, SFoc and 3SgF morphemes are always *ŋga* in Timbuktu KCh, but *ŋga* ~ *ŋa* in DjCh.

These synchronic variations may explain "hypercorrect" cases where a nasal-stop cluster seems to have developed out of a single consonant in loanwords: *alaanda* ~ *laanda* 'custom' (Arabic *al-šaad-a*), *maambala* 'commerce' (Arabic *mu-šaamal-a*). Note also *wandasu* 'converse' (KCh *wannasu*, from dialectal Arabic *wannas-*).

3.7.1 Contractions involving Imperfective *o* ~ *go*

The *o* variant of the Impf morpheme undergoes regular VV-Contraction following a morpheme-final vowel, as in KCh. Thus *har di o* ... [hardo: ...] with *har di* 'the

man'. NPs ending in *a* may contract fully or partially, e.g. when Topic morpheme *ta* is involved: *ta o* ranges from fully contracted [to:] to something approaching [təw] or [təo].

The Impf morpheme has more systematic contractions with preceding subject pronominals. In three cases (1Sg, 3Sg, 3Pl), DjCh and KCh (of Timbuktu) have sharply different contractions. In (727) we give the DjCh forms and reproduce the KCh forms for comparison. We omit the 3PlF and Logo/3RefPl pronouns which end in *yo* and so contract unproblematically with a following *o* to phonetic [...jo:].

(727) Combinations of subject pronoun and Imperfective MAN morpheme

<u>category</u>	<u>source</u>	<u>DjCh</u>	<u>KCh</u> [Timbuktu]
1SgS	* <i>ay go</i>	<i>ay (go)</i>	<i>yee</i>
1PlS	* <i>yer go</i>	<i>yer o</i>	<i>yer o</i>
2SgS	* <i>ni go</i>	<i>no-o</i>	<i>no-o</i>
2PlS	* <i>wor go</i>	<i>wor o</i>	<i>wor o</i>
3SgS	* <i>a go</i>	<i>wo-o</i>	<i>a-a</i>
"			<i>o-o</i> [Niafunké]
3PlS	* <i>i go</i>	<i>yo-o</i>	<i>i-i</i>
3SgF	* <i>ŋga go</i>	<i>ŋga o</i> [ŋgo:]	<i>ŋga o</i> [ŋgo:]
Logo/3RefISg	* <i>ŋgu go</i>	<i>ŋgu o</i> [ŋgo:]	<i>ŋgu o</i> [ŋgo:]

Uncontracted *a go*, *i go*, etc. are attested but less common.

While the DjCh 1SgS Impf form is sometimes *ay go*, very often where we expect imperfective aspect (and get it for other pronouns) we hear just *ay*. In processing texts, then, *ay* before a verb is aspectually ambiguous, and context must be used to infer the aspect: *ay goy* 'I am working' or 'I worked'. Textual examples of imperfective *ay* are pointed out in footnotes in the texts volume (e.g. pp. 272, 280). If a DF morpheme like Top[ic] *ta* intervenes between *ay* and Impf, the latter is overt: [*ay ta*] *o* ...

DjCh and (Timbuktu) KCh differ dramatically in their contractions for 3SgS and 3PlS. However, for 3SgS the DjCh form *wo-o* is close to the upriver KCh (e.g. Niafunké) variant *o-o*. DjCh *wo-o koy* 'he is going' could be misinterpreted in Timbuktu as *woo koy* 'this one went' with demonstrative *woo*.

In DjCh, contracted forms are not only used (regularly) for imperfective aspect with a following verb, but also (occasionally) when *go - o* functions as quasi-verb 'be' (with following locational phrase). This does not happen in KCh.

3.7.4 Contractions of vowels over an intervening semivowel

Word-final diphthongs sometimes contract in allegro speech with a following vowel, the most common case being when a V-initial pronominal PP like 3Sg Dative *a see* follows a verb. In this speech style, phonetic [kaise:] could reflect *kow a see* or *kay a see* as well as *kaa a see* (the verbs are 'take away', 'stand', and 'come', respectively).

3.7.6 Phonology of Abstractive nominalizer -ey

The Abstractive suffix is heard as -ey, except that it combines with stem-final *u* of a multisyllabic stem to produce -oy (in most cases). Examples under §4.3.1.

3.7.7 Syncope

Syncope of the KCh type *horon* 'be bitter', Adj *honn-o* (<**horn-o*) is sporadic. DjCh *hɔrɔ̄ - hɔrɔn* does have an Adj *hɔnn-o* 'bitter', but unsyncopeated *hɔrɔn-o* is now common (§4.4.2). (For 'be hot', DjCh normally uses *dungu* rather than *korō - koron*.)

3.8.1 Forms of the 1Sg pronoun

The pronoun *ay* tends to be heard as [ej] as postverbal direct object, so in that position we will transcribe it *ey* (labeled 1SgO) as we do for KCh. The combination of 1SgS plus Impf **go* is expressed either as *ay go* or as reduced *ay*, the latter being indistinguishable in form from the unmarked (perfective) form *ay* (§3.7.1). Thus a *kar ey* 'she hit me', *ay go gɔrɔ* (or *ay gɔrɔ*) 'I am sitting', *ay gɔrɔ* 'I sat'.

The 1Sg Dative is regular even in postverbal position: *ay see*. There is an archaic irregular variant *nana ~ ñene*, recorded in fixed phrases like *hinjey ñene* 'excuse me!'; cf. KCh *yene* and variants.

The 1SgS plus Subjunctive is regular: *ay ma*. A variant #*ye* is not recorded.

3.8.2 Forms of the 2Sg pronoun

2Sg *ni* is optionally reduced to *n* when followed by another morpheme within its phrase, i.e., as subject, as possessor, as postpositional complement, or before a DF morpheme: *n si hin ka ...* 'you cannot ...'

The 2SgDat is usually the regular *ni see* (optionally reduced to *n see*) even in postverbal position. An irregular (and archaic) variant *mane* or *mana* is attested postverbally.

The 2SgS plus (perfective) Negative is *ma na*, hence *ma na koy* 'you did not go.'

2SgSSubju (2SgS plus Subjunctive) is *ma*, as in *no-o baa [ma čindi ...]* 'you(Sg) want to remain ...'

2Sg (as left conjunct) plus 'and' is usually *ni nda ...* (or *ni nna ...*), but an archaic and rare *ma na ...* 'you and ...' is attested.

3.8.3 Forms of -ije 'child' as compound final

The desyllabified form is phonetic [-jdʒe], orthographic -*yje*.

3.8.4 Possessive *wane* before Definite *di*

Possessive *wane* plus Def *di* is often realized as *wan di* as in KCh, but both *wan di* and *wane di* are attested in texts.

3.8.5 Plural *yoo* before postpositions and other particles

Whereas KCh usually unrounds the Pl morpheme *yo* to *ye* before postpositions and DF morphemes, DjCh retains the rounding. Moreover, we will note in §3.10.10 that the DjCh morpheme is phonetically long in some positions, and we take *yoo* to be the basic representation. Of course the long vowel is more resistant to unrounding than the short vowel of the KCh morpheme.

3.8.6 Verb-stem changes before derivational suffix *-ndi*

The productive Fact-Caus or Mediop suffix is *-ndi* as in KCh, hence Fact *moor-ndi* 'cause to be far away' or 'cause to ferment', Caus *čow-ndi* 'teach' (= 'cause to read'), and Mediop *gar-ndi* 'be found'. However, there are a few cases of *-aandi*, all in factitive or causative (transitivizing) function. KCh likewise has a few cases of *-andi* instead of the usual *-ndi*, and this bisyllabic suffix variant is evidently archaic; the KS Fact-Caus and Mediop morphemes have the form *-andi*. The long *aa* in *-aandi* is inconsistently heard because of the following consonant cluster, but there is also a variant *-aani* with a clearly long vowel. The derivatives in (728) are all Fact-Caus.

(728)	<u>verb</u>	<u>gloss</u>	<u>derivative</u>	<u>gloss</u>
a.	<i>jaraa</i>	'boil [intr]'	<i>jaraa-ndi</i>	'boil [tr]'
	<i>maraa</i>	'assemble [intr]'	<i>maraa-ndi</i>	'assemble [tr]'
b.	<i>kaan</i>	'be sweet'	<i>kaan-aandi</i>	'sweeten [tr]'
	<i>kaan</i>	'be sharp'	<i>kaan-aandi</i>	'sharpen'
	<i>maan</i>	'be near'	<i>maan-aandi</i>	'bring near'
	<i>kuma</i>	'be diminished'	<i>kum-aandi</i>	'reduce'
	<i>kani</i>	'lie down'	<i>kan-aandi</i>	'lay, set down'
c.	<i>jur</i>	'run'	<i>jur-aandi</i>	'expel, force out'
	"	"	<i>jur-ndi</i>	"
d.	<i>jumbu</i>	'go down'	<i>jum-aandi</i>	'take down'
	"	"	<i>jum-aani</i>	"
	"	"	<i>jum-di</i>	"

In (728a), the verb already ends in *aa* so the causatives can be taken as having the simple *-ndi* suffix. Nevertheless, such ambiguous forms can be thought of as bridges between the *-ndi* and *-aandi* variants. We see the *-aandi* variant in (728b) with both C- and V-final stems. Variation between *-ndi* and *-aandi* (variant *-aani*) is observed in (728c) and (728d). The stem 'go down' (728d) additionally loses the *bu* syllable in the causative derivative, as it does in KCh *jum-di* and KS *zum-andi*.

3.8.7 Shortened forms of “light” nouns before Rel *kaa ~ kama*

The forms are *bɔr kama* (alongside *bɔrɔ kama*) ‘someone who’ (<*bɔrɔhay kaa* ‘something that’ (*haya*), *non kaa* ‘where ...’ (<*nongguhan kaa* ‘when ...’ (<*hã ~ han* or *handi* ‘day’). For more on the spatiotemporal cases see §8.3.6.

3.8.8 Forms of unmarked and marked third person pronouns.

Simple 3Sg and 3Pl are as in KCh. The 3PIO form *gi* does not palatalize to *ji*.

For the omission of 3SgO *ga* after postverbal (especially, clause-final) *nda ~ na* ‘with’, see §4.1.6, below.

3SgF *ŋga ~ ŋa* is distinct from Logo/3ReflSg *ŋgu ~ ŋu*, but 3PIF is homophonous to Logo/3ReflPl, both being *ŋgu-yo ~ ŋu-yo ~ ŋgi-yo ~ ŋgi-ya ~ ŋgi*. The syntax of 3F pronouns seems to be the same as in KCh.

3.10.1 Word-final *b

jaw ‘slug, knock hard’ matches KCh *jab*.

3.10.4 Assimilation of *r, *y, *w to following consonant

From **yarda* ‘consent’ we get a full gamut of pronunciations: *yadda* (or degeminated *yada*), *yarda*, and *yarra*. *kurru* ‘drag’ probably reflects **kurnu* (KCh *kurru ~ kunnu*, KS *kurnu*). *rs* seems stable: *horso* ‘caste of griots’. From **farta* ‘go out’ we get *fatta* (or degeminated *fata*) and *farta*. From **harta* ‘miss (target)’ we get *harra*. DjCh generally agrees with KCh except that DjCh shows more extensive progressive assimilation to *rr* (e.g. *yarra* is not attested in KCh).

woyče ‘co-wife’ and *haw-mee* ‘fasting’ show that semivowels have not assimilated.

3.10.8 Stem-final *ey to oy

Examples are *garboy* ‘date (fruit)’, *kuboy* ‘meet’ (also ‘darkness’), *humoy ~ himey* ‘bathe’.

3.10.9. *mn → nn

Basilectal DjCh frequently assimilates original **mn* to a geminate nasal within stems. In two cases we get *mm*: *hamni ~ hammi* for both ‘flying insect’ and ‘flour’ (KCh *hamni*). The two etyma were originally distinguished by tones. The more common result from **mn* is *nn*, as in *gomni ~ gonni* ‘good fortune, blessing’ (KCh *gomni*), *jenne* ‘divide up’ (KCh *jemna*), and *kunna* ‘gather up’ (KCh *kumna*).

3.10.10 Vowel length of postnominal morphemes (*yoo*, *gaa*, *see*)

The DjCh counterparts of KCh Pl *yo*, Dat *se*, and postposition *ga* 'on' are usually heard with long vowels when followed by another morpheme within the same phrase, e.g., *yoo* before a postposition and *see* or *gaa* before *nee* 'here'. The long vowel of *see* and *gaa* is quite noticeable in texts, while that of *yoo* is less consistent. I posit long-vowel representations and assume that the phonetic short variants reflect a shortening rule applying clause- and phrase-finally. Transcriptions will show the lengthened variant throughout.

4.1.6 Pronominal forms preceding and following *nda* ~ *nna* ~ *na* 'and, with'

3SgO *ga* is often omitted after postverbal *nda* ~ *na* 'with' (or 'than'), especially at the end of a clause, as in (729). For further examples see footnotes on the Djenné material in the texts volume (e.g., pp. 316, 326, 334). The KCh counterpart would end in *nda ga* with 3SgO *ga*, and this longer form is also attested in DjCh.

- (729) *[kamba wane di yaa] njerfu di bow na*
 [hand Poss Def Emph] money Def be-much **than(3SgO)**
 'The hand(-made) one is (=costs) more than it (=machine-made one).'

4.2.1 Demonstrative pronoun

Two occurrences of *woo* 'this, that' sometimes flank the noun: *na [woo sii flāā woo]* 'by [this such-and-such style]'. Here the noun is *sii* 'style'.

woo di with Def morpheme often precedes a definite noun. In this case, *woo di* can sometimes be taken as a possessive, perhaps denoting the situation described in preceding discourse: *[woo di] jiiri di yoo* 'the years [of that (situation)]'. However, very often *woo di* followed by a definite noun is best treated as an appositional or modifying demonstrative: *woo di maraa di* 'that one, (i.e.) the encounter' = 'that encounter'. When the noun is plural, *woo di* in this position is often not separately pluralized, suggesting a modifying status: *woo di horso di yoo* 'those *horso* griots'.

4.2.2 Frozen combinations of noun plus *-*woo*

Examples are: *jiiroo* 'this year', *h55* (rarely *hano*) 'today', *čigoo* 'tonight', *musoo* 'like this, thus', *jaaroo* 'today, these days', *misoo* 'that way'.

4.2.3 Demonstrative and deictic adverbs

Proximal *nee* 'here' is common on its own, or attached appositionally to a NP in locational function. In the latter case, it may precede, follow, or flank the core NP: *jenne nee* = *nee jenne* = *nee jenne nee* 'here in Djenné'. However, *nee* preceding a

nonlocational NP is interpreted as possessive 'of here', and can be freely translated as 'local': *nee hijey* 'a wedding of here' = 'a local wedding'.

Nonproximate adverbs are deictic *hentoo* ~ *hontoo* '(over) there' and definite-anaphoric *doodi* 'there'.

4.2.4. Emphatic and Approximative modifiers of deictics

Emph *yaa* can be added to locationals: *nee yaa* 'right here'. Approx *here* is common after locationals: *doodi here* 'around there, in that area'.

4.3.1 Abstractive nominal (-ey ~ -rey)

Some Abstractives are *tin-ey* 'heaviness', *yeen-ey* 'coldness', *hij-ey* 'marriage', *dung-oy* 'hotness', *send-oy* 'difficulty, expensiveness', *waafak-oy* 'agreement', *yaraas-oy* 'inexpensiveness', and *mɔŋg-oy* 'inability'. The verbs underlying them are *tĩ* ~ *tin*, *yey*, *hijji*, *dungu*, *sendu*, *waafaku*, *yaraasu*, and *mɔŋgu*. Note that stem-final *u* generally combines with *-ey* to give *-oy*. However, I have recorded *fut-ey* 'evil thing' from *futu* 'be nasty'. Perhaps this is an archaism or a reflection of KCh influence.

baay-ey 'love, fondness' contrasts with *ibaay* 'passion, object of desire' (cf. *baa* 'want, love').

The examples of *-rey* are *bey-rey* 'knowledge', *daabu-rey* 'covering', *duu-rey* 'gain(s)', *mey-rey* 'possessions'.

4.3.3 Characteristic nominals

-koy is common as agentive or denominal: *dɔɔn-koy* 'singer' (*dɔɔn* 'sing; song'), *kur-koy* 'shepherd' (*kur* 'drive [cattle]'), *taabal-koy* or *taabal-neere-koy* 'owner of portable street stand' (*taabal* 'table', *neere* 'sell').

-koyni is attested as a denominal in *aloojur-koyni* 'cripple' (*aloojur* 'infirmity, handicap'), *gungu-koyni* 'pregnant woman' (*gungu* 'belly'), *maambala-koyni* 'merchant, shopkeeper'.

-kom is attested in *hollo-kom* 'madman', with a variant *hollo-kɔ̃* ~ *hollo-kɔn*.

4.3.4 Participle and Ordinal (-nte)

The suffix is *-nte* as in KCh: *bisa-nte* 'passed', *taaki-nte* 'fourth'.

In DjCh, participles have special uses in backgrounding clauses. See §9.5.11 for discussion and examples.

4.4.2 Adjectives as noun modifiers

Adj suffix *-o* makes a verb of adjectival quality into a modifying adjective, though some stems do this without a suffix. Except at the level of fine detail, the system is as in KCh. A few of the more interesting forms are in (730).

(730)	Adjectival forms		
	<u>verb</u>	<u>gloss</u>	<u>modifying adjectival form</u>
a.	<i>jɛɛn</i>	'be old'	<i>jɛɛn-o</i>
	<i>tĩ-tin</i>	'be heavy'	<i>tin-o</i>
	<i>fɛlɛ - fɛlɛn</i>	'be lightweight'	<i>fɛlɛn-o</i>
b.	<i>sendu</i>	'be expensive, difficult'	<i>send-o</i>
	<i>duŋgu</i>	'be hot'	<i>duŋg-o</i>
c.	<i>hɔrɔ̄ - hɔrɔn</i>	'be bitter'	<i>hɔrɔn-o</i> , rarely <i>hɔnn-o</i>
d.	<i>kɔɔ</i>	'be dry'	<i>kɔɔg-o</i>
	<i>yey</i>	'be cold'	<i>yɛɛn-o</i>
e.	<i>woro</i>	'be thick, stout'	<i>woro</i>
f.	<i>kuu</i>	'be long'	<i>kuku</i>
	<i>bow</i>	'be many, much'	<i>bobow</i>
g.	<i>boori</i>	'be good'	<i>boyr-o</i>
	<i>mari</i>	'be thin and narrow'	<i>mayra</i>
h.	<i>bɛɛr</i>	'be big'	<i>bɛɛr</i>
	<i>čirey</i>	'be red'	<i>čirey</i>
i.	<i>čiina</i>	'be small, few'	<i>čiina</i> (but <i>kayna</i> preferred)

(730a-b) show regular suffixation of *-o* after a V-final (730a) or C-final (730b) stem. (730c) shows that no syncope occurs, contrast KCh *horon* 'be bitter' and Adj *honn-o* (**horn-o*). Forms in (730d) show minor stem changes before the suffix, as in KCh counterparts. In (730e), if my transcriptions are correct the verb has final short *o* while the adjective has final long *oo*. KCh has *woro* in both functions (cf. KS *warga* 'be fat'). (730f) shows apparent reduplication instead of a suffix. (730g) has the two examples of probable historical metathesis (**ry* → *yr*); *boyr-o* arguably ends in Adj *-o*, but *mayra* does not. (730h) shows two among several attested zero-suffix cases where the adjective is identical to the verb. The same pattern is possible in (730i), but *čiina* is not common as a modifying adjective.

4.4.3 Adjectives as NP heads with Absolute prefix

i-tey-nte di 'the wet one' and *i-kɔɔg-o* 'the dry one' show the use of Absol *i-* with *-nte* participles and with ordinary adjectives, when the preceding noun slot is vacant.

tanaa 'other' can be used without Absol prefix: *tanaa si doodi* 'nothing else is there' (lit. 'other is not there').

4.5.1 Modifying and Absolute forms of simple numerals

Absolute 'one' is *a-foo*, contrast *i-foo* 'which?'. However, *i-foo* can also mean 'ones', the plural of *a-foo*.

The Absol prefix in DjCh is usually *a-* with numerals '2-5' and '10': *a-hiḡka* '2', *a-hinja* '3', *a-taaki* '4', *a-guu* '5', *a-woy* '10'.

4.5.2 Compound numerals

Key forms are *woy-gu* '50', *woy-du* '60', and *woy-ye* or *woy iiye* '70'.

4.6 Nominal compounds

Basically as in KCh. Typical compound finals are *-tereɣ* (essential nature) and *-jeɣeɣ* 'lack'.

4.6.7 Verb-noun compounds (*-kasine, doo*)

-kasine 'mate' occurs in several compounds like *ḡoɔ-kasine* 'neighbor' (lit. "sit-mate").

doo is the usual final for 'place of' compounds after a verb stem (i.e., a zero-derived nominalization): *tan doo* 'fishing place'. Cf. postposition *doo*.

5.2.1 Possessor NPs

The Possessive postposition is *wanɛ*. For contracted *wan di* see §3.8.4.

5.4.3 Universal quantification (*kur* 'all')

The quantifier 'all, every' is *kur* or *kul*. Absolute forms are singular *a-kur*, plural *i-kur*. The participle *maraa-nte* 'having gathered (come together)' is often added to *kur* as a (weak) intensifier, as in (731). For *kur* as right-edge marker, see §9.5.10.

- (731) *yo-o* *kaa-na* *a-kur* *maraa-nte*
 3PLS-Impf bring AbsolSg-all gather-Partpl
 'They will bring it all.'

5.4.5 Complementary subsets ('some ..., others ...')

The pattern *čindi yoo ...*, *čindi yoo ...*, *čindi yoo ...* 'some ... , others ... , (still) others ...' is attested.

5.4.7 Currency and time of day

The five Muslim prayers are *alfajar* (pre-dawn), *aluula* (early afternoon), *alaasara* (mid-afternoon), *fitirow* (twilight), and *saafoo* (evening).

5.4.8 Quantification over pronouns

yer bər foo kul 'each (one) of us' can be coindexed with a 3RefISg pronoun, as in (732).

- (732) *yer bər foo kul go jow ŋgu jiney*
 1Pl person one all Impf take 3RefISg gear
 '[Each one of us]_x will take his_x baggage.'

5.8.1 Focus

The most common focalizing morphemes are Emph *yaa* and SFoc *ŋga* ~ *ŋa*. Emph *yaa* can follow a NP in postverbal position, since focalization in DjCh does not require fronting. For details on these constructions see §8.1.

For an infrequent *ne* with apparent focalizing function, see (754) in §8.1.1.

5.8.2 Topic (Top *bine*, Top *ta*, and 3SgF *ŋga*)

These morphemes are used much like their KCh counterparts. *bine* can be used with NPs (generally preposed); less often it is clause-final. *ta* is very common after preposed, subject, or possessor NPs, and clause-finally.

5.9. Adpositions and case-marking

The basic postpositions are Dative *see*, *gaa* 'on', *doo* 'at the place of', Locative *la* or *kuna*, and Possessive *wane*.

As in KCh, postpositions like Dat *see* follow DF morphemes: *yer moo see* 'for us too', *huu tanaa yoo yaa gungu* 'inside other houses'.

5.9.2 Dative *see*

The form *see* occurs frequently even with (postverbal) 1Sg and 2Sg pronouns: *ay see*, *ni see*. The archaic portmanteaus are uncommon: 1SgDat *fiene* (§3.8.1), 2SgDat *mana ~ mane* (§3.8.2).

5.9.4 Locative

The Loc postpositions are *kuna* and *la* (for a few speakers, *ra*). *la* corresponds to KCh and KS *ra*, but KS has *la* in some phonological contexts.

kuna and *la* are interchangeable. Often repetitions or other parallel constructions have *la* and then *kuna*, as in (733), suggesting that the interchange is stylistically valued.

- (733) *har di go dey [a la] haya,*
 man Def Impf buy [3Sg Loc] thing,
 woy di moo go dey [a kuna] haya
 woman Def too Impf buy [3Sg Loc] thing
 ‘The man (=bridegroom) buys a part of of, and the woman (=bride)
 buys a part of it.’

5.9.7 Postpositions of spatial orientation (‘behind’, ‘facing’, etc.)

The postposition *čirey* ‘beside; under’ may reflect the partial conflation of two original postpositions seen in KCh *čire* ‘under’ and *jere* ‘beside’. (To be sure, DjCh does preserve *jere*, especially in the compound postposition *X jere gaa* ‘beside X’.) DjCh *čirey* most often means ‘beside’, and *ganda* ‘ground’ (noun) or ‘below’ (adverb) can be used roughly as an ‘under’ postposition (734).

- (734) *a go taabal di ganda here*
 3SgS be table Def **under** Approx
 ‘It is (on the ground) under the table.’

gungu ‘belly’ often functions like a postposition ‘within, in the midst of’: *yer huu di gungu* ‘within our house (=family)’.

5.9.8 Quasi-prepositions *jaa* ‘since’ and *hal ~ har* ‘until’

The two quasi-prepositions are illustrated together in (735).

- (735) *ay go koy fari [jaa suba-suba] [har fitirow]*
 1SgS Impf go farm [since morning] [until twilight]
 ‘I go work in the fields from morning to dusk.’

In (735), we could argue that the NPs following *jaa* and *har* really represent clauses ('since morning broke,' etc.). However, in DjCh, *hal* ~ *har* is occasionally found in texts before an infinitival VP (736).

- (736) *hal ka koy too hijey han di gaa*
 until Inf go attain marriage day Def on
 'up until (reaching) the wedding day'

5.9.9 Prepositions *bilaa* 'without', *bara* 'except'

bilaa 'without' is attested with following NP complement: *bilaa sukar* 'without sugar'. *bara* is the 'except' morpheme; see §8.5.3. *kala* occurs as a clause-initial morpheme but means 'perhaps'.

5.9.10 'between, among, amidst'

jeme corresponds at least in usage to KCh *game* (737). For 'friend' = reciprocal see §10.2.5.

- (737) *woo di go yer na čere jeme*
 Dem Def be 1Pl and friend among
 'This (matter) is between us.'

5.10.1 Pronouns in apposition to nouns

wor jam di yoo 'you(Pl) metalsmiths'. This is indistinguishable from 'your(Pl) metalsmiths', and perhaps the two are syntactically identical. An expanded relative clause type *wor kama si jam di yoo* 'you(Pl) who are metalsmiths' is also attested (with *si* - *či* 'be').

5.11 Instrumental, comitative, and conjoined NPs

The preposition takes the form *nda* ~ *nna* ~ *na*, of which *na* is the most common variant. The form *nna* is used chiefly in pronominal conjunctions: *ŋga nna X* '3Sg and X'. *nda* is also sometimes heard in this context. The preference for "heavy" variants in this position helps avoid confusion with Neg *na*, which follows similar pronoun forms.

5.11.1 Conjunction of personal pronouns

nga nna X (*nna* varying with *nda* and *na*) is a common way of beginning a discourse-internal sentence, and can be glossed ‘in addition, ...’ In (738), the speaker lists groups of persons involved in a wedding who must be given kola nuts or similar gifts.

- (738) *yo-o* *mey* *maa* *yoo* *kaa* *go* *koy* *hoo-koy*,
 3PlS-Impf have name Pl Rel Impf go hunter,
nga *na* [*čere* *yoo* *gooro*],
 3SgF and [friend Pl kola],
nga *na* [*baba* *yoo* *gooro*]
 3SgF and [father Pl kola],
 ‘They have persons (“names”) who go as intermediaries (“hunters”).
 In addition, kola for friends. In addition, kola for fathers.’

5.11.4 *nda* in idioms and adverbial phrases

Locational adverbials are sometimes phrased with Instr-Comit *nda ~ na*, especially when the location is not pinpointed. Thus *koy [na jere tanaa]* ‘go [to another side (=area)]’. This is distinct structurally from *koy-nda X* ‘take (go with) X’ (§6.2.5). A more genuine instrumental sense is seen in the superficially similar *koy [na čee]* ‘go [with (=on) foot]’.

6.1.1 Verbs, quasi-verbs, and the referentiality of subject NPs

čindi ‘remain’ is attested in a construction with nonreferential 3Sg subject, as in (739).

- (739) *mɔr-ta* *a* *čindi* *baŋa* *di* *nda* *fara*
 now 3SgS remain hippo Def and F
 ‘Now there remained (only) the hippo and Faran’

Aside from impersonal *bara* ‘must’, DjCh sometimes uses *hangu* ‘think, believe, remember’ sentence-initially, followed directly by an indicative clause (‘thinking that ...’ or ‘presumably ...’). Often the missing subject NP is inferred to be the speaker, but in context it can also be another sentient discourse referent (‘he went in, thinking that ...’). The verb *či ~ čin* ‘say’ is frequently used in the same type of subjectless construction, but in this case the missing subject is inferred to be a discourse-internal referent or a generalized indefinite (‘they say that ...’).

Sentence-initial *yala ...* or *yara ...* with following subjunctive clause means ‘hopefully ...’ or ‘hoping that ...’, but the particle is not a true verb.

6.1.4 Ditransitives and other verbs with dative

nɔɔ 'give' has the same basic constructions as in KCh. (740a) shows the object plus dative construction, while (740b-c) show the double-object construction.

- (740) a. *ay nɔɔ [ni see] njerfu di*
 1SgS give [2Sg Dat] money Def
 'I gave the money to you(Sg).'
- b. *ay nɔɔ ni attey*
 1SgS give 2SgO tea
 'I gave you (some) tea.'
- c. *nɔɔ ey attey*
 give 1SgO tea
 'Give me (some) tea!'

However, a Djenné native from whom I elicited a broad range of 'give' examples rejected the double-object construction in cases where both objects are pronominal. Thus (741a) was elicited but (741b) rejected. By contrast, in KCh the type (741b) is perfectly good, in fact preferred to (741a).

- (741) a. *ay nɔɔ ga [ni see]*
 1SgS give 3SgO [2Sg Dat]
 'I gave it to you.'
- b. *#ay nɔɔ ni ga*
 1SgS give 2SgO 3SgO

čerbu 'show' is attested only in the object-plus-dative construction.

hii can mean 'lend' or 'borrow'. The first sense gives a construction *X hii Y [Z see]* 'X lend Y to Z' with dative recipient, and is parallel to the construction with *nɛɛɛ* 'sell'. The alternative construction is *X hii Y [Z gaa]* 'X borrow Y from Z,' and is parallel to the construction with *dey* 'buy'.

6.1.6 Verbs with instrumental-comitative complements (*nda ~ na*)

The locational complement of 'go' is sometimes expressed as a *nda* phrase: *koy [nda X]* 'go to X', as in *koy [na jere tanaa]* 'go to another side (=area)'. This is distinct structurally from *koy-nda X* (§6.2.5).

Likewise we have *bana X [na Y]* 'pay X (person) [with Y (e.g. money)]' and *jaatey X [na Y]* 'count (=consider) X [as (being) Y]'.

6.2 Derived voice forms

As in KCh, the major derivational suffix is *-ndi*, Factitive-Causative or Mediopassive.

6.2.3 Mediopassive *-ndi*

The suffix is productive: *gar-ndi* 'be found (be present)', *gɔm-di* 'be swallowed'.

Arguably, *yey-ndi-ndi* 'be set out to dry' is a case of Mediop *-ndi* added to Fact-Caus *-ndi*. However, if *yey-ndi* in the sense 'set out to dry' is synchronically a Fact-Caus derivative, it is only by historically secondary association with *yey-ndi* 'make cold, make happy'. Cognates like KCh *yendi* 'set out to dry' are not Fact-Caus in form, and can take Mediop *-ndi* just like any other underived transitive stem.

6.2.5 Suffixation of *-nda* to verb stem

Suffix *-nda* is often pronounced *-nna* or *-na*, following the phonetic variation of the related Instr-Comit preposition *nda ~ nna ~ na*. Examples are *kaa-na* 'bring', *koy-na* 'take, go with', *sawa-nna* 'coincide with', *kuboy-na* 'encounter, meet', *gay-na* 'miss (not encounter) for a long time', and *fay-nda* 'separate oneself from'.

hima 'resemble' is used without suffix as a simple transitive.

6.3.3 Centripetal *-kate*

This Centripetal suffix is not attested in my DjCh data. 'Come back' is *yee ka kaa*, not *#yee-kate*.

7.1.1 Quasi-verbs *či* (equational) and *nono* (identificational)

The unnegated equational-quasi verb is pronounced *či* or *si*, the latter being common in the local basilect. In general, each speaker uses one variant or the other consistently. Care must be taken to distinguish this *si* (which always precedes a NP) from ImpfNeg *si* (which always directly precedes a verb), and from negative locational *si* (next section). As in KCh, the quasi-verb normally occurs in unmarked (perfective) aspect (742a) and is therefore negated by *na* (742). In this combination the quasi-verb is pronounced *ti* (742b).

- (742) a. *na ni si bɔɔ kaa...*
 if 2SgS **be** person Rel ...
 'if you are a person who ...'
- b. *ay na ti yenge-kɔɔ*
 1SgS Neg **be** brawler
 'I am not a trouble-maker (habitual fighter).'

7.1.2 Locational quasi-verbs *go*, *si*

The locational quasi-verbs, positive *go* and negative *si*, seem to have about the same syntax as do KCh *goo* and *sii*. However, in DjCh I hear the vowels as short. Moreover, *go* is sometimes reduced to *o* when followed by a locational phrase, as in (743). KCh always has *goo* in this context.

- (743) *mey* *ŋga* *o* *nee*
 who? SFoc be here
 ‘Who is here?’

go may also disappear entirely after a pronoun (if a locational expression follows), as in *wor nee* ‘you(Pl) are here’ in ex. (744b) of §9.5.6. Disappearance is most common after 1SgS pronoun *ay*, as in (744). Recall that Impf *go* is also often omitted after this pronoun.

- (744) *ay* — *mɔrayda* *noŋgu* *di kama*
 1SgS — now place Def Rel
 ‘the place (in) which I am now’

Because of these facts, the equation of locational *go* ~ *o* and *si* with Impf *go* ~ *o* and ImpfNeg *si* is even better justified in DjCh than in KCh.

7.1.3 Existential and impersonal quasi-verb *bara*

As in KCh, *bara* ‘exist’ is compatible with various nonzero MAN morphemes (745a-c) and with Inf *ka* (745d).

- (745) a. *send-oy* *di kama* *go* *bara* *mɔ-čiino*
 difficult-Abstr Def Rel **Impf exist** now
 ‘(in view of) the inflation which there is now’
- b. *haya* *si* *bara*
 thing **ImpfNeg exist**
 ‘There is nothing (here).’
- c. *ni* *bana-hay* *moo* *ma* *bara*
 2Sg pay-price too **Subju exist**
 ‘Your pay should also exist’ (= ‘You should also get paid’)
- d. *čee-jerŋgi* *di* *yoo* *kaa* *čindi* *ka* *bara*
 foot-bracelet Def Pl Rel used-to **Inf exist**
 ‘the anklets (ankle-rings) that there used to be’

7.1.4 Possessive predications

mey, a simple transitive verb 'have, own' is common. An alternative is equational 'be' plus possessive *wanɛ* as predicate, as in (746). Here, *si* is a variant of the equational quasi-verb 'be', not the ImpfNeg morpheme.

- (746) *taasu di si [yer kur yaa wanɛ]*
 rice Def be [1Pl all Emph Poss]
 'The rice belongs to all of us.'

An alternative is existential-locational 'be' plus a PP, like the dative in (747).

- (747) *na a hin-ey go [ni see]*
 if 3Sg means be [2Sg Dat]
 'if you have the means of (=for) it' (= 'if you can afford it')

7.2.1 MAN morphemes and sequences

Perfective, indicative, and positive are unmarked. Overt morphemes are Impf *go* ~ *o*, ImpfNeg *si*, Neg *na*, and Subju *ma*. The Subju Neg combination is *ma si*. The system is basically identical to that of KCh.

7.2.3 Presentative imperfectives (preverbal *gaa*)

goo is used before *kaa* 'come': *a goo kaa* 'here she comes!' It also occurs before *kaa-na* 'bring': *a goo kaa-na attey di* 'here he comes with the tea!'

gaa is used before locational quasi-verb *go*, as in *a gaa go* 'there he is!' It is also attested before Impf *go* and another verb, as in (748).

- (748) *deɣene mayra woo yoo kaa gaa go*
 red-amber fine Dem Pl Rel Presentative be
[sarra-sarra ŋu-yo]
 [Rdp-straighten 3RefPl]
 'these beads of red amber which are right here, forming straight lines
 (=strings)'

An unusual feature of DjCh is that *gaa* can combine with *goo*, as in *a gaa goo kaa*, another way to say 'here she comes!'

7.2.4 Subjunctive mood

wor ma or *wo ma* is the 2PlS Subjunctive. For 2SgSSubju *ma* see §3.8.2.

7.2.5 Future

The simple imperfective can be used with future time reference, as in KCh. Explicit futures are of two types.

Fut morpheme *ta* follows the Impf morpheme (749), as in KCh.

- (749) *bər foo kul o ta warra ga a-foo-foo*
 person one all Impf Fut throw 3SgO AbsolSg-oneone
 'Each person will throw it in turn.'

A serial-verb construction with *kaa* 'come, become' and a following VP (Inf *ka* is usually omitted) can mean 'come and VP'. With imperfective aspect, the construction can also be interpreted as future, with no entailment of centripetal motion (750).

- (750) *no-o kaa koy*
 2SgS-Impf come go
 'You(Sg) will go.'

Since Impf *go ~ o* is often omitted after 1SgS *ay* (§3.7.1), the usual 1Sg counterpart of (750) is *ay kaa koy*.

kaa in this future function may combine with *kaa* 'come' in the latter's lexical sense: *no-o kaa kaa* 'you will come'.

7.2.6 Marked Progressive constructions

Quasi-verb *go* 'be' combines with the Locative (*la* or *kuna*) of a nominalized verb (Abstractive or zero-derived) (751). This pattern is more common in DjCh than in KCh.

- (751) a. *i go mɔɔ-dumbu di yoo la*
 3PIS be rice-cut Def Pl Loc
 'They are involved in the rice harvests.'
- b. *i go koy di kuna*
 3PIS be going Def Loc
 'They were going (along).'

7.3 Imperatives

With *kaa* 'come' the forms are: singular positive *kaa!* 'come!', singular negative *ma si kaa!* 'don't come!', plural positive *wo kaa!*, plural negative *wo ma si kaa!*. The only difference vis-à-vis KCh is that the plural negative uses the 2PIImpera *wo* rather than the full 2PIS form *wor*, as sometimes in other subjunctive contexts.

8.1.1 Nonsubject focus constructions

Whereas nonsubject focalized constituents in KCh are always fronted, in DjCh they may be fronted or may remain in place (*in situ*). The *in situ* pattern seems dominant in the basilect. When a semantically focused constituent such as a WH-interrogative remains *in situ*, it may lack explicit DF marking (752a-b). While WH-interrogatives are presumptively focalized, in sentences with ordinary (noninterrogative) NPs as postverbal constituents there may be no way to determine whether one of these constituents is “focalized,” so the concept of grammatical focalization is dubiously applicable to DjCh. However, Emph *yaa* is often added to a postverbal NP in focalizing function, as with the WH-interrogative in (752c).

- (752) a. *n kar mey?*
2SgS hit who?
'Whom did you hit?'
- b. *no-o kaa [alwakati foo]?*
2SgS-Impf come [time which] ?
'When are you coming?'
- c. *ni ŋaa [maa yaa]?*
2SgS eat [what? Emph] ?
'What did you eat?'

When the nonsubject focalized constituent is fronted, *yaa* may be attached to it (753a-f). When the focalized constituent is a PP, *yaa* follows the noun and precedes the postposition (753d).

- (753) a. *taka foo yaa no-o goy?*
manner which? Emph 2SgS-Impf work?
'How do you(Sg) work?'
- b. *mey yaa ni kar t?*
who? Emph 2SgS hit t ?
'Whom_x did you hit t_x ?'
- c. *maatiga yaa ay ŋaa t*
peanut Emph 1SgS eat t
'It was peanuts_x [focus] that I ate t_x.'
- d. *[maa yaa see] no-o hem?*
[what? Emph Dat] 2SgS-Impf weep?
'Why are you crying?'
- e. *men yaa a go?*
where? Emph 3SgS be?
'Where is she?'
- f. *frans ñerfu di yaa ay go mey t*
France money Def Emph 1SgS Impf have t
'It's French money_x [focus] that I have t_x.'

An archaic Focus particle *ne* is used by some speakers after a fronted focal nonsubject NP or PP. Overall it is much less common than KCh *na* or KS *no*, some speakers do not seem to use it at all in this focalizing function. An example is (754).

- (754) *galiyeni kuna ne belesi njay kaa*
 G Loc Foc B N come
 'It was [in Galiyeni (a boat)] [*focus*] that Belesi Ndiaye came.'

ne ~ na is used by many speakers in *kaa ne*, *kaa na*, or *kama ne*, variants of Relative *kaa ~ kama* used fairly often in nonsubject relatives. We will gloss this *ne ~ na* in interlinears as "Foc," for lack of a better label, but it has no clear focalizing value in this combination. Examples are (771c) and (772) in §8.3.3, below. If a postposition is present, *ne ~ na* follows the postposition: *kaa see ne ...* 'to whom ...' (Dative). KCh has a somewhat similar *na* in a few fixed combinations like *saa di kaa (na) ...* 'when ...'.

8.1.2 Subject focus constructions

The KCh SFoc morpheme *ŋga* has a counterpart in DjCh SFoc *ŋga ~ ŋa* (755a-c), which occurs frequently in the recorded texts.

- (755) a. *mey ŋga o koy?*
 who? SFoc Impf go
 'Who will go?'
 b. *woo ŋga si har di kaa kar ey*
 Dem SFoc be man Def Rel hit 1SgO
 'This [*focus*] is the man who hit me.'
 c. *ni ŋa ŋin athey di*
 2Sg SFoc drink tea Def
 'It's you [*focus*] who drank the tea.'

However, some other speakers (not recorded on tape) prefer Emph morpheme *yaa* in this function (756), as in Niafunké.

- (756) a. *mey yaa kar ni?*
 who? Emph hit 2SgO
 'Who hit you(Sg)?'
 b. [*ŋga yaa*] *koy*
 [3SgF Emph] go
 'It's he [*focus*] who went.'

8.2.1 Polar (yes-no) questions and answers

Clause-final polar interrogative *ba* is a characteristic feature of DjCh. It is unknown in other Songhay varieties. A simple example is (757a). (757b) shows that it follows any embedded clauses—here a quotative—, and also shows how *ba* may cooccur with a higher-level negative *a na ti* ‘it is not (the case that...)’ in querying function.

- (757) a. B *go* *koyra* *ba* ?
 B *be* *town* **yes-no?**
 ‘Is B (man’s name) in town?’
- b. *a na ti [ni har [no-o kar ey]] ba* ?
 3SgS Neg be [2SgS say [2SgS-Impf hit 1SgO]] **yes-no?**
 ‘Didn’t you say that you would hit me?’

Disjunctive yes-no questions with *wala* ‘or’ often take unreduced form. *ba* occurs after the first of the disjunct clauses (758a). (758b) shows *wala* as a tag question in yes-no contexts where the second disjunct clause (the positive-negative inverse of the first clause) is omitted.

- (758) a. *woo di na mɔr-čiino woo di o gay ba* ?
 Dem Def with now Dem Def Impf be-long-time **yes-no?**
wala woo di na mɔreyda a si gay ?
 or Dem Def with now 3SgS ImpfNeg be-long-time?
 ‘From that (prosperous time) to now, has that been a long time? Or from that time to now, it has not been a long time?’
- b. *wor kaa-na huriya kayna wala* ?
 2PlS come-with knife small **or?**
 ‘You brought the little knife, didn’t you?’ (=‘Did you bring the little knife?’)

Clause-initial particle *yala ~ yara* is occasionally used instead of *wala* in simple or embedded yes-no questions. While *wala* also means ‘or’ and is basically a disjunction, *yala ~ yara* elsewhere has modal values ranging from desiderative (§9.6.4) to expectation, cf. (819) in §9.6.5, below.

Truncated echoic replies to yes-no interrogatives, of the form subject pronoun plus positive *go* or negative *si*, occur in DjCh but less systematically than in KCh. Alternatives are a simple ‘yes!’ (*ōhō!* with rising pitch on the second syllable) or ‘no!’ (*ō’ō!* with falling pitch) interjection, or a syntactically complete sentence including a verb, as in (759).

- (759) Q: *a na kaa ga ba* ?
 3SgS Neg become 3SgO **yes-no?**
 ‘Didn’t he become it (governor)?’
- A: *a kaa ga*
 3SgS become 3SgO
 ‘(Yes,) he became it.’

8.2.2 WH-questions

The simple WH-interrogatives are: *mey* 'who?', *maa* 'what?', *mē* ~ *mēn* or *mēe-here* 'where?', *merje* ~ *marje* 'how many?' or 'how much?', *foo* 'which?' (Absolute *i-foo*), and *mote* 'how?'. Sentence examples are in §8.1.1-2 (fronted) and §8.2.4 (*in situ*).

Plural *mey yoo* 'who?' is attested, though the unmarked singular is usual. Pl *maa yoo* 'what?' seems to be rare (compare *maa yoo* 'names').

8.2.3 Composite WH-interrogatives ('how?', 'why?', 'when?')

Composite terms for 'how?' are *misa foo*, *saa foo*, or *taka foo*, all containing *foo* 'which?'. The original nouns involved are *mise* ~ *misa* and *taka*, both meaning essentially 'manner'. *saa foo* is probably a transformation of **(mi)se foo*, perhaps contaminated with an earlier **saa foo* 'what time?'.
 'Why?' is *maa see*, literally 'to (for) what?'. Clause-initially, the phrase can also mean 'because' (§9.5.7). 'When?' is *alwakati foo*, literally 'which time?'.

8.2.4 *In situ* (non-fronted) WH-interrogatives

WH-interrogatives are semantically focal. They may be fronted (several examples in §8.1.1-2). However, a characteristic of basilectal DjCh is that focal and relativized constituents remain *in situ* (in place), as in the WH-interrogative cases in (760). Emph *yaa* can be added to an unfronted (as well as fronted) focal constituent (760a,c).

- (760) a. *ni* *ŋaa* [*maa yaa*]?
 2SgS cat [what? Emph]
 'What did you eat?'
 b. *n* *kar* *mey*
 2SgS hit who?
 'Who(m) did you hit?'
 c. *ni* *nɔɔ* *ñerfu* *di* [*mey yaa see*]?
 2SgS give money Def [who? Emph Dat]
 'Who did you give the money to?'
 d. *no-o* *koy* *mē*?
 2SgS-Impf go where?
 'Where are you going?'
 e. *no-o* *kaa* *alwakati foo*?
 2SgS come [time which?]
 'When are you coming (back)?'
 f. *no-o* *goy* [*taka foo*]?
 2SgS-Impf work [manner which?]
 'How do you work?'

In (761), we see that comitative ‘with whom?’ can be expressed by a conjunction, with *mey* ‘who?’ as second conjunct.

- (761) *[ni nda mey] ŋga o koy [na čere]?*
 [2Sg and who?] SFoc Impf go [with friend]
 ‘Who are you going (together) with?’

8.2.5 Questions embedded under matrix verbs (‘know’, ‘ask’, etc.)

The pattern (762a-b) is similar to that of KCh, with indefinite forms of low-content (“light”) nouns.

- (762) a. *ay si bey taka di kaa wo-o goy*
 1SgS ImpfNeg know manner Def Rel 3SgS-Impf work
 ‘I don’t know how she works.’
 b. *ay si bey non kama a koy*
 1SgS ImpfNeg know place Rel 3SgS go
 ‘I don’t know where he went.’

8.2.6 ‘whatchamacallit?’

haywane ‘whatchamacallit?’ (noun) or ‘be or do whatchamacallit?’ (verb).

8.3 Relative clause constructions

The Rel morpheme is *kaa* or *kama* (cf. KCh *kaa*, KS *kaŋ*). *kama* is most common in postverbal position, *kaa* in preverbal position, though this is not a hard rule.

Fronted nonsubject relatives also permit a variant with *na ~ ne* extension, hence *kaa na*, *kaa ne*, or *kama ne*. This *na ~ ne* may be a vestige of the (nonsubject) Focus morpheme preserved as KCh *na*, ultimately reflecting a reduced ‘there’ demonstrative **no*. The most direct comparison is with the occasional KCh addition of *na* to adverbial relatives like *saa di kaa (na) ...* ‘when ...’.

Since fronting of nonsubjects is not usual in (basilectal) DjCh, forms like *kaa na* do not have high text frequency. There are no examples of *kaa na* or the other extended variants with subject relatives. Note that in a subject relative, *kaa na* plus VP would be interpreted as containing Neg *na*.

Pluralization with *yoo*, i.e. *kaa yoo*, is attested in texts but is rare. Some apparent cases may really involve a hesitation after *kaa*, followed by a restart of the clause, beginning with 3PlS Impf *yo-o* (‘the people who—, they are ...’). However, in the sequence *kaa yoo go ...* attested in one text, with Impf *go*, the *yoo* can only be the Pl morpheme. The Rel morpheme readily follows a plural NP ending in *yoo*, as in *bɔɔ di yoo kaa ...* ‘the people who ...’.

Especially in elicitation (from French cues), we get the KCh-type construction with Rel *kaa* – *kama* at the beginning of the relative clause. In texts, however, we usually find a basilectal construction with *kaa* – *kama* (most often *kama*) at the end of the relativized NP, which remains *in situ*. We therefore bracket *kama* with this NP. However, even in basilectal DjCh, a relative clause may be added as a kind of elaboration to a NP introduced in a preceding clause ('there sat the man, whom I had seen'), and in this event the appended relative clause typically begins with Rel *kaa* – *kama* followed by a clause with a resumptive pronoun (or occasionally a zero).

When the "relativized" NP is a new discourse referent (not carried over from the preceding clause), it is quite often difficult to decide whether to gloss it as a restrictive relative clause ('a man whom I saw') or as an indefinite, since either is reasonable with reference to the following context: 'the man whom I saw, I hit him' = 'I saw a certain man, (and) I hit him' (there is no interclausal 'and' conjunction to differentiate the two constructions). An indefinite reading seems reasonable in (763a), while in (763b) the universal quantifier *kur* 'all' generalizes to all possible locations.

- (763) a. *wo-o* *ŋaa ga,* *wo-o* *baa a mee* —,
 3SgS-Impf eat 3SgO, 3SgS-Impf break 3Sg mouth—,
na [*bɔr kaa*] *gar farā*
 if [person Rel] find F
 'It (fish) was eating it (rice), it was breaking its mouth's—. If someone found Faran, ...'
- b. *ma* *gaaba-ndi ta,* *hijey di na a gar ey*
 2SgSSubju try Top, marriage Def if 3SgS find 1SgO
 [*noŋgu kur kaa*], *ma* *samba ay see* ...
 [place all Rel], 2SgSSubju send 1Sg Dat ...
 'You should try, wherever the wedding finds me, to send me ...'

The combination of *na* 'if' with a relative clause is very common when a new discourse referent is introduced, as in (763a-b). Often a free English translation would disregard the 'if' and translate as a simple relative clause, typically functioning as a preposed topic NP for the following clause. Thus, in (763a), 'anyone who found Faran, (he ...)'. However, if we take the 'if' as part of the semantic representation, we should then treat *kaa* – *kama* as an indefinite marker ('some X' or 'a particular X'), hence 'if someone found Faran, (he ...)'. A third possibility is to reconstruct the full representation as including a second person pronoun and a copula (omitted from the surface): 'if you are someone who ...' We occasionally get a similar clause-initial *na* before participial clauses (§9.5.11).

In (764), the second *kaa* (that of *hay kaa* 'something', here extended to mean 'someone') must be indefinite, since taking both *kaa*'s as relative would result in semantic gibberish.

- (764) *ŋu ta o bey woo yaa, bɔr kaa gar*
 LogoSg Top Impf know Dem Emph, person Rel find
hay kaa [ŋu baba yaa gaa]
 thing Rel [3ReflSg father Emph on]
 '[she said] she knew that this (was) someone_x who_x had found
 (=inherited) something (or other) from his_x father.'

A restrictive reading of relatives can be enforced by using Def *di*, at the end of the clause or between the relativized noun and the Rel morpheme. In (765a-c), we see *di* in both of these locations. In (765a), it would seem that the final *di* is attached to *kama*, but (765b-c) show that we can get clause-final *di* even when the relativized noun with *kaa* - *kama* occurs earlier in the clause.

- (765) a. *no-o kaa jow [wande di kama] di*
 2SgS-Impf come take [wife Def Rel] Def
 'the woman whom you(Sg) come and take'
 b. *[hɔ̃ɔ bɔrɔ beer foo-foo di kaa] go bara di*
 [today person big Rdp-one Def Rel] Impf exist Def
 'one or two of the big (=elderly) persons of today'
 c. *[hari-jeŋey di kaa] kaa hasara ga [yer ta gaa] di*
 [water-lack Def Rel] come ruin 3SgO [1Pl Top on] Def
 'the drought which has come and ruined it on us'

(765a) is an *in situ* direct object relative; (765b-c) are subject relatives.

In (766), the final *di kama* functions as a reduction of e.g. *alwakati di kama* 'at the time when'.

- (766) *i baa ka wongu di kama, farmaka, a koy...*
 3PIS want Inf refuse Def Rel, F, he went ...
 'When they were on the verge of refusing, (as for) Farmaka, he went ...'

8.3.1 Relativization of subject NPs

Since subjects precede verbs, there is no way to determine whether a relativized subject is *in situ* or has been fronted. In smoothly uttered sentences, *kaa* - *kama* is not followed by an overt 3SgS or 3PIS morpheme (767a-b). However, Impf *go* is audible after the Rel morpheme (767a).

- (767) a. *bɔrɔ kaa go kar ja-kayna*
 person Rel Impf hit child
 'a person who hits children'
 b. *jingar di kama too moŋeyda*
 holiday Def Rel arrive now
 'the holiday that has come up now'

8.3.2 Relativization of direct objects and complements of 'give'

Examples of *in situ* direct-object relatives are (768a-c).

- (768) a. *yer o goy [haya di yoo kama] [jingar di la]*
 1Pl Impf work [thing Def Pl Rel] [holiday Def Loc]
 'the things that we produce during the holiday (season)'
- b. *ay go har [ni se] [derbe di kama]*
 1SgS Impf say [2Sg Dat] [garment Def Rel]
 'the garment which I am describing (speaking about) to you'
- c. *ay ta o koy yaara wor kama*
 1Sg Top Impf go seek 2PIO Rel
 'you whom I went and sought'

When a relativized direct-object NP is extracted, we often get a resumptive pronoun, like 3SgO *ga* 'it' in (769a,d), or 3PIO *gi* in (769b-c). The first *kama* in (769a) may be a hesitation, or may be indefinite ('a certain ...').

- (769) a. *i si yada ka dan goy kama,*
 3PIS ImpfNeg consent Inf do work Rel,
kama i na gar ga ŋu-yo baaba gaa
 Rel 3PIS Neg find 3SgO 3RefIP1 father on
 'They_y refuse to do any particular work_x, which_x they_y did not find
 (=inherit) *t_x* from their_y fathers.'
- b. *woo di yoo si yer bɔɔ yoo yaa,*
 Dem Def Pl be 1Pl person Pl Emph,
kama i koy-na gi
 Rel 3PIS go-with 3PIO
 'Those are our people (=Africans), whom they (=whites) took.'
- c. *wala [koyra-yje di yoo jaatin]*
 or [villager Def Pl self]
nga o dey-dey [woo di],
 SFoc Impf Rdp-buy [Dem Def],
[woo di yoo kama] wor o hɪsa gi
 [Dem Def Pl Rel] 2PIS Impf prepare 3PIO
[nam-nɔɔɔ di yoo kuna]?
 [copper Def Pl Loc]
 'Or is it the locals themselves [*focus*] who buy that, (namely) those
 (jewels) that you make in copper?'
- d. *woo di kaa a taa ga*
 Dem Def Rel 3SgS sew 3SgO
 'that one which he sewed'

However, we also get some examples with phonologically unrealized traces (770).

- (770) *haya kaa ay go bey t*
 thing Rel 1SgS Impf know *t*
 'a thing_x which I know *t_x*'

In texts, the type (769a-d) with resumptives is most typical of contexts where the discourse referent in question is part of the preceding clause, and the relative clause follows as an elaboration. This discourse pattern is seen most clearly in (769c).

8.3.3 Relativization of NP complements of postpositions

In elicitation, we get fronted Rel *kaa* – *kama* and a postverbal PP with resumptive pronoun. In (771a), the resumptive pronoun is 3Sg though the NP in question is plural, but the resumptive pronoun more often agrees in number. The extended variant *kaa na* or *kaa ne* (see end of §8.1.1) is exemplified in (771c).

- (771) a. *ban̄gu di yoo kaa hari fata [a kuna]*
 swamp Def Pl Rel water exit [3Sg Loc]
 'the floodplains_x which_x the water has receded from *t_x*.'
- b. *bɔr di kaa ay nɔɔ a see ñerfu di*
 person Def Rel 1SgS give 3Sg Dat money Def
 'the person_x whom_x I gave the money to *t_x*.'
- c. *bɔr kaa na ni goy a see*
 person Rel Foc 2SgS work 3Sg Dat
 'the person for whom you worked'

Especially with spatiotemporal phrases, an implied spatial postposition may be omitted (772).

- (772) *han di kaa ne belesi njay go kaa sofaara*
 day Def Rel Foc B N Impf come S
 'the day (in) which Belesi Ndiaye was coming to Sofara (town)'

In situ cases occur in texts. (773a) is emended from a slightly broken textual example, but the emended portion (*ɲu* for *a*) is not relevant to the point at hand. (773b-c) are also textual examples.

- (773) a. *a dan̄ ɲu jente di [woo di kama gaa]*
 3SgS do 3Ref1Sg learning Def [Dem Def Rel on]
 'that one_x with whom_x he_y did his_y apprenticeship'
- b. *ɲga nda [ay koy brousse di yoo non̄gu di yoo kama la]*
 3SgF and [1SgS go bush Def Pl place Def Pl Rel Loc]
 'In addition, whatever places in the rural areas I have gone to, ...'
- c. *ni kaa tun [daliil di kaa see]*
 2SgS come arise [purposeDef Rel Dat]
 'the purpose for which you (came and) arose.'

Rel *kama* may also follow a spatial postposition, as in (774a-b).

- (774) a. *tira-feer-ey di go dā [handi di la kama]*
 ritual Def Impf be-done [day Def Loc Rel]
 'on the day (when) the ritual is performed'
- b. *no-o kungu [jaman di la kama]*
 2SgS-Impf be-full [era Def Loc Rel]
 '(back) in the days when you were well-fed'

The postposition is generally Locative *la*, and *la kama* is more frequent in texts than *kama la*. It appears that this usage involves backgrounded clauses, and it may be that the final PP is not the actual relativized noun. Consider now (775).

- (775) *jenne wane di [wo-o kuubi-ndi] di*
 Djenné Poss Def [3SgS-Impf curve-Mediop] Def
kama wo-o yurru gumo
 Rel 3SgS-Impf be-smooth very
 'The way the Djenné one is curved, it is very smooth.'

Here the Def *di* (after a verb) suggests a covert nominal (perhaps 'manner')

8.3.4 Relativization of NP complements of *nda* 'with, and'

The preposition *nda - nna - na* seems to be stranded with trace representing the fronted Rel *kaa* in (776). However, since 3SgO *ga* is sometimes omitted (or realized as zero) after postverbal *nda* (see §4.1.6, above), it is not entirely certain that we are dealing with a trace, rather than a (resumptive) pronoun that happens to have zero expression.

- (776) *hay kur kaa i čin ŋu-yo o faaba mali na*
 thing all Rel 3PIS say LogoPIS Impf help Mali with
 'everything_x which_x they said they would help Mali with *t_x*'

A different pattern with double *nda* is apparently seen in (777).

- (777) *hay kur kaa nda ay soḡor nda*
 thing all Rel with 1SgS worry with
 'anything that I was worried about'

However, this may have been an internally restarted clause ('anything that—, if I was worried about it').

8.3.5 Relativization of possessor NP

(778) shows the pattern, with *kaa* – *kama* preceding the possessed NP.

- (778) a. *ay guna bōrō hirka kaa maa si* Jeff
 1SgS see person two **Rel name** be J
 ‘I have seen (=met) two men whose name is Jeff.’
- b. *ndarka yoo yaa, kaa gumo di yoo go mari*
 hammer Pl Emph, **Rel head Def Pl** Impf be-thin
 ‘some hammers, whose heads are narrow’

When something intervenes between Rel morpheme and the possessed NP, a resumptive pronoun can occur. In (779a), the 2Sg pronoun is coindexed with generic *bōr* ‘person’.

- (779) a. *na bōr kaa mōr-čiiino ni kuñe go mey hin-ey*
 if **person Rel** now 2Sg husband Impf have means
 ‘if (you are) someone_x who_x now your_x husband has means’
- b. *derbe beer woo kaa yo-o jōre*
 garment large Dem **Rel** 3PlS-Impf embroider
 [a jine here di]
 [3Sg front area Def]
 ‘this big garment (=boubou)_x, which_x they embroider its_x front’

8.3.6 Adverbial relatives without postpositions

Simple adverbial clauses with temporal or spatial sense are formed by preposing a phrase of the minimal type [X Rel ...] to an indicative clause, where X is a noun meaning roughly ‘place’ or ‘time’ and Rel is, as usual, *kaa* or *kama*. Examples are *han kaa* ... ‘when ...’ (*hā* – *han* or *handi* ‘day’), *saa di kaa* ... ‘when ...’ (*saa* ‘time’ with Def *di*), and *non kaa* ... ‘where ...’ or ‘when ...’ (*non* ‘place’). Note that the spatial form *non kaa* ... can extend loosely into temporal function. Some of these phrases may be acrolectal, reflecting KCh influence, which might explain why *kaa* (the Rel morpheme shared with KCh) is more common than *kama* (though the latter is attested, e.g. *saa di kama* ...).

A more characteristic DjCh phrasing is *X kur kama* ... (without Def *di*), showing the uniquely DjCh Rel variant *kama*, and using *kur* – *kul* ‘all’ even in non-generalizing contexts: *saa kul kama* ... ‘when ...’ or ‘whenever ...’, *non kul kama* ... ‘where ...’ or ‘wherever ...’ (780).

- (780) *non kul kama baana kar, yo-o duma hayni*
place all Rel rain strike, 3PlS-Impf sow millet
 ‘When it rains, they sow millet.’

Another authentic DjCh construction is to leave the spatiotemporal NP *in situ* (not fronted to clause-initial position). In this case, however, the construction is more regular and literal. The noun is usually unreduced, it may be followed by Def *di*, *kul* is not used as loosely as in clause-initial cases, and the nouns stick closely to their core lexical sense. An example is (781).

- (781) *baana di kar norɣu di kama bii,*
 rain Def strike place Def Rel yesterday,
yo-o kaa duma
 3PIS-Impf come sow
 'There where the rain fell yesterday, they will (come and) sow (millet).'

8.3.8 Relativization out of complex syntactic structures

In (782) we have fronting of the relativized NP out of an embedded subjunctive clause.

- (782) *woo ŋga si mangoro di kaa*
 Dem SFoc be mango Def Rel
 [*ay baa ay ma ŋaa t*]
 [1SgS want 1SgS Subju eat t]
 'This [*focus*] is the mango_x that I want to eat t_x.'

However, this was an elicited example, and the usual pattern in such examples is to front the relativized NP (thus approximating the French cues). I do not have a wide range of relevant textual data, but (783), with an embedded indicative (quotative) complement, suggests that *in situ* relatives are compatible with clausal embedding.

- (783) *ni har ay see goy taka jeen-o di kama*
 2SgS say 1Sg Dat work kind old-Adj Def Rel
 '(with) the old manner of working that you told me of'

8.3.9 DF morphemes and postpositions operating on the head NP

In (784), the Dat postposition *see*, whose complement is the bracketed complex NP, is optionally omitted, presumably to avoid an ungainly sentence-final double postposition.

- (784) *ay nɔɔ ŋerfu di*
 1SgS give money Def
 [*har di kaa čindi butigi di kuna*] (*see*)
 [man Def Rel stay shop Def Loc] (Dat)
 'I gave the money to the man who was still in the shop.'

8.4.1 Preposed topical constituents, with or without Topic *bine*

Aside from preposed cases, *bine* can also be used as a clause-final particle.

- (785) *wor o hīsa woo di yoo bine, wor o hīsa ga*
 2PIS Impf fix Dem Def Pl **Top**, 2PIS Impf fix 3SgO
 [[[yow di yoo kama] go kaa] yaa] ba ?
 [[[stranger Def Pl Rel] Impf come] Emph] yes-no?
 ‘Regarding your(Pl) making those, do you make it (for) the foreigners
 who come?’

8.4.2 Use of 3F (full third person) pronouns

The syntax of 3SgF and 3PIF pronouns is the same as in KCh. As we have noted, 3PIF *ŋgu-yo* and variants is not distinguishable phonetically from Logo/3RefPl pronouns.

8.4.3 Use of weak Topic marker *ta*

Weak Top morpheme *ta* is extremely common. It is used after NPs (including pronouns), PPs, and clauses. It is not to be confused with Future *ta* (which occurs only between Impf and the verb).

8.5 Emphatics and similatives

The most common emphatics are *daa* ‘only’, *jaafi* ‘(one-)self’, and focalizing *yaa*. See next section for usage. For clause-final *dee* and *mee* see §8.5.7.

Emphatic morphemes like *yaa* precede postpositions like Dat *see* (786), as in KCh.

- (786) *a nɔɔ ga [[ay na ni] yaa] see]*
 3SgS give 3SgO [[[1Sg and 2SgS] **Emph**] **Dat**]
 ‘He gave it to you and me.’

sanda – sanna means ‘like’, either specifying similarity of one entity to another (after a NP) or acting as a hedging or hesitation expression (before any phrase or clause). A predication ‘X is like Y’ can be expressed with the verb *bar-sanna*. However, close perceptual similarity is usually expressed by the phrase type ‘you would think X’ (=it looked just like X).

8.5.1 Simple emphatics (*daa*, *jaafi* – *jaatin*, *yaa*)

daa is common after NPs and clauses, but its usage differs considerably from that of its Timbuktu KCh counterpart. The usual sense when it occurs after a noun is ‘only’, as in *jingar daa kuna* ‘only on a holiday (not at other times)’ (see next section). It can also be used linking two clauses, emphasizing that the completion of the first eventuality immediately precedes the second eventuality: ‘A, (only) then B’ or ‘as soon as A, B’, as in (787). In this function, DjCh *daa* corresponds functionally to KCh *dee*.

- (787) *wor o goy daa yo-o bana wor [na hayni]?*
 2PIS Impf work **Emph** 3PIS-Impf pay 2PIO [with millet]?
 ‘When you (goldsmiths) work, do they then pay you with millet (grain)?’

jaafi – *jaatin* occurs after NPs (‘myself’, ‘himself’) and clauses (‘indeed’).

yaa is primarily a focalizing particle after NPs, but since focalization in (basilectal) DjCh does not involve fronting, *yaa* can still be classified as a local emphatic rather than as a syntactic morpheme. Subject focus is usually expressed by SFoc *nga*, but some speakers use *yaa* here too (§8.1.2).

The sequence of NP (or pronoun) plus *jaafi* may be followed by *yaa* in focalizing function: *nee jaafi yaa ...* ‘it was right here [*focus*] that ...’ However, I have also recorded ... *yaa jaafi*.

An apparent clause-final emphatic *ke!* was attested once in a narrative.

8.5.2 ‘Only’ (*nin*, *tā* – *tan*, *kɔɔn*, *daa*)

nī – *nin* and *tā* – *tan* ‘only’ are attested in the texts, chiefly with clausal scope, but seem to be used by only some speakers. NP *kɔɔn* ‘NP alone’ or ‘a mere NP’ is also attested several times. ‘Only NP’ is usually expressed as *NP daa*, or as *NP daa foo* with *foo* ‘one’ (788).

- (788) *almisimi daa foo go hirow jingar-ey*
 Muslim **Emph one** Impf enter mosque
 ‘Only a Muslim (may) enter a mosque.’

8.5.3 ‘Unless’ and ‘except’

na a na či ga, literally ‘if it isn’t it,’ is common in the sense ‘otherwise’ (‘else’).

‘Unless’ can be expressed by *bara nda ...*, literally ‘except if ...’

‘Except X’ where X is a NP is *bara X*. Typically, *bara X* can be analysed as a reduction of a more complex construction. Examples in (789).

- (789) a. *a si hin ka dira bara taam*
 3SgS ImpfNeg can Inf walk **except** shoe
 'She can't walk except (with) shoes.'
- b. *a si hin ka fata bara [ay na ŋga]*
 3SgS ImpfNeg can Inf exit **except** [1Sg and 3SgF]
 'He_x can't go out without me.' (lit., '...except [I and he_x]')

8.5.7 *dee, mee*

Clause-final *dee* has mild adversarial sense ('mind you') (790), or adds a warning touch to an imperative ('now!').

- (790) *tombi, a n či hantum dee, tombi nono*
 dot, 3SgS Neg be writing **Emph**, dot it-is
 'Dots. It wasn't writing, mind you, it was (just) dots.'

mee! is attested as a clause-final emphatic, giving a stronger warning or threatening nuance to an imperative: *kaa mee!* 'come, for God's sake!'

8.5.8 *baada, wallaahi, laabudda*

laa-budda ~ *laa-burda* means 'probably, perhaps'. I have recorded *baada* only in the adverbial phrase *baada banda* 'afterward'. *wallaahi* 'by God' is well-attested in in oaths, and may be followed by *bara* before the substantive assertion.

8.5.9 *wala* 'or' in emphatic sense 'even...'

wala 'or' means 'even' when preposed to a NP in the absence of a preceding disjunct (791), especially under negation.

- (791) *a na nɔɔ ey [wala allaara foo]*
 3SgS Neg give 1SgO [**even** riyal one]
 'He didn't give me even one riyal.'

Where *wala* 'even' seems to have VP scope ('he didn't even ...'), it is preposed to the entire clause (792a-b).

- (792) a. *a koy wala a na hīsa [ŋgu jiney di yoo]*
 3SgS go **even** 3SgS Neg prepare [3ReflSg gear Def Pl]
 'He went, without even packing up his belongings.'
- b. *wala a na foo*
even 3SgS Neg greet
 'She didn't even say hello.'

9.1.1 Ordering and pronominal cliticization

The ordering of postverbal constituents appears to be much as in KCh, with pronominal objects coming first, then pronominal adpositional phrases, then definite (or otherwise “old”) NPs, then indefinite NPs. Examples in (793a-b).

- (793) a. *no-o* *kow* *i* *see* *i* *čirkose*
 2SgS-Impf remove 3Pl Dat 3Pl lunch
 ‘You would take out (=pay) their_x lunch for them_x.’
- b. *wo-o* *hin* *ka* *dey* [*ŋu* *gumo* *see*] *derbe*
 3SgS-Impf can Inf buy [3RefISg head Dat] garment
 ‘She can buy a garment for herself.’

However, a pronominal PP follows a nonpronominal object NP more often than in KCh. This is most common when the object NP is a simple one like demonstrative *woo di* ‘that one’ as in (794), but there are occasional textual examples with more substantial NPs.

- (794) *a* *čin* *ŋgu* *o* *kaa* *kay-ndi* [*woo di*] *a* *see*
 3SgS say LogoSgS Impf come stand-Caus [Dem Def] 3Sg Dat
 ‘He_x said he_x would come and set that up for it.’

9.1.2 Double-object constructions (‘give’, ‘show’)

nɔɔ ‘give’ most often has a canonical direct object plus dative construction even when the indirect object is a first or second person pronoun, as in (795).

- (795) a. *yo-o* *nɔɔ* *ga* [*ni* *see*]
 3PlS-Impf give 3SgO [2Sg Dat]
 ‘They will give it to you.’
- b. *suba* *na* *ay* *kaa* *nɔɔ* *ni* *see* *jan̄gu*
 tomorrow if 1SgS come give 2Sg Dat hundred
 ‘tomorrow, if I come and give you one hundred’

The double-object construction seems to be rare, but is attested (796).

- (796) *i* *nɔɔ* *ga* [*huriya* *kayna*]
 3PlS give 3SgO [knife-let small]
 ‘They gave him the little knife.’

9.3.4 Equivalents of negative polarity items

For '(not ...) anything', the NP may be *haya foo* ('thing one') or just *haya* ('thing'): *haya (foo) si nee* 'there is nothing here.' In this instance, the polarity item precedes the negative (*si* 'not be').

9.5 Clause conjunction and indicative complement clauses

Indicative complement clauses in DjCh sometimes begin with *na* (variant *nda*), perhaps a special use of the 'if' particle (§9.5.1). Some examples of nonconditional *na* are given in (797a-b).

- (797) a. *bara na ay čindi*
must with 1SgS remain
 'I must remain.'
- b. *ni si hargu na*
 2SgS ImpfNeg think **if**
woo andama-yje woo go mey biiri moo fey!
 Dem Adam-child Dem Impf have bone also at-all!
 'You wouldn't think that this person has any bones at all!'

bara na in (797a) may have a modal value (perhaps inevitability) distinct from that of the obligational construction with *bara* followed by subjunctive clause (§9.6.2). However, (797a) can also mean 'unless I remained' in other contexts, with *na* 'if'. For *bara* 'except, unless', see §5.9.9. In (797b), it is possible that *na* is the Instr-Comit morpheme 'with', though this morpheme is not otherwise clearly attested in Instr-Comit function with a clausal complement. Compare (798), with nominal complement.

- (798) *no-o hargu na maa?*
 2SgS-Impf think **with** what?
 'You are thinking about what?'

9.5.1 Conditionals (*na ... , wala ...*)

The basic conditional is like that of KCh, beginning with *na ~ nda* 'if, supposing that, when'. The common variant in this position is *na*. In (799), Emph *daa* emphasizes the immediacy of the consequent.

- (799) *na wičir too daa, yo-o nan ga musoo di*
if late-afternoon arrive Emph,3PIS-Impfleave 3SgO manner Def
 'Once the late afternoon has arrived, they will put it aside thus.'

As a complement of a verb like 'know', *nda* can mean 'whether', as in (800).

- (800) *na čiiimi nɔnɔ wala na a na či čiiimi*
 if truth it-is or if 3SgS Neg be truth
 '(I want to know) whether it is the truth, or whether it is not the truth.'

DjCh often combines clause-initial *na* with a relative clause. The resulting combinations frequently function to introduce a discourse referent (often indefinite or generic) which will play a role in the following sentence. For discussion see §8.3. We also occasionally get *na* at the beginning of a participial background clause; see §9.5.11.

wala 'or, even' is also used as in KCh to mean 'even if' (801).

- (801) *wala ay duu njerfu di mɔr-čiino,*
 even 1SgS get money Def now,
 [woo boori a la] jiiri tanaa ...
 [probably] year other ...
 'Even if I got the money now, it would probably be another year (before ...)'

9.5.3 Juxtaposed clauses in adverbial function ('while', 'without')

An example is (802).

- (802) *yo-o hin ka dan jiiri muumoy di kur*
 3PlS-Impf can Inf do year entire Def all
 [i go dɛrbe-yje foo yaa gaa]
 [3PlS be clothing-child one Emph on]
 'They might spend the entire year (while they are) working on one small textile.'

9.5.5 Adversative conjunctions

kaa ~ ŋkaa 'but' occurs clause-initially (803). This resembles *kaa* 'but' in GN, but in view of the (optional) nasal the source for the DjCh form may be Bambara *ŋka* instead of Fulfulde *ka(a)*.

- (803) a. *baana go hin ka kar mɔreydo, ŋkaa wo-o sendu*
 rain Impf can Inf strike now, but 3SgS-Impf be-rare
 'Rain can strike (=fall) now (=at this season), but it's unusual.'
 b. *a jĕĕ, kaa har mɔreyda a go goy*
 3SgS be-old, but until now 3SgS Impf work
 'He has gotten old, but he is (still) working to this day.'

9.5.6 *jaa* 'since', *hal* ~ *har* 'until, before', *ka-nnã* and *ma-nnã* 'as long as'

jaa and *hal* as clause-initial particles are exemplified in (804-5).

- (804) [saa di] *jaa* *woo* *di* *ta* *bisa* *ta*
 [time Def] since Dem Def Top pass Top
 'So then, that (=prosperity) has already passed (=ended).'
- (805) *na n dan kottu di ka bē, hal*
 if 2SgS do cut Def Inf end, until
ni moo ma bey mər-čiino ta kottu di— a too
 2Sg too Subju know now Top cut Def 3SgS suffice
 'If (=when) you finish making the cut, so that you too know that now
 the cutting—, it (=one cut) is sufficient, ...'

DjCh also has a special clause-initial element meaning 'as long as' or 'during the time when', in two variants: *ka-nnã* ~ *ka-nnan* and *ma-nnã* ~ *ma-nnan*. These forms look like they may be compressions of former phrases; for the onsets cf. Inf *ka* and Subju *ma*. For *ma-nnã* there is a 2Pl variant *wo ma-nnã*, apparently with 2Pl imperative *wo*, suggesting that *ma-nnã* is a singular imperative. *nã* ~ *nan* could be taken as the verb 'leave, let', in the sense 'cause, account for'. However, we will not attempt to segment the forms. Examples in (806); in (806b) locational quasi-verb *go* 'be' is apparently realized as zero after *wor*.

- (806) a. *ka-nnan* [tubaabo yoo go kaa], *yer ta yer o duu goy*
 as-long [white Pl Impf come], 1Pl Top 1PlS Impf get work
 'As long as whites come (here), as for us, we'll have some work.'
- b. *ma-nnã* [wor nee jenne nee]
 as-long [2PlS here Djenné here]
 'as long as you(Pl) are here in Djenné'

9.5.7 'Because' clauses

'Because' is *maa see*, literally 'to (for) what?', as in (807). For the sense 'why?' see §8.2.3.

- (807) *ay si ñin ga maa see a go hɔrɔ*
 1SgS ImpfNeg drink 3SgO what? Dat 3SgS Impf be-bitter
 'I don't drink it, because it's bitter.'

9.5.8 'That' complements

The verb *čĩ* ~ *čĩn* 'say' can be added (in serial construction) to a preceding verb like *bey* 'know', the result being somewhat similar to a quotative 'that' (808).

- (808) *no-o* *bey ka čī* ‘...’
 2SgS-Impf know Inf say ‘...’
 ‘You know (=realize) that ...’

Rel *kaa ~ kama* is not in regular use as a ‘that’ complementizer. However, there are cases where *kaa ...* appears to be used as a complementizer introducing background clauses describing situations prevailing at the time of a foregrounded event. One could connect this with e.g. *han kaa ...* ‘when ...’ (*hā - han* ‘day’), cf. §8.3.6, and claim that *kaa ...* is a reduction of a similar relative clause. An example is (809).

- (809) *ay* *ñin* *attey* *kaa* *sukal* *si* *a* *kuna*
 1SgS drink tea when sugar not-be 3Sg Loc
 ‘I drank tea with no sugar in it (=without sugar).’

9.5.9 Bare indicative complements (*gar, bara*)

gar ‘find’ is common with an indicative clause as complement ‘... find (that ...)’. For *bara na ...* plus indicative clause, see §9.6.2.

9.5.10 Right-edge marking in antecedents and background clauses

kur (or *ku*) ‘all’ is common as a right-edge marker (like KCh *kul*). *kur* in right-edge marking function may be extended as *kur maraa-nte* just as in NP-quantifying function (§5.4.3). Other forms like *a-kur di* with AbsolSg *a-* and Def *di* are occasionally attested in right-edge marking function.

Def *di* is recorded at the end of background clauses. In (810), *di* follows a simple clause and is in turn followed by Rel *kama*. It appears that *di* is a kind of propositional definite (‘the fact that ...’), and Rel *kama* is attached to this propositional entity (rather than to a specific clause-internal NP).

- (810) [*wo-o* *kuubi-ndi*] *di* *kama*
 [3SgS-Impf curve-Mediop] Def Rel
 ‘Given the way it is curved, ...’

9.5.11 Backgrounded participial clauses

DjCh uses participles in *-nte* (§4.3.4) in backgrounded clauses (‘you having entered the house, he got up ...’). The participial clause is resultative and sets the stage for the next (foregrounded) event. Such participial clauses are usually simple, often just a subject NP and a motion or stance verb (811a), though more complex clauses are attested. The participial clause usually has a subject distinct from that of the following foregrounded clause, but this is not a syntactic rule and a few cases of coreferentiality

occur in texts. When a serial-verb construction is participialized, the first of the two verbs is marked by *-nte* (811b-d).

- (811) a. [a kaa-nte] [ay guna ga mɔreyda]
 [3SgS come-Partpl] [1SgS see 3SgO now]
 'I saw him right after he came (back).'
- b. [baana di kay-nte ka ben], [fufu di sinti]
 [rain Def stop-Partpl Inf end], [coldness Def begin]
 'After the rain (rainy season) stops, the cold weather begins.'
- c. [a yee-nte ka kaa]
 [3SgS return-Partpl Inf come]
 'when he has come back, ...'
- d. [a duu-bumo-nte ka goy]
 [3SgS get-head-Partpl Inf work]
 'when he has finished working, ...'

Nonzero MAN morphemes do not appear to be possible in participial clauses. As a result, we could consider interpreting the "subject" as a possessor, and take the participle as syntactically nominal: '(with, after) his coming.' (Pronouns have the same forms as subjects and as possessors.) However, participles are only infrequently used as verbal nouns in other constructions.

Backgrounded participial clauses are similar in function to conditional antecedents with *na* 'if'. The combination of the two in a single clause occurs occasionally (812).

- (812) na woo di kur hun-nte, i go duu ka koy ...
 if Dem Def all leave-Partpl, 3PISImpf get Inf go ...
 '... when all that is over, they proceed to go ...'

Such examples are reminiscent of the combination of *na* 'if' with relative clauses in similar backgrounded contexts (§8.3).

Backgrounded participial constructions are apparently absent from KCh.

9.6 Subjunctive complements

Aside from the syntactic contexts (generally shared with KCh) described in sections below, we have textual examples in DjCh where the subjunctive is used in clauses denoting alternative possibilities. Consider (813), where the speaker is describing a range of typical situations. The first clause is indicative, while others denoting alternatives are phrased in the subjunctive.

- (813) *yer o dey ga na hayni,*
 1PIS Impf spend 3SgO on millet,
 ou bien *yer ma dey ga na mɔɔ-kɔgɔsi,*
 else 1PIS **Subju** spend 3SgO on unshelled-rice,
 ou bien *yer ma dey ga na mɔɔ-yje*
 else 1PIS **Subju** spend 3SgO on shelled-rice
 ‘We spend it (=earnings) on millet, or (maybe) we spend it on unshelled
 rice, or (maybe) we spend it on shelled rice.’

9.6.1 Subjunctive complements to matrix-clause verbs

(814) is an example with *tusa* as matrix verb.

- (814) *ay ŋa tusa ga*
 1Sg SFoc **incite** 3SgO
[a ma kar ŋu kayna di]
 [3SgS **Subju** hit 3ReflSg younger-sibling Def]
 ‘It was I [*focus*] who egged him on to hit his younger brother.’

9.6.2 Subjunctive complements of obligational *bara*

(815a) shows the usual construction with impersonal *bara* ‘must’ plus subjunctive clause. For *bara na* see §9.5.

- (815) *bara [ay ma čindi]*
must [1SgS Subju remain]
 ‘I must remain.’

French *pour que* can nowadays be used with a subjunctive clause (816). It can alternatively take infinitival VP complements, see (824) in §9.7.1, below.

- (816) *pour que yer ma kaa yer ma duu huna*
so-that 1PIS **Subju** come 1PIS Subju get life
 ‘so that we might come and get (=earn) a subsistence (livelihood)’

bara can also take a simple NP complement: *bara X* ‘X is necessary.’ This can perhaps be construed as a reduced clausal complement (‘it is necessary that X be present’).

9.6.3 Subjunctive clauses in jussive reported speech

čī~čīn 'say' plus subjunctive clause is the usual jussive construction ('he told me to go'). Sometimes 'say' is omitted, but its virtual presence can be inferred by an otherwise unmotivated shift to subjunctive (817).

- (817) *a yee ka čerbu yer see bōrō tanaa yoo,*
 3SgS repeat Inf show 1Pl Dat person other Pl,
yer ma koy faaba ...
 1PlS **Subju** go help ...
 'He showed us some more people, (telling) us to go help ...'

9.6.4 Subjunctive clauses with complementizers (*hal, bilaa, yala - yara*)

Clause-initial *yala - yara* 'hopefully' (<dialectal Arabic) can take subjunctive or indicative complements. The subjunctive pattern is seen in (818) and has desiderative sense ('hope', 'wish'). Cf. also the following section.

- (818) *yala [a ma kaa]*
 hopefully [3SgS **Subju** come]
 'Hopefully he'll come' (= 'May he come!')

9.6.5 Subjunctive clauses under the scope of a distant trigger

As in KCh, some grammatical elements can be thought of as "weak" subjunctive triggers; while the clause they occur in is indicative, a following clause which elaborates on or paraphrases the indicative clause shifts into subjunctive. Consider (819).

- (819) *yara wo-o sinti ka jow harğa-kōrbō wane kuubi di,*
 hoping 3SgS-Impf begin Inf take earring Poss curve Def,
a ma jow a wane jaatey di
 3SgS **Subju** take 3Sg Poss shape Def
 '(one curves the metal), expecting that it will begin to take on the
 curvature of an earring, that it may take its (=earring's) shape.'

yara plus indicative clause seems to indicate expectation or wondering, rather than hope as with subjunctive complements (preceding section). The propositional material under the scope of *yara* in the first clause ('it begin to ...') is paraphrased by the second clause ('take its shape'). *yara* is not repeated in this second clause, which therefore shifts into the subjunctive to show that it is still within the modal world of the first clause. If the second clause were expressed in the indicative, its modal subordination might not be apparent.

In (820), we see a similar phenomenon where a subjunctive clause elaborates on a preceding indicative relative clause with generic subject. Such generic relatives are somewhat hypothetical (when applied to specific individuals like 'you'), and so can be thought of as weak subjunctive triggers. Without the subjunctive shift, it might not be apparent that the second clause is modally hedged.

- (820) *maa see aadama-yje yoo kaa wor tun [nda čere],*
 what?Dat Adam-child Pl Rel 2PIS arise [with friend],
woo di wor ma dira čere, ...
 Dem Def 2PIS **Subju** walk friend, ...
 'Because human beings_x who_x you(Pl)_x were brought up together, that
 is to say you(Pl) went around together, ...'

In (821), the subjunctive clause is effectively under the scope of the negation in the following clause.

- (821) *koyra di ma waafaku, a si hin ka duu fas!*
 city Def **Subju** agree, 3SgS ImpfNeg can Inf be-had at-all!
 'For the city to be at peace, it couldn't happen at all!'

9.6.6 Bare subjunctive clauses with no overt trigger

A subjunctive clause with no overt trigger may occur in a narrative to indicate that the event denoted is intended by one of the agents. For example, '3Sg go to the river (indicative), 3Sg go across (subjunctive)' means 'he went to the river, intending to go across.'

A double subjunctive construction involving two paired subjunctive clauses with no trigger (overt or implied) means 'no sooner X than Y,' as in (822), where we give the preceding context to show that this would not otherwise be a subjunctive context.

- (822) *i koy too koyra di la, i too-nte di,*
 3PIS go reach town Def Loc, 3PIS reach-Partpl Def,
koyra di gungu,
 town Def inside,
[ŋgi ta ma too], [i ma guna]
 [3PIF Top **Subju** reach]. [3PIS **Subju** look]
 'They went and arrived in the town. Having arrived inside the town,
 no sooner did they arrive than they looked.'

9.7. Infinitival VPs and serial verbs

Serial verb constructions can be treated as units for purposes of forming participial background clauses; see examples (811b-d) in §9.5.11. For infinitival VPs after *hal - har* 'until', see §5.9.8.

9.7.1 Infinitival VPs in event sequences

(823a) shows the typical infinitival sequence ('take', 'throw', 'aim'), though 'throw' and 'aim' are really different aspects of a single action. In (823b), the type *hem ka hem* 'weep and weep' indicates prolongation; perhaps this is really a special type of verb-verb compound rather than a sequence.

- (823) a. *faran duu ka di_n ga, ka warra ga,*
 F get Inf take 3SgO, Inf throw 3SgO,
ka terge-ndi ga beene
 Inf direct 3SgO up
 'Faran proceeded to take it, and throw it, and aim it upwards.'
- b. *jinni woy di ije di jow ka hem ka hem*
 djinn woman Def child Def take Inf weep Inf weep
 'The child of the female djinn threw himself into weeping and (more) weeping.'

In one passage (824), Infinitive *ka* follows French *pour que* 'so that' in an event sequence. Contrast the subjunctive complement of *pour que* in (816), §9.6.2, above. The effect is like French *pour* plus infinitive (*pour chercher ...*).

- (824) ... *ka koy goy, pour que ka wir atam kayna* quoi
 ... Inf go work, so-that Inf seek grain little indeed
 '... and go work, in order to try to earn a little grain.'

9.7.2 Inventory of serial verbs

We present the verbs in the sections below. Differences vis-à-vis KCh are few; see especially the use of *wir* (§9.7.3), *kaa* 'come' (§9.7.7), and the apparent absence of *hisa* as serial verb (§9.7.6).

9.7.3 Control verbs

Examples are *yadda ka VP* 'consent to VP' (*yadda* has several pronunciation variants), and *wir ka VP* 'be on the verge of VP-ing' (825).

- (825) *wo-o wir ka mɔŋgu dira-ka-yaabi*
 3SgS-Impf seek Inf be-unable walk-Inf-stride
 'He was on the verge of becoming unable to walk fast.'

X faaba Y [ka VP] means 'X help Y to VP' (where X and Y are joint agents of the action denoted by the VP). This follows the KCh pattern.

9.7.4 Modal serial verbs

hin *ka VP* 'can VP' and *hima* *ka VP* 'should VP, ought to VP' are common.

9.7.5 Aspectual serial verbs

With the serial verb after the substantive VP we can cite *VP ka bē* 'finish VP-ing'. With the serial verb in the normal construction, preceding the substantive VP, we have *baa ka VP* 'nearly VP', *sinti ka VP* 'begin to VP', *bey ka VP* 'have (ever) VP-ed', *čindi ka VP* 'continue to VP, habitually VP', *dɔɔnay ka VP* 'be accustomed to VP', *duu ka VP* 'proceed to VP, *jow ka VP* 'launch into VP-ing', *kəkərɔ ka VP* 'have recently VP-ed' (*kəkərɔ* also attested with indicative complement), *yee ka VP* 'VP again, re-VP'. *duu ka VP* 'proceed to VP' is common, but in DjCh it gets some competition from *kaa VP* with *kaa* 'come' (see §9.7.7).

9.7.6 Quantifying and negative serial verbs

hīsa 'prepare' does not seem to be used as a serial verb '(do) very much, (do) well'. The functional equivalent of this KCh serial-verb construction is to add *gumo* 'well' as a postverbal adverb.

jē ~ jen is used in the negative sense 'fail to', like KCh *jen*.

VP [ka tɔntɔ] means 'VP some more (additionally)', with *tɔntɔ ~ tɔntɔn* 'add, augment'.

9.7.7 Motion and time-of-day verbs as serial verbs

koy 'go' and *kaa* 'come' do not require *Inf ka* when followed by a VP.

- (826) a. *ay koy taasi ay baa-koy di yoo*
 1SgS go search 1Sg friend Def Pl
 'I went and looked for my friends.'
- b. *a kaa koy hirow maale-bañā-terey di kuna*
 3SgS come go enter master-slave-hood Def Loc
 'He proceeded to go and enter into apprenticeship.'

For some speakers, *kaa* in serial construction with a following VP becomes *ka ta VP* (compare KCh *kaa ta VP*).

koy usually has its literal motion sense when followed by a VP, as in (826a). *kaa*, on the other hand, often simply establishes that there has been an interval of time vis-à-vis the preceding event (or the time of speaking), and can be translated either as future tense (§7.2.5) or, in a narrative context, as 'proceed to VP' (after a time interval) as in (826b). DjCh narrative has some unusual elaborations of such motion-verb sequences (827).

- (827) *i kaa ka kaa koy too [batu di kuna]*
 3PIS **come** Inf **come** go arrive[crowd Def Loc]
 'They came and proceeded to go into the midst of the crowd.'

Here the first *kaa* seems to have the literal sense 'come', while in *kaa koy too* the *kaa* has its typical serial-verb sense. Note that Inf *ka* is used after the true verb 'come' but not after the more grammaticalized serial-verb *kaa*. In (828), the same surface string ... *kaa ka kaa* ... seen in (827) has a slightly different analysis, since the first *kaa* is now bracketed with the preceding *yee* 'return'.

- (828) ... [*ka [yee [ka kaa]]] [ka [kaa kani ...]]*
 ... [Inf [return [Inf **come**]]] [Inf [**come** lie-down ...]]
 '... and came back, and proceeded to lie down ...'

(828) also illustrates *yee* 'return' as serial verb.

Time-of-day verbs attested as serial verbs (with following *ka VP*) are *biyaa* 'do at daybreak', *hoy* 'do at mid-day', and *hanana* 'do at night'.

9.7.8 Comparative constructions

bisa 'surpass' can occur in a serial verb construction before the substantive VP, especially with simple substantive VPs like quality adjectives (829a). *bisa* can also follow the substantive VP, and this pattern is more usual with complex substantive VPs, since the comparandum can be expressed simply as a direct object of *bisa* (829b).

- (829) a. *jenne wane di yaa bisa ka boori na*
 Djenné Poss Def Emph **surpass** Inf **be-pretty than** (3SgO)
 'The Djenné one (=a style of earrings) is prettier than it (Macina style).'
- b. *wala mɔr-čiino yaa duu go a kuna*
 or now Emph profit be 3Sg in
ka bisa lawar di ?
 Inf **surpass** old-times Def?
 '... or is there more profit in it (=work) now than in the old days?'

In type (829a), the comparandum is expressed as *na X* (or *nda X*) 'than X'. When X is 3SgO *ga*, it is often omitted (or reduced phonetically to zero) after *na*, as in (829), cf. (729) in §4.1.6, above. *bisa* 'surpass' is sometimes found with *na X* 'than X' as comparandum, as an alternative to direct-object status.

Simple adjectives directly form comparatives with *na X* (830a) or with simple direct object X (830b). (831) is an example of a superlative; note the 'all' quantifier.

Intransitive *sawa* 'be equal' and transitive *too* 'attain' express equality or symmetry (832). In (832b), the substantive domain is expressed as an unmarked postverbal noun *bey*.

- (830) a. *a beer na ey*
3SgS be-big than 1SgO
'He is bigger (=older) than I.'
- b. *a jen ey*
3SgS be-old 1SgO
'He is older than I.'
- (831) [*yer kur har beer*] *si nga yaa*
[1Pl all man big] be 3SgF Emph
'The oldest man of us all is he.'
- (832) a. [*ay na ga kur*] *ηaa di go sawa*
[1SgS and 3SgO all] eating Def Impf be-equal
'He and I eat equally as much.'
- b. *a si too ni bey*
3SgS ImpfNeg attain 2SgO knowledge
'He does not equal you in knowledge.'
- c. *a si ηaa ka too ni*
3SgS ImpfNeg eat Inf attain 2SgO
'He does not eat as much as you.'

A comparative with a full clause as apparent comparandum is shown in (833). Perhaps this clause is really a reduction of a relative clause ('the manner in which you do it').

- (833) *woo di nga o yaraasun na wor o dā*
Dem Def SFoc Impf be-easy than 2PIS Impf do
'It is that (method) [*focus*] which is easier than (the way) you do (it).'

10.2.1 Compound reflexives (*bumo* 'head')

The word for 'head' is *bumo*. Compound reflexives are of the type *ay bumo* 'myself', *ηu bumo* 'himself, herself', etc.

10.2.3 Reflexive verbs

In the sense 'get ready', *hīsa* is normally a reflexive verb (834a), while *landina* (cf. KCh *lelindī*) is either a simple intransitive verb (834b) or a reflexive verb (834c).

- (834) a. *ay go koy hīsa ey*
1SgS Impf go fix 1SgO
'I'll go get ready.'
- b. *a landina*
3SgS prepare
'She got ready.'

- c. *a landina ngu*
 3SgS prepare 3ReflSgO
 [=b]

One construction popular in DjCh is to use *nã - nan* 'leave, abandon' as a reflexive verb, in senses like 'intervene (in quarrel), speak up (in discussion)' (835).

- (835) *i sar ka nan ngu-yo doodi*
 3PlS jump Inf leave 3RefIPIO there
 'They jumped in and spoke up (in the discussion) there.'

Other attested reflexive verbs are *bere* 'transform oneself (into ...)', *jubaa* 'flop around, flounder', *kufu* 'lather up', *maraa* 'assemble', and *serre - sarra* 'form straight line'.

10.2.4 Syntax of reflexive pronouns

Compound *bumo* reflexives are common as direct object or postpositional complement, coindexed with the clause-mate subject (836a-b).

- (836) a. *i si naaney ngu-yo bumo*
 3PlS ImpfNeg trust 3RefIPhead
 'They don't trust themselves.'
- b. *wo-o maraa [ngu ñerfu di] [ngu bumo see]*
 3SgS-Impf gather [3ReflSg money Def] [3ReflSg head Dat]
 'He will keep his money for himself.'

A simple 3Refl pronoun (e.g. 3ReflSg *ngu - nu*) is used prototypically in possessor function, attached to a postverbal NP. Again, the reflexive is coindexed to the clause subject (837a). The 3Refl pronoun is also used in right conjuncts (837b).

- (837) a. *a go hima [ngu hasey]*
 3SgS Impf resemble [3ReflSg uncle]
 'He resembles his uncle.'
- b. *na nda [nu baba]*
 3SgF and [3ReflSg father]
 'she and her father'

There is one textual example which (conceivably) shows that a direct object NP may serve as antecedent for a 3Refl possessor on a following postverbal NP, unlike the case in KCh. This is (838a), if parsed monoclausally as 'he goes and finds [the woman_x] [at her_x house].' However, the syntax may really be biclausal 'he goes and finds (that) [the woman_x (is) at her_x house]' with omitted 'be' verb, in which case the 3ReflSg *nu* in 'her house' has the normal clause-mate subject antecedent. (838b), from

another text, shows that direct-object antecedents are not normal (we get regular 3Pl, not 3ReflPl, in the PP.)

- (838) a. *wo-o koy gar woy di*
 3SgS-Impf go find woman_x Def
[ŋu huu] noŋgu di doo
 [3ReflSg_x house] place Def at
 'He (groom) goes and finds the woman_x at her_x house.'
- b. *a ma kow [woo yo jinde di] [i gaa]*
 3SgS Subju remove [Dem Pl neck Def] [3Pl on]
 '... that he remove [the neck of these_x] [from them_x]' (=behead these)

In (839) we have 3ReflSg *ŋu* (following *jow* 'take' in an embedded subjunctive clause), coindexed with the subject of the matrix clause verb 'let, permit'. The first *ŋu* is LogoSg and may be disregarded here.

- (839) *a ma nan [ŋu ma jow ŋu] mee*
 3SgS Subju permit [LogoSgS Subju take 3ReflSgO] Emph
 '(X told the spear_y) to permit that he_x take it_y.'

3Refl pronouns are used (as in KCh) as possessors of right conjuncts, with left conjuncts as antecedents (840).

- (840) *ni na ni tuu, ay moo na ay tuu,*
 2SgS and 2Sg bowl, 1Sgtoo and 1Sg bowl,
woo moo na ŋu tuu
Dem too and **3ReflSg** bowl
 'you and your bowl, also me and my bowl, also this (guy) and his bowl'

10.2.6 Syntax of reciprocals

The typical direct-object and postpositional complement functions are shown in (841a-b).

- (841) a. *i si naaney čere*
 3PlS ImpfNeg trust friend
 'They don't trust each other.'
- b. *wor o har ga [čere see]*
 2PlS Impf say 3SgO [friend Dat]
 'You(Pl) say it to each other.'

(842) shows *čere* as a kind of right conjunct, but here the left conjunct 'we' contains all referents involved, so *na čere* functions semantically like an adverb 'together, collectively'.

- (842) [yer na čere] gay-na
 [1PIS and friend] endure-with
 'We (you and I) have gone a long time without seeing each other.'

10.3.1 *bɔɔ* 'person' and 2Sg pronouns

The basic KCh pattern holds for DjCh: a generic *bɔɔ* 'person' (or similar human generic) can take 2Sg agreement. In (843), we see the same pattern for the plural, with *aadama-yje yoo* 'humans' as the generic noun.

- (843) *aadama-yje yoo kaa wor tun [nda čere]*
 Adam-child P1 Rel 2PIS arise [with friend]
 'Human beings_x who_x you(Pl)_x are brought up together.'

10.3.2 Indefinite human *a koy di*

a koy di 'the fellow' is attested a few times in the texts.

11.1.4 Time expressions (nouns and verbs).

The following terms for 'now' (cf. Timbuktu *moreyda* and extensions, Niafunké *mer-ta*) were observed in a 1991 textual corpus, the number of occurrences indicated in brackets: *mɔɔ-čiino* [150], *mɔɔ-ta* [75], *mɔɔreyda* [46], *mɔɔreydoo* [9], *mɔɔ-da* [6], *mɔɔ-doo* [6], *mɔɔrey-čiino* [0] (known from elicitation).

Text

This monologue was recorded in Timbuktu in 1986. It describes the 1840 battle of Toya in which Tuaregs defeated a force from the Fula "Empire" which had its capital in Hamdallahi (near Mopti). The named personages are Sékou Amadou, the Fula leader in Hamdallahi, and Amadou Sambourou Kolado, who died at Toya. See Sanankoua (1990) for the historical background. Comments and section references are added in parentheses after the relevant lines.

surgu di yo saa di kaa na i šinti— i hīsa ka din
Tuareg Def Pl time Def Rel Ø 3PIS begin— 3PIS do-much Inf take
The Tuaregs, when they began—. They took a great deal of
(*saa di kaa (na) ...* 'when ...', §8.3.6; serial verb *hīsa ka ...* §9.7.6)

gandoo alkaasu, i faraa-ndi gi nda laamu, i din
this-land tax, 3PIS suffer-Caus 3PIO with rule, 3PIS take
this land's taxes, they oppressed them (=local people) with their iron rule. They took
(*gandoo* §4.2.2)

alkaasu di hal i hīsa ka faraa-ndi boro di yo,
tax Def until 3PIS do-much Inf suffer-Caus person Def Pl
taxes to the point that they oppressed the people very much.

saa di i hantum i se i koy hamdallaay,
time Def 3PIS write 3PI Dat 3PIS go Hamdallahi
So, they (=people) wrote to them (=distant leaders). They went to Hamdallahi (a town).
(*saa di*, very end of §8.4.3)

i har seeku se a ma faaba ŋgi-ye nda—,
3PIS say Sékou Dat 3SgS Subju help LogoPIO with—,
They_x told (=asked) Sékou (=a leader) to help them_x with—,
(jussive §9.6.3; logophoric pronoun coindexed with quoted speaker §10.1.1-2; syntax
of *faaba* 'help' end of §9.7.3)

ka yenje surgu di yo, seeku, a gar ŋgu wane taalib foo
Inf fight Tuareg Def Pl, Sékou, 3SgS find 3RefISg Poss pupil one
(help them) fight the Tuaregs. Sékou, he found one of his (own) pupils
(*a gar ...* often with abstract subject §6.1.1, §9.5.9, but here = Sékou)

kaa se i-i har 'aamadu samburu koolado dursudi',
Rel Dat 3PIS-Impf say 'Amadou Sambourou Kolado Dursudi'
whom they called 'Amadou Sambourou Kolado Doursoudi',
(dative relative with fronted postposition §8.3.3)

nga wane taalib foo kaa a-a hīsa ka naaney ga,
 3SgF Poss pupil one Rel 3SgS-Impf do-much Inf trust 3SgO
 (who was) a pupil of his (=Sékou's) whom he (=Sékou) had much confidence in.
 (parenthetical, not in apposition to 'pupil' above, hence no 3ReflSg possessor; 3SgF
 is facultative instead of 3Sg in possessor function §8.4.2)

seeku har a se kaa aywa maa na a-a baa?
 Sékou say 3Sg Dat that well, what? Foc 3SgS-Impf want?
 Sékou asked him (=Amadou), well, what did he (=Amadou) want?
 (even reported speech often begins with *aywa* or similar exclamation; WH-
 interrogatives usually fronted and focalized §8.2.2)

wala a-a baa ngu ma koy yenje wala?
 or 3SgS-Impf want LogoSgS Subju go fight yes/no?
 Did he (=Amadou) want to go (to the north) and fight (with the Tuaregs)?
 (*baa* 'want' takes finite subjunctive clause even for coreferential subject §9.6.1; in *koy*
yenje 'go to fight, go to battle', *yenje* can be construed as noun or verb)

a har a se ngu goo, ngu o baa ngu ma koy
 3SgS say 3Sg Dat LogoSgS be, LogoSgS Impf want LogoSgS Subju go
 He (=Amadou) told him (=Sékou), yes he did; he was willing to go
 (*ngu goo* is logophoric version of echo answer 'yes I do' §8.2.1)

yenje, a har a se, aywa nda a koy a si yee-kate,
 fight, 3SgS say 3Sg Dat, well if 3SgS go 3SgS ImpfNeg return-Centrip,
 and fight. He (=Sékou) told him, well, if he (=Amadou) went, he would not come back.
 (typical conditional with perfective antecedent and imperfective consequent §9.5.1)

a har a se ngu o bey, saa di kaa a kani
 3SgS say 3SgS Dat LogoSgS Impf know, time Def Rel 3SgS lie-down
 He (=Amadou) told him that he knew. When he (=Amadou) went to bed
 (*kani* variously 'lie down, go to sleep, retire for the night, stay overnight')

ka lelinde, nga nda ngu wane maabe di, i har
 Inf get-ready, 3SgF and 3ReflSg Poss griot Def, 3PIS say
 and got ready (to travel), he and his griot, they (=Amadou and griot) said
 ('griot' is a caste of bards who specialize in singing the praises of nobles)

ngi-yo o koy yenje, nga wane wande di har a se kaa—
 LogoPIS Impf go fight, 3SgF Poss wife Def say 3Sg Dat that—
 that they were going to fight, his (=Amadou's) wife said to him that—
 ('said they were going to ...' can also mean 'were intending to ...')

aamadu har 'm?' a har a se kaa 'nda n koy,
 Amadou say 'huh?' 3SgS say 3Sg Dat Rel 'if 2SgS go,
 Amadou said, 'what?' She said to him that, 'if you go,
 (*kaa* ... 'that ...' can be used even with following direct quotation §9.5.8)

ni si yee-kate, nda n koy no-o bun dooti,
 2SgS ImpfNeg return-Centrip, if 2Sg go 2SgS-Impf die there,
 you won't come back; if you go, you'll die there.'
 (Centripetal suffix §6.3.3)

a har a se kaa ngu guna ga jaa aljumaa di čiji
 3SgS say 3Sg Dat that LogoSgS see 3SgO since Friday Def night
 He (=Amadou) told her that he had (fore-)seen it since Friday evening,

kaa ngu guna kaa ngu o bun, nda ngu koy
 that LogoSgS see that LogoSgS Impf die, if LogoSgS go
 that he had (fore-)seen that he was going to die; (he knew that) if he went,
 (first *kaa ...* 'that ...' either delayed complement of 'see', or perhaps used in sense 'such
 that ...' or 'when ...' §8.3.10)

ngu si yee-kate, a koy, a har ga
 LogoSg ImpfNeg return-Centrip, 3SgS go, 3SgS say 3SgO
 he would not come back. He (=Amadou) went, (and) he told it

baba di se, baba di har a se kaa ngu guna ga,
 father Def Dat, father Def say 3Sg Dat Rel LogoSgS see 3SgO,
 to the (=his) father. The father told him that he (=father) had (fore-)seen it,

nda a koy, a-a bun dooti a si yee-kate,
 if 3SgS go, 3SgS-Impf die there 3SgS ImpfNeg return-Centrip,
 if he (=Amadou) went, he would die there without coming back.

a har ngu guna ga, i ma gaara ngu se,
 3SgS say LogoSgS see 3SgO, 3PIS Subju bless LogoSgS Dat,
 He (=Amadou) said he had (fore-)seen it, (and asked) that they bless him.
 (seamless combination of indicative and subjunctive clauses complementing a single
 instance of *har* 'say'; *gaara* 'bless' takes dative NP)

maabe di moo koy ngu wande di doo a har ga a se,
 griot Def too go 3ReflSg wife Def chez 3SgS say 3SgO 3Sg Dat
 The griot, for his part, went to his (own) wife, and he told it to her.
 (typical use of *moo* 'too' indicating parallel action §8.5.5)

i sarre, i kaa i jow i-i dira, hal i too—,
 3PIS set-off, 3PIS come 3PIS take 3PIS-Impf walk, until 3PIS reach—,
 They (=Amadou and griot) set off, they went and began their trip, until they reached—,
 (*jow* 'become actively involved in ...' is usually a serial verb followed by infinitival
 VP, but for this speaker it has imperfective indicative complements §9.5.3)

i too mopti i kani, i bisa hal i too—,
 3PISreach Mopti 3PIS lie-down, 3PIS pass until 3PIS reach—,
 they reached Mopti. They lodged overnight. They went on until they reached—,

surgu-saarey, saa di kaa i too kaa i honno surgu di yo,
 Tuareg-cemetery, time Def Rel 3PIS arrive when 3PIS espy Tuareg Def Pl,
 Tuareg-cemetery (place). When they had arrived, when they espied the Tuaregs,
 (*surgu-saarey*, name of a place near Toya in the province of Timbuktu)

surgu di yo hīsa ka bow, saa di kaa i kaa
 Tuareg Def Pl do-much Inf be-much, time Def Rel 3PIS come
 the Tuaregs became very numerous. When they (=Tuaregs) came,

i šinti, i jow i-i yenje, mais a jow
 3PIS begin, 3PIS take 3PIS-Impf fight, but 3SgS take
 they began, they launched into battle. But he (=Amadou) launched

a-a yenje surgu di yo hal surgu di yo kul ben,
 3SgS-Impf fight Tuareg Def Pl until Tuareg Def Pl all finish,
 into fighting the Tuaregs until all of the Tuaregs were wiped out.

boro jonju hinja nda waranja čindi hinja boro di kaa
 person hundred three and thirty remainder three person Def Rel
 Three hundred thirty men, the man (=men) who
 (*boro di* here singular in form, but denoting a collectivity, cf. 3Pl below)

goo a banda, a har i se kaa i ma yee,
 be 3Sg behind, 3SgS say 3Pl Dat that 3PIS Subju return,
 were with him (=Amadou), he told them to go back,

i ma koy har seeku se kaa a ma samba-kata
 3PIS Subju go say Sékou Dat that 3SgS Subju send-Centrip
 and to go ask Sékou to send here

ngu se boro ngu ta ngu o hima ka bun
 LogoSg Dat person LogoSg Top LogoSgS Impf ought Inf die
 some people (=reinforcements) to him; as for himself, he was destined to die

aljumaa di alaasara, saa di kaa boro di yo—,
 Friday Def afternoon-prayer, time Def Rel person Def Pl—,
 on Friday at the late-afternoon prayer. When the people—,

i sarre i koy, a kar alwalaa, a jingar,
 3PIS set-off 3PIS go, 3SgS hit ablution, 3SgS pray,
 (when) they had departed and gone, he (=Amadou) did the ablutions and prayed.

a har ngu wane maabe di se a ma koy kate
 3SgS say 3ReflSg Poss griot Def Dat 3SgS Subju go bring
 He (=Amadou) told his griot to go fetch

ŋgu se hari, kaa ŋgu ñin, maabe di koy

LogoSg Dat water, Rel LogoSgS drink, griot Def go

some water for him, for him (=Amadou) to drink. The griot went.

(‘water [for X to drink]’ construction often with perfective aspect §7.2.2)

a gar woy hiŋka kaa— i-i—, i-i ñumey-ndi,

3SgS find woman two Rel— 3PIS-Impf—, 3PIS-Impf bathe-Caus,

He (=griot) encountered two women who—, they were—, they were washing clothes.

i čilili i har a se—, a har i se
3PIS ululate 3PIS say 3Sg Dat—, 3SgS say 3Pl Dat

They cried for joy (welcoming him). They asked him—, (or rather) he asked them

i ma noo ŋgu se hari kaa ŋgu ñin

3PIS Subju give LogoSg Dat water Rel LogoSg drink

to give him some water for him (=griot) to drink.

i har a se kaa ŋgi-ye si hin ka noo ga hari
3PIS say 3Sg Dat that LogoPIS ImpfNeg can Inf give 3SgO water

They (=women) told him that they could not give him water

kaa a ñin, maa se, ŋgi-yo o ta duu yow yo

Rel 3SgS drink, what? Dat, LogoPIS Impf Fut get guest Pl

for him to drink, because they were going to have (=were expecting) some guests,

kaa či, aamadu samburu koolado dursudi nda ŋgu wane maabe di,
Rel be, Amadou Sambourou Kolado Doursoudi and 3ReflSg Poss griot Def,

namely, Amadou Sambourou Kolado Doursoudi and his griot;

(reflexive possessor in conjoined NP of type ‘[X and his_x Y]’ §10.2.4)

i hima ka gulli a! čijoo alaaxara,

3PIS ought Inf come-in-evening ah! tonight Hereafter,

they (=Amadou and griot) were destined for the Hereafter that evening;

(here the griot learns that he too is destined to die with Amadou)

ŋgi-yo boro hiŋka di ŋga či ŋgi-ya wane wande di yo,

LogoPl person two Def SFoc be 3PIF Poss wife Def Pl

the two of them (=women) were their (=Amadou’s & griot’s) wives;

(for ‘the two of them’ see §5.4.8)

saa di ŋgi-ye goo čeñe kuna ŋgi-ye si hin ka noo ga
time Def LogoPIS be hurry Loc LogoPIS ImpfNeg can Inf give 3SgO

so, they (=women) were in a hurry and they couldn’t give him (=griot)

(‘be [in hurry]’ is a marked progressive construction §7.2.6)

hari, maabe di koy a har ga aamadu se,
 water, griot Def go 3SgS say 3SgO Amadou Dat,
 any water. The griot went and told it (=this) to Amadou.
 ('any water' is the end of the long indirect quotation beginning 'they said ...')

a har a se, jaka nga ta a-a bey kaa
 3SgS say 3Sg Dat, lo! 3SgF Top 3SgS-Impf know that
 He (=griot) told him, lo!, (in reality) he (=Amadou) knew that

ngu o bun, a si har ga ngu se,
 LogoSgS Impf die, 3SgS ImpfNeg say 3SgO LogoSg Dat
 he (=griot) was going to die, (but) he (=Amadou) wasn't telling it to him;
 (the first *ngu* denotes the griot, though grammatically it could also denote Amadou)

a-a jamba, aamadu har a se kaa ngu nga o bun,
 3SgS-Impf deceive, Amadou say 3Sg Dat that LogoSg SFoc Impf die,
 he was being deceptive. Amadou told him that it was he (=Amadou) who would die;
 ('he was being deceptive' is arguably still within the griot's reported speech; subject-
 focus with *nga* §8.1.1 stresses that Amadou, hence implicitly not the griot, will die)

ngu o baa nga ta ma koy a ma si bun,
 LogoSgS Impf want 3SgF Top Subju go 3SgS Subju Neg die,
 he (=Amadou) wanted him (=griot) to go (afterwards) and not die.
 (weak Topic morpheme *ta* in *nga ta* §8.4.3)

maabe di jow ngu wane yenje jiney di yo
 griot Def take 3ReflSg Poss fight implement Def Pl
 The griot took his battle gear.
 (*yenje jiney* is a tight compound §4.6.1, could be hyphenated)

a kow ngu tira di yo a jur a hirow
 3SgS take-out 3ReflSg amulet Def Pl 3SgS run 3SgS enter
 He (=griot) took out his amulets (of protection). He (=griot) rushed into

surgu di ye ra, surgu di yo wii ga,
 Tuareg Def Pl Loc, Tuareg Def Pl kill 3SgO,
 the midst of the Tuaregs. The Tuaregs killed him.

aamadu jow-kata maabe di, a jirgar a beene
 Amadou take-Centrip griot Def, 3SgS pray 3Sg on-top
 Amadou took (the body of) the griot. He prayed over him.

a kar alwala a jirgar a beene a jisi ga,
 3SgS hit ablution 3SgS pray 3Sg on-top 3SgS put-down 3SgO,
 He (=Amadou) did the ablutions and prayed over him. He put him (=corpse) down,

a kasanče ga a koy a fiči ga,
 3SgS enshroud 3SgO 3SgS go 3SgS bury 3SgO,
 He put a shroud around him, he went and he buried him.

a duu ka goro hal a jinggar aljuma di alaasara,
 3SgS get Inf sit until 3SgS pray Friday Def afternoon-prayer
 He then sat (=waited) until he prayed the afternoon Friday prayer.

a jinggar alaasara a duu ka kar alwalaa,
 3SgS pray afternoon-prayer 3SgS get Inf hit ablution,
 He prayed the afternoon prayer. He proceeded to do the ablutions, (then)

a jinggar, a duu ka kow ngu wane tira di yo
 3SgS pray, 3SgS get Inf take-out 3ReflSg Poss amulet Def Pl
 he prayed. He proceeded to take out his (own) amulets.

a jisi gi, a kata ngu wane kasanče di
 3SgS put-down 3PIO, 3SgS bring 3ReflSg Poss shroud Def
 He deposited them (=amulets). He brought his (own) shroud.
 (we learn later that the amulets were put in the horse's saddlebags as a message)

a hirow a kuna a kani, a har surgu di yo se
 3SgS enter 3Sg Loc 3SgS lie-down, 3SgS say Tuareg Def Pl Dat
 He got into it (=shroud). He lay down. He told the Tuaregs

i ma hay ngu, surgu di yo hay ga,
 3PIS Subju jab LogoSgO, Tuareg Def Pl jab 3SgO
 to pierce him (with a sword). The Tuaregs pierced him.

a bun, bari di jur a koy hirow hamdallaay—
 3SgS die, horse Def run 3SgS go enter Hamdallahi
 He died. The (=his) horse galloped, it went and entered Hamdallahi (town).

a na too hala hamdallaay kala
 3SgS Neg reach as-far-as Hamdallahi except
 It didn't reach Hamdallahi until
 ('not ... except' construction §8.5.4)

suba di wane adduhaar di ra, a gar seeku aamadu
 tomorrow Def Poss morning Def Loc, 3SgS find Sékou Amadou
 in the mid-morning of the next day. It happened that Sékou Amadou
 (Sékou Amadou = full name of Sékou, distinct from the other Amadou; 3SgS *a* in *a*
gar could conceivably denote the horse but here it is probably abstract)

nda aamadu woo wane baba di, i-i boyrey ganji di ra,
 and Amadou Dem Poss father Def, 3PIS-Impfconverse wilderness Def Loc
 and this Amadou's father, they were conversing out in the bush.

(‘this Amadou’ = the protagonist Amadou Sambourou ...; ‘the bush’ here means
 anywhere outside of settled areas)

woo di har a se, ‘seeku?’ a har ‘m?’
 Dem Def say 3Sg Dat, ‘Sékou?’ 3SgS say ‘huh?’
 That one (=Amadou's father) said to him, ‘Sékou?’ He (=Sékou) said, ‘what?’

‘jaa ije-meyre di yo koy yer na duu ŋgi wane alxabar,’
 ‘since child-small Def Pl go 1PIS Neg get 3PIF Poss news,’
 (Father:) ‘Ever since the boys went away (to fight), we haven't had news of them.’

a har a se kaa ‘ije-meyre di yo
 3SgS say 3Sg Dat that ‘child-small Def Pl
 He (=Sékou) replied to him, ‘(concerning) the boys,

ni si hāā i-kur parce que ni ije foo di
 2SgS ImpfNeg inquire AbsolPl-all because 2Sg child one Def
 you're not (really) asking about all of them; (it's) because your son (=Amadou) alone

kaa goo i ra, woo di se na no-o hāā ga,
 Rel be 3Pl Loc, Dem Def Dat Foc 2SgS-Impf inquire 3SgO,
 who is among them (=boys), that's why you are asking about it.'
 (*woo di se* is focalized postpositional phrase)

a har a se kaa a na či—, a na či
 3SgS say 3Sg Dat Rel 3SgS Neg be—, 3SgS Neg be
 He (=father) replied to him that it wasn't—, it wasn't

ŋgu wane ije foo di, aljamaa kaa koy, ŋgi-ye na duu
 LogoSg Poss child one Def, group Rel go, LogoPlS Neg get
 his own son alone; the group (=army) that had gone, they (two) had not had

ŋgi alxabar ŋgu si bey i bun wala i huna,
 3PIF news LogoSgS ImpfNeg know 3PIS die or 3PIS live,
 any news of them; he (=father) didn't know whether they were dead or alive.

haya keyna bari di kaa, a kaa ta gar a jow
 thing small horse Def come, 3SgS come Inf find 3SgS take
 Shortly thereafter the horse arrived. It happened that he (=Amadou) had taken
 (*haya keyna* ‘little thing’ often has temporal sense ‘a while’)

ŋgu wane čitaab di, a kan-ndi a beene,
 3ReflSg Poss book Def, 3SgS lie-Caus 3Sg on-top,
 his (own) Koran, (and) he had laid on top of it (=book)
 (*čitaab-kitaaw* denotes a Koran as a physical object)

ŋgu bomo di, seeku har a se
 3Ref1Sg head Def, Sékou say 3Sg Dat

his own head. Sékou had told him

(This seems to be a report of an earlier dialogue between Sékou and Amadou)

'kow čitaab di beene ni bomo di,' a har a se
 'take-off book Def on-top 2Sg head Def,' 3SgS say 3Sg Dat
 'take your head from off the top of the book.' He (=Amadou) had said to him

kaa ŋgu bomo di ŋga nda čitaab di kul
 that LogoSg head Def 3SgF and book Def all

that his (own) head, it (=head) and the Koran were

čj a-foo, parce que haya kul kaa goo čitaab di kuna,
 be Absol-one, because thing all Rel be book Def in,
 one and the same, because everything which was (written) in the Koran,

a goo ŋgu bomo di ra, a har a se
 3SgS be LogoSg head Def Loc, 3SgS say 3Sg Dat

it was (also) in his head. He (=Sékou?) said to him (=father)

(i.e., Amadou claims that he has memorized the Koranic text and has thus become mystically consubstantial with the tome)

kaa aywa bari di kaa bari di kaa i koy
 Rel well, horse Def come horse Def come 3PIS go

that, well, the horse had come, the horse had come. They (=Sékou and father) went

i feer ga i fuuney, ŋga wane dangaa di woo
 3PIS open 3SgO 3PIS search, 3SgF Poss saddlebag Def Dem

They untied it (=saddlebag) and they searched. This saddlebag of his (=Amadou's)

kaa goo jere di yo beene, i gar a kuna
 Rel be side Def Pl on-top, 3PIS find 3Sg in

which was up on the (horse's) sides, they found in it

(long 'saddlebag' NP including relative clause is a preposed topic NP)

tira di kaa aamadu bun, ŋgu maabe di bun
 amulet Def that Amadou die, LogoSg griot Def die

the amulet (indicating) that Amadou had died; (first) his griot had died,

('amulet' is treated as a message from Amadou, hence logophoric possessor in *ŋgu maabe di* coindexed with Amadou; /aamadu bun/ is chronologically out of order and the narrator will repair this)

woo di banda aamadu kaa ta bun, bari di kaa,
 Dem Def behind Amadou come Inf die, horse Def come,

(and) Amadou had died after that. The horse came (as a messenger).

(*kaa ta ...* 'come and ...' often used to indicate a brief lapse of time §9.7.7)

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Morpheme Index

Affixes, grammatically interesting morphemes, and selected stems are listed below with section references, generally in descending order of significance. In alphabetical ordering vowel length is disregarded, and velar nasal *ŋ* is treated as *n*.

<i>a</i>	3Sg pronoun 4.1.4, 4.3.4, 3.8.8
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<i>a koy di</i>	'the person' 10.3.2
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<i>a na či</i>	higher-level negation 9.3.2
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<i>beer</i>	'big' 4.6.6 (compound final)
<i>bey</i>	a) 'know' 9.5.8, 6.1.4, 4.3.1, 6.2.2, 8.2.5, 8.2.7 b) serial verb 'have ever done' 9.7.5
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<i>bilaa</i>	'without' 5.9.9, 9.6.4 (subjunctive)
<i>bine</i>	a) Topic morpheme 5.8.2, 8.4.1 b) noun 'heart' in emotion expressions 11.4
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<i>bomo</i>	'head' in reflexives 10.2.1
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<i>boori</i>	'be pretty, good' 4.4.2
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<i>čiina</i>	'be small' 4.4.2
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<i>dee</i>	Emphatic particle 5.8.3, 8.5.7
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<i>dira</i>	'be in motion, walk' 11.1.3
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<i>dooti</i>	'there' 4.2.3
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<i>faati</i>	serial verb 'have already done' 9.7.5
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<i>gi,ji</i>	3Pl Object pronoun 3.8.8
<i>gaaba-ndi</i>	'try hard' 3.8.6
<i>ganda</i>	'land; down' 4.2.1
<i>gar</i>	a) transitive verb 'find' 6.1.1 b) verb 'find (situation)' 9.5.9, 9.7.10
<i>go</i>	→ <i>o</i>
<i>goo</i>	locational quasi-verb 7.1.2, 7.2.3, 7.2.6
<i>guu</i>	'five' 4.5.1
<i>guna</i>	'see' 9.5.9 (with complement)
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<i>hal,har</i>	'until' 5.9.8 (with NP), 9.5.6 (subjunctive), 9.6.4, 11.1.5, 3.10.10
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<i>har</i>	a) 'say' 6.1.4, 9.6.3, 10.1.1 b) → <i>hal</i>
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<i>haya foo</i>	'anything' 7.1.5

<i>haya-jje</i>	—> <i>haywana</i>
<i>haywana</i>	'whatchamacallit?' 8.2.6, 7.1.5 (as verb)
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<i>here</i>	Approximative 4.2.4
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<i>hin</i>	serial verb 'be able' 9.7.4, 4.3.1
<i>hinne</i>	'amount' 8.2.3
<i>hīsa</i>	a) serial verb 'do very much' 9.7.6 b) reflexive verb 'get ready' 10.2.3
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<i>horon, honn-</i>	'bitter' 3.7.7 (Syncope), 4.3.1, 4.4.2
<i>hun</i>	'leave, go from' 11.1.3
<i>huneyno</i>	'by oneself, unfettered' 8.5.1
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<i>jere</i>	'beside' 5.9.7
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<i>jongu,jangu</i>	'hundred' 4.5.1-2
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<i>jum-di</i>	irregular Causative 'take down' 3.8.6
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<i>koron, konn-</i>	'hot' 3.7.7 (Syncope), 4.3.1, 4.4.2
<i>koy</i>	'go' 6.1.3, 6.2.5, 9.7.7, 9.7.9, 11.1.3
<i>-koy</i>	Characteristic suffix 4.3.3
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<i>-koyni</i>	Characteristic suffix 4.3.3
<i>kuu</i>	'be long, tall' 4.4.2
<i>kuboy</i>	a) 'meet' 6.1.3 b) 'be possible (that)' 9.7.4
<i>kuku</i>	'long, tall' 4.4.2
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<i>lawal</i>	'first' (ordinal) 4.3.4
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<i>mana, mane</i>	2Sg Dative 3.8.2
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<i>morgo</i>	'be unable' 9.3.2, 9.7.6, 4.3.1
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<i>mooso</i>	'slowly, gently' 9.3.1

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<i>noo</i>	'give' 6.1.4, 9.1.2
<i>nono</i>	identificational quasi-verb 'it is' 7.1.1
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<i>saa foo</i>	'when?' 8.2.3
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<i>tenje, tanje</i>	'facing' 5.9.7, 11.1.2
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