# A Grammar of Toro Tegu (Dogon)
# Tabi mountain dialect

Dogon language family
Mali

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# 1 Introduction

## 1.1 Dogon languages

The Dogon languages are spoken chiefly in eastern Mali. The predominantly Dogon area in Mali is bounded by Boni in the north, by Mopti-Sévaré in the east, and by the Bankass area to the south. It reaches to the Burkina Faso border (e.g. beyond Koro) in the east, and there are some Jamsay and Tomo Kan extensions (probably of recent date) into Burkina.

Current indications are that there may be at least twenty distinct languages, several of which have extensive dialectal variation internally. Toro Tegu is rather distinctive among Dogon languages. Toto Tegu does not seem to have any specifically "western" Dogon features (i.e. shared with Najamba, Yanda Dom, Tiranige, Bunogeetc.), so it can be loosely assigned to "eastern" Dogon including Jamsay and Togo Kan.

Dogon is thought to be a branch of Niger-Congo. Its position within this huge linguistic phylum is not yet clear.

## 1.2 Toro Tegu language

The term "Toro Tegu" (abbreviation **TT**), literally "mountain language," will be used to denote this language. This is the term in use at least in the Tabi mountain area. The TT-speaking people refer to themselves as "mountain people," which distinguishes them from the Jamsay of the valleys and the various herding peoples.

On occasion, in sessions where discussions of lexical differences between Jamsay (which is named after a greeting response *jámì săy* 'peace only'), one of my assistants referred to TT as *bà:ní kɔ́$^{n}$→*, using the corresponding greeting response in TT (§19.5.1).

The language is very different from Jamsay, the other Dogon language widely known by TT speakers, and from other Dogon languages known to me. In addition, most adult TT speakers speak Fulfulde as a second language; it is the primary language of the major weekly market towns (Boni for Tabi Mountain and Koyo, and Dalla for Sarinyere), as well as of Douentza and Mopti. Some older TT speakers from the Tabi Mountain villages also know Humburi Senni (Songhay of Hombori).

## 1.3 Environment

The local physical environment can be thought of as an arc of some six principal inselbergs, arranged in the form of an interrupted and rather wide horseshoe. These inselbergs rise abruptly from the relatively flat plains. Tabi Mountain and Sarinyere Mountain are at the endpoints of the horseshoe. The Fulfulde-speaking market town of Boni is in the middle of the bend of the horseshoe, sandwiched in a narrow valley between two of the mountains.

Traditionally, most of the villages were on the summits or sides of the inselbergs, well-protected from marauders on the plains, and with direct access to water in the form of pools and springs. By the late 20th Century, the villages of Tabi and Sarinyere had relocated to new sites on the flat plains adjacent to the mountains. The village of Loro remains on a rocky shelf linking two inselbergs, and there is one fairly large village (Koyo Imla) that is still located on the summit of an inselberg next to Boni.

The principal TT-speaking villages are listed in (1). GPS bearings for most of them were taken by me, but those for Loro and Koyo Imla are estimated from maps since our vehicle could not reach them. The figures are degrees, minutes, an decimal fractions (001 to 999) of minutes.

(1)

| official name | TT name | N latitude | W longitude |
|---|---|---|---|
| a. at Tabi mountain | | | |
| Tabi | *tá* | 15 01.712 | 02 03.003 |
| Toupéré | *tùpèrɛ́* | 15 00.316 | 02 05.100 |
| Tega | *té:gá* | 15 01.712 | 02 03.003 |
| b. at Sarinyere mountain (*tálí tɔ́rɔ̀*) | | | |
| Nemdjene | *nɛ́m-gèrⁿé* | 15 00.807 | 02 24.818 |
| Tandi | *tálí* | 15 00.441 | 02 26.623 |
| Zamouka | *zàmúkà* | 15 01.331 | 02 07.053 |
| Koyo | *kòyó* | 15 02.574 | 02 24.683 |
| c. between Tabi and Sarinyere (following the horseshoe) | | | |
| Koyo Imla | *íwrà* | 15 04 | 02 12 |
| Loro | *lógúró* | 15 05 | 02 10 |
| Piringa | *pìrìŋá* | 15 06.434 | 02 08.941 |
| Youna | *ɲúŋúnɔ́* | 15 05.402 | 02 08.333 |
| Daaga | *dà:gá* | 15 00.996 | 02 19.821 |

Koyo Imra is on a high summit near Boni. Daaga is a newer village in the plains occupied partially by TT-speaking people from Sarinyere, and partially by Fulbe-Rimaibe. The name of the village in Fulfulde is Tile-Damba.

There are also some Dogon near Ela Mountain, mainly at a village called *ɛ̀nkɛ̀rí* whose coordinates are not known to me.

In small hamlets in the plains that occupy the middle of the horseshoe, and in villages flanking the TT-speaking area, are Fulbe-Rimaibé, historically the Fulfulde-speaking slave caste. There are also some itinerant freeborn Fulbe, and some Fulbe who speak Fulankiriya (a Songhay dialect related to Koyraboro Senni of Gao), who pass through the zone with their cattle at various times of the year. Sedentery Fulbe including merchants are predominant in the large town Boni.

My linguistic data are mostly from residents of the village of Toupéré, though some of the recorded texts involved speakers from nearby Tega. These are two of the three villages flanking Tabi Mountain, the other being Tabi proper. Tabi Mountain is really two peaks linked by a rocky shelf. The villages were originally located on the larger peak, known as *tà-kóyò*. The original Tabi village was on the summit, while the original Toupéré and Tega villages were on the slope. There are disagreements as to whether (old) Tabi or (old) Toupéré was the first Dogon settlement; Tega was settled later. The smaller peak, known as *dà-tɔ́rɔ́*, appears to have been uninhabited.

The inhabitants of the villages at Tabi Mountain were removed to Hombori during the French colonial period, as punishment for their armed resistance. They were allowed to return beginning in the 1940's. Some of the older people in the Tabi Mountain villages grew up in the Hombori area and still speak Humburi Senni (a Songhay language). There are still a few remnant TT-speaking groups in the Hombori area, now quite cut-off from the main TT-speaking zone.

Songhay borrowings in the speech of Toupéré village are generally confined to cultural (including flora-fauna) vocabulary), e.g. *gání* 'dance', *ná:néy* (variant *ná:léy*) 'trust', *árúkúsú-bɔ̀ŋ*-ká:réy 'herb with white flowers (*Celosia*)'.

The Sarinyere villages were originally on the summit (Koyo) or on the slopes, but have now been moved down to the plains below. Zamouka is divided into three separate segments aligned along the base of the mountain. As of 2011 the only school was at Nemgene.

### 1.4 Previous study of Toro Tegu and of its speakers

There has been no previous professional linguistic work on TT. The existence of the language has been known since the pioneering ethnographic and

ethnolinguistic of the great French team including Marcel Griaule and Geneviève Calame-Griaule. It is included in the latter's map of Dogon dialects, under the name **Tandam**, which is based on *tá* (name of Tabi village); See Calame-Griaule (1968).

The primary (nonlinguistic) scholarship on the area is the work of a French team whose focus was on archeology, public health, demography, and human biology of the Tabi Mountain villages. They appear to have collected a wordlist but, to my knowledge, it is not published. The volume resulting from the project does contain valuable information about the history and demography (Cazes ed. 1993).

There is one major work on the archeology of Sarinyere mountain, emphasizing the original villages on the summit, with further references (Gallay 1981).

### 1.5 Literacy and language politics

Malian linguistic policies are based on the notion that each ethnic group (including Dogon) is also a linguistic unit. For Dogon, the Toro-So language spoken around Sanga was selected as the standard. One result of this is that there has been relatively little concerted research, or applied linguistic projects, on the other Dogon languages.

Efforts to launch literacy programs based on Toro-So seem to have had success in the Sanga-Bandiagara area, but have not caught on well in the Douentza and Boni areas where Toro-So is not present even as a second or third vernacular. Accordingly, local individuals have been developing literacy programs based on Jamsay (which is widely known as a second Dogon language in this northern region), and this does seem to be catching on. Jamsay-based literacy would work well for the Toro Tegu area, especially at Tabi Mountain, since Jamsay is spoken as a second language. There are also some smaller-scale efforts to develop literacy programs based on other Dogon languages, including Najamba.

### 1.6 Fieldwork

During the 2004-5 academic year I was based in Douentza, working primarily on Jamsay. I was able to make a trip of several days to Toupéré during this period, and was also able to bring a speaker to Douentza to work with me for some two weeks. The initial focus was on putting together a working lexicon, identifying named plants and animals, and initial work on morphology

(especially of verbs). Two 90-minute tapes were recorded in Toupéré, and transcription of one of them was begun in Douentza.

Fieldwork on TT intensified during the NSF grant period, beginning with a session from June to December 2006, in which Ben Tey and Toro Tegu were featured. Several further short visits were made to Toupéré in subsequent years, and two different individuals were invited to Douentza for several periods of two to three weeks each. The remaining taped materials were transcribed, the lexicon was fleshed out, and chapters of the grammar were drafted and then edited.

In addition to this grammar, TT-related materials from our project are "Toro Tegu texts," the Toro tegu column in our lexical data, and a video "Tomtoms of Tupere." All of these are currently available on the project website www.dogonlanguages.org.

### 1.7 Acknowledgements

My work on Dogon languages began with a project focused on Jamsay, funded by the National Endowment for the Humanities. Some survey work on other Dogon languages was also undertaken during that grant period. The sustained work on the non-Jamsay Dogon languages of the area has been supported by National Science Foundation grants 0537435 and 0853364 (Documenting Endangered Languages program) during 2006-2012. The University of Michigan also provided support in the form of released time and bridging support.

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In the TT-speaking area, I am very appreciative of the warm reception I and my "team" received from the village of Toupéré. There we were allowed to the the school building as our base (during school vacations), many individuals helped out with logistics (including the difficult work of extracting drinking water from a very deep well), and we were treated (on the eve of departure on our first visit) to an unscheduled midnight tomtom performance involving most of the young people of the village. Special thanks to Sadou Guindo, Boubakar Guindo, Boureïma Karouwa, Boureïma Baillo, Hamadoun Golla (village chief), Oumou Pathé, the late Seydou Pathé Guindo, and the many adults and children who brought us specimens of plants and animals. And thanks again to my regular assistants who accompanied me on the trips to Toupéré, Abdoulsalam Maiga, Seydou Moro, and Minkaïlou Djiguiba.

# 2 Sketch

## 2.1 Prosody and vowel harmony

TT is a tonal language. Syllables have H[igh], L[ow], falling <HL>, or rising <LH> tone. <LHL> syllables are attested in two monosyllabic nouns in TT, see (62d) in §3.7.1.2, and are otherwise absent; such syllables are found in several Dogon languages (and in one nearby Songhay language, Tondi Songway Kiini).

In addition to lexical tones on noun, verb, and other stems, there are some word-internal grammatical tone overlays, and other overlays affecting words that are controlled by the morphosyntactic context. As a result, the lexical tones are often completely overwritten, an environment that makes tonal minimal pairs not particularly useful. Not surprisingly, there are few tonal minimal pairs within a word-class (e.g. nouns), though there are some word-families with, say, a verb and its cognate nominal, that contain minimal pairs.

Terminal intonation features, chiefly exaggerated **prolongation** (→), are lexicalized on many adverbials. The **dying-quail** intonation (∴), involving prolongation and (if the syllable otherwise ends in an H-tone) a slow pitch declien, is found in NP conjunction.

Some morphophonological patterns affecting vowels in noninitial syllables may be interpreted in terms of metrical asymmetries, though these are mostly limited to verbal morphology. Some verbal inflectional suffixes have distinct allomorphs (beginning with different consonants) depending on the prosodic heaviness of the preceding verb stem.

Vowel-harmony is observed as a passive phenomenon in typical vowel sequences within stems, and actively in verbal morphology, where the first syllable of many suffixes has its vowel determined by the vowel-harmonic class of the stem (§3.5.1). There are three classes: {*a ɛ*}, *ɔ*, and {*o e*). The first two merge into one class for some purposes. Vowel-harmony is not absolute at word-level even for verbs; for example, only the first vowel of perfective-1a suffix *-wòrè-* ~ *-wɔ̀rè-* is subject to harmony induced by the preceding stem.

## 2.2 Inflectable verbs

TT verbs have a maximal morphological structure (2).

(2) [stem (-derivational suffix)] - AN (aspect-negation) - 3rd person subject

The lexical stem (or root) may be followed by a reversive or causative derivational suffix. The stem (simple or derived) may then be followed by an AN suffix marking perfective or imperfective aspect along with negation if applicable, or it may take a modal form (imperative or hortative). In positive utterances, there are three distinct perfective suffixes (though most verbs allow only two of them), an imperfective, and a future. The negative counterparts boil these categories down to two, a perfective negative and an imperfective negative.

There is no complete suffixal paradigm of pronominal-subject markers as in some other Dogon languages. However, a third person pronominal (3Sg, 3Pl, nonhuman singular, or nonhuman plural) may follow and encliticize to the AN suffix. In the case of (human) 3Sg subject, the pronominal morpheme can be taken as a suffix rather than a (loose) clitic. An example of a fairly complex verb form is (3).

(3) *págú-rú-wɔ̀sì-wɔ́*
tie-Revers-Pfv1b-3SgSbj
'He/She untied'

There are also some morphosyntactic mechanisms for converting an active verb into constructions with **stative or progressive** sense. Both of these belong to a larger class of stative predicates (in the broad sense) that **do not distinguish perfective and imperfective** aspects, and (perhaps as a result) have a distinctive stative negative form rather than using the aspect-marked perfective negative and imperfective negative suffixes. This larger stative class includes a few defective quasi-verbs that occur only in these stative constructions, with senses like 'be', 'have', 'know', and 'want' (§11.2.4-5).

Most adjective stems have phonologically related verbs (inchoative and factitive). The verbs often end in recognizable inchoative or factitive suffixes, but one cannot derive the verbs mechanically by simply adding the suffixes to the adjective and then applying routine phonological rules.

First and second person subjects (as well as objects) are expressed by clause-initial pronominals that may be separated from the verb by other constituents, rather than by suffixes on the verb as in many other Dogon languages.

Imperfective and (optionally) future verbs, in positive utterances, are preceded by an imperfective particle *á* (allomorph *â:*).

(4) *[lɛ́ á lì-r-ǒ:]*
[meal Ipfv eat-Ipfv-3SgSbj]
'He/She eats a meal.'

Verbs are cited either by the imperative (which brings out the vowel-harmonic class and the lexical tone), or in a **full-citation form** consisting of the combining form, a double back-slash \\, and the imperative, thus (imperative) *ló* or full-citation *lú**ló* 'enter'. The **combining form** is used in chains and before most suffixes; it ends in /*u*/ (except with monosyllabic stems), which is subject in some positions to deletion. The combining form does show the lexical tone of the stem, but does not in all cases bring out its vowel-harmonic class. So the imperative is usually sufficient to characterize the phonology of the stem. However, there are a few *Cɛ́* monosyllables, some of which shift to *Cí* in the combining form while others remain as *Cɛ́*, and in these few cases the combining form is not predictable from the imperative.

### 2.3 Noun phrase (NP)

A NP may begin with a possessor NP or pronominal (if an NP, it has its regular form and there is no Genitive morpheme). The **core NP** follows, consisting of a noun stem (perhaps a compound or derivative) plus any modifying adjectives. Most human nouns (other than kin terms) have a **singular/plural** distinction expressed by suffixes on the noun (not on the adjectives). This core NP is followed by any cardinal numerals, then by determiners and non-numeral quantifiers.

The structure of NPs is expressed not only by **linear ordering** but also by **tonosyntactic processes**. Within the core NP, a reference-restricting element (i.e., an adjective) forces tone-dropping on the preceding word. In a sequence like N-Adj-Adj, the first two words are tone-dropped. A numeral that follows the core NP has no tonosyntactic interactions with the core NP, suggesting a bracketing for tonological purposes of the type [N-Adj]-Num, where tone-dropping applies only inside the bracket, resulting in $N^{L}$ Adj Num.

The sequence of core NP plus numeral may be followed by a determiner (demonstrative 'this/that', or definite). The determiner marks number (singular, plural). Definite as well as demonstrative determiners control tone-dropping on an immediately preceding core NP or numeral.

This already complex situation is further complicated by the fact that a **possessor NP** to the left of the NP also has tonosyntactic effects on the core NP, controlling either tone-dropping to {L} or else (if the possessor is a pronominal, or an NP other than a simple core NP) controlling {HL}. In the latter case, the initial H-tone is realized on the first syllable (or monosyllabic mora), and all following syllables (or final monosyllabic mora) are L-toned. This creates conflicts in combinations like Poss-coreNP-Det, if the possessor (on the left) controls {HL} on the core NP while the determiner (on the right) imposes {L}

on the same core NP. This has to be resolved by bracketing; as it happens, the possessor "wins." So the prosodic bracketing is [Poss-coreNP]-Det, with the inner bracket constituting a **tonosyntactic island** that the determiner cannot penetrate. The output can be represented as Poss $^{HL}$[core NP] Det.

There is a transpersonal reflexive-possessor morpheme *mà*, following a direct object or other nonsubject NP. The antecedent is the clause-mate subject, which may be of any pronominal person or number.

The structure of NPs is also elucidated by the analysis of relative clauses, to which I now turn.

### 2.4 Relative clauses

Relative clauses are covered in detail in Chapter 14. The differences between TT relative clauses and those of Jamsay, a typical northern Dogon language in this respect, are summarized in (5).

(5)

| feature | TT | Jamsay |
|---|---|---|
| head NP is internal to clause | (?) | √ |
| head NP drops tones to {L} | √ | √ |
| numeral remains with head NP and drops tones | √ | √ |
| determiner for head NP follows verb | √ | √ |
| 'each'/'all' for head NP follows verb | √ | √ |
| all subject pronominals are proclitic verb | √ | √ |
| a relative morpheme follows head NP | √ | no |
| clause ends in another relative morpheme | √ | no |
| verb has a participial suffix (Sg, Pl, …) | no | √ |

In the common Dogon pattern exemplified by Jamsay, the head NP remains within the relative clause but is tone-dropped. The regular subject-pronominal suffix position in the verb is replaced by a participial suffix marking the nominal category (e.g. human singular) but not pronominal person of the head NP. Numerals remain with the head NP and drop tones in parallel with the head noun. Other quantifiers ('all', 'each') and definite determiners associated with the head NP appear after the participle, not internally with the head NP. Since pronominal-subject category cannot be expressed by the usual inflectional suffixes on the verb, a special set of preverbal pronominal subject markers appears (except when the subject is the head NP and therefore already clearly indicated).

TT shares some of these features, but differs in at least three major respects. First, it has a relative morpheme *kà:* that immediately follows the head NP. (It

may also appear, by itself, in headless relatives.) Second, it has a clause-final relative morpheme *ŋ́*, invariant in form (i.e. not participial), which follows the verb and (if present) a postverbal adjunct phrase. *ŋ́* may be (at least historically) a special use of singular demonstrative pronoun *ŋ̀gú* 'this/that', which has a reduced variant *ŋ́* after a modified noun. Third, the verb of a relative clause has no suffixation beyond the usual AN (aspect-negation) marking, so it has no participial morphology, though it is treated syntactically as part of the higher NP. Fourth, internal head NPs tend (but not absolutely) to be clause-initial in TT much more frequently than in Jamsay and other Dogon languages, so there is a hint that the head NP may be fronted rather than internal.

An example is (6). The term for 'yesterday' is here shown at the beginning (giving evidence that the head NP can be internal), but it may also occur in other positions including between the verb and *ŋ́*. The NP (minus the definite marking) would otherwise have the form *lɛ́ lěy* 'two meals', with lexical tones on both 'meal' (*lɛ́*) and 'two' (*lěy*). The verb 'he/she ate' would appear in a main clause as *lí-sà-wɔ́* ('eat-Pfv2-3SgSbj) with the 3Sg subject morpheme at the end. In the relative clause, *wɔ́* is proclitic to the verb.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| (6) | *[yá:* | *[lɛ̀* | *lèy]*$^{L}$ | *kà:* | *wɔ́* | *lí-sà* | *ŋ̀*$^{L}$ | *cíní* |
| | [yesterday | [meal | two]$^{L}$ | Rel | 3SgSbj | eat-Pfv2 | Rel$^{L}$ | DefPl |

'The two meals that he/she ate yesterday.' (*lɛ́* 'eat')

### 2.5 Postposition phrase (PP)

TT has a variety of postpositions that follow NPs or pronominals. Examples are dative *dè* and locative *kù*. Several other postpositions are composites of an original possessed noun plus *kù* or a similar element, as in *[íló* $^{L}$*pùrò] kù]* 'inside the house', originally 'in the house's belly' (*pùró* 'belly', *íló* $^{L}$*pùrò* 'the house's belly'). Tonal patterns confirm the suspicion of a close morphosyntactic relationship between such postpositions and possessed nouns.

### 2.6 Main clauses and constituent order

The most basic linear order in TT is S-O-(X-)V-X (subject, object, verb, X equals everything else). Here S and O are nonpronominal NPs (the position of pronominal clitics is somewhat different). At least in elicitation, constituent order in main clauses seems freer than in several other Dogon languages, which have a relatively strict Adv-S-O-X-V order, with at least temporal adverbs regularly preceding the subject.

In TT, a nonpronominal subject NP is typically clause-initial. It can be preceded by a topicalized or focalized constituent, or by certain clause-introducing adverbs like 'then' in (7b). Spatiotemporal and manner adverbs generally follow the verb, though temporal adverbs may precede.

(7) a. *tɛ́năm* *èr$^{n}$á* *á:=m̀* *kúw-wòsì*
hyena goat seize=and.SS devour-Pfv1b
'Hyena seized and devoured Goat.' (2004-1a.01) (/áwá=m̀/)

b. *[kó* *kɔ̀]* *bɛ̀l-à:rá* *kó,*
[NonhSg SFocSg] sheep-male NonSg,
*bɛ̀lú* *táyrè* *cɛ́sú-sà*
sheep division cut-Pfv2
'Then (the) ram divided the sheep in halves (two subgroups).' (2004-1a.07)

c. *[m̀* $^{HL}$*bá]* *sǎydù* *wɔ̀-sɔ́* *yá:* *[lú:mà* *kù]*
[1SgPoss $^{HL}$father] S see-Pfv2 yesterday [market Loc]
'My father saw Seydou yesterday in the market.'

When a **direct object** is present, it precedes the verb. Idiomatic or otherwise fixed object-verb combinations, such as a verb plus its cognate nominal, always follow OV order. There are infrequent textual occurrences where a relatively heavy object NP follows the verb.

**Adverbial phrases** (AdvPs) in the form of PPs or lexical spatiotemporal adverbs may precede or follow the verb. Usually they precede the verb if no other bulky material, such as a nonpronominal direct object, is present in that position (8a). When such a preverbal constituent is present, AdvPs may follow (8b) or precede the verb (8c).

(8) a. *[tìw$^{n}$á* $^{L}$*dòsù]* *dìŋú* *dà*
[**tree** $^{L}$**under**] sit be
'He was sitting under a tree.' (2004-1a.04)

b. *[ì-m-í:* *nà]* *pású-wɔ̀sì=cɛ́*
[child-Pl-Dimin ReflPoss] leave-Pfv1b=NonhPlSbj
*[tìw$^{n}$á* $^{L}$*dòsù ]*
**[tree** $^{L}$**under]**
'They (= animals) left their young under the tree.' (2004-1a.06)

c. *[[nɔ̀ŋùnɔ̀* *sɛ̀w-sɛ̀w]*$^{L}$ *ŋgú]*
[[handful big-big]$^{L}$ DemSg]

*[[ká* *mà]* *kù]* *á* *kùl-lò*
[[**mouth** **ReflPoss**] **in**] Ipfv put-Ipfv
'He was putting those huge handfuls (of millet cake) into his mouth.' (2004-1a.04)

Because of the flexibility of constituent order, in direct elicitation (using French cues) my assistants tended to follow French linear order for major constituents. Therefore, especially regarding linear order, it is best to rely on textual examples (which are followed by text numbers such as 2004-1a.04), rather than on elicited examples (which lack such codes).

## 2.7 Interclausal syntax

TT has a range of devices for chaining VPs (with shared subjects), and for subordinating one clause to another.

In chains, the nonfinal VPs (sometimes simple verbs) appear with or without a conjunction-like linking element *mà* (or *=m̀*). If without *mà*, the verb takes the combining form, which (except when the verb is monosyllabic) ends in a *ú* that is subject to apocope in some contexts. This **direct chain** construction requires a high degree of conceptual integration of the two (or more) VPs into a unified event type (as in *bìrǐy yèrí* 'return come' = 'come back'), and requires that the verbs be adjacent. If the nonfinal VP has a verb with *mà*, the verb stem takes a form identical to its imperative (which never ends in a high vowel). This looser chaining device does not require close conceptual integration, and does not require adjacency of the verbs.

The chaining pattern with the combining form of the verb (without *mà*) is also used as the complement of *bèrá* 'can, be able to' (special use of a verb meaning 'get, obtain').

Some other main-clause verbs take complements with a verbal noun. There are two verbal noun suffixes: *-ú* and *-rěŋ* (*-těŋ*). In this complement construction, *-ú* is used when the complement precedes the controlling main-clause verb, while *-rěŋ* is preferred when it follows. The form in *-ú* is more nouny than that in *-rěŋ*, and a preceding nominal object often appears in compound-initial form or functions as a possessor of the verbal noun.

## 2.8 Anaphora

Logophoric pronouns are used to indicate that the referent of a pronominal is coindexed with the attributed source of a quotation or thought. The forms are singular *àsí*, plural *àsí mǎ:*. They do not do double-duty as reflexives.

A distinctive feature of TT discourse, not found in the other Dogon languages known to me, is the self-benefactive form *símà*, glossed 'for oneself'. An extended discussion of this form, which occurs frequently in texts, is in §18.5.

# 3 Phonology

## 3.1 General

This chapter begins with syllables and metrical structure (§3.2), then describes the consonants and vowels (§3.3, §3.4). It proceeds to cover vowel harmony (§3.5) and nontonal phonological processes such as assimilations that apply to sequences of segments (§3.6). There is some interaction between prosodic structure and the segmental rules, not only with regard to Syncope, but also when *mr* alternates with *mbur* and *ŋr* alternates with *ŋgur* medially in a word (§3.6.2.1). The tonal system is featured in §3.7.

## 3.2 Internal phonological structure of stems and words

### 3.2.1 Syllables

Noninitial syllables within words are normally *Cv*, *Cv:*, and *CvC*, where *v* is a short vowel and *v:* is a long (oral or nasalized) vowel. In word-initial syllables, the initial *C* may be omitted.

Verb stems must end in a *Cv* syllable with short vowel, as best seen in the imperative. This is true of monosyllabic as well as longer stems. Examples are *págá* 'tie' and *gú* 'exit'. Most verbs directly borrowed from Fulfulde end in *ɛ́* and therefore satisfy this syllabic restriction.

There is one verb stem with a true final semivowel: *ów* 'give'. There are many other verbs that appear with a final consonant (semivowel or *m*) in the combining form, e.g. *áw* 'catch', *bɛ̌w* 'sprout'. I analyse these as having a final /ú/ that is deleted; their underlying bisyllabic character is revealed by their imperative forms (*áwá, bɛ̀wá*).

### 3.2.2 Metrical structure

Metrically weak positions are those that favor **reduction of vocalic contrasts** (specifically favoring high vowels) and/or **vowel deletion** (syncope or apocope). The phenomenon is phonologically significant for verbs, where we can see it operating across a rich system of suffixal inflections.

A binary distinction may be made between verbal inflections based on the **combining form**, and the remaining forms including the **imperative**. The basic difference is that the combining form has a metrically weak final syllable (in the case of nonmonosyllabic stems), while the imperative has a strong final syllable.

For monosyllabic verbs (*Cv*), the absence of a second syllable makes the metrical structure somewhat moot. The vowel is never deleted. However, most *Có* and all *Cé* verbs do shift to a high vowel in the combining form (*Cú*, *Cí*). For all longer stems, the final syllable is weak in the combining form but not in the imperative-type forms. In addition, verb stems of three or four syllables have metrically weak medial syllables (even in the imperative-type forms).

| (9) | verb shape | morphological type | metrical pattern (strong, weak) |
|---|---|---|---|
| | *Cv* | combining form | s (with a hint of w) |
| | | imperative etc. | s |
| | *CvCv* | combining form | sw (trochaic) |
| | | imperative etc. | ss |
| | *CvCvCv* | combining form | sww (dactylic) |
| | | imperative etc. | sws |
| | *CvCvCvCv* | combining form | swww |
| | | imperative etc. | swws |

The **trochaic** type sw is relatively simple; the final vowel raises to *u*, and under certain conditions it may disappear either before a suffix (syncope) or word-finally (apocope).

In the **dactylic** type sww, both weak syllables have *u*. Only one of these *u*-vowels can be deleted. If the final syllable begins with a semivowel or *m*, the final syllable is deleted, leaving an unreduced *u* in the medial syllable. If the final syllable begins with any other consonant, this syllable appears with unreduced *u* and the medial /u/ may be reduced to schwa or syncopated.

All *CvCvCvCv* (or longer) verb stems known to me are derived causatives with suffix *-mv* or less often *-m-kv* (chapter 9). We have seen just above that *m* or a semivowel at the beginning of a stem-final syllable makes that syllable the metrical weak link in the combining form (where it disappears by syncope). This also occurs in the quadrisyllabic causatives, so *CvCvCv-mv* has a combining form *CvCvCv-m*, which now ends in a heavy and therefore metrically strong *CvC* syllable. The preceding (i.e. second) syllable may reduce its *u* (to schwa or zero).

### 3.2.3 Prosodic weight of verb stems and suffix allomorphy

In addition to the patterning of vocalic raising, reduction, and deletion discussed in the preceding section, we may detect prosodic factors at work in **allomorph splits** (involving choice of suffix-initial consonant) in certain verbal inflectional suffixes. These splits are based primarily on the overall prosodic weight of the preceding stem, not on metrical (rhythmical) considerations as such. Oversimplifying slightly (see below), the splits are given in (10).

(10)

| stem | imperfective | PfvNeg | IpfvNeg |
|---|---|---|---|
| 1-2 moras | *-rv̀-* | *-rv́-* | |
| 3+ moras | *-tv̀-* | *-lv́-* | |
| 1 mora | | | *-r$^{n}$v́-* |
| 2+ moras | | | *-nv́-* |

For the **imperfective** and for the **perfective negative**, the split is between prosodically light *Cv* and *CvCv* stems on the one hand, and prosodically heavy *Cv:Cv*, *CvCCv*, *CvCvCv*, etc. It may be significant that the initial consonant is *r* for both suffix categories after prosodically light verbs. The basically prosodic division is slightly complicated by the fact that light stems with unclustered medial rhotics, i.e. *(C)vrv-* and *(C)vr$^{n}$v-*, are incompatible with rhotic-initial inflectional suffixes, so they default to the allomorphs otherwise associated with heavy stems. There are also various *CC*-cluster rules that apply at the boundary between stem and suffix when the stem-final vowel is syncopated.

For more details see §10.1.1.6 (imperfective), §10.1.2.2 (perfective negative), and §10.1.2.3 (imperfective negative).

## 3.3 Consonants

The inventory of consonantal phonemes is (11), with some singly or doubly parenthesized to indicate degree of marginality.

(11) Consonants

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| labial | *p* | *b* | *m* | (*f*) | | *w* | *w*$^{n}$ | | |
| alveolar | *t* | *d* | *n* | *s* | *l* | *r* | *r*$^{n}$ | | |
| alveopalatal | *c* | *j* | (*ɲ*) | ((*š*)) | | *y* | *y*$^{n}$ | | |
| velar | *k* | *g* | *ŋ* | | | | | | |
| laryngeal | | | | | | | | (*h*) | ((*ʔ*)) |

*c* is IPA [tʃ], *j* is [dʒ], *š* is [ʃ], *y* is [j].
key to columns: 1. aspirated voiceless stops (*c* is affricated); 2. voiced stops; 3.nasals, 4. voiceless fricatives (including sibilants); 5. laterals; 6-7. unnasalized and nasalized sonorants; 8-9. laryngeals

### 3.3.1 Alveopalatals (*c*, *j*, *ɲ*)

As in some other languages of the region (montane Songhay as well as Dogon), there is considerable fluctuation between *k* and *c*, between *g* and *j*, and between *ŋ* and *ɲ* before front vowels {*i e ɛ*}. To facilitate navigation in the lexicon, it is necessary to normalize in one direction or the other and I agonize over this for each language I work on. For TT, I normalize the transcription as *c*, *j*, and *ŋ* where both pronunciations are possible. Thus *jìní* 'is not', *círó* 'fly!', *dìŋé* 'sit!'.

*c* and *j* are of course easily distinguishable from *k* and *g* before low and back vowels. Here *c* and *j* are not very common, being confined chiefly to borrowings (e.g. *cárdì* 'silver' and *já:sèrè* 'shiftlessness' from Fulfulde) and expressive adverbials including adjectival intensifiers (*cóy-cóy* 'very red', *cɔ́t-cɔ́t* 'very straight', *jáw-jáw* 'very fast').

*ɲ* is also uncommon if we exclude the cases that I transcribe with *y*$^{n}$, although for some of these [ɲ] is attested as a variant pronunciation alongside [j$^{n}$]: *y*$^{n}$*áŋkìtà* 'regret', *y*$^{n}$*à-r*$^{n}$*ú* 'woman', *y*$^{n}$*áw*$^{n}$*á* 'damaged', *mɔ̀y*$^{n}$*ɔ́* 'raise (livestock)', *zìy*$^{n}$*ó* 'fart(v)'. (In most of these cases, cognates in e.g. Jamsay have ɲ.) I did hear *ɲ* in *ɲɔ́* 'camel'. I also transcribe *ɲ* in other words, typically loanwords, where this represents the usual pronunciation: *ŋɔ́:ɲɔ̀* 'pancake', *ɲéccè* 'residue from sifting flour', *sèséɲè* 'kola-nut mash', *bèrè-gáɲì* 'stick with forked end', *ɲégé:rè* 'toilet'. In the fixed phrase *[X dîŋ] ɲémá* 'instead of X', the clustering of two nasals may favor *ɲ* over *y*$^{n}$.

### 3.3.2 Voiced velar stop *g* and *g*-Spirantization (*g*→*ɣ*)

Spirantization of *g* to [ɣ] in the frames *a_a* and *ɔ_ɔ*, i.e., between low back vowels, is not systematic in TT and I transcribe *g* rather than *ɣ*.

### 3.3.3 Velar nasal (*ŋ*)

*ŋ* may occur finally: *dĕŋ* 'place', *sŭŋ* 'rope'. It is fairly common intervocalically: *gàŋá* 'prevent', *yⁿáŋá* '(a) race', *góŋó* 'deserted', *léŋé* 'tasty'. In initial position it is limited to occasional loanwords like *ŋɔ́:ɲɔ̀* 'pancake'.

Before a front vowel, *ŋ* is not reliably distinguishable from *ɲ*.

### 3.3.4 Voiceless labials (*p*, *f*)

*p* is common in initial and intervocalic position: *págá* 'tie', *púró* 'blow', *bàpá* 'carry on back'.

*f* is found in some loanwords, like *fòtó* 'photo' and *ná:fìkì* 'trouble-maker' (regional, < Arabic). In the more highly nativized loans, it is generally replaced by *p*, and in elicitation sessions informants often insist on the *p* pronunciations. Example: *mălfà* or *mălpà* 'rifle'.

### 3.3.5 Laryngeals (*h*, *ʔ*)

*h* occurs word-initially in a number of loanwords, especially from Fulfulde: *hámnà* 'pestering', *húlɛ́* 'boundary', *hɔ́rà* 'observing carefully', *héló* 'distribute' *hɔ̀lɛ́* '(someone's) share', *hɔ́lɔ́* 'craziness' (<Songhay). Other than *unh-huh!* type expressions it does not occur medially or finally.

Glottal stop *ʔ* is not part of the basic consonantal system. It occurs in such linguistically marginal expressions as *ɔ́ⁿʔɔ̀ⁿ* 'nope!'.

### 3.3.6 Preglottalized stops (*ɓ*, *ɗ*, *ƒ*, *ɠ*) in Fulfulde borrowings

The preglottalized stops of the local Fulfulde variety are written with the IPA symbols properly applied to ingressives. I will follow the Fulfulde orthography with respect to the occasional Fulfulde loanword that is still pronounced (by some speakers) with the preglottalization. Thus *lɔ́ɓɓìnà* '(act of) hitting hard'.

### 3.3.7 Sibilants (*s*, *š*, *z*, *ž*)

Sibilant *s* is often palatalized to [ʃ] before a front vowel {*i e ɛ*} in native vocabulary, as in *síwó* 'become fattened', *séw* 'thick, fat', and *séréw* 'used up'. The alternation is subphonemic with respect to native vocabulary, but the situation is complicated by the presence of borrowed words like *sî:* 'kind, type' (< Fulfulde) that do not commonly palatalize.

Palatalization is regular in the clusters *ys* and *y$^{n}$s* before any vowel, as in *pòysú* 'off-white' and *bùy$^{n}$sú* 'almost ripe', which I have only heard with a palatoalveolar [ʃ].

The voiced sibilant has similar tendencies. Thus orthographic *z* is often pronounced [ʒ] in stems like *zìŋá* 'be bent', *zèwá* 'harass', and *zérì* 'bring!'.

An autonomous *š* phoneme, i.e. not due to neighboring front vowels or *y*, is not well-established, but occurs in *šâllá:hù* 'if God wills' (Arabic phrase in common use). An autonomous *ž* phoneme occurs in *žúnú:bù* 'sin' (<Arabic).

### 3.3.8 Orally released nasal (*m$^{b}$*, *ŋ$^{g}$*)

A recurring problem in northern Dogon languages is alternations (across or within languages) between *m* and either *m$^{b}$* or *mb*, i.e. some version of *m* with an oral release, in intervocalic or word-initial position. Alternations of this type have been observed in TT. For example, the 1Sg pronominal morpheme *m̀* is often heard as *m̀$^{b}$* before a vowel.

The issue has wider phonological ramifications since an oral release of the nasal should prevent the nasal from spreading its nasality to the right (Forward Nasalization, §3.6.1.1), while a true *m* should allow the process to apply.

There are, in fact, a number of stems attested with intervocalic *m* that does not induce Forward Nasalization, particularly of *r* to *r$^{n}$* : *màrá* 'become lost', *bámárà-n* 'Bambara person', *bímmá:rè* 'raised bunk', *márèy* 'wounding' (<Songhay), *mìrá* 'voice', *kásámmárà* 'meal with balls of cooked millet', *mùrɔ́* '(rain) fall', *mɔ́rú* 'you were warned!', *ɔ̀mɔ̀rɔ́* 'misfortune', *mèrá* 'abdomen'. Contrast e.g. *már$^{n}$á* 'stupidity' and *mɔ́r$^{n}$ɔ̀* 'error', which do show the effects of Forward Nasalization. For some, but not all, of the stems with unnasalized *r* in this position, a variant pronunciation with *mb* or *m$^{b}$* (i.e. with brief oral release) is recorded: *m̀$^{b}$àrá* 'become lost', *m̀$^{b}$èrá* 'abdomen', *bímbá:rè* 'raised bunk', *m̀$^{b}$ìrá* 'voice'. For some other words, such a variant with *mb* is not (yet?) recorded for TT, but *mb* does appear in cognates: TT *ɔ̀mɔ̀rɔ́* 'misfortune' versus Bankan Tey *ɔ̀mbùrɔ́* and Najamba *ɔ̀mbɔ̀lɔ́*, TT *bámárà-n* 'Bambara person' versus counterparts with *mb* in many languages.

### 3.3.9 Nasalized sonorants (*r*$^{n}$, *w*$^{n}$, *y*$^{n}$)

These nasalized sonorants are in part predictable variants of the corresponding oral sonorants (nasalized in the presence of another nasal), and in part autonomous phonemes.

{*r w y*} are secondarily nasalized after another nasal by Forward Nasalization (§3.6.1.1). Within a stem this is arguably a constraint rather than a linear process: *nàw*$^{n}$*á* 'meat', *mɔ̀y*$^{n}$*ɔ́* 'raise (livestock)', *nàr*$^{n}$*á* 'chase away'; oral {*r w y*} do not normally occur in such positions. For examples of suffix-initial {*r w y*} being nasalized due to a stem nasal, see §3.6.1.1.

Syllable-final {*w y*} are also nasalized syllable-finally in the environment Nv_ with some nasal or nasalized consonant N. I do not usually transcribe the nasalization of the final semivowel in this case, but in e.g. *níŋèy* 'beside, along with' for [níŋèj$^{n}$] and *náw-náw* 'very smooth' for [náw$^{n}$náw$^{n}$] it should be understood that the semivowel is phonetically nasalized.

For {*w y*} but not *r*, nasalization also occurs before another nasal by Backward Nasalization (§3.6.1.2), but only across a vowel. Examples within a stem suggest a constraint: *y*$^{n}$*òŋɔ́* 'spoil (child)', *w*$^{n}$*àŋá* 'disdain'. For examples involving *Cv-* stems before a nasal suffix, see §3.6.1.2. However, there is no particular nasalization of the semivowel in e.g. imperfective negative *tày-ná-* 'does not shoot' or *àw-ná-* 'does not catch', contrast *gùy*$^{n}$*-nó-* 'does not steal' with lexical *y*$^{n}$ (imperative *gùy*$^{n}$*ó*).

Of special interest are the stems for 'woman' and 'distant'. 'Woman' is *y*$^{n}$*à-r*$^{n}$*ú* 'woman' or plural *y*$^{n}$*à-mú*, with initial nasalized *y*$^{n}$ preceding a nasal-initial suffix . Unnasalized *y is preserved in e.g. *yà-gùrɔ̌-n* 'young woman' (§4.1.2, §5.1.11). The adjective 'distant, far away' is *wà:gá*, but the corresponding verb is *w*$^{n}$*áŋú-lá* 'go far away', whose medial *ŋ* forces nasalization of the initial *w*, see (259) in §9.4.

{*r*$^{n}$ *w*$^{n}$ *y*$^{n}$} may also occur in the absence of a second nasal, and in these cases the phonemic status of these segments is clear. *r*$^{n}$ is confined to intervocalic position, as in *bàr*$^{n}$*á* 'become red' (*bár*$^{n}$*ú* 'red'), *cír*$^{n}$*ó* 'snot', *tɔ́r*$^{n}$*ɔ́* 'turn on (flashlight)'. Note also allomorph *-r*$^{n}$*v́-* of the imperfective negative after *Cv-* monosyllables (§10.1.2.3).

{*w*$^{n}$ *y*$^{n}$} but not *r*$^{n}$ also occur **syllable-finally** (including word-finally) with no other nasal present: : *téy*$^{n}$ 'bow (for arrow)', *ɛ̌w*$^{n}$*-ɛ̂w*$^{n}$ 'at full speed', *zîw*$^{n}$ 'fart'.

*w*$^{n}$ occurs **initially** with no other nasal present in *w*$^{n}$*á:sú* 'bat (mammal)' and *w*$^{n}$*à:sá* 'scoop out'. I know of no similar cases with *y*$^{n}$.

In stems like the verbs *y*$^{n}$*àw*$^{n}$*á* 'malfunction' and *w*$^{n}$*ày*$^{n}$*á* 'come to a boil', **two nasalized semivowels** occur together with no other nasal present.

### 3.3.10 Consonant clusters

I will not dwell on medial clusters here, since Fulfulde and other loanwords have introduced some very un-Dogon-like clusters, and since the optional Late Syncope applying to e.g. the second of three syllables in a word can create some rather marginal clusters.

#### 3.3.10.1 Initial *CC* clusters

Initial clusters do not occur except in loanwords.

#### 3.3.10.2 Medial geminated *CC* clusters

At verb-suffix boundaries, the clusters *ll*, *nn*, and *tt* may be created by Early Syncope and subsequent *CC*-cluster rules; see §3.6.3.3 for a summary.

Within unsegmentable stems, clusters occur chiefly in loanwords. Examples of geminates are: *súbbɛ̀* 'spice seed' (*Ammodaucus*), *wáccɔ́:rɛ̀* 'nickname', *yɛ́ddà* 'challenge', *hóggò* 'animal pen', *híjjì* 'pilgrimage to Mecca', *júkkɔ́:rɛ̀* 'fine (penalty)', *sɛ́llà* 'health', *támmà* 'colonial coin', *hínnà* 'being absorbed (focused)', *hɛ́ppà* 'anxiety', *bárrá:dù* 'tea kettle', *pɔ́ttɛ̀* 'participation', *láyyà* 'Feast of the Ram'. I can find no examples of *ww*, $w^{n}w^{n}$, $y^{n}y^{n}$, or *ss*.

#### 3.3.10.3 Medial non-geminate *CC* clusters

**Nasal plus homorganic voiced stop**: this cluster type is somewhat suspect in native Dogon vocabulary because of historical and synchronic alternations of the type *mb* ~ $m^{b}$ ~ *m*. There are several examples of Fulfulde and other loans with fixed clusters of this type: *cámbòl* 'diabetes', *kúndô:w* 'breed of sheep', *jíŋgá:rú* 'prayer' (< Songhay).

Clusters of **nasal plus homorganic voiceless stop** do occur in what look like native vocabulary, e.g. *zɛ̀mpɛ́* 'one-sided loincloth', *bɛ̀ntɛ́* 'loincloth', *dáŋkì* 'shed'.

**Semivowels** may occur with various following consonants (semivowels favor syncope of a following vowel when possible, so the actual lexical representation of such cases can be debated): *dɔ̀ymɔ́* 'be in a hurry', *pòysú* 'off-white', *cɛ́wsó* 'break off a piece'.

**Nasals** (especially *m*) and **lateral** *l* also occur as first member of a few *CC* clusters other than the homorganic nasal-stop clusters mentioned above. Most examples are probable loanwords, but for *l* I can cite e.g. *gàlmá* 'bowl-shaped

basin' and *pɛ́lsú\\pɛ́lsá* 'split (nut) in half', and for nasals we have e.g. *húmsú\\húmsó* 'breathe', *òmnú* 'tamarind', and *tímlé* 'pillar'.

An interpretive difficulty is that, since the second syllable of a three-syllable sequence is a metrically weak position, such examples as *gàlmá* and *pɛ́lsú* might be analysed as trisyllabic /gàlùmá/, /pɛ́lúsú/, etc., with a medial short high vowel that **syncopates**. There are, in fact, several words where *CvC$_2$Cv* and either *CvC$_2$uCv or CvC$_2$iCv* pronunciations are recorded, where *C$_2$* is a sonorant. This is especially common when C$_2$ is **tap** *r* or *r$^n$*, which require a brief release before a following consonant. Thus *tìrbú* or *tìrùbú* '*Dichrostachys* tree'.

Taps are also analytically tricky and phonetically unstable as the second consonant in a medial cluster. For word-medial alternations of the type *ŋr* ~ *ŋgur*, see §3.6.2.1.

#### 3.3.10.4 Medial triple *CCC* clusters

Triple clusters consisting of a semivowel plus a homorganic nasal-voiced stop cluster occur in a few Fulfulde loanwords: *kóynjèl* 'cattle disease', *dáyŋgòl* 'hitching posts'.

#### 3.3.10.5 Final *CC* clusters

Final clusters do not occur except in unassimilated loanwords.

## 3.4 Vowels

The inventory of vowels is (12).

(12)

| short oral | long oral | nasalized |
|---|---|---|
| *u* | *u:* | *u:$^n$* |
| *o* | *o:* | *o:$^n$* |
| *ɔ* | *ɔ:* | *ɔ:$^n$* |
| *a* | *a:* | *a:$^n$* |
| *ɛ* | *ɛ:* | *ɛ:$^n$* |
| *e* | *e:* | *e:$^n$* |
| *i* | *i:* | *i:$^n$* |

### 3.4.1 Short and (oral) long vowels

Short vowels are common in all syllabic positions. In native Dogon vocabulary, oral long vowels occur chiefly in initial syllables of nonmonosyllabic stems. Oral long vowels are usually syllable-final, but there are some loanwords like *fĭdâ:w* 'memorial feast' with a final semivowel resulting in a superheavy *Cv:C* syllable.

Monosyllabic *Cv* is strongly preferred to *Cv:* in TT, unlike many other Dogon languages. There are many *Cv́* verb stems like *wɔ́* 'see', *só* 'take', and *ká* 'shave'. There are no unambiguously *Cv́:* or *Cv̌:* verbs. However, there are some verbs of original shape *Cawa* and *Cɔwɔ* that are arguably in the process of becoming *Ca:* and *Cɔ:* by contraction in the imperative and related forms, though the more common set of inflections based on the combining form still has *Caw-* and *Cɔw-*, see (266a) in §10.1.

Monosyllabic nouns likewise prefer *Cv* to *Cv:*. Examples are *kú* 'head', *ká* 'mouth', *dɔ́* 'insult(n)', *lɔ́* 'hand', *tá* 'taboo', *dú* 'plains', *sɔ́* 'second layer of millet', *lé* 'meal', *zá* 'millet cakes', and *ní* 'water'. Cognates in Jamsay etc. generally have long vowels (Cv:); the direction of change is not yet clear. *Cv:* does occur with a few TT noun stems of less clear origin that have contour tones (which cannot be expressed on a short vowel): *gô:* 'flat shady spot', *yô:* 'dried-out leaves on ground'. Among adjectives, *ná:* 'big' has a long vowel, but other monosyllabic adjectives have short vowels: *gá* 'bigger', *dɔ́* 'hot; fast'.

In cases involving a final long high vowel, such as [pû:] 'scrubber' (cf. verb *púwɔ́* 'wipe'), [èŋìnè-dû:] 'peanut-butter balls' (beginning with *éŋíné* 'peanut'), [mĭ:] 'fine (powder)' (cf. verb *mìyⁿá* 'grind into powder'), [kû:] 'yam' (< Bambara), and [sî:] 'kind (type)' (<Fulfulde), one can ask whether native speakers take them to have {*u: i:*} or {*uw iy*}. I transcribe *pûw, dûw, mĭyⁿ* because of the fairly transparent connection to the related verbs, but *kû:* and *sî:* since for those nouns is no connection to another form of the same word-family. The compound final in *yù-gô:* 'late-ripening millet' (*yú* 'millet') is a good candidate for a derivation from /gówò/ (Intervocalic Semivowel-Deletion, §3.6.4.1), cf. the associated verb *gòwó ~ gŏ:* 'harvest (late-ripening millet' with combining form *gŏw*.

*Cv:* occurs in some particles: *zăː* 'since' (< Songhay), *gá:* or *gà:* 'but' (regional),

In bisyllabic or longer verbs, if there is a long vowel it is in the first syllable: *zê:rú* 'bring' (§10.1.4.2), *lí:-má* 'feed' (causative of *lé* 'eat'). Nouns of this type are also common: *nè:sé* 'supper', *bú:rù* 'bread', *kùrùkò:rí* 'private stock'. Unlike verbs, nouns also allow medial and final long vowels, but the examples are borrowings or contractions. Final long vowels: *àtê:* 'tea', *kògî:* 'cream on milk', *ná:nâ:* 'mint'. Medial long vowels: *púrá:rè* 'meal to break Ramadan fast', *jíŋgá:rú* 'prayer' (<Songhay). Medial long vowels due to

contraction: *èrê:ré* ‘wild-pea shrub’ (*Boscia*) from iterated *èré-èré*, *nùnû:rⁿú* ‘someone’ reduplicated from *nù-rⁿú* ‘person’ (§4.1.2).

Several adjectives have, at least as a diminutive variant, a form ending in [i:(:)] (§4.5.3). There is an issue whether this is a phonemic long vowel (*i:*), or an intonation-like prolongation (→) like that of many expressive adverbials (§8.4.5).

### 3.4.2 Nasalized vowels

A nasalized vowel occurs in one monosyllabic verb stem: *pɛ́ⁿ* ‘be hardened and ripe (ready to harvest), (egg) be ready to hatch’.

Nasalized vowels occur in some onomatopoeic expressions, such as *cí:ⁿ-kà:ⁿ-cí:ⁿ* (creaking sound). They also occur expressive adverbials like *páⁿ→* ‘wide open’, and in adjectival intensifiers, e.g. *tí:ⁿ-tí:ⁿ* ‘very black’.

In quite a few lexical items, a phonetically nasalized vowel is immediately followed by *s*. One could argue that the proper representation is /ns/ and that the nasal is realized in the form of vocalic nasalization.

(13)

| form | gloss | comment |
|---|---|---|
| *tè:ⁿsú* | ‘basin’ or ‘large bowl’ | |
| *bà:ⁿsá* | ‘wooden bowl’ | |
| *bàⁿsá* | ‘master, owner’ | as cpd final usually *bàsà* ‘owner of X’ (§5.1.12); cf *ŋ̀gú bá:ⁿsà* ‘this/that (person) §4.4.1 |
| *kó:ⁿsú* | ‘backing of rifle mechanism’ | |
| *súⁿsɔ́* | ‘sniff’ | |
| *ɔ̀ⁿsù-rⁿú* | ‘younger same-sex sibling’ | |
| *ɔ́ⁿsɔ́* | ‘pick up (fallen fruits)’ (imperative) | |
| *ɔ́ⁿsɔ́* | ‘suck’ | |
| *èⁿsú* | ‘shame’ | |
| *èⁿsú* | ‘(a) prop’ | |
| *dà:ⁿsá* | ‘throw’ | |
| *úⁿsɔ́* | ‘string together’ | |
| *gà:ⁿsú* | ‘rough, coarse’ | |
| *ɛ̀ⁿsá* | ‘chicken’ | variant *èsá* |
| *kùpà:ⁿsú* | ‘lung’ | |
| *tóⁿsú* | ‘testicles’ | |
| *kɔ̀:ⁿsɔ́* | ‘millet beer’ | |
| *bùyⁿsú* | ‘almost ripe’ | |
| *àⁿsú* | ‘roselle’ | |

In many of these stems, comparative evidence points to an original consonant cluster, perhaps *nj. For example, cognates of TT *ɛ̀ⁿsá* 'chicken include Nanga *ènjé*, Ben Tey *ènjê-m*, and Jamsay *ɛ̀ɲé* as well as Bankan Tey *èzê-m*.

In the case of adjective *ɔ́ⁿsíⁿ→* 'thin', the nasalization clearly continues to the end of the stem, suggesting that we have two distinct nasalized vowels. The related verb *ɔ́ⁿsú-rⁿú-* likewise has a nasalized *rⁿ* in the suffix, which cannot be explained by the presence of *ɔ́ⁿ* in the initial syllable.

### 3.4.3 Initial vowels

While *Cv* is the typical syllabic shape, hence *CvCv* for bisyllabics and so forth, the initial *C* position may be vacant. Vowel-initial verb stems include *áwá* 'catch', *ów* 'give', *ɔ́gɔ́* 'be in command', *ùnɔ́* 'go up', *írá* 'be ripe', *èlá* 'look', and *énó* 'narrate'. For nouns we have e.g. *ɔ́nɔ́* 'fontanel', *órú* 'field', *ùró* 'hole', *ìsó* 'soil', *ěyⁿ* 'mouse', *à-nú* 'man', and *ɛ́tú* 'unripe'.

### 3.4.4 Stem-final vowels

There are no unusual restrictions on stem-final vowels except in verbs.

Each verb has two basic forms, the combining form that is used in VP chains and before most suffixes, and a small set of forms exemplified by the imperative. The imperative can often be taken as lexically basic, since it clearly shows the vowel-harmony class of the verb, which is not always true of the combining form. Taking the imperative as lexically basic, the crucial restriction is that the **final vowel may not be high** {*i u*}. On the other hand, nearly all verbs do end in a high vowel in the combining form (the exceptions are certain *Cv-* stems along with *ów* 'give', the only verb stem ending in a consonant). For restrictions on the relationship between the first vowel and the middle and final vowels of a verb stem, see §3.5.3, below.

## 3.5 Vowel harmony and other vowel-to-vowel assimilations

### 3.5.1 Vowel-harmonic classes of verb stems

There are three vowel-harmonic classes (14a), two of which merge under some conditions (14b) to form an ATR-type split. Of comparative interest is the fact that, in some contexts, *ɛ* is closely associated with *a* rather than with *ɔ*.

(14) a. 3 sets {ɛ a} versus ɔ versus {e o}
b. 2 sets {ɛ a ɔ} versus {e o}

High vowels {*i u*} are **extraharmonic**. They may combine with vowels from any harmonic set. In CvCvCv stems with a medial high vowel, the first and third syllables must still be harmonically acceptable, as with *wɔ̀gùsɔ́* 'dig up', *bèríyò* 'belching', and *kòsíyò* 'sneezing'.

Uncompounded stems of all word-classes (noun, adjective, numeral, verb) generally respect harmony (3-set version) in that vowels of different harmonic sets are not combined. Examples of bisyllabic nouns that respect harmony (recalling that high vowels are extraharmonic) are *zɛ̀lá* 'side', *jɛ́rɛ̀* 'side', *cìrá* 'bone', *kàsú* 'calabash', *ésú* 'thing' *tɔ́kɔ́* 'sheath', *kɔ̀rɔ́* 'neck', *tùŋɔ́* 'back', *bèté* 'belly', *péŋó* 'hip', *kórú* 'navel', and *jímrò* 'rib'.

Stems like *tɔ̀ŋɔ́lɛ̀* 'headband in bell-dance' show that back/rounding harmony is not strict, even when ATR harmony is respected.

Some stems (other than verbs) consist entirely of high vowels and cannot be classified into a harmonic set, e.g. *gùsú* 'skin', *bìbìrí* 'stirring stick'.

For the non-verb word-classes, harmony is basically a passive phenomenon observed in the form of recurrent stem-internal vowel sequences. For such stems there are generally no suffixes including nonhigh vowels that would force a choice among harmonic sets. No vowel-harmonic phonology is observed with ordinal suffix *-ló* added to numerals, since neither the stem nor the suffix adjusts its vocalism: *léy-ló* 'second', *pɛ́ːl-ló* 'tenth' (§4.7.2.2).

Vowel harmony is, however, conspicuous in verbal morphology, since derivational and inflectional (AN) suffixes with non-high vowels are harmonically sensitive. There are two patterns of harmony. In the **three-set harmonic type**, the suffixal vowel appears as *a* after an {ɛ a} stem, as ɔ after an ɔ stem, and as *o* after an {e o} stem (the stem's harmonic class is always determinable from its imperative). This is the productive harmonic pattern for verbal suffixes (15).

(15)

| category | {ɛ a} | ɔ | {e o} |
|---|---|---|---|
| a. derivational (imperative form shown) | | | |
| reversive (§9.1) | *-rá* | *-rɔ́* | *-ró* |
| causative (§9.2) | *-má* | *-mɔ́* | *-mó* |
| b. inflectional | | | |
| perfective-2 (§10.1.1.3) | *-sà-* | *-sɔ̀-* | *-sò-* |
| imperfective (§10.1.1.6) | *-rà-* | *-rɔ̀-* | *-rò-* |
| imperfective negative (§10.1.2.3) | *-ná-* | *-nɔ́-* | *-nó-* |

In the two-set type, the suffix has only two vocalic variants, as the {*ɛ a*} and *ɔ* stem classes are treated as equivalent. These are cases where the suffixal vowel is always mid-height (i.e. never *a*). In (16a), only the first syllable of the suffix is involved.

| (16) | category | {*ɛ a ɔ*} | {*e o*} |
|---|---|---|---|
| | a. suffix has *ɔ* or *o* | | |
| | perfective-1a (§10.1.1.1) | *-wɔ̀rè-* | *-wòrè-* |
| | perfective-1b (§10.1.1.2) | *-wɔ̀sì-* | *-wòsì-* |
| | b. suffix has *e* or *ɛ* | | |
| | hortative (§10.4.4) | *-ɛ́*, *-yⁿɛ́* | *-é*, *-yⁿé* |

I have no example where vowel-harmonic assimilation penetrates into the second vowel of a bisyllabic suffix. The only bisyllabic verbal suffix with a non-high vowel in the second syllable is the perfective-1a (16a), and its second vowel is an invariant *e* over all harmonic classes, as seen in e.g. *yǎy-wɔ̀rè-* 'went' where the *ɔ* in the first syllable of the suffix is determined by the harmonic class of the stem, but where the *e* in the second suffixal syllable fails to shift to *ɛ*. This is distinct from sequences of the type *CvC(v)-Cv-Cv-* with two consecutive *-Cv-* suffixes, where iteration does occur. Thus *dùwⁿɔ́* 'be finished' (imperative), causative *dùm-lɔ́* (imperative), and perfective-1a of the latter *dùm-lú-wɔ̀rè* with *ɔ̀* ultimately reflecting the harmonic class of *dùwⁿɔ́*.

This last example also shows that a suffix reflects the harmonic class of the verb stem even when the verb itself (in its combining form) fails to show the diagnostic vocalism. This is seen more dramatically in cases where two homophonous combining forms occur with different suffixal variants reflecting the hidden harmonic classes of the respective stems (seen, however, in their imperative forms). For example, 'roll up (mat)' is *mùnó*, while 'rumple' is *mùnɔ́*. The two are merged as *mùnú* in the combining form, which occurs as such in verb chains. With a harmonically sensitive suffix (the majority), the two are distinguishable, e.g. perfective-1b *mùnú-wⁿòsì* 'rolled up' versus *mùnú-wⁿɔ̀sì* 'rumpled'. Likewise with the respective reversive derivatives of these two verbs, where we find perfective-1b *mùnù-rⁿú-wⁿòsì* 'unrolled' versus *mùnù-rⁿú-wⁿɔ̀sì* 'unrumpled'.

### 3.5.2 Underlying representations of vowels in verbal suffixes

The issue arises how to represent the vowels in verbal suffixes in their underlying form, i.e. before they harmonize with the stem. Only the first syllable of bisyllabic suffixes is relevant since only they engage in harmonic adjustments. The full set of vocalic possibilities is summarized in (17).

(17)

| vocalism | suffixes |
|---|---|
| *i* | perfective negative *-rí-* |
| *u* | verbal noun *-ú* |
| *a* | future *-yàrà-* |
| *e* ~ *ɛ* | hortative *-é/-ɛ́* |
| *o* ~ *ɔ* | perfective-1a *-wɔ̀rè-/-wòrè-*, perfective-1b *-wɔ̀sì-/-wòsì-* |
| *o* ~ *ɔ* ~ *a* | perfective-2 *-sò-/-sɔ̀-/-sà-* (and several others} |

There is no issue as to the representation of the invariant vowels. The *e* ~ *ɛ* alternation clearly requires a slightly underspecified vowel with the shared features of the two outputs (front, mid-height, unrounded). The *o* ~ *ɔ* alternation requires a similar slightly underspecified vowel (back, mid-height, rounded). The problem is how to account for the difference between *o* ~ *ɔ* and *o* ~ *ɔ* ~ *a*. There are various clever answers that one could propose; for example, the latter might be represented as a more thoroughly underspecified vowel (non-front, non-high). However, the difference between *o* ~ *ɔ* and *o* ~ *ɔ* ~ *a* also correlates with the presence of suffix-initial *w* in the former versus various coronals in the latter, and with bisyllabic versus monosyllabic suffixes. So the optimal analysis is elusive.

In citing the various suffixes, I will often use *v* (for "vowel") as a variable for the *o* ~ *ɔ* ~ *a* cases, hence *-sv̀-* rather than the laborious *-sò-/-sɔ̀-/-sà-*. (There is no consonant *v* in the language, so no confusion should result.)

### 3.5.3 Restrictions on medial and final vowels in verb stems

In monosyllabic (*Cv́*) verbs, the vowel in the imperative (and related forms) may be any non-high vowel. However, *Cé* is found only in *dé* 'carry (on head)' or its homonym 'bathe', while *Cɛ́* is rather common (*lɛ́* 'eat', *nɛ́* 'drink', *yɛ́* 'weep', *cɛ́* 'slaughter', *jɛ́* 'dance', *dɛ́* 'be tired').

In **bisyllabic** verbs, the vowel sequences in (18) are attested in the imperative and related forms. The verbs 'bring' (imperative *zérì*) and 'come' (*yèrí*) are irregular in this and other respects, and they are not included in the tables.

(18) a. identical non-high vowels
common: *a…a*, *o…o*, *ɔ…ɔ*
a few cases: *e…e*
unattested: #*ɛ…ɛ*

b. nonidentical non-high vowels
*e…o*
*ɛ…a*

c. high plus compatible nonhigh vowel
*u…o*, *u…ɔ*
*i…e*, *i…a*

If the first syllable has *e*, the second syllable has *e* or *o* depending on the stem. *e…e* is less common and seems to occur only over an intervening liquid, while *e…o* occurs in all consonantal environments. For *e…e* the examples are *dèlé* 'store', *jèré* 'keep', *dèré* 'establish', *céré* 'prolong'. For *e…o* the examples include *céló* 'make well', *léyó* 'sleep', *céwó* 'strike', *séró* 'be mushy', *cétó* 'stumble', *néŋó* 'do for a long time', *séŋó* 'stink', *péŋó* 'choke on food', *tíwó* 'send'.

*ɛ…a* is very common and corresponds to *ɛ…ɛ* in nearby Dogon languages such as Jamsay.

If the first vowel is high, the second syllable may be any mid-height vowel with the same rounding and front/back features, except that we get final *a* where we would have expected *ɛ*. Historically, TT *i…a* reflects *iɛ, as in *èlá* 'look', *térá* 'chop', and *jèwá* 'scoop up'. In bisyllabic verbs with high vowel in the first syllable, the second vowel (in the imperative) is the key for determining the vowel-harmonic class. Examples: *u...o* in *mùnó* 'roll up', *u…ɔ* in *mùnɔ́* 'rumple', *i…e* in *dìŋé* 'sit', and *i…a* in *bìrá* 'work'.

In **trisyllabic and longer** verb stems, whether underived or suffixally derived, the medial vowels are high. They are usually pronounced as *u* by my assistant in careful speech, but in allegro speech they are heard as a schwa-like vowel of variable timbre and they optionally zeroed (Late u-Syncope) in favorable environments. This means that (except for the irregular 'bring' and 'come') there are no verbs of three or more syllables whose imperative ends in any front vowel {*i e ɛ*}. The relationship between the first and last vowels is the same for long stems as for bisyllabics, except that there are no #*e…u…e* verbs. Only *e…u…o* is attested: *dègùró* '(manufactured object) become pleasingly shaped' (compare adjective *dègírè*, which does end in *e*), *étú-ró* 'be sweet' (inchoative of adjective *ètú*), *lékùró* 'drip'.

To a large extent, the vocalic phonology of stem plus inflectional suffix combinations follows the same patterns, which could therefore be formulated as word-level constraints for verbs.

### 3.5.4 Suffix-to-Suffix Vocalic Assimilation (right to left)

Vowel-harmonic processes generally take the form of left-to-right (forward) spreading of vocalic features from stems into suffixes.

However, there is also a somewhat limited right-to-left vocalic assimilation that applies in the combination of future *-yàrà-* with a following third person subject morpheme, 3Sg *-wɔ́* or 3Pl *-e* (the latter with or without an additional 3Pl *=bé* or nonhuman plural *=kɛ́*). The data are messy, and morphology and phonology cannot be easily separated. The relevant data are in (19).

(19)

| *-yàrà-* plus … | pronunciations | |
|---|---|---|
| 3Sg *-wɔ́* | *-yàrà-wɔ́*, *-yɔ̀r-ɔ̌:* | |
| 3Pl *-e* | *-yèr-è* | after stem of {*e o*} vowel-harmonic class |
| | *-yɛ̀r-è* | after stem of {*ɛ ɔ a*} vowel-harmonic class |

In the 3Sg, there is an optional contraction of /àwɔ́/ to *ɔ̌:*, compare Intervocal Semivowel-Deletion (§3.6.4.1). If this contraction occurs, it is followed by an obligatory assimilation of the first *a* in *-yàrà-* to the *ɔ* vocalism of the ending. The harmonic class of the stem is not a factor. For example, alongside uncontracted *tòtí-yàrà-wɔ́* 'he/she will show' the contracted form is *tòtí-yɔ̀r-ɔ̌:*, even though 'show' is an {*e o*} harmonic-class verb.

In the 3Pl, the replacement of the final *a* in *-yàrà-* by *-e* leads to an obligatory assimilation of the first *a* in *-yàrà-*. This time, however, my assistant pronounced *-yèr-è* or *-yɛ̀r-è* depending on the harmonic class of the stem. In other words, the assimilation of /a/ to {*e ɛ*} is triggered by the final suffix, but the relevant vowel is still within the harmonic control of the verb stem.

(20)

| gloss | imperative | future | future (3Pl form) |
|---|---|---|---|
| 'dance' | *jɛ́* | *jí-yàrà* | *jí-yɛ̀r-è* |
| 'cut' | *cɛ́sá* | *cɛ̀sí-yàrà* | *cɛ̀sí-yɛ̀r-è* |
| 'carry' | *dé* | *dí-yàrà* | *dí-yèr-è* |
| 'dig channel' | *póró* | *pòrí-yàrà* | *pòrí-yèr-è* |

In the case of *Cé-* monosyllabic verbs that do not raise their vowel in the combining form, 3Pl future *-yèr-è* loses its /y/ and the form contracts. Thus *dé* 'be tired' (imperative identical to combining form), future *dé-yàrà-*, 3Pl future /dé-yèr-è/ surfacing as *dê:-r-è*. See Intervocalic Semivowel-Deletion (§3.6.4.1).

## 3.6 Segmental phonological rules

### 3.6.1 Nasalization rules

#### 3.6.1.1 Forward Nasalization

Forward Nasalization is the process whereby nasalization spreads from a vowel or consonant to a consonant on its right. The consonants that are targets for this spreading are {*y w r*], which become {$y^n$ $w^n$ $r^n$} by this process.

When {*y w*} are syllable-final in a syllable beginning with a nasal, or with a nasalized vowel, I do not usually indicate the spreading in transcriptions, thus *bɔ̀n-ěy* 'little mortar' (diminutive of *bɔ̀nɔ́*), pronounced [bɔ̀nějⁿ] with nasality extending to the end of the second syllable. An exception is when the semivowel has secondarily become syllable-final due to Syncope or Apocope, in which case I do indicate nasalization in the ordinary transcription: *mɔ̌y$^n$* 'raise (livestock)', combining form of the verb whose imperative is *mɔ̀y$^n$ɔ́*.

As a static phenomenon, we observe that {$y^n$ $w^n$ $r^n$} regularly occur within stems that also have a preceding nasal consonant or another {$y^n$ $w^n$ $r^n$}. The stem-internal cases can be thought of in terms of a constraint (nasalization harmony), rather than a linear process. Examples of stems respecting this constraint are *már$^n$á* 'stupidity', *kúmíy$^n$ó* 'clench (hand)' *nàw$^n$á* 'meat', *núw$^n$ó* 'die', *mɔ̀r$^n$ɔ́* 'be in error', *y$^n$àw$^n$á* 'be pampered'.

To be sure, there are some real and/or apparent counterexamples. One issue is the treatment of alternations of the types *Cvmburv* ~ *Cvmrv* and *Cvŋgurv* ~ *Cvŋrv* discussed in some detail in §3.6.2.1, below. Another is the occurrence of a number of stems where *m* behaves phonologically like *mb*, and may in fact alternate with *mb* or *m$^b$*, see §3.3.8, above.

Forward Nasalization is most clearly observed in verb-suffix combinations where a nasal in the verb induces nasalization of {*w y r*} in the suffix. Relevant suffixes include perfective-1b *-wɔ̀sì-* (*-wòsì-*), perfective negative allomorph *-rí-*, and imperfective allomorph *-rà-*. When nasalized, these appear as *-w$^n$ɔ̀sì-* (*-w$^n$òsì-*), *-r$^n$í-*, and *-r$^n$à-*, respectively. Of special interest are the suffixes *-yàrà-* (future), illustrated in (21a-d), and *-wɔ̀rè-/-wòrè-* (perfective-1a), which nasalize both the suffix-initial semivowel and the suffix-medial rhotic after a nasal syllable: *-y$^n$àr$^n$à-*, *-w$^n$ɔ̀r$^n$è-* (*-w$^n$òr$^n$è-*). For the perfective-1a, see *kár$^n$-w$^n$ɔ̀r$^n$è* in (119) in §4.7.2.1.

The segment that triggers Forward Nasaliation may be a syllable-initial nasal or nasalized consonant (21a), a syllable-final nasalized semivowel (21b), or a nsalized vowel (21c).

(21)

| | gloss | imperative | future |
|---|---|---|---|
| a. | 'go up' | *ùnɔ́* | *ùní-yⁿàrⁿà-* |
| b. | 'steal' | *gùyⁿó* | *gǔyⁿ-yⁿàrⁿà-* |
| c. | 'be ripe' | *pɛ́ⁿ* | *pɛ́ⁿ-yⁿàrⁿà-* |

The rule may be formalized as (22). As formulated it will apply even to syllable-final semivowels, although I do not bother to transcribe nasalization in these cases.

(22) Forward Nasalization

definition: a **nasal syllable** is a syllable of the shape *Nv* with some nasal or nasalized consonant *N*, or *(C)vN* with some nasalized semivowel *N*, or *Cvⁿ* with a nasalized vowel

{*w y r*} > {*wⁿ yⁿ rⁿ*} after a nasal syllable

Contrast e.g. *núm-bòrè-* ~ *núm-wòrè-* 'died' in (267e) in §10.1.1.1 where syllable-final *m* does not spread its nasalization rightward. Likewise in *yⁿǎm-bɔ̀rè-* ~ *yⁿǎm-mɔ̀rè-* 'was ruined' (same reference), whose *m* is derived from /wⁿ/ (§3.6.3.2).

### 3.6.1.2 Backward Nasalization

**Backward nasalization** spreads nasalization from a medial *Nv* syllable to the consonant at the onset of the preceding syllable. All examples known to me involve semivowels {*w y*} rather than *r*. Stem-initial *r* is found only in Fulfulde loanwords, and here it does not nasalize: *rɛ́:nà* 'surviving'. I do not hear nasalization in e.g. *gúrùŋ-gáràŋ* 'having spreading roots'.

In cases like (23) where all relevant segments are internal to a stem, Backward Nasalization can be thought of as applying passively in the form of a constraint against oral semivowels in nasalizing positions.

| (23) | | form | gloss | comment |
|---|---|---|---|---|
| | a. | *yⁿà:ŋá* | ‘night’ | |
| | | *yⁿɔ̀ŋɔ́* | ‘waste(v)’ | |
| | b. | *wⁿàŋá* | ‘lower (price)’ | |

The forms in (23) can be taken as having a lexicalized *yⁿ* or *wⁿ*.

The noun ‘woman’ is the best case in nominal morphology for a phonological rule where nasalization spreads from the suffix to the preceding stem. As a simple noun its forms are *yⁿà-rⁿú* ‘woman’ and plural *yⁿà-mú*. Assuming that native speakers connect this stem with e.g. the compound initial in *yà-gùrɔ̌-n* ‘adolescent girl’, and with the adjective *yá* ‘female (animal)’, one can argue for a lexical representation /yà-/ and for a Backward Nasalization process.

Backward Nasalization is more easily observed in verbal morphology. The **imperfective negative** suffix, which takes the general form *-rⁿv́-*, specifically *-rⁿá-*, *-rⁿɔ́-*, or *-rⁿó-*, after monosyllabic *Cv́-* stems, induces Backward Nasalization of the stem-initial consonant, so that *y* and *w* become *yⁿ* and *wⁿ*. The same thing happens in the hortative (§10.4.4), which for monosyllabic stems has allomorph *-yⁿɛ́* or *-yⁿɛ́* depending on vowel harmony.

| (24) | | gloss | imperative | IpfvNeg | hortative |
|---|---|---|---|---|---|
| | a. | ‘weep’ | *yɛ́* | *yⁿì-rⁿá-* | *yⁿí-yⁿɛ́* |
| | b. | ‘see’ | *wɔ́* | *wⁿɔ̀-rⁿɔ́-* | *wⁿɔ̀-yⁿɛ́* |

An extension of Backward Nasalization to **initial *l*** in a *lv-* monosyllabic verb results, quite unusually, in *nv-*. There are only three verbs of this shape (25).

| (25) | | gloss | imperative | IpfvNeg | hortative |
|---|---|---|---|---|---|
| | a. | ‘enter’ | *ló* | *nù-rⁿó-* | *nú-yⁿɛ́* |
| | b. | ‘eat’ | *lɛ́* | *nì-rⁿá-* | *ní-yⁿɛ́* |
| | c. | ‘spend night’ | *lá* | *nà-rⁿá-* | *ná-yⁿɛ́* |

For ‘enter’ and ‘spend night’ the *n* is probably original (e.g. Jamsay *nú:*, Ben Tey *nú*, and Nanga *núy* ‘enter’; Jamsay *ná:* and Ben Tey *ná* ‘spend night’). The ‘eat’ verb, however, might be related to a cognate set pointing to *ɲɛ́(:) including Jamsay *ɲɛ́:*, and in TT it may have gotten tangled with the phonologically and semantically similar verb *nɛ́* ‘drink’ (‘eat’ and ‘drink’ have merged fully in one other Dogon language, Tiranige).

Historical origins may also help us understand an otherwise unintelligible phonological pattern in the imperfective negative of *Cvrv* stems with medial rhotic. With bisyllabic stems, the imperfective negative allomorph is *-nv́-*. The combination /Cvrù-nv́-/ undergoes Early *u*-Syncope (§3.6.2.2) and Rhotic Deletion (§3.6.3.6), and shows up as *Cv̀-nv́-*. This now satisfies the environment for Backward Nasalization, but one wonders whether it is too late at this point in the derivation for the nasalization rule to apply. The data are in (26).

| (26) | | gloss | imperative | IpfvNeg |
|---|---|---|---|---|
| | a. | 'come' | *yèrí* | *yè-nó-* |
| | | 'measure' | *yàrá* | *yà-ná-* |
| | | 'do farming' | *wàrá* | *wà-ná-* |
| | b. | 'be hurt' | *lùrɔ́* | *nù-nɔ́-* |

There is no nasalization of the initial semivowels in the imperfective negative forms in (26a). However, the initial /l/ in (26b) does nasalize to *n*. It seems odd that /l/ but not semivowels nasalize here, given that semivowels (and /r/) elsewhere have a greater propensity to nasalize than other consonants including /l/. Again, though, the initial *n* is original (cf. Jamsay *nùr$^{n}$ó* 'pain').

Backward Nasalization is formulated in (27).

(27) **Backward Nasalization**

a. constraint: initial semivowels must be nasalized within stems beginning in *CvN*… with *N* a nasal or nasalized consonant.
b. stem-initial {*y w l*} become {*y$^{n}$ w$^{n}$ n*}, respectively, in *Cv-* stems before a suffix beginning with a nasal or nasalized consonant.
c. stem-initial /l/ becomes *n* in a *Cvrv-* stem that reduces (by Early *u*-Syncope and Rhotic Deletion) to *Cv-* before a suffix beginning with a nasal

### 3.6.1.3 Alternations of *l* with *n*

Among the examples where TT *l* corresponds to *n* in several other Dogon languages are these: *lá* 'spend the night', *ló* 'enter', *làrá* 'bear (child)', and *lùrɔ́* 'be hurt'. Aside from the cases of /l/ > *n* by Backward Nasalization described in the preceding section, the following minor alternations of *l* and *n* may be mentioned.

I recorded the term for 'Bella (member of Bella ethnic group)' as singular *bènè-rⁿú* (presumably < *bèlè-rⁿú) but plural *bèlě-m*. The term for 'Fulbe (person)' is *púnɔ̀-rⁿú*, plural *púlɔ̌-m*. For both 'Bella' and 'Fulbe', the stem-medial *n* variant is associated with singular suffix *-rⁿú*, while the *l* variant is associated with plural *-ḿ* (allomorph of *-mú*).

Associated with adjective *nôm* 'sour', I recorded a verb *lóló* 'become sour'.

Related to the common verb *jèló* 'pass' is the comparative 'be/do more (than X)' pattern based on the stative construction *[X jěl dà]*, literally something like 'be in a state of having (sur-)passed X'. This is pronounced *jěn dà* by some speakers, though they do not have *n* in *jèló* 'pass' itself, suggesting that the comparative construction is no longer structurally transparent (§12.1.4).

#### 3.6.1.4 Alternation of *g* with *ŋ*

This occurs as a quirky feature of inchoative verbs that are based on adjectives with medial *g*. The examples are *wà:gá* 'distant' with inchoative *wⁿáŋú-lá* 'go far away', and *tɛ̀gɛ̌y* 'small' with inchoative *tɛ́ŋú-lá* 'become small'. See (259b) in §9.4.

### 3.6.2 Vocalic rules sensitive to syllabic or metrical structure

#### 3.6.2.1 Medial alternations of *mr* with *mbur* and of *ŋr* with *ŋgur*

It has been difficult to determine the likely native-speaker representation of some stems and stem-suffix combinations where both *mr* and *mbur* seem to be possibilities. Likewise with cases involving *ŋr* and *ŋgur*. Here I will first discuss stem-internal cases, then those involving a stem ending in *m* or *ŋ* and a suffix beginning with *r*.

Examples of relevant stems are in (28).

(28)

| | gloss | trisyllabic | bisyllabic |
|---|---|---|---|
| a. | 'brush away' | *dàmbùrá* ~ *dàmᵇùrá* ~ *dàmúrá* | *dàmrá* ~ *dàmᵇrá* |
| | 'large fruit' | *kùmbúrù* ~ *kùmᵇúrù* ~ *kùmúrù* | *kŭmrù* ~ *kŭmᵇrù* |
| | 'window' | *dómbúrěy* ~ *dómᵇúrěy* ~ *dómúrěy* | *dómrěy* ~ *dómᵇrěy* |

| | | | |
|---|---|---|---|
| b. | ‘wipe off’ | *súŋgúrɔ́* ~ *súŋ$^{g}$úrɔ́* ~ *súŋúrɔ́* | *súŋrɔ́* ~ *súŋ$^{g}$rɔ́* |
| | ‘shape balls’ | *màŋgùrá* ~ *màŋ$^{g}$ùrá* ~ *màŋùrá* | *màŋrá* ~ *màŋ$^{g}$rá* |

By [m$^{b}$] and [ŋ$^{g}$] I imean nasals with a brief oral release. In the trisyllabic pronunciations, the medial (i.e. second) syllable is metrically weak, so its /u/ is articulated as a brief vowel of variable quality, ranging from schwa to [i] or [u] depending on flanking consonants and vowels. Therefore the difference among the several variants given for each form are more subtle than the normalized transcriptions suggest.

**Two analyses** suggest themselves. In one, the inputs are /mr/ and /ŋr/, and the other outputs are the result of a *u*-Epenthesis rule and/or the development of an oral release or a full-fledged oral voiced stop at the end of the nasal. In the second, the underlying representation is something like /mbur/ or /ŋgur/, with the metrically weak /u/ then subject to reduction and perhaps complete deletion.

The advantage of the second analysis is that it accounts for the failure of the /r/ to nasalize to *r$^{n}$* even in variants like *màŋrá* and *màŋùrá* where there is no audible oral stop or oral release between the nasal and the /r/.

Similar issues arise when we consider combinations of *Cvmv-* and *Cvŋv-* verbs with *r*-initial suffixes, specifically reversive *-rv́-*, perfective negative *-rí-*, and imperfective variant *-rv̀-*. (29) exemplifies the issues using the perfective negative, for which only the trisyllabic and bisyllabic extremes are shown, but which have the same gradation of forms seen above for the stem-internal cases. *Cvw$^{n}$v-* verbs are included with true *Cvmv* verbs (29a) since the /w$^{n}$/ becomes *m* in syllable-final position.

(29)

| | gloss | imperative | PfvNeg trisyllabic | PfvNeg bisyllabic |
|---|---|---|---|---|
| a. | ‘look for’ | *y$^{n}$òmó* | *y$^{n}$òmbù-rí-* etc. | *y$^{n}$òm-rí-* etc. |
| | ‘malfunction’ | *y$^{n}$àw$^{n}$á* | *y$^{n}$àmbù-rí-* etc. | *y$^{n}$àm-rí-* etc. |
| b. | ‘sit’ | *dìŋé* | *dìŋgù-rí-* etc. | *dìŋ-rí-* etc. |

The [mb] and [ŋg] pronunciations, with at least a brief oral release, do not occur in the imperative, and would be quite impossible in the case of ‘malfunction’ with its /w$^{n}$/. Given this, and given the widespread occurrence of presuffixal syncope of the final /u/ of bisyllabic combining forms, i.e., /CvCu-/ becoming /CvC-/, it seems obvious that the phonological derivations are of the type (30).

(30) a. /yⁿàwⁿù-rí-/ underlying (combining form plus suffix)
b. /yⁿàwⁿ-rí-/ syncope
c. *yⁿàm-rí-* /wⁿ/ > *m*
d. *yⁿàmbù-rí-* etc. optional Epenthesis and Oral Release

That is, the bisyllabic type *yⁿàm-rí-* is derived first, and the trisyllabic output *yⁿàmbù-rí-* is a further development from it.

However, there is again the question, why does the *r* not nasalize, given that throughout (30a-c) it is in the environment that normally triggers this process? This, and the fact that my assistant preferred the trisyllabic pronunciations in careful style, suggests the possibility that trisyllabic *yⁿàmbù-rí-* is in fact the first pronounceable output of the phonological derivation. In this view, the bisyllabic outputs of the general type *yⁿàm-rí-* are relatively low-level reductions of the trisyllabic form, as suggested schematically in (31).

(31) a. /yⁿàwⁿù-rí-/ underlying (combining form plus suffix)
b. /yⁿàwⁿ-rí-/ syncope
c. /*yⁿàm-rí-*/ /wⁿ/ > *m*
d. *yⁿàmbù-rí-* etc. Epenthesis and Oral Release
e. " Forward Nasalization (fails to apply)
f. *yⁿàm-rí-* etc. optional syncope (or similar lenition)

The interesting feature of this derivation is that (31c) and (31f) may be identical in form, although the forms in question are modified in between, a conclusion unlikely to win favor from phonologists who believe that all phonological processes are driven by the quest for the optimal output. The key move is that the nasal acquires an oral release of some kind at (31d), which then blocks Forward Nasalization. I find this derivation more compelling than that in (30).

The alternations described above occur to a lesser extent before *dà* 'be' in a stative construction with preceding verb in its combining form. The trisyllabic variants are possible in the case of *ŋ* (32a) but not *m* (32b).

(32)

| | gloss | imperative | stative construction | |
|---|---|---|---|---|
| | | | trisyllabic | bisyllabic |
| a. | 'sit' | *dìŋé* | *dìŋgú dà*, etc. | *dǐŋ dà* |
| b. | 'look for' | *yⁿòmó* | — | *yⁿǒm dà* |
| | 'malfunction' | *yⁿàwⁿá* | — | *yⁿǎm dà* |

I have occasionally heard similar pronunciations of nouns or adjectives before *dà* 'be' or dative *dè*. Thus dative *děŋ dè* 'to/for (the) place' is sometimes heard as *dèŋgú dè*.

Lateral *l* combines unproblematically with a preceding peripheral (noncoronal) nasal: *pìlì-m-lí* 'did not make (it) white'.

### 3.6.2.2 Early and Late *u*-Syncope

There are few opportunities for nouns to syncopate because of their limited suffixal morphology. Where syncope may have occurred historically, the synchronic representation has been updated.

Syncope of a short high vowel, written *u*, is quite important in verbal morphology, the key target being the stem-final vowel preceding a derivational or inflectional (AN) suffix. There are some analytic difficulties here. It is necessary to distinguish **Early *u*-Syncope**, which may lead to the operation of *CC*-cluster rules (some of them fairly unusual), and **Late *u*-Syncope** typical of allegro speech.

An example of Early *u*-Syncope is the combination of 'laugh' (imperative *mǔ:*, underlying combining form /mɔ̀w$^{n}$ú/) with future *-yàrà-* as *mǔm-bàrà-* (variants *mǔm-màrà-*, *mǔm-m$^{b}$àrà-*). Here the syncope leads to consonantal changes, first the syllable-final shift of /w$^{n}$/ to *m* (§3.6.3.2), then an idiosyncratic *CC*-cluster rule converting /my/ to *mb* or *mm$^{b}$* (with oral release, §3.6.3.4), which then optionally simplifies to *mm*.

An example of Late *u*-Syncope is the sporadic reduction of perfective-2 *kúlú-sò-* 'put' to *kúl-sò-*. Here the targeted vowel, though being in a metrically weak position, is usually pronounced in careful speech. The only consonantal adjustment that is conditioned by Late *u*-Syncope is the conversion of *r$^{n}$* to *n* before another consonant, as in perfective-2 *kár$^{n}$ú-sà-* 'did', which can be heard in allegro speech as [kánsà].

As the examples above show, both Early and Late u-Syncope occur at the juncture between a (nonmonosyllabic) verb stem and a suffix. Indeed, they can both occur in connection with the same verbal suffix, depending on the preceding consonantism, as in forms of perfective-1b *-wɔ̀sì-/-wòsì-*. When the preceding verb (in combining form) is *Cvlú-* with lateral *l*, there is no Early *u*-Syncope and we get forms like *kúlú-wòsì-* 'put-Past', which may undergo optional Late *u*-Syncope to *kúl-wòsì-*. On the other hand, *nùŋɔ́* 'sing' has perfective-1b variants based on *nǔŋ-gɔ̀sì*. This calls for Early *u*-Syncope followed by *CC*-cluster adjustments.

Certain consonants require Early u-Syncope in the correct morphological enviroment: **semivowels {*y w y$^{n}$ w$^{n}$*} plus *m***. These consonants induce syncope not only at the end of bisyllabic stems, but also at the end of trisyllabic

and longer verbs stems, which do not syncopate the final vowel after other consonants. Thus *bùrùmɔ́* 'make mound' has combining form *bùrŭm-* before suffixes, and *bìrìyó* 'go back' has *bìrĭy-*, illustrating third-syllable Early *u*-Syncope after a semivowel or *m*. Contrast *wìwìsó* 'put a pinch' with combining form *wìwìsú-*, and *yìyìró* 'sprinkle' with combining form *yìyìrú-*, where the third syllable keeps its *ú*.

Early *u*-Syncope applies under more limited conditions after the **remaining sonorants**, i.e. {*ŋ n l r* $r^n$}. Only bisyllabic *CvCu-* stems before a suffix permit Early *u*-Syncope after these consonants, unlike semivowels and *m* (which also require syncope in the third syllable of *CvCvCu-* stems). Within bisyllabics, which consonants from the set {*ŋ n l r* $r^n$} induce Early *u*-Syncope depends on the particular following suffix. The details are best reserved for the relevant sections of Chapters 9 (derivational) and 10 (inflectional).

In the combination *CvCu-Cv…* with bisyllabic stem and a suffix, if the medial-syllable vowel is not deleted by Early *u*-Syncope, it is still in a metrically weak position and is usually schwa-like. It is optionally syncopated entirely if the flanking consonants permit. This is the case with *kúlú-sò-* 'put' (perfective-2), syncopated variant *kúl-sò-*, mentioned above. The medial syllable is likewise metrically weak in underived $CvCuC_3v$ verb stems (excluding cases where $C_3$ is a semivowel or *m* and the final vowel is syncopated). Here again, the second vowel is schwa-like and may disappear if the flanking consonants permit. I interpret this to be **Late *u*-Syncope**, which is really just the limiting case of low-level vocalic reduction in a metrically weak position. Some trisyllabic examples are in (33), where the second-syllable /u/ is understood to be weak and occasionally syncopated.

| (33) | gloss | imperative | IpfvNeg | future |
|---|---|---|---|---|
| | 'soar' | *yàlùrá* | *yàlùrù-ná* | *yàlùrí-yàrà* |
| | 'massage' | $y^n$*ùmùnɔ́* | $y^n$*ùmùnù-nɔ́* | $y^n$*ùmùní-*$y^n$*àr*$^n$*à* |
| | 'go far' | $w^n$*áŋúlá* | $w^n$*àŋùlù-ná* | $w^n$*àŋùlí-yàrà* |

The Early *u*-Syncope rule is given informally as (34). The details of (34b) are specific to particular suffixes and are given in the relevant sections of chapters 9 (derivational) and 10 (inflectional). The targeted vowel is underlined.

(34) **Early *u*-Syncope** (obligatory)

a) $CvC_2\underline{u}$-*Cv* with bisyllabic stem and $C_2$ = semivowel or *m* : the *u* is deleted (unrestricted)
b) $CvC_2\underline{u}$-*Cv* with bisyllabic stem and $C_2$ = {*ŋ n l r* $r^n$} : the *u* is deleted (various phonological and morphological restrictions)

c) *CvCuC$_3$ u-Cv* with trisyllabic stem and *C$_3$* = semivowel or *m* : the presuffixal *u* is deleted (unrestricted)

The Late *u*-Syncope rule is given in (35), with the targeted vowel underlined. A full analysis will not be given here of the fine points, such as which pairs of flanking consonants lend themselves to full syncope. A sibilant after the targeted vowel, as in *wàgùsá* 'knead', does favor syncope regardless of the preceding consonant. Otherwise, stops and *n* preceding the targeted vowel disfavor syncope. Identical consonants seem to avoid syncopating (which would produce a geminate), for example in *súmú-mɔ́* 'cause to be wrinkled'.

(35) **Late *u*-Syncope** (optional, low-level)

*CvCvCv* with or without morpheme boundaries: schwa-like second vowel, written /u/, in weak metrical position is optionally deleted in allegro speech if flanking consonants permit

### 3.6.2.3 *u*-Apocope

Apocope (final-vowel deletion) is closely related to syncope. Because verbs have a combining form that occurs both before suffixes (derivational and inflectional), and in VP-chains without a suffix, the same final *u*-vowel is involved in both pre-suffixal syncope (described above) and in interword apocope (in chains). One could question whether a chain of two verbs (the first in the bare combining form, the second inflected) might not be considered a compound-like structure. Indeed, in the future and progressive, which control a {LH} overlay on the verb, a preceding chained verb is treated as part of the main verb and is therefore included in the L-toned part of the overlay (§10.1.1.9, §10.1.3.2).

The same apocope that we see in verb chains also applies to the verbal noun in suffix *-ú*, which is often prepausal. The verbal noun and the combining form are audibly distinguishable by tone only, and only when the lexical melody is /H/ (the verbal noun has a {LH} overlay). For examples of the *-ú* verbal noun see §4.2.2.1.

At any rate, the underlying final /ú/ of combining forms and verbal nouns of nonmonosyllabic verbs is deleted in much the same way it is in verb-suffix combinations (where I refer to the deletion as syncope). One might therefore distinguish Early and Late *u*-Apocope. However, neither chained combining forms, nor verbal nouns, are involved in the quirky *CC*-cluster rules that make the distinction between Early and Late *u*-Syncope so important in verbal

inflectional morphology. Instead, apocope may be obligatory or optional, depending on syllable count and on the consonant preceding the targeted vowel.

(36) ***u*-Apocope (combining form of verb, also *-ú* verbal noun)**

obligatory:
a) *CvC$_2$ u* with bisyllabic stem and *C$_2$* = semivowel or *m* : the *u* is deleted (unrestricted)
b) *CvCuC$_3$ u* with trisyllabic stem and *C$_3$* = semivowel or *m* : the final *u* is deleted (unrestricted)

optional
c) *CvC$_2$ u* with bisyllabic stem and *C$_2$* other than semivowel or *m* : the *u* is optionally deleted if the flanking consonants allow this

### 3.6.2.4 Monosyllabic-Stem Vowel-Lengthening

Verbs of the shape *Cv́* do not lengthen their vowel before AN (i.e., inflectional) suffixes. However, they do lengthen the vowel (of the combining form) to *Cv́:-* before certain derivational suffixes.

Three relevant reversive derivatives are given in (245d) in §9.1. An example is *tɔ́* 'step on', reversive *tɔ́:-rɔ́* 'take foot off'. Contrast an AN form like perfective-2 *tɔ́-sɔ̀-* 'stepped on'.

From the causatives in §9.2, the relevant derivation is from *lɛ́* 'eat (meal)', with combining form *lí-*, to causative *lí:-má* 'feed'. From the deadjectival inchoatives in §9.4, the relevant pair is adjective *gá* 'big(ger)' and inchoative *gá:-lá* 'become big'.

There are no counterexamples known to me of the generalization that *Cv́-* lengthens to *Cv́:-* before reversive suffix *-rv́-*, causative suffix allomorph *-mv́-*, and inchoative suffix allomorph *-lv́-*. In this sense, the lengthening rule is productive, although a relatively small set of forms is involved.

(37) **Monosyllabic-Stem Vowel-Lengthening**

*Cv́-* verb stem > *Cv́:-* before a productive derivational suffix

The lengthening does not apply to idiosyncratic, frozen causatives not involving a productive causative suffix: *dìró* 'cause to bathe' from intransitive *dí\\dé* 'bathe', *nɛ̀w$^{n}$á* 'give drink to' from *ní\\nɛ́* 'drink', and *gùŋɔ́* 'take out' from intransitive *gú\\gɔ́* 'exit'.

### 3.6.3 Local consonant cluster rules

#### 3.6.3.1 Assimilations involving 1Sg *m̀*

The 1Sg pronoun has a full form *mí* or *m̀ᵇí* as an independent pronoun (§4.3.1). In most grammatical contexts it lacks a vowel, has low tone, and may be represented as *m̀* (or *m̀ᵇ*). Before a vowel, for example the imperfective particle *á*, the verb *áwá* 'catch' (38a), or (as possessor) the noun *íló* 'house', the 1Sg morpheme appears as *m̀* or *m̀ᵇ* with oral release. My primary assistant strongly preferred *m̀ᵇ* in careful style.

Before a consonant other than *h*, the 1Sg morpheme behaves like an underspecified nasal. It therefore acquires place features from the following consonant (38b-d).

(38) a. *m̀ᵇ* *áw-wɔ̀sì-wɔ́*
1SgObj catch-Pfv1b-3SgSbj
'He/She caught me.'

b. *ǹ* *tɛ́w-wɔ̀sì-wɔ́*
1SgObj hit-Pfv1b-3SgSbj
'He/She hit me.'

c. *ŋ̀* *wɔ̌ː-sì-wɔ́*
1SgObj see-Pfv1b-3SgSbj
'He/She saw me.'

d. *m̀* *págú-wɔ̀sì-wɔ́*
1SgObj tie-Pfv1b-3SgSbj
'He/She tied me up.'

The assimilation rule is (39). It is an idiosyncracy of the 1Sg morpheme and does not apply, for example, to verb stems ending in *m* in the combining form before a suffix.

(39) Assimilations of 1Sg *m̀* to a following consonant
*n* before alveolar {*t d n s z l*} or palatal {*y j*}
*m* before labial (*p f m*} and before *h*
*ŋ* before velar {*k g ŋ*} and before *w*

I make no orthographic distinction between *n* before alveolar, and *n* before palatal, but in the latter case the *n* is articulated in the palatoalveolar area.

The 1Sg morpheme is pronounced *m̀* before /h/, as in *m̀ há:jɛ̀* 'my need(s)'. Since /h/ has no supralaryngeal articulatory gesture it does not interact with the basic labial articulation of the nasal. /h/ occurs word-initially in Fulfulde loans like *há:jɛ̀*.

### 3.6.3.2 /w$^{n}$/ > *m*

Consider alternations like that for the verb 'die': imperative *núw$^{n}$ó*, combining form *núm* (in chains), imperfective *nǔm-màrà*, and perfective negative *nùmbù-rí* (< /nùm-rí/). Here lexical (i.e. underlying) /w$^{n}$/ surfaces only between vowels. In syllable-final position (word-finally, or preconsonantally within a word), it shifts to *m*. The shift is independent of the quality of the preceding vowel; compare 'be ruined' with imperative *y$^{n}$àw$^{n}$á* and combining form *y$^{n}$ǎm*, and 'drown' with imperative *nɛ̀w$^{n}$á* and combining form *nɛ̌m*.

(40) /w$^{n}$/ > *m*

/w$^{n}$/ shifts to *m* in syllable-final position

The shift is fed by *u*-Syncope, which applies in the infinitive and in the suffixed verb forms cited above (but not in the imperative).

Because of this shift, at least one pair of verbs that have different imperatives is merged in the combining form and in the inflections based on the combining form: *sám\\sámá*, itself perhaps etymologically composite, meaning 'pick out, select' (cf. Jamsay *sáná*) or 'strain water from (wild peas' (cf. Jamsay *sá:*), versus *sám\\sáw$^{n}$á* 'fence in (with thorn branches' (cf. Jamsay *sáŋá*).

There is no parallel shift for *y$^{n}$*, hence 'steal' has infinitive *gǔy$^{n}$*, perfective *gǔy$^{n}$-wòsì*, and imperative *gùy$^{n}$ó*.

### 3.6.3.3 Summary of *CC* processes at verb-suffix boundary

The tabular representation (41) summarizes the outputs at the boundary of a *CvCv-* verb, syncopated to *CvC-* before a *C*-initial verb suffix. It is assumed that the syllable-final shift of /w$^{n}$/ to *m* has already taken place. It is also assumed that stems with final /r/ or /r$^{n}$/ have forced suffixes that otherwise begin with /r/ after stems of this syllabic shape to **default to their other allomorph** (which is normally reserved for trisyllabic stems). Specifically, imperfective *-rv̀-* is replaced by its allomorph *-tv̀-*, and perfective negative *-rí-* is

replaced by its allomorph *-lí-*. The stem-final input consonant is shown in the vertical column on the left, and the suffix-initial input consonant is shown horizontally across the top.

(41)

| | *w* | *y* | *r* | *l* | *n* | *s* | *t* |
|---|---|---|---|---|---|---|---|
| *m* | *mb/mm* | *mb/mm* | *mbur* | | | | |
| *ŋ* | *ŋg* | *ŋg* | *ŋgur* | | | | |
| *w* | | *ww* | | | | | |
| *r* | | | *l* | *l* | *n* | | *t* |
| *r*$^{n}$ | | | *l* | *l* | *n* | | *t* |
| *l* | | | *ll* | | *nn* | | |
| *n* | | | *nn* | | | | |
| *t* | | | | | | *tt* | |

The blank cells in the table indicate either that the combinations are not produced by Early *u*-Syncope (e.g. /nl/, or else that no change occurs (e.g. /nn/, /ml/). The data are sparse for suffix-initial *l* and *t*, which are confined to suffixal allomorphs of limited distribution.

In the changes that are shown in the table, four themes emerge. These correlate, respectively, with the topmost three rows, the middle two rows, and the lowest three rows of the table proper (excluding headings). First, suffix-initial semivowels fuse in a somewhat complex way with a preceding peripheral nasal, or in one case with a nonhomorganic semivowel. Second, two rhotics (/rr/ or /r$^{n}$r/) combine to form ungeminated *l*. Third, rhotics are deleted before suffix-initial coronals {*l n t*} but not *s*. Fourth, some clusters of similar but nonidentical coronal consonants simplify to geminates; one subset of cases involves two sonorants, another is the specific case of /ts/ > *tt*. These are described in the following sections. For the cases of *mbur* for /mr/ and of *ŋgur* for /ŋr/, see §3.6.2.1, above.

### 3.6.3.4 Semivowel Fusion (/mw/, /my/, /ŋw/, /ŋy/, /wy/)

In the inflectional categories whose suffixes begin with *w* or *y*, this semivowel may fuse with the stem-final consonant (after Early *u*-Syncope). The relevant suffixes are perfective-1a *-wɔ̀rè-/-wòrè-*, perfective-1b *-wɔ̀sì-/-wòsì-*, and future *-yàrà-*.

The cluster *yw* is stable, but /wy/ > *ww*.

(42) a. *yǎy-wɔ̀rè*
go-Pfv1a
'went'

b. *ǒw-wàrà*
give-Fut
'will give' (*ów-* plus *-yàrà-*)

In the nasal-semivowel combinations, the phonetic outputs are rather varied and the phonology is not completely clear. The relevant combinations are /mw/, /my/, /ŋw/, and /ŋy/, as alveolar *n* disallows Early *u*-Syncope of a following vowel before a semivowel.

Basically, the nasal *m* or *ŋ* pushes rightward into the prosodic slot of the suffixal semivowel. As a result, suffix-initial /y/ vanishes, and /w/ may also disappear (but does not always do so). The situation is complicated by the fairly strong tendency of the nasal to develop a terminal oral release or even a full voiced stop, hence [mb] or [$m^b$] varying with [m:], and [ŋg] or [$ŋ^g$] varying with [ŋ:]. A suffixal /w/ fails to nasalize by Forward Nasalization (§3.6.1.1), suggesting that this variant is parasitic on some other variant with an oral release to the nasal.

(43)

| | gloss | imperative | perfective-1a or -1b | future |
|---|---|---|---|---|
| a. | 'die' | *núw$^n$ó* | *nǔm-bòrè-*<br>*nǔm-m$^b$òrè-*<br>*nǔm-mòrè-*<br>*nǔm-wòrè-* | *nǔm-bàrà-*<br>*nǔm-m$^b$àrà-* |
| b. | 'sing' | *nùŋɔ́* | *nǔŋ-gɔ̀sì-*<br>*nǔŋ-ŋ$^g$ɔ̀sì-*<br>*nǔŋ-ŋɔ̀sì-*<br>*nǔŋ-wɔ̀sì-* | *nǔŋ-gàrà-*<br>*nǔŋ-ŋ$^g$àrà-*<br>*nǔŋ-ŋàrà-* |

The rules are formulated as (44). To my knowledge they apply only in the morphology of bisyllabic verbs, but I can find no other contexts where the relevant combinations occur, except a few iterative expressive adverbials with /wy/ like *yéréw-yéréw* 'striding fast'.

(44) **Semivowel Fusion** (verb-suffix boundary)

a. /wy/ > *ww*

b. suffix-initial {*y w*} fuse with a preceding peripheral nasal {*m ŋ*}, allowing the nasal to penetrate into the prosodic slot of the semivowel (fully for /y/, fully or partially for /w/); the nasal may also develop an oral release

(44b), regarding the nasals, should be placed in a larger context including the development of /mr/ to *mbur* and of /ŋr/ to *ŋgur*, though in these cases the *r* does not fuse with the nasal (on the contrary). See §3.6.2.1 for discussion.

### 3.6.3.5 Rhotic Dissimilation

The combination of stem-final *r* or *r*$^{n}$ plus suffix-initial *r* after syncope is realized as *l*, if we factor out cases where the stem-final rhotic has forced the suffix to default to another allomorph not beginning with *r*. Admittedly, this means disregarding the majority of rhotic-final stems, which do force this default.

In the imperfective, the default from *-rv̀-* to the other suffixal allomorph *-tv̀-* is observed with most of the relevant verbs, and the resulting /rt/ or /r$^{n}$t/ surfaces as *t* by Rhotic-Deletion, as in *sór*$^{n}$*ó* 'call', imperfective *só-tò-* and *céré* 'wait', imperfective *cé-tò-*.

However, two "irregular" imperfectives show *l* instead of *t*. I analyse them as cases where the default to *-tv̀-* does not take place, so in effect these irregularities show the authentic treatment of /rr/ and /r$^{n}$r/. The relevant examples are in (45).

(45)

| gloss | imperative | imperfective |
|---|---|---|
| 'do' | *kár*$^{n}$*á* | *ká-là-* |
| 'encounter' | *dìr*$^{n}$*á* | *dí-là-* (alongside regular *dí-tà-*) |

Admittedly, this is a slender evidentiary base for a phonological rule. However, if this line of reasoning is accepted, we apparently have /r$^{n}$r/ combining as ungeminated *l*. The most sensible analysis is to have the suffixal /r/ **dissimilate** to the preceding rhotic, becoming *l*. Later the stem-final /r$^{n}$/ is deleted before *l*, as it is before perfective negative allomorph *-lí-*, see Rhotic-Deletion, below.

A **different dissimilation** is seen in reversive derivatives from *Cvrv* stems. The productive reversive suffix is *-rv́-*. Early *u*-Syncope does not occur in this

combination. From *tárá* 'be stuck on' we have *tálú-rá-* '(something stuck on) be taken down or off', and from *màrá* (~ *m̀ᵇàrá*) 'be lost' we get *màlù-rá* (~ *m̀ᵇàlù-rá*) '(something lost) be found (recovered)'; see (246) in §9.1. So here it is the stem's rhotic, not the suffixal rhotic, that shifts to *l*. (I have no examples of reversives from *Cvrⁿv-* stems.) The reversive data do at least confirm an avoidance of rhotic-rhotic sequences.

Recognizing that the data are sparse and analytically problematic, I offer the dissimilation rules as (46).

(46) **Rhotic Dissimilation**

a. in reversives: *Cvrv-rv-* > *Cvlv-rv-*

b. in imperfective verbs (with *-rv̀-* allomorph): /rr/ > *rl*
(feeds into Rhotic-Deletion, resulting in *l*)

### 3.6.3.6 Rhotic Delection (before coronal)

A rhotic /r/ or /rⁿ/ is deleted before a nonrhotic coronal consonant (*n*, *t*, *l*, *s*) within a word at a morpheme boundary, following Early *u*-Syncope of the intervening vowel. Early *u*-Syncope applies to bisyllabic verbs of the shape *CvCv-*, so Rhotic Deletion (§3.6.3.6) occurs in bisyllabics ending in …*rv-* or …*rⁿv-* before imperfective negative *-nv́-*, imperfective allomorph *-tv̀-*, and perfective negative allomorph *-lí-*. It does not normally apply before perfective-2 *-sv̀-*, which does not allow Early *u*-Syncope (though it is very receptive to Late *u*-Syncope).

However, a handful of irregular perfective-2 forms do exceptionally require Early *u*-Syncope before perfective-2 *-sv̀-*, which leads to the deletion of the /r/; details in (§10.1.1.3) . Examples are in (47). The relevant suffixal forms of the irregular verb 'bring' are based on /zêːrú-/ rather than on the imperative *zérì* (§10.1.4.2).

(47)

| gloss | Imperat | Imperf | IpfvNeg | PfvNeg | perfective-2 |
|---|---|---|---|---|---|
| 'chase' | *nàrⁿá* | *ná-tà* | *nà-ná* | *nà-lí* | (not relevant) |
| 'sell' | *dɔ̀rɔ́* | *dɔ́-tɔ̀* | *dɔ̀-nɔ́* | *dɔ̀-lí* | (not relevant) |
| 'bring' | *zérì* | *zéː-tò* | *zêː-nó* | *zêː-lí* | *zêː-só-* |
| | [the combining form of 'bring' is /zêːrú/] | | | | |

The clusters *rn*, *rt*, *rs*, and *rl* do occur in loanwords: *dárnà* '(a) call to Muslim worshippers to stand up', *hàrtûm* 'garlic', *sártì* 'time limit', *cèrló* 'bugle' (Fr

*clairon*), *dúrsà* ‘reciting from memory’. Therefore Rhotic-Deletion is a morpheme-boundary process.

(48) **Rhotic Deletion**

> *r* or $r^n$ is deleted when followed (after Early *u*-Syncope) by a suffixal coronal consonant {*l n t s*}.

Something related happens in decimal numerals where *pɛ́:ró* ‘10’ is reduced to *pɛ́- ~ pé-* before a digit numeral beginning with a coronal (*l t n*), but only in 20’ to ‘50’. See (115) in §4.7.1.3.

### 3.6.3.7 Sonorant Assimilation

The following assimilations producing geminate consonants are observed in combinations of *CvCv-* stems with inflectional suffixes (after Early *u*-Syncope): /lr/ > *ll* (with one exceptional case of /nn/ involving a derivational suffix), /ln/ > *nn*, /nr/ > *nn*. There are no cases of input /nl/ so we can only guess what its output would be.

Examples are in (49).

(49)

| | gloss | imperative | suffix | stem + suffix |
|---|---|---|---|---|
| a. /lr/ > *ll* | | | | |
| | ‘do well’ | *célό* | Ipfv *-rv̀-* | *cél-lò-* |
| | | | PfvNeg *-rí-* | *cèl-lí-* |
| b. /lr/ > *nn* | | | | |
| | ‘cover’ | *tílá* | reversive *-rv́-* | *tín-ná-* |
| c. /ln/ > *nn* | | | | |
| | ‘put down’ | *dèlé* | IpfvNeg *-nv́-* | *dèn-nó-* |
| d. /*nr*/ > *nn* | | | | |
| | ‘go up’ | *ùnɔ́* | Ipfv *-rv̀-* | *ún-nɔ̀-* |
| | | | PfvNeg *-rí-* | *ùn-ní-* |

Since the output of /nl/ is indeterminate, if we allow these assimilations to follow Rhotic-Deletion (removing /rn/ and /rl/ from their status as clusters), we can summarize the rules as in (50).

(50) **Sonorant Assimilation** (verb-suffix boundary)

Clusters of any two of {*l r n*} are simplified to geminates based on the hierarchy *n* > *l* > *r*, with the higher-ranking sonorant generalizing its features to the other member of the cluster. Thus:

/nl/ or /ln/ > *nn*

/lr/ > *ll* (exceptionally *nn* in reversive derivation)

### 3.6.3.8 /ts/ > *tt*

This is a quirky backward assimilation that occurs only in the perfective-2. The verbs in question are bisyllabic *Cvtv-* stems. Before perfective-2 *-sv̀-*, Early *u*-Syncope applies (syncope is not usual elsewhere for *Cvtv-* stems). The /ts/ cluster then surfaces as *tt*, as in *tót-tò-* 'showed', cf. imperative *tótó* (§10.1.1.3).

I also recorded /ts/ > *tt* in the phrase *mút tàrá-∅* 'is not numerous', cf. *mútú* 'much, many' and *sàrá-* 'not be'.

(51) /ts/ > *tt* at the stem-suffix boundary with perfective-2 *-sv̀-*, and at the boundary between an adjective and *sàrá* 'not be'.

I know of no *Cvdv-* verbs so I cannot determine whether a similar process applies after *d*.

### 3.6.3.9 /mr/ > *mn*

The irregular shift of /mr/ to *mn* after Early *u*-Syncope is attested in a handful of reversive derivatives: *tɔ́m-nɔ́-* 'unroll (turban)' (from *tɔ́w$^{n}$ɔ́* 'roll on turban'), *bùm-nó* '(to) right (something flipped over)'. See (248d) in §9.1. For the more usual treatment of /mr/ produced by Early *u*-Syncope in this position, namely *mbur*, see §3.6.2.1.

## 3.6.4 Intervocalic consonantal deletions and *vv*-Contraction

### 3.6.4.1 Intervocalic Semivowel-Deletion

In a number of *CvCv* verbs, a medial *w* that shows up consistently in the combining form *Cvw-* is deleted in the corresponding imperative and relatived forms. There are some verbs that do this optionally, and some that are not attested with the deletion. The flanking vowels in the imperative are in all cases

identical non-high back or low vowels, i.e. either *a_a*, *ɔ_ɔ*, or *o_o*. When the *w* deletes, the result is predictably a long *a:*, *ɔ:*, or *o:*. Most of the examples of deletion involve *ɔ_ɔ*, since there are few verbs of the shape *Cowo* and since deletion has only been observed (as an option) with one /Cawa/ verb, 'catch' in (52a).

| (52) | | gloss | combining form | imperative |
|---|---|---|---|---|
| | a. | 'catch' | *áw-* | *áwá ~ á:* |
| | | 'pull in' | *yǎw-* | *yàwá* |
| | | 'jostle' | *gǎw-* | *gàwá* |
| | | 'knock off fruit' | *zǎw-* | *zàwá* |
| | | 'carry on shoulder' | *wǎw-* | *wàwá* |
| | b. | 'poke' | *sɔ́w-* | *sɔ́wɔ́ ~ sɔ́:* |
| | | 'kill' | *wɔ̌w-* | *wɔ̌:* |
| | | 'run' | *zɔ̌w-* | *zɔ̌:* |
| | | 'ask (price)' | *gɔ̌w-* | *gɔ̀wɔ́ ~ gɔ̌:* |
| | | 'be accustomed' | *lɔ́w-* | *lɔ́wɔ́ ~ lɔ́:* |
| | | 'skim off foliage' | *pɔ́w-* | *pɔ́:* |
| | | 'get old' | *yɔ̌w-* | *yɔ̀wɔ́ ~ yɔ̌:* |
| | | 'get water' | *kɔ́w-* | *kɔ́wɔ́ ~ kɔ́:* |
| | c. | 'harvest late millet' | *gǒw-* | *gòwó ~ gǒ:* |

/w$^{n}$/ is also deleted under similar conditions for some verbs (53). If the /w$^{n}$/ deletes, the resulting long vowel is nasalized.

| (53) | | gloss | combining form | imperative |
|---|---|---|---|---|
| | a. | 'toss' | *mǎm-* | *màw$^{n}$á ~ mǎ:$^{n}$* |
| | | 'bump' | *dǎm-* | *dàw$^{n}$á* |
| | | 'become deaf' | *pám-* | *pá:$^{n}$* |
| | b. | 'laugh' | *mɔ̌m-* | *mɔ̌:* |
| | | 'roll on turban' | *tɔ́m-* | *tɔ́w$^{n}$ɔ́ ~ tɔ́:$^{n}$* |
| | | 'scoop up' | *sɔ́m-* | *sɔ́w$^{n}$ɔ́ ~ sɔ́:$^{n}$* |
| | | 'wake up' | *y$^{n}$ɔ̌m-* | *yɔ̀w$^{n}$ɔ́* |
| | c. | 'fold once' | *kóm-* | *kó:$^{n}$* |

The rule also applies to sequences involving a suffix-initial *w*, and there is even a context where /y/ is deleted in this position.

The perfective-1b suffix *-wɔ̀sì-*/*-wòsì-* deletes the /w/ after monosyllabic *Cɔ́-*, *Có-*, and (interestingly) *Cá-* verbs. There are no exceptions to this contraction. Examples are in (54).

| (54) | gloss | imperative | perfective-1b |
|---|---|---|---|
| | 'roast' | *dɔ́* | *dɔ̂:-sì-* |
| | 'wrestle' | *pó* | *pô:-sì-* |
| | 'shave'' | *ká* | *kâ:-sì-* |

The expected uncontracted forms would be #*dɔ́-wɔ̀sì-*, #*pó-wòsì-*, and #*ká-wɔ̀sì-*. The same contraction is seen in *wɔ́-* 'see', perfective-1b *wɔ̌:-sì-*, though here the perfective-1b appears to preserve an archaic rising tone melody.

The initial *y* of future *-yàrà-* is also deleted after these same monosyllabic *Cɔ́-*, *Có-*, and *Cá-* verbs. This is unexpected, since *Cvyv-* verb stems do not lose their *y* (imperatives *yàyá* 'go', *dɔ̀yɔ́-* 'become hot'). *-yàrà-* is the only suffix beginning with /*y*/.

| (55) | gloss | imperative | future |
|---|---|---|---|
| | 'roast' | *dɔ́* | *dɔ̂:-rà-* |
| | 'wrestle' | *pó* | *pô:-rà-* |
| | 'shave'' | *ká* | *kâ:-rà-* |

The contraction does not occur when *-yàrà-* follows monosyllabic *Cɛ́-*, hence *dɛ́-yàrà-* 'will become tired'. However, in the (optional) third person plural variant /dɛ́-yɛ̀r-è/, contraction to *dɛ̂:-r-è* 'they will become tired' does occur.

Combining the verb-stem-internal (imperative) and verb-suffix data, the generalization is that /w/ is subject to deletion between two vowels each from the set {*o ɔ a*}, and that a similar deletion applies on a morphologically restricted basis to the /y/ of the future suffix. All of the deletions occur when the targeted semivowel is at the onset of the second syllable in the word (from the left), but whether this is a factor as such in the operation of the deletion is unclear (the only verbs with combining forms ending in a non-high vowel are monosyllabic, so the necessary underlying vowel sequences are never found in combinations of longer verb stems with suffixes).

(56) **Intervocalic Semivowel-Deletion**

a. /w/ or /w$^{n}$/ is deleted when flanked by short low or mid-height vowels from the set {*o ɔ a*}, obligatorily at stem-suffix boundary but not always obligatory (and for some stems unattested) within a bisyllabic stem; deleted *w$^{n}$* leaves its nasalization on the contracted vowel.

b. /y/ in future suffix *-yàrà-* is deleted (obligatorily) when flanked by short low or mid-height vowels {*o ɔ a*} or (after Suffix-to-Suffix Vocalic Assimilation) by two *ɛ* vowels

### 3.6.4.2 Deletion of intervocalic /r/ (irregular)

Brief mention may be made of an isolated case of a somewhat similar deletion of intervocalic /r/ in tandem with deletion of /w/. This is in the paradigm of the verb *bèrú\\bèrá* 'get, obtain', whose perfective-1b is irregularly *bě:-sì-* for expected quadrisyllabic #*bèrú-wɔ̀sì-*.

### 3.6.4.3 *vv*-Contraction

Two vowels may come together across a deleted consonant, usually /w/, less often /y/ or /r/. For the deletion, see especially Intervocalic Semivowel-Deletion (§3.6.4.1).

Often the two vowels are already identical, so there is no suspense regarding the output vowel quality. The tones are likewise preserved, forming (if necessary) a contour tone (falling or rising).

Cases of nonidentical vowels contracting are given in (57).

(57) a. *Cv-* verb plus AN suffix

/oa/ > *o:* /pó-yàrà-/ > *pô:-rà-* 'will wrestle'

/ɔa/ > *ɔ:* /dɔ́-yàrà-/ > *dɔ̂:-rà-* 'will roast'

b. *Cvrv-* verb before AN suffix

/ɛuɔ/ > *ɛ:* /bèrú-wɔ̀sì-/ > *bě:-sì-* 'will get'

c. AN suffix plus third person suffix

/aɔ/ > *ɔ:* /-yàrà-wɔ́-/ > *-yɔ̀r-ɔ̌:* '-Future-3Sg'

/oɔ/ > *ɔ:* /tórú-sò-wɔ́/ > *tórú-s-ɔ̌:* 'he/she jumped'

d. CV verb-AN portmanteau plus third person suffix
/aɔ/ > *a:* ~ *ɔ:* /là-wɔ́/ > *l-ă:* ~ *l-ɔ̌:* ‘is going (to)’

e. pronoun conjunctions, see (195) in §7.1.1.1
/ia/ > *a:* /mí á lěy / > [má:lěj] ‘I and you-Pl’
/iu/ > *a:* /mí ú lěy / > [mú:lěj] ‘I and you-Sg’

One could attempt to unify these fragmentary data on grounds of phonological naturalness, but since many of the morphemes in question have only one vowel there is also the issue of preserving enough phonetic material to insure recognition of the stems and suffixes in question, particularly *Cv́-* verb stems and the 3Sg suffix.

In (57b), if we assume that both /r/ and /w/ undergo intervocalic deletions, we actually have three vowels /ɛ̀úɔ̀/ contracting to *ɛ̌:*. Since /u/ is the marker of the combining form and conveys no lexical information, it can be sacrificed without loss of such information. This leaves /ɛ/ and /ɔ/, which here contract as *ɛ:*, again preserving lexical over suffixal information (the suffix is initially bisyllabic and is therefore still clearly audible).

There are also some verbal suffix allomorphs, used with stems other than *Cv́* monosyllabics, that are realized as final vowels that replace the vowels of the preceding verb stems (which may be underived or derived). In addition to the hortative and the verbal noun in *-ú*, the combining form (also in *-ú* but with different tonal effects) may also be included here, although my regular transcription does not segment the combining form.

(58) a. no tone change in stem
*-ɛ́*\|\|*-ɛ́* hortative
*-ú* combining form of verb

b. preceding stem drops tones
*-ú* verbal noun (preceding stem drops tones)

If these are represented as suffixes of the form *-v* (i.e. a vowel), they too must contract with the final vowel of the preceding stem, but unlike the cases in (57), this time the result is a short vowel.

## 3.7 Tonology

Notation: /…/ = lexical melody, {…} = grammatical overlay, no brackets = syllable-by-syllable tone sequence such as HL or L<LH>, angled brackets = contoured tones in a single syllable.

### 3.7.1 Lexical tone melodies and grammatical tone overlays

Each noun, adjective, numeral, verb, or other stem has a **lexical tone melody**. These lexical tones may be overridden by superimposed stem-wide **tone overlays** controlled by the inflectional morphology (in the case of verbs) or by the syntax (in the case of nouns and other NP components). That is, the overlays are **tonomorphological** (if word-internal, as often with verbs) or **tonosyntactic** (within multi-word NPs).

The one theoretically possible tone pattern that is excluded as a possible lexical melody is all-low /L/. That is, **every stem has at least one H-tone component**. Monosyllabic stems may therefore be /H/, /HL/, or /LH/ but not /L/. Bisyllabics may be /HL/, /LH/, /HH/, or /LHL/, rarely /HLH/, but not /L/, and so forth. As a result of this constraint on lexical tone melodies, morphologically or syntactically controlled stem-wide tone-dropping (to all-low) is **always audible**.

#### 3.7.1.1 Lexical tone melodies of verbs

Lexical tone melodies for verbs are much more restricted than for other word classes. Verb stems have either an all-high /H/ or a rising /LH/ melody. The lexical melody is directly observable in the imperative, in the bare combining form (as in nonfinal position in verb chains), and in a few suffixally inflected forms that are based on the combining form (including the positive perfectives and the hortative). In other suffixally inflected forms, the lexical tone melody is overridden by a tone overlay controlled by the suffix or auxiliary.

The predominant **monosyllabic** verb shape, excluding *(C)vC* syncopated from /(C)vCv/, is short-voweled *Cv*. Verbs of this type do not have the choice between all-high and {LH}; all of them are **/H/-toned** *Cv́-*. Certainly this limitation correlates with the monomoraic (i.e. short-voweled) prosody of these *Cv́-* stems, since a contour tone such as <LH> cannot be expressed on a single mora in TT. But this may be putting the cart before the horse; if there were <LH>-toned monosyllabic verbs, they could presumably just lengthen the vowel.

The *Cv́-* verb stems known to me are in (59). There is one with a nasalized vowel (59b) and one with irregular tone variations (59c). Potential ambiguity involving homophonous stems (*dá*, *dɔ́*, *kó*, *só*, *tɔ́*) is usually resolved by context, including conventionalized objects (cognate or not) that are regularly paired with certain verbs.

| (59) | | imperative | gloss | comment |
|---|---|---|---|---|
| a. | *(C)v* | *bá* | ‘learn’ | |
| | | *cɛ́* | ‘slaughter’ | |
| | | *dá* | ‘prop up’ | |
| | | *dá* | ‘endure’ | |
| | | *dɛ́* | ‘be tired’ | |
| | | *dé* | ‘carry’ | |
| | | *dɔ́* | ‘arrive’ | |
| | | *dɔ́* | ‘roast’ | |
| | | *dɔ́* | ‘insult’ | object is *dɔ́* |
| | | *gó* | ‘exit’ | |
| | | *jɛ́* | ‘dance’ | |
| | | *kó* | ‘yawn’ | object is *ká* ‘mouth’ |
| | | *kó* | ‘split (wood)’ | |
| | | *kɔ́* | ‘raise (child’ | |
| | | *ká* | ‘shave’ | |
| | | *lá* | ‘spend night’ | |
| | | *lɛ́* | ‘eat’ | |
| | | *ló* | ‘enter’ | |
| | | *lɔ́* | ‘mount’ | |
| | | *ná* | ‘forget’ | |
| | | *nɛ́* | ‘drink’ | |
| | | *pó* | ‘wrestle’ | |
| | | *sá* | ‘become straight’ | |
| | | *só* | ‘take, pick up’ | |
| | | *só* | ‘drip’ | |
| | | *sɔ́* | ‘lay down the second layer’ | |
| | | *tá* | ‘avoid taboo’ | |
| | | *tɔ́* | ‘sow, plant’ | cognate nominal *tŏw* |
| | | *tɔ́* | ‘step on’ | |
| | | *zɛ́* | ‘take out (hot coals)’ | |
| | | *zó* | ‘be full’ | |
| b. | *(C)v$^{n}$* | *pɛ́$^{n}$* | ‘be hardened and ripe’ | |
| c. | | *wɔ́* | ‘see’ | some L-toned forms |

A **vestige of an original /LH/ melody** occurs in a few forms in the paradigm of *wɔ́* ‘see’ (59c), namely perfective-1b *wɔ̌ː-sì* (for expected #*wɔ̂ː-sì*, parallel to e.g. *dɔ̂ː-sì* ‘arrived’), and perfective-2 *wɔ̀-sɔ́* (for expected #*wɔ́-sɔ̀-*, parallel to e.g. *dɔ́-sɔ̀* ‘arrived’). See §10.1.4.5.

Verbs whose imperative is (or may be) of the syllabic shape *Ca:*, *Cɔ:*, or *Co:* are underlying bisyllabics with deleted /w/; see Intervocalic Semivowel-Deletion (§3.6.4.1).

The only indisputable *(C)vC* verb stem is 'give', which has /H/ melody (imperative *ów*, combining form *ów-*).

For **bisyllabic** stems, the melodic choice is between /H/ (60a) and /LH/ (60b). When the final vowel of a *(C)v̀Cv́* verb is syncopated, the rising tone pattern is realized as *(C)v̌C-*. A rare tonal minimal pair is *yⁿǒm\|\|yⁿòmó* 'look for' versus *yⁿóm\|\|yⁿómó* 'be stronger than'.

(60)

| | imperative | gloss | combining form |
|---|---|---|---|
| a. /H/ | *táyá* | 'shoot' | *táy-* |
| | *héló* | 'divide' | *hélú-* |
| | *áwá* | 'catch' | *áw-* |
| | *néŋó* | 'do for long time' | *néŋú-* |
| b. /LH/ | *bɛ̀rá* | 'get' | *bɛ̀rú-* |
| | *yⁿàwⁿá* | 'malfunction' | *yⁿǎm-* |
| | *làrá* | 'bear child' | *làrú-* |
| | *wⁿàyⁿá* | 'come to a boil' | *wⁿǎyⁿ-* |
| | *dà:ⁿsá* | 'throw' | *dà:ⁿsú-* |
| | *bùyⁿsó* | 'become half-ripe' | *bùyⁿsú-* |

There is one irregular bisyllabic verb that has <HL>H tones in the combining form, i.e. an /HLH/ melody. This is 'bring', with imperative *zérì* but combining form *zê:rú*. Historically this is the fusion of two verbs, 'take' and 'come' (§10.1.4.2). The /rú/ syllable is often lost by an exceptional application of Early *u*-Syncope followed by regular Rhotic-Deletion.

For trisyllabic stems (simple or derived), and for quadrisyllabic stems (which are perhaps always derived), the choice is again between /H/ and /LH/. In the latter melody, when the vowel of the final syllable is syncopated before a suffix (this is regular when the final consonant of the stem is a semivowel or *m*) we get e.g. *CvCvCv́* > *CvCv̌C-*.

(61)

| | imperative | gloss | stem before perfective suffixes |
|---|---|---|---|
| a. all-high | *tóŋgúró* | 'pour' | *tóŋgúrú-* |
| | *lálúrá* | 'stretch' | *lálúrú-* |
| | *ólú-rú-mó* | 'make smooth' | *ólú-rú-m-* |

| | | | |
|---|---|---|---|
| b. rising | *yèrìyó* | ‘winnow’ | *yèrǐy-* |
| | *zìgùtó* | ‘vibrate’ | *zìgùtú-* |
| | *zègùrù-mó* | ‘cause to be kaput’ | *zègùrǔ-m-* |

3.7.1.2 Lexical tone melodies for unsegmentable noun stems

The only monotonal pattern is /H/ (62a). Of the two bitonal melodies, /LH/ is very common in native vocabulary. /HL/ occurs in comparatively few native nouns, but is very common with loanwords, especially from Fulfulde. Of the two tritonal melodies, /LHL/ is more common than /HLH/ but both are attested even in bisyllabic stems. /LHL/ is also attested in two monosyllabic nouns, i.e. with bell-shaped <LHL> tone (62d).

(62)

| | noun | gloss |
|---|---|---|
| a. /H/ | *sélgíré* | ‘mallet’ |
| | *séségé* | ‘large rattle’ |
| | *jíŋgá:rú* | ‘Ramadan holy day’ |
| | *kórú* | ‘navel’ |
| | *néŋ* | ‘blood’ |
| | *cé:ŋ* | ‘tendon’ |
| | *kú* | ‘head’ |
| b. /LH/ | *ɔ̀mɔ̀r$^{n}$ɔ́* | ‘misfortune’ |
| | *nàŋá* | ‘cow’ |
| | *ɛ̀r$^{n}$á* | ‘goat’ |
| | *nǔŋ* | ‘grindstone’ |
| | *y$^{n}$à-r$^{n}$ú* | ‘woman’ |
| c. /HL/ | *írù* | ‘breast’ |
| | *mú:dù* | ‘round bread’ |
| | *sé:dè* | ‘awareness’ |
| | *êm* | ‘milk’ |

d. /LHL/

monosyllabic

| | |
|---|---|
| *gɔ̃ː-n* | ‘griot with war tomtoms’ |
| *pãː-m* | ‘understanding’ (<Fulfulde) |

bisyllabic or longer

| | |
|---|---|
| *gǎːrì* | ‘saddle’ |
| *gɔ̌ːrɔ̀* | ‘kola nut’ |
| *kàjíyà* | ‘act of clearing throat’ |
| *àndǎrkà* | ‘hammer’ |

e. /HLH/

| | |
|---|---|
| *kâːnú* | ‘monkey’ |
| *púlɔ̌-n* | ‘Fulbe person’ |
| *tɛ́nǎm* | ‘hyena’ |
| *kúsěy* | ‘trap(n)’ (frozen diminutive?) |

*Cv* monosyllabic stems, i.e. with a single mora, are invariably H-toned: *ná* ‘mother’, *lɔ́* ‘arm’, *zá* ‘millet cakes’. The corresponding contour-toned vowel-final monosyllables should be *Cv̂ː* and *Cv̌ː* (with long vowel), but these are not typical in TT. In a few cases a stem of the shape *Cvwv* has a contracted variant *Cvː*, cf. Intervocalic Semivowel-Deletion (§3.6.4.1). Thus *dáwà* ‘soluble ink’ with variant *dâː* attested in compounds, *ɲɔ̀wⁿɔ́* ‘(the) cold’ with variant *ɲɔ̌ːⁿ*. For *Cv̂ː* I can cite the noun *sîː* ‘kind (type)’, probably a Fulfulde borrowing.

Quadritonal stems are compounds or loanwords (which may be treated prosodically like compounds).

For discussion of the location of tone breaks in bitonal, tritonal, and tonally more complex nouns, see §3.7.1.5-7, below.

### 3.7.1.3 Noun stems with high tone on suffix only

A few nouns that usually occur with a human (singular or plural) suffix, whether syllabic or not, realize the only H-tone of the word on the suffix. Examples are in (63). Gourou is a Dogon ethnicity (Koro area).

(63)

| | gloss | Sg | Pl |
|---|---|---|---|
| a. | ‘Hogon (chief)’ | *ɔ̀ŋù-nú* | *ɔ̀ŋù-mú* ~ *ɔ̀ŋŭ-m* |
| b. | ‘Gourou’ | *gùrŭ*-n | *gùrŭ*-m |

In the cases with nonsyllabic singular or plural suffix, one could also transcribe as e.g. *ɔ̀ŋù-ḿ*, bringing out the L-toned character of the stem.

For ‘Hogon’ compare the nonhuman noun *ɔ̀gɔ́* ‘chiefhood’ (Fr *chefferie*), though the phonological relationship is now obscure.

Nouns of this type could be considered to have **no lexical high tone**, in which case the final mora of the word form raises its tone to satisfy the constraint against all-L-toned word forms (prior to tonosyntactic processes). The alternative is to interpret the basic stems as e.g. /ɔŋŭ/ with a final rising tone whose H-tone element is realized on the suffix. This should be assessed after considering the comments on (66c-d) below.

There is at least one noun with a parallel falling tone whose L-tone element is realized on the suffix: *àlfâ*-n ‘holy man’, plural *àlfâ*-m (i.e. *àlfǎ-ǹ*, *àlfǎ-m̀*), probably borrowed in this form from Songhay (ultimately from Arabic).

### 3.7.1.4 Lexical tone melodies for adjectives and numerals

A list of underived adjective stems is given in §4.5.1. The tonal possibilities are like those for nouns. Most adjectives have /H/ or /LH/ lexical melodies. /HL/ is uncommon but one can cite *nôm* ‘sour’ and *tôm* ‘cold; slow’. There is one /LHL/ adjective: *lă:là* ‘weak’. See (109) in §4.5.1 below for lists.

Numerals are catalogued in §4.7. Simple numerals have /H/, /LH/, and /HL/ melodies.

### 3.7.1.5 Tone-break location for bitonal verb stems

Verbs with the rising /LH/ lexical tone melody have the tone shift at the **final syllable** (which is always *Cv* with short vowel). If the vowel of this syllable is syncopated, the preceding syllable becomes rising-toned.

(64)

| gloss | imperative | combining form |
|---|---|---|
| ‘throw’ | *dà:$^{n}$sá* | *dà:$^{n}$sú-* |
| ‘become half-ripe’ | *bùy$^{n}$só* | *bùy$^{n}$sú-* |
| ‘vibrate’ | *zìgùtó* | *zìgùtú-* |
| ‘cause to be kaput’ | *zègùrù-mó* | *zègùrŭ-m-* |

### 3.7.1.6 Tone-break location for bitonal noun stems

If the noun stem is prosodically **light** (two moras), the two tone components each occupy one mora (65a-b). In **medium-weight** stems of the types *(C)vCCv*

and *(C)v:Cv*, i.e. bisyllabics with long (bimoraic) initial syllable and short final syllable, the two tone components each occupy one syllable (65c-d).

(65)

| noun | gloss |
|---|---|
| a. light, /HL/ | |
| *sî:* | 'kind (type)' |
| *tɛ́mɛ̀* | 'sieve' |
| *kúmò* | 'smoke' |
| b. light, /LH/ | |
| *ìwó* | 'honey' |
| *pɛ̀tá* | 'winnowing van' |
| c. heavy, /HL/ | |
| *há:mnà* | 'stupid act' |
| *táŋkà* | 'colonial coin' |
| *sá:rà* | 'target' |
| d. heavy, /LH/ | |
| *gà:rí* | 'last year' |
| *yⁿà:ŋá* | 'night' |
| *kɔ̀:ⁿsɔ́* | 'millet beer' |

Consider now bisyllabic stems that **end in a bi- (or tri-)moraic syllable** (disregarding the structure of the initial syllable). Usually the falling template /HL/ has the tone split at the syllable boundary (66a), but I recorded H<HL> with final falling tone in (66b) where the final syllable is super-heavy. The rising melody /LH/, on the other hand, is normally realized as L<LH> with the tone split occurring inside the final syllable (66d), though I have one example of LH (66c).

(66)

| type | noun | gloss |
|---|---|---|
| a. HL | *túbàl* | 'large drum' |
| | *gándòl* | 'yoke' |
| b. H<HL> | *ságâ:w* | 'a breed of sheep' |
| | *kúndô:w* | 'a breed of sheep' |
| | *rúkû:* | 'bowing in prayer' |
| c. LH | *bàtéŋ* | 'fromager tree' (*Ceiba*) |

d. L<LH>

*frozen diminutives (§4.2.3)*

| | |
|---|---|
| *mùkěy* | ‘deaf mute’ |
| *pòrěy* | ‘wooden tablet’ |
| *làwrěy* | ‘trimming ax’ |
| *sò:r$^{n}$ěy$^{n}$* | ‘necked waterjar’ |

*other nouns*

| | |
|---|---|
| *mì:mă:* | ‘spur’ |
| *ìsŏŋ* | ‘name’ |

We now turn to bitonal **trisyllabic** stems ending in a short syllable. A complicating factor is the lurking possibility of (synchronic or at least historical) compounding. In compounds like *lɔ́-sàgá* ‘ring (for finger)’ where at least one component stem (here *lɔ́* ‘hand’) is recognizable, the tone pattern is presumed to follow tonal rules for (monotonal and bitonal) compound initials and finals, so we disregard them here. In other cases, however, a synchronically unsegmentable trisyllabic stem may have originated as a compound and may retain its original tone pattern. Bearing this in mind, consider the data in (67).

(67)

| | type | noun | gloss |
|---|---|---|---|
| a. | HHL | | |
| | heavy penult | | |
| | | *gársú:sù* | ‘(military) exercises’ (also *gársû:s*) |
| | | *séréndù* | ‘wooden flute’ |
| | | *láyyá:rɛ̀* | ‘sacrificial ram for feast’ |
| | other | | |
| | | *sálígì* | ‘ablutions’ |
| | | *sádákà* | ‘alms’ |
| b. | HLL | *lá:kàrà* | ‘the Hereafter’ |
| | | *kɔ́fɔ̀rɔ̀* | ‘colonial coin’ |
| | | *píkìnì* | ‘colonial coin’ |
| | | *lákkìrì* | ‘couscous’ |
| c. | LLH | *màŋgùrú* | ‘ball’ |
| | | *nùŋùlɔ́* | ‘mid-day’ |

| | | | |
|---|---|---|---|
| d. | LHH | *nòndér$^{n}$á* | ‘day’ |
| | | *zàndúrú* | ‘donkey’ |
| | | *jàybánú* | ‘vulture’ |
| | | *dàkóró* | ‘hyrax (mammal)’ |

For the falling melody /HL/, HHL is typical when the penult is heavy (67a). Both HHL and HLL occur when the penultimate and final syllables are both light (67a-b), and further study might well reveal inter-speaker variation. For the rising melody /LH/, both LLH and LHH are attested (67c-d). I take LLH to be the default, since the cases of LHH are likely to reflect original compounds whose second element was H-toned. For *zàn-dúrú* ‘donkey’, compare Bankan Tey *dúrù*. In *nòndér$^{n}$á* ‘day’, a native speaker can perhaps still detect the presence of *nǒŋ* ‘sun’ and a form related to the verb *dèr$^{n}$ú\\dèr$^{n}$á* ‘spend the middle of the day’.

There are relatively few trisyllabic nouns with final heavy syllable. All cases (other than compounds) are loanwords (mainly from Fulfulde) and have /HL/ melody realized over the three syllables as HHL.

| (68) | type | noun | gloss |
|---|---|---|---|
| | HHL | *bó:bíyàl* | ‘reed flute’ |

To the limited extent that lexical /HHL/ is phonemically distinct from /HLL/, and that /LLH/ is phonemically distinct from /LHH/, we may need to split /HL/ into /H*L/ and /HL*/, and /LH/ into /L*H/ and /LH*/, where the asterisk indicates the possibility of iteration of the preceding tone on additional syllables. This distinction is marginal for heavy stems and is not relevant to monosyllabic stems or to most bisyllabics.

#### 3.7.1.7 Tone-break location for multitonal noun stems

If the lexical melody is **tritonal**, i.e. /HLH/ or /LHL/, there is no difficulty when the stem itself has three moras: each tone component is realized on its own mora (69). /LHL/ is more common than /HLH/; for the latter, all noncomposite examples known to me are given below. I know of no /HLH/ trisyllabic stems, but <HL>H and H<LH> bisyllabics are attested.

(69)

| type | noun | gloss |
|---|---|---|
| LHL | *wùsíyò* | ‘bellows’ |
| | *tùkúsù* | ‘mash’ |
| | *kàjíyà* | ‘act of clearing throat’ |
| | *pùŋgúrɔ̀* | ‘abomasum’ |
| | *wèrcíyà* | ‘prayer beads’ |
| | *kòsíyò* | ‘coughing’ |
| | *ìsíyà* | ‘sneeze(n)’ |
| | *zàmánì* | ‘era’ |
| | *sèytá:nì* | ‘devil’ |
| | *gàrí:bù* | ‘mendicant koranic-school pupil’ |
| | *nà:fĭkì* | ‘trouble-maker’ |
| <LH>L | *dăwrì* | ‘trick, ruse’ |
| | *gă:rì* | ‘saddle’ |
| | *mălfâ* | ‘rifle’ |
| L<HL> | *sìlâm* | ‘legendary sword’ |
| | *wàlâŋ* | ‘ceremonial rifle’ |
| | *àlfâ*-n | ‘holy man’ |
| | *tùsûm* | ‘pigeon’ |
| | *kàrûm* | ‘stick to prevent suckling’ |
| HLH | [none] | |
| <HL>H | *kâ:nú* | ‘monkey’ |
| H<LH> | | |
| *nouns that regularly take human number suffixes* | | |
| | *púlɔ̌*-n | ‘Fulbe person’ |
| | *súrkù-nú* | ‘Tuareg person’ |
| *possible frozen diminutives* | | |
| | *páléy* | ‘bier’ |
| | *tɛ́gɛ̌y* | ‘a little’ |
| *other* | | |
| | *tɛ́năm* | ‘hyena’ |

If the stem has more syllables or moras than are needed to accomodate each tone component, the predominant pattern is that the tone breaks cluster to the right, so the last few moras or syllables have one tone component each. In (70a-b), the mora is the critical unit. In (70c), the penultimate syllable is

bimoraic but carries the sole H-tone of the word; these stems (all borrowed) have two preceding syllables, suggesting that in {LHL} the high tone must be realized no later than the onset of the third syllable. In (70d), the long vowel in the second syllable seems to have attracted the high tone. (70e) has prosody of a compound *jàhán-námà*, varying with contracted *jă:n-námà*.

(70)

| | type | noun | gloss |
|---|---|---|---|
| a. | L<LH>L | *àndărkà* | 'hammer' |
| | | *àljĕmnà* | 'paradise' |
| b. | LL<HL> | *làsìdân* | 'adjutant' |
| | | *kàpàrâl* | 'corporal' |
| c. | LLHL | *àdùná:rⁿù* | 'world' |
| | | *àlàhɔ́rmɔ̀* | 'grace (of God)' |
| | | *àrsìlá:mì* | 'Muslim' |
| | | *wàlàŋgá:rù* | 'cart poles' (also *wàlàŋgâ:r*) |
| d. | LHLL | *àlmú:jìbù* | 'imam's respondent' |
| e. | <LH>HL | *jă:nnámà* | 'hell' (also *jàhánnámà*) |

Examples of nouns with four or more tone components are in (71). Fauna spp., particularly insects, are especially prominent in these data.

(71)

| | type | noun | gloss |
|---|---|---|---|
| a. | HL<HL> | *kúmàndâw* | 'commandant' |
| | HH<LH> | *sóm-pólŏm* | 'grasshopper sp.' (Acrida) |
| b. | L<HL>HL | *pèrêm-pɛ́mmɛ̀* | 'grasshopper sp.' (*Oedaleus*) |
| | L<HL><HL>H | *wàsâŋ-kôwró* | 'buprestid beetle sp.' (*Sternocera*) |
| | " | *gòrôŋ-gômpó* | 'fruit bat sp.' (*Eidolon*) |
| | L<LH>HL | *nànâm-dɔ́rì:* | 'paradise whydah' (bird) |
| | L<LH>LH | *gèrêŋ-gɛ̀:ⁿsí* | 'namaqua dove' (*Oena*) |
| | HHH<LH> | *dógúm-núwⁿĕy* | 'tenebrionid beetle sp. (*Vieta*) |
| | " | *yókúm-dó:rĕy* | 'grasshopper larvae' |
| | LHHL | *dàŋká-pélì:* | 'grasshopper sp. (*Zacompsa*) |
| c. | LLL<HL> | *kàtàrà-kâw* | 'noisy bustard sp.' (bird) |
| | " | *kòtòrò-kôw* | 'kite' (hawk) |

| | | | |
|---|---|---|---|
| d. | L<HL>HLH | *sègûm-ségìré* | ‘grasshopper sp.’ (*Kraussella*) |
| | " | *zìnâŋ-gɔ́ŋgùrɔ́* | ‘grasshopper sp.’ (*Hieroglyphus*) |
| | " | *bàtâŋ-kóŋgùró* | ‘buprestid beetle sp.’ (*Steraspis*) |

These nouns are almost certainly treated prosodically as compounds by native speakers, even though the compound components have no identifiable independent meaning. In slow pronunciations given under elicitation, they are usually broken into two parts as suggested by the hyphens. Admittedly, the location of the “compound” break in the French loanword *kúmàndâw* ‘major (military rank)’ (Fr *commandant*)’ is ambiguous (*kú-màndâw* or *kúmàn-dâw*), especially in view of the fortuitous similarity to *kú* ‘head’. In the quadrisyllabic type (71b) and in the five-syllable pattern (71d), the natural break is between the second and third syllables, and this is reinforced by the <HL> tone on the second syllable. However, in the alliterative onomatopoeic *kàtàrà-kâw* and *kòtòrò-kôw* (71c) the natural break is before the final syllable.

### 3.7.2 Grammatical tone patterns

#### 3.7.2.1 Derivational verbal morphology

The addition of a *-Cv-* derivational suffix (reversive, causative) creates a new verb stem that is subject to the same constraints on tone patterns as underived verb stems. If the base stem has /H/ melody, e.g. *CvCv-*, the derivative does as well, hence *CvCv-Cv-*. /LH/-melody stems reapply the melody to the derivative, so a *CvCv-* stem has derivatives of the form *CvCv-Cv-* with only the final syllable H-toned.

For examples see the lists in §9.1 (reversives) and §9.2 (causatives).

#### 3.7.2.2 Inflectional verbal morphology

Inflectional suffixes are added to the combining form of the verb stem. In addition, some suffixes control a tone overlay on the stem. (72) summarizes the data. Verbal noun suffixes are included. For examples see the sections cross-referenced.

(72) a. suffixes that do not alter the lexical tone melody of the stem:
perfective-1a *-wɔ̀rè-/-wòrè-* (§10.1.1.1)
perfective-1b *-wɔ̀sì-/-wòsì-* (§10.1.1.2)
perfective-2 *-sv̀-* (§10.1.1.3)
stative negative *-ŋ̀gó-* (§10.1.3.3)
hortative *-y$^{n}$é/-y$^{n}$é* or *-é/-ɛ́* (§10.4.4)

b. no change in stem tone except /that LH/ melody has tone break at the morpheme boundary:
prohibitive *-lé/-lɛ́* and *-ré/-rɛ́* (§10.4.2)

c. {L} overlay (tone-dropping) before suffix
perfective negative *-rí-* and *-lí-* (§10.1.2.2)
imperfective negative *-nv́-* and *-r$^{n}$v́-* (§10.1.2.3)
progressive *-cí dà* (§10.1.3.2)
prohibitive *-kú* (§10.4.2)
verbal noun *-ú* (with nonmonosyllabic stems only) (§4.2.2.1)

d. /LH/ overlay before suffix (H on final mora, all preceding moras L)
future *-yàrà-* (§10.1.1.9)

e. {H} overlay before suffix
imperfective *-rv̀-* and *-tv̀-* (§10.1.1.6)
verbal noun *-rĕŋ* (§4.2.2.2)

In (72c) the stem is tone-dropped but the suffix itself is H-toned, so one could alternatively analysis this as an {LH} overlay applied to stem plus suffix.

### 3.7.2.3 {LH} overlay extends to chained verb (future, progressive)

An unusual feature of the future inflection (suffix *-yàrà-*) is that the tone overlay imposed on the preceding verb stem, the relevant part of which is L-toned, **extends leftward to include a directly chained preceding verb**. The chained verb takes the combining form except for the drop to {L} tones. Several main-clause verbs that take clausal complements require a complement VP ending in such a directly chained verb, an example being *bɛ̀rá* in the sense ‘be able to, can’ (special use of *bɛ̀rá* ‘get, acquire’), §17.4.4. Contrast the tones of *tórú* ‘jump’ (combining form) in the imperfective (73a) and future (73b). See also *nàr$^{n}$ù$^{L}$ pàsí-yàrà* ‘will chase out (and leave)’ (483b) in §14.2.1.

(73) a. *á* *tórú* *bè-t-ǒ:*
Ipfv **jump** can-Ipfv-3SgSbj
'He/She can jump.'

b. *tòrù*$^{L}$ *bèrí-yàrà-wɔ́*
**jump**$^{L}$ can-Fut-3SgSbj
'He/She will be able to jump.'

c. *làrù*$^{L}$ *hèl-cí* *d-è = bɛ́*
**argue**$^{L}$ share-Prog be-3PlSbj=3PlSbj
'They kept arguing.' (2004-1a.05)

Tonologically, one really should rebracket e.g. (73b) as *[torù-bèrí]*$^{LH}$*-yàrà-wɔ́*, where the brackets delimit the domain of the {LH} tone overlay controlled by *-yàrà-*. In (73a), by contrast, *tórú* has its regular combining-form tones, even though imperfective particle *á* forces tone-dropping on the stem of the following imperfective verb 'can'.

The nonfinal chained verb drops tones to {L} even when the initial L-tone is inaudible in the future verb itself. This happens with *Cv́-* stems, which have future forms of the shape *Cv́-yàrà-* (or a contraction thereof), since the stem has only one mora and expresses only the H-tone element. Thus *nùŋ*$^{L}$ 'sing' instead of *nŭŋ* (or *nùŋú*) in (74), where future *lâ:-r-è* 'will/would spend the night' (contracted variant of *lá-yàr-è*) is based on a *Cv́-* stem that has no room for the low tone of the {LH} overlay.

(74) *y*$^{n}$*à:ŋá* *nùŋɔ́* *á* *nùŋ*$^{L}$ *lâ:-r-è*
night song Ipfv sing$^{L}$ spend.night-Ipfv-3PlSbj
'They would stay up at night singing songs.' (2004-2a.08)

The same tonal treatment (i.e. all-low tones on the nonfinal stem) occurs with certain tightly-knit complement nouns, including some fixed object-verb sequences ending in *kár*$^{n}$*á* 'do' (§11.1.7). Thus *bárjà kár*$^{n}$*á* 'thank (someone)', *bàrjà*$^{L}$ *kàr*$^{n}$*í-y*$^{n}$*àr*$^{n}$*à-* 'will thank' with L-toned noun, tonomorphologically rebracketable as *[bàrjà-kàr*$^{n}$*í]*$^{LH}$*-y*$^{n}$*àr*$^{n}$*à-*. Contrast e.g. *bèlú ĕw-wàrà-* 'will buy a sheep', where the ordinary object 'sheep' has its lexical tone as in other verbal inflections.

This expanded scope of a suffix-induced verb-stem tone overlay **does not apply to negative suffixal inflections**, before which the verb stem drops tones while having no effect on any preceding element. Therefore H-toned *tórú* 'jump' is not tone-dropped in *tórú bè-n-ǒ:* 'he/she cannot jump' (imperfective negative) or in *tórú bè-lí-wɔ́* 'he/she could not jump' (perfective negative),

although *bèrá* 'can' (combining form *bèrú*) itself does drop tones before the negative suffix.

The {LH} overlay on two chained verb stems preceding the future suffix, with just one H-toned syllable, might be compared to the combination of {L}-toned primary verb and H-toned progressive *-cí* in the progressive construction (§10.1.3.2). A direct comparison is reasonable if *-cí* is analysed as a frozen chain-final verb.

#### 3.7.2.4 Syntactically controlled tonal processes in NPs

A serious discussion of this requires close analysis of NP structure and is therefore deferred until Chapter 6. There are both left-to-right (forward) and right-to-left (backward) tonal interactions. The key operations are summarized in (75). The basic linear order is [possessor NP - [noun - adjective(s)] - numeral - determiner - quantifier], with [noun - adjective(s)] functioning as **core NP**.

(75) a. left-to-right
possessed core NP (including noun and any adjectives) is…
i. all-low if the possessor is a simple noun or core NP without determiners or external plural marking
ii. otherwise {HL} with the first syllable (first mora for bimoraic monosyllabic noun) high and any following syllables low (if the core NP is monomoraic *Cv*, the L tone element is manifested by downstep on a following definite morpheme

b. right-to-left
` i. an adjective forces all-low tones (tone-dropping) on the preceding noun or adjective within core NP
ii. a determiner (demonstrative pronoun or definite morpheme) forces all-low tones on the preceding core NP or numeral

Often a core NP is targeted for a tone overlay simultaneously from the left (possessor) and right (determiner). In this case the possessor wins out, in those cases where the two competing tone overlays are not identical. This requires an analysis in terms of bracketing relationships, with the understanding that tonal interactions apply within brackets before any other tonal processes apply.

The possessor NP is never affected by any tonological processes that apply to the head noun, the core NP, or numerals following the core NP. In effect, the possessor NP constitutes a **tonosyntactic island** impervious to outside pressures.

When a NP functions as **head of a relative clause**, the remaining words (other than the possessor) that have thus far escaped NP-internal tone-dropping rules, i.e. the final word in the core NP along with a numeral if present, are tone-dropped (§14.1.1).

### 3.7.2.5 Tone-Raising (*Cv* postpositions)

There are two high-frequency postpositions whose normal form is *Cv̀* with L-tone. These become H-toned after personal pronouns, after demonstrative pronouns (whether used absolutely, or as postnominal determiners), after definite morphemes, *yà:fú:* (and variants) 'all', and after certain interrogatives (*àyé* 'who?, *èsé* 'what?').

(76)

| gloss | usual form | after pronoun or determiner |
|---|---|---|
| locative | *kù* | *kú* |
| dative | *dè* | *dé* |

In addition to the tonal shift, locative *kù* (*kú*) assimilates its vowel to become *kí* after plural *ŋ̀gí* 'these, those' and definite plural *cíní*.

Examples involving **demonstrative pronouns** are in (77).

(77) a. *[à-nù*$^{L}$ *ŋ̀gú]* *dé*
[man-Sg$^{L}$ DemSg] Dat
'to/for this man'

b. *[àrà-m*$^{L}$ *ŋ̀gí]* *dé*
man-Pl$^{L}$ DemPl Dat
'to/for these men'

c. *[ùrò*$^{L}$ *ŋ̀gú]* *kú*
*[ùrò*$^{L}$ *ŋ́]* *kú*
[hole$^{L}$ DemSg] in
'in this hole'
(showing two postnominal forms of the demonstrative)

d. *[ùrò*$^{L}$ *ŋ̀gí]* *kí*
[hole$^{L}$ DemPl] in
'in these holes'

The fact that relative morpheme *ŋ́* fails to raise the tone of dative *dè* in (78) is an argument against a synchronic connection of relative *ŋ́* with demonstrative *ŋ̀gú* (variant *ŋ́*).

(78) *[nù-ŋ*$^{L}$ *kà: ɛ̀r*$^{n}$*á dɔ̀rú-sɔ̀ ŋ́] dè*
[person-Sg$^{L}$ Rel goat sell-Pfv2 Rel] Dat
'(e.g. I gave the money) to the person who sold the goat'

Examples with a **definite morpheme** are in (79).

(79) a. *[à-nù*$^{L}$ *kúnú] dé*
[man-Sg$^{L}$ DefSg] Dat
'to/for the man'

b. *[àrà-m*$^{L}$ *cíní] dé*
[man-Pl$^{L}$ DefPl] Dat
'to/for the men'

c. *[ùrò*$^{L}$ *kúnú] kú*
[hole$^{L}$ DefSg] in
'in the hole'

d. *[ùrò*$^{L}$ *cíní] kí*
[hole$^{L}$ DefPl] in
'in the holes'

For *[[… yà:fú:] dé]*, dative of the 'all' quantifier, see (554b) ('I told all of the children to come') in §17.1.3.1.

The dative forms of personal pronouns are given in (80). Simple locatives with *kù* are not elicitable for pronouns, which require the complex postposition *[X* $^{HL}$*púrò] kù]* in locative sense. In the third person datives, the pronoun itself is L-toned, but we cannot determine whether this is due to a tonological process (with underlying H-tone, as in the independent pronouns), or just an allomorphic matter. Third person pronouns also have low tones as possessors, for example.

(80)

| | category | independent | dative |
|---|---|---|---|
| a. | 1Sg | *m̀*$^{b}$*í* | *ǹ dé* |
| | 1Pl | *í* | *í dé* |
| | 2Sg | *ú* | *ú dé* |
| | 2Pl | *á* | *á dé* |

| | | | |
|---|---|---|---|
| b. | 3Sg | *wó* | *wò dé* |
| | 3Pl | *bé* | *bè dé* |
| | NonhSg | *kó* | *kò dé* |
| | NonhPl | *ké* | *kè dé* |

### 3.7.3 Tonal phonology

#### 3.7.3.1 Downstep (possessed *Cv* noun plus determiner)

When an {HL} possessed-noun overlay is controlled by a preceding possessor on a *Cv* noun stem, only the H-tone element of {HL} is audible on the noun: *m̀* $^{HL}$*bá* 'my father'. Unless this is immediately followed by a determiner, the L-tone element is lost without a trace.

The only determiners with initial high tone are the definite morphemes, singular *kúnú* and plural *cíní*. After a possessed *Cv́* noun carryng the {HL} overlay, the pitch level of the definite morpheme drops. This is shown by preposing the downstep symbol *ꜜ*. For more on the structure of such combinations, see §4.4.3.

(81) a. *[ùrò*$^{L}$ *kúnú]* $^{HL}$*ká* *ꜜkúnú*
[hole$^{L}$ DefSg] $^{HL}$mouth DefSg
'the opening of the pit' (2004-1a.03)

b. *[kɔ̀* *lɔ́* *ꜜkúnú]*
[NonhSgPoss hand DefSg]
'its hand' (2004-1a.10, denoting an elephant's trunk)

This downstep has no effect on postnominal demonstrative pronouns (singular *ŋ̀gú*, plural *ŋ̀gí*), which already begin with an L-tone.

(82) *[[kɔ̀* *lɔ́]* *ŋ̀gí]*
[[NonhSgPoss hand] DemPl
''these arms of its (=of a mantis)' (2004-1b.04)

#### 3.7.3.2 <HLH> syllable flattened to H

A <HLH> syllable (unlike <LHL>) is not allowed. A potential syllable of this shape occurs when relative *ŋ́* follows a *Cv̂:* syllable and the two are pronounced

as one syllable. This combination is flattened to H-tone. An example is *ná: ŋ́* for /nâ: ŋ́/, see analysis of (486) in §14.2.3.

# 4 Nominal, pronominal, and adjectival morphology

## 4.1 Nouns

### 4.1.1 Simple noun stems

For many nouns of **human reference** (excluding most kin terms), number is marked by suffixation on the noun. The suffixes are those in (83).

(83) Human number markers

| | | |
|---|---|---|
| Sg | after *Cv-* stem: | *-r$^{n}$ú* |
| | after longer stem: | *-nú* (apocopated *-ń*) |
| Pl | | *-mú* (apocopated *-ḿ*) |

Examples of singular *-r$^{n}$ú* are *nù-r$^{n}$ú* ‘person’, *ì-r$^{n}$ú* ‘child’, *y$^{n}$à-r$^{n}$ú* ‘woman’.

Singular *-nú* occurs in e.g. *èrɛ̀:-nú* ‘able-bodied man’, *ɔ̀ŋù-nú* ‘traditional chief (Hogon)’, and (*yà* / *àrà*) *pày-nú* ‘old (woman / man)’, and regularly in agentive compounds like *nùŋɔ̀-núŋú-nú* ‘singer’ (§5.1.9). Apocopated *-ń* occurs in e.g. *yà-gùrɔ̌-n* ‘unmarried woman’ and *púlɔ̌-n* ‘Fulbe person (Pullo)’.

Some apparent counterexamples where *-nú* occurs instead of *-r$^{n}$ú* after *Cv-* stem are actually cases where a bisyllabic *Cvrv-* or *Cvr$^{n}$v* stem with medial rhotic has contracted, as in *à-nú* ‘man’ (compare plural *àrǎ-m*) and agentive compounds based on *Cvrv-* or *Cvr$^{n}$v-* verbs, such as *kù-[ɛ́-nú]* ‘braiding lady’ (compare plural *kù-[ɛ́rú-m*], verb *ɛ́rá* ‘braid’). The contraction is parallel to what occurs more transparently in verbal suffixal morphphonemics, and is by Early *u*-Syncope (§3.6.2.2) followed by Rhotic Deletion (§3.6.3.5)

Plural *-mú* (*-ḿ*) occurs after both monosyllabic and longer stems: *nù-mú* ‘people’, *y$^{n}$à-mú* ‘women’, agentive *nùŋɔ̀-núŋú-mú* ‘singers’, *yà-gùrɔ̌-m* ‘unmarried women’.

There is a **free** (nonsuffixal) **plural** marker *mǎ:* that may occur in any NP denoting nonsingular entities (§6.6.1). It is not common after human nouns that already mark number by suffixation. It is common after kin terms, most of which make no suffixal singular/plural distinction. It is also used with nonhuman nouns, which have no morphological number marking, when it is necessary to make it clear that a noun denotes a group. Thus *nènú* ‘dog(s)’ and

*tìw$^{n}$á* ‘tree(s)’ do not normally indicate plurality, but where necessary they may be made explicitly plural as *nènú mă:* and *tìw$^{n}$á mă:*.

### 4.1.2 Primary human nouns (‘child’, ‘man’, ‘woman’, ‘person’)

The terms in (84), already mentioned above, are quite basic.

(84)

| gloss | Sg | Pl |
|---|---|---|
| ‘person’ | *nù-r$^{n}$ú* ~ *nŭ-n* | *nù-mú* ~ *nŭ-m* |
| ‘woman’ | *y$^{n}$à-r$^{n}$ú* ~ *y$^{n}$ă-n* | *y$^{n}$à-mú* ~ *y$^{n}$ă-m* |
| ‘man’ | *à-nú* ~ *ă-n* | *àră-m* |

Singular ‘man’ can be derived from /àrù-nú/, as mentioned in the preceding section. This explains why the suffix is *-nú* rather than *-r$^{n}$ú* (which would be used after a true monosyllabic *Cv-* stem).

‘Woman’ and ‘man’ correspond to adjectives (and nonhuman nouns) *yá* ‘female’ and *àrá* ‘male’. The unnasalized *y* in *yá* suggests that the nasalized *y$^{n}$* in *y$^{n}$à-r$^{n}$ú* ‘woman’ and its plural *y$^{n}$à-mú* is due to Backward Nasalization (§3.6.1.2), with nasalization emanating from the suffixes.

The forms for ‘child’ are more complex, because of the frequency of the diminutive ending *-í:* (arguably *-í→*).

(85) ‘Child’

| | | |
|---|---|---|
| Sg | regular | *ì-r$^{n}$ú* ~ *ĭ-n* |
| | diminutive | *ì-r$^{n}$-í:* |
| Pl | regular | *ì-mú* ~ *ĭ-m* |
| | diminutive | *ì-m-í:* |

The diminutive plural is sometimes extended as *ì-m-í: mă:*, with plural particle *mă:* (note the alliterative ring and the repeated labial nasals, appropriate to this hypocoristically sensitive category).

Irregular combinations of ‘man’ and ‘woman’ with adjectives and compound elements, including their combinations with ‘child’ to produce ‘boy’ and ‘girl’, are covered in §5.1.11 below.

### 4.1.3 Kin terms

Kin terms, which (like other nouns) occur both in possessed and unpossessed forms, in most cases do not have singular and plural suffixes. Therefore to express plurality it is necessary to add plural particle *mă:*, which is therefore rather common with these nouns. It should be noted that terms like 'father' may be extended (e.g. to one's father's brothers), and that families tend to be large, so that plural kin terms are in common use.

Example: *lìsí* 'maternal uncle', *ǹ* $^{HL}$*lísì* 'my maternal uncle' (with {HL} possessed-noun tone overlay), *lìsí mă:* 'maternal uncles', *ǹ* $^{HL}$*lísì mă:* 'my maternal uncles'.

A few kin terms denoting kin of descending generations do have morphological number marking: *lísí-bé-nú* 'sister's child' (plural *lísí-bérú-m*), *tér$^{n}$ú-bé-r$^{n}$ú* 'grandchild' (plural *tér$^{n}$ú-bé-m*). In addition, the 'child(ren)' term discussed in the preceding section can be used as a kin term for son or daughter, as with English *child(ren)* or *kid(s)*. Also, some kin terms end in a 'man' or 'woman' term to mark sex, as with *ìsù-[à-nú]* 'male opposite-sex sibling' (i.e. woman's brother) versus *ísú-[y$^{n}$á-r$^{n}$ú]* 'female opposite-sex sibling' (i.e. man's sister). The tonal difference, in the unpossessed form, between these last two forms is correct but mysterious.

### 4.1.4 'So-and-so' (*má:nì*)

*má:nì* 'So-and-so' is used as a variable for personal names.

### 4.1.5 Initial *àn-* in nouns

One can arguably segment an initial morpheme *àn-*, at least historically, in a few nouns: *àndá:rěy* 'small pit (of jujube fruit') (from Songhay, e.g. Tondi Songway Kiini *dà:rêy* 'jujube'), *ànàŋgòlí* 'bile duct', *àndèŋé* 'baggy pants' (cf. Jamsay *pɔ̀n-dèŋé* or *àdèŋé*), *ànsámmù* 'furry waterskin', *àntólì* 'walking stick', *àndărkà* 'hammer' (also in Songhay). With high tone: *ánsèsérè* 'liana sp.' (*Tinospora*).

Similar *à-* or *àn-* elements occur in other Dogon and Songhay languages of the zone.

## 4.2 Derived nominals

### 4.2.1 Characteristic derivatives (*X dà ŋ́*, *X-[nù-rⁿú]*)

A construction corresponding exactly to the denominal characteristic derivation in e.g. Jamsay (*wàlá* 'laziness', *wàlà-gú-* 'lazy person, one characterized by laziness') has not been found.

One functionally comparable construction is a simple compound type ending in e.g. *nù-rⁿú* 'person'. The compound initial is L-toned. Thus *yɔ̀wrɔ́* 'laziness', *yɔ̀wrɔ̀*$^{L}$*-[nù-rⁿú]* 'lazy person'. See also the 'owner' compounds of §5.1.12.

Where lexically possible, informants generally preferred a deverbal construction in the form of a headless relative clause ending in *dà ŋ́*, i.e. 'be' plus the clause-final relative morpheme *ŋ́*. Examples are in (86). In (86a) the combining form of the verb happens to be homophonous to the related noun, but in (86b) the verb and noun are clearly distinct, at least tonally.

| (86) | | verb | gloss | derivative | gloss | related noun |
|---|---|---|---|---|---|---|
| | a. | *dɔ̀ːlú**dɔ̀ːlɔ́* | 'be dirty' | *dɔ̀ːlú dà ŋ́* | 'dirty one' | *dɔ̀ːlú* 'dirtiness' |
| | | *bàgú**bàgá* | 'get rich' | *bàgú dà ŋ́* | 'wealthy one' | *bàgú* 'wealth' |
| | b. | *ésú**èsá* | 'cleanness' | *ésú dà ŋ́* | 'clean one' | *èsú* 'cleanness' |

These combinations may be pluralized by adding *mǎː*, as in *dɔ̀ːlú dà ŋ́ mǎː* 'dirty ones'.

### 4.2.2 Verbal nouns

In addition to the productive verbal noun patterns described below, note *nòŋ-lúw-ŋɔ́* 'sunset' in (224b) in §8.2.12, a variant of *nòŋ-lúwɔ́*. Both variants are based on *(nǒŋ) lùwɔ́* '(sun) set'.

#### 4.2.2.1 Combining form versus verbal noun in *-ú*

What I call the **combining form** of a verb (used in chains, and before several inflectional suffixes) is very similar in form to a **verbal noun** that is often used as a citation form by informants during discussions of lexicon. For nonmonosyllabic verbs, both end in H-toned *ú*, which is subject to apocope under some conditions.

The difference between the two forms is audible for stems with lexical /H/ melody, since the combining form respects this melody (which also appears in the prohibitive), while the verbal noun has an **{LH} overlay** realized as L(L…)H with H-tone on the *-ú* (87a). For verbs with lexical /LH/ melody there is no audible difference between the two forms (87b). In the case of the verbal noun (but not the combining form), I will transcribe the verbal noun suffix *-ú* with a hyphen, and will use *-∅* when this suffix has been deleted (apocopated) as in (87c-d). Monosyllabic *Cv-* stems have no suffix in either the combining form or the verbal noun, which are always identical; since there is only one mora, the tone is high in both cases (87e). Irregular verbs are illustrated in (87f). Of interest here is the fact that *zè:r-ú* 'bring-VblN' has overlaid {LH} tones in the verbal noun, versus *zê:rú* with lexical /HLH/ melody in the combining form.

| (87) | gloss | imperative | combining | Verbal noun |
|---|---|---|---|---|
| a. | 'get up' | *úró* | *úrú* | *ùr-ú* |
| | 'tie | *págá* | *págú* | *pàg-ú* |
| | 'wait' | *céré* | *cérú* | *cèr-ú* |
| | 'do' | *kár$^{n}$á* | *kár$^{n}$ú* | *kàr$^{n}$-ú* |
| | 'go down' | *sígó* | *sígú* | *sìg-ú* |
| b. | 'be finished' | *dùm-lɔ́* | *dùm-lú* | *dùm-l-ú* |
| | 'sit' | *dìŋé* | *dìŋú* | *dìŋ-ú* |
| | 'dig' | *gàsá* | *gàsú* | *gàs-ú* |
| c. | 'sleep' | *léyó* | *léy* | *lěy-∅* |
| | 'die' | *núw$^{n}$ó* | *núm* | *nŭm-∅* |
| | 'give' | *ów* | *ów* | *ŏw-∅* |
| | 'cough' | *kósíyó* | *kósíy* | *kòsĭy-∅* |
| d. | 'kill' | *wɔ̌:* | *wɔ̌w* | *wɔ̌w-∅* |
| | 'steal' | *gùy$^{n}$ó* | *gŭy$^{n}$* | *gŭy$^{n}$-∅* |
| e. | 'shave' | *ká* | *ká* | *ká* |
| | 'exit' | *gó* | *gú* | *gú* |
| | 'arrive' | *dɔ́* | *dɔ́* | *dɔ́* |
| f. | 'come' | *yèrí* | *yèrí* | *yèrí* |
| | 'bring' | *zérì* | *zê:rú* | *zè:r-ú* |
| | 'go to' | *yá* | *bòrú* | *bòr-ú* |

The verbal noun in *-ú* is productive. It is the form usually given by informants when asked to translate verbs in isolated citation forms. It is also readily available for use as a cognate nominal when no other (lexical) cognate nominal exists for a particular verb. Even when there is a such a cognate nominal, the verbal noun in *-ú* may be used as the complement of a cognate verb (88).

(88) a. *èg-ú* *égú-s-ǒ:*
listen-VblN listen-Pfv2-3SgSbj
'He/she listened.'

b. *cèr-ú* *ǹ* *cérú-sò*
wait-VblN 1SgSbj wait-Pfv2
'I waited.'

Several verbs have cognate nominals that are segmentally identical to the corresponding verbal nouns. The nominals may be {LH}-toned and therefore identical to the verbal nouns, or they may be {HL}-toned and distinct tonally from the verbal nouns. See (374d-e) in §11.1.6.2.

#### 4.2.2.2 Verbal noun in *-rěŋ* ~ *-těŋ*

This verbal noun (VblN) derivation is productive, and is regularly used in clausal complements required by any of several higher-clause verbs like 'forget (to)' and 'be afraid (to)' (§17.3.5-6). It is also used as part of the 'before …' adverbial clause construction §15.2.3.

The verb stem is in the combining form, but shifts to **{H}-tone** before this suffix. The suffix itself has allomorphs *-rěŋ* (after monosyllabics and bimoranic bisyllabics), and *-těŋ* (after longer stems). The *r* may undergo Forward Nasalization (§3.6.1.1) to $r^n$. In nonmonosyllabic stems, the stem-final vowel undergoes Early *u*-Syncope under the usual conditions, which in turn triggers the usual *CC*-cluster rules.

The allomorphy (*r/t* alternation) and the details of Early *u*-Syncope and *CC*-cluster rules are the same as those for imperfective *-rà-* (§10.1.1.6) rather than those for perfective negative *-rí-* (§10.1.2.2). Therefore most rhotic-medial light bisyllabics (*Cvrv-* and $Cvr^nv$-) combine with the suffix to give *Cv́-těŋ*, parallel to imperfective *Cv́-tv̀-*. However, the exceptional verbs of these shapes that have imperfective *Cv́-lv̀-* likewise have verbal noun *Cv́-lěŋ*. We get *-lěŋ* and *-něŋ* after stems that end (following syncope) in *l* and *n*, see Sonorant Assimilation (§3.6.3.7). For suffix-initial *r* ~ *t* see also the causative allomorphs in (253-254) in §9.2.

I do not hear vowel-harmonically distinct variants for this suffix. For example, the verbal noun of both *mùnó* 'roll up (mat)' and *mùnɔ́* 'rumple' is *mún-nĕŋ*.

Examples are given in (89), with the irregular forms in (89h). *kárⁿá* 'do' irregularly has *l* instead of *t* in both the imperfective *ká-là-* and the verbal noun *ká-lĕŋ*.

| (89) | | gloss | imperative | VblN |
|---|---|---|---|---|
| | a. | 'exit' | *gó* | *gú-rĕŋ* |
| | | 'eat' | *lɛ́* | *lí-rĕŋ* |
| | b. | 'give' | *ów* | *ów-rĕŋ* |
| | | 'run' | *zɔ̌:* | *zɔ́w-rĕŋ* |
| | c. | 'tie' | *págá* | *págú-rĕŋ* |
| | | 'dig' | *gàsá* | *gású-rĕŋ* |
| | | 'touch' | *dògó* | *dógú-rĕŋ* |
| | d. | 'look' | *èlá* | *ɛ́l-lĕŋ* |
| | | 'go up' | *ùnɔ́* | *ún-nĕŋ* |
| | e. | 'jump' | *tóró* | *tó-tĕŋ* |
| | | 'chase' | *nàrⁿá* | *ná-tĕŋ* |
| | f. | 'drink' | *nɛ́* | *ní-rⁿĕŋ* |
| | g. | 'go back' | *bìrìyó* | *bíríy-tĕŋ* |
| | | 'converse' | *élúkó* | *élkú-tĕŋ* |
| | | 'throw' | *dà:ⁿsá* | *dá:ⁿsú-tĕŋ* |
| | h. | 'do' | *kárⁿá* | *ká-lĕŋ* |
| | | 'come' | *yèrí* | *yé-tĕŋ* |
| | | 'go to' | *yá* | *bó-tĕŋ* (< *bòrú-*) |
| | | 'bring' | *zérì* | *zé:-tĕŋ* (< *zê:rú-*) |

### 4.2.3 Diminutive nouns (*-ĕy/-ɛy*, *-í:*)

The usual diminutive suffix for nouns is *-ĕy* or *-ɛy*, depending on the vowel-harmonic class of the noun (*-ɛy* is associated with vowels {*a ɛ ɔ*}). If a nonmonosyllabic noun ends in a vowel, this vowel is replaced by the suffixal

vowel. Examples: *bà:ⁿsá* 'wooden eating bowl', diminutive (i.e. small bowl) *bà:ⁿs-ěy* ; *tògùrò-[ùr-ěy]* 'drain from toilet into street' from *ùró* 'hole (pit)'.

Suffix *-ěy/-ěy* has rising tone, but may co-occur with an H-tone on a preceding syllable.

There are some nouns (and adjectives) that occur only, or most often, in the diminutive form. Nouns attested only in the diminutive form, making segmentation questionable, include *làwrěy* 'small trimming ax', *wòwòrěy* 'collarbone', *cèwrěy* 'fingernail', *kúsěy* 'trap(n)', and the final in *yà-gìrěy* 'young adult female'.

The diminutive suffix is rather common in **compound finals**, including some body parts, plant names (especially those marked as "male" or "female"), and animal (e.g. bird) names. Some of these are transparent, others are frozen (there is no nondiminutive form of the compound final). Examples: *pùrɔ̀-[ùr-ěy]* 'anus' (rear.end-[hole-Dimin]'), *lɔ̀-[pòt-ěy]* 'shoulderblade' (hand-[worn.out?-Dimin]), *kúrúkúlěy* 'tree sp.' (*Boscia angustifolia*), *[yàgà-yàgà]-[ár-èy]* 'spiny hibiscus bush sp.' (*Hibiscus longisepalus*, distinguished from other *yàgà-yágà* species as "male"), *pétkíl-ěy* 'laughing dove'

There are also some nouns that take *-í:* rather than *-ěy/-ěy*, though *-í:* is a variant of a mainly adjectival diminutive ending *-í→*. The *-í:* is common with *ì-rⁿú* 'child' and its plural *ì-mú*, which therefore often appear as *ì-rⁿ-í:* and *ì-m-í:*, see (85) in §4.1.2 above. The diminutive of these 'child' terms is also common in compounds like *nàŋà-[ì-rⁿ-í:]* 'calf' ("cow-[child-Dimin]"), see §5.1.10.

The noun recorded only as *cès-í:* 'small piece of meat' is related to the verb *césá* 'cut'. Another noun recorded only with final *í:* (which is therefore not clearly segmentable) is *nàŋà-sɔ̀rí:* 'branch used as whip'.

### 4.2.4 Agentive nominals (*-nú ~ -n*, plural *-mú ~ -m*)

All agentive nominals in my data are compounds of the *deer-[slay-er]* variety with an L-toned initial noun denoting the typical object (or a cognate nominal as a kind of filler), plus an H-toned verb stem (without AN suffix) ending in human singular *-nú ~ -n* or human plural *-mú ~ -m*. The usual pronunciations are singular *-nú* and (apocopated) plural *-m*. For examples of these compounds see §5.1.9.

A special **clausal agentive** with suffix *-n* (for singular or plural) on the AN-inflected verb is described in §14.2.2.

## 4.3 Pronouns

For 1Pl *í*, 2Sg *ú*, and 2Pl *á*, no changes in form occur across syntactic functions. The 1Sg is subject to tonal variation. Third person pronominals are subject both to tonal and vocalic variation.

### 4.3.1 Independent pronouns

The **independent** personal pronouns are in (90). All are H-toned. The third person forms have closed mid vowels {*e o*}. These forms are used for focalized pronouns, and before various discourse-functional and logical particles, as in *wó mánì* ~ *wó mà* 'he/she too'. They are also used as vocatives. In my texts, which are heavy on quoted speech (especially in the tales), a third person independent pronoun at the beginning of a sentence, with no discourse-functional particle following, very often represents a reported vocative, i.e. an original 'hey you!'.

(90)

| | category | independent pronoun |
|---|---|---|
| a. | 1Sg | *mí* ~ *m̀ᵇí* |
| | 1Pl | *í* |
| b. | 2Sg | *ú* |
| | 2Pl | *á* |
| c. | 3Sg | *wó* |
| | 3Pl | *bé* |
| d. | NonhSg | *kó* |
| | NonhPl | *cé* ~ *ké* |
| e. | Logo | *àsí* |
| | Logo Pl | *àsí mă:* |

In elicitation, plural *mă:* is optionally added to plural independent pronouns, hence *í mă:*, *á mă:*, *bé mă:*, *ké mă:*. This combination is redundant, and it has not been observed in texts.

For the use of logophoric pronouns see §18.2.

### 4.3.2 Direct object and (in relatives) preverbal subject

Pronouns used in unfocused **direct-object** function (preceding the verb), and as **preverbal subject pronominals in relative clauses** (§14.1.6), are in (91). All except 1Sg are H-toned. The third person forms have open mid vowels {*ɛ ɔ*}.

(91)

| | category | object pronoun | comment |
|---|---|---|---|
| a. | 1Sg | *m̀* | assimilates to following consonant (becoming *ǹ*, *ŋ̀*); has optional oral release as *m̀*$^{b}$ before a vowel |
| | 1Pl | *í* | |
| b. | 2Sg | *ú* | |
| | 2Pl | *á* | |
| c. | 3Sg | *wɔ́* | |
| | 3Pl | *bɛ́* | |
| d. | NonhSg | *kɔ́* | |
| | NonhPl | *cɛ́* ~ *kɛ́* | |
| e. | Logo | *àsí* | |
| | Logo Pl | *àsí mǎ:* | |

*m̀ wɔ́*, 1Sg subject on 3Sg object, e.g. (95a) below, optionally contracts to *m̀ ɔ́* or *m̀*$^{b}$ *ɔ́*, as in (303b) in §10.1.2.2. In the contracted form, the initial L-tone varies between inaudible and faintly audible.

Pronominal objects may **follow** imperative verbs. In this case the 1Sg object has independent-pronoun form *mí*, while other categories have the same form as preverbal objects; see §10.4.6.

### 4.3.3 Possessor and postpositional complement

The forms in (92) are used in **possessor** functions (for postpositional-complement function, see below). Here the 1Sg and all third person forms are L-toned, and the third person forms have **open mid vowels** {*ɛ ɔ*} in careful pronunciation. In allegro speech the distinction between {*ɛ ɔ*} and {*e o*} is not always clear.

(92)

| | category | possessor | comment |
|---|---|---|---|
| a. | 1Sg | *m̀* | assimilates to following consonant (becoming *n*, *ŋ̀*); has optional oral release as *m̀*$^{b}$ before vowel |
| | 1Pl | *í* | |
| b. | 2Sg | *ú* | |
| | 2Pl | *á* | |
| c. | 3Sg | *wɔ̀* | |
| | 3Pl | *bɛ̀* | |
| d. | NonhSg | *kɔ̀* | |
| | NonhPl | *cɛ̀* ~ *kɛ̀* | |
| e. | Logo | *àsí* | |
| | Logo Pl | *àsí mǎ:* | |

In sentences like 'I saw my child' or 'She ate her food', where the possessor is coindexed with the clause-mate subject, instead of the usual possessor pronominal preceding the possessed noun, a transpersonal reflexive possessor *mà* occurs following the possessed noun; see §18.1.1.

There is no difference between alienable and inalienable possessor pronouns. Examples: 1Sg *m̀* $^{HL}$*ílò* 'my house' (also pronounced *m̀*$^{b}$ $^{HL}$*ílò*), *m̀* $^{HL}$*bá* 'my father'; *wɔ̀* $^{HL}$*nénù* 'his/her dog', *wɔ̀* $^{HL}$*kú* 'his/her head', *wɔ̀* $^{HL}$*ná* 'his/her mother'.

The forms used in possessor function, notably with L-tone in the third person, recur as the pronominals used **before postpositions**. The similarity between possessive and postpositional forms of pronouns is hardly surprising, since some postpositions originated as nouns. The dative series is slightly different since the third person pronominals have {*e o*} vowels (harmonizing with the *e* of the postposition itself), and since the dative morpheme *dè* becomes *dé* by Tone-Raising (§3.7.2.5).

(93) gives examples with **dative** *dé* (§8.3).

(93)

| | category | pronoun before postp | dative |
|---|---|---|---|
| a. | 1Sg | *m̀* | *ǹ dé* |
| | 1Pl | *í* | *í dé* |
| b. | 2Sg | *ú* | *ú dé* |
| | 2Pl | *á* | *á dé* |
| c. | 3Sg | *wɔ̀* | *wò dé* |
| | 3Pl | *bɛ̀* | *bè dé* |
| d. | NonhSg | *kɔ̀* | *kò dé* |
| | NonhPl | *cɛ̀ (~ kɛ̀)* | *cè dé (~ kè dé)* |
| e. | Logo | *àsí* | *àsí dé* |
| | Logo Pl | *àsí mă:* | *[àsí mă:] dé* |

### 4.3.4 Main-clause subjects, pre- and post-verbal

**Subject** pronominals as used in **main clauses** are shown in (94). The 1st/2nd person forms precede the VP (as do nonpronominal subject NPs). They are often clause-initial, but can follow other constituents especially when the latter are at least slightly focal. The 1st/2nd person subject pronominals may cliticize to a following morpheme (a verb, an object pronominal, or imperfective *á*). The 3rd person forms are postverbal (suffixes/enclitics).

(94)

| | category | subject pronominal | comment |
|---|---|---|---|
| a. | 1Sg | *m̀* | assimilates to following consonant (becoming *n*, *ŋ̀*); has optional oral release as *m̀$^{b}$* before vowel |
| | 1Pl | *í* | |
| b. | 2Sg | *ú* | |
| | 2Pl | *á* | |

| | | | |
|---|---|---|---|
| c. | 3Sg | *-wɔ́* | contracts in some cases with a preceding vowel to produce *-ɔ́:* or *-ɔ̌:* |
| | 3Pl | *=bɛ́* | |
| d. | NonhSg | *=kɔ́* | |
| | NonhPl | *=cɛ́* ~ *=kɛ́* | |

I will transcribe 3Sg as a suffix, the other third-person subject markers as clitics (boundary symbol =). There are some morphophonological interactions between these clitics and the final syllable of the preceding verb, but they are somewhat opaque. 3Sg *-wɔ́* frequently contracts with a preceding non-high vowel, after the *w* is dropped: *yǎy-wɔ̀rɛ̀-wɔ́* 'he/she went' is often pronounced [jǎjwɔ̀rɔ̌:]. If this contraction occurs, the contracted vowel always appears as [ɔ:].

For final *-e* replacing the regular final vowel of an AN suffix when the subject is third plural or nonhuman plural (and occasionally for first or second person plural), see §10.2.2.

**Subjects precede objects** (pronominal or otherwise), except of course in the case of third person subject pronominals suffixed or cliticized to the verb. In particular, first and second person subject pronomnals precede (pronominal and other) objects, as in (95a-d). The special set of third person preverbal subject pronominals used in relative clauses (91) likewise precede objects (95f). Objects, including pronominal objects, follow any preverbal (pronominal or other) subject (95a-f).

(95) a. *m̀* *wɔ́* *tɛ́w-wɔ̀šì*
1SgSbj 3SgObj hit-Pfv1b
'I hit-Past him/her.'

b. *ú* *ŋ̀* *wɔ̌:-šì*
2SgSbj 1SgObj see-Pfv1b
'You-Sg saw me.'

c. *m̀* *ú* *wɔ̂:-rà*
1SgSbj 2SgObj see-Ipfv
'I will see you-Sg.'

d. *ŋ̀* *y$^{n}$à-r$^{n}$ú* *wɔ̀-sɔ́*
1SgSbj woman-Sg see-Pfv2
'I saw a woman.'

e. *y$^{n}$à-r$^{n}$ú* *ŋ̀* *wɔ̀-sɔ́-wɔ́*
woman-Sg 1SgObj see-Pfv2-3SgSbj
'A woman saw me.'

f. *này$^{n}$*$^{L}$ *kà:* *bɛ́* *ŋ̀* *wɔ̀-sɔ́* *ŋ́*
day$^{L}$ Rel 3PlSbj 3PlObj see-Pfv2 Rel
'the day when they saw me'

## 4.4 Demonstratives and other determiners

### 4.4.1 'This/that (one)' (*ŋ̀gú*)

The **absolute** forms of the basic deictic demonstrative pronoun, translatable as e.g. 'this one' or 'that one' depending on context, are in (96). These are the forms used when the demonstrative functions as a noun phrase (i.e. not modifying a preceding noun stem).

| (96) | | form | category | comment |
|---|---|---|---|---|
| | a. | *ŋ̀gú* ~ *ŋú* | nonhuman singular | |
| | | *ŋ̀gí* ~ *ŋí* | nonhuman plural | |
| | b. | *ŋ̀gú* $^{HL}$*bá:$^{n}$sà* | human singular | cf. *bà$^{n}$sá* 'owner' (and variants) |
| | | *ŋ̀gí* $^{HL}$*bâ-m* | human plural | cf. *bâ*-m 'owners' |

An example is (97).

(97) *[ǹ* *dé]* *ŋ̀gú* *ów*
[1Sg Dat] DemSg give.Imprt
'Give me that!'

$^{HL}$*bá:$^{n}$sà* is related to *bà$^{n}$sá* (and variants) 'owner', which as compound final (very common) appears as *[X* $^{L}$*bàsà]*, *[X* $^{L}$*bà$^{n}$sà]*, or *[X* $^{L}$*bà:$^{n}$sà]* 'owner of X', as in *íló* $^{L}$*bàsà* 'house-owner', see §5.1.12. The use of the 'owner' form in human demonstratives also occurs in Jamsay.

In **postnominal** modifying function, we get *ŋú* (less often *ŋ̀gú*) in the (human and nonhuman) singular, and *ŋí* (less often *ŋ̀gí*) in the plural. The noun **drops tones**, as it would before a modifying adjective. In allegro speech, *ŋú* may simplify to *ŋ́*. This raises the possibility that relative morpheme *ŋ́*, which

appears at the end of relative clauses (§14.1.7), may be historically connected with the demonstrative pronoun.

(98) a. *nù-r$^{n}$ù*$^{L}$ *ŋú*
person-Sg$^{L}$ DemSg
'that person' (*nùr$^{n}$ó*)

b. *nù-mù*$^{L}$ *ŋí*
person-Pl$^{L}$ DemPl
'those people' (*nù-mú*)

c. *nàŋà*$^{L}$ *ŋú*
cow$^{L}$ DemSg
'that cow' (*nàŋá*)

d. *nàŋà*$^{L}$ *ŋí*
cow$^{L}$ DemPl
'those cows'

Before plural *ŋí*, the (redundant) plural morpheme *mă:* is not used (#*nàŋà mă: ŋí* 'those cows' is ungrammatical). However, nouns like 'person' (that have word-internal plural morphemes do take plural form (suffix *-mu*) before *ŋí* (98b).

### 4.4.2 Prenominal strong discourse-definite *kɔ̀* (optional plural *cɛ̀*)

*kɔ̀* may precede a singular noun, indicating prior mention in the discourse. It is more strongly discourse-definite ('this/that same X') than postnominal definite *kúnú*, on which see the following section. *kɔ̀* is etymologically an offshoot of nonhuman singular pronoun *kɔ̀* in possessor function (§4.3.3). However, in discourse-definite function it combines with human as well as with nonhuman nouns, and it does not control the usual possessed {HL} overlay on the noun. It may co-occur with a genuine (pronominal) prossessor (99c), though this combination is not common. It may also co-occur with a postnominal deictic demonstrative (99a) or with the weaker postnominal definite marker, see (202a) in §7.2.

(99) a. *kɔ̀* *nàŋà*$^{L}$ *ŋú*
DiscDef cow$^{L}$ DemSg
'this (same) cow'

b. *kɔ̀* *ì-rⁿú*
DiscDef child-Sg
'the (same) child'

c. *kɔ̀* *m̀* HL*í-rⁿù*
DiscDef 1SgPoss HLchild-Sg
'my child (mentioned before)'

Compare the tones on the noun in (99b), above with those in (100) where *kɔ̀* is a nonhuman pronoun in possessor function and controls {HL} on the noun.

(100) *kɔ̀* HL*í-rⁿù*
NonhSgPoss HLchild
'its (=animal's) child'

Although definite *kɔ̀* does not agree with the modified noun in humanness, it does "agree" optionally in number, so it may appear as *cɛ̀* (variant *kɛ̀*) before a plural noun. Perhaps the best way to put this is to say that *kɔ̀* preserves a trace of its origin as a nonhuman possessor pronoun (hence 'its X' = 'the X'), and that a plural modified noun tends to suggest a corresponding plurality of possessors (hence 'their-Nonhuman Xs' = 'the Xs'). In the examples below, (101a) illustrates non-agreement, while (101b) shows the optional "agreement." I gloss *cɛ̀* in this function as "DiscDefPl" in interlinears, versus just "DiscDef" for *kɔ̀*.

(101) a. *kɔ̀* *nàŋà*L *ŋí*
DiscDef cowL DemSg
'these (same) cows'

b. *cɛ̀* *ì-m-ì:*L *ŋí*
DiscDefPl child-Pl-DiminL DemPl
'these (same) children'
(alternatively: *kɔ̀ ì-m-ì: ŋí*)

### 4.4.3 Postnominal definite *kúnú* and *cíní* 'that (same)'

Competing with prenominal *kɔ̀* is a postnominal definite morpheme *kúnú*, with plural *cíní*. The latter is also pronounced *kíní*, and one could argue that this would be the most revealing transcription. These postnominal definites can be described as weak discourse-definite markers, translatable as 'the', in contrast to strong discourse-definite *kɔ̀* 'that (same)'. Neither *kɔ̀* nor the postnominal definites are used in cases like 'the sun' or 'the way you walk' that do not

reactivate referents introduced in prior discourse. Postnominal definites are not used absolutely, i.e. in the absence of an overt modified noun.

The ***u/i*** **vocalic opposition** for singular versus plural is similar to that in demonstrative pronouns *ŋ̀gú* versus plural *ŋ̀gí*, and (with mid-height vowels) to that in nonhuman pronouns *kɔ́* and plural *kɛ́*.

The definite morphemes are optionally **shortened** (apocopated) to *kún* and *cín* ~ *kín*, respectively.

(102) a. *nàŋà*$^{L}$ *kúnú*
cow$^{L}$ DefSg
'these (same) cows' (*nàŋá*)

b. *nàŋà*$^{L}$ *cíní*
cow$^{L}$ DefPl
'those (same) cows'

c. *ì-r$^{n}$ù*$^{L}$ *kúnú*
child-Sg$^{L}$ DefSg
'that (same) child' (*ì-r$^{n}$ú*)

d. *ì-m-ì:*$^{L}$ *cíní*
child-Pl-Dimin$^{L}$ DefPl
'those (same) children' (*ì-m-í:*)

The modified noun **drops tones**, as it does before (postnominal) demonstratives and before modifying adjectives. This is illustrated in the examples above, and is indexed by the superscripted $^{L}$ on the right edge of the target domain, "pointing" rightward to the postposed definite marker as controller.

In the sequence Poss-N-Det, the noun acquires its tone overlay from the possessor, not from the determiner; see §6.2.2. When the possessor is a simple noun or core NP, this cannot be proven, since both the possessor and the determiner impose the same all-L overlay. However, when the possessor is a pronoun, or a more complex NP such as one including a determiner, it imposes an {HL} overlay on the possessum, whether or not a determiner follows (103a). In this case, if the noun is monosyllabic *Cv*, the {HL} overlay is realized with an H-tone on the noun and with a pitch drop (downstep) on an otherwise H-toned determiner (namely, definite *kúnú* or its plural *cíní*) (103b). For this downstep (symbol $^{!}$), see §3.7.3.1.

(103) a. *[m̀* $^{HL}$*í-r$^{n}$ù]* *kúnú*
[1SgPoss $^{HL}$child-Sg] DefSg
'this (same) child of mine'

b. *[ŋ́* HL*ká]* *ˈkúnú*
[1SgPoss HLmouth] DefSg
'this (same) mouth of mine'

### 4.4.4 Demonstrative adverbs

#### 4.4.4.1 Locative adverbs ('here', 'there')

The demonstrative adverbs specifying location are in (104).

(104) a. deictic (pointing)

| | |
|---|---|
| *ìní* | 'here' |
| *ìndêy, ìllêy* | 'over there' (deictic) |

b. discourse-definite

| | |
|---|---|
| *yá* | 'there, in that (same) place' |
| *yá gìrěy* | 'around there (that same place)' (§4.4.4.3) |

*yá* is the probable historical source of existential *á* (in *á dà* 'be present, be there', §11.2.2.1) and of imperfective particle *á* (§11.1.1.1), as well as the first syllable in *yⁿá-ŋ́gó* 'not be (somewhere)' (§11.2.2.2).

Examples of the deictic adverbials are in (105), and of the discourse-definite ones are in (106).

(105) a. *zérì* *ìní*
bring.Imprt **here**
'Bring (it) here!' (2004-1a.09)

b. *dèlé* *kɔ́* *ìndêy*
put.down NonhSgObj over.there
'Put it down over there!' (pointing)

(106) a. *[[[ùró* L*pùrò]* *kù]* *gàsá* *mà]*
[[[hole Lbelly] in] dig and.SS]
*[kó* *mánì]* *[yá* *á* *sì-tù-rò]*
[NonhSg too] [**there** Ipfv go.down-Caus-Ipfv]
'It (lizard) digs in (its) hole, it too lays (eggs) there.' (2004-1a.10)

b. *[bámákɔ̀]* *bò-s-ɔ́ː]*
[Bamako go.to-Pfv2-3SgSbj]
*[yá* *gìrěy]* *á* *bìrí-yàrà-wɔ́*
[there around] Ipfv work(v)-Fut-3SgSbj
'He went to Bamako. He will work around there (=in that area).'

#### 4.4.4.2 Logophoric demonstrative adverbs (absent)

I have not recorded any demonstrative adverbs based on logophoric *àsí*.

#### 4.4.4.3 Emphatic/approximative modifiers of adverbs

(107a) emphasizes exact location, with particle *tóy*. (107b-c) suggest less precision, with *jínò* in (107b) and *gìrěy* (especially common with discourse-definite *yá* 'there') as the approximative particles.

(107) a. *ìní* *tóy*
here Emph
'right here'

b. *ìllêy* *jínò*
there Approx
'over there (somewhere)'

c. *yá* *gìrěy*
there.Def around
'(somewhere) around there (= that same place)'

Demonstrative adverb *yá gìrěy* (107c) differs only tonally from *yà-gìrěy* 'young adult female (not yet a mother)', a term applied chiefly to female animals (e.g. heifers).

### 4.4.5 Presentatives (*ŋɔ́rⁿɔ̀*)

The presentative morpheme ('here's …!') is *ŋɔ́rⁿɔ̀*, preceding the featured entity. A third person subject pronominal is preverbal as in relative clauses. Whether this is related to *ú wⁿɔ̀-rⁿɔ́* 'you-Sg do not see?' (as a rhetorical question) is unclear.

(108) a. *ŋɔ́rⁿɔ̀* *wɔ́* *á* *yà-rà*
Presentative 3SgSbj Ipfv come-Ipfv
'Here he/she comes!'

b. *kâ:nú* *yèrí* *yàgùrú* *èlú-sà,*
monkey come look.down look-Pfv2,
*tɛ́nǎm* *ŋɔ́rⁿɔ̀* *[ùró* *kù]*
hyena Presentative [hole in]
'Monkey leaned over to look, and lo, there was hyena in the hole.' (2004-1a.05)

## 4.5 Adjectives

### 4.5.1 Underived adjectives

Adjectives are used in modifying function, following the noun. If the referent is plural, the free plural morpheme *mǎ:* follows the adjective (not the noun), but the noun may have its regular plural suffix, as in *yⁿà-ḿ jèrⁿú mǎ:* 'good women' ("woman-Plural good Plural").

(109) Adjectives

| gloss | form |
|---|---|
| a. monosyllabic | |
| 'big' | *ná:* |
| 'hot, fast' | *dɔ́* |
| 'old (animal)' | *-yɔ̌:* (follows *àrà-* 'male' or *yà-* 'female') |
| b. two syllables, /LH/ melody, final *ú* | |
| 'good' | *jèrⁿú* |
| 'bitter' | *gòlú* |
| 'ugly' | *mɔ̀sú* |
| 'muddied' | *bùtú* |
| 'straight' | *ìgú* |
| 'crooked' | *gɔ̀nú* |
| 'smooth, sleek' | *òlú* |
| 'moist, soft, fresh | *ɔ̀rú* |
| 'dense (foliage)' | *dɔ̀gú* |
| 'wet' | *ɔ̀tú* |
| 'old (human)' | *pày-nú* (follows *àrà-* 'male', *yà-* 'female') |

‘old (thing)’ *pòtú*
‘undiluted’ *kùrú*
‘other’ *làgú*
‘half-ripe’ *bùyⁿsú* (pronounced [bùjⁿʃú])
‘emaciated’ *dɔ̀ŋú*
‘blunt (blade)’ *dùnú*
‘heavy’ *dùsú*
‘long, tall’ *gùrú*
‘nearby’ *bɛ̀rú*
‘skinny’ *dɔ̀ŋú*
‘coarse’ *gà:ⁿsú*
‘ripe’ *ìrú*
‘green (wood)’ *ɔ̀rú*

c. two syllables, /H/ melody, final *ú* (not *ú…ú*)
‘unripe; fresh (milk)’ *ɛ́tú*
‘lightweight’ *ɛ́rú*
‘red’ *bárⁿú*
‘white’ *pírú*

d. two syllables, /H/ melody
‘deep’ *lókó*
‘rotten’ *ɔ́rɔ́*
‘spacious’ *pótó*
‘feeble’ *kɔ́ŋɔ́*
‘many, full’ *mútú*
‘front’ *jíró*
‘rear’ *pɛ́rá*

e. two or more syllables, ending in front vowel
‘sweet; sharp’ *lìsí*
‘diluted’ *sèré*
‘empty’ *péré*
‘easy, cheap’ *zɔ́rɛ́*

f. two syllables, /LH/ melody, vocalism *a…a*
‘new’ *kàlá*
‘distant’ *wà:gá*

g. two or more syllables, /LH/ melody, final *í→* (§4.5.3 below)

| | |
|---|---|
| ‘thin’ | *ɔ̀ⁿsíⁿ→* |
| ‘pointed’ | *sèmí→* |
| ‘sole, single’ | *tùr-í→* |

h. bisyllabic, /LHL/ melody, *a…a* vocalism

| | |
|---|---|
| ‘weak’ | *lǎ:là* |

i. bisyllabic, /LH/ melody, ending in *ěy* ~ *ěy* (diminutive)

| | |
|---|---|
| ‘small, young’ | *tègěy* (cf. noun/adverb *tɛ́gěy* ‘a little’) |
| ‘short’ | *tùkěy* |
| ‘young (animal)’ | *kùrěy* |

j. monosyllabic, ending in *y* or *w*

| | |
|---|---|
| ‘fat, thick’ | *sɛ́w* |
| ‘living’ | *yⁿéyⁿ* |
| ‘hard’ | *mǎw* ~ *mᵇǎw* |
| ‘dry’ | *mǎyⁿ* |
| ‘tight (rope)’ | *ěw* |
| ‘dense (forest)’ | *ěw* |

k. monosyllabic, ending in nasal

| | |
|---|---|
| ‘black’ | *jém* |
| ‘difficult, costly’ | *nâŋ* |
| ‘sour’ | *nôm* |
| ‘cold, slow’ | *tôm* |

l. other

| | |
|---|---|
| ‘lukewarm’ | *bùgêm, bùgêm-bùgêm* |

The adjectives of type *Cv̀Cú* in (109b) may have originated as verbal nouns in some cases, see §4.5.4 below. Those of type *Cv̀Cěy* or *CvCɛ̌y* in (109h) are diminutive in form (§4.5.3, cf. §4.2.3); other adjectives may also form diminutives, but the cases in (109h) are always in this form. The final *í→* or *íⁿ→* of the forms in (109f) is also arguably segmentable, and some other adjectives have a similar form as a variant; see §4.5.3, below.

Some adjective-like senses are expressed by relative clauses (final *dà ŋ́*) with a verb of adjectival meaning. An example is *dɔ̀ymú dà ŋ́* ‘(one) who is fast’.

### 4.5.2 Iterative adjectives

Adjectives (as opposed to expressive adverbials) do not normally have lexicalized iterative form. For iterative derivatives of adjectives, see §5.3.3.

### 4.5.3 Diminutive adjectives with *í→* or *-ěy*

Some adjectives have an **optional** extension *í→* with the same tone melody, or sometimes with a reversed tone overlay (HL instead of LH). The sense is **diminutive**, and the most common examples are either color terms (110a) or adjectives that lend themselves semantically to diminutive or other hypocoristic uses (110b).

(110)

| | gloss | adjective | with *ì→* |
|---|---|---|---|
| a. | 'red' | *bár$^{n}$ú* | *bàr$^{n}$-í→* (or: *bár-ì→*) |
| | 'white' | *pírú* | *pìr-í→* |
| | 'black' | *jém* | *jèw$^{n}$-í→* |
| b. | 'skinny' | *dɔ̀ŋú* | *dɔ̀ŋ-í→* |
| | 'lightweight' | *érú* | *èr-í→* |
| | 'ugly' | *mɔ̀sú* | *mɔ̀s-í→* |
| | 'fat' | *sɛ́w* | *sɛ̀w-í→* |
| | 'soft & moist, tender' | *ɔ̀rú* | *ɔ̀r-í→* |

A similar example involving an adjective-like numeral is *túrú* 'one', *tùr-í→* 'single, sole'.

After some hesitation I transcribe these forms with *i→*, i.e. with intonation-like prolongation (like that with some expressive adverbials) rather than ordinary vowel-length. However, the distinction is not sharp, especially since phonemic long oral vowels are elsewhere confined to word-initial syllables except in loanwords.

(109g) in §4.5.1 lists a few adjectives that **always** end in *í→* (or nasalized *í$^{n}$→*) following an L-toned first syllable, e.g. *ɔ̀$^{n}$sí→$^{n}$* 'thin'. (109i) similarly lists several adjectives with diminutive-like senses ('small', 'young', 'short') that always end in *ěy* ~ *ěy* that immediate suggests the nominal diminutive suffix (§4.2.3). It does not seem usual for ordinary adjectives to allow optional addition of the diminutive ending, though I can cite (from a text) a diminutive *là:l-ěy* from *lă:là* 'weak, feeble'.

#### 4.5.4 Adjectives from *-ú* verbal noun with {HL} tone

Certain verbs that have a verbal noun with suffix *-ú*, e.g. bisyllabic *CV̀C-ú* or apocopated *CV́C-∅*, have a corresponding form with falling tone that occurs as compound final after an L-toned noun. This form functions as an adjective, often similar to the adjectival use of a **past (i.e. passive) participle** in English (*fried rice*, *mashed potatoes*). In other words, the adjective-like verb form denotes the action that resulted in the final product.

The verb *zàlá* 'cook (e.g. meat, cow-peas) in a pot', verbal noun *zàl-ú*, corresponds to an adjective-like form *zálù* in several combinations, e.g. *sèrù zálù* 'cream of millet (one type)', *[sèrè ɛ̀tù] zálù* 'cream of millet (another type)', *mɔ̀ zálù* 'cooked rice'.

The verb *dùwɔ́* 'pound (e.g. grain, in a mortar)', verbal noun *dŭw-∅*, takes the form *dûw-∅* (pronounced [dû:]) in *ɛ̀ŋìnɛ̀ dûw-∅* '(balls of) pounded peanuts (with some millet)', cf. *ɛ́ŋínɛ́* 'peanuts', and in *sàŋà dûw-∅* 'crushed millet mixed with some peanuts'.

*yàwrá* is a verb (verbal noun *yàwr-ú*) meaning 'crush, grind (e.g. millet, with stones)'. We get *yáwr-ù* in *sàŋà yáwr-ù* 'crushed millet (snack)'.

Deverbal adjectives of this type are closely related to compounds consisting of L-toned nouns as initials, followed by verbal nouns with their normal rising tone pattern (§5.1.4). When the verb is monosyllabic *Cv́*, one cannot distinguish the verbal noun from its adjectival counterpart with {HL} tone, since both would have *Cv́* form; see §5.1.5 for some examples.

### 4.6 Participles (absent)

There are no morphological participles (i.e. verbs with noun-adjective endings agreeing with a NP) in TT. However, verbs in relative clauses behave syntactically like nominals (they can be followed by determiners and non-numeral quantifiers). See chapter 14.

### 4.7 Numerals

#### 4.7.1 Cardinal numerals

##### 4.7.1.1 'One', 'same (one)', and 'other'

The basic '1' numeral is *túrú*. A preceding modified noun has its regular tones, as it does before other numerals (but not before adjectives): *íló túrú* 'one house'.

Expressions like ‘X and Y, both are one’ are used in the sense ‘X and Y are the same’ (i.e. are substantively identical, or are equivalent in some respect). Here the numeral takes a predicative form *tùr-í→* (111). *kɛ́k ~ cɛ́k* ‘only’ may be added. (For conjunction see §7.1.1.)

(111) a. *[yú꞉꞉ [túsú lěy] cɛ̌-w-là꞉-fú꞉] tùr-í→*
[millet-& [sorghum and] all] one.single
‘Millet and sorghum are the same (=equivalent).’

b. *tùr-í→ cɛ́k = bɛ́*
one.single only=3PlSbj
‘They are the same.’

Numeral ‘1’ may occur in expressions meaning ‘X alone (singly)’ (112). One form used in this context is *túrí꞉-ló*. With numerals ‘2’ and above, *-ló* is an ordinal suffix, but ‘first’ is expressed by a different form (§4.7.2.1-2, below).

(112) *búkàrì túrí꞉-ló kɔ̀ ŋ̀gú kár$^{n}$ú-sà*
Boukari singly SFocSg DemSg do-Pfv2
‘It’s Boukari alone [focus] who did that.’

Falling-toned $^{HL}$*túr-ì→* after an NP, as in (589b) in §17.4.4, is probably a compound-like {HL} overlay. For other (x̄ n̂) compounds see §5.1.7.

‘Other’ is expressed by the true adjective *làgú*. Thus *bɛ̀lú* ‘sheep’, *bɛ̀lù*$^{L}$ *làgú* ‘another (or: the other) sheep’. Note the tone-dropping on the modified noun.

### 4.7.1.2 ‘2’ to ‘10’

The numerals from ‘2’ to ‘10’ are in (113).

(113)
| | | |
|---|---|---|
| ‘2’ | *lěy* | (cf. also *lěy* in conjunctions, §7.1.1.1) |
| ‘3’ | *tà꞉lí* | |
| ‘4’ | *nǎy$^{n}$* | |
| ‘5’ | *nŭ꞉y$^{n}$* | |
| ‘6’ | *kúréy* | |
| ‘7’ | *sóy$^{n}$* | |
| ‘8’ | *gá꞉rà* | |
| ‘9’ | *lá꞉rà* | |
| ‘10’ | *pɛ́꞉rú* | |

The numerals may follow a modified noun, which retains its regular tones (114a). They may also be used absolutely, as NPs with no overt modified noun (114b).

(114) a. *[bɛ̀lú* *lěy]* *cí* *děn* *d-è=bɛ́*
[sheep two] slaughter Tr be-3PlSbj=3PlSbj
'They have slaughtered (=cut the throat of) two sheep.'

b.. *[ǹ* *dé]* *lěy* *ów*
[1Sg Dat] two give.Imprt
'Give me two!'

4.7.1.3 Decimal numerals ('10', '20', …) and combinations ('11', '59', …)

The decimal numerals are in (115), with '10' repeated for reference from the preceding section. The decimal numerals from '20' to '90' are compounds of '10' (in various thin disguises) plus the relevant single-digit numeral. In '20' through '50', the '10' component takes the truncated form *pɛ́-* (assimilating harmonically to *pé-* in *pé-lěy* '20'). The deletion of the rhotic syllabic (*rv*) before a coronal consonant suggests a comparison with Rhotic Deletion (before coronal), §3.6.3.6. In the same forms '20' to '50, the initial '10' has H-tone, contrasting rhythmically with the initial L-tone component of the following single-digit numeral. In '60' and '70', we *pèrú-* is followed by a single-digit numeral with initial H-tone. In '80' and '90', *pèr-* precedes an H-tone.

(115)

| gloss | form |
|---|---|
| '10' | *pɛ́:ró* |
| '20' | *pé-lěy* |
| '30' | *pé-tà:lí* |
| '40' | *pé-nǎy*$^{n}$ |
| '50' | *pé-nǔ:y*$^{n}$ |
| '60' | *pèrú-kúréy* |
| '70' | *pèrú-sóy*$^{n}$ |
| '80' | *pèr-gá:rà* |
| '90' | *pèr-lá:rà* |

In combinations of a decimal unit with a single-digit numeral (e.g. '18', '36, ''97'), the decimal unit comes first, followed by the single-digit numeral, with no 'plus' linker. However, in '11' to '19', the '10' numeral takes the form *pɛ́:r-î:* (116a).

(116) a. *pɛ́:r-î:* *lěy*
ten-plus two
'twelve'

b. *pɛ́-năy$^{n}$* *nŭ:y$^{n}$*
ten-four five
'forty-five'

c. *nùndír$^{n}$á* *[pɛ́-lěy* *tà:lí]*
day [ten-two three]
'twenty-three days'

#### 4.7.1.4 Large numerals ('100', '1000', …) and their composites

The two basic large numerals are those in (117). They are noun-like syntactically, and can be modified by smaller following numerals, e.g. to express '200' or '5000'. Although *zàŋgú* 'hundred' has a resemblance to e.g. Gourou *sùŋú*, TT has borrowed both *zàŋgú* and *zɛ́mbèrɛ̀* 'thousand' from Songhay.

(117) gloss form

a. 'hundred' *zàŋgú ~ zàŋú ~ zăŋ*

b. 'thousand' *zɛ́mbèrɛ̀*

For 'one hundred', *túrú* is added: *zàŋú túrú* 'one hundred'. Likewise with 'one thousand': *zɛ́mbèrɛ̀ túrú*.

'One hundred fifty' is *zàŋú túrú pɛ́-nù:y$^{n}$*.

For very large quantities (e.g. 'million'), the phrase *zɛ̀mbèrɛ̀ lùgó* is used.

#### 4.7.1.5 Currency

As is true in native languages throughout the zone, the unit of currency is equivalent to the 5 franc CFA coin, called *mú:dù* in TT (cf. Fulfulde *bu:du*).

#### 4.7.1.6 Iterated distributive numerals

Distributive numerals, with glosses like ‘ten apiece’, ‘ten (currency units) each’, ‘ten at a time’, or ‘by tens’, are formed by iterating the numeral.

(118) a. *[gò:rò*$^{L}$ *ŋ̀gú]* *pé:rú-pé:rú*
[kola$^{L}$ DemSg] ten-ten
‘Kola nuts are ten currency units (= 50 CFA) each.’

b. *nŭ-m* *pé:rú-pé:rú* *yĕw-wòrè*
person-Pl ten-ten come-Pfv1a]
‘The people came ten at a time (in groups of ten).’

Decimal numerals (‘20’ to ‘90’) are treated as units for this purpose: *[pé-nŭ:y*$^{n}$*]-[pé-nŭ:y*$^{n}$*]* ‘fifty each’.

If the numeral is composite, including both a decimal (or higher) numeral and a digit, only the digit is iterated. So from *pér-î: nŭ:y*$^{n}$ ‘15’ (§4.7.1.3), the distributive is *pér-î: nŭ:y*$^{n}$*-nŭ:y*$^{n}$ ‘15 at a time, 15 each’.

The interrogative ‘how much?, how many?’ can also form a distributive iteration, and in fact is very common in asking for unit prices: *àŋ́-àŋ́* ‘at how much (per unit)?’ (§13.2.7).

### 4.7.2 Ordinal adjectives

#### 4.7.2.1 ‘First’ and ‘last’

For ‘first’, the ordinal is the adjective *dɛ́wrú*, as in *tùwò*$^{L}$ *dɛ́wrú* ‘the first stone’. It is commonly used in connection with chronology rather than rank.

(119) *[[mòbìlì* *dèwrù]*$^{L}$ *ŋgú]* *kálà* *kár*$^{n}$*-w*$^{n}$*ɔr*$^{n}$*è*
[[vehicle **first**]$^{L}$ DemSg] stuck do-Pfv1a
‘This first vehicle (e.g. in a convoy) got bogged (in the mud).’ (Fr *calé*)

Another expression, *tí→*, is adverbial ‘first’ or predicative ‘(be) first’. In predicative function, it is most common in contexts such as competitions and rankings rather than chronology. In the relativized form *kà: tí→* it competes with *dɛ́wrú* as a modifier with no sharp distinction in meaning (120c).

(120) a. *tí→ = wɔ́*
first=3SgSbj
‘He/She is first (e.g. in class, in a race).’

b. *tí→* *jìní-wɔ́*
first not-3SgSbj
'He/She is not first.'

c. *ɛ́wá* *mɔ̀ŋgɔ̀rɔ̀*[L] *kà:* *tí→* *ú* *wɔ̀-sɔ́* *ŋ̀*
buy.Imprt mango[L] Rel first 2SgSbj see-Pfv2 Rel
'Buy-2Sg the first mango that you see!.'

For 'last (in time or rank)', the adjective *pɛ́rá* is used: *bɛ̀l pɛ́rá* 'the last sheep', *mòbìlì pɛ́rá* 'the last vehicle (in a convoy)'.

#### 4.7.2.2 Other ordinals (suffix *-ló*)

Except for 'first' (and 'last'), ordinals are formed by suffixing *-ló* to the numeral. Even *túrú* 'one' can be followed by *-ló* when it is part of a complex numeral. Except as part of decimal terms ('20' to '90'), numerals from '1' to '10' have all-H tone before *-ló*. 'Hundred' and 'thousand' have L-toned stems before *-ló*.

(121)

| form | gloss |
|---|---|
| a. single-digit numeral | |
| *léy-ló* | 'second' |
| *tá:l-ló* | 'third' |
| *kúréy-ló* | 'sixth' |
| *gá:rá-ló* | 'eighth' |
| *pɛ́:l-ló* | 'tenth' |
| b. decimal | |
| *pɛ̀-tà:lì-ló* | 'thirtieth' |
| c. decimal plus single-digit numeral | |
| *pɛ̀:r-ì: túl-ló* | 'eleventh' |
| *pɛ̀:r-ì: léy-ló* | 'twelfth' |
| d. huindred | |
| *zàŋ̀ù-ló* | 'hundredth' |
| e. thousand | |
| *zɛ̀mbɛ̀rɛ̀-ló* | 'thousand' |

### 4.7.3 Fractions and portions

'A half', often really more vaguely 'a portion', can be expressed by *hèlú* (literally 'a division, a sharing', cf. verb *hélú-* 'divide, share'), *kà-kàrúkà* (related to *kárkú-* 'tear, rip') and *jérè* (borrowed < Fulfulde). Divisions into three or more portions can also be denoted by the noun *búrmó* and the related adverbial *búrúm-búrúm*.

# 5 Nominal and adjectival compounds

## 5.1 Nominal compounds

The following notation is used in the **formulas**. Word-classes: n = noun, v = verb, a = adjective, x = variable word-class (usually noun). Diacritics, using x as base: x̄ = same tones as in uncompounded form (lexical melody or lower-level overlay), x̀ = {L} overlay (tone-dropping), x́ = {H} overlay, x̂ = {HL} overlay, x̌ = {LH} overlay.

### 5.1.1 Compounds of type (x̄ n̄) and (x̄ ň)

Several compounds with a final human noun, especially 'person' and 'man' but also e.g. 'chief', have an initial (which may itself be complex, or even a locative adverbial phrase), and a final with {LH} overlay realized as L(L…)H. In most cases this L(L…)H pattern is already the regular lexical melody of the final noun (*nù-r$^{n}$ú* 'person', *nù-mú* 'people', *ɔ̀ŋù-nú* 'traditional chief, Hogon'. In this case, these compounds are compatible with either of the formulas (x̄ n̄) or (x̄ ň).

(122) a. *ǒw* *à-nú*
bush man-Sg
'lion' ("bush-man")

b. *[ów* *kù]* *nù-mú*
[bush in] person-Pl
'rural people'

c. *àlá* *ɔ̀ŋù-nú*
village chief-Sg
'the village chief'

d. *[kɔ̀* *gɔ̌ŋ]* *nù-mú*
[DiscDef elephant] person-Pl
'the people (= troops) of the elephant' (2004-1b.01)

See also 'Sarinyere Mountain people' in (240).

However, *nùmù:mú* ‘people’ as compound final in (123) below is tonally distinct from the pronunciation of this (idiosyncratically iterative) stem when uncompounded, namely *nùmû:mú* (§5.3.2). This suggests that a type (x̄ x̌) with {LH} overlay on the final is occasionally distinguishable from (x̄ n̄), with no overlay on either initial or final.

(123) a. *tórɔ́* $^{LH}$*nùmù:mú*
mountain $^{LH}$people
‘mountain people’

c. *àlá* $^{LH}$*nùmù:mú*
village $^{LH}$people
‘villagers’

The examples in (122) above are therefore ambiguous as to (x̄ x̌) versus (x̄ n̄).

### 5.1.2 Compounds of type (x̀ n̄)

The initial has {L} overlay. This is indicated by the superscripted $^{L}$ in (124), but the superscript is omitted in my normal transcription. The final has its regular tone. This is the most common pattern for typical, lexicalized compounds. It has the same tone pattern as a noun-adjective combination, which suggests that the latter is a kind of compound.

(124) a. *òw*$^{L}$*-nìw*$^{n}$*ěy*$^{n}$
bush$^{L}$-cat
‘wild cat’

b. *tìw*$^{n}$*à*$^{L}$*-[dù-dùŋgúrò]*
tree$^{L}$-[stump]
‘tree stump’ (*tìw*$^{n}$*á*)

c. *kù*$^{L}$*-kàsú*
head$^{L}$-calabash
‘skull’

Some nouns are especially common as compound initials, defining a semantic domain that the referent relates to. Thus *cɛ́lá* ‘central organs (especially liver)’, which is also the seat of the emotions, occurs in e.g. *cèlà*$^{L}$*-tóŋɔ́* ‘heart’ (“…-can”), *cèlà*$^{L}$*-y*$^{n}$*úmnò* ‘nausea’, *cèlà*$^{L}$*-bár*$^{n}$*à* ‘anger’ (“…-redness”), *cèlà*$^{L}$*-pɛ́*$^{n}$ ‘heroism’ (“…-hardened.ripe”), *cèlà*$^{L}$*-y*$^{n}$*áw*$^{n}$*á* ‘being devastated (e.g.

by failure)'. On the other hand, *-cɛ́lá* is the final in *lɔ̀*$^{L}$*-cɛ́lá* 'palm of hand' and *bèl*$^{L}$*-cɛ́lá* 'middle'.

Certain nouns lend themselves to functioning as compound finals, flexibly denoting parts or configurations that can be adapted to a range of contexts. *ká* 'mouth' can mean 'tip, end (of an object)' and 'opening, rim (of orifice)', and occurs as a fixed part of such compounds as *pùrɔ̀*$^{L}$*-ká* 'rear end', *bètè*$^{L}$*-ká* 'stomach, paunch', *cìr*$^{n}$*ò*$^{L}$*-ká* 'nose' (uncompounded *cír*$^{n}$*ó* has specialized to mean 'snot' in TT), and *ìl*$^{L}$*-ká* 'outside (a house)'. *ósú* 'path, road' is another common final: *nì*$^{L}$*-ósú* 'water channel', *gàgù*$^{L}$*-ósú* 'tracks (of reptile)', *kùwɔ̀*$^{L}$*-ósú* 'tracks (paw prints)', *dè*$^{L}$*-ósú* 'riverbed, oued', *yɔ̀kɔ̀*$^{L}$*-ósú* '(interior) throat'. Of course nouns like 'hair' and 'hole' occur with numerous initials indicating the body region in question: *kù*$^{L}$*-kúrɔ́* 'head hair', *bèw*$^{L}$*-kúrɔ́* 'beard hair', *jìrò*$^{L}$*-kúrɔ́* 'eyelash', *bìsà*$^{L}$*-kúrɔ́* 'mane hair', *kà*$^{L}$*-kúrɔ́* 'moustache' ("mouth-hair"), *cɛ̀lkù*$^{L}$*-kúrɔ́* 'chest hair'; *sùgùrù*$^{L}$*-ùró* 'ear hole', *cìr*$^{n}$*ò*$^{L}$*-ùró* 'nostril'.

Some nouns denoting containers or other common implements can be used as compound finals that describe a shape or contour: *tè:*$^{n}$*sú* 'bowl' in *jìrò*$^{L}$*-tè:*$^{n}$*sú* 'eye socket', *kàsú* 'calabash' in *kù*$^{L}$*-kàsú* 'skull' ("head-…"), *pètá* '(flat) fan' in *kà*$^{L}$*-pètá* '(flat) side of face' ("mouth-…") and *kù*$^{L}$*-pètá* 'temple' ("head-…"), *béré* 'stick' in *cìr*$^{n}$*ò*$^{L}$*-béré* 'bridge of nose'.

As compound final, *ní* 'water' generalizes to 'liquid': *cìr*$^{n}$*ò*$^{L}$*-ní* 'snot in nose', *ànnà*$^{L}$*-ní* 'urine', *ìrù*$^{L}$*-ní* 'breast milk' ("breast-water", cf. *êm* 'milk'), *sèrè*$^{L}$*-ní* 'semen', *jìrò*$^{L}$*-ní* 'tears', *lòw*$^{L}$*-ní* 'liquid (not buttery) oil', *àr*$^{n}$*à*$^{L}$*-ní* 'rainwater, rainfall', *ɛ̀rà*$^{L}$*-ní* 'soda-ash water'.

*-tɔ́* is a specialized compound final occurring in *lɔ̀*$^{L}$*-tɔ́* 'hand' (*lɔ́* 'hand, arm') and *kùwɔ̀*$^{L}$*-tɔ́* 'foot' (*kúwɔ́* 'leg, foot').

Compounding is recursive. An example where the initial is itself composite is *[lɔ̀-bèrè]*$^{L}$*-tùwó* 'stone arm-ring', from *lɔ̀*$^{L}$*-béré* '(wooden) arm-ring' (*lɔ́* 'arm, hand', *béré* 'stick') plus *tùwó* 'stone'.

In the lists above I use the superscripted $^{L}$ to clarify the tonomorphological structure, but in everyday transcriptions I usually limit superscripts to word-level overlays as in multi-word NPs.

### 5.1.3 Compounds with final verbal noun, type (x̀ n̄)

The initial denotes the direct object. It occurs without determiners and with all tones low. This is indicated by superscript $^{L}$ in (125-126) and in places elsewhere in this chapter, but I usually omit the superscript in textual transcriptions. The final is a verbal noun in form. The compound may be a **verbal abstractive** simply denoting the event type, or it may denote e.g. an **instrument** or **product** associated with the event type. Depending on tones,

there may or may not be an audible distinction between a true compound (with a verbal noun as final) and a noun followed by a deverbal adjective (§4.5.4).

(125) a. *kà*$^{L}$*-[pàg-ú]]*
mouth$^{L}$-[tie-VblN]
'muzzle-guard (to prevent suckling)' (*ká*, *págá*)

b. *yù*$^{L}$*-[bɛ̌w-∅]*
millet$^{L}$-[sprout-VblN]
'(a) millet sprout' (*yú*, *bɛ̀wá*)

c. *yù*$^{L}$*-[lŭw-∅]*
millet$^{L}$-[fall-VblN]
'millet (spike and plant) that has fallen to the ground' (*lùwó*)

d. *yù*$^{L}$*-[làr-ú]*
millet$^{L}$-[bear(child)-VblN]
'millet plant that has grown a substantial spike (but no grains yet)' (*làrá*)

e. *kù*$^{L}$*-[tɔ̌m-∅]*
head$^{L}$-[roll.on-VblN]
'turban' (*kú*, *tɔ́w$^{n}$ɔ́*)

f. *nɛ̀ŋ*$^{L}$*-[ìg-ú]*
salt$^{L}$-[stand-VblN]
'slab (bar) of salt'

The [noun-[verb-VblN]] compound may function as an adjective-like modifier of another noun (126).

(126) *yù*$^{L}$ *kà*$^{L}$*-[pàg-ú]*
millet$^{L}$ mouth$^{L}$-[tie-VblN]
'millet plant at the stage where it has stopped growing new leaves'

### 5.1.4 Compounds with final verbal noun, type (x̀ ń)

In this type, the verbal noun has {H} overlay.

(127) a. *kù*$^{L}$-$^{H}$*[tíl-ú]*
head$^{L}$-$^{H}$ [shut-VblN]
'mourning' (*kú*, *tílá*)

b. *kà*$^{L}$-$^{H}$*[pír-ú]*
mouth$^{L}$-$^{H}$[slap-VblN]
'(a) slap'

c. *yù*$^{L}$ *ɛ̀m*$^{L}$-$^{H}$*[lát-ú]*
millet$^{L}$ milk$^{L}$-$^{H}$[put.up-VblN]
'millet plant at the stage where the grains exude milky latex'

d. *kù*$^{L}$-$^{H}$*[ɛ́r-ú]*
head$^{L}$-$^{H}$[braid-VblN]
'hairstyle (braided)'

A slightly different pattern with the same tone patter is seen in *nòŋ*$^{L}$*-lúwó* 'sunset' (*nǒŋ* 'sun'), where the verb 'fall' has a final nonhigh vowel (as in prohibitive *lùwó*), unlike verbal noun *lŭw-∅*.

The examples in (127) function as verbal nouns, i.e. the verbal-noun final is the semantic and syntactic head of the compound. If the final is based on a verb stem that is bisyllabic or longer, the compound is tonally distinguishable from noun-adjective combinations with {HL}-toned deveral adjective (§4.5.4). See the following section on monosyllabics.

### 5.1.5 Compounds with final *-Cv́* verbal noun

With monosyllabic *Cv́* verb stems, when the form *Cv́* follows an {L}-overlaid noun stem, one cannot determine from the tone pattern whether the sequence is a compound of type (x̀ n̄) ending in an unmodified verbal noun, a compound of type (x̀ ń) with an {H}-overlaid verbal noun (preceding section), or a noun plus an adjective that takes the segmental form of a verbal noun but with {HL} overlay (§4.5.4). These three constructions are tonally distinguishable for bisyllabic and longer stems, but a *Cv́* stem will appear with H-tone in all three.

(128) a. *cɛ̀là*$^{L}$*-yí*
heart$^{L}$-weep.VblN
'grief (e.g. after a death)' (*cɛ́lá*, *yɛ́*)

b. *tìn*$^{L}$*-dí*
firewood$^{L}$-carry.VblN
'(tied) bundle of firewood' (*tìr*$^{n}$*ú*, *dé*)

Intuitively, I would classify (128a) as an (x̀ ń) compound, but (128b) as a noun plus deverbal adjective (*tìn*$^{L\ HL}$*dí*).

### 5.1.6 Possessive-type compounds (x̄ ǹ)

In these compounds, the initial has its regular tones, and the final has {L} overlay. This is the regular tonal pattern for possessed nouns when the possessor is (as here) a noun stem or other simple core NP without determiners or other phrasal attributes. Often these compounds are interchangeable with those of type (x̀ n̄), cf. English *bird brain* and *bird's brain*, and many times an informant has given a compound in one tonal pattern and then repeated it with the other.

(129) a. *sǒŋ* $^{L}$*dàŋà*
horse $^{L}$bag
'grain bag for horse' (*dàŋá*)

b. *tɔ́rɔ́* $^{L}$*tùwò*
mountain $^{L}$rock
'mountain rock (boulder)' (*tùwó*)

c. *mălfà* $^{L}$*cìrà*
rifle $^{L}$horn
'gunpowder horn' (*círá*)
(*cìrà* can also be the L-toned form of *cìrá* 'bone')

More examples: *jìró* $^{L}$*pìrù* 'the white of the eye', *súgúrú* $^{L}$*dɔ̀:lù* 'ear's dirt' (i.e., 'earwax'), *pèrú* $^{L}$*tɔ̀kɔ̀* 'knife's sheath'.

The initial may itself be a compound. Indeed, the heavier the initial is, the more likely it is to function as possessor rather than as a very long, {L}-toned initial.

(130) a. *cìr*$^{n}$*ò*$^{L}$*-ká* $^{L}$*sùŋ*
nose $^{L}$rope
'nose rope (= reins for camel or ox)' (*sǔŋ*)

b. *sùgùrù*$^{L}$*-pètá* $^{L}$*cìrà*
ear$^{L}$-flat.fan $^{L}$bone
'mastoid process (bone behind ear)' (*pètá* 'fan; flat side', *cìrá*)

Both the initial (the possessor) and the final (the possessed) are compounds in e.g. *cìr$^{n}$ò-ká* $^{L}$*lɔ̀-sàgà* 'nose ring'. The initial is the usual word for 'nose', but originally meant 'nose-mouth' (*cír$^{n}$ó* has shifted semantically to 'snot'). The final is *lɔ̀*$^{L}$*-sàgá* '(finger) ring' (cf. *lɔ́* 'hand').

Although these compounds have the tone overlay of possessor-possessed NPs, they function as nouns. They may be modified by following adjectives, and in this construction (unless the possessor-possessed sense is fairly clear) the entire compound undergoes tone-dropping. Thus *ní* $^{L}$*kòrò* 'waterjar' ("water's jar") drops its tones in (131a), as does *sŏŋ* $^{L}$*dàŋà* 'horse's grain bag' ("horse's bag") in (131b), as required by the following modifying adjective. By contrast, a true possessor NP does not drop tones due to an adjective modifying the possessed noun.

(131) a. *[nì* *kòrò]*$^{L}$ *ná:*
[water jar]$^{L}$ big
'a big waterjar'

b. *[sòŋ* *dàŋà]*$^{L}$ *jèr$^{n}$ú*
[horse bag]$^{L}$ good
'a good [horse's grain bag]'

### 5.1.7 Compounds of type (x̄ n̂)

In (132), the initial (the name of a town) has its regular tones, but the final has an {HL} overlay. Although {HL} is the regular possessum overlay controlled by pronominal and determined/quantified nominal possessors, {HL} is never the regular overlay controlled by undetermined/unquantified nominal possessors, see see (155) in §6.2.1.1. Therefore the examples in this section cannot be reduced to true possessives. Interestingly, though, most of the initials end in an H-tone. This is reminiscent of Ben Tey, where the final tone of an undetermined nominal possessor is carried over to the onset of the possessum.

(132) *bó:ní* $^{HL}$*y$^{n}$â-m*
Boni $^{HL}$woman-Pl
'women of Boni' (bó:ní, y*$^{n}$à-m*ú ~ *y$^{n}$ă-m*)

Further examples of this tonal type are in (133).

(133)

| | compound | gloss | contains… |
|---|---|---|---|
| a. | *cɛ́lá-*$^{HL}$*mpárèy* | ‘spleen’ | *cɛ́lá* ‘heart/liver’ |
| b. | *hŭmsò-*$^{HL}$*ósù* | ‘windpipe’ | *húmsó* ‘breathe’, *ósú* ‘path’ |
| c. | *tìw*$^{n}$*á-*$^{HL}$*kôw* | ‘tree bark’ | *tìw*$^{n}$*á* ‘tree’, *kŏw* ‘shell’ |
| d. | *ŏw-*$^{HL}$*órù* | ‘fields far from village’ | *ŏw* ‘the bush’, *órú* ‘field’ |

The tone of *hŭmsò-* in *hŭmsò-*$^{HL}$*ósù* is irregular.

Informants repeating a compound several times sometimes fluctuated between this pattern and the more productive possessive-type compound with {L}-overlaid final.

An example whose initial is internally complex is *[nì-nàw*$^{n}$*à]*$^{L}$*-ăw-∅]-*$^{HL}$*cêŋ* ‘fishhook’. The initial contains *ní* $^{L}$*nàw*$^{n}$*à* ‘water’s meat’ (= ‘fish’) as an {L}-toned compound initial for verbal noun *ăw-∅* ‘catching’. The final is an {HL}-toned version of *cĕŋ* ‘sharp-pointed implement, needle’.

The (x̄ n̂) type is also regular in combinations beginning with *yàgá* ‘which?’ (§13.2.8), including ‘when?’ interrogatives like *yàgá* $^{HL}$*túŋɔ̀* (§13.2.5).

### 5.1.8 Compounds of type (ǹ v̂)

In one animal tale, the animals were organized into two armies, one for flying creatures and the other for terrestrial animals. The term used by the narrator for ‘flying creatures’ was *jètà*$^{L}$*-*$^{HL}$*círò*. This consists of *jètá* ‘wing’ with {L} overlay plus a form of the verb ‘fly’ (cf. prohibitive *círó*) with {HL} overlay. The final in this compound is somewhat difficult to interpret (perhaps an otherwise unattested nominal ‘flying, flight’).

### 5.1.9 Agentive compounds of type (x̀ v́-Agent)

In this common and productive type, the initial drops its tones, and the final (verb stem plus singular or plural suffix) has {H} overlay. The initial denotes a typical object, or it is a cognate nominal (or other default nominal) associated lexically with the verb. The singular form ends in *-nú* ~ *-n* (except *-r*$^{n}$*ú* after a monosyllabic stem), the plural in *-mú* ~ *-m* (§4.2.4). Most often the singular is syllabic *-nú* and the plural is nonsyllabic *-m*. A nonmonosyllabic verb usually has stem-final *u* before the suffix, but in ‘hunter’ (134a) I heard *o*. The monosyllabic verb attested in this construction takes the stem shape *Cí-* as in (134c) (‘dancer’).

(134) a. *àrà*$^{L-H}$*[ósó-nú]*
hunt(n)$^{L-H}$[hunt.Agent-Sg]
'hunter'
(cf. *àrà-ósó á òsù-r-ɔ̌:* 'he/she is hunting')

b. *nùŋɔ*$^{L-H}$*[núŋú-nú]*
song$^{L-H}$[sing.Agent-Sg]
'singer' (*nùŋɔ́*)

c. *jɛ*$^{L-H}$*[jí-r$^{n}$ú]*
dance(n)$^{L-H}$[dance.Agent-Sg]
'dancer' (*jɛ́*)
(also *gàni*$^{L-H}$*[jí-r$^{n}$ú]*, from *gání*, a boy's dance')

When the verb stem is of the shape *Cvrv-* or *Cvr$^{n}$v-* with medial rhotic, Early *u*-Syncope and then Rhotic-Deletion occur in the singular, but not in the plural (135).

(135)

| gloss | singular | plural | noun | verb (Imprt) |
|---|---|---|---|---|
| 'merchant' | *jà:gù*$^{L-H}$*[ká-nú]* | *jà:gù*$^{L-H}$*[kár$^{n}$ú-m]* | *já:gù* | *kár$^{n}$á* 'do' |
| 'farmer' | *wàrù*$^{L-H}$*[wá-n]* | *wàrù*$^{L-H}$*[wárú-m]* | *wàrá* | *wàrá* |
| 'braid lady' | *kù*$^{L-H}$*[ɛ́-nú]* | *kù*$^{L-H}$*[ɛ́rú-m]* | *kú* 'head' | *ɛ́rá* |

### 5.1.10 Compounds with *-[ì-r$^{n}$ú]* 'child of'

'Child' is *ì-r$^{n}$ú* (Pl *ì-mú* 'children'). In this (nondiminutive) form, it is widely used as a compound final denoting a child belonging to a caste or other social category, the young of an animal species, the fruit or seed of a plant, or a similar small object associated with a larger one. The initial drops tones.

(136)

| | noun | gloss | compound | gloss |
|---|---|---|---|---|
| a. | *zɛ́màn* | 'blacksmith' | *zɛ̀màn*$^{L}$*-[ì-r$^{n}$ú]* | 'young blacksmith' |
| | *zɔ́r$^{n}$ú* | 'Songhay' | *zɔr$^{n}$ù*$^{L}$*-[ì-r$^{n}$ú]* | 'young Songhay' |
| b. | *nènú* | 'dog' | *nènì*$^{L}$*-[ì-r$^{n}$ú]* | 'puppy' |
| | *gɔ̌ŋ* | 'elephant' | *gɔ̀ŋ*$^{L}$*-[ì-r$^{n}$ú]* | 'young elephant' |

| | | | | | |
|---|---|---|---|---|---|
| c. | *mɔ̀nɔ́* | 'wild date tree' | *mɔ̀r$^{n}$ù*$^{L}$*-[ì-r$^{n}$ú]* | 'wild date (fruit)' |
| | *yú* | 'millet' | *yù*$^{L}$*-[ì-r$^{n}$ú]* | 'grain of millet' |

The compound 'round grindstone' in (136) must have originated as a 'child of' compound, but this is somewhat opaque synchronically because of vocalic changes. Cf., however, *ì-r$^{n}$-í:*, a diminutive form of *ì-r$^{n}$ú* 'child'. The large flat grindstone (slightly concave) is the base, while the small round groundstone is held in the hand and does the grinding.

(137)

| noun | gloss | related noun | gloss |
|---|---|---|---|
| *nŭŋ* | 'flat grindstone' | *nùŋ*$^{L}$*-[òr$^{n}$-í:]* | 'round grindstone' |

*jìrò*$^{L}$*-[ì-r$^{n}$ú]* 'eye-child-Sg' turned up in a text meaning 'one eyeball'. Here 'child' is used as a unit term, circumscribing a term that would otherwise usually be taken as denoting at least a pair of eyes.

### 5.1.11 Combinations with 'man' or 'woman' including 'boy' and 'girl'

There are some irregularities involving the 'man' and 'woman' stems. As nouns they were mentioned in §4.1.2.

'Man' as a noun is *à-nú* (plausibly from *àrà-nú), with plural *ără-m* (< *àrà-mú), cf. adjective *árá* 'male'. The stem occurs as first part of some combinations, which might be analysed as noun-adjective sequences or as compounds (there is no sharp difference between the two). For 'old man', both *àrà*$^{L}$ *pày-nú* and *àn*$^{L}$ *pày-nú* are attested. In the latter variant *àn*$^{L}$ is presumably related to *à-nú*, but humanness/number marking by suffixes is elsewhere normally marked only on the final element (adjective, compound final). The plural recorded is *àrà*$^{L}$ *pày-mú*. For 'bachelor, unmarried man' the form is *àrà*$^{L}$ *kúmú-nú*, likewise *àrà*$^{L}$ *kàlă-n* 'new man' (i.e. 'newlywed man'). *èrè:-nú* 'unmarried young man' perhaps once had the structure *àrà-X-nú with some adjective or compound final X containing an *ɛ, but it is now unsegmentable.

'Woman' is *y$^{n}$à-r$^{n}$ú*, plural *y$^{n}$à-mú*, cf. adjective *yá* 'female'. It has fewer irregularities in its combinations than do its counterparts in other Dogon languages, such as Jamsay. With a following adjective or compound initial the form is *yà*$^{L}$, confirming the suspicion that *y$^{n}$* in the nouns is secondarily nasalized; see Backward Nasalization (§3.6.1.2). Examples are *yà*$^{L}$ *pày-nú* 'old woman' and *yà*$^{L}$*-gùrŏ-n* 'unmarried woman'.

'Child' is singular *ì-r$^{n}$ú*, plural *ì-mú* ~ *ĭ-m*, or with diminutive ending singular *ì-r$^{n}$-í:*, plural *ì-m-í:*. The diminutive form combines in a slightly irregular way with the 'man' and 'woman' terms. For 'boy' we get *[à-n]*$^{L}$*-*

*[ì:-r$^{n}$-í:]* with plural *àr*$^{L}$*-[ì:-m-í:]*. For 'girl' we get *[y$^{n}$à-r$^{n}$]*$^{L}$*-[ì:-r$^{n}$-í:]* with plural *[y$^{n}$à-m]-[ì:-m-í:]*, where brackets obscure the *vv*-Contraction (§3.6.4.3) that occurs at the main boundary. The singular pattern is therefore [N-Sg]-[N-Sg] with double marking of intrinsic features (unlike the usual TT morphosyntactic pattern). The plural pattern, however, is N-[N-Sg] for 'boys' and [N-Pl]-[N-Pl] for 'women'. The morphological discrepancy can be understood in terms of prosodic (as opposed to morphemic) uniformity among the set of forms. 'Man', 'woman', and 'women' have *(C)v-Cv* shapes including the suffix, while 'men' is *(C)vCv* without the suffix and *(C)vCv-C* with the suffix.

### 5.1.12 'Owner of' (*X* $^{L}$*bàsà*, plural *X* $^{L}$*bà-m*)

The noun 'owner' has the form *bà$^{n}$sá* with irregular plural *bâ-m*. As a compound final it often takes the form *[X* $^{L}$*bàsà]* without nasalization, though I have also recorded *[X* $^{L}$*bà$^{n}$sà]* and with long vowel *[X* $^{L}$*bà:$^{n}$sa]*. The preceding noun is morphosyntactically the possessor. The unproblematic plural form is $^{L}$*bà-m*, see (665) in Text 1.

This compound type may be used as a kind of characteristic derivative, describing a type of entity that has, or is associated with, the feature (e.g. conspicuous body part) in question.

(138) a. *kúrɔ́* $^{L}$*bàsà* *kúnú*
hair $^{L}$owner DefSg
'the winged ones (grasshoppers with developed wings)' (2004-1b.03)
(can also mean 'the hairy one')

b. *[cìr$^{n}$ò-kà*$^{L}$ *ná:]* $^{L}$*bàsà*
[nose$^{L}$ big] $^{L}$owner
'big-nosed person'

Some other examples: *tùŋɔ́* $^{L}$*bàsà* 'hunchback', *[bètè sɛ́w]* $^{L}$*bàsà* 'one that has a big belly'. Examples like (138b) directly compete with bahuvrihis (§5.2.1.1).

The compound with $^{L}$*bàsà* may be used adjectivally, following a common noun that it modifies.

(139) *gògù*$^{L}$ *[záká* $^{L}$*bàsà]*
staff$^{L}$ [fork $^{L}$owner]
'herder's staff (stick) with forked end' (*gògú*)

With {HL} tone overlay, ‘owner’ appears in the human demonstrative *ŋ̀gú* $^{HL}$*bá:$^{n}$sà* ‘this/that (person)’, see§4.4.1.

### 5.1.13 Loose and tight compounds with *ná:* (‘authentic’, ‘entire’, ‘big’)

In TT, *ná:* can function as a simple adjective meaning ‘big’ (synonym *sɛ́w*). This makes it difficult to distinguish between ordinary noun-adjective combinations and lexically specialized compounds of the sort that are common in other Dogon languages. Size as such is arguably focal in (140a). The examples in (140b) are lexicalized but happen to denote large exemplars of their general category. Those in (140c) involve prototypicality or importance. The initial in (140d) does not occur independently and its segmentability is unclear.

(140) a.

| | | |
|---|---|---|
| *tèŋgà:rè*$^{L}$ *ná:* | ‘full-sized Fulbe hat’ | *téŋgá:rè* ‘Fulbe hat’ |
| *bòr*$^{L}$ *ná:* | ‘big hourglass-shaped tomtom’ | *bòrú* ‘tomtom’ |
| *kùsèy*$^{L}$ *ná:* | ‘big trap’ | *kúsěy* ‘trap(n)’ |
| *[nì kòrò]*$^{L}$ *ná:* | ‘large necked waterjar’ | *ní* $^{L}$*kòrò* ‘waterjar’ |

b.

| | | |
|---|---|---|
| *kùrɔ*$^{L}$*-ná:* | ‘inner wing (of grasshopper)’ | *kúrɔ́* ‘hair, feather’ |
| *[bètè-kà]*$^{L}$*-ná:* | ‘rumen (main stomach)’ | *bètè*$^{L}$*-ká* ‘stomach’ |
| *tàgù*$^{L}$*-ná:* | ‘gendarme boot’ | *tàgú* ‘shoe’ |
| *tìw$^{n}$à*$^{L}$*-ná:* | ‘tree’ | *tìw$^{n}$á* ‘tree, wood’ |
| *[nàŋà-yà]*$^{L}$*-ná:* | ‘cow that has calved’ | *nàŋà-yá* ‘cow’ |

c.

| | | |
|---|---|---|
| *tùsù*$^{L}$*-ná:* | ‘a cultivar of sorghum’ | *túsú* ‘sorghum’ |
| *nòndèr$^{n}$à*$^{L}$*-ná:* | ‘holy day’ | *nòndér$^{n}$á* ‘day’ |
| *kɔ̀lì*$^{L}$*-ná:* | ‘guitar with 2-4 strings’ | *kɔ̀lí* ‘guitar’ |
| *ìlò*$^{L}$*-ná:* | ‘menstruation house’ | *íló* ‘house’ |

d. *dìsì*$^{L}$*-ná:* ‘God’

### 5.1.14 Instrumental relative compounds (‘oil for rubbing’)

Constructions of this type involve *á* (presumably the imperfective particle) and a relativized imperfective verb with (nonreferential) 3Pl subject. There is no *kà:* relative morpheme.

(141) a.

| | | | |
|---|---|---|---|
| *nì*$^{L}$ | *á* | *nì-r-è* | *ŋ́* |
| water$^{L}$ | Ipfv | drink-Ipfv-3PlSbj | Rel |

‘water for drinking’

b. *nì*$^{L}$ *á* *dì-r-è* *ŋ́*
water$^{L}$ Ipfv bathe-Ipfv-3PlSbj Rel
'water for bathing'

## 5.2 Adjectival compounds

### 5.2.1 Bahuvrihi ("Blackbeard") compounds (n̄ x̂)

The Sanskrit grammatical term bahuvrihi denotes compounds of the *Blackbeard* and *two-headed* types, with a noun (such as a body part) and either a descriptive adjective or a numeral. These are based on simple NPs like *black beard* and *two heads*, but the bahuvrihis denote (or describe) the larger entity (person, animal, etc.).

TT bahuvrihis have the tonal formula (n̄ x̂). The initial noun has its lexical melody, while the final (i.e. adjective or numeral) has {HL} overlay.

#### 5.2.1.1 With adjectival compound final

Examples are in (142). The cases in (142b) involve adjectives with intonational prolongation (→). In some cases the final element is not otherwise attested.

(142) a. *kú-*$^{HL}$*bár$^{n}$ù* 'red-headed' (e.g. agama lizard)

b. *tùŋɔ́-*$^{HL}$*gúŋùnì→* 'having a hunched back'
*bèté-*$^{HL}$*dósù→* 'big-bellied (insect)'
*jìr$^{n}$ó-*$^{HL}$*sákù→* 'having buck teeth'

#### 5.2.1.2 With numeral compound final

A numeral may function as the final in a bahuvrihi compound (compare English *two-fisted*, *three-toed*).

(143) *kúwɔ́-*$^{HL}$*nây*
foot-$^{HL}$four
'quadruped, four-footed creature' (2004-1b.01)

## 5.3 Reduplication and iteration (nouns, adjectives, adverbials)

I use the term **iteration** for the repetition, with or without tone changes, of an entire stem, which may or may not occur elsewhere in simple form. **Reduplication** is used for partial repetition (e.g. *Cv-*), and for stems that look like they contain iterations (with or without vocalic and/or tonal changes) of a segment which, however, does not occur elsewhere.

### 5.3.1 Frozen *Cv*-Reduplication in nouns

A number of nouns and compound finals begin with what might be taken as a *Cv-* reduplicative segment. The unreduplicated stem is usually not attested, so segmentation is doubtful, but the prevalence of the pattern, with the initial *Cv-* usually L-toned, is suggestive. A fairly complete list is given below, with uncompounded stems in (144a), and stems found only as compound finals in (144b). (144c-d) are similar except that here the *Cv-* is H-toned.

| (144) | noun | gloss | comment |
|---|---|---|---|
| a. nouns, L-toned *Cv̀-* | | | |
| | *cɛ̀-cɛ́* | ‘beetle, bug’ (general term) | |
| | *nɛ̀-nɛ́* | ‘scorpion’ | |
| | *kɔ̀-kɔ́* | ‘tree sp.’ (*Gardenia*) | |
| | *zì-zîm* | ‘mud-dauber wasp’ | |
| | *kɔ́-kɔ́rɔ́* | ‘tall herb sp.’ (*Rogeria*) | |
| | *là-láwà* | ‘tree sp.’ (*Maerua angolensis*) | |
| | *gù-gúsù* | ‘giant pouched rat’ (*Cricetomys*) | |
| | *bɔ̀-bɔ̀lɔ́* | ‘bogolan (dyed garments)’ | |
| | *cɛ̀-cɛ̀rú* | ‘stem, stalk’ | |
| | *cɛ̂-cɛ̀rú* | ‘hot chili pepper’ | |
| | *nɛ̀-nɛ̀r$^{n}$ú* | ‘thirst’ | |
| | *bò-bògú* | ‘uncastrated’ | |
| | *sɛ̀-sɛ̀r$^{n}$í* | ‘necklace (chain)’ | |
| | *wò-wòrɛ̌y* | ‘collarbone’ | |
| | *cɛ̀-cɛ̌wtà* | ‘twin sibling’ | |
| | *zà-zàmkú* | ‘double grain spike’ | |
| | *sɛ̀-sɛ̀jɛ́nà* | ‘tall herb sp.’ (*Sesbania*) | |
| | *zà-zàgúrà* | ‘fan-footed gecko lizard’ (*Ptyodactylus*) | |
| | *dù-dùŋgúrò* | ‘cut-off piece’ | |
| | *mà-màŋgìré* | ‘herb with spiny fruit’ (*Tribulus*) | |
| | *dɔ̀-dɔ̀:$^{n}$síyà* | ‘scrub-robin’ | |

b. compound finals, L-toned *Cv̀-*

| | | |
|---|---|---|
| *kàsù-[gú-gúrú]* | ‘gourd fruit seedball’ | *kàsú* ‘calabash’ |
| *jìrò-[kò-kòmró]* | ‘cheekbone’ | *jìró* ‘eye’ |
| *kùwɔ̀-[cè-cèwró]* | ‘anklebone’ | *kúwɔ́* ‘foot, leg’ |
| *kùwɔ̀-[cè-cègùrú]* | ‘ankle’ | |
| *àrà-[bɔ̀-bɔ̀rɔ́]* | ‘cream of millet (type)’ | cf. Jamsay *pìrè-àrá* ‘cream of millet’ |

c. nouns, H-toned *Cv́-*

| | |
|---|---|
| *sé-sém* | ‘passing shower’ |
| *cí-cìrⁿí* | ‘mountain fig sp.’ (*Ficus cordata*) |
| *bí-bísì:* | ‘tree sp.’ (*Maerua crassifolia*) |
| *sá-sàrⁿíyⁿà* | ‘shrub sp.’ (*Phyllanthus*) |
| *bɔ́-bɔ́rɔ́* | ‘algae’ |
| *gú-gúrú* | ‘dike-ridge in field’ |
| *bú-búsú* | ‘new branch’ *bìsá* ‘re-grow branch’ |

d. compound final, H-toned *Cv́-*

| | | |
|---|---|---|
| *kònò-[gá-gásèy]* | ‘watermelon (type)’ | *kònó* ‘watermelon’ |

### 5.3.2 Reduplications of *nù-rⁿú* ‘person’ (*nùnû:rⁿú*, *nùmû:mú*)

Related to the regular noun for ‘person’ (singular *nù-rⁿú*, plural *nù-mú*, §4.1.2), there are unusual variant forms that look like iterations with medial contraction (145). *nùnû:rⁿú* could be derived, somewhat raggedly, from /nù-rⁿú-(n)ù-rⁿú/, and *nùmû:mú* from /nù-mú-(n)ù-mú/. However, I will not hyphenate these forms as they are far from transparent morphologically. Possibly the pattern was suggested by *ì-m-í: mă:* ‘children’, see discussion of (85) above. In any event, the quasi-iterated forms in (145) are used with nonspecific reference (‘someone’, ‘some people’).

(145) Sg *nùnû:rⁿú*
Pl *nùmû:mú*

The form *nùmû:mú* is segmentally identical to, but tonally distinct from, a (perhaps historically related) noun *númú:mú* ‘kin relationship’.

(146) *númú:mú* *[[í* *HL zákà]* *kù]* *dá*
kinship [[1Pl HL between] in] be
‘There is a kinship relationship between us.’

### 5.3.3 Derived iterated adjectives (‘__-ish’)

Many adjectives lend themselves to gradation, and therefore to an approximative derivation, expressed by full-stem iteration. The sense is ‘sort of ADJ’, ‘ADJ-ish’. The stem is repeated exactly once. The first (=leftmost) occurrence has its regular tone. The second has an **{HL} overlay** realized as <HL> (on a bimoraic monosyllabic), as HL (on a bisyllabic), or as HLL (on a trisyllabic). Monomoraic bisyllabics appear with H tone, the L-tone component having found no segmental material to attach to. The pattern is most common with color adjectives but is elicitable for many adjectives (147).

(147)

| gloss | simple stem | reduplication (‘__-ish’) |
|---|---|---|
| ‘hot’ | *dɔ́* | *dɔ́-*$^{HL}$*dɔ́* |
| ‘black’ | *jém* | *jém-*$^{HL}$*jêm* |
| ‘red’ | *bárⁿú* | *bárⁿú-*$^{HL}$*bárⁿù* |
| ‘white’ | *pírú* | *pírú-*$^{HL}$*pírù* |
| ‘brown’ | *wùgùrú* | *wùgùrú-*$^{HL}$*wúgùrù* |
| ‘short’ | *tùkěy* | *tùkěy-*$^{HL}$*túkèy* |
| ‘sweet’ | *lìsí* | *lìsí-*$^{HL}$*lísì* |
| ‘coarse’ | *gà:ⁿsú* | *gà:ⁿsú-*$^{HL}$*gá:ⁿsù* |

The iterated sequence functions as a single adjective for tonological purposes. Thus *nì dɔ́* ‘hot water’ and iterated *nì dɔ́-*$^{HL}$*dɔ́* ‘hottish water’, with definite forms *[nì dɔ̀]*$^{L}$ *kúnú* ‘the hot water’, *[nì dɔ̀-dɔ̀]*$^{L}$ *kúnú* ‘the hottish water’ (note the tone-dropping induced by the determiner).

### 5.3.4 (Semi-)frozen iterative adjectives

The productive adjectival ‘-ish’ derivative (§5.3.3) is to be distinguished from stems that (as adjectives) are lexically iterative. These may function syntactically as adverbials or adjectives, and generally describe visual patterns that are repeated over a surface.

(148)

| gloss | stem | comments |
|---|---|---|
| ‘spotted’ | *tɔ̀bbɛ́-tɔ̀bbɛ́* | cf. noun *tɔ́bbɛ̀* ‘spot’ (< Fulfulde) |
| ‘blotched’ | *lápùrà-lápùrà* | cf. noun *lápúrà* |
| ‘white-spotted’ | *pɔ̀rⁿùká-pɔ̀rⁿùká* | synonym *pɔ̀rⁿùkú* |

### 5.3.5 Frozen iterative nouns

Among onomatopoeic bird names, a type with repeated long monosyllables and H-L tone pattern is seen in *gá:$^{n}$-gà:$^{n}$* 'pied crow', *sí:$^{n}$-sà:$^{n}$* 'buffalo-weaver (bird)', *tú:-tù:* 'coucal', and *ké:$^{n}$-kè:$^{n}$* 'rock kestrel'.

Quadrisyllabic iterations with LL-HL tone pattern are fairly common for flora and fauna not known for their calls, e.g. *pìrè-pírè* 'butterfly', *nòŋò-nóŋò* 'praying mantis', *y$^{n}$àŋà-y$^{n}$áŋà* 'wind scorpion', *yàgà-yágà* 'hibiscus bush spp.' The same tone pattern occurs in *zùnù-zúnù* 'poor-quality meat', *cèsè-césè* 'wood chips' (verb *césá* 'cut'), and *pɔ̀tɔ̀-pɔ́tɔ̀* 'mud'. A symmetrical HL-HL tone pattern is seen in *fúnà-fúnà* 'bush sp.' (*Pergularia*).

A pattern with LH-LH tones, allowing for contraction to L<HL>H, is perhaps present in *yèkê:ké ~ wèkê:kè* 'spotted thick-knee'. Compare *nùnû:r$^{n}$ú* etc. in §5.2.2.

An all-high tone pattern is seen in the final of *kàsù$^{L}$-[kúlú-kúlú]* 'calabash with protrusions'.

### 5.3.6 Iterative expressive adverbials

TT is rich in lexicalized expressive adverbials that are iterative in form. Often the repeated elements are not otherwise attested.

(149) has a few examples where the iterated components are segmentally identical. The subdivisions of (149) are based on tonal patterns. The pattern in (149b) is also the productive device for deriving '-ish' adjectives from base adjectives, see §5.3.3.

(149) a. tones same in both parts

| | |
|---|---|
| *dá:-dá:* | 'scattered, here and there' |
| *sáw-sáw* | 'fastidiously clean' |
| *sɔ́:$^{n}$-sɔ́:$^{n}$* | 'all together' |
| *tɔ̀bbɛ́-tɔ̀bbɛ́* | 'dotted' |
| *zígì-zágù* | 'staggering under a heavy load' |
| *yérέw-yérέw* | 'striding fast' |
| *lápùrà-lápùrà* | 'blotched' |
| *mútírí-mútírí* | 'having swollen hindquarters' |
| *dɔ̀dùrɛ́-dɔ̀dùrɛ́* | 'almost alongside' |

b. second part has {HL} pattern (HL, HLL, etc.)

| | |
|---|---|
| *ěw$^{n}$-êw$^{n}$* | ‘at full speed’ |
| *zígí-zígì* | ‘lumbering along’ |
| *y$^{n}$áŋúnú-y$^{n}$áŋùnù* | ‘walking with legs wide apart (like a boy recently circumcised’ |

There are also some cases where the **vocalism is varied** in an iterative adverbial. Typically a non-low vowel in the first part is replaced by *a* in the following iteration (150a). Compare *zig-zag*, *ping-pong*, and similar reduplications in English. A couple of nouns of this type are mixed in with the adverbials in (150).

(150) a. tones same in both parts

| | |
|---|---|
| *gúrùŋ-gáràŋ* | ‘with roots spreading’ |
| *mê:-mâ→* | ‘face to face’ |
| *yúkù-yákù* | ‘chubby’ (as adjective: *yùkù-yàkú*) |

b. LL-HH tone pattern

| | |
|---|---|
| *zèlèw-záláw* | ‘glimmering’ |
| *dɛ̀mà-dɛ́má→* | ‘towering’ |
| *ɲìmì-ɲámá* | ‘bric-à-brac’ (regional word) |
| *yùlù-yálá* | ‘black variety of sweet sorghum’ |

A variation on this is a three-part ABA pattern with the low vowel in the medial iteration (151). In addition to adverbials, this pattern occurs in onomatopoeic imitations of some sounds.

(151) a. tones same in all parts

| | |
|---|---|
| *zìgú-zàgú-zìgú* | ‘staggering along’ |

b. H-L-H tone pattern

| | |
|---|---|
| *cí:$^{n}$-kà:$^{n}$-cí:$^{n}$* | ‘creaking sound’ |
| *hó:-hà:-hó:* | ‘hubbub’ (regional expression) |

# 6 Noun Phrase structure

## 6.1 Organization of NP constituents

The structure of a noun phrase is expressed by a combination of linear sequencing and tonosyntactic interactions among words or word-strings. The basic tonosyntactic overlays within multi-word NPs are {L} and {HL}. They are controlled by **reference-restricting modifiers**, those that subdivide the set of individuals eligible to be referred to from the set of ineligibles (this excludes quantifiers and discourse-functional elements). Overlay {L} is controlled by adjectives, determiners (demonstratives and definites), and relative clauses, which target the noun (and any intervening words) from the right. Possessors, which control from the left, control either {HL} or {L} depending on the grammatical form of the possessor.

There is **no morphological case-marking** in nonpronominal NPs of structural positions (subject, object). Dative, purposive, instrumental, and spatiotemporal functions are marked by postpositions following the NP (chapter 8).

A **core NP** consists of a noun plus any number of adjectives. A core NP denotes a set that may then be quantified over or determined.

### 6.1.1 Linear order

The ordering in (152) is applicable to NPs not involving relative clauses. The possessor may itself be a complete NP.

(152) a. possessor NP
b. noun (most non-kin human nouns end in a number suffix)
c. modifying adjective(s)
d. cardinal numeral
e. determiner: demonstrative or definite
f. other quantifier: plural *mǎ:*, 'each' *kálá:*, or 'all' *yà:fú:* etc.

Examples are in (153).

(153) a. *[m̀* [HL]*bá]* [L]*àlà*
[1SgPoss [HL]father] [L]village
'my father's village' [possessor, noun]

b. *nènù*[L] *ná:* *mă:*
dog[L] big Pl
'(the) big dogs' [noun, adjective, Pl]

c. *[nènù* *nà:]*[L] *ŋú* *mă:*
[dog big][L] Dem Pl
'those dogs' [noun, adjective, Dem, Pl]

d. *ǹjíw* *là:fú:*
DemPl all
'all that' [Dem, 'all']

e. *íló* *nŭ:y*$^{n}$ *yà:fú:*
house five all
'all five houses' [noun, numeral, 'all']

f. *nènù*[L] *tégĕy* *mă:* *lĕy*
dog[L] small Pl two
'two small dogs' [noun, adjective, Pl, numeral]

g. *[y*$^{n}$*à-m* *tà:lì]*[L] *cíní*
[woman-Pl three][L] DefPl
'the (same) three women' [noun, numeral, Def]

### 6.1.2 Headless NPs (absolute demonstratives, adjectives, numerals)

The "noun" slot in a core NP may be empty if the type of entity in question is understood or unspecified and if some modifier is overt. The noun is not usually deletable before an adjective; instead, a semantically light noun like 'person' or 'thing' is used. With some difficulty, I was able to elicit absolute uses of adjectives in noun-like contexts like 'the reds versus the blacks' (in a soccer match).

(154) a. *bár*$^{n}$*ú* *mă:*
red Pl
'(the) reds'

b. *bán* *túrú*
red one
'one red'

Numerals are also generally used with at least a semantically light noun. However, it is possible to use numerals absolutely, especially in connection with currency (the understood unit being *bú:dù* 'riyal' = five francs CFA). Thus *zémbèrɛ̀* 'thousand' can be used, for *bú:dù zémbèrɛ̀*, in the sense '5000 francs CFA'.

Demonstrative pronouns (but not definite morphemes) are readily used in absolute function without a noun: *ŋ̀gú* 'that'.

### 6.1.3 Apparent bifurcation (in relatives)

Certain elements that occur at the end of NPs are (seemingly) shifted rightward to a position following relative morpheme *ŋ́* in relative clauses if they are associated with the head NP. These are determiners (demonstrative, definite), distributive and universal quantifiers ('each', 'all'), and the independent plural morpheme *mǎ:*. Possessors, modifying adjectives, and cardinal numerals remain with the head NP inside the relative clause. A movement analysis for these elements is not needed if the relative clause is generated within the larger NP in the slot between numeral and determiner.

For examples see Chapter 14.

### 6.1.4 Internal bracketing and tone-dropping

Tone-dropping applies to a noun that is followed by a **modifying adjective** (including ordinals). If there are two adjectives,the noun and the first adjective undergo tone-dropping. The effect is that only the rightmost word in a core NP can retain lexical tones (which always include at least one lexical H-tone element).

There is **no tone-dropping** before quantifiers (cardinal numeral, *yà:fú:* 'all', plural *mǎ:*). There is **no systematic tone-dropping** before *kálá:* 'each', thus *ìrⁿú kálá:* 'each child', *íló kálá:* 'each house'. However, tone-dropping does occur (along with other reductions) in a few high-frequency combinations: *nàyⁿ ká:* 'every day' (variant of *nǎyⁿ kálá:*) and *tùŋ kálá:* 'always, every time' (reduced from *tùwⁿɔ́ kálá:*).

A **determiner** (demonstrative or definite) forces tone-dropping on the final word of the core NP, and simultaneously on any numeral that may follow the core NP.

A **possessor NP has its regular tones**. In the presence of a possessor NP, the possessed noun is subject to an {HL} or {L} overlay.

## 6.2 Possessives

### 6.2.1 Possessor plus possessed noun

The sections below treat canonical possessives, typically those with a referential possessor and a NP denoting a set. Many postpositions (chapter 8) originated as possessed nouns (e.g. 'inside X' from 'in [the belly [of X]]'), and still have morphosyntactic (including tonosyntactic) similarities to canonical possessives.

#### 6.2.1.1 Possessed core NP noun(-adjective)

Ordinary possession is expressed by **preposing the possessor NP** (in its normal tones) to the possessed noun (**possessum**). There is **no linking element** or other possessive (genitive) morpheme. However, possessums are marked by tonal changes, as summarized in (155).

(155)

| | possessor | tone overlay on possessum |
|---|---|---|
| a. | noun (or core NP) | {L} |
| b. | pronoun<br>conjoined NP<br>noun plus determiner<br>noun plus plural *mă:*<br>noun plus quantifier<br>*yàgá* 'which?' (§13.2.8) | {HL} |

In (155a), the possessor is an unconjoined noun. It may be simple or compounded, it has its usual suffixal number marking (if applicable), and it may be followed by an adjective. In other words, it has the structural possibiities of a core NP in the sense of §6.1.1. It may not, however, be conjoined with another NP. Furthermore, it may not be inflected or bound by any external morpheme: plural *mă:*, a quantifier ('each', 'every'), a demonstrative, or a postnominal definite morpheme.

Examples of simple nouns as possessors, requiring {L}-toned possessums, are in (156).

(156) a. *sáydù* $^{L}$*ìlò*
Seydou $^{L}$house
'Seydou's house' (*ílǒ*)

b. *àlá-[ɔŋù-nú]* $^{L}$*nènù*
village-[chief-Sg] $^{L}$dog
'the village chief's dog'. (*nènú*)

c. *bɛ̀lú* $^{L}$*pìŋò*
sheep $^{L}$herd
'a herd of sheep' (*pìŋǒ*)

Adding a modifying adjective to a possessor noun does not change its status as simple core NP. Therefore the possessed noun in (157b) has the same {L} overlay as in (157a), in spite of the addition of the adjective to the possessor.

(157) a *à-nú* $^{L}$*dòlkì*
man-Sg $^{L}$boubou
'a man's boubou' (*dòlkí*)

b. *[à-nù*$^{L}$ *séw]* $^{L}$*dòlkì*
[man-Sg$^{L}$ fat] $^{L}$boubou
'a fat man's boubou' (*dòlkí*)

c. *[ìsò*$^{L}$ *ɔrú]* $^{L}$*tòw*
[earth$^{L}$ wet] $^{L}$sowing
'sowing (seeds) in wet earth' (2004-2a.06) (*tǒw*)

When the possessor is a syntactically more complex NP (158) or a pronominal (159), we get an **{HL} overlay** on the possessed noun, indicated by superscript $^{HL}$ preceding the targeted domain in the transcription and the interlinear. As usual, {HL} is realized as H-tone on a monomoraic *Cv* stem. For the forms of possessor pronominals, see (92) in §4.3.3 above.

(158) a. *[sáydù* *[á:mádù* *lěy]]* $^{HL}$*ílò*
[Seydou [Amadou and]] $^{HL}$house
'the house of Seydou and Amadou' (*ílǒ*)

b. *[bɛ̀lú* *mǎ:]* $^{HL}$*píŋò*
[sheep Pl] $^{HL}$ herd
'a herd of sheep' (*pìŋǒ*)

c. *[à-nù*$^{L}$ *kúnú]* $^{HL}$*ílò*
[man-Sg$^{L}$ DefSg] $^{HL}$house
'the man's house' (*à-nú*, *íló*)

d. *[à-nù*$^{L}$ *ŋú]* $^{HL}$*ílò*
[man-Sg$^{L}$ this] $^{HL}$house
'this man's house' (*à-nú*, *íló*)

e. *[[tìw$^{n}$à*$^{L}$ *kún]* $^{HL}$*kú]* *kù*
[[tree$^{L}$ DefSg] $^{HL}$head] on
'on the top of the tree' (2004-1a.04), cf. §3.7.3.1

f. *[y$^{n}$ă-m* *lěy]* $^{HL}$*ílò*
[woman-Pl two] $^{HL}$house
'a two-woman house' (or: 'a house of two women')

(159) a. *ǹ* $^{HL}$*nêŋ*
1SgPoss $^{HL}$blood
'my blood' (*néŋ*)

b. *í* $^{HL}$*ílò*
1PlPoss $^{HL}$house
'our house' (*íló*)

c. *àsí* $^{HL}$*ílò*
LogoPoss $^{HL}$house
'(he$_x$ said:) his$_x$ house' (*íló*)

d. *[àsí* *mă:]* $^{HL}$*ílò*
[LogoPoss Pl] $^{HL}$house
'(they$_x$ said:) their$_x$ house' (*íló*)

e. *ú* $^{HL}$*nénù*
2SgPoss $^{HL}$dog
'your-Sg dog' (*nènú*)

Depending on the prosodic shape of the possessed noun, this {HL} overlay is expressed as H on a Cv stem (see below for downstep on a following determiner), <HL> on a single long syllable, and HL, HLL, or HLLL on longer stems (160). On nonmonosyllabics, the tone break is at the beginning of the second syllable.

(160)

| | gloss | basic form | as possessed noun (HL} |
|---|---|---|---|
| a. | 'mouth' | *ká* | HL*ká* (ˈ) |
| | (ˈ is audibly realized only on a following definite morpheme) | | |
| b. | 'yam' | *kû:* | HL*kû:* |
| c. | 'blood' | *néŋ* | HL*nêŋ* |
| | 'bridge' (< Fr) | *pôm* | HL*pôm* |
| d. | 'sesame' | *nátì* | HL*nátì* |
| | 'saddle' | *gă:rì* | HL*gá:rì* |
| e. | 'yoke' | *gálíyé* | HL*gálìyè* |
| f. | 'whip' | *nàŋà-sɔ̀rí:* | HL*náŋà-sɔ̀rì:* |

If the stem has a single mora, as with 'mouth' (160a), in its lexical form it must be *Cv́* with H-tone to satisfy the requirement of at least one H-tone. It also appears as *Cv́* after a possessor, but in this case there is evidence that this is the surface output with {HL} overlay. The only audible effect of the underlying L-toned component is that a following H-toned determiner, e.g. singular definite *kúnú*, undergoes a downward pitch shift (**downstep**), as in *ŋ̀ ká ˈkúnú* 'my mouth (definite)'. See §3.7.3.1 for more discussion and examples.

Some nouns already have a lexical /HL/ melody. In these cases, the HL overlay has **no audible effect**; see 'yam', 'sesame', and 'bridge' in (160) above. However, /HL/ is not a common melody with nouns, being typical mainly of borrowings (especially from Fulfulde).

### 6.2.1.2 Possessed numeral phrase noun(-adjective-)numeral

If a numeral follows the possessed core NP, the numeral is **not included** in the scope of possessor-controlled tone overlays, so it appears with its lexical tone melody. Therefore *tà:lí* '3' in (161) has its lexical melody, although the possessed noun 'animal' is tonosyntactically controlled by the possessor. In TT this is true of alienable as well as inalienable possession.

(161)

| | | | | | |
|---|---|---|---|---|---|
| *[m̀* | HL*árzàgà* | *tà:lí]* | *yàgá* | *dá* | *má* |
| [1SgPoss | HLanimal | three] | where? | be | Q |

'where are my three animals?'

The numeral can be tone-dropped by an additional tonosyntactic controller to the right, such as a determiner.

### 6.2.2 Tonological conflict between possessor and adjective or determiner

Consider now a combination of the type [my house big] meaning 'my big house', or [my house this] meaning 'this house of mine', where the noun is flanked by a possessor and either a modifying adjective or demonstrative. Coming from the left, the possessor seeks to control {HL} overlay on 'house'. Coming from the right, the modifying adjective or demonstrative seeks to control {L} (tone-dropping) on 'house'. The unfortunate possessed noun is therefore caught in a pull of **conflicting tonal requirements** from the left and right.

In this situation, in TT a modifying adjective is bracketed with the noun and the two constitute the tonosyntactic target domain. The result is Poss $^{(H)L}$[N Adj], with {HL} or {L} overlay (depending on the form of the possessor) on the N-Adj sequence (162a). A supeficially similar sequence like (162b), where however the adjective has its regular tones, is interpreted as predicative, i.e., the adjective is external to the NP. If the adjective has {HL} overlay, it is similarly recognized as a comparative predicate (162c), see §12.1.2. Example (162d) is like (162a) except that the possessor is a noun, and therefore imposes {L} rather than {HL} overlay on the noun-adjective combination.

(162) a. *m̀* $^{HL}$*[ílò* *nà:]*
1SgPoss $^{HL}$[house big]
'my big house' (<*ìlò ná:* 'a big house')

b. *[m̀* $^{HL}$*ílò]* *ná:*
[1SgPoss $^{HL}$house] big
'My house is big.'

c. *[m̀* $^{HL}$*ílò]* $^{HL}$*nâ:*
[1SgPoss $^{HL}$house] $^{HL}$big
'My house is bigger (than some other house).'

d. *sáydù* $^{L}$*[ìlò* *nà:]*
S $^{L}$[house big]
'Seydou's big house'

Unlike the case with modifying adjectives, a demonstrative pronoun is treated as **external** to the possessor-possessum sequence, which then behaves as a

**tonosyntactic island** impervious to the control power of the demonstrative, even though the latter is clearly part of the NP (163a-b). (163b) can also be interpreted as having a predicative demonstrative (note the alternative free translations). The demonstrative tends to have its fuller pronunciation *ŋgú* in the predicative sense, and reduced variants such as *ŋú* and *ŋ́* in the NP-internal function.

(163) a. *[kɔ̀* HL*bɛ́l-cɛ̀là]* *ŋú*
[NonhSgPoss HLmiddle] DemSg
'that middle (part) of it (=elephant)' (2004-1a.10) (*bɛ̀l-cɛ́lá*)

b. *[m̀* HL*ílò]* *ŋú*
[1SgPoss HLhouse] DemSg
'this house of mine'
or: 'My house is this (one).'

We get the same tonosyntactic structure if we replace the demonstrative ('this/that') in (163) with regular postnominal definite markers; see (103a-b) in §4.4.3.

The {HL} overlay is realized as just H-tone on a Cv possessum, with the L-tone component then realized as downstep on the definite marker (§3.7.3.1).

### 6.2.3 Possessed kin terms

Kin terms do not differ structurally from alienable nouns. (164) gives the unpossessed lexical forms in the righthand column. The central column shows 1Sg possessor forms featuring an {HL} overlay.

(164)

| gloss | 1Sg possessor | absolute (unpossessed) |
|---|---|---|
| 'father' | *m̀* HL*bá* | *bá* |
| 'mother' | *ǹ* HL*ná* | *ná* |
| 'elder brother' | *ǹ* HL*dérè* | *dèré* |
| 'younger brother' | *m̀* HL*ɔ́ⁿsù-rⁿù* | *ɔ̀ⁿsù-rⁿú* |
| 'maternal uncle' | *ǹ* HL*lísì* | *lìsí* |
| 'paternal aunt' | *m̀* HL*áwⁿà* | *àwⁿá* |
| 'grandfather' | *m̀* HL*bábà* | *bábá* |
| 'sister' | *m̀* HL*ísù-[yⁿà-rⁿù]* | *ísú-[yá-rⁿú]* |

For 'grandmother', no morphological 1Sg possessor combination was elicitable. Instead, the bare stem *náná* is also used as the 1Sg possessor form. Other forms

such as *ú* [HL]*nánà* ‘your-Sg grandmother’ were elicited, with regular {HL} overlay on the noun.

Kin terms are unusual in that most of them lack the singular and plural suffixes found on most other human nouns. They therefore often occur with the independent plural particle *mǎ:* when the reference is plural.

### 6.2.4 Recursive possession

**Recursive possession** involves a possessed NP that in turn functions as possessor of another NP. Note the bracketing in (165d-e). In (165f) ‘uncle’ is treated as a compound initial for ‘elephant’, and this whole NP is the innermost possessor.

(165) a. *nènú*
‘dog’

b. *sáydù* [L]*nènù*
Seydou [L]dog
‘Seydou’s dog’ (*nènú*)

c. *nènú* [L]*ìlò*
dog [L]house
‘the dog’s house’ (*ílǒ*)

d. *[sáydù* [L]*nènù]* [L]*ìlò*
[Seydou [L]dog] [L]house
‘Seydou’s dog’s house’

e. *[ǹ* [HL]*nénù]* [L]*bànà*
[1SgPoss [HL]dog] [L]tail
‘my dog’s tail’ (*báná*)

f. *[[[[bà* *là:]*[L] *gǒŋ]* [L]*kù]* [L]*bèl-cèlà]* *kù]*
[[[[father ?][L] elephant] [L]**head**] [L] **middle**] in]
‘in the middle of Uncle Elephant’s head’ (2004-1b.01)
(*bà lǎ:* ‘father’s younger brother’, *lǎ:* not otherwise attested)

See also ‘the middle of the blind man’s back’, (671) in Text 1.

## 6.3 Noun plus adjective

### 6.3.1 Noun plus regular adjective

A modifying adjective follows the noun, which undergoes **tone-dropping** (indicated by superscripted $^{L}$ in the interlinear).

(166) a. *tùwò*$^{L}$ *jɛ́m*
stone$^{L}$ black
'a black stone' (*tùwó*)

b. *à-nù*$^{L}$ *jɛ̀r*$^{n}$*ú*
man-Sg$^{L}$ good
'a good man' (also pronounced *à-n*$^{L}$ *jɛ̀r*$^{n}$*ú*, < *à-nú*)

c. *y*$^{n}$*à-r*$^{n}$*ù*$^{L}$ *tɛ̀gɛ̌y*
woman-Sg$^{L}$ small
'little woman' (term for bigamous man's younger wife)

Versatile adjectives ('heavy', 'fat', 'big', 'red', 'good', 'little', etc.) that can be added to a wide range of human and other nouns do not take human number marking (singular *-nú*, plural *-mú*, or variants) agreeing with human referents. However, some stems that regularly combine with a preceding 'person', 'man', or 'woman', and that might be considered either adjectives (with a strong human bias) or compound finals, do have these endings. Examples with *yá* or number-inflected *y*$^{n}$*à-r*$^{n}$*ú* 'woman' (as modified noun or compound initial, in either case {L}-toned): *y*$^{n}$*à-r*$^{n}$*ù*$^{L}$ *pày-nú* 'old woman' (plural *y*$^{n}$*à-m*$^{L}$ *pày-mú*), *yà*$^{L}$*-gùrɔ̌-n* 'unmarried woman' (plural *yà*$^{L}$*-gùrɔ̌-m*), *yà*$^{L}$*-kùlɔ̌-n* 'adult woman (mother of one to a few children)' (plural *yà*$^{L}$*-kùlɔ̌-m*). 'Blind (person)', as noun or adjective. is *jìrìm-nú*, plural *jìrìm-mú*.

Certain adjectives **can acquire human number suffixes** when used nominally in the absence of a head noun. For example, the ordinal *léy-ló* 'second' occurred in a text with a possessor: *àsí* $^{HL}$*léy-lò-n* 'his (logophoric) partner' (in crime, literally!). The unpossessed form in this nominal function, as in '(I don't have) a partner', is *lèy*$^{L}$*-lɔ̌-n*.

'African' (as noun) can be expressed as a compound ('skin$^{L}$-black'), and here 'black' has human number marking: *gùsù*$^{L}$*-jɛ́m-nú* 'African' (plural *gùsù*$^{L}$*-jɛ́m-mú*).

For absolute uses of adjectives (i.e. with no overt noun), see §6.1.2.

### 6.3.2 Adjective (or adverb) *jérè* 'certain (ones)'

This adjective is used as a partitioning quantifier 'some, certain (ones)'. It may be repeated in parallel constructions like (167), where each occurrence of *jérè* denotes a portion of the same set or entity.

(167) *[nù-m* $^{L}$ *jérè]* *yǎy-wɔ̀rè,* *[nù-m* $^{L}$ *jérè]* *wàsú-wɔ̀rè*
[person-Pl$^{L}$ certain] go-Pfv1a, [person-Pl$^{L}$ certain] stay-Pfv1a
'Some people have gone away, some (others) have stayed.'

If *jérè* is treated as a modifying adjective, it forces tone-dropping on the preceding noun, as in this example. However, *jérè* may also function a numeral-like quantifier, in which case it has no tonal effect on preceding words, as in *tùw$^{n}$ɔ́ jérè* 'sometimes' (*tùw$^{n}$ɔ́* 'time, moment').

### 6.3.3 Expansions of adjective

#### 6.3.3.1 Adjective sequences

Two or more adjectives may modify the same noun. In this case the final adjective retains its tones (unless tonosyntactically controlled by another element outside the core NP), while the noun and the nonfinal adjective(s) are tone-dropped. Thus noun *íló* 'house', *ìlò*$^{L}$ *pírú* 'white house', *ìlò*$^{L}$ *ná:* 'big house', *[ìlò nà:]*$^{L}$ *pírú* 'big white house'.

#### 6.3.3.2 Adjectival and other intensifiers

There are dozens of special interjection-like forms, ranging from single syllables to iteratives with four to six syllables, that can be used to intensify an adjective. Some intensifiers are verb-like in their semantics, but do seem to denote states (compare English *sit tight* or *sit still* and the like), so I include them here. A few are also noun-like ('dust', 'fog'), the intensifier indicating a large amount.

In other Dogon languages and in Songhay, the short intensifiers tend to have otherwise aberrant syllabic shapes, such as *CvC* with final voiceless stop. In TT, such forms are often pronounced *CvCù* or *CvCì* with an extra short high vowel at the end, but a few do have the *CvC* shape. The forms in (168) are organized by the shape of the intensifier.

(168)

| gloss | stem | intensifier |
|---|---|---|
| a. *CvC*, *CvC*, or *CvCv* with final high vowel | | |
| ‘blind’ | *jìrĭm* | *mâm* |
| ‘sitting still’ | — | *dâŋ* |
| ‘full (container)’ | *zó* | *pɛ́t* |
| ‘finished’ | *dùwⁿɔ́* | *tɛ́t* |
| ‘standing up’ | *ígó* | *tíw* |
| ‘flowery’ | — | *wókù* |
| ‘bitter’ | *gòlú* | *kátí* |
| ‘sole, single’ | *tùr-í→* | *lókù* |
| ‘only’ | — | *cɛ́kù* |
| b. *CvC-CvC* with final sonorant | | |
| ‘newborn’ | — | *zɛ́yⁿ-zɛ̀yⁿ* |
| ‘red (uncooked meat)’ | *bárⁿú* | *záyⁿ-záyⁿ* |
| ‘sour’ | *nôm* | *tóyⁿ-tóyⁿ* |
| ‘sour’ | *nôm* | *tóyⁿ-tóyⁿ* |
| ‘red’ | *bárⁿú* | *cóy-cóy* |
| ‘sour’ | *nôm* | *tóyⁿ-tóyⁿ* |
| ‘smooth’ | *òlú* | *náw-náw*, *pál-pál* |
| ‘hot (water, meal)’ | *dɔ́* | *jáw-jáw* |
| ‘hot (termperature)’ | — | *jáw-jáw*, *táw-táw* |
| ‘tight (rope)’ | *ɛ̆w* | *jéŋ-jéŋ* (also *jéŋ→*) |
| ‘black’ | *jém* | *tíːⁿ-tíːⁿ* (also *kírím-kírím*) |
| ‘dust’ | *kúsò* | *tíw-tíw* |
| ‘sated (full)’ | *ɛ́ŋá* | *túy-túy* |
| ‘at full boil’ | *wⁿàyⁿá* | *púl-púl* |
| ‘be inflated (fully)’ | *zó* | *jéŋ-jéŋ* |
| ‘full (sack, stomach)’ | *zó* | *túy-túy* |
| ‘shivering’ | — | *cɛ̆w-cɛ̆w* |
| ‘be fast’ | *dɔ̆y* | *jáw-jáw* |
| c. other *CvC-CvC*, or *CvCv-CvCv* with final high vowel | | |
| ‘rotten’ | *ɔ́rɔ́* | *dús-dús* |
| ‘straight’ | *ìgú* | *cɔ́t-cɔ́t* |
| ‘standing straight up’ | — | *ték-ték* |
| ‘fine (powder)’ | *mĭyⁿ* | *lúrí-lúrí* |
| ‘unripe’ | *ɛ́tú* | *zɛ́gí-zɛ́gí* |
| ‘soft, yielding’ | *ɔ̀rí→* | *yɔ́tú-yɔ́tú* |
| ‘soft (e.g. powder)’ | *ɔ̀rí→* | *yɔ́rú-yɔ́rú* |
| ‘lightweight’ | *ɛ́rú* | *cépí-cépí* |

d. other *CvCv-CvCv*

| | | |
|---|---|---|
| ‘sharply pointed’ | *sèmí→* | *mírⁿí-mírⁿí* |
| ‘thin’ | *ɔ̀ⁿsíⁿ→* | " |
| ‘nauseating’ | — | *páká-páká* |
| ‘thick’ | *séw* | *bùŋá-bùŋá* |
| ‘remain (left over)’ | *wàsá* | *wìdì-wádá* |

e. *Cv́Cv́C*

| | | |
|---|---|---|
| ‘tight-fitting’ | — | *kéréŋ, káláŋ* |
| ‘wet’ | *ɔ̀tú* | *zúbák* |
| ‘used up’ | *dùwⁿɔ́* | *séréw* |

f. *Cv́Cv́C-Cv́Cv́C*

| | | |
|---|---|---|
| ‘black’ | *jém* | *kírím-kírím* (also *tíːⁿ-tíːⁿ*) |
| ‘clean-shaven (scalp)’ | — | *lóróm-lóróm* |
| ‘hard’ | *măw* | *kéréŋ-kéréŋ* |
| ‘dry’ | *măyⁿ* | *kérέw-kérέw*, *káráw-káráw* |
| ‘heavy’ | *dùsú* | *zílέŋ-zílέŋ* |
| ‘firm (tires)’ | *ĕw* | *tésέŋ-tésέŋ* |

g. *CvCv-Cv* (with final *Cv* repeated)

| | | |
|---|---|---|
| ‘long’ | *gùrú* | *zúlúlú* |
| ‘cold’ | *tôm* | *kólélé* |
| ‘overloaded’ | — | *kírírí* |
| ‘tall’ | *gùrú* | *sókókó* |

h. *CvC→* with intonational prolongation

| | | |
|---|---|---|
| ‘tight (rope)’ | *ĕw* | *jéŋ→* (also *jéŋ-jéŋ*) |
| ‘oversized’ | — | *gûyⁿ→* |
| ‘small (tiny)’ | *tègĕy* | *yⁿíwⁿ→* |
| ‘stinking’ | — | *dús→* |

i. other with intonational prolongation

| | | |
|---|---|---|
| ‘short (object)’ | *tùkĕy* | *bèkìrí→* |
| ‘short (living thing)’ | *tùkĕy* | *tɔ̀lí→* |
| ‘rough, coarse’ | *gàːⁿsú* | *kágú-sû→* |
| ‘fog, haze’ | *àrú-mòmó* | *pítâm→* |

j. other *Cv́(C)Cv́*

| | | |
|---|---|---|
| ‘crispy (tasty)’ | *sĭm* | *cέrέ* |
| ‘sweet’ | *ètú* | *léŋgé* |

6.3.3.3 ‘Near X’, ‘far from X’

Expressions of the type ‘near X’ and ‘far from X’ consist of the ‘near’ or ‘far’ adjective plus an expression containing the reference NP and the postposition-like adverb *níŋèy* (variant *níŋgèy*) ‘beside’ or ‘along with’ (169).

(169) a. *[m̀* HL*ílò]* *bèrú* *[àlá* *níŋèy]*
[1SgPoss HLhouse] near [village **beside**]
‘My house is near the village.’

b. *wà:gá* *[àlá* *níŋgèy]*
far [village **beside**]
‘far from the village’

e. *sárŋérⁿè* *[[àlá* L*ìlò]* *níŋèy]* *wà:gá*
Sarinyere [[village L house] **beside**] distant
‘Sarinyere is far from the village.’

It is also possible to express the reference NP as a **dative**.

(170) a. *[m̀* HL*órù]* *wà:gá* *[dúwánzá* *dé]*
[1SgPoss HLfield] far [Douentza **Dat**]
‘My field is far from Douentza.’

b. *té:gà* *[[àlá* L*ìlò]* *dè]* *bèrú*
Tega [[village L house[ **Dat**] near
‘Tega is near the village.’

6.3.3.4 ‘Good to eat’

The examples in (171) were elicited. The quality adjective ‘good’ is predicative, and is accompanied by a phrase including the verbal noun in *-ú* (no suffix for monosyllabics). The verbal noun in (171a) is possessed by its logical direct object, the verbal noun then functioning as subject of ‘good’. In (171b), the entity itself is the subject of ‘good’, and the verbal noun occurs as a dative complement.

(171) a. *[kɔ̀* *[HL]él-ù]* *jèr$^{n}$ú* *sánnì*
[NonhSgPoss [HL]see.VblN] good very
'It's very nice to look at.'

b. *ní* *[dí* *dè]* *jèr$^{n}$ú=kɔ́* *wállà,*
water [[bathe.VblN Dat] good=NonhSgSbj although,
*[ní* *dè* *kày]* *jèr$^{n}$ú* *sàrà=kɔ́*
[drink.VblN Dat Top] good not.be=NonhSgSbj
'The water is good for bathing, but it's not good for drinking.'

## 6.4 Noun plus numeral

### 6.4.1 Noun (and adjective) plus numeral

When a noun (or noun plus adjective sequence) is followed by a cardinal numeral, both the noun (or noun plus adjective) and the numeral have their regular tones. This shows that numerals are a very different kind of modifier than adjectives. They are quantifiers, rather than reference restrictors.

(172) a. *bɛ̀lú* *pɛ́:rú*
sheep ten
'ten sheep'

b. *[bɛ̀lù[L]* *sɛ́w]* *pɛ́:rú*
[sheep[L] plump] ten
'ten plump sheep'

When a sequence like those in (172) is subject (as a whole) to tone-dropping, controlled by a following demonstrative pronoun or definite morpheme, or else by virtue of functioning as head NP in a relative clause, the core NP and the numeral combine to constitute the target domain. For examples involving demonstrative pronouns and definite morphemes, see §6.5.4 below. For examples involving relative clause head NPs, see (460) in §14.1.1.

In relative clauses, a numeral associated with the head NP remains with this head NP inside the clause, i.e. it does not follow the verb and the relative morpheme *ŋ́*.

### 6.4.2 Adjective-Numeral Inversion

In a simple indefinite NP consisting of noun, adjective, and numeral, as in '(I have) six big houses', the order is fixed. An informant rejected #*[ìlò kùrèy]*$^{L}$ *ná:* as an alternative to (173). The examples of this section bold the numeral in the interlinears, making it easier to follow the reordering.

(173) *ìlò*$^{L}$ *ná:* *kúréy*
house$^{L}$ big **six**
'six big houses'

If a demonstrative (174) or a possessor (175) is added, or if the NP functions as head of a relative clause (176), the adjective and numeral optionally switch places. Both the (a) and (b) versions of (174-176) are possible.

(174) a. *[ìlò* *nà:* *kùrèy]*$^{L}$ *ŋgí*
[house big **six**]$^{L}$ DemPl
'these/those six big houses'

b. *[ìlò* *kùrèy* *nà:]*$^{L}$ *ŋgí*
[house **six** big]$^{L}$ DemPl
[=(a)]

(175) a. *ú* $^{HL}$*[ílò* *nà:* *kùrèy]* *ŋgí*
2Sgoss $^{HL}$[house big **six**] DemPl
'those six big houses of yours-Sg'

b. *ú* $^{HL}$*[ílò* *kùrèy* *nà:]* *ŋgí*
2SgPoss $^{HL}$[house **six** big] DemPl
[=(a)]

(176) a. *[ìlò* *nà:* *kùrèy]*$^{L}$ *lŭw* *dà* *ŋ́*$^{L}$ *kíní*
[house big **six**]$^{L}$ fall be Rel$^{L}$ DefPl
'the six big houses that fell'

b. *[ìlò* *kùrèy* *nà:]*$^{L}$ *lŭw* *dà* *ŋ́*$^{L}$ *kíní*
house **six** big]$^{L}$ fall be Rel$^{L}$ DefPl
[=(a)]

Examples like (175a-b) with a possessor are most readily elicited with a final definite morpheme, but they can be elicited without this morpheme. In this case we see more clearly that when the numeral precedes the adjective, it is included

in the scope of possessor-controlled tone-dropping that extends to the adjective (177). By contrast, in Poss-N(-Adj)-Num combinations, the numeral is external to the target domain controlled by the possessor, see (161) above. The tone-dropping of the numeral in (175) must be attributed to the final demonstrative.

(177) *m̀* *[m̀* $^{HL}$*[ílò* *kùrèy* *nà:]]* *dɔ̀ró-wɔ̀sì*
1SgSbj [1SgPoss $^{HL}$[house **six** big]] sell-Pfv1b
'I sold my six big houses.' (or: 'I sold six of my big houses.')

## 6.5 Noun plus demonstrative or definite morpheme

### 6.5.1 Prenominal definite *kɔ̀*

*kɔ̀* preceding a noun is glossable as 'that (same) …', i.e., it is a (strong) discourse-definite morpheme referring back to prior discourse or other shared prior knowledge (§4.4.2). It often co-occurs with a postnominal definite morpheme such as singular *kúnú*, and it is compatible with a (prenominal) pronominal possessor. Unlike *kɔ̀* 'its …' in nonhuman singular possessor function, definite *kɔ̀* has **no tonal effect** on the following noun or other words. In (178a), 'cow' is tone-dropped by the postnominal definite marker. In (178b), 'cow' is {HL}-toned under the control of the pronominal possessor. In neither case does the initial discourse-definite *kɔ̀* have any tonosyntactic effects.

(178) a. *[kɔ̀* *nàŋà*$^{L}$ *kúnú]* *ú* *kɔ́* *wɔ̀-sɔ́* *má*
[**DiscDef** cow$^{L}$ DefSg] 2SgSbj NonhSgObj see-Pfv2 Q
'Have you-Sg seen that cow (that we were talking about)?'

b. *[kɔ̀* *ǹ* $^{HL}$*náŋà* *kúnú]*
[**DiscDef** 1SgPoss $^{HL}$cow DefSg]
*ú* *kɔ́* *wɔ̀-sɔ́* *má*
2SgSbj NonhSgObj see-Pfv2 Q
'Have you-Sg seen that cow of mine?'

*kɔ̀* without a co-occurring possessor or postnominal determiner and therefore having no tonal effect on the noun is illustrated in (99b), (208), and (400c) among other examples.

### 6.5.2 Postnominal demonstrative pronouns (*ŋ̀gú*, *ŋ̀gí*)

A deictic demonstrative pronoun *ŋ̀gú* ~ *ŋú* ~ *ŋ́* 'this/that', plural *ŋ̀gí* ~ *ŋí* 'these/those' (for the variants see §4.4.1) may follow the noun and any modifying adjectives or cardinal numerals that may be present. A demonstrative forces tone-dropping on the preceding noun and on the intervening words. Examples are in (179), using *íló* 'house' and *ná:* 'big'.

(179) a. *ìlò*$^{L}$ *ŋú*
house$^{L}$ DemSg
'this/that house' (*íló*)

b. *[ìlò* *nà:]*$^{L}$ *ŋú*
[house. big]$^{L}$ DemSg
'this/that big house' (*ìlò ná:* 'big house')

If a noun (with or without adjective) and a **cardinal numeral** are both present, the demonstrative controls tone-dropping on the entire N-(Adj-)Num sequence, see (183b,d) in §6.5.4 below.

A noun (or noun plus adjective) with a prenominal possessor is under the tonosyntactic control of the possessor rather than the demonstrative. This is observable in the case of pronominal (and some other) possessors that induce a {HL} tone overlay on the possessed noun, which is unaffected by a following demonstrative. The tonosyntactic structure is indicated by the bracketing in (180a). In ambiguous combinations like (180b), we cannot directly determine whether tone-dropping on the noun is controlled by the possessor or by the demonstrative, but extrapolating from (180a) I opt for the possessor-control interpretation.

(180) a. *[m̀* $^{HL}$*ílò]* *ŋí*
[1SgPoss $^{HL}$house] DemPl
'these/those houses of mine'

b. *[sáydù* $^{L}$*ìlò]* *ŋú*
[S $^{L}$house] DemSg
'this/that house of Seydou'

In relative clauses, a demonstrative associated with the head NP (e.g. in 'these dogs that …') follows the verb and the relative morpheme *ŋ́* (which drops tones to *ŋ̀*$^{L}$). See §14.1.11.

### 6.5.3 Postnominal definite morphemes (*kúnú*, plural *cíní*)

These definite morphemes (§4.4.3) occur in the same linear positions as, and have the same tonosyntactic effects on preceding words as, demonstratives. The examples in (181-182) are parallel to those given in the preceding section. Plural *cíní* can also be pronounced *kíní*.

(181) a. *ìlò*$^{L}$ *kúnú*
house$^{L}$ DefSg
'the house' (*íló*)

b. *[ìlò* *nà:]*$^{L}$ *kúnú*
[house big]$^{L}$ DefSg
'the big house' (*ìlò*$^{L}$ *ná:* 'big house')

c. *kɔ̀* *[bùrù* *tà:l-lò]*$^{L}$ *kúnú*
DiscDef [year three-Ordinal]$^{L}$ DefSg
'the third year' (2004-2a.03) (*bùrú*, *tá:l-ló*, *bùrù*$^{L}$ *tá:l-ló*)

(182) a. *[m̀* $^{HL}$*índò]* *cíní*
[1SgPoss $^{HL}$house] DefPl
'the houses of mine'

b. *[sáydù* $^{L}$*ìlò]* *ŋú*
[S $^{L}$house] DefSg
'the house of Seydou'

If a cardinal numeral intervences between the core NP and the definite morpheme, both the core NP and the numeral are tone-dropped; see §6.5.4, below.

For definite morphemes following the verb and relative morpheme *ŋ́* (which drops tones to *ŋ̀* before a determiner) in relative clauses, see §14.1.11.

### 6.5.4 Postnominal determiners force tone-dropping on core NP and numeral

A postnominal determinater, such as *ŋ̀gí* 'these/those' or definite plural *cíní*, forces tone-dropping simultaneously on the final word of the core NP **and on a numeral** following this core NP. Without the determiner, both words would surface with lexical melodies, including at least one H-tone (unless the core NP is independently tone-dropped under the influence of a possessor).

(183) a. *àlá* *sóy$^{n}$*
village seven
'seven villages'

b. *[àlà* *sòy$^{n}$]$^{L}$* *ŋ̀gí*
[village seven]$^{L}$ DemPl
'these/those seven villages'

c. *[àlà* *sòy$^{n}$]$^{L}$* *cíní*
[village seven]$^{L}$ DefPl
'the seven villages'

d. *[ìlò* *tà:lì]$^{L}$* *ŋ́í*
[house three]$^{L}$ DemPl
'these/those three houses' (*íló tà:lí* 'three houses')

e. *[ìlò* *tà:lì]$^{L}$* *cíní*
[house three]$^{L}$ DefPl
'the three houses' (*íló tà:lí* 'three houses')

As noted in §6.5.2 above and elsewhere, in Poss-N(-Adj)-Det combinations, the possessor (not the determiner) controls tones on the N(-Adj) target, so the determiner has no overt tonosyntactic effect.

## 6.6 Other quantifiers at the end of NPs

### 6.6.1 Free plural (*mă:*)

Free (unsuffixed) plural particle *mă:* is an optional element. It is generally used after nonhuman nouns that do not have obligatory singular/plural marking by suffixation, for example when the listener might otherwise think that the reference is to a single object (184a). It may also be used to force a countable reading on a noun like 'milk' that is usually treated as a mass, for example to denote types of the entity in question (184b).

(184) a. *ìlò$^{L}$* *ná:* *mă:*
house$^{L}$ big Pl
'big houses'

b. *êm* *mă:*
milk Pl
'milks (e.g. kinds of milk)'

c. *hálì* *[bɛ̀* $^{HL}$*tégù* *mă:],* *níŋ* *kày,*
until [3PlPoss $^{HL}$talk Pl], now Topic,
*túnŏm-mà* *pású-sà*
Recip leave-Pfv1
'until their words left each other (=they could not agree)' (2004-1b.01)

d. *[nù-m*$^{L}$ *jérè* *mă:]* *â:* *kúw-rò*
[person-Pl$^{L}$ certain Pl] Ipfv devour-Ipfv
'Some (other) people eat it (= grasshoppers).' (2004-1b.02)

In texts, the most common combination involving *mă:* is logophoric plural pronoun *àsí mă:* (§18.2.1), where it is obligatory. *mă:* is not otherwise used in combination with personal pronouns. It is occasionally used with demonstrative pronouns, but these already distinguish singular from plural by vocalism, so the *mă:* is redudant, as in *ŋ̀gí* equivalent to *ŋ̀gí mă:* 'these, those'.

*mă:* is not normally used (redundantly) in NPs also including a nonsingular cardinal numeral. For example, 'three houses' appears in texts and normal elicited sentences (using French cues) as *íló tà:lí* (185a). However, when asked directly whether *íló tà:lí mă:* (185b) was acceptable as an alternative, informants did accept it; I am putting a question mark before this example (185b) to indicate that it is not idiomatic.

(185) a. *íló* *tà:lí*
house three
'three houses'

b. ? *íló* *tà:lí* *mă:*
? house three Pl
(=a)

When *mă:* is inserted between a noun and a cardinal numeral, the numeral is interpreted as predicative, i.e. external to the NP (186).

(186) *[íló* *mă:]* *tà:lí*
[house Pl] three
'The houses are three (in number).'

In elicitation, informants accepted the combination of plural *mă:* with a following universal quantifier *yà:fú:* 'all'. As with cardinal numerals, *mă:* is redundant here (except when it forces a countable reading on a normally mass noun, as in 'kinds of milk'). In my textual data, *mă:* does not combine with *yà:fú:*, but the combination does qualify as grammatical.

(187) a. *íló* (*mă:*) *yà:fú:*
house (Pl) all
'all the houses'

b. *êm* *mă:* *yà:fú:*
milk Pl all
'all of the milks (=kinds of milk)'

*mă:* functions as **associative plural** when added to singular personal names or other NPs denoting specific individuals, in the sense 'X and associates' (companions, family).

(188) *í:sà:* *mă:*
Issa Pl
'Issa (man's name) and company' (2004-1b.03)

### 6.6.2 'Each X' (*kálá:*, *kâ:$^{n}$*) and 'all X' (*yà:fú:*)

The distributive quantifier *kálá:* **'each'** is generally added to a noun or to a noun-adjective combination. For those nouns with a suffixal number distinction, the noun is singular in form. *kálá:* (unlike its counterpart in e.g. Jamsay) does not induce tone-dropping on a preceding word. A sentence containing a NP with *kálá:* typically has a second quantified NP elsewhere, e.g. 'a (=one) boubou' in (189a) and 'one sack each' in (189b). For iterated numerals in distributive function, like *túr-túrú* in (189b), see §4.7.1.6.

(189) a. *[ì-r$^{n}$ú* *kálá:]* *dòlkí* *bèrú* *dĕn* *dà*
[child-Sg each] boubou get Tr be
'Each child has gotten a boubou (garment).'
[for *dĕn dà* see (314-315) in §10.1.3.1]

b. *[[íló* *kálá:]* *dé]*
[[house each] Dat]
*[sá:kù* *túr-túrú]* *á* *òw-r-è=bɛ́*
[sack one-one] Ipfv give-Ipfv-3PlSbj=3PlSbj
'They will give one sack (of millet) to each house.'

*kálá:* is not readily combinable with NPs that also contain a determiner (demonstrative pronoun, definite morpheme). However, an **appositional construction** may be used, with *kálá:* usually added to a semantically light resumptive noun, as in (190). Such examples contain the ordinary 'person' noun for human reference (190a), a special form *kâ:$^{n}$* which I tentatively gloss as 'critter' for animal reference (190d), and zero (after a phrasal prosodic break) for inanimate reference (190c).

(190) a. *[àrà-m*$^{L}$ *ŋí]* *[[nù-r$^{n}$ú* *kálá:]* *dé]*
[man-Pl$^{L}$ DemPl] [[person-Sg each] Dat]
*pé-lěy* *ów-s-è*
ten-two give-Pfv2-3PlSbj
'They gave twenty (riyals) to each of these men.'

b. *[bèl*$^{L}$ *ŋí]* *[[kâ:$^{n}$* *kálá:]* *dé]* *sɔ̀lɔ́* *ów*
[sheep$^{L}$ DemPl] [[critter each] Dat] grass give.Imprt
'Give-2Sg some grass to each of these sheep!'

c. *[ìlò* *ŋí]* *[[[∅* *kálá:]* $^{HL}$*púrò]* *kù]*
[house DemPl] [[[∅ each] $^{HL}$inside] in]
*[sá:kù* *túrú]* *kùlí-yèr-è*
[sack one] put-Fut-3PlSbj
'They will put one sack in each of these houses.'

The quantifier is sometimes heard as *kálá* without notable lengthening of the final vowel. One elderly speaker used *kâ:$^{n}$* (varying with *kálá:*) in the phrase *nù-r$^{n}$ù kâ:$^{n}$* 'each (any) person'. (*kâ:$^{n}$* is also the 'each' quantifier in Jamsay.)

As the examples indicate, *kálá:* can occur in explicitly distributive environments, as in (189b) and (190a), where the 'each X' phrase is paired with another quantified expression. However, in other examples like (189a) a gloss 'every X' is fine.

The universal quantifier **'all'**, when it has scope over a preceding overtly expressed noun, most often takes the form *yà:fú:*, variant *yàgàfú:* (191).

(191) a. *[íló* *yà:fú:]* *lŭw* *sígú* *kám-wɔ̀rè*
[house all] fall go.down be.entirely-Pfv1
'All the houses fell (=collapsed).'

b. *[wɔ̀* HL*cɛ́rù* *yà:fú:]* *măr* *kám-wɔ̀rè*
[3SgPoss HLmoney all] be.lost do.entirely-Pfv1a
'All her money was lost.'

The probably older form *yàgàfú:* suggests etymological connections with *yàgá* 'which?' and with Jamsay (and regional, e.g. Fulfulde) *fú:* 'all'.

As an absolute form, 'everything' is *cĕw-là:fú:*, with several phonological variants.

(192) *săy* *cĕw-là:fú:* *sɔ́gú* *kám-wɔ̀ší*
bird everything peck do.entirely-Pfv1b
'The birds have eaten ("pecked") everything.'

One variant in very careful speech style is *cè-húlè-yàgà-fú:*, which at first sight might be taken as the etymological granddaddy of all the variants. However, in the more common *cĕw-là:fú:* the initial resembles Jamsay *cêw* 'all'.

## 6.7 Accusative absent for NPs

There is **no morphological accusative marking** for NPs. For pronouns, there are slight differences in the forms and linear positions of direct objects as opposed to subjects and possessors; see (91) in §4.3.2.

# 7 Coordination

## 7.1 Conjunction ('and')

### 7.1.1 NP coordination

#### 7.1.1.1 NP conjunction ('X and Y') with *lěy*

Conjunction of two NPs takes the form *[X∴ [Y lěy]]*. The left conjunct, where phonologically possible, lengthens its final vowel and applies a slowly falling tone to it. This is the **dying quail intonation** best developed in Jamsay, where it applies to both left and right conjuncts. The prosodic prolongation seems less extreme in TT than in Jamsay. The right conjunct has its normal pronunciation and is followed by *lěy*, which I will gloss as 'and'. It a special use of the numeral *lěy* 'two', and is not used in conjunction of more than two NPs (on which see the following section).

I use the symbol "-&" in interlinears to indicate the special prosodic ending of the left conjunct.

(193) a. *mí∴ [búrà: lěy]*
1Sg-& [Boura and]
'me and Boura (man's name)'

b. *yⁿà-mú∴ [àrǎ-m lěy]*
women-& [men and]
'women and men' (*yⁿà-mú* or *yⁿǎ-m*)

c. *bɛ̀lú∴ [ɛ̀rⁿá lěy]*
sheep-& [goat and]
'sheep and goats' (*bɛ̀lú*)

d. *yⁿà:ŋá∴ [nùŋùlɔ́ lěy]*
night-& [day and]
'night and day' (*yⁿà:ŋá*)

As (193a) shows, conjunction of a pronoun with a nonpronominal NP has the same form as conjunction of two nonpronominal NPs. The pronoun takes left conjunct position, and shows the usual prosodic modification.

In **pronoun-pronoun** combinations, on the other hand, the left conjunct has its normal independent form, with no special lengthening or falling tone (194).

(194) a. *ú* *[bé* *lěy]*
2Sg [3Pl and]
'you-Sg and them'

b. *wɔ́* *[bé* *lěy]*
3Sg [3Pl and]
'he/she and them'

c. *í* *[wó* *lěy]*
1Pl [3Sg and]
'we and him/her'

d. *mí* *[bé* *lěy]*
1Sg [3Pl and]
'he/she and them'

1Sg *mí*, however, is reduced to *m* before a vowel (or semivowel), fusing with the following pronominal. The examples in (195) are presented with partially normalized transcriptions. 'I and he/she' (195a) is pronounced [ḿwɔ́ː], suggesting that 3Sg variant *wɔ́* occurs instead of expected *wó* as in (194c) above. To get from /mí wɔ́/ to [ḿwɔ́ː] further requires irregular deletion of /í/ with compensatory lengthening of /ɔ́/. 1Sg followed by 2Sg *ú* is pronounced [múː] (195b), and 1Sg followed by 2Pl *á* surfaced as [máː] (195c), in both cases by *vv*-Contraction (§3.6.4.3).

(195) a. *mí* *[wɔ́* *lěy]*
1Sg [3Sg and]
'me and him/her'

b. *mí* *[ú* *lěy]*
1Sg [2Sg and]
'me and you-Sg'

c. *mí* *[á* *lěy]*
1Sg [2Pl and]
'me and you-Pl'

### 7.1.1.2 Extended NP conjunctions ('X and Y and Z …')

There is no existential conjunction construction of the Jamsay type ('there is X, and there is Y, and there is Z, …') with a conjunctive particle (Jamsay *bé→*) repeated after each element. Instead, the regular existential clause with *á dà* is repeated, with terminal pitch rise (↑) of nonterminal conjuncts as usual in extended lists.

(196) *yú* *á* *dà↑,* *ɛ́ŋúnɛ́* *á* *dà↑,*
millet Exist be, peanut Exist be,
*nɛ̌ŋ* *á* *dà↑,* *tɔ̀rⁿíyⁿàrⁿà* *á* *dà↑, …*
salt Exist be, corn Exist be, …
'(In the market) there is millet, there are peanuts, there is salt, there is corn (maize), …'

Ordinary conjunction of the type *[X∴ [Y lɛ̌y]]* as described in the preceding section is extended to **three or more conjuncts** by repeating the dying-quail terminal intonation on all conjuncts. The dying-quail intonation is less pronounced on the terminal conjunct, giving a prosodic hint that the string is completed. *lɛ̌y* (identical to the numeral '2' and therefore inappropriate in conjunctions of more than two elements) is absent. When followed by e.g. a verb in the same clause, there is usually an intonational break at the end of the conjoined NP.

(197) *[yú∴* *túsú∴* *tɔ̀rⁿí-yⁿàrⁿà∴]* *zɛ̂ː-s-ɔ̌ː*
[millet-& sorghum-& corn-&] bring-Pfv2-3SgSbj
'He/She brought some millet, some sorghum, and some corn.'

### 7.1.1.3 Conjunction with final universal quantifier (*yà:fú:*)

The 'all' quantifier *yà:fú:* (with several variants: *yàgàfú:*, *cɛ̀-hú:lì-yà:fú:*, *cɛ̌-w-yà:fú:*, etc.) may occur at the end of a conjoined NP. If *lɛ̌y* 'and' is present, it precedes the quantifier.

(198) a. *[àrá∴* *yá* *lɛ̌y* *yà:fú:] …*
[male-& female and **all**] …
'the male and the female … (are equally long)' (2004-1b.03, grasshoppers)

b. *[[kɔ́* *[HL]árà.ː ]*
[[NonhSgPoss [HL]male-&]
*[kɔ́* *[HL]yá]* *lěy* *yà:fú:]* *jɛ́m*
[NonhSgPoss [HL]female] and **all**] black
'Both its male and its female are black.' (2004-1b.03, grasshoppers)

c. *àrǎ-mː* *yⁿà-múː* *ì-múː↓,* *cɛ̀-hú:lì-yàgàfú:,*
man-Pl-& woman-Pl-& child-Pl-&, all,
*mɔ̀tɔ́=m̀* *á* *tɔ̀-rɔ̀*
come.together=and.SS Ipfv sow-Ipfv
'Men, women, and children all do the sowing together.'
(2005-2a.06)

When added to a conjoined NP as in these examples, *yà:fú:* essentially summarizes and marks the end (right edge) of the overall NP, rather than adding a new quantificational element. For example, I gloss (198b) as 'both its male and its female' rather than as 'all its males and its females'. This right-edge marking function is also found with multi-clause conditional antecedents; see (202b) in §7.2.1.

### 7.1.1.4 Conjunction or disjunction with *hé→* and *yéː*

A fairly uncommon particle *hé→* with intonational prolongation is inserted between two coordinands, with no other marker of coordination. The pragmatic force is more emphatic, as in 'both X and Y' or 'anything from X to Y'. Some cases could be taken as (inclusive) disjunctions rather than as conjunctions.

(199) *[yó* *nà]* *kúyⁿɔ́,* *[à-nú,* *hé→* *yⁿà-rⁿú],*
[today now] genital.disease, [man-Sg, **and** woman-Sg]
*nù-rⁿù*[L] *kà:* *kúyⁿɔ́* *wɔ́* *bɛ̌ː-sì* *ŋ̀* *má*
person-Sg[L] Rel genital.disease 3SgObj get-Pfv1b Rel if
'Yes, again, for genital disease, (it doesn't matter) whether (it's) a man or a woman, if it's someone whom blood-in-the-urine has afflicted, …'
(2004-2a.07)

A particle *yéː* with dying-quail intonation occurs in similar contexts. As these particles are pronounced as interjections, they may be variants of a single class of forms.

(200) *pày-nú* *yé꞉꞉* *ì-r$^{n}$ú,* *í* *zàlá* *mà,*
old.person-Sg **and** child, 1PlSbj cook.in.pot and.SS,
*cɛ́* *á* *nì-r$^{n}$à*
NonhPlObj Ipfv drink-Ipfv
'(Whether it's) an old person or a child, we cook it (= medicine), that's what he drinks.' (2004-2a.07)

### 7.1.2 "Conjunction" of verbs, VP's, and clauses

#### 7.1.2.1 VP Chains

Verbs and VPs are "conjoined" using the chaining mechanisms described in chapter 15, which have no similarity to NP conjunction. There is also an interesting construction with paired antonymic verbs, both in hortative form, used as a kind of nominalization (§10.4.5).

#### 7.1.2.2 NP-like conjunction of clauses in willy-nilly conditional antecedents

Clauses are likewise normally not conjoined in NP-like fashion. In narratives, successive events are either described by autonomous clauses, or (if the subjects are shared) the VP-chaining devices are used. There is, however, one case where clauses are conjoined using the *[X꞉꞉ Y lěy]* construction. This is the **willy-nilly conditional** construction: 'whether [you are coming] or [you aren't coming], …' is expressed in TT as a conjunction rather than as a disjunction: [[you are coming*꞉꞉*] [you aren't coming] *lěy yà:fú:]*. The logic is not conjunctive in the usual sense of clause conjunction (i.e. where the truth of both clauses is asserted), since only one of the mutually incompatible component clauses can be true. Rather, the conjunction is more abstract: 'in both cases, namely the case that [you are coming] and the case that [you are not coming], …'. See §16.4 for details.

See also the discussion of clause-initial *má* … 'and then …' (§15.2.1.4).

## 7.2 Disjunction

### 7.2.1 Avoidance of 'or' disjunctions

In elicitation, informants tended to avoid 'or' disjunctions connecting two or more NPs, preferring constructions with parallel clauses. Whether there is an

adversarial relationship (exlusive 'or') between the two propositions is left to the listener to infer.

(201) *àtê:* *m̀* *â:* *ní-r$^{n}$à→↑,*
tea 1SgSbj Ipfv drink-Ipfv,
*káfɛ̂* *m̀* *â:* *ní-r$^{n}$à→↓*
coffee 1SgSbj Ipfv drink-Ipfv
'I drink tea or coffee.' (lit., "I drink tea, I drink coffee")

The normal prosodic realization of such paired clauses is with the final syllable of both prolonged (→), with higher than normal terminal pitch at the end of the first clause (↑), and with regular terminal falling pitch at the end of the second clause (↓).

Likewise, where English has 'or' linking two subordinated clauses, TT usually finds an alternative construction. In (202a), the embedded 'whether X or Y' is expressed using parallel positive and negative clauses in yes-no interrogative form (here, with final *mà* or *mâ→*). The clause-initial *má* is the '(and) then' particle (§15.2.1.4). (202b) is a willy-nilly conditional antecedent expressed as an 'and' conjunction (§16.4), with final 'all' quantifier (§7.1.1.3).

(202) a. *kɔ́* *èlí-yàrà* *ká* *kɔ́,*
NonhSg look-Fut say NonhSg,
*[[kɔ̀* *nù-m*$^{L}$ *cíní]* *gú-wòrè* *mà]*
[[DiscDef person-Pl$^{L}$ DefPl] exit-Pfv1a Q]
*[gù-rí* *mâ→],*
[exit-PfvNeg Q]
*má* *[bɛ́* *bɛ́lú-wɔ̀rè* *mà]*
then [3PlSbj approach-Pfv1a Q]
*[bɛ̀l-lí* *mâ→]*
[approach-PfvNeg Q]
'(Hyena said:) He (=hyena) would look (=check) whether those people had come out, or had not come out, (and whether) they had approached, or had not approached.' (2004-1b.01)

b. *ú* *â:* *yá-rà∴,*
2SgSbj Ipfv come-Ipfv-&,
*[ú* *yè-nó]* *lɛ̌y]* *yà:fú:*
[2SgSbj come-IpfvNeg] **and]** **all**
'whether you-Sg are coming or aren't coming'

### 7.2.2 'Or' (*ma→*)

As in several nearby Dogon languages, the 'or' disjunction is difficult to distinguish from the yes-no interrogative particle *ma*, which by its nature asks the listener to choose between two options.

The disjunctive particle *ma→* is placed between the coordinands. In careful speech it is grouped prosodically with the following constituent, e.g. with the second coordinand in a two-part 'X [or Y]' sequence. It is variably prolonged intonationally (*→*). Pitch is highly variable, ranging from flat low to falling to rising. I will transcribe the pitch heard in each example as though it were phonological tone, since I cannot determine an underlying (lexical) tone..

(203) a. *[nǎy$^{n}$ kálá:] [bèlú [mà→ èr$^{n}$á]] â: cí-r-ǒ:*
[day each] [sheep [**or** goat]] Ipfv slaughter-Ipfv-3SgSbj
'Every day he slaughters (either) a sheep or a goat.'

b. *léyó [íló kù] [mǎ→ [dáŋkí dòsù]]*
sleep.Imprt [house in] [or [shed under]]
'Sleep-2Sg in the house or under the shed!'

c. *[sáydù [mâ→ á:mádu]] kɔ̀ bírá á bìrí-yàrà*
[S [or A]] SFocSg work(n) Ipfv work(v)-Fut
'Seydou or Amadou [focus] will do (the) work.

It is possible to repeat the disjunctive particle, resulting in an *[or X] [or Y]* ('either X or Y') construction of the type familiar from French and Spanish. In my data, the pitch on *ma→* is low in both occurrences.

(204) *zòŋó [mà→ [[èm$^{L}$ nôm] sǐ:]] [mà→ [súkkàrà sǐ:]]*
treat.Imprt [or [[milk$^{L}$ sour] with]] [or [sugar with]]
'Treat-2Sg (the patient) either with sour milk or with sugar (in the eyes, after a spitting cobra attack)!'

### 7.2.3 'Or' (*nà→*)

An alternative form *nà→* is also in use as a disjunction. It may be a simple variant of *ma→*. At any rate, I have several examples from one informant, which my principal assistant converted into counterparts with *ma→*.

In (205), *nà→* occurs in parallel before each of two imperative clauses.

(205) *nà→* *bèlú* *cɛ́→↑,* *nà→* *èrⁿá* *cɛ́→*
**or** sheep slaughter.Imprt, **or** goat slaughter.Imprt
'Slaughter a sheep or a goat!'
(lit. "Either slaughter a sheep, or slaughter a goat!")

In (206), *nà→* takes NPs and adverbials in its scope. The particle may occur before both coordinands (206a), or just before the noninitial coordinand (206b).

(206) a. *[[nà→* *súkkárà→↑]* *[nà→* *ìwó→]]* *zérì*
[[**or** sugar] [**or** honey]] bring.Imprt
'Bring the sugar or the honey.'

b. *nù-rⁿú* *mɔ̀ŋgɔ́rɔ̀* *á* *lí* *bɛ̀-tà*
person-Sg mango Ipfv eat can-Ipfv
*[àrká→↑* *[nà→* *dɛ̀:gá→]*
[morning [**or** afternoon]
'One can eat a mango in the morning or in the afternoon.'

In interrogatives, where the coordinands are presented as alternatives to choose from, the regular clause-final polar interrogative particle *mà* is added to both clauses, and no overt disjunction is needed (207).

(207) *bèlú* *ú* HL*íwà* *mà↑,* *èrⁿá* *ú* HL*íwà* *mà* ?
sheep 2SgSbj HLwant **Q**, goat 2SgSbj HLwant **Q**
'Do you-Sg want a sheep, or do you want a goat?'

### 7.2.4 Disjunction with *wàlá* or *wâl-mà*

*wàlá* occurred in a few textual passages like that in (208). Similar forms are common in Songhay, Fulfulde, etc., but are less typical of Dogon languages.

(208) *má* *[[kɔ̀* *kúwɔ́]* *wàlá* *kɔ̀rɔ́]*
and.then [[DiscDef foot] **or** neck]
*[[dèŋ*$^{L}$ *pítím* *dà* *ŋ̀*$^{L}$ *kún]* *dé]*
[[place$^{L}$ be.swollen be Rel$^{L}$ DefSg] Dat]
'and then (to) the foot or neck, to the (= whichever) place the swelling is in, (we apply the medication there)' (2005-2a.07

A form *wâl-mà*, with variant *wálì-mà*, occurred in another text (209). Here the *mà* is not prosodically lengthened.

(209) *kálá* *ày$^{n}$á-ày$^{n}$á,* *[èm*$^{L}$ *nôm]* *wâl-mà* *súkkàrà*
all remedy-remedy, [milk$^{L}$ sour] or sugar
'A remedy is necessary (if a cobra spits into one's eyes), curdled milk or sugar.' (2004-1a.10)

# 8 Postpositions and adverbials

## 8.1 Instrumental and comitative

### 8.1.1 Instrumental *sǐ:* ~ *sì:*

This postposition is added to NPs functioning as instruments. The tone of the postposition can be rising in careful speech, as suggested by my transcriptions here, but in most examples it is heard as L-toned.

(210) a. *[béré sǐ:] ǹ tɛ́w-s-ɔ̌:*
[stick Instr] 1SgObj hit-Pfv2-3SgSbj
'He/She hit me with a stick.'

b. *nàwⁿá ǹ cɛ́s-sà [pèrú sǐ:]*
meat 1SgSbj cut-Pfv2 [knife Instr]
'I cut-Past the meat with a knife.'

c. *[èsé sǐ:] ú á tìn-ní-yⁿàrⁿà*
[what? Instr] 2SgSbj Ipfv shut-Revers-Fut
'With what will you open it?' (*tílá*)

d. *[[nàŋàᴸ zíŋí] sǐ:] wàrá m̀ â: wá-tà*
[[cowᴸ bull] Instr] farming 1SgSbj Ipfv farm(v)-Ipfv
'I do farm work with an ox.' (verb *wàrá*)

See also 'they cannot dig by themselves' (616c) in §18.1.2.

### 8.1.2 Comitative

Instead of a comitative PP, the preference is for a chain construction with verb *mɔ̀tɔ́* 'assemble, be or come together' in the combining form *mɔ̀tɔ́ mà* 'get together and …', followed by another VP denoting the relevant activity.

(211) *[sáydù* *[ń* *lěy]]* *[mɔ̀tɔ́* *mà]*
[S [1Sg and]] [**be.together** **and.SS**]
*bírá* *á* *bì-tà*
work(n) Ipfv work(v)-Ipfv
'I and Seydou work together.' (= 'I work with Seydou')

## 8.2 Spatial postpositions

### 8.2.1 Locative, allative, and ablative functions

PP's denote locations rather than starting points or endpoints of trajectories. To express the latter, a motion verb like 'go' (allative) or 'exit, leave' (ablative) must be used, alongside a locative PP. Thus 'he went in the village' = 'he went to the village', and 'she left in the village' = 'she left (=went from) the village'.

### 8.2.2 Simple and complex postpositions

Simple postpositions are monomorphemic and invariant in form and are added directly to an NP (which has the same form it would have without the postposition). Complex PPs are analysable into a possessor, a possessed noun (denoting a body-part, for example) and a final simple postposition, structurally like English *at [the back [of the house]]* but with the opposite linear order. The possessum ('back') takes the appropriate tone overlay when the possessor precedes it; see §6.2 for details.

### 8.2.3 'In' (*kù*)

The basic locative postposition is *kù*. It may be glossed 'in (contained space)', 'on (surface)', or 'at (a location)'. Simple PP's of the form *[X kù]* are used in a variety of locational expressions, though in elicitation my assistant insists on the compound postposition *[[X* $^{L}$*pùrò] kù]* for 'in(side) X' in many contexts, and indeed *[[X* $^{L}$*pùrò] kù]* is very common in texts. This *[[X* $^{L}$*pùrò] kù]* (on which see below) is one of several complex postpositions that end in *kù*.

(212) a. *[lú:mà* *kù]* *yǎy-wɔ̀r-ɔ́:*
[market **in**] go-Pfv1a-3SgSbj
'He/She went to the market.'

b. *[àlá kù] gú-wɔ̀r-ɔ́:*
[village **in**] leave-Pfv1a-3SgSbj
'He/She left the village.'

c. *[kàrá kù] jìró m̀ â: léy-rò*
[mat **in**] eye 1SgSbj Ipfv sleep-Ipfv
'I sleep on a mat.'

Like the other *Cv̀* postposition (dative *dè*), *kù* becomes *kú* after demonstrative pronouns and definite morphemes by Tone-Raising (§3.7.2.5), thus *ŋ̀gú kú* 'in/on this', *[X kúnú] kú* 'in/on the X'.

A 3Pl variant *kì* is attested in *[kɛ̀ kí] kì* 'on their-Nonh head(s)', see (224b) in §8.2.12, versus singular *[kɔ̀ kú] kù* 'on its head'. The shift to front vowels is uncommon in PPs of this type, but follows the pattern whereby verb stems shift their final vowel to *ɛ* ~ *e* before cliticized 3Pl *=bɛ́* or NonhPl *=cé* (§10.2.2), as well as singular-to-plural back-to-front vocalic alternations in demonstratives and definites (§4.4.1-3).

*kù* probably originated as the possessed form of *kú* 'head', but the synchronic connection seems weak at best. The combination *[X kú] kù]* 'on the head (or tip) of X' is still fairly common. Compare Jamsay tonal locative *kû:*$^{n}$ 'on the head of'.

### 8.2.4 'Inside' (… $^{L}$*pùrò kù*)

The noun *pùró* 'belly' (hence 'interior') occurs in the adverbial phrase *pùró kù* 'inside, within'. By adding a preceding NP (X), and treating *púró* as possessed noun (with consequent tonal changes), we get the 'inside X' construction (213). For example, the tonal output is … $^{HL}$*púrò kù* after a pronominal possessor, … $^{L}$*pùrò kù* after an undetermined noun.

This construction is not only used for enclosures (dwellings, containers), but also for bodies of water, holes, etc.

(213) a. *[[íló $^{L}$pùrò ] kù] á lèy-r-ɔ́:*
[[house $^{L}$belly] in] Ipfv sleep-Ipfv-3SgSbj
'He/She sleeps in the house.'

b. *[[kɔ̀ $^{HL}$púrò] kù]*
[[NonhSgPoss $^{HL}$belly] in]
'inside it'

c. *[[ùró* *[L]pùrò]* *kù]* *á* *húrà* *kà-là*
[[hole [L]belly] in] Ipfv staying do-Ipfv
'It (=python) stays in a hole.' (2004-1a.10)

### 8.2.5 'On the neck of' (… [L]*kɔ̀rɔ̀ kù*)

This expression is used with reference to carrying a burden, physical or metaphorical. The form is … [HL]*kɔ́rɔ̀ kù* after a pronominal, … [L]*kɔ̀rɔ̀ kù* after an undetermined noun.

(214) *[dè:ŋgó* *yà:fú:]* *[[ŋ̀* [HL]*kɔ́rɔ̀]* *kù]* *dà*
[fatigue all] [[1SgPoss [HL]neck] in] be
'The whole fatigue (=onerous burden) is on my neck.'

### 8.2.6 'On' (… [L]*jèsù kù*, … [L]*jèsù*)

The noun *jèsú* 'body' is the basis for a complex postposition 'in (=on) the body of' = 'on'. The tonal form is … [HL]*jésù kù* after a pronominal, … [L]*jèsù kù* after an undetermined noun.

(215) *kàyá* *[[íló* [L]*jèsù]* *kù]* *lɔ́kù* *dà*
grasshopper [[house [L]body] in] be.attached be
'The grasshopper is on the wall (of the house).'

In texts, the *kù* is usually omitted, resulting in *[X* [L]*jèsù]* or *[X* [HL]*jésù]* depending on the syntactic category of X, so possessed 'body' can now function as a simple (as opposed to composite) postposition.

### 8.2.7 'In front of' (… [L]*kà kù*, … [L]*jìrè kà*)

When the reference object is a house, burrow, or other entity with a well-defined entranceway, 'in front of' is expressed as 'in (=at) the mouth of', with a possessed form of *ká* 'mouth' followed optionally by locative *kù*. The result, after tonal changes, is … [HL]*ká (kù)* after a pronominal and … [L]*kà (kù)* after an undetermined noun.

(216) a. *[íló* [L]*kà]* *(kù)*
[house [L]**mouth**] (in)
'in front of (=at the mouth of) the house'

b. *[kɔ́* $^{HL}$*ká]* *kù*
[NonhSg $^{HL}$**mouth**] in
'in front of it (=house)'

Adverbial 'to/in (the) front, forward' is *jíré* $^{L}$*kà* (217a), cf. *jìró* 'eye'. A related form is *jíró* '(position) in front'. As part of a complex postposition with a preceding NP or pronominal functioning as possessor, *jíré* takes the appropriate possessed-noun overlay (217b-c). Instead of the expected final locative postposition *kù*, these combinations have $^{L}$*kà*, originally the possessed form of *ká* 'mouth'. I gloss it as 'mouth' in (217) but the synchronic connection is weak.

(217) a. *[jíré* $^{L}$*kà]* *zɔ̌w-wɔ̀r-ɔ̌:*
[**front** $^{L}$mouth] run-Pfv1a-3SgSbj
'He/She ran ahead.'

b. *[ŋ̀* $^{HL}$*jírè]* $^{L}$*kà*
[1SgPoss $^{HL}$**front**] $^{L}$mouth
'in front of me'

c. *[nàŋá* $^{HL}$*jìrè]* $^{L}$*kà*
[cow $^{HL}$**front**] $^{L}$mouth
'in front of the cow'

### 8.2.8 'Behind, in the rear' (… $^{L}$*pɛ̀rà*)

The noun 'rear, back (of sth)' is *pɛ́rá*. It is also used in this simple form as an adverbial 'behind, in the rear'. With a preceding (possessor) NP or pronoun, we get PPs meaning 'behind X' as in (218). As expected, the tonal form is … $^{HL}$*pɛ́rà* after a pronominal, … $^{L}$*pɛ̀rà* after an undetermined noun. This postposition is presumably shortened from an older complex postposition ('at the rear of …').

(218) a. *íló* $^{L}$*pɛ̀rà*
house $^{L}$**rear**
'behind (=in back of) the house'

b. *ŋ̀* $^{HL}$*pɛ́rà*
1SgPoss $^{HL}$**rear**
'behind me'

### 8.2.9 'Under' (…$^{L}$*dòsù*)

Adverbial '(down) below, underneath' is *dòsú* or (with final locative postposition) *dòsú kù*.

As postposition with preceding NP or pronoun, we get interchangeably either a form based on simple *dòsú* (219a) or the complex postposition *dòsú kù* (219b), in either case with the relevant possessed overlay.

(219) a. *dèŋ-díŋ* $^{L}$*dòsù* *(kù)*
place-sit $^{L}$**under** (in)
'under the stool'

b. *ú* $^{HL}$*dósù* *(kù)*
2SgPoss $^{HL}$**under** (in)
'under you-Sg'

### 8.2.10 'Beside, next to' (… $^{L}$*zèlà kù*)

Adverbial 'to the side (=nearby)' can be expressed by the PP *zèlá kù*. This is also used as a complex PP, with the appropriate tone overlays on *zèlá*.

(220) a. *[tògú* $^{L}$*zèlà]* *kù*
[water.jar $^{L}$beside] in
'beside the water jar'

b. *[í* $^{HL}$*zélà]* *kù*
[1PlPoss $^{HL}$beside] in
'beside us'

An alternative is to use a locative PP based on the noun *dùtú* 'hip', when adjacency is indicated.

(221) *àlá* *[[kóyò* $^{L}$*dùtù]* *kù]* *dà*
village [[mountain $^{L}$hip] in] be
'The village is at the hip of (=adjacent to) the mountain.'

### 8.2.11 ‘Between, among’ ([L]*zàkà* ~ [L]*zâ: (kù)*)

The postposition appears, with the usual possessed-noun tone overlays, as [L]*zàkà* after nonpronominal NP and as [HL]*zákà* after a pronominal. This simple form is usual in the sense ‘between (X and Y)’. The examples in (222) show the ‘between/among’ postposition after a single noun or pronoun with plural reference.

(222) a. *yⁿă-m* [L]*zàkà*
woman-Pl [L]between
‘among/between the women’

b. *í* [HL]*zákà*
1PlPoss [HL]between
‘between us’

The complement of the postposition may also be a conjunction (223).

(223) a. *[m̀ᵇí* *[ú* *lěy]]* [HL]*zákà*
[1Sg [2Sg and]] [HL]between
‘between me and you-Sg’

b. *[tùpèré.:* *[bó:nì* *lěy]]* [HL]*zákà*
[Toupéré-& [Boni and]] [HL]between
‘between Toupéré (village) and Boni (town).’

In the sense ‘among X’ with plural or collective X, the usual form is *[[X* [L]*zàkà] kù]* or *[[X* [HL]*zákà] kù]*, , ending with locative *kù*.

A variant with forms *[[X* [L]*zà:] kù]* and *[[X* [HL]*zâ:] kù]* ‘among X’ is recorded in texts; see [HL]*zâ:* in (672) in Text 1.

The similarity of [L]*zàkà* to the noun *zákâ* ‘forked stick’ is etymologically suggestive.

### 8.2.12 ‘Together with; beside, next to’ (… *níŋèy*)

The postposition *níŋèy* means ‘together with’ or ‘beside, next to’ (224). It follows a NP (noun-headed or pronominal), but there is **no tonal interaction** between the two. Therefore *níŋèy* is not tone-dropped after an undetermined noun. This tonal feature is shared with *tɔ́ŋɔ̀* ‘around’ (following section), but contrasts with the other noun-like postpositions, which (as “possessed” nouns) are subject to possessed tone overlays.

(224) a. *[èsà-àrá níŋèy] zɔ́ŋɔ̀ á zɔ̌ŋ-gèr-è*
[chicken-male **with**] fight(n) Ipfv fight-Fut-3PlSbj
'(Elephant said:) they will fight with Rooster.' (2004-1b.01)

b. *kɔ̀ HL*yây yàgàfú:,*
NonhSgPoss HLgoing all,
*nòŋ-lúw-ŋó [pútúrò níŋèy],*
sun-fall-Nom [twilight **with**]
*[[kɛ̀ kí] kì] á ùŋùrù-t-è=cɛ́*
[[NonhPlPoss head] in] Ipfv arise-Ipfv-3PlSbj=NonhSgSbj
'Its (= locust's) going (is) sunset, (coinciding) with the twilight prayer, at this time they (= locusts) arise ….' (2004-1b.02)
(*[kɛ̀ kí] kì* 'on their-Nonh head(s)', cf *[kɔ̀ kú] kù* 'on its head')

c. *[[[kɔ̀ HLlɔ́] ˈkúnú] níŋèy]*
[[[NonhSgPoss HLhand] DefSg] **next.to**]
*zàkú kúlú dà*
put.up.on put be
'It (= tusk) is up ("put up") next to its hand (=trunk).' (2004-1a.10)
(for downstep on definite marker, see §3.7.3.1)

d. *téwó [àlá níŋèy] dá*
well [village **beside**] be
'The well is beside (= at the edge of the village.'

See also (566a) in §17.3.1.1 ('… go along with us') and (647) in §19.2.2 ('put them together and roast them with …').

### 8.2.13 'Toward, around' (*tɔ́ŋɔ̀*)

Like *níŋèy* (preceding section), but unlike the other noun-based postpositions, *tɔ́ŋɔ̀* follows a NP (pronominal or noun-headed) but there is **no tonal interaction** between the two. In particular, *tɔ́ŋɔ̀* does not drop its tones after an undetermined noun (225c-d).

(225) a. *í tɔ́ŋɔ̀*
1Pl toward
'toward us; in our zone'

b. *dúwⁿáysà* *tɔ́ŋɔ̀*
D toward
'toward Douentza (town)'

c. *órú* *tɔ́ŋɔ̀*
field toward
'toward (the) field'

d. *àlá* *tɔ́ŋɔ̀*
village toward
'toward (the) village'

e. *[m̀ᵇ* HL*órù]* *tɔ́ŋɔ̀*
[1SgPoss HLfield] toward
'toward my field(s)'

### 8.3 Purposive-dative-causal-allative *dè* (*dé*)

The **purposive** function of postposition *dè*, which involves a future goal, is illustrated in (226).

(226) *[cɛ̀rú* *dè]* *bírá* *m̀* *â:* *bí-tà*
[money Dat] work(n) 1SgSbj Ipfv work(v)-Ipfv
'I work for money.'

*dè* also has standard dative functions, e.g. as a basic argument with verb *ów* 'give' or with quotative quasi-verb *ká* 'say', and as an optional benefactive with other verbs.

(227) a. *tɛ́nǎm* *ká* *[ɛ̀rⁿà-àrá* *dè]*
hyena say [goat-male **Dat**]
'Hyena said to Billygoat: …' (2004-1a.01)

b. *[bɛ̀lú* *dè]* *ès-tú-kɛ̌y* *kà-lí*
[goat **Dat**] anything do-PfvNeg
'(Hyena) didn't do anything to Goat.' (2004-1a.01)

c. *[yⁿà-rⁿú* *dè]* *á* *òw-r-ɔ̌:*
[woman-Sg Dat] Ipfv give-Ipfv-3SgSbj
'He would give (the millet) to the woman.' (2004-1a.04)

In a more abstract causal senses ‘because of’, ‘on account of’, and ‘for the sake of’, which point back in time to a causal force, the postposition is $^{HL}$*ká:wà* after a pronoun and tone-dropped $^{L}$*kà:wà* after an undetermined noun.

(228) a. *[bírá* *m̀* *â:* *bí-tà]*
[work(n) 1SgSbj Ipfv work(v)-Ipfv]
*[[yⁿà-rⁿú* *mà]* $^{HL}$*ká:wà]*
[[woman-Sg ReflPoss] $^{HL}$reason]
‘I work on account of my wife.’

b. *[pá:ntà* $^{L}$*kà:wà]* *m̀* *bírá* *á* *bì-tà*
[Fanta $^{L}$reason] 1SgSbj work(n) Ipfv work(v)-Ipfv
‘I work on account of Fanta (woman’s name).’

c. *[kàyá* $^{L}$*kà:wà]* *yǎy-wɔ̀r-ɔ̌:*
[grasshopper $^{L}$reason] go-Pfv1-3SgSbj
‘He/She went away, because of the grasshoppers (=locusts).’

*dè* is also used in **allative sense** in a number of textual occurrences, with a motion verb. However, static location (‘in’, ‘at’, etc.) is usually expressed by *kù* or a complex postposition ending in *kù*.

(229) *ká* *ké* *zɔ̌:* *[íló* *dè],* *zɔ̌w-s-è=cé*
say NonhPl run.Imprt [house **Dat**], run-Pfv2-3PlSbj=NonhPlSbj
‘It told them (one group): you-Pl run to the house (=village)! They ran (=fled)’ (2004-1a.07)

*dè* becomes *dé* after a personal pronoun, a demonstrative pronoun (whether postnominal or independent), a definite morpheme, or certain interrogatives (‘who’, ‘what?’). Personal pronouns, but not the other forms mentioned simultaneously drop their own tones. Thus *wò dé* ‘to/for him/her’, *ǹ dé* ‘to/for me’, *ŋ̀gú dé* ‘to/for this one’, etc. See Tone-Raising (§3.7.2.5).

Pronominal dative PPs regularly precede the verb (except when added as afterthoughts), but need not be adjacent (proclitic) to it. Nonpronominal dative and locative PPs often follow the verb but may precede, especially when more or less focalized.

## 8.4 Other adverbials (or equivalents)

### 8.4.1 Similarity (L*sì kàyⁿ*, *kǎyⁿ*, HL*kâyⁿ*, *ŋ̀kǎyⁿ*, HL*túnù*)

The complex postposition *sì kàyⁿ* 'like' has the usual possessed-noun tone overlays, hence HL*sí kàyⁿ* after a pronoun or an inflected (or conjoined) noun, L*sì kàyⁿ* after a simple nonpronominal NP. The combination is somewhat frozen, but *kàyⁿ* is clearly related to adverb *ŋ̀kǎyⁿ* 'like that, thus' and other forms. L*sì* is probably a special use of *sí* '(someone's) possession', i.e. '(possessed) thing', which occurs in predicates of possession ('X is [Y's thing]' = 'X belongs to Y'), §11.5.2. Therefore I bracket *[[X* L*sì] kàyⁿ]*, take *kàyⁿ* to carry the sense 'like', and translate literally 'like X's thing' (interpreted as 'like X's manner').

(230) a. *[[ǹ* HL*sí]* L*kàyⁿ]* *dá-wɔ́*
[[1SgPoss HL**Poss**] L**like**] be-3SgSbj
'He/She is like me (=my manner).'

b. *[lɛ́* *á* *lì-r-ɔ̌:]* *[[gɔ̌ŋ* L*sì]* L*kày]*
[meal Ipfv eat-Ipfv-3SgSbj] [[elephant L**Poss**] L**like**]
'He/She eats like an elephant.'

c. *[[ú* HL*sí]* L*kàyⁿ]* *yⁿá-ŋ̀gó=bɛ́*
[[2SgPoss HL**Poss**] L**like**] not.be=3PlSbj
'They are not like you-Sg.'

The construction *[[X* L*sì] kàyⁿ]* is also used in texts to introduce the topic of X's manner, which is then described in the following clauses.

(231) *[kó* *mà]* *[[kɔ̀* HL*sí]* *kàyⁿ],*
[Nonh also] [[NonhSgPoss HL**Poss**] **like**],
*[yⁿà:ŋá-yⁿà:ŋá* *dá]* *á* *yày-rà=kɔ́*
[night-night be] Ipfv go-Ipfv=NonhSgSbj
'Furthermore, its (= locust's) manner (is), it goes around at night (= is nocturnal).'

In texts, I also observed a falling-toned variant HL*kâyⁿ* following the complementary constituent, suggesting a true postpositional status (i.e. in the tonal form of a possessed noun).

(232) *gá:* *[kó* *mánì],*
but [NonhSg too],
*[[kà:-yèrú* *kà:* *dá* *ŋ́]* *$^{HL}$kây$^{n}$]* *dá=kɔ́*
[[tree.locust Rel be Rel] $^{HL}$like] be=NonhSgSbj
'But that (= pilgim locust) too, it's like the (same) way the tree locust is.' (2004-1b.03)

The adverb *kǎy$^{n}$* with rising tone, without *sí*, cannot be taken as a true postposition because of its tones. However, it does immediately follow a constituent, either indicating that the denotation is approximate, or expressing a similarity to another entity. In (233a), it is added to an iterated adjective ('reddish') that already conveys the approximateness of the hue (§5.3.3). Many examples of *kǎy$^{n}$* are predicative, with immediately following *dá* 'be' (in H-toned form), as in these examples.

(233) a. *lúpì:* *kày↑,* *kɔ̀pú=kɔ́,*
Acorypha Topic, brown.gray=NonhSgSbj,
*[bár$^{n}$ú-$^{HL}$bár$^{n}$ù* *kǎy$^{n}$]* *dá=kɔ́*
[red-$^{HL}$red **like**] **be**=NonhSgSbj
'As for *Acorypha* grasshopper, it's (mixed) brown-gray, it's sort of reddish.' (2004-1b.03)

b. *[bàr$^{n}$-ì→* *sèŋgìli!→]* *[pùrɔ́* *sémì→* *sémì→]*
[red-Dimin feeble] [rear pointed pointed]
*[[dùŋù-nú* *káy-ěy]* *kǎy$^{n}$]* *dá* *ŋ́*
[[sorceror-Sg grasshopper-Dimin] **like**] **be** Rel
'the one that is red (=brown) and feeble, with a somewhat pointed rear end (= abdomen), like (= similar to) sorceror's grasshopper' (2004-1b.03)

The deictic manner adverb 'thus, like this/that' is *ŋ̀kǎy$^{n}$*. Here the adverb is not directly attached to a preceding NP. The manner indicated may be shown gesturally, or it may refer back to (i.e., resume) prior discourse.

(234) a. *ŋ̀kǎy$^{n}$* *ní* *dì-kú*
**thus** water bathe-Proh
'Don't bathe (like that.'

b. *á!* *ká* *[[ŋ̀kǎy$^{n}$* *má* *kày]* *ká, …*
ah! say [[**thus** if] Top] say, …
'(They) said: ah, if it's (= if it keeps up) like that, …' (2004-1b.01)

c. *[… kùrú bàmmàtá], [kó nà] ŋ̀kǎy$^{n}$ á bà-tà*
[(drumming rhythm)], [NonhSg now] **thus** Ipfv beat-Ipfv
‘ “…kurubammata”. That (rhythm) now, he beat (the tomtom) like that.’ (2004-1b.01)

The noun *túnú* ‘comrade’ or ‘peer (of …), the likes (of …)’ may also be used, in possessed form.

(235) *èlá [[bùrù*$^{L}$ *ŋ̀gú] *$^{HL}$*túnù]*
look.Imprt [[year$^{L}$ DemSg] $^{HL}$**peer**]
*ú wɔ̀-sɔ́ má*
2SgSbj see-Pfv2 Q
‘Look (=consider) whether you have seen the likes of this year.’

### 8.4.2 Extent (‘a lot’, ‘a little’)

Adverbial ‘much, a lot’ is *nànnà:r$^{n}$á*, while adverbial ‘a little’ is *tégĕy* or iterated *tègĕy-tégèy*. Adverb *tégĕy* is tonally distinct from modifying adjective *tègĕy* ‘small, little’, but both forms likely contain diminutive *-ĕy*.

(236) a. *bírá á bì-t-ɔ̌: nànnà:r$^{n}$á*
work(n) Imprt work(v)-Ipfv-3SgSbj much
‘He/She works a lot.’

b. *bírá á bì-t-ɔ̌: tègĕy-tégèy*
work(n) Imprt work(v)-Ipfv-3SgSbj a.little
‘He/She works a little.’

### 8.4.3 Specificity

#### 8.4.3.1 ‘Approximately’

The adverb *bísèbáràmà* ‘maybe’ can be used as a proxy for ‘approximately’ with quantities and locations.

(237) *zàŋ́í lĕy bísèbáràmà*
thousand two maybe
‘maybe (=approximately) two thousand’

#### 8.4.3.2 'Exactly' (*tóy*, *dà*)

Interjection-like particle *tóy* is illustrated in (238a). In (238b), *ŋú dà* (with demonstrative *ŋú*) appears to have a similar function with a temporal adverbial.

(238) a. *ìní* *tóy*
here exactly
'right here'

b. *nìŋ-nìŋ* *[ŋú* *dà]*
now-now [DemSg Emph]
'right now, immediately'

### 8.4.4 Spatiotemporal adverbials

#### 8.4.4.1 Temporal adverbs

Some common adverbs (and short adverbial phrases) are in (239).

(239)

| form | gloss |
|---|---|
| a. simple | |
| *also in (b) with nà or kày* | |
| *làgú* | 'again' |
| *yó* | 'today' |
| *níŋù* ~ *nîŋ* | 'now' |
| *other* | |
| *déwrú* | 'first(ly)' |
| *gà:rí* | 'last year' |
| *gèrìmètí* | 'two years ago' |
| *lóyɔ́* | 'this year' |
| *síràa* | 'tomorrow' |
| *yá:* | 'yesterday' |

b. composite

*with nà* (§19.1.2)

| | |
|---|---|
| *dógò nà* | 'previously, before' |
| *làgí nà* | 'again' |
| *yó nà* | 'today' or 'again' |

*with topic kày* (§19.1.1)

| | |
|---|---|
| *níŋ kày* | 'now' |
| *dôm kày* | '(not) yet' (in negative context) |

*with kálá:* 'each' (§6.6.2)

| | |
|---|---|
| *tùŋ kálá:* | 'always' (*tùw$^{n}$ɔ́* 'moment, time') (§15.2.3) |

*contain Songhay elements*

| | |
|---|---|
| *bà:ní-dàmá* | 'next year' (Songhay *bà:ní* 'peace') |
| *bà:nì-tí:-tí:* | 'two years from now' |
| *zǎ: hô:→* | 'long ago' (<Songhay) |

*perhaps related to jérè 'certain (ones)' (§6.3.2)*

| | |
|---|---|
| *tùŋɔ́ gérè* | 'often, sometimes' (*tùw$^{n}$ɔ́* 'moment, time') |

### 8.4.4.2 'First' (*tí→*)

Adverbial 'first' specifying chronological relationships among events, as in 'first we'll eat the millet cakes, then the mangoes' is *tí→*, as in Jamsay.

(240) *[[[tál* *$^{HL}$tɔ́rɔ̀]* *nǔ-m]* *tɔ́ŋɔ̀]* *tí→*
[[[Sarinyere $^{HL}$mountain] person-Pl] around] first
*á* *gù-r-è=ké*
Ipfv exit-Ipfv-3PlSbj=NonhPlSbj
'They (= horses) would first come out over by the people of Sarinyere Mountain.' (then the horses would proceed to Tabi) (2004-2a.01)
(for the compound 'Sarinyere Mountain people' see §5.1.1)

### 8.4.4.3 Cardinal directions

These terms are nouns, but they are used as adverbs.

(241)

| form | gloss | comment |
|---|---|---|
| *dú* | 'east' | widespread in Dogon languages |
| *lúwò* | 'west' | verb *lǔw\\lùwó* 'fall; (sun) set' |
| *háwsá* | 'north' | in northern Mali: 'zone north of Niger R.' |
| *dĕwrì* | 'south' | cf. *dέwrú* 'first(ly)' (??) |

The suffix *-nàm* is used after the first of two terms in complex cardinal-direction expressions, as in *háwsà-nàm lúwò* 'northwest'.

#### 8.4.4.4 Vertical positions

The two basic adverbs (nominal in form) are *kŭmnɔ̀* 'above, on top' and *tɛ̀má* 'down, below, underneath'.

### 8.4.5 Expressive adverbials

Expressive adverbials (EAs) are typically marked phonologically, for example by obligatory iteration or by "intonational" prolongation of the final vowel or sonorant. They are not easily integrated into NPs, but they do have predicative forms. Semantically stative predicates have zero copula in the positive, and *yⁿá-ŋ̀gó* 'not be (somewhere)' (§11.2.2.2) in the negative. Semantically active (inchoative) predicates have *kárⁿá* 'do' or intransitive 'be done' (§11.1.7) as auxiliary. Examples with *dém→* 'straight' are in the following section.

#### 8.4.5.1 'Straight' (*dém→*)

Adverbial 'straight' describing a trajectory (as opposed to adjectival 'straight, not crooked') is expressed by the expressive adverbial *dém→*, which is also found in Jamsay and other northeastern Dogon languages.

Examples of stative predicates are in (242). Positive (242a) has an implied zero copula.

(242) a. *[òsù ŋ̀gú]* *dém→*
[road DemSg] straight
'This road is straight.'

b. *[òsù ŋ̀gú]* *dém→* *yⁿá-ŋ̀gó*
[road DemSg] straight it.is.not
'This road is straight.'

Examples of active (aspect-marked) predicates with 'do' as auxiliary are in (243).

(243) a. *[òsù* *ŋ̀gú]* *dém→* *ká$^{n}$-wɔ̀rɛ̀*
[road DemSg] straight be.done-Pfv1a
'This road became straight.'

b. *[òsù* *ŋ̀gú]* *dém→* *ká-lì*
[road DemSg] straight be.done-PfvNeg
'This road didn't become straight.'

### 8.4.5.2 'Apart, separate' (*dá→*)

The phrasing of 'X and Y are distinct (or: physically separated)' is usually *[X dá→] [Y dá→]*.

(244) *kóy* *kɔ́* *jɛ̀sá* *mà,*
indeed NonhSgObj sort(v) and.SS,
*yù-bɔ́:lɔ̀* *dá→,* *yù-gà:$^{n}$sú* *dá→,* …
millet-lower.quality **apart**, millet-higher.quality **apart**, …
'(we) sort them (with) the lower-quality millet (spikes) separated from the higher-quality millet (spikes), and …' (2005-2a.06)

### 8.4.5.3 'Never' (*àbádá*)

The regionally widespread 'never' adverb *àbádá* (ultimately < Arabic) is used both in the literal temporal sense 'not ever, at no time' and as an emphatic negative 'not on your life'.

### 8.4.5.4 'All, entirely'

The 'all' quantifier (§6.6.2) may be used adverbially. In this context it often takes a fuller form such as *cè-hú:lè-yàgà-fú:*. It is common at the end of conditional antecedents, for example.

# 9 Verbal derivation

Productive derivational suffixes used to derive verbs from input verbs are reversive (‘un-‘, ‘dis-‘) and causative. There is one verb for which the same suffix as in the causative has passive sense (§9.3). There are no mediopassive/transitive suffixal alternations of the sort found in many other Dogon languages.

## 9.1 Reversive verbs (*-rV́-*)

Dogon languages have a fairly productive reversive suffixal derivation, with semantics similar to English *un-* (*unbend*, *untie*, etc.). The reversive suffix appears (in the prohibitive, which is diagnostic for vowel-harmonic class) as *-rá*, *-ró*, or *-ró* depending on the vowel-harmonic class of the input stem (§3.5.1). It is added to the **combining form** of the underived stem. The tone melody of the underived stem is preserved, but is in effect reapplied to the derived stem with its extra syllable. For example, using bisyllabics, /H/-melody *CV́CV́-* becomes *CV́CV́-rV́-*, and /LH/-melody *CV̀CV́-* becomes *CV̀CV̀-rV́-* with the tone break at the final syllable.

The examples known to me are in (245) and the following lists in this section. The forms shown are imperatives. The examples in (245a-b) are straightforward phonologically. Forward Nasalization (§3.6.1.1) applies in (245c), so the suffix appears as *-r$^{n}$V́-*. *CV́-* stems are lengthened to *CV́:-* before the reversive suffix (245d), see Monosyllabic-Stem Vowel-Lengthening (§3.6.2.4).

(245)

| | underived | gloss | reversive | gloss |
|---|---|---|---|---|
| a. | *págá* | ‘tie’ | *págú-rá* | ‘untie’ |
| | *sɔ́gɔ́* | ‘lock’ | *sɔ́gú-rɔ́* | ‘unlock’ |
| | *gùtɔ́* | ‘hang up’ | *gùtù-rɔ́* | ‘unhook, take down (sth hanging)’ |
| | *kúsɔ́* | ‘insert (blade)’ | *kúsú-rɔ́* | ‘remove blade’ |
| | *mùsó* | ‘stuff (a hole)’ | *mùsù-ró* | ‘unstuff, reopen (stopped-up hole)’ |
| | *lɔ́kɔ́* | ‘(flour) stick’ | *lɔ́kú-rɔ́* | ‘remove stuck-on flour’ |
| | *ító* | ‘cover w. blanket’ | *ítú-ró* | ‘remove blanket from’ |
| | *dìgá* | ‘tie knot’ | *dìgù-rá* | ‘untie (knot)’ |
| | *dàpá* | ‘cover’ | *dàpù-rá-* | ‘remove cover from’ |
| b. | *kɔ́lɔ́* | ‘tangle’ | *kɔ́lú-rɔ́* | ‘untangle’ |
| c. | *mùnó* | ‘roll up (mat)’ | *mùnù-r$^{n}$ó* | ‘unroll (mat)’ |
| | *mùnɔ́* | ‘rumple’ | *mùnù-r$^{n}$ɔ́* | ‘un-rumple’ |
| | *dùnó* | ‘fold up (rope)’ | *dùnù-r$^{n}$ó* | ‘unfold (rope)’ |
| d. | *tɔ́* | ‘step on’ | *tɔ́:-rɔ́* | ‘take foot off (sth)’ |
| | *kó* | ‘cover with hide’ | *kú:-ró* | ‘remove hide cover’ |
| | *dá* | ‘prop up’ | *dá:-ró* | ‘remove prop from’ |

In (246), the expected output is #*Cvrv-rv-* with two consecutive rhotics, a disfavored combination in TT. The first /r/ dissimilates, becoming *l* (Rhotic Dissimilation, §3.6.3.5), so the output *Cvlv-rv-* is identical to the regular output from true *Cvlv-* stems (245b).

(246)

| underived | gloss | reversive | gloss |
|---|---|---|---|
| *tárá* | ‘be stuck on’ | *tálú-rá* | ‘(sth stuck on) be taken down or off’ |
| *màrá* | ‘be lost’ | *màlù-rá* | ‘(sth lost) be found’ |
| | [variant *m̀$^{b}$àrá*, reversive *m̀$^{b}$àlù-rá*] | | |

**Early u-Syncope** (§3.6.2.2) applies to *CvCv-* stems with certain medial consonants. In (247), the consonant in question is a semivowel. If the semivowel is /y$^{n}$/, Forward Nasalization (§3.6.1.1) applies to the suffixal rhotic (247b).

(247)

| | underived | gloss | reversive | gloss |
|---|---|---|---|---|
| a. | *bìwá* | 'bury' | *bìw-rá* | 'disinter' |
| b. | *ɔ́yⁿɔ́* | 'spin (thread)' | *ɔ́yⁿ-rⁿɔ́* | 'unspin (cord)' |
| | *màyⁿá* | 'build' | *màyⁿ-rⁿá* | 'unbuild' |

Early *u*-Syncope also applies to reversives based on *CvC₂v-* where $C_2$ is /l/ or a peripheral nasal {*m ŋ*}, including *m* from /wⁿ/. The cluster /lr/ is irregularly realized as *nn* in the one example I have (248a). Cluster /ŋr/ is restructured as *ŋgur* (248b), though this may then be resyncopated to /ŋr/ (note the absence of Forward Nasalization). Two distinct treatments are attested for syncopated cluster /mr/. The first is to restructure /mr/ as *mbur*, with optional subsequent resyncopation to *mr*, parallel to *ŋgur* from /ŋr/ (248c). For the *ŋgur/mbur* restructurings, see §3.6.2.1. The other attested output for /mr/ is *mn*, a shift that does not occur elsewhere in TT morphophonology (248d)

(248)

| | underived | gloss | reversive | gloss |
|---|---|---|---|---|
| a. | *tílá* | 'shut, cover' | *tín-ná* | 'open, uncover' |
| b. | *tɔ́ŋɔ́* | 'hobble (animal)' | *tɔ́ŋgú-rɔ́* | 'unhobble' |
| | | (variants *tɔ́ŋ-rɔ́* etc.) | | |
| | *gàŋá* | 'get bogged' | *gàŋgù-rá* | '(sth bogged) get out' |
| | | (variants *gàŋ-rá* etc.) | | |
| | *péŋó* | 'choke on food' | *péŋgú-ró* | 'dislodge food stuck in throat' |
| c. | *sáwⁿá* | 'fence in' | *sámbú-rá* | 'remove fence from' |
| | | (variants *sám-rá* etc.) | | |
| d. | *tɔ́wⁿɔ́* | 'roll on (turban)' | *tɔ́m-nɔ́* | 'unroll (turban)' |
| | (underived stem also *tɔ́mɔ́*) | | | |
| | *bùwⁿó* | 'flip over' | *bùm-nó* | 'right (sth flipped)' |

My assistant does not accept the combination of the reversive suffix with a preceding causative suffix, and I found no examples of this combination in texts or in lexical elicitation. It was possible to elicit reversives for certain verbs that have a causative suffix in their usual transitive form, but in this case the causative suffix is omitted in the reversive (249). In (249a), *ɔ́ŋgú-rɔ́* reflects syncopated /ɔ́ŋ-rɔ́/; see §3.6.2.1 for the phonology.

(249)

| | underived | gloss | reversive | gloss |
|---|---|---|---|---|
| a. | *ɔ́ŋú-mɔ́* | 'crumple (sth)' | *ɔ́ŋgú-rɔ́* (variant *ɔ́ŋ-rɔ́*) | 'uncrumple' |
| b. | *gɔ̀nù-mɔ́* | 'bend (sth)' | *gɔ̀nù-rⁿɔ́-* | 'straighten out' |

cf. intransitive *gɔ̀nɔ́* 'be bent, curved'

The morphological relationship between *ná-* 'forget' and *nátúrá-* 'remember' is synchronically obscure. Compare Jamsay *náŋá* 'forget' and its morphologically transparent reversive *náŋá-rⁿá-* 'remember' (i.e. 'un-forget').

The verb *lálá* 'undo' is a kind of lexical reversive not derived from or related to any other verb. It is used in senses like 'undo (braids)', 'undo (knot)', and 'unravel (rope)', as well as in the corresponding intransitive senses ('become undone').

## 9.2 Deverbal causative verbs (*-mv́*, *-kv́*, *-rv́ ~ -tv́*, etc.)

Suffixal causative derivatives are most often from intransitive bases, though a few transitives like 'eat' and 'drink' also have causatives.

There are two reasonably productive causative suffixes, *-mv́-* and *-kv́-*, and the combination *-m-kv́-* is also found. There are also a few minor causative patterns involving other suffixes. Stems whose causatives are in common use generally have a single causative form. When eliciting a wider variety of causatives, including some that are probably not common for semantic reasons, I found differences among informants as to which allomorph was the default.

Causative *-mv́* is common in deadjectival factitives (§9.4, below). It is also fairly common in causatives based on nonadjectival verbs. (250) shows the input verbs and their causatives in imperative form. There are few phonological issues, since the suffixal *m* induces Early *u*-Syncope of the **following**, not preceding vowel. In (250a), the monosyllabic verb 'eat (meal)', whose combining form is *lí*, lengthens before the derivational suffix; see Monosyllabic-Stem Vowel-Lengthening (§3.6.2.4).

| (250) | | input | gloss | causative | gloss |
|---|---|---|---|---|---|
| | a. | *tóró* | 'jump' | *tórú-mó* | 'make jump' |
| | | *dìŋé* | 'sit' | *dìŋù-mó* | 'cause to sit' |
| | | *ɛ́ŋá* | 'be sated' | *ɛ́ŋú-má* | 'feed well' |
| | | *kúgó* | 'be charred' | *kúgú-mó* | 'char' |
| | | *lɔ́gɔ́* | 'be lit' | *lɔ́gú-mɔ́* | 'ignite' |
| | | *ɛ́gá* | 'understand' | *ɛ́gú-má* | 'make understand, explain to' |
| | b. | *lɛ́* | 'eat (meal)' | *lí:-má* | 'feed' |

Examples of the causative *-kʸ́-* allomorph are in (251). The phonology is straightforward in (251a). Early *u*-Syncope (§3.6.2.2) applies as usual after a semivowl in (251b). Early *u*-Syncope also applies after peripheral nasals {*m ŋ*}, including *m* from /w$^{n}$/ (251c).

| (251) | | input | gloss | causative | gloss |
|---|---|---|---|---|---|
| | a. | *púsó* | 'explode' | *púsú-kó* | 'detonate' |
| | | *ɔ́rɔ́* | 'rot' | *ɔ́rú-kɔ́* | 'cause to rot' |
| | | *wàrá* | 'do farm work' | *wàrù-ká* | 'make (animal) plow' |
| | b. | *lɔ́wɔ́* | 'learn' | *lɔ́w-kɔ́* | 'teach' |
| | | *kúwó* | 'eat (meat)' | *kúw-kó* | 'give meat to, have eat meat' |
| | | *ɛ́wá* | 'be dense' | *ɛ́w-ká* | 'make dense' |
| | | *mìy$^{n}$á* | 'be ground up' | *mìy$^{n}$-ká* | 'grind up finely' |
| | | *bày$^{n}$á* | 'be alive' | *bày$^{n}$-ká* | 'resuscitate' |
| | c. | *dìŋé* | 'sit down' | *dìŋ-kó* | 'make sit, have sit' |
| | | *y$^{n}$àw$^{n}$á* | 'malfunction' | *y$^{n}$àm-ká* | 'cause to malfunction' |

Irregular causatives with *-kʸ́-* are in (252). In (252a), the shift of *w* to *m* is unexpected; elsewhere nasalized *w$^{n}$* but not *w* undergoes this shift. Alternatively, we could reanalize *lím-ká* and connect its *m* with the type *-m-kʸ́-* in (252c). In (252b), the first syllable in causative *lù-kó* is unexpectedly short; one would expect #*lùw-kó-*. In (252c), we apparently have double causative marking with *-mʸ́-* preceding *-kʸ́-*.

| (252) | | input | gloss | causative | gloss |
|---|---|---|---|---|---|
| | a. | *líwá* | ‘be afraid’ | *lím-ká* | ‘scare’ |
| | b. | *lùwó* | ‘fall’ | *lù-kó* | ‘cause to fall’ |
| | c. | *yɛ́* | ‘weep’ | *yì-m-ká* | ‘cause to weep’ |

A minor causative type with *-rv́-* is found in two cases (253a). These are probably relics of the “transitive” morpheme, which occurs in more productive form in many Dogon languages (but not Jamsay), usually functioning as a causative-like valency-increasing form paired with mediopassive *-yv-*. In TT, it would seem that the transitive suffix has become homophonous (in part) with reversive and inchoative *-rv́-* due to intervocalic consonantal mergers, and this homophy likely explains the low productivity of transitive *-rv́-*. (253b) is an idiosyncratic combination of *-rv́-* with following causative *-mv́-*.

| (253) | | input | gloss | causative | gloss |
|---|---|---|---|---|---|
| | a. | *dé* | ‘bathe (self)’ | *dì-ró* | ‘bathe (sb)’ |
| | | *ígó* | ‘stop; stand’ | *ígú-ró* | ‘arrest (sb); erect’ |
| | b. | *ìsé* | ‘lie down’ | *ìsù-rù-mó* | ‘cause to lie down’ |

There are also a few cases of *-tv́-* (254), which etymologically is probably a variant of the *-rv́-* in (253). A similar suffix-initial *r/t* alternation occurs in verbal nouns (*-rĕŋ* ~ *-tĕŋ*, §4.2.2.2) and imperfectives (§10.1.1.6), though the details differ.

| (254) | input | gloss | causative | gloss |
|---|---|---|---|---|
| | *sígó* | ‘go down’ | *sí-tó* | ‘take down’ |
| | *súmí-y$^{n}$ó* | ‘hide (self)’ | *sú-tó* | ‘hide (sth)’ |
| | *tɔ́* | ‘be spilled’ | *tú-tɔ́* | ‘spill (sth)’ |
| | *bìrì-yó* | ‘go back’ | *bì-tó* | ‘repeat; take back’ |

The last form, *bì-tó*, adds a further causative suffix in an offshoot *bì-tù-kó*, which has senses like ‘turn (one’s body) around’. *bì-tó* (or a homonym) also means ‘ignite’.

Isolated simple/causative pairs that fit no productive pattern are listed in (255). *nèw$^{n}$á* may have undergone a shift *m → *w$^{n}$* that has been blocked (by leveling) in other causatives. *gùŋó* ‘take out’ belongs to a a complex Dogon cognate set of irregular causatives of ‘go out’.

| (255) | input | gloss | causative | gloss |
|---|---|---|---|---|
| | *nɛ́* | 'drink' | *nɛ̀w$^{n}$á* | 'give drink to' |
| | *gó* | 'exit' | *gùŋ́ó* | 'take out (of sth)' |

A few stems have what amounts to a **suppletive** causative, at least synchronically. For *ùnɔ́* 'go up' we have *látá* 'cause to go up, put up'. For *ló* 'enter' we have *kúló* 'put (in)'.

## 9.3 Passive verbs

For suffixal passive derivations, the pickings are slim. The example in (256) is the one I am aware of. The passive ends in what looks like a causative suffix.

| (256) | transitive verb | gloss | passive derivative | gloss |
|---|---|---|---|---|
| | *dìr$^{n}$á* | 'encounter' | *dìr$^{n}$ù-má* | 'be found, exist' |

I could not elicit a passive of 'see', 'get', or 'hear'. Together with 'find, encounter', these are the verbal senses that show similar causative-like suffixal passives in several other Dogon languages.

## 9.4 Deadjectival inchoative and factitive verbs

Word-families including modifying adjectives typically also include to a pair of verbs, one **inchoative** ('X become ADJ') and the other **factitive** ('Y make X ADJ'). The factitive is formed from the inchoative by adding one of the causative suffixes: *-mɔ́-*, *-kɔ́-*, or *-m-kɔ́-*. The data below are therefore organized around the form of the inchoative verb.

In a considerable number of cases, the inchoative verb has no special derivational suffix. The inchoative is subject to the specific phonological constraints that apply to all regular verbs. The tone melody of a verb in (257), whether derived derived or basic, is typically determined by its initial consonant in a way that does not apply to relatied adjectives (or nouns). /H/ melody is required by an initial voiceless obstruent and is usual with zero initial consonant (i.e. vowel-initial), while /LH/ melody is required by an initial voiced obstruent. This correlation is totally disregarded by adjectives and nouns.

Examples of inchoatives with no derivational suffix are in (257), along with their factitives. I know of no monosyllabic inchoatives; adjective *dɔ́* 'hot, fast' corresponds to inchoative *dɔ̀yɔ́* (257b).

(257)

| | input | gloss | inchoative | factitive |
|---|---|---|---|---|
| a. | *yɔ̌:* | ‘old’ | *yɔ̀wɔ́ ~ yɔ̌:* | *yɔ̀w-kɔ́* |
| | *bárⁿú* | ‘red’ | *bàrⁿá* | *bàrⁿù-ká* |
| | *jèrⁿú* | ‘good’ | *jèrⁿá* | *jèrⁿù-má* |
| | *ìrú* | ‘ripe’ | *írá* | *írú-ká* |
| | *dɔ̀ŋú* | ‘skinny’ | *dɔ̀ŋɔ́* | *dɔ̀ŋ-kɔ́* |
| | *kùrú* | ‘undiluted’ | *kúró* | *kúrú-kó, kúrú-mó* |
| | *gà:ⁿsú* | ‘coarse’ | *gà:ⁿsá* | *gà:ⁿsù-má* |
| | *yùgùsú* | ‘woolly’ | *yùgùsɔ́* | *yùgùsù-mɔ́* |
| | *bùyⁿsú* | ‘half-ripe’ | *bùyⁿsó* | — |
| | *dómbúró* | ‘stout’ | *dómbúró* | — |
| b. | *dɔ́* | ‘hot’ | *dɔ̀yɔ́* | *dɔ̀y-kɔ́* |

An alternative is to use *-rv́-* as an inchoative suffix. We have seen *-rv́-* as a productive reversive suffix for verbs (§9.1), and as a rare and frozen causative, see (523) in §9.2. The attested examples of inchoative *-rv́-* are in (258). They involve a medial voiceless obstruent (258a,c) or *l* (258b). If the adjective ends in a frozen diminutive ending, this is omitted in the verbalizations (258c). This formation is unusual in that even voiced-stop-initial ‘become heavy’ and ‘become bitter’ have /H/ melody, if correctly transcribed.

(258)

| | input | gloss | inchoative | factitive |
|---|---|---|---|---|
| a. medial obstruent | | | | |
| | *dùsú* | ‘heavy’ | *dúsú-rɔ́* | *dúsú-rú-mɔ́* |
| | *lókó* | ‘deep’ | *lókú-ró* | *lókú-rú-mó* |
| | *pótó* | ‘spacious’ | *pótú-ró* | [= inchoative] |
| | *lìsí* | ‘sharp’ | *lísú-ró* | [= inchoative] |
| | *ètú* | ‘sweet’ | *étú-ró* | *étú-rú-mó-* |
| b. medial liquid | | | | |
| | *òlú* | ‘smooth’ | *ólú-ró* | *ólú-rú-m-kó* |
| | *gòlú* | ‘bitter’ | *gólú-ró* | *gólú-rú-mó* |
| c. verb trims off diminutive ending | | | | |
| | *ɔ̀ⁿsíⁿ→* | ‘thin’ | *ɔ́ⁿsú-rⁿɔ́* | *ɔ́ⁿsú-rⁿú-mɔ́* |
| | *tùkěy* | ‘short’ | *túkú-ró* | *túkú-rú-mó* |

There are also several inchoatives with *-lv́-*, which is arguably a variant of *-rv́-*. While *-rv́-* occurs after voiceless obstruents and *l*, we get *-lv́-* after sonorants other than *l* (259a). This includes, however, *ŋ* mutated from *g* in the adjective (259b), an alternation found only in this morphological context. *Cv́-* lengthens to *Cv́:-* before the suffix in the only relevant example (259c); see Monosyllabic-Stem Vowel-Lengthening (§3.6.2.4). The /ml/ cluster in /jèm-lá/ is restructured as *mbul* (259d), cf. the more common case of *mbur* from /mr/ (§3.6.2.1).

(259)

| | input | gloss | inchoative | factitive |
|---|---|---|---|---|
| a. | *sɛ́w* | 'fat' | *sɛ́w-lá* | *sɛ́w-lú-má* |
| | *mằw* | 'hard' (also *m$^{b}$ằw*, etc.) | *máw-lá* | *máw-lú-má* |
| | *nâŋ* | 'difficult' | *náŋú-lá* | *náŋú-lú-má* |
| b. | *wà:gá* | 'distant' | *w$^{n}$áŋú-lá* | *w$^{n}$áŋúl-ú-má* |
| | *tègěy* | 'small' | *téŋú-lá* | *téŋú-lú-má* |
| c. | *gá* | 'bigger' (functions as inchoative for *ná:* 'big') | *gá:-lá* | *gá:-lú-má* |
| d. | *jɛ́m* | 'black' | *jèmbù-lá* | *jèmbù-lù-má* |

There are several adjective/inchoative sets where the consonantism of the inchoative has a phonological problematic relationship to that of the adjective. First, when the adjective has the shape *Cvrv*, the inchoative is *Cvlv* (260a). On the face of it, the *l* mutates to *r* just as *g* mutates to *ŋ* in (259b) above, and there is no suffix. Alternatively, one could posit a suffix *-lv́-* and allow /Cvru-lv-/ to undero Early *u*-Syncope (§3.6.2.2) then Rhotic Deletion (§3.6.3.6) to reduce this to *Cv-lv-*.

(260)

| | input | gloss | inchoative | factitive |
|---|---|---|---|---|
| a. | *zɔ́rɛ́* | 'easy' | *zɔ́lɔ́* | *zɔ́lú-mɔ́* |
| | *pírú* | 'white' | *pílá* | *pílí-má* |
| | *gùrú* | 'long, tall' | *gúlɔ́* | *gúlú-mɔ́* |
| | *bɛ̀rú* | 'near' | *bɛ́lá* | *bɛ́lú-má* |
| | *ɛ́rú* | 'lightweight' | *ɛ́lá* | *ɛ́lú-má* |
| b. | *ɔ̀rí→* | 'soft' | *ɔ́lɔ́* | *ɔ́lú-mɔ́* |

That the mutation analysis might be better in this morphological context is suggested by cases where medial *l* in the inchoative corresponds to *m* in the adjective (261a-b). There is also a strange example with an apparent mutation of the adjective's *r* to *t* in the inchoative (261c). This is reminiscent of the *t* that appears in the imperfective inflection of *Cvrv* verbs (*Cv́-tv̀-*), for which I suggested an explanation in terms of defaulting from the *-rv̀-* allomorph of the imperfective to the *-tv̀-* allomorph. The shift of stem-initial *n* to *l* in (261b) is to be compared to other *n* ~ *l* alternations (§3.6.1.2-3).

| (261) | | input | gloss | inchoative | factitive |
|---|---|---|---|---|---|
| | a. | *tôm* | 'cold' | *tóló* | *tólú-mó* |
| | b. | *nôm* | 'sour' | *lóló* | *lólú-m-kó* |
| | c. | *ɔ̀rú* | 'wet' | *ɔ́tɔ́* | *ɔ́tú-mɔ́* |

Some adjectives seem to have no inchoative. *ná:* 'big' corresponds semantically to *gá:-lá* 'become big', which is based on *gá* 'bigger'. No inchoative was elicitable for *péré* 'empty'.

## 9.5 Denominal verbs

I can cite the example in (262).

| (262) | noun | gloss | verb | gloss |
|---|---|---|---|---|
| | *pètá* | 'fan/van' | *pétú-má-* | 'winnow (with van)' |

# 10 Verbal inflection

## 10.1 Inflection of regular indicative verbs

As an initial orientation to the morphology, consider the paradigms of the verbs 'cough' and 'go up'. Further pronominal suffixation for third person subject categories is possible but is omitted here.

(263)

| | | 'cough' | 'go up' |
|---|---|---|---|
| a. | imperative | *kósíyó* | *ùnɔ́* |
| | combining form | *kósíy* [kósí:] | *ùnú* |
| | subordinator *mà* | *kósíyó mà* | *ùnɔ́ mà* |
| | perfective-1a or -1b | *kósíy-wòsì-* (1b) | *ùnú-wⁿɔ̀rⁿè-* (1a) |
| | perfective-2 | *kósíy-sò-* | *ùnú-sɔ̀-* |
| | hortative | *kósíy-é* | *ùn-é* |
| b. | future | *kòsǐy-yàrà-* | *ùní-yⁿàrⁿà-* |
| | imperfective | *kósíy-tò-* | *ún-nɔ̀-* |
| | perfective negative | *kòsìy-lí-* | *ùn-ní-* |
| | imperfective negative | *kòsìy-nó-* | *ùn-nɔ́-* |

In the perfective-1 (263a), the two verbs take distinct suffixes, -1b being characteristic of transitives ('cough'), -1a being typical of motion verbs and other intransitives ('go up'). There is also another perfective category, perfective-2.

The lexical distinction between /H/ and /LH/ melodies is observable in the forms in (263a). 'Cough' has /H/ melody, while 'go up' is /LH/. There is no melodic distinction among *Cv́* monosyllabic verbs, which have only the /H/ melody, but bisyllabics and longer stems are /H/ or /LH/. For stems of three or more syllables, the tone break is at the rightmost syllable boundary, as in *dùŋgùrɔ́* 'cut meat'. For many verbs, one can predict the lexical melody from the initial consonant.

The AN (aspect-negation) forms in (263b) all **neutralize** lexical tonal contrasts, by superimposing various stem-wide **overlays** controlled by the particular suffix; see §3.7.2.2 for a tabular summary of these overlays.

The **imperative** is particularly useful for determining the **vowel-harmonic class** of the stem (§3.5.1) in addition to revealing the lexical tone. The harmonic

class of the stem determines the vocalism of some suffixes. Since lexical high vowels {*i u*} are extraharmonic, and since the combining form and the inflections based on it replace the final vowel by *ú*, there are some stems (including 'go up') whose combining form (here *ùnú*) fails to reveal the stem's harmonic class. The imperative (here *ùnɔ́* rather than #*ùnó*) always includes at least one telltale non-high vowel, and this vowel suffices to characterize the harmonic class. Therefore the imperative (*ùnɔ́*) is used here as a **short citation form**, alongside the **full citation form** (*ùnú\\ùnɔ́*) which includes both the combining form and the imperative.

If the suffix has only a high vowel (e.g. perfective negative), or if it has invariant *a* vowels (future), the suffix disregards the harmonic class of the stem. If the first syllable of the suffix has a vowel other than invariant {*i u a*}, it must harmonize with the stem. The harmonic alternations are of the following types, depending on the suffix: *e* ~ *ɛ* in the hortative; *o* ~ *ɔ* in the two perfective-1 suffixes (a and b), both of which are bisyllabic and begin in *w*; and *o* ~ *ɔ* ~ *a* in the remaining cases (perfective-2, imperfective, and imperfective negative), which are monosyllabic and do not begin with *w*. For discussion of the underlying representation of suffixal vowels, see §3.5.2.

The harmonic class of a verb is determinable from the vocalism it shows in the imperative, the maximal three-way distinction being between {*a ɛ*}, *ɔ*, and {*e o*} classes. Thus the perfective-2 suffix *-sɨ̀-* appears as *-sà-*, *-sɔ̀-*, or *-sò-* depending on the harmonic class of the stem. The {*a ɛ*} and *ɔ* classes merge to form a binary opposite to {*e o*} with regard to those suffixes that distinguish only two forms of the vowel of their first syllable, e.g. hortative *-ɛ́* versus *-é* and perfective-1a *-wɔ̀rè-* versus *-wòrè-*. The final *e* of this latter suffix, incidentally, is invariable (i.e. not sensitive to harmony), and I can cite no other bisyllabic suffix whose second syllable is harmonically sensitive.

Suffixal derivatives (reversive, causative, etc.) adopt the harmonic class of the input verb.

For the most part, paradigms are regular in the sense that one can predict the outputs for each AN category given a basic lexical representation (or the imperative). There is one thoroughly irregular, suppletive paradigm, that for the transitive verb 'go to'. There are also a few verbs with irregularities in one or more AN forms. For details on the irregular verbs see §10.1.4.

There are a number of ***Cv́-* verbs** with short vowel. Those that have stable vowel quality, i.e. that have the same vowel in the imperative and in the combining form, are shown in (264). The vowels in question are {*o ɔ a ɛ*}. The absence of *Cé-* may be accidental.

(264) imperative combining verbs

| | | |
|---|---|---|
| *Có* | *Có-* | *pó-* ‘wrestle’, *só-* ‘take’ |
| *Cɔ́* | *Cɔ́-* | *dɔ́-* ‘roast’, *dɔ́-* ‘arrive’, *wɔ́-* ‘see’ |
| *Cɛ́* | *Cɛ́-* | *dɛ́-* ‘be tired’ |
| *Cá* | *Cá-* | *ká-* ‘shave’ |

As indicated, all *Cv-* verbs have H-tone (*Cv́-*). However, *wɔ́-* ‘see’ has a perfective-2 form *wɔ̀-sɔ́-* instead of expected #*wɔ́-sɔ̀-*, and a perfective-1b *wɔ̌ː-sì-* for expected #*wɔ̂ː-sì-*, which I take to be vestiges of an originally rising lexical tone.

The *Cv́-* verbs that show vocalic alternations have a high vowel in the combining form and inflections based on it, and a mid-height vowel in the imperative (and in verb chains before subordinator *mà* ‘and’). No *Cv́-* verb has a high-voweled imperative. There appear to be no cases of imperative *Cɔ́* corresponding to a combining form *Cú-* ; whether this is an accidental gap is debatable.

(265) imperative combining verbs

| | | |
|---|---|---|
| *Có* | *Cú-* | *gú\|\|gó* ‘exit’, *lú\|\|ló* ‘enter’ |
| *Cé* | *Cí-* | *dí\|\|dé* ‘bathe’ |
| *Cɛ́* | *Cí-* | *lí\|\|lɛ́* ‘eat (meal)’, *ní\|\|nɛ́* ‘drink’, *yí\|\|yɛ́* ‘weep’, *jí\|\|jɛ́* ‘dance’, *cí\|\|cɛ́* ‘slaughter’ |

In addition to the full-fledged *Cv-* verbs illustrated above, **suppletive ‘go to’** has monosyllabic imperfective *là-* and imperative *yá*.

Other surface presuffixal *Cv-* stem forms are secondary, reflecting phonological rules (stem-final syncope of a *Cvrv-* or *Cvr$^{n}$v-* stem followed by a *CC* contraction rule), as in imperfective *bí-tà-* and perfective negative *bì-lí-*, from *bìrá-* ‘work’.

There is one true ***(C)vC-* stem**, namely *ów-* ‘give’ (imperative *ów*). Contrast e.g. *gǒw-* ‘harvest (late millet)’ whose imperative *gòwó* ~ *gǒː* points to bisyllabicity. Other cases of *CvC-* before a suffix similarly reflect syncope, e.g. presuffixal *yǎy-* ‘go’ from /yàyú-/ (compare imperative *yàyá*, which brings out the bisyllabicity).

There are several verbs with long-voweled ***Cɔː* imperatives**. Before an AN suffix, these verbs take the form *Cɔw-* (266a) or, if nasal-initial, *Cɔm-* (266b). There are also a few similar verbs that vary between *Cǎː$^{n}$* and C*àw$^{n}$á* in the imperative, with combining form *Cǎm-* (266c).

| (266) | | imperative | combining | gloss |
|---|---|---|---|---|
| | a. | *wɔ̌:* | *wɔ̌w-* | ‘kill’ |
| | | *zɔ̌:* | *zɔ̌w-* | ‘run’ |
| | b. | *mɔ̌:* | *mɔ̌m-* | ‘laugh’ |
| | c. | *mǎ:$^{n}$ ~ màw$^{n}$á* | *mǎm-* | ‘toss’ |
| | | *bǎ:$^{n}$ ~ bàw$^{n}$á* | *bǎm-* | ‘go around’ |

### 10.1.1 Perfective and imperfective systems (positive AN categories)

The first cut is between perfective and imperfective systems. The binary quality of this opposition is clear in the negative. In positive utterances, there are multiple perfective and imperfective categories.

#### 10.1.1.1 Perfective-1a (*-wɔ̀rè-* ~ *-wòrè-*)

The perfective-1a suffix is used chiefly with intransitives (including motion and stance verbs, and adjectival inchoatives). It also occurs with a few “weak transitives” like ‘forget’, and is also attested with ‘bring’. For the grammatically equivalent perfective-1b suffix *-wɔ̀sì-* (used mostly with transitives), see the following section. The two perfective-1 suffixes may be thought of as marked perfectives, in contrast to the less marked perfective-2 with suffix *-sà-* and variants (§10.1.1.3).

The verb stem is in the **combining form**.

Some examples of *-wòrè-* and *-wɔ̀rè-* are in (267), with the imperative shown alongside it to clarify the lexical vocalism. The rounded vowel in the first syllable appears as *ɔ* when the stem is characterized by {*a ɛ*} or by *ɔ* vocalism (267a), and as *o* when the stem has +ATR {*e o*} vocalism (267b).

| (267) | | gloss | perfective-1a | imperative |
|---|---|---|---|---|
| | a. | ‘be tired’ | *dɛ́-wɔ̀rè-* | *dɛ́* |
| | | ‘rain fall’ | *mùrú-wɔ̀rè-* | *mùrɔ́* |
| | | ‘be finished’ | *dùm-lú-wɔ̀rè-* | *dùm-lɔ́* |
| | | ‘go’ | *yǎy-wɔ̀rè-* | *yàyá* |

| | | | |
|---|---|---|---|
| b. | ‘exit’ | *gú-wòrè-* | *gó* |
| | ‘get up’ | *úrú-wòrè-* | *úró* |
| | ‘wait’ | *cérú-wòrè-* | *céré* |
| c. | ‘forget’ | *ná-w$^{n}$ɔr$^{n}$è-* | *ná* |
| | ‘go up’ | *ùnú-w$^{n}$ɔr$^{n}$è-* | *ùnɔ́* |
| d. | ‘sleep’ | *léy-wòrè-* | *léyó* |
| | ‘go back’ | *bìrĭy-wòrè-* | *bìrìyó* |
| | ‘fall’ | *lŭw-wòrè-* | *lùwó* |
| e. | ‘die’ | *núm-bòrè-* ~ *núm-wòrè-* | *núw$^{n}$ó* |
| | ‘be ruined’ | *y$^{n}$ăm-bɔ̀rè-* ~ *y$^{n}$ăm-mɔrè-* | *y$^{n}$àw$^{n}$á* |
| f. | ‘sit’ | *dĭŋ-gòrè-* ~ *dĭŋ-worè-* | *dìŋé* |
| g. | ‘arrive’ | *dɔ̂ː-rè-* | *dɔ́* |
| | ‘leak’ | *sôː-rè-* | *só* |

The final *e* is invariant and does not harmonize with preceding vowels. When the subject is third person (including nonhuman) plural, one can imagine that the optional 3Pl suffix *-e* is present (in which case we should segment as e.g. *-wòr-è*), but we cannot tell. 3Sg *-wɔ́* and other third person subject morphemes are added to the suffix with no contractions.

The suffixal consonants *w…r* are **nasalized** to *w$^{n}$…r$^{n}$* when the preceding syllable begins with a nasal or nasalized consonant (267c), but not when the preceding syllable ends in a nasal stop like *m*. The stem-final *u* is subject to syncope in nonmonosyllabic stems, if preceded by an unclustered semivowel (267d).

**Early u-Syncope** (§3.6.2.2) applies to the stem-final vowel under certain conditions. *CvC$_2$v-* stems with *C$_2$* a peripheral nasal {*m ŋ*} or a semivowel {*y y$^{n}$ w w$^{n}$*} require this syncope (underlying /w$^{n}$/ shifts to *m*). After syncope, the peripheral nasals combine with the suffixal /w/ by **Semivowel-Fusion** (§3.6.3.4) to any of a range of phonetic outputs revolving around *mb* and *ŋg* (267e-f). No further changes are needed for the semivowel-final stems (267d).

Monosyllabic *Có-* and *Cɔ́-* stems that do not shift to a high vowel in the combining form contract with the first syllable of the suffix, which loses its /w/ (267g) by **Intervocalic Semivowel-Deletion** (§3.6.4.1). The contraction does not occur with *Cɛ́-*. My only example of this suffix with *Cá-* is *ná-w$^{n}$ɔr$^{n}$è-* ‘forgot’, which does not contract (I cannot determine whether this is due to nasalization).

Forms of the perfective-1a suffix with **irregular verbs**, and the unusually unsuffixed perfective-1 of 'go to', are in (268).

(268)

| | gloss | perfective-1a | imperative |
|---|---|---|---|
| a. | 'bring' | *zêːrú-wòrè-* | *zérì* |
| | 'come' | *yĕw-wòrè-* | *yèrí* |
| | | (alongside regular *yèrú-wòrè-*) | |
| b. | 'go to' | *bɛ̀rɛ́-* | *yá* |
| | | (compare perfective negative *bòː-lí-*) | |

Regular subject suffixes (human 3rd person) are added to *-wòrè-* and its variants. The 3Sg form is *-wɔ̀r-ɔ̌ː* regardless of stem vocalism, as the first suffixal vowel harmonizes with the (contracted) second-syllable vowel (the prototype is *-wòrè-wɔ́). The 3Pl is *-wòr-è=bɛ́* or *-wɔ̀rè=bɛ́*.

(269) a. *yèrú-wòr-ɔ̌ː*
come-Pfv1a-3SgSbj
'He/She came.'

b. *ǹ* *yèrú-wòrè*
1SgSbj come-Pfv1a
'I came.'

c. *yèrú-wòrè=bɛ́*
come-Pfv1a=3PlSbj
'They came.'

d. *àtêː* *zêːrú-wòsì-wɔ́*
tea bring-Pfv1b-3SgSbj
'He/She brought the tea.'

The morphologically opaque *bɛ̀rɛ́* 'went' for suppletive 'to go' is seen in (270).

(270) a. *[páːntà* *dè]* *súkkàrà* *ǹ* *zí* *bɛ̀rɛ́*
[Fanta Dat] sugar 1SgSbj convey go.to.Pfv
'I took (=delivered) the sugar to Fanta (woman's name).'

b. *[lúːmà* *tɔ́ŋɔ̀]* *bɛ̀rɛ́=bɛ́*
[market toward] go.to.Pfv=3PlSbj
'They went toward the market.'

c. *à:!* *[kɔ́* *bɛ̀rɛ́]* *tùg-ú*
ah! [NonhSgSbj go.to.Pfv] cut.off-VblN
'Ah, so it (=he) must have gone (elsewhere in the field) to cut off (millet stems).' (2004.1a.09)

### 10.1.1.2 Perfective-1b (*-wɔ̀sì-*, *-wòsì-*)

Transitives (except 'forget' and a few others) take a perfective suffix *-wɔ̀sì-*, with harmonic variant *-wòsì-*. We get *ɔ* when the verb's vowel-harmonic class is {*ɛ a*} or *ɔ*, and *o* when it is {*e o*}.

The stem takes its combining form. The phonology is basically the same as for perfective-1a *-wɔ̀rè-/-wòrè-* (preceding section). Indeed, one could consider segmenting the two suffixes into two parts, with a shared initial morpheme *-wɔ̀-*.

(271)

| | gloss | perfective-1b | imperative |
|---|---|---|---|
| a. | 'bite' | *cɛ́rú-wɔ̀sì-* | *cɛ́rá* |
| | 'help' | *bàrú-wɔ̀sì-* | *bàrá* |
| | 'dig' | *gàsú-wɔ̀sì-* | *gàsá* |
| | 'throw' | *dà:$^{n}$sú-wɔ̀sì-* | *dà:$^{n}$sá* |
| | 'tie' | *págú-wɔ̀sì-* | *págá* |
| | 'recognize' | *ítú-wòsì-* | *ítá* |
| b. | 'sell' | *dɔ̀rú-wɔ̀sì-* | *dɔ̀rɔ́* |
| | 'cut (meat)' | *dùŋgùrú-wɔ̀sì-* | *dùŋgùrɔ́* |
| c. | 'give' | *ów-wòsì-* | *ów* |
| | 'jump' | *tórú-wòsì-* | *tóró* |
| | 'put down' | *dèlú-wòsì-* | *dèlé* |
| | 'speak' | *tégú-wòsì-* | *tégó* |
| | 'reply' | *kísú-wòsì-* | *kísó* |
| | 'cough' | *kósíy-wòsì-* | *kósíyó* |
| d. | 'shoot' | *táy-wɔ̀sì-* | *táyá* |
| | 'catch' | *áw-wɔ̀sì-* | *áwá* |
| | 'build' | *mǎy$^{n}$-w$^{n}$ɔ̀sì-* | *mày$^{n}$á* |
| | 'put' | *kúlú-wòsì-* | *kúló* |

| | | | |
|---|---|---|---|
| e. | ‘chase’ | *nàrⁿú-wⁿɔ̀sì-* | *nàrⁿá* |
| | ‘do’ | *kárⁿú-wⁿɔ̀sì-* | *kárⁿá* |
| f. | ‘kill’ | *wɔ̌w-wɔ̀sì-* | *wɔ̌:* |
| | ‘run’ | *zɔ̌w-wɔ̀sì-* | *zɔ̌:* |
| g. | ‘laugh’ | *mɔ̌m-bɔ̀sì- ~ mɔ̌m-wɔ̀sì* | *mɔ̌:* |
| | ‘toss’ | *măm-bɔ̀sì- ~ măm-wɔ̀sì* | *màwⁿá ~ mă:ⁿ* |
| h. | ‘sing’ | *nǔŋ-gɔ̀sì- ~ nǔŋ-wɔ̀sì* | *nùŋɔ́* |

We now turn to **monosyllabic** stems. *Có-* and *Cɔ́-* stems contract with the suffix, resulting in *Cv̂:-sì-*, preserving the vowel quality of the stem (272b).

| (272) | gloss | perfective-1b | imperative |
|---|---|---|---|
| a. | ‘drink’ | *ní-wⁿɔ̀sì-* | *né* |
| | ‘eat’ | *lí-wɔ̀sì-* | *lɛ́* |
| | ‘dance’ | *jí-wɔ̀sì-* | *jɛ́* |
| | ‘slaughter’ | *cí-wɔ̀sì-* | *cɛ́* |
| | ‘weep’ | *yí-wɔ̀sì-* | *yɛ́* |
| | ‘bathe’ | *dí-wɔ̀sì-* | *dé* |
| b. | ‘roast’ | *dɔ̂:-sì-* | *dɔ́* |
| | ‘wrestle’ | *pɔ̂:-sì-* | *pɔ́* |
| | ‘take’ | *sɔ̂:-sì-* | *sɔ́* |
| | ‘shave’ | *kâ:-sì-* | *ká* |

*Cá-* monosyllabics occasionally contract, though in elicitation informants prefer the uncontracted variants: *ká-wɔ̀sì-* ~ *kâ:-sì-* ‘shaved’.

Two irregular forms have been noted. The monosyllabic verb ‘see’ has a perfective that is segmentally regular (after contraction), but has a distinctive rising tone pattern (273a). One can imagine a derivation from underlying /wɔ̌:-wɔ̀sì-/, whereby the medial /w/ is deleted, and the resulting contracted /wɔ̌:-sì-/ shifts the final tone break to the syllable boundary. The high-frequency bisyllabic verb ‘get’ shows a more radical contraction from expected quadrisyllabic #*bèrú-wɔ̀sì-* to a bisyllabic form (273b).

| (273) | gloss | perfective-1b | imperative |
|---|---|---|---|
| a. | ‘see’ | *wɔ̌:-sì-* | *wɔ́* |
| b. | ‘get’ | *bɛ̌:-sì-* | *bɛ̀rá* |

The usual pronominal-subject clause-initial particles (1st/2nd person) and suffixes or enclitics (3rd person) apply to the perfective-1b. The 3Sg suffix is *-wɔ́*, and has no harmonic interaction with the suffix, thus *-wɔ̀sì-wɔ́* or *-wòsì-wɔ́* depending on the stem. The 3Pl has *=bɛ́*, optionally accompanied by 3Pl *-e-* replacing the *i* in *-wɔ̀sì-*/*-wòsì-*, thus *-wɔ̀sì=bɛ́* ~ *-wɔ̀s-è=bɛ́*, and *-wɔ̀sì=bɛ́* ~ *-wɔ̀s-è=bɛ́*.

(274) a. *í* *bèlú* *pàgú-wɔ̀sì*
1PlSbj sheep tie-Pfv1b
'We tied up the sheep.'

b. *lɛ́* *kárⁿú-wɔ̀sì=bɛ́*
meal make-Pfv1b=3PlSbj
'They cooked the meal.' (also *kárⁿú-wɔ̀s-è=bɛ́*)

c. *m̀* *wɔ́* *wɔ̌w-wɔ̀sì*
1SgSbj 3SgObj kill-Pfv1b
'I killed him/her.'

d. *bɛ́* *wɔ̌w-wɔ̀sì-wɔ́*
3PlObj kill-Pfv1b-3SgSbj
'He/She killed them.'

e. *nàwⁿá* *kúw-wòsè=bɛ́*
meat eat.meat-Pfv1b=3PlSbj
'They ate the meat.'

For verbs like *dìrⁿú**dìrⁿá* 'encounter, find', both perfective-1b *dìrⁿú-wⁿɔ̀sì-* and perfective-1a *dìrⁿú-wⁿɔ̀rⁿè-* are attested. My assistant suggested that only *dìrⁿú-wⁿɔ̀sì-* is used with human object, while either form could be used with nonhuman object.

### 10.1.1.3 Perfective-2 (*-sɔ̀-*, *-tɔ̀-*)

In ordinary main clauses, the perfective-2 is essentially interchangeable with the perfective-1 (a or b). The perfective-2 is required, replacing the perfective-1, in the presence of a focalized constituent and in relative clauses (§13.1.3.1, §14.1.8). What these have in common is that the verb is part of the **defocalized** (presupposed, backgrounded) part of the clause.

The verb takes its **combining form**. Except when preceded by *t*, the suffix takes the forms *-sò-*, *-sɔ̀-*, and *-sà-*, which correlate with the stem's vowel-harmonic class, respectively {*e o*}, *ɔ*, and {*ɛ a*}. Examples with monosyllabic stems are in (275).

| (275) | | gloss | perfective-2 | imperative |
|---|---|---|---|---|
| | a. | 'give' | *ów-sò-* | *ów* |
| | | 'exit' | *gú-sò-* | *gó* |
| | | 'wrestle' | *pó-sò-* | *pó* |
| | | 'bathe' | *dí-sò-* | *dé* |
| | b. | 'kill' | *wɔ̆w-sɔ̀-* | *wɔ̆:* |
| | | 'arrive' | *dɔ́-sɔ̀-* | *dɔ́* |
| | c. | 'drink' | *ní-sà-* | *nɛ́* |
| | | 'dance' | *jí-sà-* | *jɛ́* |
| | | 'shave' | *ká-sà-* | *ká* |

*(C)vtv* verbs, i.e. bimoraic bisyllabics with medial *t*, appear as *(C)vt-tv-* in the perfective-2 (276), suggesting that **Early *u*-Syncope** has (atypically for these verbs) taken place, followed by an idiosyncratic *CC*-cluster rule converting /ts/ to *tt* in this combination only (§3.6.3.8).

| (276) | gloss | perfective-2 | imperative |
|---|---|---|---|
| | 'sweep' | *zăt-tà-* | *zàtá* |
| | 'give back' | *bĭt-tò-* | *bìtó* |
| | 'show' | *tót-tò-* | *tótó* |
| | 'do together' | *mŏt-tɔ̀-* | *mɔ̀tɔ́* |

It is important not to confuse this *-tv̀-* with the *-tv̀-* allomorph of the imperfective suffix (whose other allomorph is *-rv̀-*). The perfective-2 forms have the shape *(C)vt-tv-* and derive from *(C)vtv* stems (note the geminated *tt*). The most similar-looking imperfective forms have the shape *(C)v-tv-* (with unclustered *t*) and derive from *(C)vrv-* stems.

Early *u*-Syncope (§3.6.2.2) occurs after semivowels under the usual conditions (277a). The sibilant *s* is phonetically conducive to **Late *u*-Syncope** of a preceding vowel after various other consonants, though this is (as usual) optional (277b). Syncope is blocked by syllabic considerations in (277c).

| (277) | | gloss | perfective-2 | imperative |
|---|---|---|---|---|
| | a. | ‘cough’ | *kósíy-sò-* | *kósíyó* |
| | | ‘go’ | *yǎy-sà-* | *yàyá* |
| | | ‘catch’ | *áw-sà-* | *áwá* |
| | b. | ‘sit’ | *dǐŋ-sò- ~ dìŋú-sò-* | *dìŋé* |
| | | ‘look for’ | *y$^{n}$ǒm-sò- ~ y$^{n}$òmú-sò-* | *y$^{n}$òmó* |
| | | ‘jump’ | *tór-sò- ~ tórú-sò-* | *tóró* |
| | | ‘reply’ | *kís-sò- ~ kísú-sò-* | *kísó* |
| | | ‘do’ | *kár$^{n}$-sà- ~ kár$^{n}$ú-sà-* | *kár$^{n}$á* |
| | | ‘hear’ | *ěg-sà- ~ ègú-sà-* | *égá* |
| | c. | ‘begin’ | *dèwrú-sà-* | *dèwrá* |
| | | ‘throw’ | *dà:$^{n}$sú-sà-* | *dà:$^{n}$sá* |

The irregularities in (278) below involve either unexpected application of syncope or else problematic rising tone patterns. Early *u*-Syncope and then Rhotic-Deletion are responsible for eliminating the medial syllable in the perfective-2 forms in (278a). The combining forms for the relevant verbs are *zê:rú*, *yèrí*, *bòrú*, and *bèrú* (the first two of these verbs are irregular), all of which end in a rhotic syllable. The unusual H-tone on the perfective-2 suffix seems to have spread from the syncopated second stem vowel. An irregular rising tone pattern of a different kind, for expected falling pattern, is seen in (278b). Here the verb is monosyllabic, so there is no syncopated vowel to blame for the H-tone on the suffix, and there is no initial H-tone as in (278a). The verb ‘see’ also has an irregular rising tone in perfective-1a *wǒ:-sì-*.

| (278) | | gloss | perfective-2 | imperative |
|---|---|---|---|---|
| | a. | ‘bring’ | *zê:-só-* | *zérì* |
| | | ‘come’ | *yè-só-* | *yèrí* |
| | | ‘go to’ | *bò-só-* | *yá* |
| | | ‘get’ | *bè-sá-* | *bèrá* |
| | b. | ‘see’ | *wɔ̀-sɔ́-* | *wɔ́* |

The combination of *-sv̀-* (*-tv̀-*) with 3Sg subject *-wɔ́* is realized as 3Sg *-s-ɔ̌:* (*-t-ɔ̌:*) The combination with 3Pl suffix *-e* is realized as *-s-è* (*-t-è*) hence with final subject enclitics *-s-è=bɛ́* (human) and *-s-è=cɛ́* (nonhuman). The vowels of these 3Sg and 3Pl forms are invariant, i.e., they are not sensitive to what the vocalism of *-sv̀-* would be in the absence of the third person suffix.

10.1.1.4 Experiential perfect ‘have ever’ (*wâ:*)

An experiential perfect (‘have ever …’) is formed by an auxiliary verb *wâ:-*. The regular verb precedes this, in its combining form. Most positive utterances with this construction are polar interrogatives. The only positive form attested is the perfective-2 (279).

(279) a. *bàmàkó ú bòrú wâ:-sá má*
Bamako 2SgSbj go.to ExpPf-Pfv2 Q
‘Have you-Sg ever gone to Bamako?’

b. *bàmàkó m̀ bòrú wâ:-sá*
Bamako 1SgSbj go.to ExpPf-Pfv2
‘I have (sometime in my life) gone to Bamako.’

The construction is common in the perfective negative, where is means ‘have never …’ (280). The adverbial *àbádá* ‘never’, from Arabic but ubiquitous in Malian languages, may be added (280c).

(280) a. *kɔ̀:ⁿsɔ́ ní wâ:-lí*
millet.beer drink ExpPf-PfvNeg
‘I have never drunk millet beer.’

b. *ŏw-[à-nú] m̀ wɔ́ wâ:-lí*
lion 1SgSbj see ExpPf-PfvNeg
‘I have never seen a lion.’

c. *àbádá bɛ̌l cí wâ:-lí=bɛ́*
never sheep slaughter ExpPf-PfvNeg-3PlSbj
‘They have never slaughtered a sheep.’

d. *[téwó kù] ǹ sígú wâ:-lí*
[well in] 1SgSbj go.down ExpPf-PfvNeg
‘I have never gone down into the well.’

*wâ:-* resembles the irregular verb ‘bring’ in its phonological patterning. Most forms of ‘bring’ are based on the /HLH/-melody combining form /zê:rú-/, which reduces to *zê:-* in several suffixal combinations, including perfective-2 *zê:-só-* (parallel in segmental shape and tone pattern to *wâ:-sá-*) and perfective negative *zê:-lí-* (parallel to *wâ:-lí-*). A notable similarity is that *wâ:-* and ‘bring’

are the only verbs that do not become totally L-toned before perfective negative *-lí-*. In the case of /zê:rú-/ this can be attributed to the unique /HLH/ lexical tone melody, the idea being that a suffix like *-lí-* can force tone-dropping only on an adjacent H-tone segment.

One might therefore hypothesize that *wâ:-* derives historically from a verb with a form like *wâ:rú- that had a similar <HL>H tone pattern, and that had a similar final *u (subject to syncope) preceded by *r (which deletes before coronals in this morphological context). However, other languages of the zone (Jamsay, Ben Tey, Najamba, Nanga) have an experiential perfect morpheme with a shape like *ta:-* or *téré-*, so I can offer no prospective cognate of TT *wâ:-*.

#### 10.1.1.5 Recent perfect ('already') absent

To express 'have already (done)', the regular perfective (positive) is used. An adverbial such as *hó:* 'long ago' may be added but is not necessary.

(281) a. *lí-wɔ̀s-è=bɛ́*
eat-Pfv1b-3PlSbj=3PlSbj
'They have (already) eaten.'

b. *hó: yǎy-wɔ̀rè=kɔ́*
long.ago go-Pfv1a=NonhSgSbj
'It (=vehicle) left some time ago.'

#### 10.1.1.6 Imperfective (*-rv̀-*, *-r$^{n}$v̀-* , *-tv̀-*, *-là-*, etc.)

An imperfective typical of activity verbs is formed with suffix *-rà-* (for other allomorphs see below). I will call it **imperfective**, and use -Ipfv- in interlinear glosses.

The stem takes its **combining form**. The lexical melody of the stem is erased by an **{H} overlay**. But see below on tone-dropping after imperfective preverbal particle *á*.

The suffix is always *-Cv̀-* in form, but both the consonant and the vowel are variable. The consonant is subject to a prosodically-controlled split between *-rv̀-* after *Cv-* verbs and most *CvCv-* verbs, and *-tv̀-* after all verbs of three or more moras; see §3.2.3. Some oddities involving *CvCv-* verbs with certain medial consonants can be accounted for by assuming the regular *-rv̀-* allomorph, but then applying Early *u*-Syncope (§3.6.2.2) and one or another of the special (post-syncope) *CC*-cluster rules. However, *CvCv-* verbs

with medial rhotic {*r* $r^n$} have imperfectives of the form *Cv́-tv̀-*, which makes little sense phonologically.

The suffixal vowel is {*o* ɔ *a*} depending on whether the vowel-harmonic class of the stem is {*e o*}, *ɔ*, or {*ɛ a*}.

Some phonologically straightforward examples are in (282). Variant *-rv̀-* occurs after monosyllabic and light (*CvCv-*) bisyllabics, and *-tv̀-* after heavier bisyllabics (282b) and trisyllabics (282c).

| (282) | | gloss | imperative | imperfective |
|---|---|---|---|---|
| | a. | 'dig' | *gàsá* | *gású-rà-* |
| | | 'go' | *yàyá* | *yáy-rà-* |
| | | 'shave' | *ká* | *ká-rà-* |
| | | 'dance' | *jɛ́* | *jí-rà-* |
| | | 'wrestle' | *pó* | *pó-rò-* |
| | | 'arrive' | *dɔ́* | *dɔ́-rɔ̀-* |
| | | 'give' | *ów* | *ów-rò-* |
| | | 'kill' | *wɔ̌:* | *wɔ́w-rɔ̀-* |
| | b. | 'begin' | *dɛ̀wrá* | *dɛ́wrú-tà-* |
| | | 'urinate' | *ánná* | *ánnú-tà-* |
| | c. | 'cut (meat)' | *dùŋgùrɔ́* | *dúŋgúrú-tɔ̀-* |
| | | 'return' | *bìrìyó* | *bíríy-tò-* |
| | | 'stroll' | *tɔ́ŋúnɔ́* | *tɔ́ŋúnú-tɔ̀-* |

The examples in (283) are similar, except that Forward Nasalization (§3.6.1.1) has applied, shifting /r/ to $r^n$.

| (283) | | gloss | imperative | imperfective |
|---|---|---|---|---|
| | a. | 'drink' | *nɛ́* | *ní-$r^n$à-* (< /ní-rà-/) |
| | b. | 'be alive' | *bày$^n$á* | *báy$^n$-$r^n$à-* |

The examples in (284) are more complex phonologically but are compatible with the prosodically correct /-rv̀-/ allomorph as an underlying representation. Early *u*-Syncope applies, then the suffixal /r/ assimilates to a preceding {*l n*} to constitute a geminate cluster (284a-b); see Sonorant Assimilation (§3.6.3.7). The post-syncope clusters /mr/ and /ŋr/ are more problematic, typically requiring an epenthetic vowel and an oral release of the nasal. This is then optionally re-syncopated, resulting in /mr/ and /ŋr/ once again, but without

allowing Forward Nasalization to produce *r*$^{n}$ (284c-d). See §3.6.2.1 for a more general discussion.

| (284) | | gloss | imperative | imperfective |
|---|---|---|---|---|
| | a. | ‘do well’ | *céló* | *cél-lò-* (< /célú-rò-/) |
| | b. | ‘go up’ | *ùnɔ́* | *ún-nɔ̀-* (< /únú-rɔ̀-/) |
| | c. | ‘sit’ | *dìŋé* | *díŋgú-rò-* (and variants, e.g. *díŋ-rò-*) |
| | | ‘sing’ | *nùŋɔ́* | *núŋgú-rɔ̀-* (and variants, e.g. *núŋ-rɔ̀-*) |
| | d. | ‘go around’ | *bàw*$^{n}$*á* | *bámbú-rà-* (and variants, e.g. *bám-rà-*) |
| | | ‘look for’ | *y*$^{n}$*òmó* | *y*$^{n}$*ómbú-rò-* (and variants, e.g. *y*$^{n}$*óm-rò-*) |

The most unusual phonological quirk is that (most) **light bisyllabic stems with medial rhotic**, i.e. *Cvrv-* and *Cvr*$^{n}$*v-* stems, have imperfective forms of the shape *Cv́-tv̀-* (285).

| (285) | | gloss | imperative | imperfective |
|---|---|---|---|---|
| | a. | ‘get’ | *bèrá* | *bɛ́-tà-* |
| | | ‘bite’ | *cérá* | *cɛ́-tà-* |
| | | ‘bear child’ | *làrá* | *lá-tà-* |
| | | ‘jump’ | *tóró* | *tó-tò-* |
| | | ‘rain fall’ | *mùrɔ́* | *mú-tɔ̀-* |
| | | ‘wait’ | *céré* | *cé-tò-* |
| | b. | ‘chase’ | *nàr*$^{n}$*á* | *ná-tà-* |
| | | ‘call’ | *sór*$^{n}$*ó* | *só-tò-* |
| | | ‘rub on’ | *zèr*$^{n}$*á* | *zɛ́-tà-* |
| | | ‘become red’ | *bàr*$^{n}$*á* | *bá-tà-* |
| | | ‘become good’ | *jèr*$^{n}$*á* | *jɛ́-tà-* |
| | | ‘track’ | *dùr*$^{n}$*ó* | *dú-tò-* |

Instead of trying to derive these from e.g. /bɛ́rú-rà-/ by a quirky *CC*-cluster rule improbably converting /rr/ into *t*, I regard these as cases where the medial rhotic in the stem **blocks the use of a rhotic-initial suffix allomorph** (if another allomorph is available). Therefore the *-tv̀-* in (285a) is not the surface form of /-rv̀-/ vis a tortuous phonological derivation, rather it is simply the alternative imperfective allomorph *-tv̀-*, pressed into service where *-rv̀-* is blocked. The derivations are now straightforward, e.g. /bɛ́rú-tà-/ → /bɛ́r-tà-/ (Early *u*-Syncope) → *bɛ́-tà-* (Rhotic Deletion, §3.6.3.6).

Imperfective forms of **irregular verbs** are in (286).

(286)

| | gloss | imperative | imperfective |
|---|---|---|---|
| a. | ‘bring’ | *zérì* | *zé:-tò-* (combining form *zê:rú*) |
| b. | ‘go to’ | *yá* | *bó-tò*, *là-* |
| | ‘come’ | *yèrí* | *yé-tò-*, *yá-rà-* |
| c. | ‘do’ | *kár$^{n}$á* | *ká-là-* |
| | ‘encounter’ | *dìr$^{n}$á* | *dí-tà-*, *dí-là-* |

The form for ‘bring’ (286a) is readily derived from combining form /zê:rú/ using Early *u*-Syncope (which is standard for this verb) and Rhotic-Deletion. The forms for ‘go to’ and ‘come’ are unusual in that each verb has two imperfectives with distinct aspectual values. *bó-tò-* (regularly derived from combining form /bòrú/) and *yé-tò-* (also regular in form) generally denote recurring or habitual events. The suppletive *là-* for ‘go to’, and the somewhat opaque *yá-rà-* for ‘come’, are used to ongoing or imminent trajectories (‘is on the way’ or ‘is going/coming later on’).

This leaves us with irregular *ká-là-* ‘is doing’ and the attested choice between regular *dí-tà-* and irregular *dí-là-* ‘is encountering’. *ká-là-* and *dí-là-* may merely be irregular in the sense that they permit (instead of blocking) the prosodically correct suffix allomorph *-rv̀-*. In this interpretation, *ká-là-* and *dí-là-* actually reveal the phonologically regular outputs of /Cvr$^{n}$v-rv̀-/. See discussion of Rhotic Dissimilation (§3.6.3.5).

The imperfective suffix combines with the usual pronominal subject particles and (third person) clitics. 3Sg clitic or suffix *-wɔ́* most often contracts with the suffixal vowel (whether *a*, *o*, or *ɔ*) to produce *-ɔ̌:*, hence *-r-ɔ̌:*, *-t-ɔ̌:*, etc. The optional 3Pl suffix shifts the suffixal vowel to *e* (from *o*, *a*, or *ɔ*) or *ɛ* (from *a* or *ɔ*), and may be followed by the 3Pl clitic *=bɛ́*.

(287)

| gloss | imperative | imperfective | 3Sg subject | 3Pl subject |
|---|---|---|---|---|
| ‘make’ | *kár$^{n}$á* | *ká-là-* | *ká-l-ɔ̌:* | *ká-l-è=bɛ́* |
| ‘drink’ | *nɛ́* | *ní-r$^{n}$à-* | *ní-r$^{n}$-ɔ̌:* | *ní-r$^{n}$-è=bɛ́* |
| ‘exit’ | *gó* | *gú-rò-* | *gú-r-ɔ̌:* | *gú-r-è=bɛ́* |
| ‘see’ | *wɔ́* | *wɔ́-rɔ̀-* | *wɔ́-r-ɔ̌:* | *wɔ́-r-e=bɛ́* |

In simple clauses (with no chained verbs), the imperfective regularly occurs with an immediately preceding **imperfective particle** *á* or *â:* (§11.1.1.1). This is the only construction offered by informants in direct elicitation of simple clauses, and it is also usual in texts. The verb stem **drops its tones** after the *á* variant but not after *â:*. Under some conditions, tone-dropping due to *á* occurs in

some combinations **even when a chained verb intervenes**. This is the case with *bɛ̀-tà* in the sequence *á m$^{b}$èlú bɛ̀-tà* (288a), where the intervening chained verb (*m$^{b}$èlú*) has its usual tones; see also (290a-b) below. See, however, (358) in

In the absence of an imperfective particle, or after the variant *â:*, the stem is entirely H-toned before the imperfective suffix. A first or second person subject pronominal, if present, precedes the *á* or *â:* particle. Examples with *á* are in (288).

(288) a. *ká àyé [jěn dà] kŭmnɔ̀ á m$^{b}$èlú bɛ̀-tà mà*
say who? [be.more is] above **Ipfv** soar can-**Ipfv** Q
'(He) said: who (among the birds) can soar the highest?' (2004.1b.01)

b. *ní á nì-r$^{n}$-è=bɛ́*
water **Ipfv** drink-**Ipfv**-3PlSbj=3PlSbj
'They drink water.' (*né*, Ipfv *ní-r$^{n}$à-*)

c. *lɛ́ á kà-l-ɔ̌:*
meal **Ipfv** make-**Ipfv**-3SgSbj
'She cooks the meals.' (*kár$^{n}$á*, Ipfv *ká-là-*)

d. *á bɛ̀-t-è=bɛ́ nànnà:r$^{n}$á*
**Ipfv** get-**Ipfv**-3PlSbj=3PlSbj much
'They get (=earn, win) a lot.' (*bɛ̀rá*)

e. *àrká zɔ̂w m̀ á zɔ̀w-rɔ̀*
morning running(n) 1SgSbj **Ipfv** run-**Ipfv**
'I run in the morning.' (*zɔ̌:*)

f. *èsé ú á y$^{n}$òmbù-rò mà*
what? 2PlSbj **Ipfv** look for-**Ipfv** Q
'What are you-Sg looking for? (*y$^{n}$ŏm\|\|y$^{n}$òmó*)

g. *èsé á á kà-là mà*
what? 2PlSbj **Ipfv** do-**Ipfv** Q
'What are you-Pl doing?

Examples with *â:*. and therefore with H-toned stem before the imperfective suffix, are in (289).

(289) a. *bírá* *m̀* *â:* *bí-tà*
work(n) 1SgSbj **Ipfv** work(v)-**Ipfv**
'I (do) work.' (verb *bìrá*)

b. *mə̂m* *m̀* *â:* *mə́mbú-rə̀*
laughter 1SgSbj **Ipfv** laugh-**Ipfv**
'I am laughing.'

The imperfective is regular in the clausal agentive construction (§14.2.2).

Positive imperfectives and related imperfective-system forms are negated by the all-purpose imperfective negative.

### 10.1.1.7 Periphrastic durative (*tə̀ŋ-rə̀-*) 'keep VP-ing'

A durative construction that competes with the imperfective, but more strongly emphasizes temporal prolongation, consists of the main verb chained to an auxiliary verb *tə̀ŋ-rə̀-* (variants *tə̀ŋgù-rə̀-* etc.) in imperfective form, with imperfective particle *á* preceding the main verb. This *tə̀ŋ-rə̀-* is unlikely to be directly related to the transitive verb *tə́ŋə́* with the senses 'hobble (quadruped)' and 'pick (cotton)', but the verb *tə́ŋúnə́* 'stroll, walk around' entails the requisite temporal duration and may be historically related.

The *tə̀ŋ-rə̀-* construction is common in texts, especially in denoting durative events that serve as background for a subsequent foregrounded event. In (290a) the presumed original sense 'walk around' is especially relevant, but there are cases like (290b) not involving (or at least not foregrounding) motion.

(290) a. *á* *yǎy* *tə̀ŋgù-r-ə̌:,*
Ipfv go keep-Ipfv-3SgSbj
*à-nú* *túrú,* *ká* *dàgú-s-ə̌:*
man-Sg one, saying find-Pfv2-3SgSbj
'He was walking around. Then (it is said) he encountered a man.' (2004-1a.03)

b. *[kó* *kày]* *sé:kěy* *cɛ́k* *à* *céŋgúrú* *tə̀ŋgù-rə̀*
[NonhSg Top] Calotropis only Impf gnaw keep-Ipfv
'As for it (= grasshopper), it keeps gnawing (=feeding) just on *Calotropis* (shrub)' (2004-1b.03)

### 10.1.1.8 Reduplicated imperfective

The imperfective may be reduplicated, though the reduplicated version is uncommon in texts. It is used, as an alternative to other imperfective forms, to describe **regularly occurring** phenomena.

My examples all involve imperfective particle *á* (which elsewhere forces tone-dropping on an imperfective verb stem). The reduplicated segment is *Cv̀-* (L-toned), the vowel quality being compied from the first stem vowel.

(291) a. *sàrí,* *á* *bì-bíw-rà*
monitor.lizard, Ipfv **Rdp**-bury-**Ipfv**
'(The) Nile monitor lizard buries (its eggs).' (2004-1a.10)

b. *kɔ́* *á* *kù-kúw-r-è*
NonhSgObj Ipfv **Rdp**-eat-Ipfv-3PlSbj
'They (= people) eat it (= mantises).' (2004-1b.04)

### 10.1.1.9 Future (*-yàrà-* and allomorphs)

The future suffix is *-yàrà-*. Its vocalism is not affected by the vowel-harmonic class of the stem. The stem itself is in the **combining form**, but has an **{LH} overlay** that erases lexical tones. The H-tone component must be overt, and appears on the final mora of the stem, any preceding moras being L-toned. Thus monosyllabic *Cv́-yàrà-*, bisyllabic *CvCv́-yàrà-* or syncopated *CvC̆-yàrà-*, trisyllabic *CvCvCv́-yàrà-* or syncopated *CvCvC̆-yàrà-*. Perhaps because of the tonal pattern, Late *u*-Syncope (§3.6.2.2) does not apply to future forms that have escaped Early *u*-Syncope. Nonmonosyllabic stems that do not syncopate the final stem vowel normally end in *ú* in the combining form, but the suffix-initial *y* colors this vowel, which is therefore always heard as *í* (I transcribe accordingly although one might analyse it as underlying /ú/).

The examples in (292) are straightforward phonologically.

(292)

| gloss | imperative | future |
|---|---|---|
| a. monosyllabic stem | | |
| 'slaughter' | *cɛ́* | *cí-yàrà-* |
| 'enter' | *ló* | *lú-yàrà-* |
| 'be tired' | *dɛ́* | *dɛ́-yàrà-* |
| b. bisyllabic, syncopated | | |
| 'go' | *yàyá* | *yǎy-yàrà-* |

c. bisyllabic, unsyncopated

| | | |
|---|---|---|
| ‘come’ | *yèrí* | *yèrí-yàrà-* |
| ‘tie’ | *págá* | *pàgí-yàrà-* |
| ‘lie down’ | *ìsé* | *ìsí-yàrà-* |

d. trisyllabic

| | | |
|---|---|---|
| ‘cut meat’ | *dùŋgùrɔ́* | *dùŋgùrí-yàrà-* |

*Cv́-* monosyllabics with {*a o ɔ*} in the combining form contract this vowel with the suffix, resulting in *Cv̂ː-rà-*. See Intervocalic Semivowel-Deletion (§3.6.4.1).

(293)

| | gloss | imperative | future |
|---|---|---|---|
| a. | ‘shave’ | *ká* | *kâː-rà-* |
| b. | ‘wrestle’ | *pó* | *pôː-rà-* |
| c. | ‘arrive’ | *dɔ́* | *dɔ̂ː-rà-* |

Early *u*-Syncope (§3.6.2.2) applies in the future inflection to prosodically light bisyllabic (*CvCv-*) stems with medial *ŋ*, *m*, or a semivowel. When Early *u*-Syncope produces the clusters /my/, /ŋy/, or /wy/, these clusters undergo Semivowel Fusion (§3.6.3.4).

(294)

| | gloss | Imperat | future |
|---|---|---|---|
| a. | ‘catch’ | *áwá* | *áw-wàrà-* |
| | ‘give’ | *ów* | *ów-wàrà-* |
| b. | ‘die’ | *núw$^{n}$ó* | *nŭm-bàrà-* ~ *nŭm-m$^{b}$àrà* ~ *nŭm-màrà* |
| | ‘become blind’ | *jìrùmó* | *jìrĭm-bàrà-* ~ *jìrĭm-m$^{b}$àrà-* ~ *jìrĭm-màrà-* |
| c. | ‘sing’ | *nùŋɔ́* | *nŭŋ-gàrà-* ~ *nŭŋ-ŋ$^{g}$àrà* ~ *nŭŋ-ŋàrà* |

The future suffix is susceptible to **Forward Nasalization** (§3.6.1.1). When it immediately follows *y$^{n}$* after syncope (/w$^{n}$/ becomes *m* in this position), or when it follows a syllable beginning in *n* or *r$^{n}$*, both **suffixal consonants are nasalized**, resulting in *-y$^{n}$àr$^{n}$à-*. Note, however, that in (294b-c), above, the variants with …*m-màrà-* and …*ŋ-ŋàrà-* do not allow Forward Nasalization to nasalize the suffixal *r*, suggesting that the variants with …*m-bàrà-* and …*ŋ-gàrà-* are more basic (their oral stops block Forward Nasalization).

(295)

| | gloss | imperative | future |
|---|---|---|---|
| a. | ‘steal’ | *gùy$^{n}$ó* | *gǔy$^{n}$-y$^{n}$àr$^{n}$à-* |
| b. | ‘go up’ | *ùnɔ́* | *ùní-y$^{n}$àr$^{n}$à-* |
| | ‘drink’ | *nɛ́* | *ní-y$^{n}$àr$^{n}$à-* |

The 3Sg-subject form appears as *-yàrà-wɔ́* or contracted *-yɔ̀r-ɔ̌:*. The 3Pl form with *-e* suffix is realized as *-yèr-è* or *-yɛ̀r-è* depending on the vowel-harmonic class of the stem. For the phonology (somewhat messy here), see the discussion of Suffix-to-Suffix Vocalic Assimilation (§3.5.4).

The future suffix occurs **with and without imperfective particle** *á*. Even with a monosyllabic verb like ‘eat’ (296b), which has an H-tone before the future suffix, I have observed no tonal effect of *á* on the tone of the stem (unlike the situation with imperfective verbs).

(296)

a. *ìní* *m̀* *á* *lěy-yàrà*
here 1SgSbj Ipfv sleep-Fut
‘I will sleep here.’

b. *ìmí* *lɛ́* *á* *lí-yàrà*
children meal Ipfv eat-Fut
‘The children will eat (now).’

c. *àrká* *m̀* *á* *ùrí-yàrà*
morning 1SgSbj Ipfv get.up-Fut
‘In the morning, I get up.’

d. *ŋ̀* *yèrí-yàrà*
1SgSbj come-Fut
‘I will come.’

An unusual aspect of the future is that the domain to which the {LH} overlay applies **extends leftword to a preceding stem**, such as a tightly-chained verb (e.g. with final ‘can, be able to’), or even to a conventionalized (semi-referential) **direct object** before the semantically light verb *kár$^{n}$á-* ‘do’. The preceding stem in question is therefore {L}-toned. Thus *tòrù bɛ̀rí-yàrà-* ‘will be able to jump’, where *tórú* ‘jump’ is treated as an extension of the inflected verb stem (*bɛ̀rá* ‘can’) and is therefore part of the L-toned stretch before the final H-toned syllable. We could re-bracket this combination tonomorphologically as *[tòrù-bɛ̀rí]*$^{LH}$*-yàrà-*, but in ordinary transcription I do not include superscripts or brackets in such verb forms. For discussion see §3.7.2.3.

There is no special future negative. The future and the imperfective are negated by the all-purpose imperfective negative.

The future (positive) gets some competition from the hortative (§10.4.4), which is sometimes used where English would have a future verb phrase expressing an intention.

### 10.1.2 Negation of indicative verbs

#### 10.1.2.1 Categories expressed by negative verbs

The basic pattern is that the various positive perfective suffixal categories are replaced by perfective negative *-rí-*, and the various positive imperfective categories are replaced by imperfective negative *-nó-*. In other words, negation brings out the underlying binary aspectual break.

#### 10.1.2.2 Perfective negative (*-rí-*, *-lí-*, etc.)

The productive perfective negative (interlinears: "PfvNeg") suffix is, with some exceptions covered below, *-rí-* after mono- and bimoraic stems, i.e. *Cv-*, *CvC-*, and *CvCv-*, and *-lí-* after heavier stems (e.g. *CvCCv-*, *Cv:Cv-*, *CvCvCv-*). This prosodic split is similar to that seen in the imperfective (§10.1.1.6), see also §3.2.3. The preceding verb stem takes its **combining form**, but undergoes **tone-dropping** to {L}.

Some phonologically straightforward examples are in (297). Note the allomorph split between *-rí-* (297a-c) and, with heavier stems, *-lí-* (297d).

(297)

| | gloss | imperative | perfective negative |
|---|---|---|---|
| a. | 'enter' | *ló* | *lù-rí-* |
| | 'eat' | *lɛ́* | *lì-rí-* |
| | 'be tired' | *dɛ́* | *dɛ̀-rí-* |
| | 'see' | *wɔ́* | *wɔ̀-rí-* |
| | 'wrestle' | *pó* | *pò-rí-* |
| | 'shave' | *ká* | *kà-rí-* |
| b. | 'run' | *zɔ̌:* | *zɔ̀w-rí-* |
| | 'give' | *ów* | *òw-rí-* |

| | | | |
|---|---|---|---|
| c. | ‘dig’ | *gàsá* | *gàsù-rí-* |
| | ‘recognize’ | *ítá* | *ìtù-rí-* |
| | ‘stop’ | *ígó* | *ìgù-rí-* |
| | ‘lie down’ | *ìsé* | *ìsù-rí* |
| d. | ‘urinate’ | *ánná* | *ànnù-lí-* |
| | ‘throw’ | *dà:$^{n}$sá* | *dà:$^{n}$sù-lí-* |
| | ‘cut meat’ | *dùŋgùrɔ́* | *dùŋgùrù-lí-* |

I generally do not include superscript $^{L}$ word-internally in inflected verbs, but in theory one could write *lù$^{L}$-rí-*, etc., to bring out the tonomorphological structure.

Early *u*-Syncope applies extensively in this inflected form. In addition to the usual Early *u*-Syncope with semivowels (298a-b), we also get obligatory Early *u*-Syncope with light bisyllabics that have medial *l* (298c) or *n* (298d). The resulting underlying /lr/ and /nr/ clusters are realized as geminate *ll* and *nn*, respectively, by Sonorant Assimilation (§3.6.3.7).

(298)

| | gloss | imperative | perfective negative |
|---|---|---|---|
| a. | ‘shoot’ | *táyá* | *tày-rí-* |
| | ‘buy’ | *ɛ́wá* | *ɛ̀w-rí-* |
| b. | ‘go back’ | *bíríyó* | *bìrìy-lí-* |
| c. | ‘do well’ | *céló* | *cèl-lí-* |
| | ‘put’ | *kúló* | *kùl-lí-* |
| d. | ‘go up’ | *ùnɔ́* | *ùn-ní-* |

When the medial consonant is a peripheral nasal {*m ŋ*}, including *m* from underlying /w$^{n}$/, Early *u*-Syncope creates the awkward clusters /mr/ and /ŋr/, which are realized as /mbur/ and /ŋgur/ or reduced variants thereof, including (re-)syncopated /mr/ and /ŋr/ (but not allowing Forward Nasalization of the *r*). For the phonology, see §3.6.2.1.

(299)

| | gloss | imperative | perfective negative |
|---|---|---|---|
| a. | 'look for' | *y$^{n}$òmó* | *y$^{n}$òmbù-rí-* ~ *y$^{n}$òm-rí-* (etc.) |
| | 'laugh' | *mɔ̀:* | *mɔ̀mbù-rí-* ~ *mɔ̀m-rí-* (etc.) |
| | (underlying combining form /mɔ̀w$^{n}$ú/) | | |
| | 'die' | *núw$^{n}$ó* | *nùmbù-rí-* ~ *nùm-rí-* (etc.) |
| b. | 'sit' | *dìŋé* | *dìŋgù-rí-* ~ *dìŋ-rí-* (etc.) |

A stem-final *m* (after syncope) combines unproblematically with suffix-initial *l* in the allomorph *-lí-* used after long (i.e. more than bimoraic) stems: *pìlù-m-lí-* 'did not cause to be white'.

When the light bisyllabic stem has a medial rhotic, the rhotic combines with the suffixal consonant to produce ungeminated *l*. Here two analyses are possible. The first analysis would posit straight phonological derivations /rr/ > *l* and /r$^{n}$r/ > *l*. The most reasonable implementation of this would be Rhotic Dissimilation (§3.6.3.5) converting the final /r/ to *l*, followed by deletion of the first rhotic before this *l* (Rhotic Deletion, §3.6.3.6). In the second analysis, which is parallel to the analysis suggested for the use of imperfective allomorph *-tɔ̀-* after these same rhotic-medial verb stems, the idea would be that the medial rhotic in the stem blocks a rhotic-initial suffix allomorph, forcing a default to the alternative perfective negative allomorph *-lí-*. In any event, the data are in (300).

(300)

| | gloss | imperative | perfective negative |
|---|---|---|---|
| a. nonnasal rhotic | | | |
| | 'come' | *yèrí* | *yè-lí-* |
| | 'get' | *bèrá* | *bè-lí-* |
| | 'bite' | *cérá* | *cè-lí-* |
| b. nasalized rhotic | | | |
| | 'encounter' | *dìr$^{n}$á* | *dì-lí-* |
| | 'call' | *sór$^{n}$ó* | *sò-lí-* |

Because of the extended range of Early *u*-Syncope (§3.6.2.2) in this inflection (e.g. with *Cvnv-* stems), and because the *l* of the allomorph *-lí-* is not susceptible to nasalization, Forward Nasalization (§3.6.1.1) applies in a somewhat smaller set of forms than in other relevant suffixal categories. We do, however, see it after the sole *Nv-* monosyllabic verb (301a), after the sole *Cv$^{n}$* monosyllable (301b), and after all *Cvy$^{n}$v* stems, which syncopate before the suffix (301c).

(301)

| | gloss | imperative | perfective negative |
|---|---|---|---|
| a. | ‘drink’ | *né* | *nì-rⁿí-* |
| b. | ‘be ripe’ | *péⁿ* | *pèⁿ-rⁿí-* |
| c. | ‘steal’ | *gùyⁿó* | *gùyⁿ-rⁿí-* |
| | ‘build’ | *màyⁿá* | *màyⁿ-rⁿí-* |

Forms with irregular verbs are in (302). A rhotic syllable (*rv*) is deleted by syncope followed by Rhotic Deletion.

(302)

| | gloss | imperative | perfective negative |
|---|---|---|---|
| a. | ‘go to’ | *yá* | *bò-lí-* (cf. combining form *bòrú-*) |
| b. | ‘bring’ | *zérì* | *zê:-lí-* (cf. combining form *zê:rú*) |

The 3Sg subject form is uncontracted *-rí-wɔ́* or *-lí-wɔ́* (303c-d). The 3Pl subject form is usually *-r-é=bɛ́* or *-l-é=bɛ́* (303e-f).

(303) a. *m̀* *ù-lí*
1SgSbj get.up-PfvNeg
‘I did not get up.’ (*úró*)

b. *m̀* *ɔ́* *wɔ̀w-rí*
1SgSbj 3SgObj kill-PfvNeg
‘I didn’t kill him.’ (*wɔ̌:*)

c. *yè-lí-wɔ́*
come-PfvNeg-3SgSbj
‘He/She did not come.’ (*yèrí*)

d. *àtê:* *zê:-lí-wɔ́*
tea bring-PfvNeg-3SgSbj
‘He/She brought the tea.’ (*zérì*)

e. *ìní* *jìró* *lèy-r-é=bɛ́*
here sleep sleep-PfvNeg-3PlSbj=3PlSbj
‘They didn’t sleep here.’ (*léyó*)

f. *ù-l-é=bɛ́*
get.up-PfvNeg-3PlSbj=3PlSbj
'They did not get up.' (*úrú*)

g. *nù-m*$^{L}$ *kà:* *lèy-rí* *ŋ́*
person-Pl$^{L}$ Rel sleep-PfvNeg Rel
'(the) people who didn't sleep'

### 10.1.2.3 Imperfective negative (*-r$^{n}$ý-*, *-ný-*)

Like some other AN suffixes, the imperfective negative has a shape *-Cý-* with variation in both the consonant and the vowel. The consonantism depends on the prosodic weight of the stem, the split in this case being between monosyllabic *Cý-* stems, which take *-r$^{n}$ý-*, and all heavier stems, which take *-ný-*. See §3.2.3 for the role of prosodic weight in verb-suffix allomorphy. The vowel of the suffix varies appears as {*a ɔ o*} depending on the vowel-harmonic class of the verb stem, here the full three-way contrast of {*ɛ a*} versus {*ɔ*} versus {*e o*}. The verb stem has its **combining form**, but undergoes **tone-dropping**.

Monosyllabics are illustrated in (304).

(304)

| | gloss | imperative | IpfvNeg |
|---|---|---|---|
| a. | 'shave' | *ká* | *kà-r$^{n}$á-* |
| | 'drink' | *nɛ́* | *nì-r$^{n}$á-* |
| | 'be tired' | *dɛ́* | *dɛ̀-r$^{n}$á-* |
| b. | 'roast' | *dɔ́* | *dɔ̀-r$^{n}$ɔ́-* |
| c. | 'take' | *só* | *sò-r$^{n}$ó-* |
| | 'exit' | *gó* | *gù-r$^{n}$ó-* |
| | 'bathe' | *dé* | *dì-r$^{n}$ó-* |

An unusual feature of this suffixal category is **Backward Nasalization** (§3.6.1.2), whereby the stem consonant of a ***Cv-* monosyllabic** is nasalized under the influence of the suffixal /r$^{n}$/. The effect is to nasalize initial /y/ to *y$^{n}$*, /w/ to *w$^{n}$*, and (more surprisingly) /l/ to *n*. One effect is to neutralize the distinction between 'eat' (imperative *lɛ́*) and 'drink' (imperative *nɛ́*) in the imperfective negative, both appearing as *nì-r$^{n}$á-*.

| (305) | | gloss | imperative | IpfvNeg |
|---|---|---|---|---|
| | a. | ‘weep’ | *yɛ́* | *yⁿì-rⁿá-* |
| | b. | ‘see’ | *wɔ́* | *wⁿɔ̀-rⁿɔ́-* |
| | c. | ‘enter’ | *ló* | *nù-rⁿó-* |
| | | ‘eat’ | *lɛ́* | *nì-rⁿá-* |

*(C)vC-* (the only case being *ów-* ‘give’) and all nonmonosyllabic stems have a basic suffix allomorph *-nv́-*, with surface variants *-ná-*, *-nɔ́-*, and *-nó-* depending on the vowel-harmonic class of the stem. Examples not involving Early *u*-Syncope are in (306). Backward Nasalization does not apply to these stems, hence the plain *r* in the stem for ‘cut meat’ and ‘begin’ (306e).

| (306) | | gloss | imperative | IpfvNeg |
|---|---|---|---|---|
| | a. | ‘give’ | *ów* | *òw-nó-* |
| | b. | ‘sit’ | *dìŋɛ́* | *dìŋù-nó-* |
| | | ‘fight’ | *zɔ̀ŋɔ́* | *zɔ̀ŋù-nɔ́* |
| | c. | ‘defecate’ | *bɔ̀sɔ́* | *bɔ̀sù-nɔ́-* |
| | | ‘stop’ | *ígó* | *ìgù-nó-* |
| | d. | ‘urinate’ | *ánná* | *ànnù-ná-* |
| | | ‘throw’ | *dà:ⁿsá* | *dà:ⁿsù-ná-* |
| | e. | ‘begin’ | *dɛ̀wrá* | *dɛ̀wrù-ná-* |
| | | ‘cut meat’ | *dùŋgùrɔ́* | *dùŋgùrù-nɔ́-* |

**Early u-Syncope** (§3.6.2.2) applies to bi- and trisyllabic verbs more or less as in other inflections. Examples showing the usual Early u-Syncope after semivowels and *m* (including *m* from /wⁿ/) are in (307). The syncope rule does not apply after to bisyllabic stems with *ŋ*, see (306b), above.

| (307) | | gloss | imperative | IpfvNeg |
|---|---|---|---|---|
| | a. | ‘shoot’ | *táyá* | *tày-ná-* |
| | | ‘buy’ | *ɛ́wá* | *ɛ̀w-ná-* |
| | | ‘steal’ | *gùyⁿó* | *gùyⁿ-nó-* |

| | | | |
|---|---|---|---|
| b. | ‘run’ | *zɔ̌:* | *zɔ̀w-nó-* |
| c. | ‘be ruined’ | *yⁿàwⁿá* | *yⁿàm-ná-* |
| | ‘look for’ | *yⁿòmó* | *yⁿòm-nó-* |
| b. | ‘go back’ | *bíríyó* | *bìrìy-nó-* |
| | ‘pick grains’ | *súgúmó* | *sùgùm-nó* |

In the imperfective negative, Early *u*-Syncope (§3.6.2.2) applies to bisyllabics with medial *l* or *n*. In the former case, the resulting /ln/ cluster surfaces as geminate *nn* by Sonorant Assimilation (§3.6.3.7).

(308)

| | gloss | imperative | IpfvNeg |
|---|---|---|---|
| a. | ‘put down’ | *dèlé* | *dèn-nó-* |
| | ‘put’ | *kúló* | *kùn-nó-* |
| | ‘do well’ | *céló* | *cèn-nó-* |
| b. | ‘go up’ | *ùnɔ́* | *ùn-nɔ́-* |

Bimoraic *Cvrv-* and *Cvrⁿv-* verbs undergo Early *u*-Syncope (§3.6.2.2), then delete the rhotic (Rhotic Deletion, §3.6.3.6), deleting the stem-final rhotic syllable, resulting in *Cv̀-nv́-* (309a-b).

(309)

| | gloss | imperative | IpfvNeg |
|---|---|---|---|
| a. | ‘help’ | *bàrá* | *bà-ná-* |
| | ‘jump’ | *tóró* | *tò-nó-* |
| | ‘come’ | *yèrí* | *yè-nó-* |
| | ‘wait’ | *céré* | *cè-nó-* |
| b. | ‘do’ | *kárⁿá* | *kà-ná-* |
| | ‘call’ | *sórⁿó* | *sò-nó-* |

If the *Cvrv-* or *Cvrⁿv-* stem begins with *l*, it further undergoes **Backward Nasalization** (§3.6.1.2) to *n* under the influence of the suffixal *n*, which is now separated from it only by a vowel (310a). Oddly, stem-initial **semivowels are not nasalized** in the same phonological environment (310b).

(310)

| | gloss | imperative | IpfvNeg |
|---|---|---|---|
| a. | 'be hurt' | *lùrɔ́* | *nù-nɔ́-* |
| | 'give birth' | *làrá* | *là-ná-* |
| b. | 'measure' | *yàrá* | *yà-ná-* |
| | 'do farming' | *wàrá* | *wà-ná-* |

This differential treatment of /l/ and {*y w*} makes no sense synchronically. Backward Nasalization, to be sure, is a morphologically restricted process. However, semivowels are just as receptive as *l* to Backward Nasalization in monosyllabic stems in this same imperfective negative inflection, see (305) above, and within stems semivowels are even more susceptible to such nasalization than other consonants (including *l*). The synchronic mystery of the uneven application of Backward Nasalization in (310) does make sense historically: TT *lùrɔ́* 'be hurt' reflects *nùrɔ́ with initial *n, cf. Jamsay *nùrⁿɔ́* (dialectally *nùrⁿó*) 'pain'.

With 3rd person suffixes we get 3Sg *-rⁿ-ɔ́:* or *-n-ɔ́:* (311b) and 3Pl *-n-é=bɛ́* or *-n-é=bé* (311c).

(311).

a. *ìní* *ú* *lèy-nó*
here 2SgSbj sleep-IpfvNeg
'You-Sg don't sleep here.'

b. *ìní* *lɛ́* *nì-rⁿ-ɔ́:*
here meal eat-IpfvNeg-3SgSbj
'He/She doesn't eat (=won't eat) here.' (*lɛ́*)

c. *ìní* *lèy-n-é=bɛ́*
here sleep-IpfvNeg-3PlSbj=3PlSbj
'They don't sleep here.'

### 10.1.3 Stative forms of active verbs

Stance verbs like 'sit' have both active and stative forms, depending on whether they denote bounded kinetic processes ('sit down, take one's seat') or temporally unbounded states ('be sitting, be seated'). There are also a few defective quasi-verbs that always denote states and have no active forms. These are 'want', 'know', 'be (somewhere)', and 'have' (§11.2.2-5, §11.5.1). Adjectives make a functionally similar distinction by distinguishing deadjectival

inchoative verbs ('become ADJ', §9.4) from (stative) predicate adjectives (§11.4).

In morphosyntactic terms, the operational definition of **stative verb** is that a) the **perfective/imperfective opposition is neutralized**; b) **negation** is by a non-aspect-marking stative negative *-ŋ̀gó* or (for some quasi-verbs) by a suppletive negative stem ; and c) there is **no imperative or hortative** form.

By this definition, the **progressive** construction in *-cí dà* (§10.1.3.2) counts as stative, while other imperfectives do not. This is true even though the progressive typically denotea ongoing active processes.

### 10.1.3.1 Optional *Cv̀*-reduplication plus stative *dà* or *dɛ̌n dà*

Verbs may combine with a locational-existential 'be' quasi-verb *dà* (§11.2.2.1), which here functions as a stative auxiliary. Third-person subject forms are 3Sg *d-ɔ̌:* and 3Pl *dà=bɛ́*. If the verb stem begins with a consonant, it adds an **optional initial L-toned *Cv̀-* reduplication** (312a-b). The quality features of the first stem-syllable's vowel is copied onto the vowel of the reduplication. **Vowel-initial stems** usually do not (audibly) reduplicate (312c-e), but in some textual occurrences I did hear a reduplicated initial vowel with a faint glottal stop separating the identical vowels (312g). The stem takes its **combining form**. It preserves its lexical tone melody if unreduplicated, but /LH/-melody verbs like 'sit' in (312a) are {H}-toned if reduplicated.

This construction is common with stance verbs denoting positions (312). Watch out for the ambiguity (stative versus progressive) of English translations like 'be sitting'.

(312) a. *dì-díŋ́ú* *d-ɔ̌:*
**Rdp**-sit **be**-3SgSbj
'He/She is sitting (=in sitting position).' (*dìŋ́é*)
(varying with unreduplicated *dìŋ́ú d-ɔ̌:*, note the tones)

b. *ìsú* *dà=bɛ́*
lie.down **be**-3Pl
'They are lying down (=in prone position).' (*ìsé*)

c. *úrú* *d-ɔ̌:*
get up **be**-3SgSbj
'He/She is standing (=arisen).' (*úró*)

d. *ígú* *d-ǒ:*
stand **be**-3SgSbj
'He/She is standing (or: stopped).' (*ígó*)

e. *tò-tóríy* *dà*
**Rdp**-squat **be**
'It (=dog) is squatting.' (*tóríyó*)

f. *pù-púnó* *dà*
**Rdp**-lie.down **be**
'It (=dog) is curled up' (said of dog, cow, etc.).

g. *[bè* $^{HL}$*[yá-kàlà* *jèr$^{n}$à]* *ì-ígú* *dà*
[3PlPoss $^{HL}$[woman-new ceremony] Rdp-stand be
'Their marriage ceremony is standing (= is still performed).' (2004-2a.08) (phonetic [ìʔígídà])

The stative construction is also attested with verbs that ordinarily denote motion or other actions/events (e.g. 'die'), when describing the resulting state. 'Come' (combining form *yèrí*, §10.1.4.3) drops its rhotic syllable before *dà* (313a).

(313) a. *àyé* *yè* *dá* *má*
who? come **be** Q
'Who has come?'

b. *gú* *d-ǒ:*
exit **be**-3SgSbj
'He/She has gone out.'

c. *wɔ́* *nù-núm* *dà*
3SgSbj **Rdp**-die **be**
'(whether…) he/she has died (=is dead)' (*núw$^{n}$ó*), part of (454b) in §13.2.10

d. *àsí* *lɛ̀-lɛ́píy* *dà*
LogoSbj **Rdp**-be.stuck **be**
'(He said:) I am stuck.' (2004-1a.09) (*lɛ́píyá*)

Certain **transitive** verbs lend themselves semantically to stative usage, for example verbs of holding and carrying, and verbs denoting durative activities like 'have fun'. To produce a stative, such verbs require an element *dɛ̌n* preceding *dà*. I have not observed reduplication of the primary verb preceding

*dĕn dà*. I will gloss *dĕn* as "Tr[ansitive]" in interlinears, for lack of a more transparent gloss (it occurs only before *dà*). However, *dĕn* could be taken to be a verb morphologically (with the preceding verb chained to it). Given the prevalence of *l* ~ *n* alternations in TT, one might explore the possibility of an etymological connection with *dèlé* 'put down' (cf. Jamsay *dè:né*). Examples are in (314). (314c) includes both an intransitive *dà* clause and a transitive *dĕn dà* clause.

(314) a. *béré* *ŋ̀* *wăw* *dĕn* *dà*
stick 1SgSbj carry.on.shoulder **Tr** **be**
'I am carrying (=holding) a staff (=stick) on my shoulder.'

b. *yⁿà-mú* *jèsú* *dí* *dĕn* *dà*
woman-Pl basket carry.on.head **Tr** **be**
'The women are carrying baskets on their heads.'

c. *[yá* *[[àlà*$^{L}$ *cín]* $^{HL}$*nû-m* *yà:fú:]*
[there [[village$^{L}$ DemPl] $^{HL}$person-Pl all
*cènà* *cénú* *lá* *d-è]*
fun have.fun stay.up be-3PlSbj]
*[cénú* *dĕn* *d-è* *[nùndérⁿá* *sóyⁿ]]*
[have.fun **Tr** **be**-3PlSbj [day seven]
'All the people of those villages there were staying up at night having fun, they were having fun for seven days.' (2004-1b.01)

For other transitive verbs that do not lend themselves to this stative function, the form in *dĕn dà* occurs occasionally in texts, but the initiating event denoted by the verb must have been completed. In other words, it expresses the resulting state, and can often be translated as a perfect.

(315) *zákà* *ìndêy* *kà:yŭŋ* *tíw* *dĕn* *d-è*
lo! over.there bee send **Tr** **be**-3PlSbj
'Lo, over there they had sent the honey bees.' (2004-1b.01)

See also (189a) in §6.6.2.

The constructions with *dà* and with *dĕn dà* are used more widely in subject-focus and subject relative clauses, where they often replace the perfective-1 of corresponding main clauses. See §13.1.3.2 (focalization) and §14.1.8 (relatives).

### 10.1.3.2 Progressive with *-cí dà* or *-cí là*

A progressive construction consists of a morpheme *-cí* ~ *-kí* that is suffixed to the **combining form** of the basic verb, whose **tones drop** to {L}, followed by *dà* 'be' for some speakers and by *là* for other speakers. *là* is perhaps interpreted by the relevant speakers as the imperfective *là* for 'go to'. *-cí* ~ *-kí* is replaced by *-kù* in the corresponding negative construction (*kù-ŋ̀gó*, §10.1.3.3).

The progressive construction occurs with verbs denoting activities that can be prolonged. Some examples showing the form of the verb are in (316). 'Bring' (combining form *zê:rú* ) drops all tones before *-cí*.

(316)

| gloss | imperative | progressive |
|---|---|---|
| 'shave' | *ká* | *kà-cí dà* |
| 'dance' | *jɛ́* | *jì-cí dà* |
| 'sweep' | *zàtá* | *zàtù-cí dà* |
| 'do' | *kár$^{n}$á* | *kàr$^{n}$ù-cí dà* |
| 'go to' | *yá* | *bòrù-cí dà* |
| 'come' | *yèrí* | *yèrì-cí dà* |
| 'bring' | *zérì* | *zè:rù-cí dà* |
| 'go' | *yàyá* | *yày-cí dà* |
| 'call' | *sór$^{n}$o* | *sòr$^{n}$ù-cí dà* |
| 'go around' | *bàmá* | *bàm-cí dà* |
| 'be ruined' | *y$^{n}$àw$^{n}$á* | *yàm-cí dà* |
| 'cut (meat)' | *dùŋgùrɔ́* | *dùŋgùrù-cí dà* |

One could argue that *cí* is itself morphologically a verb, obligatorily chained to a preceding verb. However, the combination is rather frozen, as is suggested by the inter-speaker fluctuation between *dà* and *là*. The only phonologically similar verb known to me is transitive *cí\\cɛ́* with various senses in the 'cut' domain, specifically 'cut the throat of, slaughter' and 'cut out long section of (hide, to make shoes)', and more abstractly 'set, decide on (the date, for e.g. a wedding)'. It is difficult to connect the semantics of this stem with those of the stative construction.

Monosyllabic stems are exemplified in (317), longer stems in (318).

(317) a.

| *ŋ̀* | *wɔ̀-cí* | *dà* |
|---|---|---|
| 1SgSbj | see-Prog | be |

'I see (=am looking)' (*wɔ́*)

b. *jɛ́* *jì-cí* *d-ɔ̌:*
dance(n) dance-Prog be-3SgSbj
'He/She is dancing.' (*jɛ́*)

(318) a. *ŋ̀* *cìsù-cí* *dà*
1SgSbj respond-Prog be
'I respond.' (*císó*)

b. *cìsù-cí* *d-ɔ̌:*
respond-Prog be-3SgSbj
'He/She responds.'

c. *ɛ̀gù-cí* *d-ɛ̀=bɛ́*
listen-Prog be-3PlSbj=3PlSbj
'They listen' (*ɛ́gá*) (pronounced [*ɛ̀gkí*…])

The progressive arguably shares one unusual tonal property with the future *-yàrà-*. This is that the primary verb directly preceding *-cí* is {L}-toned; for discussion see §3.7.2.3. A preceding direct-object noun, such as a cognate nominal, has its usual tones; see *jɛ́* 'dance(n)' in (318b), above.

In narratives, a sequence of three or so iterated occurrences of a verb in this form indicates **extended prolongation** of an activity, often as precursor to a terminating event, as in (319).

(319) *[kùw$^{n}$á* *wó* *y$^{n}$òm-cí* *dà]* *[wó* *y$^{n}$òm-cí* *dà]*
[crane 3SgObj **seek-Prog** **be**] [3SgObj **seek-Prog** **be**]
*[wó* *y$^{n}$òm-cí* *dà],* *dìr$^{n}$ú-sà* *[kɔ̀* *à-nù$^{L}$* *kúnú]*
[3SgObj **seek-Prog** **be**], encounter-Pfv2 [DiscDef man-Sg$^{L}$ DefSg]
'Crowned crane (bird) searched and searched and searched (for him), (then) it (finally) encountered that man.' (2004-1a.04)

### 10.1.3.3 Negation of stative and progressive verbs (*ŋ̀gó*)

The stative negative suffix *-ŋ̀gó* replaces *dà* (and *là*) in the positive stative constructions described in preceding sections. It follows the combining form of the verb in the simple stative construction, and it follows *-kù* (replacing positive *-cí*) in the progressive. Suffix *-ŋ̀gó* is related to negative locational-existential quasi-verb *y$^{n}$á-ŋ̀gó* 'not be (somewhere), be absent, not exist' (§11.2.2.2). *-ŋ̀gó* may be followed by third person endings: 3Sg *-ŋ̀g-ɔ́:*, 3Pl *-ŋ̀gó=bɛ́*, NonhSg *-ŋ̀gó=kɔ́*, NonhPl *-ŋ̀gó=cɛ́*.

The stative construction with reduplication in the positive **omits the reduplication** in the negative (320). The verb stem is not tone-dropped before *-ŋ̀gó*.

(320) a. *ǹ* *dǐŋ-ŋ̀gó*
1SgSbj sit-StatNeg
'I am not sitting.' (*dìŋé*)

b. *úrú-ŋ̀gó=bɛ́*
get.up-StatNeg=3PlSbj
'They are not (standing) up.' (*úró*)

c. *tóríy-ŋ̀gó*
squat-StatNeg
'It (=nonhuman) is not squatting.' (*tóríyó*)

d. *dǐŋ-ŋ̀g-ɔ́:*
sit-StatNeg-3SgSbj
'He/She is not sitting.'

Negation of progressive *-cí dà* ~ *-cí là* is expressed by *kù-ŋ̀gó* following the combining form of the verb, which is not tone-dropped.

(321) a. *zàtú* *kù-ŋ̀g-ɔ́:*
sweep Prog-StatNeg
'I am not sweeping.' (*dìŋé*)

b. *ŋ̀* *kár$^{n}$ú* *kù-ŋ̀gó*
1SgSbj do Prog-StatNeg
'I am not doing.'

b. *ŋ̀* *jí* *kù-ŋ̀gó*
1SgSbj dance Prog-StatNeg
'I am not dancing.'

### 10.1.4 Irregular verbs

#### 10.1.4.1 'Go' (*yǎy/yàyá*) and 'go to' (suppletive *bɛ̀rɛ́-*, *bò-*, *là-*, *yá*)

*yàyá* (combining form *yǎy-* with regular syncope) is a pure intransitive 'go, go away' verb without an overt locational complement. Its paradigm is in (322).

(322)

| AN category | form |
|---|---|
| perfective-1a | *yǎy-wɔ̀rè-* |
| perfective-2 | *yǎy-sà-* |
| perfective negative | *yày-rí-* |
| imperfective | *yáy-rà-* |
| future | *yǎy-yàrà-* |
| imperfective negative | *yày-ná-* |
| imperative | *yàyá* |
| prohibitive | *yày-kú* |
| hortative (1Pl) | *áy yày-é́* |

In the transitive construction 'go to (a place)' with an overt locational, a distinct suppletive paradigm is used (323). Note in particular that *yá* is the imperative of this suppletive 'go to' paradigm, versus imperative *yàyá* for 'go' in (322) above.

(323)

| | |
|---|---|
| perfective (perhaps 1b) | *bɛ̀ré-* |
| perfective-2 | *bò-só-* |
| perfective negative | *bò-lí-* |
| imperfective (habitual) | *bó-tò-* |
| imperfective (progressive) | *là-* |
| future | *l`lâ:-* (geminate *ll*, beginning with low tone) |
| imperfective negative | *bò-nó-* |
| imperative | *yá* |
| prohibitive | *bòrù-kú, bò-lé* |
| hortative (1Pl) | *áy* $y^{n}$*ɛ̌:* |
| before *mà* 'and' | *yá mà, bòró mà, bèré mà* |

This suppletive paradigm includes a defective partial paradigm apparently based on combining form /bòrú-/, with an irregular perfective *bɛ̀ré-* (not to be confused with the verb *bɛ̀rá* 'get', combining form *bɛ̀rú-*). This *bɛ̀ré-* arguably functions as perfective-1b (which is typical of transitives), but it is difficult to segment. Perfective-2 *bò-só-* has an unusual {LH} overlay, a peculiarity shared with the perfective-2 of 'come' and 'see'; see (278) in §10.1.1.3.

The partial paradigm based on /bòrú-/ is complemented by forms based on *yá* (imperative, hortative, one variant of the form before subordinator *mà*), and by somewhat obscure (positive) imperfective and future forms beginning with *l*. Of the two competing imperfectives, *bó-tò-* occurs in habitual contexts while *là-* is progressive ('is on the way').

*là-* combines with the 3Sg suffix as *là-wɔ́* or contracted *l-ǎ:* or *l-ɔ̌:*. The 3Pl form is *l-ɛ̌:*, as in 3Pl *l-ɛ̀:=bɛ́*. The corresponding forms of future *l`lâ:-* (e.g. 3Sg *l`lâ:-wɔ́*) are interesting since a contraction here would be our only chance to see whether tritonal <HLH> is possible on a single syllable. The answer is no: the contracted forms elicited did not have a noticeable pitch drop in the middle, so <HLH> has flattened to H (§3.7.3.2). The contracted forms recorded are 3Sg *l`lɔ́:* and 3Pl *l`lɛ́:=bɛ́*.

### 10.1.4.2 'Bring' (*zê:rú* and variants)

The forms of this verb are in (324). Most are based on /zê:rú/, with a unique (for verbs) /HLH/ melody that reflects a fused chain of 'take' and 'come' (more clearly preserved in Donno So). Without the fusion, this combination still exists even in TT in the form of *zí* plus motion verb ('go' or 'come'), see §15.1.9.

The monosyllabic variant *ze:-* 'bring' occurs before coronial consonants; it reflects syncope of the final *u* followed by deletion of /r/ before the suffix-initial consonant. This phonology is slightly irregular, since syncope elsewhere applies only to bimoraic stems, i.e. *(C)vCv-* with two short vowels. The future is also unusual; one would expect something like #*zê:rí-yàrà-* but the actual form is *zí-yàrà-*. The imperative has a short *e* and a unique (for verbs) {HL} tone pattern. In the negative forms, whose suffixes normally force tone-dropping on the preceding stem, only the final H of /zê:rú/ has its tones lowered by the suffix, which is then realized either as *zê:-* (when the /r/ and /u/ are deleted) or as *zé:rù-* with the tone shift realigned at the syllable boundary.

(324)

| AN category | form |
|---|---|
| bare stem (in chains) | *zê:rú* |
| perfective-1a | *zê:rú-wòrè* |
| perfective-1b | *zê:rú-wɔ̀sì* |
| perfective-2 | *zê:-só* |
| perfective negative | *zê:-lí-* |
| imperfective | *zé:-tò-* |
| future | *zí-yàrà-* |
| imperfective negative | *zê:-nó-* |
| imperative | *zérì* |
| prohibitive | *zé:rù-kú*, *zê:r-ku* |
| hortative (1Pl) | *zê:r-é* |

#### 10.1.4.3 ‘Come’ (*yèrí*)

The imperative is *yèrí*, violating the usual rule that imperatives and related forms must end in a non-high vowel (compare *zérì* ‘bring!’).

The combining form, as used without suffixation in chains, is also *yèrí* (rather than *yèrú*). In the suffixal forms, it is difficult to determine whether the stem has the underlying form /yèrí/ or /yèrú/, since the final vowel is lost in most of the combinations by Early *u*-Syncope (§3.6.2.2), and since perfective-1a *yèrú-wòrè-* and future *yèrí-yàrà-* have semivowel-initial suffixes (the semivowel colors the preceding stem-final vowel).

The perfective-1a has an irregular contracted variant *yěw-wòrè-* alongside regular *yèrú-wòrè-*.

The perfective-2 *yè-só-* is tonally unusual, assuming /yèrú-sò-/ as the input before Early *u*-Syncope. The high tone of the syncopated vowel is seemingly transferred to the suffix. The stative *yè dá-* has similar form.

In the imperfective, the morphologically regular form *yé-tò-* is used in habitual contexts. An irregular form *yá-rà-* occurs in progressive and imminent-action (‘be coming, be on the way here’) contexts. As usual it drops tones after imperfective *á*, hence *á yà-rà* ‘be coming’.

#### 10.1.4.4 ‘Get, obtain’ (*bɛ̀rá*)

This verb shares some minor phonological oddities with ‘come’ and ‘see’. Early *u*-Syncope (§3.6.2.2) applies before perfective-2 *-sv̀-* (as with ‘come’ and ‘bring’). The resulting form *bɛ̀-sá-* (from /bɛ̀rú-sà-/) shows H-tone on the suffix, apparently transferred from the syncopated vowel.

The perfective-1b is *bɛ̌ː-sì-* for underlying /bɛ̀rú-wɔ̀sì-/. If this form is generated by phonological rule, it requires deletion of both *r* and *w* followed by *vv*-Contraction.

As a final verb in chains, *bɛ̀rá* means ‘can, be able to’ (§17.4.4).

#### 10.1.4.5 ‘See’ (*wɔ́*)

Like all other vowel-final monosyllabic verbs, this one has the shape *Cv́* in both imperative and combining form. However, there are some irregularities that look like vestiges of an original rising tone (*wɔ̌ː-). The perfective-2 is *wɔ̀-sɔ́-* with irregular LH tone pattern; all other *Cv́* stems have *Cv́-sv̀-* with falling tones. The perfective-1b is *wɔ̌ː-sì-*, with irregular <LH>L tone sequence, compare e.g. *dɔ̂ː-sì-* ‘roasted’ from *dɔ́-*.

Other forms are regular, i.e. are exactly parallel to those of *dɔ́* 'roast' and other *Cɔ́* verbs: imperative and combining form *wɔ́*, imperfective *wɔ́-rɔ̀-*, future *wɔ̂ː-rà-*, perfective negative *wɔ̀-rí-*, imperfective negative *wⁿɔ̀-rⁿɔ́-* (the latter shows the effects of Backward Nasalization, §3.6.1.2).

#### 10.1.4.6 'Eat' (*lɛ́*) and 'drink' (*nɛ́*)

These verbs are not irregular. Due to morphophonological processes, in the imperfective negative they merge as *nì-rⁿá-*. Even in this category, there is ordinarily no confusion, since both verbs normally take overt complements, the unmarked objects being *lɛ́* 'meal' for 'eat' and *ní* 'water' for 'drink'.

## 10.2 Pronominal paradigms for non-imperative verbs

### 10.2.1 Regular subject pronominal particles and suffixes

(325) shows the position of subject pronominals relative to the VP, which for present purposes is assumed to end in the conjugated predicate (verb or quasi-verb). The 1st/2nd person pronominals are clause-initial (except for some setting adverbs), while the third person pronominals are suffixed or encliticized to the predicate.

The third person subject pronominals are not used as agreement markers when the subject is already expressed by an overt NP (or independent pronoun) before the verb. In this respect, TT third-person subject pronominals are like those of English.

(325) Subject pronominals (main clauses)

| category | form | comment |
|---|---|---|
| 1Sg | *m̀* VP | *m̀* assimilates to a following *C* (hence *ŋ̀*, *ǹ*); full form *mí* is optional before an object. |
| 1Pl | *í* VP | |
| 2Sg | *ú* VP | |
| 2Pl | *á* VP | |
| 3Sg | VP-*wɔ́* | contracts with some preceding vowels |
| 3Pl | VP=*bɛ́* | preceding vowel shifts to *ɛ* or *e* |
| NonhSg | VP=*kɔ́* | zero agreement also possible |
| NonhPl | VP=*cɛ́* | preceding vowel shifts to *ɛ* or *e*; zero agreement also possible; |

In relative clauses, all subject pronominals are preverbal proclitics. They can be separated from the predicate only by the imperfective morpheme *á* and/or by a pronominal object, but they follow adverbs and nonpronominal objects, so they are not clause-initial except by accident (§14.1.6).

### 10.2.2 Final *e* or *ɛ* for plural (especially third person) subject

3Pl *=bɛ́* and NonhPl *=cɛ́* frequently co-occur with a variant of the inflectional suffix ending in *-e* (occasionally *-ɛ*) rather than in the suffix's vowel, adopting the tone of the deleted vowel. I transcribe this as a suffix and gloss it "3PlS" in interlinears. It likely originated as an assimilation to the vowel of *=bɛ́* or *=cɛ́*, but the vocalic change is now autonomous, and occurs optionally **whether or not** the final *=bɛ́* or *=cɛ́* **is present** as long as the subject is in one of the relevant third person plural categories (human or nonhuman). The vocalic change is also sporadically found in combination with **first or second person plural**. This *-e* is best thought of as an **ablaut mutation** rather than a suffix, and can be compared with other cases where singular forms with back vowels are opposed to plural forms with front vowels, notably among determiners (demonstratives and definites).

In (326), the *-e* form is shown with (human) 3Pl *=bɛ́*.

(326)

| category | suffix | with 3Pl *=bɛ́* (assimilated) |
|---|---|---|
| Pfv1a | *-wòrè* | *-wòr-è=bɛ́* |
| | *-wɔ̀rè* | *-wɔ̀r-è=bɛ́* |
| Pfv1b | *-wòsì* | *-wòs-è=bɛ́* |
| | *-wɔ̀sì* | *-wɔ̀s-è=bɛ́* |
| PfvNeg | *-rí* | *-r-é=bɛ́* |
| future | *-yàrà* | *-yèr-è=bɛ́* |
| | | *-yèr-è=bɛ́* |
| | [Suffix-to-Suffix Vocalic Assimilation, §3.5.4] | |
| imperfective | *-rò- ~ -rɔ̀- ~ -rà-* | *-r-è=bɛ́* |
| IpfvNeg | *-nó ~ -nɔ̀ ~ -nà* | *-né=bɛ́* |

The allomorphs in the "suffix" column are determined by the ATR-harmonic category of the preceding verb stem. The mutated *e*, however, does not have an *ɛ* variant. Variations in suffix-initial consonants are disregarded here.

Thus (human) 3Pl-subject perfective-1b *tórú-wòsì=bɛ́* 'they jumped' and *dɔ̀rú-wɔ̀sì=bɛ́* have variants *tórú-wòs-è=bɛ́* and *dɔ̀rú-wɔ̀s-è=bɛ́*, respectively. There is another option: without the final *=bɛ́* they are still optionally pronounced as *tórú-wòs-è* and *dɔ̀rú-wɔ̀s-è*, which index a third person plural subject (either human or nonhuman).

For 3Pl *jìrⁿ-é* 'they are not' from *jìní*, see end of §11.2.2. For a similar final-vowel mutation in loose verb chains, see (504-505) in §15.1.5.

## 10.3 Temporal particles outside of the verb

### 10.3.1 Past *nɔ̀* following predicate

An invariant particle *nɔ̀* may follow a verb or other predicate (including statives) to indicate past time reference. It has low text frequency, especially for active verbs, but it can be readily elicited with any type of predicate. The past particle is common with stative verbs ('have', 'be sitting'), and with predicate nouns and adjectives ('be X' with zero copula), since such predicates make no perfective/imperfective opposition.

(327) a. *órú* *ǹ* *sá* *nɔ̀*
field 1Sg have Past
'I had a field.'

b. *dìŋgú* *d-ɔ̌:* *nɔ̀*
sit be-3SgSbj Past
'He/She was sitting.' (*dìŋɛ́*)

c. *m̀ᵇí* *wàrà*$^{L-H}$ *[wá-nú]* *nɔ̀*
1SgSbj farming$^{L-H}$[do.farming.Agent-Sg] Past
'I was (=used to be) a farmer.'

d. *á* *lì-r-è=bɛ́* *nɔ̀*
Ipfv eat-Ipfv-3PlSbj=3PlSbj Past
'They used to eat'

The past particle is not common in my texts with active verbs. These verbs distinguish perfective from imperfective, and the perfective is generally understood to have past time reference. However, imperfective active verbs may

combine with *nɔ̀* to produce a past imperfective ('was VP-ing') or past habitual ('used to VP') (328a). Perfective active verbs combine with *nɔ̀*, rarely, but this time the sense is **past perfect** ('had VP-ed'). The perfective-2 (not perfective-1) is used in this context (328b).

(328) a. *[sɔ́ːrɔ̀ kù] á lèy-r-ɔ̌ː nɔ̀*
[upstairs in] Ipfv sleep-Ipfv-3SgSbj Past
'He/She was sleeping (or: used to sleep) upstairs.'

b. *lɛ́ lí-s-è=bɛ́ nɔ̀*
meal eat-Pfv2-3PlSbj=3PlSbj Past
'They had eaten (a meal).'

### 10.3.2 Adverb *dɔ̂m* 'as of now, (not) yet' before or after predicate

Adverb *dɔ̂m* means '(as up, up to) now', implying a nonpermanent situation. It may occur clause-initially, before the subject, or it may occur after the predicate.

It is most common in negative utterances where the sense is 'not yet' (329).

(329) a. *dɔ̂m mí [nàŋà*$^{L}$ *kúnú] pàgù-rí*
**yet** 1SgSbj [cow$^{L}$ DefSg] tie-PfvNeg
'I have not yet tied the cow.'

b. *mí [nàŋà*$^{L}$ *kúnú] pàgù-rí dɔ̂m*
1SgSbj [cow$^{L}$ DefSg] tie-PfvNeg **yet**
[=(a)]

In positive utterances, the usual sense is 'for now, for the time being' (330).

(330) *mí [nàŋà*$^{L}$ *kúnú] á pàgù-rà dɔ̂m*
1SgSbj [cow$^{L}$ DefSg] Ipfv tie-Ipfv **for.now**
'I am tying the cow for now.'

## 10.4 Imperatives and hortatives

The bare stem ending in a non-high vowel, here called the imperative stem, is also used before the same-subject 'and' subordinators *mà* and *=m̀* (§15.1.4-5), and at the end of one type of *hálì* 'until' clause (§15.2.2.2).

### 10.4.1 Positive imperative

Positive imperatives with **singular addressee** are expressed by an unsuffixed form that preserves lexical tone melodies. As a reminder, the melody is /H/ for *Cv-* stems (331a), and either /H/ or /LH/ for longer stems (except /HLH/ 'bring'), with /H/ required after voiceless obstruents (331b) and /LH/ generally required after voiced obstruents (331c).

(331) Singular-addressee imperative (positive)

| gloss | imperative |
|---|---|
| a. *Cv* stems | |
| 'go' | *yá* |
| 'exit' | *gó* |
| 'wrestle' | *pó* |
| 'arrive' | *dɔ́* |
| 'be tired' | *dɛ́* |
| 'eat' | *lɛ́* |
| b. /H/-melody nonmonosyllabics | |
| 'give' | *ów* |
| 'stop' | *ígó* |
| 'get up' | *úró* |
| 'go down' | *sígó* |
| 'do well' | *céló* |
| 'wait' | *céré* |
| 'hit' | *téwá* |
| 'tie' | *págá* |
| 'jump' | *tóró* |
| 'call' | *sóró* |
| 'reply' | *kísó* |
| 'speak' | *tégó* |

c. /LH/-melody nonmonosyllabics

| | |
|---|---|
| ‘kill’ | *wǒ:* |
| ‘go up’ | *ùnɔ́* |
| ‘lie down’ | *ìsé* |
| ‘chase’ | *nàrⁿá* |
| ‘get old’ | *yɔ̀wɔ́* |
| ‘sit’ | *dìŋé* |
| ‘put down’ | *dèlé* |
| ‘work’ | *bìrá* |
| ‘get’ | *bɛ̀rá* |
| ‘go back’ | *bìrìyó* |
| ‘cut meat’ | *dùŋgùrɔ́* |

Although the imperative is unsuffixed, it is distinct from the combining form used in chains and before nonzero AN suffixes. The imperative **ends in a non-high vowel** (except for a couple of irregular verbs), while the combining form always ends in a high vowel (which may be zeroed, leaving a stem-final sonorant). The imperative is useful as a citation form since it expresses the ATR-harmonic status of the stem, which is based on a core distinction of {*ɛ ɔ*} (also associated with *a*) versus {*e o*} harmonic pairs. However, in some cases one could argue that the final vowel of the imperative is shifted from a lexical vowel.

Monosyllabic *Cv-* verbs may have any vowel other than high *i* or *u*, hence {*e ɛ a ɔ o*}. In bimoraic bisyllabics *(C)vCv-*, the vowel patterns in (332) are observed.

(332)

| | example | gloss |
|---|---|---|
| a. identical vowels | | |
| *a…a* | *nàrⁿá* | ‘chase’ |
| *o…o* | *tóró* | ‘jump’ |
| *ɔ…ɔ* | *sɔ́wɔ́* | ‘jab’ |
| *e…e* | *céré* | ‘wait’ |
| #*ɛ…ɛ* | — | [(see *ɛ…a* in (c)] |

b. high vowel plus non-high vowel

| | | |
|---|---|---|
| *i…a* | *bìrá* | ‘work’ |
| *i…o* | *sígó* | ‘go down’ |
| #*i…ɔ* | — | |
| *i…e* | *ìsé* | ‘lie down’ |
| #*i…ɛ* | — | |
| #*u…a* | — | |
| *u…o* | *lùwó* | ‘fall’ |
| *u…ɔ* | *ùnɔ́* | ‘go up’ |
| #*u…e* | — | |
| #*u…ɛ* | — | |

c. two distinct non-high vowels

| | | |
|---|---|---|
| *e…o* | *léyó* | ‘sleep’ |
| *ɛ…a* | *bɛ̀rá* | ‘get’ |
| (others) | — | |

Of special interest are the two patterns in (332c), both of which are common. *e…o* is more frequent than *e…e*, and *ɛ…a* is the only pattern possible for a bisyllabic with initial-syllable *ɛ*. Note also that in (332b), *i* may be followed by any of {*a e o*}, with *a* likely reflecting *ɛ, while *u* can only be followed by another back rounded vowel. In other words, there is a tendency to favor stem-final low vowels and back rounded vowels at the expense of front unrounded vowels (*e ɛ*).

Irregular imperatives are in (333).

(333)

| | gloss | imperative |
|---|---|---|
| a. | ‘come’ | *yèrí* |
| b. | ‘go to’ (suppletive) | *yá* |
| c. | ‘bring’ | *zérì* |

Sentence examples are in (334).

(334) a. *[nàŋà*$^{L}$ *ŋ̀gú]* *págá*
[cow$^{L}$ DemSg] tie.Imprt
‘Tie-2Sg that cow!’

b. *[bɛ̀lù*$^{L}$ *ŋ̀gú]* *cɛ́*
[sheep$^{L}$ DemSg] slaughter.Imprt
‘Slaughter-2Sg the sheep-Sg!’

A **plural-addressee** positive imperative is formed by adding to the (singular) imperative the 2Pl pronominal *á* in its normal clause-initial subject position. Compare the singular (335a) with its plural (335b). Another plural example, with direct object between subject pronominal and verb, is (335c).

(335) a. *dìŋé*
sit.Imprt
'Sit-2Sg down!'

b. *á* *dìŋé*
2PlAddr sit.Imprt
'Sit-2Pl down!'

c. *á* *[nàŋà*$^{L}$ *ŋgú]* *págá*
2PlAddr [cow$^{L}$ DemSg] tie.Imprt
'Tie-2Pl that cow!'

The supposed covert 2Sg subject of an imperative is treated for referential purposes as absent. In particular, it cannot serve as antecedent of a reflexive possessor on an object NP. This is true of prohibitives as well as positive imperatives. See (611a-c) in §18.1.1.1 for examples and discussion. Hortatives have a different treatment since they have both an addressee (with the same plural-addressee construction as imperatives) plus a true 1Pl subject that can bind reflexives.

For quoted imperatives, see §17.1.3.1. For 'until' constructions containing imperatives (or verb forms identical to imperatives), but not involving commands, see §15.2.2.2-3. For imperatives in a purposive construction, see (596) in §17.5.2.

### 10.4.2 Prohibitive (*-kú*, *-lé* ~ *-ré* ~ *-lɛ́* ~ *-rɛ́*)

A **prohibitive** (negative imperative) for singular addressee is formed by adding either of two suffixes to the combining form of the verb. One is *-kú*, which forces tone-dropping on the preceding stem. The other is *-lé* ~ *-ré*, with variants *-lɛ́* and *-rɛ́* if required by vowel harmony. Here the stem preserves its lexical tone, except that verbs with rising /LH/ melody have the tone break at the suffix boundary. The allomorph with *l* is used after heavy stems (e.g. trisyllabics). The allomorph with *r* is used after monosyllabic and light bisyllabics, i.e. *Cv-* and *(C)vCv-*, but the *(C)vCv-* verbs allow syncope, followed by the reduction of /r$^{n}$l/ or /rl/ to *l*. Some examples of the *-kú* and *-lé*

~ *-ré* prohibitives are given in (336), with the positive imperative stem shown in parentheses after the translation.

(336) a. *yèr-kú*
*yè-lé*
come($^{L}$)-Proh
'Don't-2Sg come!' (*yèrí*)

b. *gù-kú*
*gú-ré*
exit($^{L}$)-Proh
'Don't-2Sg go out!' (*gó*)

c. *sìg-kú*
*sígú-ré*
go.down($^{L}$)-Proh
'Don't-2Sg go down!' (*sígó*)

d. *mə̂m* *mɔ̀m-kú*
" *mɔ̀m-ré́*
laughter laugh($^{L}$)-Proh
'Don't-2Sg laugh!' (*mɔ̌:* < /mɔ̀w$^{n}$ɔ́/)

e. *[bɛ̀l* *ŋ̀gú]* *cì-kú*
" " *cí-ré́*
[sheep$^{L}$ DemSg] slaughter($^{L}$)-Proh
'Don't slaughter the sheep-Sg!' (*cɛ́*)

Forms of *-kú* with suppletive and other irregular verbs are *bòr-kú* 'don't go (to …)', *zé:rù-kú* 'don't bring!', and *wɔ̀-kú* 'don't see!' A sampling of forms of *-lé* ~ *-ré* is in (337).

(337)

| gloss | imperative | prohibitive |
|---|---|---|
| a. monosyllabic and light bisyllabic | | |
| 'eat' | *lɛ́* | *lí-ré́* |
| 'drink' | *nɛ́* | *ní-r$^{n}$ɛ́* |
| 'enter' | *ló* | *lú-ré́* |
| 'run' | *zɔ̌:* | *zɔ̀w-ré́* |
| 'go up' | *ùnɔ́* | *ùnù-ré́* |

b. trisyllabic stems

| | | |
|---|---|---|
| ‘go back’ | *bìrìyó* | *bìrìy-lé* |
| ‘rub (eyes)’ | *lìgìsó* | *lìgìsì-lé* |
| ‘wipe’ | *súŋgúrɔ́* | *súŋgúrú-lɛ́* |

c. with /r$^{n}$l/ or /rl/ simplifying to *l*

| | | |
|---|---|---|
| ‘do’ | *kár$^{n}$á* | *ká-lɛ́* |
| ‘come’ | *yèrí* | *yè-lé* |

d. with /lr/ assimilating to *ll*

| | | |
|---|---|---|
| ‘look’ | *èlá* | *èl-lɛ́* |

e. irregular verbs

| | | |
|---|---|---|
| ‘bring’ | *zérì* | *zê:-lé* |
| ‘go to’ | *yá* | *bò-lé* |
| ‘see’ | *wɔ́* | *wɔ́-rɛ́* |

A **plural-addressee prohibitive** is formed, as with the positive imperative, by adding 2Pl pronominal *á* (in the normal clause-initial subject position) to the prohibitive in *-kú*.

(338) a. *á* *yèrù-kú*
2PlAddr come$^{L}$-Proh
‘Don’t-2Pl come!’

b. *á* *mɔ̂m* *mɔ̀m-kú*
2PlAddr laughter laugh$^{L}$-Proh
‘Don’t-2Pl laugh!’

c. *á* *èl-lɛ́*
2PlAddr look-Proh
‘Don’t-2Pl look!’

### 10.4.3 Double imperative (‘go/come and …’)

Imperative verbs *yá* ‘go!’ and *yèrí* ‘come!’ may be used before another imperative VP: *yá [lɛ́ lɛ́]* ‘go eat a meal!’, *yèrí [nàw$^{n}$á kúwó]* ‘come eat meat!’

Other verbs require a different (chained) construction, as in *[dìŋɛ́ mà] [lɛ́ lɛ́]* ‘sit down and eat a meal!’ (lit., ‘having sat down, eat a meal!’).

### 10.4.4 Hortatives (*-yⁿé* ~ *-yⁿɛ́* or stem-final *e* ~ *ɛ*)

There is a special **hortative** verb form ('let's go!'). The suffix takes the form *-yⁿé* or *-yⁿɛ́* after monosyllabics, the choice depending on the vowel-harmonic status of the stem. For longer stems, *e* or *ɛ* replaces the stem-final vowel; this can be analysed as suffixation or as final-vowel mutation. Stems with {*ɛ a ɔ*} in the imperative have *ɛ* in the hortative suffix, those with +ATR {*e o*} in the imperative have *e*. The lexical tones of the stem are preserved. Representative forms are in (339).

(339)

| gloss | imperative | hortative |
|---|---|---|
| a. *Cv* stems | | |
| 'exit' | *gó* | *gú-yⁿé* |
| 'shave' | *ká* | *ká-yⁿɛ́* |
| 'drink' | *nɛ́* | *ní-yⁿɛ́* |
| b. *CvC* and contracted *Cv:* stems | | |
| 'give' | *ów* | *ów-é* |
| 'kill' | *wɔ̌:* (< /wɔ̀wɔ́/) | *wɔ̀-yɛ́* (or perhaps *wɔ̀y-ɛ́*) |
| c. nonmonosyllabics | | |
| 'go' | *yàyá* | *yày-ɛ́* |
| 'work' | *bìrá* | *bìr-ɛ́* |
| 'call' | *sórⁿó* | *sórⁿ-é* |
| 'sleep' | *léyó* | *léy-é* |
| 'hit' | *tɛ́wá* | *tɛ́w-ɛ́* |
| 'look' | *èlá* | *èl-ɛ́* |
| 'sit' | *dìŋɛ́* | *dìŋ-é* |
| 'go up' | *ùnɔ́* | *ùn-ɛ́* |
| 'dig' | *gàsá* | *gàs-ɛ́* |
| 'hear' | *égá* | *ég-ɛ́* |
| 'stop' | *ígó* | *íg-é* |
| 'begin' | *dɛ̀wrá* | *dɛ̀wr-ɛ́* |
| 'go back' | *bíríyó* | *bìrìy-é* |
| 'be finished' | *dùmù-lɔ́* | *dùmù-l-ɛ́* (2004-1a.10) |

**Backward nasalization** (§3.6.1.2) occurs in monosyllabics. A striking example is 'eat' (imperative *lɛ́*) which merges in the hortative with 'drink' (imperative *nɛ́*). The same pattern of Backward Nasalization was observed above in the imperfective negative (§10.1.2.3). For 'see' (340b), the stem has low tone as in some other inflections.

(340)

| | gloss | imperative | hortative |
|---|---|---|---|
| a. | ‘eat’ | *lɛ́* | *ní-yⁿɛ́* |
| | ‘enter’ | *ló* | *nú-yⁿɛ́* |
| b. | ‘see’ | *wɔ́* | *wⁿɔ̀-yⁿɛ́* |

Hortatives of **irregular verbs** are in (341). *yⁿɛ̌ː* is perhaps from *yà-yⁿɛ́ via backward nasalized *yⁿà-yⁿɛ́.

(341)

| | gloss | imperative | hortative |
|---|---|---|---|
| a. | ‘come’ | *yèrí* | *yèr-é* |
| b. | ‘bring’ | *zérì* | *zêːr-é* |
| c. | ‘go to’ | *yá* | *yⁿɛ̌ː* |

The first person inclusive hortative is expressed by clause-initial *á í* for **nonsingular addressee**, or just *í* for **singular addressee** (342c), cf. 1Pl pronoun *í* and 2Pl pronoun *á*. Because the 1Pl subject is overtly expressed, it is treated as a true referential subject for purposes of anaphora, see (613) in §18.1.1.1.

(342) a.
*á* *í* *bìr-é*
2PlAddr 1PlSbj work(v)-Hort
‘Let’s-2Pl work!’

b.
*á* *í* *dìŋ-é*
2PlAddr 1PlSbj sit-Hort
‘Let’s-2Pl sit!’

c.
*í* *ɛ́g-ɛ́*
1PlSbj hear-Hort
‘Let’s-2Sg hear (listen)!’

d.
*á* *í* *ɛ̀l-ɛ́*
2PlAddr 1PlSbj look-Hort
‘Let’s-2Pl look!’

e.
*á* *í* *yày-ɛ́*
2PlAddr 1PlSbj go-Hort
‘Let’s-2Pl go!’

f. *á* *í* *y$^{n}$-ɛ̌:* *[lú:mà* *kù]*
2PlAddr 1PlSbj go.to-Hort [market in]
'Let's-2Pl go to the market!.'

g. *á* *í* *nú-y$^{n}$é*
2PlAddr 1PlSbj enter-Hort
'Let's-2Pl go in!'

h. *á* *í* *gú-y$^{n}$é*
2PlAddr 1PlSbj exit-Hort
'Let's-2Pl go out!'

i. *á* *í* *lɛ́* *ní-y$^{n}$ɛ́*
2PlAddr 1PlSbj meal eat-Hort
'Let's-2Pl eat!'

For the hortative form in purposive clauses with final *ńdɛ̀*, see §17.5.2.

A **negative hortative** can be expressed by using the same *á í* (plural-addressee) or *í* (singular addressee) with a prohibitive (singular) verb.

(343) a. *á* *í* *yèr-kú*
2PlAddr 1PlSbj come-Proh
'Let's-2Pl not come!'

b. *í* *yèr-kú*
1Pl come-Proh
'Let's-2Sg not come!'

It is also possible to use simple **imperfective negatives** in negative hortative function. In this case there is no difference between singular and nonsingular addressee, both of which have regular 1Pl subjects.

(344) a. *í* *yày-ná*
1PlSbj go-IpfvNeg
'Let's not go!' (= 'We will not go.')

b. *í* *lɛ́* *nì-r$^{n}$á*
1PlSbj meal eat-IpfvNeg
'Let's not eat!' (= 'We will not eat.')

For quoted hortatives see §17.1.3.2. For hortative verb forms in purposive clauses, see §17.5.2.

### 10.4.5 Paired hortatives or imperatives in back-and-forth contexts

Two adjacent hortatives may form a construction functioning as a kind of abstractive verbal noun denoting back-and-forth actions. The combination is followed by a form of *kár$^{n}$á* 'do'. The textual examples involve sequentially antonymic (i.e. mutually reversive) pairs of motion verbs 'go and come' and 'enter and go out' (345a-b). In each case, both hortatives show intonational prolongation (→). Combinations involving other verb pairs, such as a verb and its morphological reversive, were elicitable (345d).

(345) a. *[[nú-y$^{n}$é→ gú-y$^{n}$é→] kàr$^{n}$-ú] dèn-ná=kɔ́*
[[enter-Hort exit-Hort] do-VblN] be.quiet-IpfvNeg=NonhSgSbj
'It goes in and comes out constantly.' (*ló*, *dèlá*) (2004-1a.10)
(lit. "It does not cease doing let's-go-in [and] let's-go-out")

b. *èsà-àrá [y$^{n}$ɛ̌:→ yèr-é→] á kà-là*
chicken-male [go.to.Hort come-Hort] Ipfv do-Ipfv
'Rooster was going back and forth.' (2004-1b.01)
(lit. "rooster is/was doing let's-go [and] let's-come")

c. *[cír-é→ síg-é→] [cír-é→ síg-é→] má-dógò*
[fly-Hort go.down-Hort] [fly-Hort go.down-Hort] only
'(grasshoppers keep doing) nothing but flying (a short distance) and landing, (and more) flying and landing' (2004-1b.03)

d. *[[nàŋà$^{L}$ kúnú] pág-ɛ́:→ págú-r-ɛ́:→] á kà-l-ɔ̌:*
[[cow$^{L}$ DefSg] tie-Hort tie-Revers-Hort] Ipfv do-Ipfv-3SgSbj
'He/She was tying and untying the cow.'

A variation on this is to use imperative 'go' and 'come' and end with *ní* 'just', see (519a) in §15.2.21.1.

### 10.4.6 Linear ordering of pronominal objects with imperatives

With a **singular-subject imperative positive** verb, a (nonlogophoric) **pronominal direct object** optionally (but quite often) **follows the verb** (346). The 1Sg form is *mí* with variant pronunciation *m̀$^{b}$ǐ*, which is also the form used as an independent pronoun. The other pronominal categories have forms

consistent with preverbal direct object function. In particular, the third person forms have open mid-height vowels {ɔ ɛ}.

(346) a. *tɛ́wá* *wɔ́*
hit.Imprt 3SgObj
'Hit-2Sg him/her!'

b. *tɛ́wá* *kɔ́*
hit.Imprt NonhSgObj
'Hit-2Sg it!'

c. *tɛ́wá* *bɛ́*
hit.Imprt 3PlObj
'Hit-2Sg them!'

d. *tɛ́wá* *m̀ᵇí*
hit.Imprt 1SgObj
'Hit-2Sg me!'

e. *tɛ́wá* *í*
hit.Imprt 1PlObj
'Hit-2Sg us!'

This ordering is rather strange, since in indicative clauses there is no constraint against clause-initial object pronominals: *bɛ́ tɛ́w-s-ɔ̌:* 'he/she hit them' (3Pl object *bɛ́*). Indeed, even in singular-subject imperative positive clauses, the pronominal object may alternatively precede the verb. Thus each example in (346) has a Doppelgänger of the type *wɔ́ tɛ́wá* 'hit-2Pl him/her!', cf. (346a).

The **singular-subject prohibitive** has the same linearization syntax as the corresponding positive form. Examples with the pronominal object following the verb are in (347).

(347) a. *tɛ̀w-kú* *wɔ́*
hit-Proh 3SgObj
'Don't-2Sg hit him/her!'

b. *tɛ̀w-kú* *m̀ᵇí*
hit-Proh 1SgObj
'Don't-2Sg hit me!'

In the less common ordering we get e.g. *wɔ́ tɛ̀w-kú* as an alternative to (347a).

In the **plural-subject imperative**, both positive and negative, a pronominal direct object **must follow the 2Pl subject morpheme** *á*. My assistant rejected proposed alternatives with a postverbal pronominal object, e.g. #*á tɛ́wá bɛ́* for (348a).

(348) a. *á* *bɛ́* *tɛ́wá*
2PlSbj 3PlObj hit.Imprt
'Hit-2Pl them!'

b. *á* *ǹ* *tɛ́wá*
2PlSbj 1SgObj hit.Imprt
'Hit-2Pl me!'

c. *á* *wɔ́* *tɛ̀w-kú*
2PlSbj 3SgObj hit-Proh
'Don't-2Pl hit him/her!'

The preferred position for a **nonpronominal direct object** is preverbal in both (positive) imperative and prohibitive (349a-c), as in indicative clauses. However, postverbal position was also accepted by my assistant, especially when the NP is somewhat heavy (349d).

(349) a. *[nènù*$^{L}$ *ŋú]* *tɛ́wá*
[dog$^{L}$ DemSg] hit.Imprt
'Hit-2Sg this dog!'

b. *nènú* *tɛ̀w-kú*
dog hit-Proh
'Don't-2Sg hit the dog!'

c. *[ì-r$^{n}$-ì:*$^{L}$ *ŋú]* *èlá*
[child-Sg$^{L}$-Dimin$^{L}$ DemSg] look.at.Imprt
'Look-2Sg at this child!.'

d. *èlá* *[ì-r$^{n}$-ì:*$^{L}$ *ŋú]*
look.at.Imprt [child-Sg-Dimin$^{L}$ DemSg]
[= (a)]

A **logophoric pronoun** (*àsí*, plural *àsí mǎ:*) is treated **like a noun** in this respect, and therefore precedes imperatives when it is in object function. My assistant accepted only preverbal position for *àsí* in (350). This suggests a noun-like status for *àsí*, which would be consistent with its form of pluralization (by

particle *mǎ:*). However, by definition the logophoric occurs only in quoted imperatives, which do not necessarily have the same structure as main-clause imperatives.

(350) *wó* *gá-sà* *[mí* *àsí* *téwá]*
3SgSbj say-Pfv2 [1SgSbj LogoObj hit.Imprt]
'He$_x$ told me to hit him$_x$.'

In **hortatives**, nonpronominal and pronominal object pronouns have their usual preverbal position. My assistant rejected postverbal position for the pronominal object in (351b). The key difference between imperatives and hortatives is that hortatives have true (1Pl) subjects while imperatives do not.

(351) a. *á* *í* *[bɛ̀l*$^{L}$ *ŋí]* *kíy$^{n}$-ɛ́*
2PlAddr 1PlSbj [sheep$^{L}$ DemPl] slaughter-Hort
'Let's slaughter these sheep!'

b. *á* *í* *kɛ́* *kíy$^{n}$-ɛ́*
2PlAddr 1PlSbj NonhPlObj slaughter-Hort
'Let's slaughter them!'

### 10.4.7 Imperative and hortative with third person (pseudo-)subject

A third person pronominal may appear before an imperative verb (352a). On the face of it, the third person pronominal has subject function, but it might also be taken as an indirect-discourse vocative (e.g. 'he' representing original 'hey you!'). When the third person reference is spelled out as a NP, it is topicalized, and when human or even animate it may appear in dative form, which strengthens the argument for an embedded quotation with implied 'say!' imperative, which we may try to capture with the formulaic literal translation "(Say) to the sheep, they (=vocative), go!" However, the topicalized NP is not always dative, especially when it denotes a less than sentient entity (352d).

(352) a. *[bɛ̌l* *dè]* *ké* *yàyá*
[sheep Dat] NonhPl go-Imprt
'The sheep-Pl must go!'
(= 'Let the sheep go!', 'May the sheep go!')

b. *[àrà*$^{L}$ *pàyní* *dè]* *wó* *ày$^{n}$á* *mìrá*
[man$^{L}$ old Dat] 3Sg medicine swallow.Imprt
'The old man should swallow the medicine.'

c. *bé* *gó*
3PlSbj exit.Imprt
'They must go out!.'

d. *[tòkù*$^{L}$ *kúnú]* *kó* *gó*
[waterjar$^{L}$ DefSg] NonhSg exit.Imprt
'The waterjar must go out(side)!'

Prohibitives are in (353).

(353) a. *[ì-m-í:* *dè]* *bé* *gù-kú*
[child-Pl-Dimin Dat] 3PlSbj exit-Proh
'The children must not go out!'

b. *ká* *[nù-ŋ*$^{L}$ *kà:* *[bɔ̀sɔ̀*$^{L}$ *ŋ̀gú]*
say [person-Sg$^{L}$ Rel [excrement$^{L}$ DemSg]
*bɔ̀sú* *bè-ná* *ŋ́* *kálá:],* *yěyyà*
defecate can-IpfvNeg Rel any], (warning)
*[[y$^{n}$à-r$^{n}$ù*$^{L}$ *ŋú]* $^{HL}$*zâŋ-∅]* *yè-lé*
[[woman-Sg$^{L}$ DemSg] $^{HL}$seek-VblN] come-ImprtNeg
'(Elephant said:) anyone who cannot defecate this (much) excrement should not (= tell him not to) come and court this woman!' (2004-1b.01)

### 10.4.8 Imperative with implied first person singular subject

In the context of uncertainty about an imperative (or sign) directed at oneself, one can inquire with a first person "imperative" as in (354). Again there is an implied quotation of the type "Did you say, 'me! (vocative), come!'?"

(354) *ǹ* *yèrí* *má→↑,*
1SgSbj come.Imprt Q
*ǹ* *yèr-kú* *má→*
1SgSbj come-Proh Q
'(That) I come, or (that) I not come?'

What looks like a first person (or logophoric, representing a quoted first person) imperative can occur in the context of wondering whether one should do something, or which of two alternative courses of action one should take.

(355) *lěy* *àsí* *kúwó* *má→↓*
two Logo **devour.Imprt** Q
‘(Hyena asked himself:) should I eat two (of them)?’ (2004.1a.07)

# 11 VP and predicate structure

## 11.1 Regular verbs and VP structure

The VP follows the subject and any preclausal or fronted constituents such as topical or focalized NPs. A VP itself consists centrally of a clause-final verb or quasi-verb plus any preceding arguments (e.g. direct objects) and adjuncts. Aspect, negation, and tense are expressed by AN suffixation on the verb.

### 11.1.1 Preverbal particles

#### 11.1.1.1 Imperfective (positive) particle *á* ~ *â:*

This particle is common in VPs that also contain a suffixally marked positive imperfective or future verb. It normally **directly precedes the verb**, following any preverbal pronominals and NPs. It can therefore be considered a **proclitic**.

Before a verb with **future suffix**, the form of the particle is consistently *á*, and there is no tonal effect on the verb. In most cases the verb in this combination begins with a low tone anyway (356a). However, even with monosyllabic verb stems (whose future form begins with a high tone), the *á* does not affect the tone of the verb (356b).

(356) a. *èsé [ǹ dé] á tòtí-yɔ̀r-ɔ́: má*
what? [1Sg Dat] Ipfv show-Fut-3SgSbj Q
'What will he/she show to me?'

b. *èsé á lí-yàrà=kɔ́ má*
what? Ipfv eat-Fut-NonhSgSbj Q
'What will it eat?'

Before a verb with **imperfective suffix**, most textual occurrences belong to one of two patterns. (Recall that the imperfective verb begins with H-tone on the stem). Both patterns involve a combination of an H-tone and an L-tone associated with the particle. First, the particle itself may take the form *â:* with long vowel and falling tone; this is followed by the verb with its usual tone, i.e. beginning with an H-toned stem (357a). Alternatively, the particle may take the short-voweled form *á*, with H-tone, but an immediately following imperfective

verb **drops its tones** (357b). I can find no clear semantic basis for the choice between the two patterns.

(357) a. *ìsó* *â:* *lí-rà=kɔ́*
earth **Ipfv** eat-Ipfv=NonhSgSbj
'It eats earth (=soil).' (2004-1b.03)

b. *yɔ̀rù*$^{L}$*-zègírè* *á* *kùw-rò=kɔ́*
cloth$^{L}$-rag Ipfv eat-Ipfv=NonhSgSbj
'It eats rags (of clothing).' (< *kúw-rò-*) (2004-1b.03)

*á* **occurs before a chained verb** that precedes the inflected verb. Two tonal treatments of imperfective chains are attested. In one, the particle takes the form *â:* or L-toned *à*, and both the chained verb(s) and the final imperfective verb have their regular tones (358a-b). In the second, H-toned *á* is followed by the chained verb in its regular tones, then by the final verb in tone-dropped form. This is usual in the 'be able' to construction with final verb *bɛ̀rá* as in (358c) and the positive imperfective examples in §17.4.4. The durative periphrasis with *tɔ́ŋ-rɔ̀* is attested with both patterns; compare (358a) to (290a-b) in §10.1.1.7.

(358) a. *[kó* *kày]* *sé:kɛ̌y* *cɛ́k* *à* *céŋúrú* *tɔ́ŋ-rɔ̀*
[NonhSg Top] Calotropis exactly Ipfv gnaw keep-Ipfv
'As for it (=grasshopper), it feeds strictly on *Calotropis* shrub.' (2004-1b.03)

b. *[kàsú* $^{L}$*wòrò]* *â:* *cɛ́rú* *pútú-kú-tò=kɔ́*
[calabash $^{L}$root] Ipfv bite break-Caus-Ipfv=NonhSgSbj
'It (=grasshopper) bites and severs the root of the gourd plant.' (2004-1b.03)

c. *á* *m$^{b}$èlú* *bɛ̀-tà*
**Ipfv** soar can-**Ipfv**
'it can soar' (excerpted from 288a)

*á* is sometimes absent before verbs with the future suffix (359).

(359) a. *dɛ̀:gá* *zá* *í* *lí-yàrà*
afternoon millet.cake 1PlSbj eat-**Fut**
'In the afternoon (=early evening) we will eat millet cakes.'

b. *sírà* *bírá* *m̀* *bìrí-yàrà* *ìní*
tomorrow work(n) 1SgSbj work(v)-**Fut** here
'I will work here tomorrow.'

c. *m̀* *ú* *tɛ̌w-wàrà*
1SgSbj 2SgObj hit-**Fut**
'I will hit you-Sg.'

d. *[nǎy$^{n}$* *kálá]* *ǹ* *zá* *lí-yàrà*
[day each] 1SgSbj millet.cake eat-**Fut**
'I eat millet cakes every day.'

*á* is used with *dà* ~ *dá* 'be (somewhere)', the combination appearing as *á dà*. It is obligatory in the absence of an overt locational (360b), and optional if *dà* ~ *dá* is preceded by an overt locational expression. It is not used before *dà* ~ *dá* if the subject is focalized (360c). Because aspect (imperfective, perfective) is not elsewhere marked on statives (see below), I gloss the proclitic in combination with *dà* ~ *dá* as **existential** rather than imperfective. It functions here as a more or less nonspecific 'there', suggesting that both existential and imperfective *á* are historical developments from *yá* '(discourse-definite) there' §4.4.4.1.

(360) a. *[àlá* *kù]* *(á)* *dà-wɔ́*
[village in] (**Exist**) be-3SgSbj
'He/She is in the village.'

b. *á* *d-ɔ̌:*
**Exist** be-3SgSbj
'He/she is present (e.g. here).'

c. *m̀bí* *kɔ̀* *ìní* *(#á)* *dà*
1Sg SFocSg here (#**Exist**) be
'It is I [focus] who am here.'

*á* is not used with other statives such as 'have' (361a), the special stative 'want' and 'know' verbs (361b-c, see §11.2.4-5), predicate adjectives (361d), or stative verbs plus *dà* 'be' (361e).

(361) a. *ǹ* *(#á)* *sá* *[bɛ̀rù* *túrú]*
1SgSbj (#**Ipfv**) have [sheep one]
'I have one sheep.'

b. *m̀$^{b}$* *(#á)* *ùkú*
1SgSbj (#**Ipfv**) know
'I know.'

c. *ní* *m̀$^{b}$* *(#á)* $^{HL}$*íwà*
water 1SgSbj (#**Ipfv**) $^{HL}$want
'I want some water.'

d. *ǹ* *(#á)* *sɛ́w*
1SgSbj (#**Ipfv**) fat
'I am fat'

e. *ìní* *ǹ* *(#á)* *dìŋú* *dà*
here 1SgSbj (#**Ipfv**) sit be
'I am sitting here.'

With active verbs, imperfective *á* may occur in focalized clauses (362a), in relative clauses (362b), and in conditional antecedent clauses (362c).

(362) a. *àyé* *ú* *á* *tɛ̀w-rà*
who? 2SgObj **Ipfv** hit-Ipfv
'Who is hitting you-Sg?'

b. *[nù-r$^{n}$ù*$^{L}$ *ú* *á* *tɛ̀w-rà* *ŋ]* *wɔ̀:-rà-wɔ́*
[person-Sg$^{L}$ 2SgObj **Ipfv** hit-Ipfv Rel] see-Ipfv-3SgSbj
'The person who is hitting you-Sg, he will see!'

c. *bé* *bírá* *á* *bì-tà* *má,*
3Pl work(n) **Ipfv** work(v)-Ipfv if,
*bɛ́* *hámnà* *kàr$^{n}$ù-kú*
3PlObj bother do-Proh
'If they are doing work (=working), don't-2Sg disturb them!'

Imperfective *á* does not occur under negation. This is brought out in (363), which has has parallel positive and negative clauses.

(363) *[nù-m*$^{L}$ *jérè]* *â:* *kúw-ròˆ,*
[person-Pl$^{L}$ some] **Ipfv** eat-Ipfv,
*[nù-m*$^{L}$ *jérè]* *kùw-nóˇ*
[person-Pl$^{L}$ some] eat-IpfvNeg
'Some people eat them (=grasshoppers), some (other) people don't.' (2004-1b.02)

### 11.1.2 Verb types (valency)

There is no accusative marking on NP objects. There is, however, a clear morphosyntactic distinction between subjects on the one hand, and objects and other nonsubject NPs on the other. The linear order S-O-V-X permits distinctions between subjects, objects, and other (e.g. adverbial) NPs. The most obvious morphological difference between subject and object is in third person pronouns, which in main clauses are postverbal clitics in subject function and preverbal clitics in object function (§4.3.2). The subject category also plays a role in interclausal syntax, e.g. VP chaining (chapter 15), and in anaphora (chapter 18).

Verbs can be intransitive or transitive. A typical transitive verb is 'see' in (364).

(364) *àrǎ-m* *y$^{n}$à-mú* *wɔ̀-sɔ́* *éwá*
man-Pl woman-Pl see-Pfv2 market
'(The) men saw (the) women in the market.'

The distinction between transitive and intransitive is blurred in Dogon languages by the presence of cognate nominals and other conventional object nouns, with little or no independent reference, that form many fixed collocations with verbs (§11.1.6.2).

**'Give' and 'show'** are ditransitive. The theme is the direct object. The indirect object (recipient) is expressed as a dative. The dative PP follows the verb (365a-b) if the NP complement is nonpronominal, and usually precedes the verb if it is pronominal (365c).

(365) a. *m̀* *búːdù* *ów-sò* *[sǎydù* *dè]*
1SgSbj money give-Pfv2 [S Dat]
'I gave (the) money to Seydou.'

b. *í* *mǎlpà* *tót-tó* *[[í* *$^{HL}$bá]* *dè]*
1PlSbj rifle show-Pfv2 [[1PlPoss $^{HL}$father] Dat]
'We showed the rifle to our father.'

c. *ɛ̀síː-túrú-kèy* *[ǹ* *dé]* *òw-rí-wɔ́*
nothing [1Sg Dat] give-PfvNeg-3SgSbj
'He didn't give me anything.'

The uninflectable **'say'** morpheme *ká* and the inflectable 'say' verb *gá-* also take dative complements; see (395f) in §11.3.3 and (227a) in §8.3.

There are also some collocations including a noun functioning as a kind of defective subject. In some cases the noun co-occurs with a true subject NP; see §11.1.5.

There is an issue whether **imperatives** have true underlying 2Sg or 2Pl subjects that, as in English, are inaudible. In English they can serve as antecedents for reflexive anaphors (*know thyself!*). In TT this is not true; see §18.1.1.1. On the other hand, the subordinator that normally indexes same-subject coindexation across chained clauses (or VPs), namely *mà* 'and.SS' (§15.1.4), can be used in imperatives, where (as usual) only the final verb is inflected: *[yá mà] yèrí* 'go and come (back)!'. However, the same-subject requirement is not strict with *mà*, so it is not a good test for imperative subjecthood.

### 11.1.3 Valency of causatives

Embedded subjects become direct objects when their clause is causativized, if there is no inherited true direct object (366).

(366) a. *m̀* *bɛ́* *dìŋì-ḿ-sò*
1SgSbj 3PlObj sit-Caus-Pfv2
'I had them (= people) sit down.' ('I seated them.')

b. *m̀* *ì-m-í:* *lí:-m-sà*
1SgSbj child-Pl-Dimin eat.meal-Caus-Pfv2
'I fed (a meal to) the children.'

If there is an inherited direct object, either one of the candidates for surface direct object appears in the usual preverbal position; the other follows the verb.

(367) a. *m̀* *ì-m-í:* *lí:-m-sà* *lɛ́*
1SgSbj child-Pl-Dimin eat.meal-Caus-Pfv2 meal
'I fed a meal to the children.'

b. *m̀* *lɛ́* *lí:-m-sà* *ì-m-í:*
1SgSbj meal eat.meal-Caus-Pfv2 child-Pl-Dimin
[(=a)]

### 11.1.4 Verb Phrase

The notion of VP, i.e. the clause minus the subject and minus AN inflection, is most useful in connection with interclausal syntax, and specifically with VP chaining (Chapter 15).

### 11.1.5 Fixed subject-verb combinations

Examples of collocations involving a fixed subject noun (usually unmodified) and a verb are in (368). These examples involve meterological, seasonal, and time-of-day events.

(368)

| noun | verb | gloss of collocation |
|---|---|---|
| a. verb not independently attested | | |
| *àrⁿá* 'rain' | *mùrú-* | 'rain fall' ('it rains') |
| *ìsú* | *sí-* | 'day break' (cf. *ìsú-* 'lie down, go to bed') |
| *yàrú* | *sí-* | 'cloudy weather (rainy season) begin' |
| b. verb independently attested | | |
| *yⁿà:ŋá* 'night' | *lú-* 'enter' | 'night fall' |
| *yàrú* | *yǎy-* 'go' | 'cloudy weather (rainy season) end' |

To a limited extent, these nouns can behave syntactically like subjects. For example, *yàrú*, a noun that occurs only in a small number of collocations like those in (368) involving transitions into and out of the rainy season, can function as subject for purposes of same-subject (SS) subordination (369). For *=m̀* see §15.1.5.

(369)

| *yàrú* | *sɛ́=m̀* | *gú-wòrè* |
|---|---|---|
| cloudy.weather | begin=and.SS | exit-Pfv1a |

'Cloudy weather (= rainy season) came and went.'

However, *yàrú* and *ìsú* are only weakly referential in these collocations.

Fixed subject nouns denoting body-parts occur in a few similar collocations. *célá* 'liver (and heart)', the seat of the emotions, occurs in two types of construction. In (370a), it is simply possessed by the human whose emotional state is described. This construction is unproblematic syntactically. In (370b), however, 'liver' occurs as an unpossessed noun separate from the subject NP. Originally (370b) meant something like 'my liver is red (i.e. hot with anger)', or perhaps '(my) liver is red on me' (French *le foie m'a rougi*).

But it is syntactically problematic since it seems to have two subjects, 'liver' (which turns red) and the 1Sg pronoun (experiencer). TT therefore makes a distinction between true (fully referential) subject and a secondary **pseudo-subject**.

(370) a. *[ǹ* $^{HL}$*cɛ́là]* *lìsí*
[1SgPoss $^{HL}$liver] pleasing
'I am happy.' (lit. "my liver is pleased")

b. *cɛ́lá* *m̀* *bǎn* *dà*
liver 1SgSbj become.red be
'I am angry.'

Same-subject subordinators treat the human experiencer as subject.

(371) *[cɛ́lá* *bàr$^{n}$á=m̀]* *ú* *yǎy-sà*
[liver become.red=and.SS] 2SgSbj go-Pfv2
'You-Sg got angry and went (away).'

It appears, then, that *cɛ́lá* in (370b) and (370) can function as subject only in connection with selectional restrictions on the verb, assuming that the sense 'liver become red' is still clearly understood by native speakers.

'Nosebleed' is expressed by a collocation with compound noun *cìr$^{n}$ò-dùr$^{n}$ú*, cf. *cìr$^{n}$ò-ká* 'nose' (which contains *ká* 'mouth'), and a verb *dùr$^{n}$ó*. The latter is also attested in the senses 'follow (tracks)' and 'go to visit (sb)', which have little connection semantically with nosebleeds except that outward directed motion is involved. For practical purposes, then, *cìr$^{n}$ò-dùr$^{n}$ú* and *dùr$^{n}$ó* are related as cognate nominal and verb. As with 'be angry', the real (human) subject is separate from the noun *cìr$^{n}$ò-dùr$^{n}$ú*.

(372) *cìr$^{n}$ò-dùr$^{n}$ú* *m̀* *á* *dù-tò*
nosebleed 1Sg Ipfv nose.bleed-Ipfv
'I have a bloody nose' ('My nose is bleeding')

For imperative "subjects" as another type of pseudo-subject, see (611a-c) in §18.1.1.1.

### 11.1.6 Idiomatic and cognate objects

#### 11.1.6.1 Noncognate objects

Aside from cognate nominals, where the verb and the noun share some phonological material (see the following section), there are numerous collocations involving a noun (usually the direct object) and a noncognate verb. In (373), the verb carries the basic meaning.

(373) a. *cír$^{n}$ó* *pór$^{n}$ɔ́*
snot blow.nose
'blow one's nose'

b. *ká* *kó*
mouth yawn
'yawn'

c. *kàlú* *tɔ́*
saliva spit
'spit'

d. *gɔ́nú* *gàgá*
snoring pull
'snore'

Further examples are *ní dé* 'bathe' (*ní* 'water'), *jìró léyó* 'sleep' (*jìró* 'eye'), *tàrú sí-tó* 'lay egg' (*tàrú* 'egg'), and *lɔ́ póŋgúró* 'applaud' (*lɔ́* 'hand').

#### 11.1.6.2 Cognate nominals

Some examples of verbs and their cognate nominals are in (374). In many cases the nominal is regularly combined with the verb, as in 'cough a cough' or 'laugh a laugh'. The examples in (374d-e) involve a final *u* (or *u that has been lost by apocope). They are therefore segmentally identical to the {LH}-toned verbal noun in *-ú*, but some of the nominals are {HL}-toned or have a small segmental change that keeps them distinct from verbal nouns (§4.2.2.1).

(374)

| verb | gloss | nominal | comment |
|---|---|---|---|
| a. bisyllabic, verb and nominal are segmentally identical | | | |
| *bègó* | 'hiccup' | *bégò* | |
| *bɔ̀sɔ́* | 'defecate' | *bɔ́sɔ́* | |
| *dòró* | 'sweat' | *dòró* | |
| *tóró* | 'jump' | *tóró* | |
| *dùwɔ́* | 'forge' | *dúwɔ́* | |
| *wàrá* | 'do farm work' | *wàrá* | |
| *kɔ́mɔ́* | 'wage (war)' | *kɔ̀mɔ́* | |
| *kɔ́sɔ́* | 'harvest' | *kɔ̀sɔ́* | |
| *cɛ́ná* | 'have fun' | *cɛ̀ná* | |
| *yàwrá* | 'crawl' | *yáwrà* | |
| *sáwrá* | 'do weeding' | *sàwrá* | |
| b. like (a) but trisyllabic | | | |
| *ìsìyá* | 'sneeze' | *ìsíyà* | |
| *kósíyó* | 'cough' | *kòsíyò* | |
| *kájíyá* | 'clear throat' | *kàjíyà* | |
| *kúgíyɔ́* | 'foam, froth' | *kùgíy* | |
| c. *Cv* verb | | | |
| *segmentally identical* | | | |
| *sɔ́* | 'lay 2nd layer' | *sɔ́* | (layers of millet spikes) |
| *nominal has final w* | | | |
| *tɔ́* | 'sow (seeds)' | *tŏw* | |
| d. nominal *CvCu* with final *u* | | | |
| *CvCú, identical in form to verbal noun (§4.2.2.1)* | | | |
| *kúró* | 'pound spikes' | *kùrú* | |
| *tírⁿá* | 'go get wood' | *tìrⁿú* | nominal = 'firewood' |
| *CvCù, tonally distinct from verbal noun* | | | |
| *tɛ́rá* | 'chop off' | *tɛ́rù* | |
| e. *CvC* nominal (likely from *CvCu) | | | |
| *final yⁿ, identical to verbal noun (§4.2.2.1)* | | | |
| *ɛ́yⁿá* | 'do a thing' | *ɛ̌yⁿ* | |
| *jìyⁿó* | 'harvest' | *jǐyⁿ* | |
| *final wⁿ versus yⁿ, {HL}-toned nominal, distinct from verbal noun* | | | |
| *zìyⁿó* | 'fart' | *zîwⁿ* | |
| *final m, {HL}-toned nominal, distinct from verbal noun* | | | |
| *mɔ̌:* | 'laugh' | *mɔ̂m* | combining form: *mɔ̌m* |

f. nominal is morphologically composite

*nominal adds a{L}-toned compound initial*

| | | | |
|---|---|---|---|
| *gùrɔ́* | 'slobber' | *kà-gúrɔ̀* | *ká* 'mouth' |
| *ósó* | 'hunt' | *àrà-ósó* | *àrá* 'male' |
| *zìgó* | 'go on hunt' | *dànà-zìgá* | Jamsay *dànáa* 'hunt(n)' |
| *kúró* | 'repound' | *yù-kúrò* | *yú* 'millet' |
| *gòwó* | 'harvest late' | *yù-gô:* | 'late millet' |

*nominal treats verb as compound initial to another noun*

| | | | |
|---|---|---|---|
| *ánná* | 'urinate' | *ànnà-ní* | *ní* 'water' |

### 11.1.7 'Do' or 'be done' (*kárⁿá*)

The verb 'do', also used intransitively ('be done', 'happen, take place') is *kárⁿá*. It is used in a wide variety of phrases, e.g. *lɛ́ kárⁿá* 'make (=cook) a meal'. A common method of nativizing Fulfulde and other loanwords is to borrow a noun-like form which is then followed by *kárⁿá*, the combination functioning syntactically as transitive or intransitive depending on the sense.

The inflectional morphology is basically regular: transitive perfective-1b *kárⁿú-wⁿɔ̀sì-* or intransitive perfective-1a *kárⁿú-wⁿɔ̀rⁿè-*, perfective negative *kà-lí-*, imperfective *ká-là* (not #*ká-tà*) imperfective negative *kà-ná-*.

(375) a. *zìrⁿá* *kárⁿú-wⁿɔ̀rⁿè*
rainy.season be.done-Pfv1a
'The rainy season took place (with normal rainfall).'

b. *m̀ᵇ* *ɔ́* *hámnà* *kárⁿú-sà*
1SgSbj 3SgObj bother do-Pfv2
'I pestered him/her.'

Further examples involving borrowings: *tú:tà kárⁿá* '(e.g. holy man) spit lightly into his hand (before giving a blessing)', *jɔ́:rà kárⁿá* '(running quadruped) stop abruptly', *títà kárⁿá* 'hold oneself up against (wall) with one's hand'.

In such tightly-knit collocations, the noun-like stem preceding *kárⁿá* is subject to tone-dropping as part of the {LH} overlay that applies to *kárⁿá* in the future and progressive inflections. See discussion and examples following (74) in §3.7.2.3.

## 11.2 'Be', 'become', 'have', and other statives

### 11.2.1 Copula 'be'

#### 11.2.1.1 Positive copula ('X is Y')

There is no overt copula morpheme. A noun or adjective in predicate position, with a subject NP or pronominal, is interpreted as predicative. The subject may be expressed as a nonpronominal NP (clause-initial), a 1st/2nd person independent subject such as 1Sg *mí*, or a 3rd person subject suffix or enclitic (§4.3.4) following the predicate: 3Sg *-wɔ́*, 3Pl *=bɛ́*, nonhuman *=kɔ́*, or nonhuman plural *=cɛ́ ~ =kɛ́*.

With a nominal predicate, in some examples there is both a nonpronominal subject NP and an agreeing third person subject clitic; in others the agreeing third person clitic is absent (as is regular when the predicate is an inflected verb or a predicate adjective). This suggests that a full NP subject is a preclausal topicalized NP followed by the clause proper, which includes an optional resumptive pronoun, e.g. '(a) lion, (it) is a wild animal' (376a). The fact that 1st/2nd person subjects are expressed by independent pronouns (1Sg *mí*) rather than the usual subject markers (1Sg *m̀*) also suggests preclausal topic status.

In expressions like *díŋá* 'it's the truth' with nonreferential subject, no pronominal subject appears (376f).

The predicate may have past time reference, made clear by (e.g. narrative) context (376g).

(376) a. *ów-[à-nú]* *òw-ésú=kɔ́*
lion bush-thing=NonhSgSbj
'The lion is a wild animal.'

b. *púlɔ̌-m=bɛ́*
Fulbe-Pl=3PlSbj
'They are Fulbe.'

c. *púnɔ̀-r$^{n}$ú-wɔ́*
Fulbe-Sg-3SgSbj
'He/She is a Fulbe (=Pullo).'

d. *à-nú-wɔ́*
man-Sg-3SgSbj
'He is a man.'

e. *y$^{n}$à-r$^{n}$ú-wɔ́*
woman-Sg-3SgSbj
'She is a woman.'

f. *wàllây ká díŋá*
by.God say truth
'(He) said: by God (=I swear), it's the truth.' (2004-1a.01)

g. *bɛ̀l-à:rá kó kɔ̀ [kɛ̀ HL bé-bè-nù]*
sheep-male NonhSg SFocSg [NonhPlPoss HL herder-Sg]
'A ram [focus] was their herder (shepherd).' (2004-1a.07)
(*bè-bé-nú*)

**First and second person** subject (=topic) is expressed with the relevant independent pronoun in clause-initial (or preclausal) position, preceding the predicative NP, with no overt copula.

(377) a. *mí púnɔ̀-r$^{n}$ú*
1Sg Fulbe-Sg
'I am a Fulbe (=Pullo).'

b. *í púlɔ̌*-m
1Pl Fulbe-Pl
'We are Fulbe.'

With *ì-r$^{n}$ú* 'child', diminutive *ì-r$^{n}$-í:* is preferred in predicate function. Its plural likewise appears as *ì-m-í:*.

(378) b. *búrâ: ì-r$^{n}$-í:-wɔ́*
Boura child-Sg-Dimin-3SgSbj
'Boura is a child.'

f. *ì-m-í: = bɛ́*
child-Pl-Dimin=3PlSbj
'they are children.'

g. *mí ì-r$^{n}$-í:*
1Sg child-Sg-Dimin
'I am a child.'

11.2.1.2 Negative copulas ('X is not Y') (*jìní*, 3Pl *jìr$^{n}$-é*)

A special negative 'be' predicator *jìní* is used in negative copulas. This directly follows the predicative NP, and precedes a third person subject pronominal suffix or enclitic if there is one.

(379) a. *ì-r$^{n}$-í:* *jìní-wɔ́*
child-Sg-Dimin not.be-3SgSbj
'He/She is not a child.'

b. *mí* *púnɔ̀-r$^{n}$ú* *jìní*
1Sg Fulbe-Sg not.be
'I am not a Fulbe (=Pullo).'

c. *púlɔ̌-m* *jìní=bɛ́*
Fulbe-Pl not.be=3PlSbj
'They are not Fulbe.'

d. *tɛ́nǎm* *ì-r$^{n}$-í:* *jìnì*
hyena child-Sg-Dimin not.be
'Hyena was not small (juvenile).' (2004-1b.01, in a tale)

The third plural subject categories have an optional variant based on *jìr$^{n}$-é*, with the same final-vowel mutation as in inflected verbs (§10.2.2). Thus a variant of (379c) is *púlɔ̌-m jìr$^{n}$-é=bɛ́* 'they are not Fulbe'.

For *jìní* in negative focalized constructions ('it is/was not X [focus] who/that …'), see §13.1.2.

11.2.2 Existential and locational quasi-verbs and particles

Predicates like locational-existential 'be (somewhere)', 'have', 'want', and 'know' are **quasi-verbs**. Whereas most statives are derived from regular (active) verbs, the quasi-verbs are defective, occurring only in stative form and with special negative counterparts, but with regular pronominal-subject inflections.

11.2.2.1 Positive locational-existential quasi-verb (*dà* ~ *dá*)

In locational-existential (not copular) sense, 'be' is expressed by *dà* ~ *dá*. The form also occurs as part of various verbal constructions (stative, progressive). The distribution of the L- and H-toned variants is summarized in (380).

(380) a. low-toned
after *á* in locational-existential function (see below);
after combining form of verb in stative construction (§10.1.3.1);
after verb plus *dɛ̌n* in transitive stative construction (§10.1.3.1);
in progressive construction *-cí dà*, variant *-cí là* (§10.1.3.2).

h. high-toned
after *ŋ̀kǎy*$^{n}$ 'like that, thus' and related 'like' forms;
following a locational expression (without *á*);
in a temporal-simultaneity construction of verb plus *dá gà* (§15.2.1.3).

*dà* is intrinsically stative, and makes no aspectual distinctions. The third-person subject forms add 3Sg *-wɔ́*, 3Pl *=bɛ́*, NonhSg *=kɔ́*, or NonhPl *=cɛ́*, as in copular constructions. The 3Sg combination *dà-wɔ́* optionally contracts to *d-ɔ̌ː*, while H-toned *dá-wɔ́* optionally contracts to *d-ɔ́ː* .

When there is no overt locational, i.e. in existential sense or with tacitly understood locational sense, particle *á* must precede *dà*, which is therefore never clause-initial. This *á* resembles imperfective particle *á*, but since statives do not otherwise make perfective vs. imperfective aspectual distinctions, in *á dà* the particle is best taken as **existential** (or as a default locational, i.e. a nonspecific 'there'). Both existential *á* and imperfective *á* are probably derived historically from *yá* '(discourse-definite) there' §4.4.4.1.

(381) a. *á* *d-ɔ̌ː*
Exist be-3SgSbj
'He/She is present (=here, there).'

b. *í* *á* *dà*
1Pl Exist be
'We are present (=here, there).'

c. *á* *dà=kɔ́*
Exist be=NonhSgSbj
'It is present (=here, there).' or 'There is some.'

*dà* ~ *dá* is also common with an overt adverbial (locational or manner) complement (382). Imperfective *á* is optional when the locational precedes the quasi-verb, and obligatory when there is no overt locational (as in simple existential function) or when the locational is postverbal. The combination is heard as *á dà* with low tone on *dà*. (Imperfective *á* has a similar tone-dropping effect on imperfective verbs, but not on future verbs.) Without *á*, *dá* has H-tone after a locational.

Clauses with *dà* ~ *dá* are usually interpreted as being valid in a time frame including the present. Where it is necessary to explicitly restrict its validity to a past time frame, past morpheme *nɔ̀* may be added at the end (382e).

(382) a. *ìní á dà=bɛ́*
*ìní dá=bɛ́*
**here** Exist **be**=3PlSbj
'They are here.'

b. *nàwⁿá á dà ìní*
meat Exist **be** **here**
'There is some meat here.'

c. *[[íló* $^{L}$*pùrù] kù] dá-wɔ́*
[[house $^{L}$inside] **in]** **be-3SgSbj**
'He/She is inside the house.'

d. *[[tègù mùtù]*$^{L}$ *ŋú] [[[àsí mǎ:]* $^{HL}$*zâ:] kù] dá*
[talk(n) much]$^{L}$ DemSg] **[[[**Logo Pl] $^{HL}$among] **in]** **be**
'(He said:) … all that talk is around us.' (2004-1a.01)

e. *[wó nà] [ùró kù] dá-wɔ́ nɔ̀*
[3Sg now] [hole **in]** **be-3SgSbj** Past
'He now, he was in a (deep) pit.' (2004-1a.03)

f. *[nòndérⁿá tà:lí],* *yá kɔ́ dá*
[day three], there NonhSgSbj be
'He was there for three days.' (2004-1a.05)

g. *[[[kɔ̀* $^{HL}$*púrò] kù] dá ŋ́*
[[[NonhSgPoss $^{HL}$belly] in] be Rel
'that which is in its belly' (2004-1a.08)

In (383), an implicit manner expression ('the way') is omitted, as often in relative claues.

(383) *sùŋù-ná: [níŋ kày] [[ú dé] á ùsù-r-è]*
python [now Top] [[2Sg Dat] Ipfv ask-Ipfv-3PlSbj]
*[kà: kɔ̀ dá ŋ́]*
[Rel NonhSgSbj be Rel]
'Python now, they are asking you-Sg (the way) how it is.' (2004-1a.10)

A first or second person subject pronominal immediately precedes *dá* or *á dà*, and therefore follows any preverbal locational. In (384a), the presence of 1Sg *ǹ* between the locational and *dá* has no effect on the tone of the latter. Logophoric *àsí* as subject behaves similarly (384c).

(384) a. *bó:nì ǹ dá*
**Boni** 1SgSbj **be**
'I am in Boni (=town).'

b. *m̀$^{b}$ á dà*
1SgSbj Exist **be**
'I am present (here).'

c. *[nòndér$^{n}$á tà:lí] [[ùrò ŋ́] kú] àsí dá*
[day three] [[hole DemSg] **in**] LogoSbj **be**
'(Hyena said: For three days I am (=have been) here in this hole.' (2004-1a.05)

### 11.2.2.2 Negative locational-existential quasi-verb (*y$^{n}$á-ŋ̀gó*)

The negative counterpart of *dá* is *y$^{n}$á-ŋ̀gó*. It is a rather frozen combination that appears to include *ŋ̀gó*, which negates stative and progressive verbs (§10.1.3.3). Most likely, the *y$^{n}$á-* is etymologically an incorporated discourse-definite 'there' adverb *yá* (§4.4.4.1), secondarily nasalized by Backward Nasalization.

*y$^{n}$á-ŋ̀gó* may be followed by third person subject markers like the enclitics 3Pl *=bɛ́*, nonhuman *=kɔ́*, and nonhuman plural *=kɛ́* (385a-b). It contracts with 3Sg suffix *-wɔ́* as *y$^{n}$á-ŋ̀g-ɔ́:* (385d). 1st/2nd person subjects take subject (not independent) pronominal form when they follow an overt locational (385c,e).

(385) a. *ìní y$^{n}$á-ŋ̀gó=bɛ́*
here not.be=3PlSbj
'They are not here.'

b. *[[íló* *$^{L}$pùrù]* *kù]* *yⁿá-ŋ̀gó=kɔ́*
[[house $^{L}$inside] in] not.be=NonhSgSbj
'It (e.g. sugar) is not in the house; There is none in the house.'

c. *[[àlá* *$^{L}$pùrù]* *kù]* *í* *yⁿá-ŋ̀gó*
[[village $^{L}$inside] in] 1PlSbj not.be
'We are not in the village.'

d. *ìní* *yⁿâŋg-ɔ́:*
here not.be-3SgSbj
'He/She is not here.'

e. *[[pàŋá* *$^{L}$pùrù]* *kù]* *ǹ* *yⁿá-ŋ̀gó*
[[granary $^{L}$inside] in] 1SgSbj not.be
'I am not in the granary.'

### 11.2.3 Stative stance verbs 'be sitting', 'be lying down'

Stance verbs occur in active function (e.g. 'sit down', 'stand up', 'lie down'), in which case they have regular AN stems (perfective and imperfective). They also occur in stative function ('be sitting [seated]', 'be standing', 'be lying down [prone]'), in which case the perfective/imperfective opposition is neutralized. In positive indicative utterances, these statives show optional initial reduplication if the stem begins with a consonant; see §10.1.3.1 for details. In negative indicative utterances, the reduplication is omitted, and a stative negative suffix *-ŋ̀gó-* is used; see §10.1.3.3 for details. There is no imperative in stative function, since e.g. 'sit (down)!' is intrinsically active (kinetic).

There are no suppletive or irregular stance verbs used specifically in stative function (as there are in Jamsay and some other Dogon languages).

### 11.2.4 'Want' (*ìwá*, $^{HL}$*íwà*)

A quasi-verb *ìwá* 'want' is used in positive utterances for 'want', with an NP or clause as complement. It is intrinsically stative, and does not co-occur with imperfective particle *á*. It has no AN suffixed forms, but may be followed by the usual third person subject pronominals, e.g. human 3Sg *ìw-ɔ́:* and 3Pl *ìw-é=bé*.

(386) *ní* *m̀* *ìwá*
water 1SgSbj **want**
'I want (=would like) some water.'

When the clause has a focalized or relativized constituent, the **tone is {HL}** (387).

(387) a. *èsé* *ú* $^{HL}$*íwà* *mà*
what? 2SgSbj $^{HL}$**want** Q
'What do you-Sg want?'

b. *m̀* *bɛ̀-lí*
1SgSbj get-PfvNeg
*[ɛ̀s*$^{L}$ *kà:* *wɔ́* $^{HL}$*íwà* *ŋ̀* *kúnú]*
[thing$^{L}$ Rel 3SgSbj $^{HL}$**want** Rel DefSg]
'I didn't (=couldn't) get the thing that he/she wants.'

A future can be formed periphrastically by combining *ìwá* with the relevant form of *kár$^{n}$á* 'do'. In (388a), I hear *ìwà* with low tones, suggesting that this form is treated as a part of the inflected verb for tonal purposes in the future positive form, following a pattern described in §10.1.1.9 and §3.7.2.3. However, in the future negative (388b) *ìwá* has its lexical /LH/ melody.

(388) a. *màŋgórò* *m̀$^{b}$* *ìwà* *kàr$^{n}$í-y$^{n}$àr$^{n}$à*
mango 1SgSbj want do-Fut
'I will want a mango.'

b. *màŋgórò* *m̀$^{b}$* *ìwá* *kà-ná*
mango 1SgSbj want do-FutNeg
'I will not want a mango.'

The 'want' predicate may also take a clausal complement, which may precede or follow. See §17.3.4 for details and examples.

The negative counterpart (**'not want'**) is *y$^{n}$àr$^{n}$á-* (3Sg *y$^{n}$àr$^{n}$-ɔ́:*, 3Pl *y$^{n}$àr$^{n}$á=bɛ́*). *y$^{n}$àr$^{n}$á-* is suppletive and will not be segmented here. However, the second syllable could be analysed as the imperfective negative suffix (§10.1.2.3), which induces backward nasalization of an initial /y/ in a *Cv* stem, as in *y$^{n}$ì-r$^{n}$á-* 'does not weep' from verb *yɛ́*. A comparison with Togo Kan *ìyɛ̀-lá* 'does not want' is therefore feasible although the Togo Kan form has a stative negative suffix.

(389) *y$^{n}$àr$^{n}$-ɔ́:* *zà-lí*
not.want-3SgSbj millet.cake-eat
'He/She doesn't want to eat millet cakes.'

### 11.2.5 ‘Know’ (*ùkú*, $^{HL}$*úkù*, *ítá-*)

In positive utterances, ‘know’ is expressed by irregular *ùkú*. It is treated as a stative verb, allows no AN suffixes, and is used without imperfective *á*. It may take a NP or clausal complement. Suffixed forms are 3Sg *ùkú-wɔ́* and 3Pl *ùkú=bɛ́*.

(390) a. *m̀* *ùkú*
1SgSbj know
‘I know.’ (also pronounced [m̀$^{b}$ ùkú])

b. *bó:nì* *ùkú-wɔ́*
Boni know-3SgSbj
‘He knows Boni (a town).’

The stem appears with **{HL} tone** after a focalized or relativized constituent (391).

(391) a. *ɛ̀s*$^{L}$ *kà:* *ú* $^{HL}$*úkù* *ŋ́*
thing$^{L}$ Rel 2SgSbj $^{HL}$know Rel
‘what you-Sg know’

b. *èsé* $^{HL}$*úkù-wɔ́* *má*
what? $^{HL}$know-3SgSbj Q
‘What does he/she know?’

The negative counterpart (**‘not know’**) is suppletive *ínà-*, which also functions as the irregular imperfective negative of *ítá*, on which see below (the regular imperfective negative for this verb would be #*ìtù-ná-*). Suffixed forms are 3Sg *ín-ɔ̌:* and 3Pl *ín-è=bɛ́*.

(392) a. *m̀* *ínà*
1SgSbj not.know
‘I don’t know.’

b. *sáydù* *ín-è=bɛ́*
Seydou not.know-3PlSbj=3PlSbj
‘They do not know Seydou.’

c. *ín-ɔ̌:* *[àrⁿá* *mùrú-wòrè* *mà]*
not.know-3SgSbj [rain fall-Pfv1a Q]
'He/She does not know that (=whether) rain has fallen.'

There is also a morphologically regular verb *ítá* (combining form *ítú*) which has the full range of inflections. Its basic sense is 'recognize (someone, something' or 'realize (that …)', and is therefore not intrinsically stative in sense. However, it may substitute for *ùkú* in perfective and future contexts. For negative *ínà-*, see above.

### 11.2.6 Morphologically regular verbs

#### 11.2.6.1 'Become' (*táŋá-*)

'Become' with a NP (rather than an adjective) as complement is expressed by the verb *táŋá-*, which has regular AN inflections.

(393) a. *ànàsá:rá* *táŋ-wɔ̀rè-wɔ́*
white.person become-Pfv1a-3SgSbj
'He/She became a white person.'

b. *dùŋù-nú* *tàŋ-rí-wɔ́*
sorcerer-Sg become-PfvNeg-3SgSbj
'He/She did not become a sorceror.'

c. *wàrà-wá-n* *m̀* *á* *tǎŋ-gàrà*
farmer 1SgSbj Ipfv become-Fut
'I will become a farmer.'

d. *ǹ* *yⁿà-rⁿá* *wàrà-wá-n* *táŋ-é*
1Sg not.want farmer become-Hort
'I do not want to become a farmer.'

## 11.3 Quotative verb and particle

Reported speech is encoded grammatically in two ways. An overt quotative marker (particle or inflectable verb) may precede the quoted matter; see just below (*ká*, *gá-*). In addition, **logophoric** pronouns (singular *àsí*, plural *àsí bɛ́*) replace original first person pronouns under most conditions, unless they also

happen to be coindexed with the current speaker or addressee. See §18.2 for details on logophorics.

### 11.3.1 Uninflectable 'say' (*ká*)

*ká* is a common invariant, particle-like quotative marker, preceding the quotation proper, when the latter is attributed to a third person (not the current speaker or addressee). It is very common in narratives reporting conversations between two or more characters, occurring at every switch in (original) speakers.

(394) a. *ká* *àsí* *bá-wɔ̀sì*
say Logo consent-Pfv1b
'He$_x$ said that he$_x$ agreed (=he gave his$_x$ consent).'

b. *ká* *ú* *yɛ̀-rì*
say 2SgSbj come-Imprt
'They say you should come (=they told you to come).'

### 11.3.2 Inflectable 'say' (*gá-*)

The all-purpose, inflectable quotative verb 'say' is *gá-*. It can take a (quoted) clause as complement, but it can also take NP complements like 'that', 'what?', and 'nothing'. The addressee of the original quotation appears as a dative (395f). A different use of the dative is illustrated in (395c).

(395) a. *èsé* *gá-s-ɔ̌:* *mà*
what? say-Pfv2-3SgSbj Q
'What did he/she say?'

b. *èsì-túrú-kòy* *ŋ̀* *gà-rí*
nothing 1SgSbj say-PfvNeg
'I didn't say anything.'

c. *[kò* *dé]* *á* *gà-r-è* *dèŋdíŋ*
[NonhSg Dat] Ipfv say-Ipfv-3PlSbj stool
'That is called "a stool."'

d. *èsé w â: gá:-rà má*
what? 2SgSbj Ipfv say-Ipfv Q
'What will you-Sg say?'

e. *gà-rí-wɔ́ [àsí â: yá-rà]*
say-PfvNeg-3SgSbj [Logo Ipfv come-Ipfv]
'She$_x$ didn't say that she$_x$ was coming.'

f. *[mí ká] [ù dé] gà-rí*
[1Sg say] [2Sg Dat] say-PfvNeg
'I didn't say it to you.'

## 11.4 Adjectival predicates

### 11.4.1 Positive adjectival predicates.

An adjective can be made predicative in either of two ways. First, a **deadjectival inchoative or factitive** verb ('sth become long', 'lengthen sth') can function as an ordinary verb predicate; see §9.4.

Second, the adjective can function, without morphological addition, as a predicate if a subject NP (or pronoun) is present. Examples with pronominal subject are in (396); as with verbs, the third person subject suffixes/enclitics follow the predicative adjective, while 1st/2nd person subject pronouns precede. For a nonpronominal NP as subject, see (162b) in §6.2.2.

(396) a. *gùrú-wɔ́*
long-3SgSbj
'He/She is long (=tall).'

b. *gùrú=bɛ́*
long=3PlSbj
'They are long (=tall).'

c. *gùrú=kɔ́*
long=NonhSgSbj
'It is long.'

d. *ŋ̀ gùrú*
1SgSbj long
'I am long (=tall).'

### 11.4.2 Negative adjectival predicates (*sàrà-*)

Negative counterparts of positive adjectival predicates (preceding section) are formed by adding conjugatable *sàrà-* or somtimes *sàrá-* after the adjective. First and second person pronominals precede the adjective. The third person forms are 3Sg *sàr-ɔ̌:* and 3Pl *sàrà = bɛ́*, or tonal variants *sàr-ɔ́:* and *sàrà = bɛ́*. There is partial homophony with forms of *sà-rá-* 'not have', see (399) in the following section.

(397) a. *gùrú* *sàr-ɔ̌:*
long Neg-3SgSbj
'He/She is not long (=tall).'

b. *gùrú* *sàrá = bɛ́*
long Neg=3PlSbj
'They are not long (=tall).'

c. *ŋ̀* *gùrú* *sàrà*
1SgSbj long Neg
'I am not long (=tall).'

d. *gùrú* *sàrà*
long Neg
'It is not long.'

## 11.5 Possessive predicates

### 11.5.1 'Have' (*sá-*)

In the construction 'X have Y', the quasi-verb *sá* is used. It is intrinsically stative, and it makes no morphological distinction between perfective and imperfective. It also has no imperative. Suffixed forms are 3Sg *sá-wɔ́* and 3Pl *sá = bɛ́*.

(398) a. *[nàŋá* *tóró]* *ǹ* *sá*
[cow one] 1SgSbj have
'I have one cow.'

b. *[yⁿà-mú lěy] sá-wɔ́*
[woman-Pl two] have-3SgSbj
'He has two wives.'

c. *[òrù*$^{L}$ *ná:] sá=bɛ́*
[field$^{L}$ big] have=3PlSbj
'They have a large field.'

d. *èsé ú sá má*
what? 2SgSbj have Q
'What do you-Sg have?'

*sá-* is used for temporary possession (custody) as well as for ownership. (398d) can be used in either context, for example.

The negative counterpart is *sà-rá-* (3Sg *sà-r-ɔ́:*). The final H-tone is usually audible, but there are some instances of tone-dropping to *sà-rà-* in texts, e.g. (418) in §12.3.

(399) a. *kèrú ǹ sà-rá*
money 1SgSbj have-Neg
'I have no money.'

b. *ès-túrú-kòy sà-r-ɔ́:*
nothing have-Neg-3SgSbj
'He/She has nothing.'

Compare L-toned *sàrà* 'not be' (in adjectival predicates, see the preceding section), which I write without a hyphen.

### 11.5.2 'Belong to' predicates (*sí*)

In this construction ('Y belongs to X'), the predicate consists of the noun phrase X plus a possessed form of *sí*, which can be taken as a semantically light noun ('possession' or the like). Quasi-verb *dà* 'be' may be added.

(400) a. *[ìlò*$^{L}$ *ŋ́ kày] [ǹ sí]*
[house$^{L}$ DemSg Top] [1Sg Poss]
'This house belongs to me (=is mine).'

b. *[nàwⁿà*[L] *ŋú]* *àyé* *sí* *má*
[meat[L] DemSg] who? Poss Q
'This meat belongs to whom (=is whose)?'

c. *[[kò* *sí]* *dà]* *[kɔ̀* *sǎŋ]*
[[Nonh Poss] be] [DiscDef woodland]
'The woodland belongs to it (=elephant).' (2004-1a.10)

d. *[bè* *sí]* *dà*
[3Pl Poss] be
'It is theirs.'

e. *[sáydù* *sí]* *dà*
[S Poss] be
'It belongs to Seydou.'

Negation is with clause-final external negative *jìní* 'it is not (the case that …)' (401).

(401) *[[ŋ̀gú* *kày]* *[ú* *sí]* *jìní*
[[DemSg Top] [2Sg Poss] Neg
'That is not yours-Sg.'

The form *sí* is somewhat opaque semantically and grammatically. It may also be etymologically present in the complex postposition *sí kàyⁿ* 'like' (§8.4.1), self-benefactive *símà* (§18.5), and logophoric *àsí* (§18.2.1).

# 12 Comparatives

## 12.1 Asymmetrical comparatives

### 12.1.1 Predicate adjective with lexical tones

A predicate adjective, in its **normal lexical tones** may form a comparative construction simply by adding a dative PP representing the comparandum. The examples in (402) were elicited.

(402) a. *[ǹ dé] gùrú-wɔ́*
[1Sg Dat] long-3SgSbj
'He/She is longer (=taller) than I (am).'

b. *ǹ [wò dé] gùrú*
1SgSbj [3Sg Dat] long
'I am longer (=taller) than he/she (is).'

### 12.1.2 Simple {HL}-toned adjective with dative comparandum

An adjective functioning as a comparative predicate appears more often with {HL} tone overlay. The comparandum takes the form of a dative PP, as in examples in the preceding section. Nouns denoting qualities, as well as adjectives, can occur in this construction. This pattern is arguably reduced from the construction with *jěn dà* (or *jěl dà*) 'is more', which co-occurs with an {HL}-toned noun or adjective that defines the domain of comparison (§12.1.4, below). Compare (403c) with (403d). If this reduction is correct, the {HL}-toned noun or adjective in (403a-c) is not the real predicate, rather an adjunct that is left over when the real predicate is omitted.

(403) a. *ú [ǹ dé]* $^{HL}$*sêw*
2SgSbj [1Sg Dat] $^{HL}$fat
'You-Sg are fatter than I (am).' (*séw*)

b. *[ǹ dé]* $^{HL}$*sêw-wɔ́*
[2Sg Dat] $^{HL}$fat-3SgSbj
'He/she is fatter than you-Sg (are).'

c. *mí* *[ú* *dé]* $^{HL}$*pây*
1SgSbj [2Sg Dat] $^{HL}$old
'I am older than you-Sg (are).' (*pǎy*)

d. *mí* *jěn* *dà* *[ú* *dé]* $^{HL}$*pây*
1SgSbj [pass Stat] [2Sg Dat] $^{HL}$old
'I am older than you-Sg (are).' (*pǎy*)

### 12.1.3 Suppletive comparative *gá* 'bigger' for *ná:* 'big'

The usual adjective for 'big' is *ná:*, which is attested in the comparative form *nâ:* 'be bigger than'. However, this is optionally suppleted by *gá* 'bigger' (404). *gá* is also the basis for the inchoative verb *gá:-lá* 'become big', since there is no inchoative verb related morphologically to *ná:*.

(404) *[jíré* $^{L}$*kà]* *gá,* *[pɛ́rá* *dè]*
[front $^{L}$mouth] bigger, [back Dat]
'the front (of an elephant) is bigger than the back.' (2004-1a.10)

### 12.1.4 'Be more' (*jěn dà* ~ *jěl dà*)

The primary comparative construction is based on the verb *jèlú**jèló* 'pass' (hence 'surpass, be better or more than'), in the stative inflected form *jěl dà*. This is pronounced *jěn dà* by many speakers, suggesting that it is in the process of diverging lexically from the 'pass' verb. The initial consonant also varies in pronunciation from *j* to *g*.

The construction takes a regular subject NP or pronoun). Suffixed third person forms are 3Sg *jěn d-ɔ́:* and 3Pl *jěn dà=bɛ́*. The time reference is unspecified, but is most often timeless (gnomic), denoting permanent relationships. The comparandum is usually expressed in dative form. The dative PP may occur clause-initially, after *jěn dà*, or clause-finally. It is also possible to have a clause-final reference comparandum with *dìŋŋémá* 'than, instead of', but the dative is more common when subject NPs are compared.

In the simplest such construction, where two subject NPs are compared with respect to an intrinsic quality (age, height, hardness, etc.), the domain of reference is expressed as an **adjective or noun with {HL} overlay**. This occurs in clause-final position, except that it is optionally followed by the dative comparandum. Thus 'I am older than you-Sg (are)' is expressed as "I (am) more

[to (=than) you] age(d).” For the occasional omission of the {HL} tone, see below, this section. The examples in (405) involve adjectives.

(405) a. *mí* *jěn* *dà* *[ú* *dé]* HL*pây*
1Sg pass be [2Sg Dat] HLaged
‘I am older than you-Sg (are).’ (*pǎy*)

b. *sáydù* *jěn* *da* *[ǹ* *dé]* HL*gúrù*
Seydou pass be [1Sg Dat] HLlong
‘Seydou is longer (=taller) than I (am).’ (*gùrú*)

c. *púlɔ́-m* *jěn* *dà* HL*mútù* *[tɔ̀rɔ́*L*-nù-ḿ* *dé]*
Fulbe-Pl pass be HLmany [mountainL-person-Pl Dat]
‘The Fulbe are more numerous than the Dogon.’ (*mútú*)

d. *jěn* *dà=bɛ́* *[ǹ* *dé]* HL*gúrù*
pass be-3PlSbj [1Sg Dat] HLlong
‘They are longer (=taller) than I (am).’ (*gùrú*)

e. *kó* *jěn* *dà* HL*nâ:,* *kó* *jěn* *dà* HL*gúrù*
NonhSg pass be HLbig, NonhSg pass be HLlong
‘That one (snake sp.) is bigger, (and) that one is longer.’ (2004-1a.10) (*ná:*, *gùrú*)

A noun may also be used to indicate the domain of reference (406). This is the only construction available for concepts like ‘strength’ that do not correspond to a simple adjectival expression.

(406) *ǹ* *[sǎydù* *dè]* *jěn* *dà* HL*césù*
1SgSbj [Seydou Dat] pass be HLstrength
‘I am stronger than Seydou.’ (*césú*)

For relative clauses based on this construction, see §14.2.3 below.

Even with adjective-like domains of reference, an alternative construction involving a **regular VP** (rather than just a noun or adjective) is always possible. (407) has a regular predicate adjective with lexical tones (not a noun with the {HL} overlay). In this construction, third person subject pronominal marking is limited to the predicate adjective, and *jěn dà* behaves like an adverbial adjunct.

(407) *[ǹ* *dé]* *jěn* *dà* *jém-wɔ́*
[1Sg Dat] pass be black-3SgSbj
‘He/She is blacker than I (am).’

When the reference domain is an **activity** (expressed as a VP) and the comparanda are subjects (agents), the construction with a regular VP is required (408). Here the dative phrase and *jěn dà* are preposed to the clause proper.

(408) a. *[ú dé] jěn dà [lé m̀ á lí-rà]*
[2Sg Dat] pass be [meal 1SgSbj Ipfv eat-Ipfv]
'I eat more than you-Sg (do).'

b. *[ú dé] jěn dà [á zɔ̀w-r-ɔ̌ː]*
[2Sg Dat] pass be [Ipfv run-Ipfv-3SgSbj]
'He/She runs more than you-Sg (do).'

When **non-subject NPs** are compared, the comparandum is expressed not as a dative, rather with a morpheme *dìŋŋémá* or *dìŋŋémá* 'than, instead of' (409a). In (409b), 'to Boura' is dative as indirect object of 'give', not as a comparandum.

(409) a. *[kàpé jěn dà m̀ á nì-r$^{n}$à],*
[coffee pass be 1SgSbj Ipfv drink-Ipfv]
*[àtê: dìŋŋémá]*
[tea than]
'I drink more coffee than (I drink) tea.'

b. *[búrâː dé] jěn dà [m̀ á ów-wàrà]*
[Boura Dat] pass be [1SgSbj Ipfv give-Ipfv]
*[sáydù dìŋŋémá]*
[Seydou than]
'I will give more to Boura (man's name) than (I do to) Seydou.'

The **negative** counterpart of *jěn dà* ~ *jěl dà* is *jèlú ŋ̀gó*, with stative negative *ŋ̀gó* (410).

(410) *mí jèlú ŋ̀gó [wò dé] $^{HL}$gúrù*
1SgSbj pass StatNeg [3Sg Dat] $^{HL}$long
'I am not longer (=taller) than him/her.'

(405-406) and (410) show the {HL} overlay on the adjective or noun that specifies the domain of comparison. In elicitation, I have occasionally recorded the adjective with its lexical tone in what is otherwise the same construction, hence lexical *gùrú* rather than the more usual {HL} *gúrù* in (411). I think that this is a feature of "elicitation-ese" where the speaker, speaking slowly, tends to revert to lexical tones. The type with {HL} is the one recorded in texts.

(411) a. *m̀* *[wò* *dé]* *jěn* *dà* *gùrú*
1SgSbj [3Sg Dat] pass be **long**
'I am longer (=taller) than he/she (is).'

b. *m̀$^{b}$í* *wó* *jěl* *dà* *gùrú*
1SgSbj 3Sg pass be **long**
'I am longer (=taller) than he/she (is).'

### 12.1.5 'Be better' (*ìtó*)

A defective stative verb *ìtó* is used in the sense 'be better'. No further expression of domain of reference is required. The comparandum appears in dative form. Suffixed forms are 3Sg *ìt-ɔ́:* and 3Pl *ìtó=bé*.

(412) a. *átté* *ìtó* *[káfé* *dé]*
tea be.better [coffee Dat]
'Tea is better than coffee.'

b. *[ǹ* *dé]* *ìt-ɔ́:*
[1Sg Dat] be.better-3SgSbj
'He/She is better than I (am).'

The negative is expressed by *ìtó sàrà*.

(413) *m̀* *[wò* *dé]* *ìtó* *sàrà*
1SgSbj [3Sg Dat] be.better not.be
'I am not better than he/she (is).'

It is also possible to use the regular 'be more' comparative *jěn dà*, followed by *ítò* 'be better' with {HL} overlay to specify the domain of comparison. This construction is usual in the negative counterpart, with *jèlú ŋ̀gó* 'not be more'.

(414) a. *m̀$^{b}$* *[ò* *dé]* *jěn* *dà* $^{HL}$*ítò*
1SgSbj [3Sg Dat] pass be $^{HL}$being.better
'I am better than he/she (is).'

b. *[ǹ* *dé]* *jèlú* *ŋ̀g-ɔ́:* $^{HL}$*ítò*
[1Sg Dat] pass StatNeg-3Sg $^{HL}$being.better
'He/She is not better than I (am).'

### 12.1.6 'Be stronger than' (*yⁿòmú-*)

In contexts like wrestling, 'X is stronger than (=can easily defeat) Y' is expressed by the verb *yⁿóm\\yⁿówⁿó*.

(415) *ǹ* *sáydù* *á* *yⁿòm-rò*
1SgSbj Seydou Ipfv be.stronger.than-Ipfv
'I can handle (=easily beat) Seydou.'

## 12.2 Symmetrical comparatives

### 12.2.1 'Be equal' (*tùr-í→* )

In positive symmetrical comparatives, the two comparanda are normally conjoined. The predicate contains *tùr-í→* '(one) single, sole, unitary', hence 'same (on some measure)'. It is morphologically a diminutive of *túrú* 'one'. *tùr-í→* may be intensified by *lók!* ~ *lókù!*, which here may be glossed 'exactly one (=exactly the same)'. The domain of comparison may be specified by a dative adjunct (416a), or by a tone-dropped noun preceding *tùr-í→* (416b). The tone-dropping suggests that the noun is treated either as a compound initial or as an adjectivally modified noun.

(416) a. *[sáydù* *[á:mádù* *lěy]]* *[césú* *dé]* *tùr-í→* *lókù*
[Seydou [Amadou and]] [strength Dat] one.single exactly
'Seydou and Amadou are exactly equal in strength.'

b. *[sáydù* *[ǹ* *lěy]* *yà:fú:]* *[bɔ̀rùm*$^{L}$ *tùr-í→]*
[Seydou [1Sg and] all] [age$^{L}$ one.single]
'Seydou and I are the same age.' (< *bɔ́rúm*)

### 12.2.2 'Attain' (*dɔ́-*)

The verb *dɔ́-* 'reach, attain, arrive (at)' can be used in symmetrical comparatives involving a temporal development ('X attains the size of Y'). It is most common in interrogatives ('Does X attain …?') and in negative indicatives ('X does not attain …'). The negatives constitute a translation equivalent for 'X is less … than …'.

(417) *[sùŋù*$^{L}$ *ná:]* $^{HL}$*górò* *dɔ̀-r$^{n}$ɔ́=kɔ́*
[snake$^{L}$ big] $^{HL}$length attain-IpfvNeg=NonhSgSbj
'It (=snake) is not as long as a python.'
(lit.: "It does not attain a python in length.")

## 12.3 'A fortiori' (*sáŋkò*, *sákkò*)

The form *sáŋkò* 'much less …, a fortiori …', variant *sákkò*, is an instance of a widespread regional form with several variants, cf. Fulfulde *sako*, Bambara *jonko*, etc.

(418) *m̀* *pé-lěy* *sà-rà,* *sáŋkò* *[milyɔ̂ŋ* *túrú]*
1SgSbj 20 have-Neg, much.less [million one]
'I don't have twenty (riyals), much less (do I have) a million (francs).'

# 13 Focalization and interrogation

## 13.1 Focalization

Focalization of a constituent (other than the verb) is expressed by the features in (419).

(419) a. the focalized constituent is **fronted** to clause-initial position (except that adverbs like 'yesterday' may precede them), leaving ∅ (zero, trace) in the original position;
b. a focalized pronominal takes **independent pronoun** form (e.g. 1Sg *mí*, nonhuman *kɔ́* );
c. a focalized third person subject does not have subject-pronominal agreement by suffixation on the verb;
d. negative focalization ('it was not I who …') is expressed by *jìní* ;
e. a **subject-focus** morpheme in the form of an L-toned nonhuman pronominal, singular *kɔ̀* (occasionally plural *kɛ̀* ) follows the subject if it in turn is followed by a nonzero preverbal constituent in a positive clause;
f. special morphology for **perfective positive** verbs.

**WH-interrogatives** ('who?', 'what?', 'how?', etc.) are intrinsically focal. In non-interrogative utterances, focalization expresses the highlighting of one constituent, with the remainder of the clause treated as backgrounded (presupposed, defocalized), as in giving a response to a WH-interrogative.

The special morphology of perfective positive verbs, notably the shift from perfective-1 to perfective-2, is shared with relative clauses (§14.1.8).

### 13.1.1 Subject focus morpheme (*kɔ̀*, plural *cɛ̀* ~ *kɛ̀*)

A morpheme, usually *kɔ̀* (identical in form to the L-toned nonhuman singular pronominal), appears in positive clauses after **a focalized subject**, if the latter is **directly followed by a nonpronominal preverbal constituent**. Examples of relevant preverbal constituents are direct objects (420a-c), spatiotemporal adverbials (420d-e), and dative PPs.

(420) a. *àyé* *kɔ̀* *bó:nì* *bò* *dá* *má*
who? **SFocSg** Boni go be Q
'Who is going to Boni (town)?'

b. *sáydù* *kɔ̀* *nùŋɔ́* *nùŋɔ́-sɔ̀*
Seydou **SFocSg** song sing-Pfv2
'It was Seydou [focus] who sang (a song).'

c. *ú* *kɔ̀* *gɛ́* *á* *gí-yàrà*
2Sg **SFocSg** dance(n) Ipfv dance-Fut
'It is you-Sg [focus] who will dance (a dance).'

d. *í* *kɔ̀* *ìní* *yè-só*
1Pl **SFocSg** here come-Pfv2
'It was we [focus] who came here.'

e. *mí* *kɔ̀* *yá:* *yè-só*
1Sg **SFocSg** yesterday come-Pfv2
'It was I [focus] who came yesterday.'

f. *y$^{n}$à-mú* *kɔ̀* *ní* *á* *gágú-rà*
woman-Pl **SFocSg** water Ipfv draw-Ipfv
'It's women [focus] who draw water.'

For **plural subject**, the corresponding nonhuman plural pronominal *cɛ̀ ~ kɛ̀*, is optionally used when the focalized constituent is of this category (421).

(421) *ké* *kɛ̀* *[[ùró* *$^{L}$pùrò]* *kù]* *á* *lù-rò*
NonhPl **SFocPl** [[hole $^{L}$belly] in] Ipfv enter-Ipfv
*gàsì-n-ɛ́=cɛ́*
dig-IpfvNeg-3PlSbj=NonhPlSbj
'It's they (lizards) [focus] who go into a (preexisting) hole, and they don't dig (burrows).' (2004-1a.10)

The focus particle does not appear whent he subject is **directly followed by the verb**, i.e. in simple intransitives with subject focus (422).

(422) *mí* *yè* *dá*
1Sg come be
'It was I [focus] who came.'

The focus particle does not occur immediately preceding preverbal imperfective proclitic *á*. In other words, *á* does not count as a "preverbal constituent" (423).

(423) *àyé* *á* *gú-yàrà* *má*
who? **Ipfv** exit-Fut Q
'Who will go out?'

The focus particle does not occur when the "preverbal constituent" immediately following the subject is **pronominal** (in any function) (424). This suggests that the following pronominals, e.g. 2Sg *ú* in (424a) and the 2Sg dative PP in (424b), are enclitic to the subject and/or proclitic to the verb.

(424) a. *mí* *ú* *wɔ̀-sɔ́*
1Sg 2SgObj see-Pfv2
'It was I [focus] who saw you-Sg.'

b. *àyé* *[ú* *dé]* *ŋ̀gó* *gá-sà* *mà*
who? [2Sg Dat] DemSg say-Pfv2 Q
'Who said that to you-Sg?'

The peculiar distribution of these particles suggests that the "subject focus" value of *kɔ̀* and plural *cɛ̀ ~ kɛ̀* is the result of rebracketing of an original construction with a subject immediately followed by an **object** NP beginning with *kɔ̀* or plural *cɛ̀ ~ kɛ̀* in discourse-definite function. Indeed, in some of the examples above the latter reading is still possible (if context is disregarded), e.g. (420b-c). However, in (421) the focus marker agrees in plurality with the subject, not the object, and in (420d-e) the focus marker is followed by an adverb that does not normally take a discourse-definite marker.

There are also several examples of *kɔ̀* following the combination of a **fronted nonsubject focalized constituent** and a **preverbal subject pronominal**. Again this is possible only when another constituent intervenes between *kɔ̀* and the verb. As in previous examples, we should be wary of the possibility of parsing with discourse-definite *kɔ̀* bracketed with the following constituent. See (444b), (446a), and (448b,d), and (451b) for examples of this type involving fronted WH-interrogatives. In those examples the context does not suggest strong discourse definiteness of the constituent following *kɔ̀*, so I favor taking *kɔ̀* as the focus morpheme.

### 13.1.2 Negative focalization with *jìní*

Negative focalization, where the negation has scope over the focalized constituent itself ('it is/was not X [focus] who/that …'), is expressed with *jìní* 'not be' (§11.2.1.2) following the fronted focal constituent.

(425) *mí* *jìní* *á* *là*
1SgSbj not.be Ipfv go.Ipfv
'It's not I [focus] who is going.'

This is of course to be distinguished from cases where the negation is internal to the backgrounded propositional material (e.g. 'it wax X [focus] who/that did not …').

(426) *sáydù* *kɔ̀* *yè-lí* *ŋ́*
S SFocSg come-PfvNeg Rel
'It was Seydou [focus] who didn't come.'

### 13.1.3 Inflectional (AN) modifications

The AN morphology of verbs is unaffected by the presence of a focalized constituent except in the perfective positive, on which see §13.1.3.1.

No change in AN inflectional suffixation occurs in simple intransitive 'exit' in the perfective negative (427a-b) or in the imperfective positive (427a-b). We get perfective negative *gù-rí-* and imperfective (positive) *gú-yàrà-* (including 3Sg subject *gú-yɔ̀r-ɔ̌:*) whether the clause is unfocalized or focalized.

(427) a. *gù-rí-wɔ́*
exit-**PfvNeg**-3SgSbj
'He/She did not go out.'

b. *àyé* *gù-rí* *má*
who? exit-**PfvNeg** Q
'Who did not go out?'

(428) a. *á* *gú-yɔ̀r-ɔ̌:*
Ipfv exit-**Fut**-3SgSbj
'He/She will go out.'

b. *àyé* *á* *gú-yàrà* *mà*
who? Ipfv exit-**Fut** Q
'Who will go out?'

There is likewise no change in AN morphology from unfocalized (429a) to focalized clauses in a transitive VP, exemplified with the imperfective positive (429b-c). The *tɛ̌w-wàrà* 'hit-Ipfv' is invariant in these examples.

(429) a. *nènú* *í* *á* *tɛ̌w-wàrà*
dog 1PlSbj Ipfv hit-**Ipfv**
'We will hit the dog.'

b. *àyé* *kɔ̀* *nènú* *á* *tɛ̌w-wàrà* *mà*
who? **SFocSg** dog] Ipfv hit-**Ipfv** Q
'Who will hit the dog?'

b. *í* *kɔ̀* *nènú* *á* *tɛ̌w-wàrà*
1Pl;Sbj **SFocSg** dog Ipfv hit-**Ipfv**
'It is we [focus] who will hit the dog.'

13.1.3.1 Perfective-2 (*-sɔ̀-*) replaces perfective-1

All (non-stative) verbs make regular use of either mostly intransitive perfective-1a suffix *-wɔ̀rɛ̀* (*-wòrè* ) or mostly transitive perfective-1b suffix *-wɔ̀sì* (*-wɔ̀sì* ) in unfocalized clauses, though perfective-2 *-sɔ̀-* is also possible. When the clause includes a focalized constituent, these perfective-1 suffixes must be replaced. The simplest way to do this is to switch to perfective-2 *-sɔ̀-*, which here functions as the **defocalized** (backgrounded) variant of the perfective (as also in relative clauses). In the following section we will see that there is another option when the focalized constituent is the subject. Therefore perfective-2 *-sɔ̀-* is regular under non-subject focalization, and competes with another construction under subject focalization.

(430) illustrates a simple unfocalized transitive with *-wɔ̀sì-*. (431a-c) are focalized clauses involving the same verb and object as (430). Another example of perfective-2 in a focalized clause is (432).

(430) *ǹ* *nènú* *wɔ̌w-wɔ̀sì*
1SgSbj dog kill-**Pfv1b**
'I killed the dog.'

(431) a. *àyé* *kɔ̀* *nènú* *wɔ̌w-sɔ̀* *mà*
who? **SFocSg** dog kill-**Pfv2** Q
'Who killed the dog?'

b. *mí* *kɔ̀* *nènú* *wɔ̌w-sɔ̀*
1SgSbj **SFocSg** dog kill-**Pfv2**
'It was I [focus] who killed the dog.'

c. *[yàgá* $^{HL}$*dêŋ]* *ú* *kɔ̀* *nènú* *wɔ̌w-sɔ̀* *mà*
[which? $^{HL}$place] 2SgSbj **SFocSg** dog kill-**Pfv2** Q
'Where did you-Sg kill the dog?'

(432) *[yàgá* $^{HL}$*cɛ́là]* *gú-s-ɔ̌:* *mà*
[which? $^{HL}$time] exit-Pfv2-3SgSbj Q
'When did he/she go out?'

13.1.3.2 Stative construction with *dà* or *dɛ̌n dà* 'be' replaces perfective-1

As indicated in the preceding section, when any constituent in the clause is focalized, perfective-1 must be replaced. Perfective-2 *-sà* is always available as an option, but in the special case where the focalized constituent is the subject, there is also another possibility. This is to combine the basic verb of the clause (in its combining form, as in verb chains) with **intransitive** *dà* 'be' (§11.2.2) or **transitive** *dɛ̌n dà*. For parallels in relative clauses, see §14.1.8. This construction also occurs in **stative** main clauses derived from active verbs (§10.1.3.1). In each of (433-434), the (a) example is unfocalized and allows perfective-1, while the (b) counterpart has a focalized subject and shifts to the stative construction.

(433) a. *gú-wòr-ɔ̌:*
exit-**Pfv1a**-3SgSbj
'He/She went out.'

b. *àyé* *gú* *dà* *mà*
who? exit **be** Q
'Who went out?'

(434) a. *ìsí-wòr-ɔ̌:*
lie.down-**Pfv1a**-3SgSbj
'He/She lay down (=went to bed).'

b. *àyé* *ìsí* *dà* *mà*
who? lie.down **be** Q
'Who lay down (=went to bed)?'

Transitive examples with *dĕn dà* are in (435).

(435) a. *mí* *kɔ̀* *nàŋá* *págí* *dĕn* *dà*
1Sg **SFocSg** cow tie **Tr** **be**
'It was I [focus] who tied up the cow.'

b. *àyé* *kɔ̀* *nàw$^{n}$á* *kúw* *dĕn* *dà* *mà*
who? **SFocSg** meat eat **Tr** **be** Q
'Who ate the meat?'

c. *[yó* *kày]* *ká*
[today Top] say
*[ŋgú* *kɔ̀* *[[ùró* *kà]* *kù]* *tígú* *dĕn* *dà]*
[DemSg **SFocSg** [[hole mouth] in] block **Tr** **be**]
*[ùró* *zú* *dà* *pét!]*
[hole be.full be full.Intensifier]
'Today, he said, when (=seeing that) that [focus] is what is blocking (=is stuck in) the opening of the burrow, the burrow is (=must be) chock full (of sheep).' (2004-1a.07)

### 13.1.4 Subject focalization

The structure of subject focalization can be pieced together from the preceding sections. The subject is clause-initial (if a pronoun, it has independent pronoun form). This applies to third person pronouns as well as other pronouns and NPs. Subject-pronominal suffixation on the verb, which occurs in unfocalized clauses for third person subjects, is correspondingly omitted. Focus morpheme *kɔ̀* occurs (under conditions given in §13.1.1 above) in positive clauses; the negative counterpart has *jìní*. A perfective positive verb undergoes morphological replacements as described in §13.1.3.1 above).

(436) a. *mí* *jìní* *á* *là*
1SgSbj not.be Ipfv go.Ipfv
'It's not I [focus] who is going.'

b. *sáydù* *á* *wàsí-yàrà*
Seydou Ipfv remain-Fut
'It's Seydou [focus] who will stay.'

c. *á:dámà* *gú* *dà*
Adama exit be
'It is Adama [focus] who has gone out.'

d. *àyé* *kɔ̀* *nàŋá* *kí-sà* *mà*
who? SFocSg cow slaughter-Pfv2 Q
'Who slaughtered the cow?'

An adverb like 'yesterday' may precede the focalized subject. Such adverbs establish spatiotemporal settings and could be regarded as preclausal topical elements.

(437) *yá:* *àyé* *kɔ̀* *ìní-sì* *lá* *dà* *mà*
yesterday who? SFocSg here-? spend.night be Q
'Who spent the night here yesterday?' [Tabi village dialect]
(or: 'Yesterday, who spent the night here?')

### 13.1.5 Object focalization

The object (full NP or pronominal) is fronted. There is no focus particle in positive clauses (438a). Negative *jìní* if present directly follows the focalized object (438b). In the perfective positive, perfective-2 *-sɨ̀-* replaces the perfective-1b suffix (438d-e). Subject agreement is as in main clauses; note the 3SgSbj suffix in (438a), which can be interpreted as unfocalized or as having object focus.

(438) a. *cɛ̀rú* *íw-ɔ̌:*
money want-3SgSbj
'He/She wants money.' or 'Money [focus] is what he/she wants.'

b. *cɛ̀rú* *jìní* *á* *yⁿómú-r-ɔ̌:*
money not.be Ipfv look.for-Ipfv-3SgSbj
'It's not money [focus] that he's looking for.'

c. *èsé* *ú* *â:* *yⁿómú-rò* *mà*
what? 2SgSbj Ipfv look.for-Ipfv Q
'What are you-Sg looking for?'

d. *èsé* *ú* *lí-sà* *mà*
what? 2SgSbj eat-Pfv2 Q
'What did you-Sg eat?'

e.. *èsé* *m̀* *[ú* *dé]* *ów-sò* *mà*
what? 1SgSbj [2Sg Dat] give-Pfv2 Q
'What did I give to you-Sg?' (heard as […mú:dé…])

f. *àyé* *ú* *∅* *tɛ́w-sà* *mà*
who? 2SgSbj ∅ hit-Pfv2 Q
'Whom did you-Sg hit?'

A setting adverb like 'yesterday' may precede the focalized constituent.

(439) *yá:* *yé* *ú* *lí-sà* *mà*
yesterday what? 2SgSbj eat-Pfv2 Q
'What did you-Sg eat yesterday?' [Tabi village dialect]

### 13.1.6 Focalization of PP or other adverbial

The entire PP (not just the NP complement of the postposition) is fronted under focalization.

(440) a. *[àyé* *dé]* *kɔ̀* *cɛ̀rú* *ów-sò* *mà*
[who? Dat] SFocSg money give-Pfv2 Q
'To whom did you-Sg give the money?'

b. *[[èsé* *kú]* *kù]*
[[what? head] in]
*ú* *kɔ̀* *súkkárà* *kúl-sò* *mà*
2SgSbj SFocSg sugar put-Pfv2 Q
'What did you-Sg put the sugar in?'

### 13.1.7 Focalization of a clause

In response to a 'what are you doiing?' question (441a), which presupposes a subject NP and calls for a reply with a (logical) focus on the VP, utterances like (441b) were elicited. These have no specific marking of VP focus.

(441) a. *èsé* *ú* *á* *kà-là* *mà*
what? 2SgSbj Ipfv do-Ipfv Q
'What are you-Sg doing?' (*kár$^{n}$á*)

b. *m̀* *â:* *zátú-rà*
1SgSbj Ipfv sweep-Ipfv
'I am sweeping.'

### 13.1.8 Focalization of predicate nominal

An example of focalization of the subject (i.e. topic) of an NP predicate is (442).

(442) *ká* *yé* *kɔ̀* *ŋú* *nà* *mà*
say who? Fos DemSg now Q
'It said (thought): who could that be?' (2004-1b.01)

## 13.2 Interrogatives

### 13.2.1 Polar (yes/no) interrogatives (*ma*, *yèy*)

The regular interrogative particle is clause-final *ma*, added to what is otherwise an ordinary main clause. The tone of the particle is often spread (i.e. copied) from the final tone of the preceding syllable. The form is often prolonged intonationally (→). When a yes/no question is expressed using both polar clauses ('did he come, or didn't he come'), as is common in dialogue, the intonational prolongation is conspicuous on the *ma* that concludes the first clause. In such paired interrogative clauses, the first also ends on higher-than-usual pitch (*ma*→↑), especially notable when the (copied) tone is low. Falling pitch, transcribed *mâ*→ has also been observed in a number of textual examples. In the paired polar interrogative construction, the second part is usually reduced by pruning out repeated nonverbal constituents, and its final *ma* may be more or less inaudible, but my assistant regularly restored it to full status in repeating taped occurrences during transcription.

(443) a. *nì*$^{L}$-$^{HL}$*né* *ú* *ìwá* *má*
water$^{L}$-drink 2SgSbj want Q
'Do you-Sg want some water to drink?'
(*nì*$^{L}$-$^{HL}$*né* purposive complement, §17.5.3)

b. *[[[àw wàsà]*$^{L}$ *cín nà]*
[[[snake other]$^{L}$ DefPl now]
*[ùró mà] á gàsù-rà mà→↑] [gàsù-ná má→]*
[hole ReflPoss] Ipfv dig-Ipfv Q] [dig-Ipfv.Neg Q]
'The remaining snakes (and reptiles) now, do they dig their (own) burrow(s), (or) do they not dig (them)?' (2004-1a.10)

As a stalling or clarification device, a single *ma* phrase is often found at the beginning of a speaking turn in response to an interlocutor's question. Thus, when the question in (443b) was posed, the other speaker began with *àw wàsà cíní má* 'the remaining snakes?', but then did not wait for the other speaker to confirm before beginning the actual reply.

*ma* is not confined to yes/no (polar) interrogatives. It optionally appears clause-finally in WH-interrogatives ('what?', etc.); examples are in the sections below.

An alternative clause-final particle *yèy* occurs in texts in contexts suggesting deeper anxiety. See (669) and (675) in Text 1.

Another particle, *yállà*, can be combined with an interrogative, which usually follows. It indicates wondering or uncertainty, and is often best translated 'whether'. An example is in (675) in Text 1.

### 13.2.2 'Who?' (*àyé*)

'Who?' is *àyé*. Like other WH-type interrogative forms, it is understood as focalized and often appears with focus particle *kɔ̀*.

(444) a. *àyé kɔ̀ ní ní-sà mà*
**who?** SFocSg water drink-Pfv2 Q
'Who drank the water?'

b. *àyé ú kɔ̀ lú:mà wɔ̀-sɔ́ má*
**who?** 2SgSbj SFocSg market see-Pfv2 Q
'Who(m) did you-Sg see in the market?'

c. *[wòtòrò*$^{L}$ *ŋú] [àyé sí] má*
[donkey.cart$^{L}$ DemSg] [**who?** Poss] Q
'That donkey cart is whose?'

The overt plural *àyé mă:* is occasionally used to require a response involving a plurality.

13.2.3 ‘What?’ (*èsé*, *yé* ), ‘with what?’, ‘why?’

‘What?’ is *èsé* or *yé*. The plural *èsé mă:* ‘what (things)?’ is elicitable but uncommon. Examples of *èsé* are in (445). An example of *yé* is in (675) in Text 1.

(445) a. *èsé* *ú* *íwà* *mà*
**what?** 2SgSbj want Q
‘What do you-Sg want?’

b. *ŋ̀gú* *[èsé=kɔ́* *má]*
DemSg [**what?**=NonhSgSbj Q]
‘That, what is it?’ (=‘What’s that?’)

‘With (=by means of) what?’ is *èsé sĭ:* or *yé sì:* (446). These include the instrumental postposition *sĭ:* ~ *sì:* (§8.1.1).

(446) a. *[èsé* *sĭ:]* *ú* *kɔ̀* *tìr$^{n}$ú* *á* *kù-rò* *mà*
[**what?** with] 2SgSbj SFocSg firewood Ipfv split-Ipfv Q
‘With what do you-Sg split firewood?’ (*kú\\kó*)

b. *[yé* *sì:]* *ú* *á* *bì-tà* *mà*
[**what?** with] 2SgSbj Ipfv work(v)-Ipfv Q
‘What do you-Sg work with?’

‘Why?’ (phrased as ‘for what?’) has two forms. One is *yé dè*, with purposive postposition *dè* (§8.3). The other is *èsé* $^{L}$*kà:wà* or contracted variant *èsé* $^{L}$*kà:*, with a possessed form of the noun *ká:wá*, ‘reason, cause’ (§17.5.8). I have also heard the latter as *ìsé* $^{L}$*kà:* with a vocalic mutation. It does not seem reasonable to connect this $^{L}$*kà:* with relative *kà:* ~ *kà:$^{n}$*, because of the semantics and because relative *kà:* ~ *kà:$^{n}$* follows a tone-dropped head NP.

(447) a. *[èsé* $^{L}$*kà:wà]* *ú* *yè-só* *má*
[**what?** $^{L}$reason] 2SgSbj come-Pfv2 Q
‘Why (=for what reason) have you-Sg come?’

b. *[èsé* $^{L}$*kà:]* *lɛ́* *lì-rí-wɔ́* *má*
[**what?** $^{L}$for] meal eat-PfvNeg-3SgSbj Q
‘Why didn’t he/she eat?’

### 13.2.4 ‘Where?’ (*yàgá*, *yà gírěy*)

‘Where?’ as an adverbial adjunct is *yàgá*. It is arguably a simplification of e.g. *yàgá dêŋ* ‘which place?’, which is also in common use. For *yàgá* ‘which?’, see §13.2.8, below.

(448) a. *yàgá* *ú* *á* *là* *mà*
**where?** 2SgSbj Ipfv go.to.Ipfv Q
‘Where are you-Sg going?’

b. *yàgá* *í* *kɔ̀* *lɛ́* *á* *lí-yàrà* *mà*
**where?** 1PlSbj SFocSg meal Ipfv eat-Ipfv Q
‘Where are we going to eat?’

c. *yàgá* *ú* *á* *gù-rò* *mà*
**where?** 2SgSbj Ipfv exit-Ipfv Q
‘Where do you leave (=come) from?’

d. *yàgá* *á* *kɔ̀* *[nàŋá* *mă:]* *pás-sà* *mà*
**where?** 2PlSbj SFocSg [cow Pl] leave-Pfv2 Q
‘Where did you-Pl leave the cows?’

Predicate locational ‘where is (X)?’ is *yàgá* or the approximative *yà gírěy* ‘around where?’ (cf. English *whereabouts?*), plus the locational quasi-verb *dá* ‘be’ (§11.2.2.1).

(449) a. *yàgá* *ú* *dá* *má*
**where?** 2SgSbj be Q
‘Where are you-Sg?’

b. *[yà* *gírěy]* *dá=bɛ́* *má*
[**where?** around] be=3PlSbj Q
‘Where are they?’

### 13.2.5 ‘When?’ (*yàgá* HL*túŋɔ̀*, *yàgá* HL*cɛ́là*, *yàgá* HL*nây*)

The forms in use are *yàgá* HL*túŋɔ̀* (cf. noun *tùw$^{n}$ɔ́* ‘time’) and *yàgá* HL*cɛ́là*, both meaning ‘when?’ or ‘what time?’ (e.g. time of day), and *yàgá* HL*nây* ‘(on) what day?’ For *yàgá* ‘which?’ see §13.2.8, below. The noun after *yàgá* has possessed-noun {HL} tone overlay.

(450) a. *[yàgá* $^{HL}$*túŋɔ̀]* *í* *á* *lí-yàrà* *mà*
[**which?** $^{HL}$**time**] 1PlSbj Ipfv eat-Fut Q
'When are we going to eat?'

b. *[yàgá* $^{HL}$*nây$^{n}$]* *â:* *dɛ̌w-wàr-è=bɛ́* *má*
[**which?** $^{HL}$**day**] Ipfv begin-Fut-3PlSbj=3PlSbj Q
'When (=on which day) will they begin?' (*dɛ̀wrá*)

c. *[yàgá* $^{HL}$*cɛ́là]* *gú-s-ɔ̌:* *má*
[**which?** $^{HL}$**time**] exit-Pfv2-3SgSbj Q
'When did he/she go out?'

### 13.2.6 'How?' (*y$^{n}$àŋɛ̂y*)

'How?' is *y$^{n}$àŋɛ̂y*. It is often combined with *kár$^{n}$á* 'do' ('do how?' = 'do what?')

(451) a. *y$^{n}$àŋɛ̂y* *í* *á* *kàr$^{n}$í-y$^{n}$àr$^{n}$à* *mà*
**how?** 1PlSbj Ipfv do-Fut Q
'How (=what) will we do?'

b. *[y$^{n}$àŋɛ̂y* *kár$^{n}$á* *mà]*
[**how?** do and.SS]
*í* *kɔ̀* *íló* *á* *mǎy$^{n}$-y$^{n}$àr$^{n}$à* *mà*
1PlSbj SFocSg house Ipfv build-Fut Q
'How do we build a house?'
(lit.: "Doing how, we build a house")

### 13.2.7 'How much?', 'how many?' (*àŋí*)

'How much?' or 'how many?' is *àŋí*.

(452) *àŋí* *ú* $^{HL}$*íwà* *mà*
**how.much?** 2SgSbj $^{HL}$want Q
'How much (or: how many) do you-Sg want?'

The distributive iteration (§4.7.1.6) is *àŋí-àŋí* 'how much (per unit, at a time, etc.)'.

### 13.2.8 ‘Which?’ (*yàgá*)

‘Which X?’ with some noun X is *[yàgá* $^{HL}$*X]* or *[yàgá-sí* $^{HL}$*X]*. The noun X has {HL} overlay. See §5.1.7 for this tonal pattern in compounds, and see §13.2.5 above for relevant ‘when?’ expressions.

(453) a. *[[yàgá-sí* $^{HL}$*ílò]* *kù]* *ú* *â:* *sìgí-yàrà* *mà*
[[**which?** $^{HL}$house] in] 2SgSbj Ipfv go.down-Ipfv Q
‘In which house do you lodge (“go down,” i.e. after work)?’ (*íló*)

b. *[yàgá* $^{HL}$*nây$^{n}$]* *yè-s-é=bɛ́* *má*
[**which?** $^{HL}$day] come-Pfv2-3PlSbj=3PlSbj Q
‘(On) which day did they come?’

c. *[yàgá-sí* $^{HL}$*ɛ́r$^{n}$à]* *ú* $^{HL}$*íwà* *mà*
[**which?** $^{HL}$goat] 2SgSbj $^{HL}$want Q
‘Which goat do you-Sg want?’ (*ɛ̀r$^{n}$á*)

### 13.2.9 ‘Whatchamacallit?’ (*ɛ́n-ná*, *y$^{n}$àŋɛ̂y dú*)

In texts, ‘whatchamacallit?’ hesitations are often expressed by *ɛ́n-ná*, a contraction beginning with a variant of *ɛ́sú* ‘thing’. Also attested in this function is *y$^{n}$àŋɛ̂y dú*, which includes *y$^{n}$àŋɛ̂y* ‘how?’ (§13.2.6), cf. French *comment dirais-je?*

‘Do whatchamacallit?’ is expressed as in English with one of these forms plus the the ‘do’ verb, rather than by a dedicated verb, see (525) in §15.2.1.4.

### 13.2.10 Embedded interrogatives

This section treats interrogatives embedded under a verb like ‘(not) know’.

Embedded **polar interrogatives** may be expressed using clause-final **interrogative particle** *ma*. The embedded clause is otherwise similar to a main clause, except that a third-person pronominal subject is expressed by a **preverbal subject pronominal** rather than by a suffix or enclitic as in main clauses. The embedded polar interrogative may be a single clause (whose truth is in play) (454a), or the alternatives may be spelled out (454b). In the latter case, the nonfinal embedded clause normally ends in nonfinal intonation (higher than usual terminal pitch).

(454) a. *[m̀ ínà] [wɔ́ yèrú-wòrè mà]*
[1SgSbj not.know] [3SgSbj come-Pfv1a Q]
'I did not know (=was unaware) that he/she had come.'

b. *[m̀ ínà] [wɔ́ bǎy$^{n}$ dà mà→↑],*
[1SgSbj not.know] [3SgSbj alive be Q],
*[wɔ́ nù-núm dà mà]*
[3SgSbj Rdp-die be Q]
'I don't know whether he/she is alive or has died.' (*núw$^{n}$ó*)

Alternatively, the explicit 'whether …' particle *yɛ́là* may be used. In this case, the 'whether …' clause may precede or follow the higher clause (e.g. 'I don't know'). Again, third person pronominal subjects are expressed by preverbal pronominals.

(455) *yɛ́là [kɔ́ kày] á bì-bíw-rà,*
**whether** [NonhSg Top] Ipfv Rdp-bury-Ipfv,
*kɔ́ kɔ́ bìw-nà,*
NonhSgSbj NonhSgObj bury-IpfvNeg,
*[kɔ́ kày] [m̀ ínà]*
[NonhSg Top] [1SgSbj not.know]
'Whether that one (=lizard) buries (its egg), or (whether) it does not bury it, I don't know.' (2004-1a.10)

Embedded WH-interrogatives like 'I don't know [who is coming]' are expressed as e.g. 'I don't know [the person who is coming]'. That is, a generic noun ('person', 'thing', 'place', 'time', 'quantity', 'manner'), with an attached **relative clause**, is the direct object of 'know'. The relative morpheme *kà:* is optional.

(456) a. *[m̀ ínà] [nù-ŋ$^{L}$ kà: á yà-rà ŋ́]*
[1SgSbj not.know] [**person-Sg**$^{L}$ Rel Ipfv come-Ipfv Rel]
'I don't know who is coming.'

b. *[m̀ ínà] [ɛ̀sù$^{L}$ í á lí-yàrà ŋ́]*
[1SgSbj not.know] [**thing**$^{L}$ 1PlSbj Ipfv eat-Ipfv Rel]
'I don't know what we will eat.'

c. *[m̀ ínà]*
[1SgSbj not.know]
*[dèŋ*$^{L}$ *kà: kálá: bé núm-sò ŋ́]*
[**place**$^{L}$ Rel any 3PlSbj die-Pfv2 Rel]
'I don't know where they died.'

d. *[m̀ ínà] [dèŋ*$^{L}$ *wɔ́ dá ŋ́]*
[1SgSbj not.know] [**place**$^{L}$ 3SgSbj be Rel]
'I don't know where he/she is.'

# 14 Relativization

## 14.1 Basics of relative clauses

Relative clauses are characterized by a clause-final morpheme *ŋ́* (arguably still recognized as an allomorph of the demonstrative pronoun), by the absence of pronominal-subject suffixes on the verb, and by an optional but very common relative morpheme *kà:* (variant *kà:ⁿ* in careful speech) that immediately follows the head NP. The only comparable head-NP-final relative marker in another Dogon language, to my knowledge, is Ben Tey *kà:ⁿ*.

The head NP appears to remain within the relative clause proper (but see comments below). The head NP's tones drop to {L}, suggestıng a connection with adjectival or demonstrative modification (i.e. reference restriction). In a non-subject relative, a pronominal subject is expressed by a preverbal pronominal in regular subject position. This is true not only for 1st/2nd person pronouns but also for third person pronouns, which in main clauses are postverbal. Determiners, universal quantifiers, and plural *bɛ́* associated with the head NP appear in clause-final position, following *ŋ́*.

Occasionally the head noun is repeated after the relative clause proper, with {L}-tones that suggest it is syntactically "possessed" by the relative clause proper (§14.1.12). This is not productive, and all textual examples involve a few semantically light spatiotemporal nouns ('place', 'day', etc.).

While other Dogon languages have a clearly internal head NP, which may be preceded by one or several other clausal constituents, in TT the great majority of textual (and elicited) occurrences position the head NP at the beginning of the clause. In view of this, and the fact that the head NP is optionally followed by relative *kà:* (which has some features of a relative pronoun), one might argue that in TT the head NP precedes (i.e. is external to) the relative clause proper (as e.g. in English). However, there are some textual occurrences in which another clause-internal constituent precedes the head NP, like the adverb 'far away' in (457).

(457) *[kó* *kɔ̀]* *[[wà:gá* *nù-n*$^{L}$ *dá* *ŋ́]*
[NonhSg SFocSg] [[**far.away(adverb)** person-Sg$^{L}$ be Rel]
*égú-wɔ̀sì* *tán]*
hear-Pfv1b if]
'Then if (even) a person who was far away heard (it)' (2004-2a.08)

Note also the location of relative *kà:* following 'Toupéré' (village name) in the headless relative in (458), suggesting that if a phonologically null (∅) head NP (with a meaning like 'manner, way') is considered to be virtually present, it would again be noninitial.

(458) *tùpéré* ∅ *kà:* *dǐŋ-sò* *ŋ́*
T (way) Rel sit.down-Pfv2 Rel
'the way Toupéré (village) was established' (2004-2a.01)

Accordingly there is some evidence that the head NP is (or can be) clause-internal, in spite of its frequent clause-initial position that hints at a shift to clause-external position.

§2.4 summarizes differences and similarities between TT and other Dogon (e.g. Jamsay) relative clauses.

### 14.1.1 Tone-dropping on final word(s) of NP in relative clause

If the internal head NP is unpossessed, it undergoes **tone-dropping** controlled by the relative clause, in its capacity as a reference-restricting modifier. The internal head affected by this tone-dropping is maximally N-Adj-Num, i.e. it can be a simple noun (459a), N-Adj (459b), N-Num, N-Adj-Num, or inverted N-Num-Adj. Any such combination including an adjective would undergo adjective-controlled tone-dropping on the word(s) to its left anyway. Therefore if the internal head ends in an adjective, the audible effect of relative-controlled tone-dropping is that the adjective drops its tones. In the examples below, tone-dropped words that would not drop tones in the absence of the relative are bolded, but I assume that the relative clause also (redundantly) drops tones of the other relevant words as indicated by bracketing.

(459) a. *nàw$^{n}$à*$^{L}$ *kà:* *ǹ* *zàlú-sà* *ŋ́*
**meat**$^{L}$ Rel 1SgSbj cook-Pfv2 Rel
'the meat that I cooked' (*nàw$^{n}$á*)

b. *[nàw$^{n}$à* *jèr$^{n}$ù]*$^{L}$ *kà:* *ǹ* *zàlú-sà* *ŋ́*
[meat **good**]$^{L}$ Rel 1SgSbj cook-Pfv2 Rel
'the good meat that I cooked' (*nàw$^{n}$à*$^{L}$ *jèr$^{n}$ú*)

In a main clause, an NP consisting of **N-Num** undergoes no tone-dropping (the noun and numeral do not interact tonosyntactically, §6.4.1). This is illustrated in (460a). When such a NP functions as relative head NP, **both words undergo tone-dropping** (460b-c).

(460) a. *nàŋá* *tà:lí*
cow three
'three cows'

b. *[nàŋà* *tà:lì]*$^{L}$ *kà:* *ŋ̀* *cí-sà* *ŋ̀*$^{L}$ *kúnú*
[**cow** **three**]$^{L}$ Rel 1SgSbj slaughter-Pfv2 Rel$^{L}$ DefSg
'the three cows that I slaughtered'

c. *[àrà-m* *tà:lì]*$^{L}$ *kà:,*
[**man-Pl** **three**]$^{L}$ Rel,
*[àrǎ-m* *pɛ́-tà:lí]* *y*$^{n}$*ǒm-sò* *ŋ́*
[man-Pl thirty] be.stronger.than-Pfv2 Rel
'the three men who overpowered thirty men' (2004-2a.01)

A possessed NP that also functions as head NP has its tones determined by the possessor-possessed relation. That is, the combination of possessor and possessed core NP is a **tonosyntactic island** that is not affected by the relative-clause operator. This is consistent with the fixed tonal form of possessor-possessed before a determiner (§6.2.2). So 'Seydou's younger brother' in (461) keeps its tones unchanged in (461b) as relative head. Actually, in (461b-d), one might think that the tone-dropping of the possessed noun is due to the relative clause. However, when the possessor is pronominal, as in (461e), or when the possessor is a NP including a quantifier or determiner, as in (461f), we hear the telltale falling tone pattern that can only be the possessor-controlled overlay {HL}.

(461) a. *sáydù* $^{L}$*ɔ*$^{n}$*sùr*$^{n}$*ù*
S $^{L}$younger.sibling
'Seydou's younger brother'

b. *[[sáydù* $^{L}$*ɔ*$^{n}$*sùr*$^{n}$*ù]*
[[S $^{L}$younger.sibling]
*kà:* *móttì* *bírá* *á* *bì-tà* *ŋ̀*$^{L}$ *kúnú]*
Rel Mopti work(n) Ipfv work(v)-Ipfv Rel$^{L}$ DefSg]
*â:* *yá-r-ǒ:*
Ipfv come-Ipfv-3SgSbj
'Seydou's younger brother who works in Mopti, he is coming.'

c. *[sáydù* $^{L}$*ìlò]* *(kà:)* *lǔw* *dà* *ŋ̀*$^{L}$ *kúnú*
[S $^{L}$house] (Rel) fall be Rel$^{L}$ DefSg
'Seydou's house that has collapsed'

d. *[sáydù* $^{L}$*èr$^{n}$à]* *(kà:)* *bùsú* *dà* *ŋ́*
[S $^{L}$goat] (Rel) animal.die be Rel
'Seydou's goat that died'

e. *[ú* $^{HL}$*ér$^{n}$à]* *(kà:)* *bùsú* *dà* *ŋ́*
[2SgPoss $^{HL}$goat] (Rel) animal.die be Rel
'your-Sg goat that died'

f. *[[àr$^{n}$ù$^{L}$* *ŋú]* $^{HL}$*ér$^{n}$à]* *(kà:)* *bùsú* *dà* *ŋ̀$^{L}$* *kúnú*
[[man$^{L}$ DemSg] $^{HL}$goat] (Rel) animal.die be Rel$^{L}$ DefSg
'this man's goat that died (definite)'

Since numerals are not ordinarily included in the scope of possessor-controlled {L} or {HL} overlays (§6.2.1.2), tone-dropping of the numeral in examples like (462) must be attributed to the relative clause. Nevertheless, 'your six goats' is prosodically phrased as a unit, so that if there is a slight pause or intonation break in (462) it comes after the numeral and before the (first) relative particle.

(462) *[ú* $^{HL}$*ér$^{n}$à]* *kùrèy$^{L}$* *(kà:)* *bùsú* *dà* *ŋ́*
[2SgPoss $^{HL}$goat] six$^{L}$ (Rel) animal.die be Rel
'your-Sg six goats that died'

### 14.1.2 Restrictions on the head noun in a relative clause

A pronoun may not be relative-clause head. However, an independent pronoun may occur pre-clausally (in its lexical tone melody), with an appositional "resumptive" noun *nù-ŋ*$^{L}$ (from *nù-r$^{n}$ú* 'person') as clause-internal head noun.

(463) a. *ú* *[nù-ŋ*$^{L}$ *kà:* *ìní* *á* *sígú-rò* *ŋ́]*
**2Sg** [**person-Sg**$^{L}$ Rel here Ipfv go.down-Ipfv Rel]
'you-Sg who live here'

b. *í* *[nù-m*$^{L}$ *kà:* *ìní* *dà* *ŋ́]*
1Pl [person-Pl$^{L}$ Rel here be Rel]
'we who are here'

### 14.1.3 Relative clause with conjoined NP as head

When a conjoined NP of the type *[X.: Y lěy]* 'X and Y' is the head NP of a relative, only the conjunctive morpheme *lěy* has its tones lowered. Thus contrast (464a), whose simple head noun has its tones dropped, with (464b), where except for the morpheme *lěy* the two NPs constituting the conjunction keep their tones. In other words, a NP inside a conjunction is a **prosodic island** not subject to syntactic tone dropping. Even the tone-dropping on *lěy* is hardly perceivable, since it is optionally pronounced *lèy* with low tone in non-relative contexts, especially before a pause.

(464) a. *[àrà-m*$^{L}$ *zɔ̀ŋú-sɔ́* *ŋ̀*$^{L}$ *cíní]* *tílú-wɔ́s-è*
[man-Pl$^{L}$ fight-Pfv2 Rel$^{L}$ DefPl] shut-Pfv1b-3PlSbj
'They have shut up (=imprisoned) the men who fought.' (*àrǎ-m*)

b. *[[àrǎ-m.:* *y*$^{n}$*ǎ-m* *lèy*$^{L}$*]* *kà:*
[[man-Pl-& woman-Pl and] Rel
*zɔ́ŋɔ́* *zɔ̀ŋú-sɔ́* *ŋ̀*$^{L}$ *cíní]* *tílú-wɔ́s-è*
fight(n) fight-Pfv2 Rel$^{L}$ DefPl] shut-Pfv1b-3PlSbj
'They have shut up (=imprisoned) the men and women who fought.'

### 14.1.4 Generic head nouns ('someone', 'something')

Semantically light nouns denoting generic ontological categories (human, thing, time, place) occur frequently as heads of relative clauses. Some of them have slightly specialized form, and one ('day') has a suppletive lexical form.

(465)

| gloss | independent | as relative head | gloss |
|---|---|---|---|
| 'person' | *nù-r*$^{n}$*ú* | *nù-ŋ*$^{L}$ *kà: …* | 'a person who …' |
| 'people' | *nǜ-mú* | *nù-m*$^{L}$ *kà: …* | 'people who …' |
| 'thing' | *ésú* | *ès*$^{L}$ *kà: …* | 'a thing that …' |

In a given context, these heads may be definite, denoting a specific individual ('the person who …', 'the thing that …'). They may also be used generically: 'someone (anyone) who …' = 'whoever …', or 'something (anything) that …' = 'whatever …'. The distinction is made explicit by using a determiner ('the', 'this/that') or a more general quantifier ('any', 'all') at the end of the clause.

(466) *[èsᴸ kà: ú á lì-rà ŋ́]* *jèrⁿú* *sàrà*
[thingᴸ Rel 2SgSbj Ipfv eat-Ipfv Rel] good not.be
'What you-Sg eat isn't good.'

As noted in the preceding subsection, *nù-ŋᴸ kà:* 'person who …' is also used in apposition to a 1st/2nd person pronoun. Other examples of *nù-ŋᴸ kà:* and its plural *nù-mᴸ kà:* are (463a-b) and, with dative postposition, (490a) in §14.5.1.

In negative contexts, '(not) any X' may be expressed using *tíŋéy* with one of the forms in (465), above. The most common combination is '(not) any thing', which is usually compressed into a single word as *ès-tíŋéy* or *èn tíŋéy* (there are also variants with *-túŋéy*). For '(not) any person' (i.e. 'no-one'), the attested form is *nù-rⁿùᴸ tígéy*.

For 'when(-ever) …' and similar temporal relative clauses, see §15.2.1.5. For 'where(-ever) …' and similar spatial relative clauses, see §15.2.4. For manner relatives ('how'), see §15.2.5.

### 14.1.5 Headless relative clause

The head NP is sometimes omitted. The relative morpheme *kà:* may or may not remain. The omission of a head NP occurs with high frequency when the head noun is semantically light, like 'place (where …)' or 'way/manner (how …)'. In (467), a 'way/manner' head is understood. *kà:-yèrú* is clearly not the head, as shown by the context and by its high tone.

(467) *[[kà:-yèrú ∅ kà: dá ŋ́] kâyⁿ]* *dá=kɔ́*
[[tree.locust ∅ Rel be Rel] like] be=NonhSgSbj
'It (= pilgrim locust) is like the way tree locust is.'

A headless relative may also be used when the head is contextually understood due to prior discourse. This construction is facilitated by a preceding existential ('there is/are'), as in (468), which occurred in the middle of a text about mantises.

(468) *á dà [kà: [kúrɔ́ sá] á cì-tò ŋ́],*
Exist be [**Rel** [hair have] Ipfv fly-Ipfv **Rel**]
*á dà [kà: kúrɔ́ sà-rá ŋ́]*
Exist be [**Rel** hair have-not **Rel**]
'There are (some) that have wings and fly, and there are (some) that don't have wings.' (2004-1b.04) (< *círó*)

### 14.1.6 Preverbal subject pronominal in nonsubject relative clause

In main clauses, pronominal subjects are either clause-initial (1st/2nd persons) or suffixed/enclitic to the predicate (3rd person), see (94) in §4.3.4. In subject relatives, the head is by definition the subject and there is no resumptive pronominal-subject marker. In nonsubject relatives, however, the subject may be pronominal. If so, it is expressed as a **preverbal proclitic**, identical in form to pronominal **object** markers, see (91) in §4.3.2. The proclitic follows a nonpronominal object if present, unlike the case with 1st/2nd person main-clause subject pronouns. The only elements that intervene between the subject proclitic and the verb are the preverbal imperfective particle *á* (469c) and nonsubject pronominals such as objects, see (95f) in §4.3.4, and dative PPs, see (488f) in §14.3.1.

(469) a. *[lɛ̀*$^{L}$ *kà: wɔ́ lí-sà ŋ́]* *jɛ̀r*$^{n}$*ú sàrà*
[meal$^{L}$ Rel **3SgSbj** eat-Pfv2 Rel] good not.be
'The meal that he/she ate was not good.'

b. *[này*$^{nL}$ *kà: bɛ́ yǎy-sà ŋ̀*$^{L}$ *kúnú] àr*$^{n}$*á mùrú-sɔ̀*
[day$^{L}$ Rel **3PlSbj** go-Pfv2 Rel$^{L}$ DefSg] rain rain.fall-Pfv2
'The day when they went, rain fell (=it rained).'

c. *m̀ ínà*
1SgSbj not.know
*[ès*$^{L}$ *kà: kɛ́ á lì-rà ŋ́]*
[thing$^{L}$ Rel **NonhPlSbj** Ipfv eat-Ipfv Rel]
'I don't know what they (=animals) eat.'

d. *này*$^{nL}$ *kà: ú lǔw sígú-sò ŋ́*
day$^{L}$ Rel **2SgSbj** fall go.down-Pfv2 Rel
'the day when you-Sg fell down'

e. *này*$^{nL}$ *kà: ú m̀bú:dù ów-sò ŋ́ [sǎydù dè]*
day$^{L}$ Rel **2SgSbj** money give-Pfv2 Rel [S Dat]
'the day when you-Sg gave the money to Seydou.'

### 14.1.7 Relative particle *ŋ́*

In a relative clause, the relative particle *ŋ́* (syllabified with a preceding word-final vowel) comes after the verb, and often at the end of the clause. It does not agree with the head NP in intrinsic nominal features (humanness, number).

Unlike "participial" verbal suffixes in relative clauses in other Dogon languages, such as Jamsay and Najamba, the *ŋ́* particle is not suffixed to the verb. Indeed, the two are frequently separated from the verb by a postverbal adjunct, especially in texts as opposed to sentences elicited with French cues.

It is likely that relative *ŋ́* is etymologically identical to the singular 'this/that' demonstrative *ŋ̀gú*, which can reduce to *ŋ́* when used as a postnominal modifier (§4.4.1). Definite determiners are used in certain other languages of the region to mark the right edge of relative clauses (e.g. Humburi Senni *dì*).

Plural particle *mă:* is optionally added after *ŋ́* when the head NP is plural. The combination is pronounced [ḿmă:]. Since the head NP is generally overt (except in adverbial clauses with covert 'time that …' or 'place where …' as implied head), *mă:* is redundant when the head NP contains a human noun that is already marked suffixally for plurality (470b). When the head NP is based on a nonhuman noun that does not mark number, or when it is a human kin term that has no suffixal number marking, *mă:* may be the only marker of plurality (470d). For the conditions under which *mă:* can be added to the internal head NP, see §14.1.10..

(470) a. *y$^{n}$à-r$^{n}$ù*$^{L}$ *kà:* *yè-lí* *ŋ́*
woman-Sg$^{L}$ Rel come-PfvNeg **Rel**
'the woman who didn't come.'

b. *y$^{n}$à-m*$^{L}$ *kà:* *yè-lí* *ŋ́* (*mă:*)
woman-Pl$^{L}$ Rel come-PfvNeg **Rel** **(Pl)**
'the women who didn't come.'

c. *nàŋà*$^{L}$ *kà:* *yè-lí* *ŋ́*
cow$^{L}$ Rel come-PfvNeg **Rel**
'the cow that didn't come'

d. *nàŋà*$^{L}$ *kà:* *yè-lí* *ŋ́* (*mă:*)
cow$^{L}$ Rel come-PfvNeg **Rel** **(Pl)**
'the cows that didn't come'

In (471a-b), an adverbial PP follows the verb and precedes *ŋ́*.

(471) a. *[kó zǒw lú-sɔ̀=kɔ́ [[ùró* L*pùrò] kù] ŋ́]*
[NonhSg run enter-Pfv2=NonhSgSbj [[**hole** L**inside**] **in**] **Rel**]
*dìrⁿú-sà=kɔ́*
encounter-Pfv2=NonhSgSbj
'(At the time) when it (= Hyena) ran inside the burrow, it found …'
(2004-1a.07)

b. *[níŋ kày] [ès*L *kà: ú úkù [kè dé] ŋ́]*
[now Top] [thingL Rel 2SgSbj know [**NonhPl Dat**] **Rel**]
'Now, (tell) what you know about them' (2004-1b.02)

Some examples elicited (with French cues) do show relative *ŋ́* preceding postverbal phrases such as datives; see (469e) in §14.1.6, above.

### 14.1.8 Perfective-2 or *dà/dɛ̌n* replaces perfective-1

The special morphological features of (defocalized) perfective positive verbs noted in the preceding chapter for focalized clauses also apply to relative clauses.

**Perfective-2** *-sɔ̀* replaces perfective-1b *-wɔ̀sì* or perfective-1a *-wòrè* (and their variants) in any subject or non-subject relative.

(472) a. *nènùL kà: ŋ̀ cɛ́rú-sà ŋ́*
dogL Rel 1SgObj bite-**Pfv2** **Rel**
'the dog that bit me'

b. *nènùL m̀ wɔ̀-sɔ́ ŋ́*
dogL 1SgSbj see-**Pfv2** **Rel**
'the dog that I saw'

In subject relatives, the speaker may alternatively use a **stative** construction with 'be' quasi-verb *dà* replacing perfective-1a *-wɔ̀rè* for intransitives (473a). The counterpart that replaces perfective-1b *-wɔ̀sì* with transitives is *dɛ̌n dà* (473b). See §10.1.3.1 for this construction, and §13.1.3.2 for its use in focalization.

(473) a. *bɛ̀lùL kà: [ùró kù] lú dà ŋ́*
sheepL Rel [hole in] enter **be** **Rel**
'the sheep-Sg that went into the hole.'

b. *nènù*$^{L}$ *kà:* *ŋ̀* *cér* *dĕn* *dà* *ŋ́*
dog$^{L}$ Rel 1SgObj bit **Tr** **be** Rel
'the dog that bit me'

c. *[ès*$^{L}$ *kà:* *kár*$^{n}$*ú* *dĕn* *dà* *ŋ́]*
[thing$^{L}$ Rel do **Tr** **be** Rel]
'the thing that it did' (2004-1b.01)

### 14.1.9 Relative clause based on negative verb or predicate

A relative may be created from any predication, positive or negative. Examples based on **negative** predicates are in (474). (474a) happens to be a possessor relative (§14.4).

(474) a. *à-nù*$^{L}$ *kà:* *[jìrò* *kùrɔ̀]*$^{L}$ *ŋ̀gú* $^{HL}$*gúrù*
man-Sg$^{L}$ Rel [eye hair]$^{L}$ DemSg $^{HL}$long
*dɔ̀-rí* *ŋ́* *yà:fú:*
reach-PfvNeg Rel all
'anyone whose eyelash is not as long (as this)' (2004-1b.01)

b. *[ìsò-súmĕy* *káyà* *kày]* *[súr*$^{n}$*ú* *jìní* *ŋ́]*
[sand grasshopper Top] [worm is.not Rel]
'as for "sand grasshopper," (one) that is not (= unless you're talking about) a worm (= larva), …' (2004-1b.03)

See also (476) in the following section ('anyone who cannot …').

### 14.1.10 Final morphemes added to relative clause (non-tone-dropping)

Plural morpheme *mă:* may be added after the relative marker *ŋ́*, denoting plurality of the head NP. The presence of *mă:* has no tonal effect on the preceding words. *mă:* can occur in the internal head only after relative *kà:* (475b), and this is less common than addition after *ŋ́*. It may not be added directly to the head NP proper, so (475c) was rejected.

(475) a. *nàŋà*$^{L}$ *kà:* *yè-lí* *ŋ́* *mă:*
cow$^{L}$ Rel come-PfvNeg **Rel** Pl
'the cows who didn't come.'

b. *[ès*$^{L}$ *kà:* *mǎ:]* *kɔ́* *á* *lì-rà* *ŋ́*
[thing$^{L}$ Rel Pl] NonhSgSbj Ipfv eat-Ipfv Rel
'the things that it (= grasshopper) eats' (2004.1b.02)

c. *#[nàŋà* *mà:]*$^{L}$ *kà:* *yè-lí* *ŋ́*
#[cow **Pl**]$^{L}$ Rel come-PfvNeg **Rel**
'the cows who did not come' [compare (470d)]

Distributive quantifier *kálá:* 'each', in the sense 'any', may occur at the end of a relative clause (476).

(476) *nù-ŋ*$^{L}$ *kà:* *[bɔ̀sɔ̀*$^{L}$ *ŋ̀gú]*
person-Sg$^{L}$ Rel [excrement$^{L}$ DemSg]
*bɔ̀sú* *bɛ̀-ná* *ŋ́* *kálá:*
defecate can-IpfvNeg Rel each
'anyone who cannot defecate this (much) excrement' (2004-1b.01)

14.1.11 Final morphemes added to relative clause (tone-dropping)

In (477a-b), we find L-tone on the relative morpheme *ŋ̀*, which is otherwise H-toned *ŋ́*. This is attributable to the **definite morpheme** *kúnú*, which has a similar tone-dropping effect on simple preceding nouns (§6.5.3).

(477) a. *y*$^{n}$*à-r*$^{n}$*ù*$^{L}$ *kà:* *yè-lí* *ŋ̀*$^{L}$ *kúnú*
woman-Sg$^{L}$ Rel come-PfvNeg **Rel**$^{L}$ **DefSg**
'the woman who didn't come.'

b. *[y*$^{n}$*à-m̀* *tà:lì]*$^{L}$ *yè-lí* *ŋ̀*$^{L}$ *cíní*
[woman-Pl three]$^{L}$ come-PfvNeg **Rel**$^{L}$ DefPl
'the three women who didn't come'

The other morphemes that follows relative *ŋ́* with similar tone-dropping effect are the demonstrative pronouns, e.g. singular *ŋ̀gú* (*ŋú*, *ŋ́*), as in (478). These pronouns also produce tone-dropping on a preceding noun in simple nonrelative NPs.

(478) a. *àyé* *kɔ̀* *[dìŋgù-rí* *ŋ̀*$^{L}$ *ŋú]* *mà*
who? SFocSg [sit-PfvNeg **Rel**$^{L}$ **DemSg**] Q
'Who is this one who did not sit down?'

b. *[kɔ̀ yⁿà-rⁿù$^{L}$ kà: àsí á zàŋgù-rà ŋ̀$^{L}$ ŋú]*
[DiscDef woman-Sg$^{L}$ Rel LogoSbj Ipfv seek-Ipfv **Rel**$^{L}$ **DemSg**]
'(said:) this (same) woman that I am courting' (2004-1b.01)

The verb of the relative clause is tonally unaffected by the tonal drop on relative *ŋ́* in these examples.

### 14.1.12 Repetition of {L}-toned head noun after relative clause

Repetition of the head noun following the relative clause proper, a typical feature of Jamsay, is not usual in TT. My data suggest that this repetition is typical only of semantically light spatiotemporal nouns, in spatiotemporal adverbial relatives, specifically *nǎyⁿ* 'day' (by extension: 'times', 'era') and *dɛ̌ŋ* 'place'. In the following textual examples, two occurrences of L-toned *nàyⁿ* flank the remainder of the relative clause.

(479) a. *[nàyⁿ$^{L}$ [ànànsá:rá níŋgèy] bɛ́ zɔ́ŋ-rɔ̀ ŋ́] $^{L}$nàyⁿ*
[**day**$^{L}$ [European beside] 3PlSbj fight-Ipfv **Rel**] $^{L}$**day**
'at the time when they were fighting against the whites, …' (2004-2a.01)

b. *hálì [[nàyⁿ$^{L}$ ànànsá:rá tá á ùní-yⁿàrⁿà ŋ́] $^{L}$nàyⁿ]*
until [[**day**$^{L}$ European Tabi Ipfv go.up-Fut **Rel**] $^{L}$**day]**
'until the day when the white was about to go up Tabi Mountain' (2004-2a.01)

I heard L-toned $^{L}$*nàyⁿ* on the post-relative occurrence of *nǎyⁿ* in both textual examples. That is, the post-relative occurrence has possessed-noun tone overlay, indicating that the relative clause proper is here functioning as (syntactic) possessor.

A similar example with repeated *dɛ̌ŋ* 'place', in two occurrences in L-toned form *dèŋ*, is (480). The dative postposition *dè* is also repeated; it occurs as the end and also internally after relative *kà:*.

(480) *[yá bɛ́ pás-s-è]*
[there 3PlObj leave-Pfv2-3PlSbj]
*[[[dèŋ$^{L}$ kà: dè kóy-kɔ̌yrà á gà-r-è ŋ́] $^{L}$dèŋ] dè]*
[[[**place**$^{L}$ **Rel Dat** KK Ipfv say-Ipfv-3PlSbj **Rel**] $^{L}$**place**] **Dat**]
'They left them there, for (= at) the place (= village) that they call Koykoyra.' (2004-2a.01)

In (481), a similar combination with two occurrences of *bùrú* 'year' might have been expected, but the occurrence that would have been inside the relative clause proper is omitted. Again, the post-relative noun is a high-frequency spatiotemporal noun. I hear it as {HL}-toned *búrù*, which is one of the possible possessed-noun tone overlays.

(481) *[í kɔ́ bɛ̌:-sì ŋ́]* $^{HL}$*búrù kày,*
[1PlSbj NonhSgObj get-Pfv1b **Rel**] $^{HL}$**year** Topic,
*àlhámdìrìllá:hì [í á lì-rà ní]*
praise.God [1PlSbj Ipfv eat-Ipfv Emph]
*[hálì hálì [yù$^{L}$ kàlá] gó]*
[until until [millet$^{L}$ new] exit.Imprt]
'(In) a year when we have gotten it (= had a good harvest), praise God, we will eat (from the previous harvest) until the new millet comes out.' (2004-2a.06)

## 14.2 Subject relative clause

### 14.2.1 Ordinary subject relative clause

Positive subject relatives with relative marker *ŋ́* (or tone-dropped *ŋ̀* before a determiner) are perfective (482a) and imperfective (482b).

(482) a. *y$^{n}$à-r$^{n}$ù$^{L}$ kà: [ìlò$^{L}$ ŋgú] á zàtù-rà ŋ́*
woman-Sg$^{L}$ Rel [house$^{L}$ DemSg] Ipfv sweep-Ipfv **Rel**
'the woman who is sweeping this house' (*y$^{n}$à-r$^{n}$ú*)

b. *yó à-r$^{n}$ù$^{L}$ yè-só ŋ̀$^{L}$ kúnú kày*
yesterday man-Sg$^{L}$ come-Pfv2 Rel$^{L}$ DefSg Top
'as for the man who came yesterday' (2004-1b.01)

When the activity in question defines a type of person (e.g. by occupation), we get an agentive construction with singular suffix *-nú ~ -n* (plural *-mú ~ -m*) instead of a relative clause with final *ŋ́*, but otherwise identical in structure to the type (482); see §14.2.2 below.

Other AN categories require *ŋ́* as the relative morpheme. Examples with negative verbs are in (483).

(483) a. *[nù-ŋ*$^{L}$ *kà: bírá bì-ná ŋ́]*
[person-Sg$^{L}$ Rel work(n) work(v)-**IpfvNeg** **Rel**]
*dàgì-rí [wɔ́ lɛ́ l-ɛ́]*
be.right-PfvNeg [3SgSbj meal eat-Hort]
'A person who doesn't work, it isn't right that he/she should eat.' (*nù-r$^{n}$ú*)

b. *[nù-ŋ*$^{L}$ *kà: yá: bì-lí ŋ́]*
[person-Sg$^{L}$ Rel yesterday work(v)-**PfvNeg** **Rel**]
*m̀ wɔ́ nàr$^{n}$ù*$^{L}$ *pàsí-yàrà*
1SgSbj 3SgObj chase.away$^{L}$ leave-Ipfv
'The person who didn't work yesterday, I will chase him/her out (and leave him/her).' (*nù-r$^{n}$ú*)
[for the {L}-tones of *nàr$^{n}$ù* before a future verb, see §3.7.2.3]

Examples with perfective positive verbs are in (484). As usual the perfective-2 is required (§14.1.8).

(484) a. *m̀ ínà [y$^{n}$à-r$^{n}$ù*$^{L}$ *kà: yè-só ŋ́]*
1SgSbj not.know [woman-Sg$^{L}$ Rel come-**Pfv2** **Rel**]
'I don't know the woman who came.' (*y$^{n}$à-r$^{n}$ú*)

b. *y$^{n}$à-r$^{n}$ù*$^{L}$ *kà: yá: lɛ́ kár$^{n}$ú-sà ŋ́*
woman-Sg$^{L}$ Rel yesterday meal do-**Pfv2** **Rel**
'the woman who cooked yesterday.' (*y$^{n}$à-r$^{n}$ú*)

### 14.2.2 Clausal agentives

Clausal agentives (functioning like subject relatives that specify an occupation or other defining activity) are exemplified in (485). They are identical in structure with ordinary imperfective subject relatives, except in using agentive suffix *-n* rather than relative particle *ŋ́*.

(485) a. *y$^{n}$à-r$^{n}$ù*$^{L}$ *kà: lɛ́ á kà-là-n*
woman-Sg$^{L}$ Rel meal **Ipfv** do-**Ipfv-Agent**
'the woman who cooks'

b. *nù-ŋ*$^{L}$ *kà: kú á kà-rà-n*
person-Sg$^{L}$ Rel head **Ipfv** shave-**Ipfv-Agent**
'one who shaves heads'

c. *nù-m*$^{L}$ *kà: ìní bírá á bì-tà-n*
person-Pl$^{L}$ Rel here work(n) **Ipfv** work(v)-**Ipfv-Agent**
'the people who work here.'

The attested lexicalized agentives are compounds of the *deerslayer* variety. In this case, the compound initial denotes a typical direct object, or is a cognate (or other default) nominal associated with the verb. The regular tonal pattern is [x́ ý-Agentive], with L-toned (tone-dropped) noun stem as the initial, and H-toned verb stem in agentive form with singular *-nú ~ -n* or plural *-mú ~ -m* as the final (§5.1.9).

### 14.2.3 Relative from comparative adjectival predicate.

Comparative clauses ending with an {HL}-toned adjective (or noun) denoting the domain of reference are described in §12.1.2. The texts contain headless nonsubject relatives based on this construction, of the logical type 'X that [Y is ADJ-er than $\varnothing_x$]'. Two such relatives occur in the passage in (486), referring to elephants.

(486) B: *[[kò dé]* $^{HL}$*ná: ŋ́]* *[[ǒw* $^{L}$*èsù]* *kày],*
[[NonhSg Dat] $^{HL}$big Rel] [[bush $^{L}$thing] Top]
*[kó kày]* *í* *wɔ̀-rí*
[NonhSg Top] 1PlSbj see-PfvNeg
'Anything bigger than that, as for (= among) wild animals, we haven't seen it.'
A: *[[kò dé]* $^{HL}$*césù* *ŋ́]* *nà*
[[NonhSg Dat] $^{HL}$strength Rel] now
'(How about) anything more powerful than that?' (2004-1a.10)

Structural /nâ: ŋ́/ in B's turn in (486) is heard as [ná:ŋ]. This initially confused the analysis, since *ná:* 'big' is the lexical form. The grammatically required {HL} overlay is, however, audible in A's turn in (486), where the noun 'strength' is lexically *césú*. In B's turn, /nâ: ŋ́/ is heard with flattened H-tone as [ná:ŋ] because it is pronounced as one syllable, and an <HLH> syllable is not allowed; see §3.7.3.2.

Another (elicited) example is (487), where the {HL} overlay on the adjective is unmistakable.

(487) *[[kò dé]* $^{HL}$*gúrù* *ŋ́]*
[[NonhSg Dat] $^{HL}$long Rel]
'(anything) that is longer than it' (*gùrú*)

## 14.3 Object relative clause

### 14.3.1 Ordinary object relative clause

The direct object is relativized on in (488). The head NP is normally clause-initial, preceding even a subject NP (488d). If the subject is pronominal, it appears as a proclitic to the verb (488e). It may be separated from the verb by a pronominal PP (488f).

(488) a. *[nàw$^{n}$à$^{L}$ í kúw-sò ŋ́] jèr$^{n}$ú sàrà*
[meat$^{L}$ 1PlSbj eat-Pfv2 Rel] good not.be
'The meat that we ate is (was) not good.' (*nàw$^{n}$á*)

b. *[kɔ̀ [kùwɔ̀-kà là:lèy]$^{L}$]*
[DiscDef [footprint tiny]$^{L}$]
*àsí á wɔ̀-rɔ̀ ŋ̀$^{L}$ ŋú nà*
LogoSbj Ipfv see-Ipfv Rel$^{L}$ DemSg now
'(Elephant thought:) now (as for) those tiny footprints that I see' (2004-1b.01)

c. *[kɔ̀ y$^{n}$à-r$^{n}$ù]$^{L}$ kà: àsí á zàŋù-rà ŋ̀$^{L}$ ŋú*
[DiscDef woman-Sg]$^{L}$ Rel LogoSbj Ipfv court-Ipfv Rel$^{L}$ DemSg
'(Elephant thought:) the woman that I am courting' (2004-1b.01)

d. *yàgá dà*
where? be
*[ɛ̀$^{n}$sà$^{L}$ kà: sǎydù kí-sà ŋ̀$^{L}$ kúnú]*
[chicken$^{L}$ Rel S slaughter-Pfv2 Rel$^{L}$ DefSg]
'Where is the chicken that Seydou slaughtered (cut the throat of)?'

e. *[ɛ̀$^{n}$sà$^{L}$ kà: yá: ú ɛ́w-sà ŋ̀$^{L}$ kúnú]*
[chicken$^{L}$ Rel yesterday 2SgSbj buy-Pfv2 Rel$^{L}$ DefSg]
'(Where is) the chicken that you-Sg bought yesterday?'

f. *[ɛ̀$^{n}$sà$^{L}$ kà: mí [ú dé] ów-sò ŋ̀$^{L}$ kúnú]*
[chicken$^{L}$ Rel 1SgSbj [2Sg Dat] give-Pfv2 Rel$^{L}$ DefSg]
'(Where is) the chicken that I gave you-Sg?'

## 14.4 Possessor relative clause

In this construction, both the possessor and the possessum drop tones. If present, *kà:* immediately precedes the possessum and can be taken as the immediate possessor, with the fully-expressed possessor to its left as a separate phrase. Examples are in (489a-c). See also 'anyone whose eyelash …', (474a) in §14.1.9. However, in (489d), *kà:* is omitted, and the possessum *ná-ìlò* has its regular tones, reinforcing the view that the possessor as relative head noun is (tono-)syntactically decoupled from the possessum even though they are adjacent.

(489) a. *nù-ŋ́*$^{L}$ *kà:* $^{L}$*ìlò* *lŭw* *sígú* *dà* *ŋ́*
**person-Sg**$^{L}$ **Rel** $^{L}$**house** fall go.down be Rel
'the person whose house has fallen down (=collapsed).'

b. *nù-ŋ́*$^{L}$ *kà:* $^{L}$*ìlò* *lùw-rí* *ŋ́*
**person-Sg**$^{L}$ **Rel** $^{L}$**house** fall-PfvNeg Rel
'the person whose house did not fall'

c. *nù-ŋ*$^{L}$ *kà:* $^{L}$*ì-r*$^{n}$*ù* *màrú* *dà* *ŋ́*
**person-Sg**$^{L}$ **Rel** $^{L}$**child-Sg** be.lost be Rel
'the person whose son was lost' (*màrú*)

d. *nù-r*$^{n}$*ù*$^{L}$ *ná-ìlò* *[tál* $^{HL}$*tɔ́rɔ̀]*
**person-Sg**$^{L}$ **mother-house** [Sarinyere $^{HL}$mountain]
*y*$^{n}$*á-ŋ̀gó* *ŋ́* *kálá→]* *y*$^{n}$*á-ŋ̀gó* *[tá* $^{HL}$*tɔ́rɔ̀]*
not.be Rel any] not.be [Tabi $^{HL}$mountain]
'There is nobody at Tabi Mountain who doesn't have kin (by marriage) at Sarinyere Mountain.' (2004-2a.05) (lit. "[any person whose kin do not exist at Sarinyere] does not exist at Tabi.")

## 14.5 PP relative clause

### 14.5.1 With overt postposition

When the complement of a postposition is relativized on, the head noun drops tones as usual, and relative *kà:* is treated as the immediate complement of the postposition.

Relative *kà:* immediately precedes a **simple postposition**. Both the head noun and the postposition drop tones to {L}. Examples are (490a) with dative *dé* (dropped to *dè* $^{L}$), and (490b) with instrumental *sí:* (dropped to *sì:* $^{L}$). The

only candidate for controller of tone-dropping on the postposition is the relative clause.

(490) a. *[nù-ŋ*$^{L}$ *[kà: dè]*$^{L}$ *m̀ ów-sò ŋ́]*
**[person-Sg**$^{L}$ **[Rel Dat]**$^{L}$ 1SgSbj give-Pfv2 Rel]
*[cèrù*$^{L}$ *cíní yà:fú:] lí kám-mɔ̀sì-wɔ́*
[money$^{L}$ DefPl all] eat do.completely-Pfv1b-3SgSbj
'The person (=man) to whom I gave (it), he completely ate (=spent) all the money.' (verb *káw*$^{n}$*á*)

b. *sàwà*$^{L}$ *[kà: sì: ]*$^{L}$ *gònó í á gàsí-yàrà ŋ́*
**axe**$^{L}$ **[Rel Inst]**$^{L}$ ditch 1PlSbj Ipfv dig-Ipfv Rel
'the axe with which we (will) dig the ditch' (*sáwà*)

Both components of a **complex postposition** undergo tone-dropping. The final component is locative *kù*, which is already L-toned, so here the tone-dropping is inaudible. The dropping of tones on the first, noun-like component, like $^{L}$*pùrù* 'interior' in *[X* $^{L}$*pùrù kù]* 'inside X', is already accounted for by its status as a possessed noun with preceding nonpronominal possessor (assuming that relative *kà:* is nominal rather than pronominal). But it is possible that the relative clause would also have tone-dropped the postposition (along with its complement) if it had been given the chance to.

(491) *[tòkù*$^{L}$ *[kà: *$^{HL}$*pùrò] kù]*
[jar$^{L}$ [[**Rel** $^{HL}$**inside**] **in**]
*ní ú â: kúl-lò ŋ́], jɛ̌n sàrà*
water 2SgSbj Ipfv put-Ipfv Rel], good not.be
'The jar in which you put-Present the water isn't good.' (*jɛ̀r*$^{n}$*ú*)

### 14.5.2 Adverbial relatives without overt postposition

Spatial and temporal relatives may omit a locative postposition (492).

(492) a. *[ìlò*$^{L}$ *kà: m̀ â: sígù-rò ŋ́] jɛ̌n sàrà*
[house$^{L}$ Rel 1SgSbj Ipfv go.down-Ipfv Rel] good not.be
'The house where I lodge ("go down" after work) is not good.' (*jɛ̀r*$^{n}$*ú*)

b. *[này$^{n}$*$^{L}$ *kà: àr$^{n}$á mùrú-sɔ́ ŋ́]*
[**day**$^{L}$ Rel rain rain.fall-Pfv2 Rel]
*[này$^{n}$*$^{L}$ *kúnú] móptì ǹ đìr$^{n}$ú-sà = kɔ́*
[day$^{L}$ Anaph] Mopti 1Sg encounter-Pfv2=NonhSgSbj
'The day the rain fell, that day found me (=I happened to be) in Mopti.'

See also temporal clauses with relative form, headed or headless e.g. '(at the time) when …' (§15.2.1.5).

# 15 Verb (VP) chaining and adverbial clauses

## 15.1 Chaining

What might otherwise appear as a string of independent main clauses, for example denoting sequential events in a narrative, often takes the form of one or more **nonfinal chained clauses**, without AN inflection, followed by a single final main clause with regular AN inflection.

Unless otherwise indicated, the subjects of the nonfinal and final clauses are shared, and this **shared subject** (whether expressed as a NP or as a pronominal) normally appears only once. Therefore we may consider the nonfinal clauses to be VPs.

There are two basic types of nonfinal chained VP. One consists simply of the VP ending in a verb in the **bare combining form**, which for nonmonosyllables always ends in *ú* (the *ú* is is deleted by apocope after semivowels and *m*). This is a **direct chain**. An example is *kúlú bì-tó* 'put (something) again', literally 'put' plus 'repeat' (causative of 'go back'). Suffixal inflections apply to the final verb in the chain, while the nonfinal verb has constant form, as in perfective-2 *kúlú bǐ-t-tò* in (672) in Text 1.

In the other type (**loose chain**), the nonfinal verb takes a form identical to the **imperative** (hence always ending in a non-high vowel), followed by a morpheme *mà* or cliticized *=m̀* that I gloss as 'and.SS', since it functions as a **same-subject switch-reference** marker.

### 15.1.1 Verbal noun in *-ú* of direct VP chains

When a VP chain is nominalized by a verbal noun suffix *-ú*, this suffix appears on the final verb. An immediately preceding chained VP takes the combining form, but **drops its tones**, suggesting that it functions as a **compound initial**. I do not add tone superscript $^{L}$ in textual transcriptions but do so here.

(493) a. *tèw*$^{L}$*-[sìg-ú]*
hit$^{L}$-[go.down-VblN]
'going down hitting the ground' [see (494) below]

b. *lùw*$^{L}$*-[sìg-ú]*
fall$^{L}$-[go.down-VblN]
‘(act of) falling down’

c. *bàr*$^{L}$*-[kŭw-∅]*
gather$^{L}$-[eat(meat)-VblN]
‘(act of) gathering up and eating’

d. *yá* *í* *á* *bò-tò* *zàŋù*$^{L}$*-ní*
there 1PlSbj Ipfv go.to-Ipfv plead$^{L}$-drink.VblN
‘We go there to ask (for wome water) to drink.’ (2004-2a.04)

In (494), the speaker’s brief pause (represented by the comma) between the nonfinal chained verb (*tɛ́w*) and the verbal noun was sufficient to permit the regular tones of the combining form to surface. In more fluent speech we would get *tɛ̀w*$^{L}$*-[sìg-ú]* as in (493a).

(494) *má* *[á* *bò-tò=kɔ́]* *[tɛ́w,* *sìg-ú↓]*
and [Ipfv go.to-Ipfv=NonhSgSbj] [hit, go.down-VblN]
‘and it (=adder, after lunging) goes (back) down hitting (the ground).’ (2004-1a.10)

### 15.1.2 Absence of AN suffix in nonfinal chained verb

I have observed no examples of a nonfinal chained verb with a nonzero AN suffix.

### 15.1.3 Direct VP-chains with bare combining forms of nonfinal verbs

The construction with *mà* or *=m̀* is used when the chained clauses are only loosely connected, as in narrative event sequences. The direct construction with a bare combining-form verb and a following inflected verb requires a **tighter conceptual integration** of the two. This more tightly-knit construction could be thought of as the equivalent for verbs of noun-noun compounding.

Certain final verbs function somewhat like English **control verbs**, except that the TT verbs in question take complements in the form of VPs ending in combining forms of verbs (i.e. forming a direct chain). Examples: *bɛ̀rá* ‘get, obtain’ when used as a final verb meaning, ‘can, be able to’ (§17.4.4), and *mɔ̀tɔ́* ‘get together’ in the sense ‘do together’ (§15.1.8). However, care must be taken to distinguish those control verbs that take combining-form (i.e. direct chain)

complements from those that take verbal-noun complements (with suffix *-ú* on the verb). For verbs with {LH} lexical tone, the combining form and the verbal noun in *-ú* are homophonous, but they are distinguishable for verbs whose lexical tone melody is /H/ (§4.2.2.1).

Examples of direct chains not involving a fixed control verb are in (495). The two verbs in each case can be construed as expressing distinct co-events integrated into a single complex event. See also the examples with *pásá* 'leave' in §15.1.7, below.

(495) a. *bàrú* *kúw-sò*
gather devour-Pfv2
'They (= frogs) gathered up and devoured (termites).'
[except from (519b) in §15.2.1.1]

b. *lŭw* *sígú* *dà*
fall go.down be
'It (= house) has collapsed.'

Some further examples (with the final verb cited in the imperative): *yèrí dɔ́* 'come & arrive' = 'arrive here', *bìrĭy yèrí* 'return & come' = 'come back here', *kúlú bárá* 'put & add' = 'increase (e.g. speed)'.

An interesting feature of these verb chains is that a nonfinal verb may appear with L-tones as part of the domain of the {LH} tone overlay imposed on a final inflected verb with future suffix *-yàrà-* (§10.1.1.9) or progressive *-cí dà* (§10.1.3.2), see §3.7.2.3.

### 15.1.4 Loose VP-chaining with final *mà* 'and' (usually same-subject)

A very common nonzero clause-final morpheme for chains of nonstative VPs (or verbs), usually involving shared subjects, is *mà*, which is glossed as 'and.SS' in interlinears. It occurs at the end of noninitial VPs (or verbs) in chains, the final VP having a regular inflected verb. Stative verbs do not combine with *mà*.

(496) a. *ǹ* *[yá* *mà]* *á* *yà-rà*
1SgSbj [go **and.SS**] Ipfv come-Ipfv
'I will go and come back.'

b. *[téⁿǎm kɔ́ ségá mà]*
[hyena NonhSgObj encounter **and.SS**]
*[[kò dé] á ùsù-rò-∅]*
[[NonhSg Dat] Ipfv ask-Ipfv-3SgSbj
'Hyena encountered him (= sheep), and he (= Hyena) asked: …' (2004-1a.02)

Before *mà*, the verb has a form **ending in a non-high vowel** (i.e. not *i* or *u*). This is therefore not the usual combining form (which usually ends in a high vowel). The form before *mà* is **usually identical to the imperative** (497a). However, irregular and suppletive motion verbs have imperative forms that are distinct from the *mà* form (497b). The irregular verb 'bring' idiosyncratically uses the combining form (ending in a high vowel) before *mà* (497c). 'Give', the only lexically C-final verb, has the same form *ów* in all three functions (497d).

| (497) | gloss | imperative | form with *mà* | combining form |
|---|---|---|---|---|
| a. | 'enter' | *ló* | *ló mà* | *lú* |
| | 'exit' | *gó* | *gó mà* | *gú* |
| | 'see' | *wɔ́* | *wɔ́ mà* | *wɔ́* |
| | 'slaughter' | *cɛ́* | *cɛ́ mà* | *cí* |
| | 'shave' | *ká* | *ká mà* | *ká* |
| | 'sit' | *dìŋé* | *dìŋé mà* | *dĭŋ* |
| | 'put down' | *dèlé* | *dèlé mà* | *dèlú* |
| | 'squat' | *tóríyó* | *tóríyó mà* | *tóríy* |
| | 'work' | *bìrá* | *bìrá mà* | *bìrú* |
| | 'tie' | *págá* | *págá mà* | *págú* |
| b. | 'go' | *yàyá* | *yá mà* | *yǎy* |
| | 'come' | *yèrí* | *yèré mà* | *yèrí* |
| | 'go to' | *yá* | *bòró mà* | *bòrú* |
| | " | | *bèré mà* | |
| | " | | *yá mà* | |
| c. | 'bring' | *zérì* | *zêːrú mà* | *zêːrú* |
| d. | 'give' | *ów* | *ów mà* | *ów* |

The form in *mà* **does not allow third person subject pronominal suffixes**. It does allow preverbal first or second person subject pronominal morphemes, but once the subject has been established, a repetition of the subject pronominal in succeeding *mà* clauses is optional.

When a first or second person subject pronominal, or any noun-headed subject NP, precedes the VP ending in *mà*, it is possible to consider it to be part of the larger clause rather than inside this particular VP. This is seen by comparing e.g. 1Sg to 3Sg subjects in (498a-b), noting the position of the third person subject marker on the final (fully inflected) verb. See §15.1.6 for further discussion.

(498) a. *ŋ̀* *[yá* *mà]* *á* *yà-rà*
1SgSbj [go and.SS] Ipfv come-Ipfv
'I will go and come back.'

b. *[yá* *mà]* *á* *yà-rà-wɔ́*
[go and.SS] Ipfv come-Ipfv-3SgSbj
'He/She will go and come back.'

A good example of the **same-subject preference** is textual passage (499). The *mà* clauses are not indented. The passage begins with three *mà* clauses with 1Pl subject. There is then a transition to another string of *mà* clauses with 'the woman who cooks the millet-cakes' (referent introduced in the fifth line, indented). Both *mà* series are terminated by a concluding main-like clause (indented) with perfective verb and clause-final H-toned *má* 'if, when' (§16.1).

(499) *í* *kɔ́* *yàrá* *mà,*
1PlSbj NonhSgObj measure **and.SS**,
*í* *héló* *mà,*
1PlSbj distribute **and.SS**,
*í* *nàw$^{n}$á* *mà,*
1PlSbj grind **and.SS**,
*í* *nǎm-mɔ̀sì* *má,*
1Pl grind-Pfv1b **if**,
*kɔ̀* *zà*$^{L}$*-[bì-nù]*$^{L}$ *kúnú,*
DiscDef millet.cakes$^{L}$-[cook.Agent-Sg]$^{L}$ DefSg,
*yá* *tòkú* *látá* *mà,*
there.Def pot set.up.on **and.SS**,
*[zà*$^{L}$ *ŋgú]* *bìrá* *mà,*
[millet.cakes$^{L}$ DemSg] cook **and.SS**,
*má* *[wɔ̀* $^{HL}$*zá]* *bìrú-wɔ̀sì* *má,* …
and.then [3SgPoss $^{HL}$millet.cakes] cook-Pfv1b **if**, …
'We go and pound them (to dislodge the grains),[1] then when we have come (back home), we measure it (=grain), we distribute it, and we grind it. (And) when we have ground it, the woman who cooks the millet-cakes sets the pot (on the fire) there, she cooks those millet cakes. (And) when she has cooked the millet cakes, …' (2004-2b.01)

In each of the *mà* chains in (499), the final clause with *mà* (lines 3 and 7) might well have been replaced with a fully inflected verb. This would make a natural "paragraph" break before the 'if/when' clauses (lines 4 and 8), which are naturally grouped (as backgrounded clauses) with the following rather than preceding clause.

The same-subject requirement for the *mà* clause and the reference clause is **not strict**. While the subjects are generally shared, there are textual occurrences that violate the same-subject generalization. In part this may reflect production problems, but there are several such textual examples and some show no prosodic sign of broken syntax. Indeed, *mà* chains can be rather long, to the point of having an almost incantational rhythm, and such long chains do not always end in a same-subject inflected clause.

In (500a), the long chain does respect the same-subject preference. In (500b), however, there is a subject switch; the woman is subject of 'hold' and 'come', and the man is the subject of 'pull' and of the final inflected verb 'give' (the man is inside a granary, providing a daily ration of millet grain spikes to his

[1] The pounding to dislodge grains from the millet spikes is generally done in a specific area at the edge of the village, where extra-large mortars and pestles are kept for community use.

wife). In (500c), a sequence of *mà* clauses forms its own paragraph, with no concluding fully inflected clause; recall also the comments on (498), above.

(500) a. *[èrê:ré kày] kɔ́rú-wɔ̀s-è má,*
[Boscia Top] pick-Pfv1b-3PlSbj if,
*í kɔ́ yàwrá mà,*
1PlSbj NonhSgObj crush **and.SS**,
*í kɔ́ sárá mà,*
1PlSbj NonhSgObj leach **and.SS**,
*í kɔ́ zàlá mà,*
1PlSbj NonhSgObj cook.in.pot **and.SS**,
*ɛ́rá í kùlí-yàrà*
soda.ash 1PlSbj put-Fut
'When they have picked *Boscia* (fruits), we will crush them (to remove the skins), we will leach them (by soaking in water for one or more days), we will cook them, and we will put in (=add) (liquid) soda ash.' (2004-2b.02)

b. *má yⁿà-rⁿú [[kɔ̀ lìsá] jèré mà]*
and.then woman-Sg [[DiscDef gear] hold **and.SS**]
*[yèró mà]*
[come **and.SS**]
*[bàsá mà]*
[take.out.provisions **and.SS**]
*[yⁿà-rⁿú dè] á òw-r-ɔ̌:]*
[woman-Sg Dat] Impr give-Ipfv-3SgSbj
'Then the woman would come with the gear (=basket) and (he would) take out millet, (and) he would give it (millet) to the woman.' (2004-1a.04)

### 15.1.5 VP-chaining with *=m̀*

In addition to the combination with *mà* described in the preceding section, there is a form with *=m̀* pronounced as a clitic (or suffix) at the end of the otherwise bare verb stem.

Unlike the combinations with *mà*, those with *=m̀* do allow **optional third person subject** markers. This suggests that *=m̀* can form a full-fledged clause, while *mà* may only form a (subjectless) VP.

(501) a. *gó=m̀-wɔ́* *lú-wòrè-wɔ́*
exit=**and.SS**-3SgSbj enter-Pfv1a-3SgSbj
'He/She went out and came (back) in.'

b. *gó=m̀=bɛ́* *lú-wòrè=bɛ́*
exit=**and.SS**=3PlSbj enter-Pfv1a=3PlSbj
'They went out and came (back) in.'

c. *[[tàgú mà]* *póló=m̀-wɔ́]*
[[shoe ReflPoss] take.off=**and.SS**-3SgSbj]
*[[ní kù]* *yǎy-s-ɔ̌:]*
[[water in] go-Pfv2-3SgSbj]
'She took off her (own) shoes and waded into the water.'

In (502) we have two parallel clauses with *=m̀*. In the text, it is not obvious that the sequence as a whole is chained to any following verb.

(502) *èsà-àrá* *úŋgúrú-sò* *[nǔ-m mà]* *jèré=m̀↑,*
chicken-male get.up-Pfv2 [person-Pl ReflPoss] hold=**and.SS**,
*[gɔ̌ŋ mánì]* *úŋgúrú-sò* *[nǔ-m mà]* *jèré=m̀↓*
[elephant also] get.up.Pfv2 [person ReflPoss] hold=**and.SS**
'Rooster got up and took his people (=winged creatures) with him, and Elephant likewise got up and took his people (=quadrupeds) with him.' (2004-1b.01)

In (502) *jèré* has its lexical sense 'hold, keep'. However, *jèré=m̀* can also be used with a preceding chained VP in a sense similar to English *keep (doing)*. In this case, *jèré=m̀* functions in narrative as a backgrounded durative adverbial clause, setting up a following clause with new material. See *súrú jèré=m̀* 'kept crawling' (668) in Text 1, and *bǎm jèré=m̀* 'kept going around' (675) in Text 1.

In (503), the initial *=m̀* clause has a third plural subject distinct from the nonhuman subject ('year') of the immediately following clause, and there is no prosodic evidence of broken syntax. The *=m̀* clause is arguably subordinated directly to the third clause, which does revert to the same third plural subject, and the free translation is phrased accordingly. However, such examples show that the same-subject requirement is somewhat flexible.

(503) *bɛ́* *sáyá=m̀,* *yàrú* *sí-wɔ̀rɛ̀,*
3PlSbj disperse=**and.SS**, year year.begin-Pfv1a,
*[yó* *nà],* *kɔ́* *á* *hìlù*$^{L}$ *bìtí-yɛ̀r-ɛ̀=bɛ́*
[again now], NonhSgSbj Ipfv raise$^{L}$ do.again-Fut-3PlSbj=3PlSbj
'They would disperse, and (when) a rainy season had begun (the following year), again, they would recommence (the funeral rites).' (2004-2a.08)

For those verb stems of two or more syllables whose regular form before *=m̀* ends in {*o ɔ a*}, the stem-final vowel optionally shifts to *e*, or to *ɛ* for verbs with {*ɔ ɛ*} vocalism, when the subject is a third person plural category; see §10.2.2 for this vowel mutation. Contrast the stem shapes in (504a) and (504b).

(504) a. *bà:$^{n}$sá* *kúló=m̀* *pású-s-ɔ̌:*
bowl put.in=**and.SS** leave-Pfv2-3SgSbj
'He put the bowl in (the container) and left it.'

b. *bà:$^{n}$sá* *kúl-é=m̀* *pású-s-ɛ̀=bɛ́*
bowl put.in-**3Pl=and.SS** leave-Pfv2-3Pl=3PlSbj
'They put the bowl in (the container) and left it.'

Examples of the special third plural forms are given in (505a). For the verbs in (505b-c), there is no audible distinction between the two stem forms. In (505b) this is because the stem is monosyllabic, and therefore does not allow the {*e ɛ*} ending. In (505c), the stem is bisyllabic but already ends in *e*, so we cannot determine whether the *e* ending is present. The forms of *=m̀* with irregular verbs are given in (505d).

| (505) | | gloss | imperative | before *=m̀* | 3Pl before *=m̀* |
|---|---|---|---|---|---|
| | a. | 'put in' | *kúló* | *kúló=m̀* | *kúl-é=m̀* |
| | | 'take out' | *gùŋ́ó* | *gùŋ́ó=m̀* | *gùŋ-é=m̀* |
| | | 'wash' | *dì-ró* | *dì-ró=m̀* | *dì-r-é=m̀* |
| | | 'tie' | *págá* | *págá=m̀* | *pág-é=m̀* |
| | | 'buy' | *ɛ́wá* | *ɛ́wá=m̀* | *ɛ́w-ɛ́=m̀* |
| | | 'sell' | *dɔ̀rɔ́* | *dɔ̀rɔ́=m̀* | *dɔ̀r-é=m̀* |
| | b. | 'enter' | *ló* | *ló=m̀* | *ló=m̀* |
| | | 'dance' | *gɛ́* | *gɛ́=m̀* | *gɛ́=m̀* |
| | c. | 'put down' | *dèlé* | *dèlé=m̀* | *dèl-é=m̀* |

| | | | | |
|---|---|---|---|---|
| d. | ‘come’ | *yèrí* | *yèró = m̀* | *yèr-é = m̀* |
| | ‘bring’ | *zérì* | *zê:ró = m̀* | *zê:r-é = m̀* |
| | ‘go to’ | *yá* | *yá = m̀* | *yá = m̀* |

### 15.1.6 Arguments of chained verbs

The topics of this section are a) the position of the subject NP or pronominal, and b) the position of any non-subject arguments (direct objects, adverbs, etc.). Recall that VP chains normally require that the subjects of the respective clauses be shared (coindexed), so there is only one occurrence of the subject NP or pronominal. Non-subject arguments may be shared (‘I [dropped and picked up] the package’), or they may belong to just one of the verbs (‘[I dropped the package] [and picked up the bag]’).

Recall that third person subject pronominals are usually suffixed on an inflected verb. Therefore such suffixes appear on the final verb in the chain, i.e. the verb that carries normal AN inflections, regardless of whether the chain involves nonfinal bare verb stems or has a chaining particle or suffix (506a). First and second person pronominals are particles that occur in or near clause-initial position. In chains, such subject pronominals **precede a nonfinal chained verb**, usually when there is a chaining particle or suffix (506b) and always in direct chains (506c). Likewise with nonpronominal (noun-headed) subject NPs (506d). One can argue in such cases whether the subject constituent should be bracketed with the chained verb, or whether it should be considered to be the subject of the final inflected verb.

(506) a. *[mɔ̀tɔ́ mà] yè-s-é = bɛ́*
[be.together and.SS] come-Pfv2-3PlSbj=3PlSbj
‘They came together.’

b. *í mɔ̀tɔ́ = m̀ yè-só*
1PlSbj be.together=and.SS come-Pfv2
‘We came together.’

c. *ǹ lŭw sígú-wòrè-∅*
1SgSbj fall go.down-Pfv1a-3SgSbj
‘I fell down.’

d. *sáydù lŭw sígú-wòrè-∅*
S fall go.down-Pfv1a-3SgSbj
‘Seydou fell down.’

In direct chains with no chaining particle or suffix, as in (506c-d), my assistant rejected proposed alternative versions with the subject intervening between the two verbs in a direct chain, as in the ungrammatical #*lŭw ŋ̀ sígú-wòrè* 'I fell down'.

When two VPs containing different non-subject arguments are combined in a chain, the linear ordering of constituents generally respects the logically correct bracketing. For example, in (507) 'inside the burrow' belongs with 'dig', and 'there' (referring to the site of digging inside the burrow) belongs with 'take down (= lay)'.

(507) *ùgùnú* *mánì↑,*
whiptail too,
*[kó* *mánì]* *[[[ùró* *$^{L}$pùrò]* *kù]* *gàsá* *mà]*
[NonhSg too] [[[**hole** $^{L}$ **inside**] **in**] dig and.SS]
*[kó* *mánì]* *[yá* *á* *sì-tù-rò]*
[NonhSg too] [**there** Ipfv go.down-Caus-Ipfv]
'The whiptail (lizard), for its part, digs inside (the) hole (=burrow), it too lays (eggs) there.' (2004-1a.10)

### 15.1.7 Chains including *pásá* 'leave'

Transitive verb *pásá* 'leave, abandon' is often added after a chained action verb such as 'put down' where it would be omitted in English. The nonfinal verb may have *mà* (508a), or it may be directly chained as with *tám* 'kick' in (508b).

(508) a. *[dèŋ-dĭŋ* *dèlé* *mà]* *[pásá* *kɔ́]*
[stool **put.down** and.SS] [**leave.Imprt** NonsgO]
'Put-2Sg the stool down (and leave-2Sg it)!'

b. *tɛ́năm* *[[kú* *mà]* *yàsá=m̀]* *cék*
hyena [[head ReflPoss] snatch=and.SS] only
*[kɔ́ yɛ̀]* *[jĕm* *tám* *pásá=m̀] …*
[then] [shard **kick** **leave**=and.SS] …
'Hyena snatched (=pulled away) his head, then kicked away (=knocked) the shard (off the hearth) (and left it), and …' (2004.1a-06)

See also (483b) in §14.2.1.

### 15.1.8 Chains including *mɔ̀tɔ́* 'be/do together'

The verb *mɔ̀tɔ́* can be intransitive 'assemble, come together' or transitive 'gather, put together'. In intransitive function, it occurs with *mà* or *=m̀* when the following clause (which may be intransitive or transitive) shares the same subject.

(509) a. *mɔ̀tɔ́=m̀* *yè-sé=bɛ́*
do.together-and.SS come-Pfv2-3PlSbj
'They came together.' (lit. "They got together and came.")

b. *[í* *mɔ̀tɔ́* *mà]* *bírá* *á* *bì-tà*
[1PlSbj do.together and.SS] work(n) Ipfv work(v)-Ipfv
'We work together.'

When a non-subject NP (e.g. direct object) of the substantive clause denotes what comes together, we get sentences like (510) with combining form *mɔ̀tú*.

(510) a. *cěwlà:fú:* *í* *mɔ̀tú* *dèlú-wòsì*
everything 1PlSbj do.together put.down-Pfv1b
'We put everything together.'

b. *í* *ké* *mɔ̀tú* *dèl-lí*
1PlSbj NonhPlObj do.together put.down-PfvNeg
'We didn't put them together.'

It is also possible to use *mɔ̀tɔ́* with a preceding chained verb in the combining form.

(511) *èsà-àrá* *[jètà*$^{L_HL}$*-círò* *yà:fú:→]* *sór$^{n}$ú* *mɔ̀tɔ́=m̀*
chicken-male [wing$^{L_HL}$-fly all] call do.together=and.SS
*[kè* *dé]* *tégú-sò]*
[NonhPl Dat] speak-Pfv2
'Rooster called all flying creatures together and spoke to them.' (2004-1b.01)

These constructions get some competition from single-clause constructions that have two NPs conjoined by *lěy* 'with, and' (§7.1.1.1).

(512) *mɔ̌* *í* *á* *zàlí-yàrà* *[nìŋú* *kó* *lěy]*
rice 1PlSbj Ipfv cook-Ipfv [sauce NonhSg and]
'We will cook the rice (together) with the sauce.' (*zàlá*)

### 15.1.9 Chains with *zí* plus motion verb ('convey')

*zí* is arguably a verb in its combining form, but it occurs only as nonfinal element in chains. That is, it cannot be directly inflected. It occurs with a following motion verb ('go' or less often 'come'). It is difficult to tease apart the semantic contribution of *zí*, but the combinations mean 'convey, transport, deliver (there, here)', with the motion verb expressing the direction.

(513) a. *[nù-rⁿú kálá]*
[person-Pl each]
*[wò sí]* *à* *zí* *bò-t-è*
[3SgPoss Poss] Ipfv **convey** **go.to**-Ipfv-3PlSbj
'Everyone delivers his (own) portion (to his own home).' (2004-2b.01)

b. *[ànànsá:rá dè]* *yɔ̀rú* *zí* *yɛ́=m̀=bɛ́,*
[European Dat] cloth **convey** **come**=and.SS=3PlSbj,
*lámpò dè*
tax Dat
'They brought the cloths to the white (man), for (= as) taxes.' (2004-2a.01)

The original meaning of *zí* was 'take, pick up' (cognates in several Dogon languages). The combination of *zí* with 'come' in (513b) is the etymological source of *zê:rú* 'bring' (§10.1.4.2), a fused form with an anomalous <HL>H tone melody that strongly suggests origin as a verb-verb compound.

### 15.1.10 Durative *á … tɔ̀ŋgù-rɔ̀-* 'keep VP-ing'

A construction expressing extended duration of an activity consists of an imperfective verb *tɔ́ŋgú-rɔ̀-* plus a preceding nonfinal chained VP ending in a verb in the combining form. The imperfective particle *á* is always present, preceding the nonfinal chained verb (in the combining form), and as usual this particle forces tone-dropping on the inflected imperfective verb, resulting in *á … tɔ̀ŋgù-rɔ̀-*. The verb form is compatible with an underlying /tɔ́ŋ-rɔ̀-/.

(514) a. *bàyló* *á* *zɔ̀gú* *tɔ̀ŋgù-rɔ̀*
population Ipfv break **keep-Ipfv**
'(He) keeps breaking (destroying) the population.' (2004-1b.01)

b. *kɛ́* *tùr-í→ -tùr-í→ ,* *á* *círú* *tɔ̀ŋgù-rɔ̀* *ŋ́*
NonhPl one.single-one.single, Ipfv fly **keep-Ipfv** Rel
'… and when they (= locusts) keep flying around here individually' (2004-1b.02)

### 15.1.11 Chains with *sá* 'have'

The quasi-verb *sá* 'have' does not readily function as a nonfinal element in chains. However, the (headless) relative clause in (515) does contain *sá* followed by an AN-inflected verb.

(515) *á* *dà* *[kà:* *[kúrɔ́* *sá]* *á* *cì-tò* *ŋ́]*
Exist be [Rel [hair have] Ipfv fly-Ipfv Rel]
''there are those (mantises) that have wings and fly' (2004-1b.04)

### 15.1.12 Negation of verb chains

Only the final, inflected VP in a chain carries overt negation, even when the negation takes the entire sequence in its scope logically. This is illustrated in (516a), where 'go' and 'come' are chained. In (516b), 'go' is positive while 'come' is negated, so instead of being chained the two are independently inflected.

(516) a. *[yá* *mà]* *yè-lí-wɔ́*
[go.to and.SS] come-PfvNeg-3SgSbj
'He/She did not go (there) and come (back).'

b. *yǎy-wɔ̀r-ɔ̌:* *yè-lí-wɔ́*
go-Pfv1a-3SgSbj come-PfvNeg-3SgSbj
'He/She went, (but) he/she did not come (back).'

The negation (517), though expressed on the inflected 'come' verb, focuses on the material in the chained VP. This sentence may be truthfully used when the individuals did in fact come, but separately.

(517) *í* *[mɔ̀tɔ́* *mà]* *yè-lí*
1PlSbj [be.together and.SS] come-PfvNeg
'We did not come together.'

## 15.2 Adverbial clauses

### 15.2.1 Temporal adverbial clauses (‘when …’)

Unambiguously temporal adverbial clauses are dealt with under this rubric. Conditional antecendent (‘if …’) clauses may also be used in roughly similar contexts.

#### 15.2.1.1 Particle *ní* ‘if/when …’, ‘just’, etc.

The uses of this particle are subtle, and analysis of multiple textual passages is called for. In clause-final position it is frequently translatable as ‘if/when …’, establishing a temporal and often causal connection between the two clauses (518).

(518) a. *[órú* *[L]bàsà]* *yèrú-wòrè* *ní→,*
[field [L]owner] come-Pfv1a **when**,
*[wɔ̌ː-sì* *[á* *yà-rà]]* *má,*
see-Pfv1b Ipfv come-Ipfv if
‘if/when the owner of the field came, if he (= crippled thief) saw (in time) that he (= owner) was coming, …’ (2004-1a.09)

b. *tàrú* *kɛ́* *sí-tú-wòsì* *ní,*
egg NonhPlSbj go.down-Caus-Pfv1b **when**,
*má* *[níŋ* *kày]* *sàrí,* *á* *bì-bíw-rà*
and [now Top] monitor.lizard, Ipfv Rdp-bury-Ipfv
‘When they (= reptiles) have laid eggs, now the Nile monitor lizard buries (the eggs).’ (2004-1a.10)

c. *[kɔ́* *tórú-wòsì* *ní]*
[NonhSgSbj jump-Pfv1b **when**]
*[[jètà*[L] *kúnú]* *sɨ̌ː]* *tɛ́gɛ̌y,*
[[wing[L] DefSg] with] a.little,
*[jètà*[L] *kúnú]* *kɔ́* *á* *bà-tà*
[wing[L] DefSg] NonhSgObj Ipfv help-Ipfv
‘When it (= grasshopper) jumps, (it’s) with (=by means of) those wings, (and just) a little. Those wings help it (jump).’ (2004-1b.03) (*bárá*)

See also *gá=m̀ ní* in (526a) in §15.2.1.5.

*ní* also occurs in marked conversational and narrative constructions, often with intonational prolongation (→). In (519a), *ní* occurs at the end of the first of two paired clauses with 'go' and 'come', respectively, in an idiomatic and prosodically marked narrative construction that describes repeated back-and-forth action. The entire two-part 'go/come' construction is then repeated verbatim. The 'go' and 'come' verbs are imperative in form, though here there is no quotation. The construction resembles one with paired hortatives denoting back-and-forth events (§10.4.5). In (519b), *ní* occurs in three identical clauses, with the same perfective-2 verb, emphasizing the sheer extent of the gathering and devouring. *ní* again seems to help emphasize the aspectual prolongation.

(519) a. *tɛ́nǎm [bǎm dá gà] yá ní→↑,*
hyena [go.around be while] go.Imprt **just**,
*[bǎm dà gà] yèrí↓,*
[go.around be while] come.Imprt,
*tɛ́nǎm [bǎm dá gà] yá ní→↑,*
hyena [go.around be while] go.Imprt **just**,
*[bǎm dà gà] yèrí↓,*
[go.around be while] come.Imprt,
*tɛ́nǎm èlú-sà*
hyena look-Pfv2
'Hyena kept going around and coming around, he kept going around and coming around. He looked.' (2004-1a.05) (*bǎm\\bàwⁿá*)

b. *[èwrá [cìsù*$^{L}$ *ŋ̀gú] bárú kúw-sò ní]*
[frog [termite$^{L}$ DemSg] gather devour-Pfv2 **just**]
*[bárú kúw-sò ní]*
[gather devour-Pfv2 **just**]
*[bárú kúw-sò ní]*
[gather devour-Pfv2 **just**]
*[hálì [kɔ̀* $^{HL}$*bétè] sálú-sà*
[until [NonhSgPoss $^{HL}$belly] fill.up-Pfv2
'The frogs gathered up and devoured the winged termites, they gathered up and ate (them), they gathered up and ate (them), until their bellies filled up (and were stretched).' (2004-1b.01)

In (669) in Text 1, a blind thief shouts a somewhat exasperated command to his partner (only realizing later, after the latter's silence, that he is not present). Here I gloss the final *ní→* as 'just', in the pragmatic sense.

There are also some examples of **phrase- or clause-initial** *ní*. The effect seems to be a stylistic framing, and the particle shows intonational prolongation. (520a) is a difficult example from a somewhat choppy passage, but *ní* seems to

introduce a point added on to the preceding ones. In (520b), *ní* could be translated as 'or', but it is the 'or' of vagueness (as in 'three or four times'), so here too the *ní* phrase might be a kind of add-on to the preceding phrase.

(520) a. *tɔ́bbɛ̀-tɔ́bbɛ̀, síttì-kɔ́↑,* HL*jɛ́m-jɛ̂m*
spotted, sulphur-NonhSgSbj, HLblack-black
*[[kɔ̀* HL*jésù] tɔ́bbà kárⁿú dà]*
[[NonhSgPoss HLbody] spot do be]
*[ní→ [bàrⁿ-í:]-* HL*[bárⁿ-ì:]]*
[**and.also** red-HLred]
'(This grasshopper is) spotted. It's sulphur (=yellow) and blackish. Its body is spotted (with black), along with reddish (=orange).

b. *[kó kày] lěy-lěy [ní túr-túrú]*
[NonhSg Top] two-two [**or.also** one-one]
*[kó kà] á yày-rà*
[NonhSg Top] Ipfv go-Ipfv
'As for it, it (= grasshopper) goes around by twos or singly.' (2004-1b.03)

In (521), *ní* occurs at the end of one phrase, then again at the beginning of the next phrase. The two phrases ('unfertilized fields' and 'fields') overlap referentially. I tentatively gloss 'just', but the effect is largely stylistic and therefore difficult to translate.

(521) *[kɔ̀* HL*dêŋ], [òrùL séwtíré] ní→↑,*
[NonhSgPoss HLplace], [fieldL unfertilized] **just**,
*ní→ [[órú* L*pùrò] kù],*
**just** [[field Linside] in],
*[[òrù sèwtìrè]*L *pású dà ŋ̀] [[órú* L*pùrò] kù]*
[[field unfertilized]L leave be Rel] [[field Linside] in]
'Its habitat is just infertile fields (without manure) in (=among) the fields, abandoned infertile fields in (=among) the fields.' (2004-1b.03)

*ní* is also a part of *kàmá-ní* 'so, …' (*kàmá* not otherwise attested), see §19.2.3. It may also be a part of *mánĭ:ní* 'also, furthermore' (extension of *mánì* 'also'), see (644) in §19.1.3.

15.2.1.2 'And then' (*gá=m̀* 'saying')

The combination *gá=m̀* is common as a clause-linking device. It literally means 'saying' or 'having said'; for *=m̀* after a chained verb see §15.1.5. In this context it indicates a temporal sequence (rather than an actual quotation), hence free translations with 'after VP-ing' or with '…VP, and then …'. It is often combined with a preceding verb also with *=m̀*, as in (522a). Many of the examples below happen to involve quotations, which are very common in my animal-tale texts, but *gá=m̀* in this temporal-sequencing function is not quotative, as can be seen more clearly in e.g. (522e).

(522) a. *[[àsí èr$^{n}$á dìr$^{n}$á=m̀]* *gá=m̀*
[[LogoSbj goat encounter=and.SS] **say=and.SS**
*[àsí bò-só ằw]*
[LogoSbj go.to-Pfv2 catch]
'(you must have intended) that you (logophoric) encounter the goat and then go to catch (it).' (2004-1a.05)

b. *àsí èr$^{n}$à-àrá ká dàgú-sà [ósú kù],*
LogoSbj goat-male say encounter-Pfv2 [road in],
*gá=m̀ àsí [kò dé] èn-túkěy kà-lí*
**say=and.SS** LogoSbj [NonhSg Dat] anything do-PfvNeg
'(if you-Sg the Hyena say) that you encountered a billygoat on the road, and (that) then you did nothing to it, …' (2004-1a.01) (*kár$^{n}$á* 'do')

c. *àsí tátúrá=m̀ ká*
LogoSbj slip=and.SS say
*[àsí á jèl-lò gá=m̀]*
[LogoSbj Ipfv pass-Ipfv **say=and.SS**]
*[àsí lŭ̀w-sò]*
[LogoSbj fall-Pfv2]
'(He said:) I slipped, and I was passing by (the hole), then I fell (in).' (2004-1a.05)

d. *háyà àsí kɔ́ gùŋú-sò, kó nà→,*
well LogoSbj NonhSgObj take.out-Pfv1, NonhSg now,
*àsí kɔ́ gùŋó=m̀ gá=m̀,*
LogoSbj NonhSgObj take.out=and **say=and.SS,**
*[kó nà] ká wɔ́ ká àsí èlá*
[NonhSg now] say 3SgSbj say LogoSbj look.Imprt
'(Monkey said:) Well, I got him out. Then, after I got him out, now he tells me to look …' (2004-1a.05)

e. *kó zɔ̌w-sɔ̀=cɛ́ [kò dé],*
NonhSg run-Pfv2=NonhPlSbj [NonhSg Dat],
*kó zɔ̀wɔ́=m̀=cɛ́, yèré=m̀=cɛ́*
NonhSg run=and.SS=NonhPlSbj, come=and.SS=NonhPlSbj
*gá=m̀ [kó kɔ̀]*
**say=and.SS** [NonhSg SFocSg]
*[[[àwⁿà-ùrò*$^{L}$ *kún]* $^{HL}$*púrò]* *kù]*
[[[aardvark-hole$^{L}$ DefSg] $^{HL}$inside] in]
*lú-s-è=cɛ́*
enter-Pfv2-3PlSbj=NonhPlSbj
'… so they (= sheep) ran for it (burrow). They came running to it, then they went inside that aardvark burrow.' (2004-1a.07)

f. *[[yù cíní] kɔ́sɔ́=m̀] gá=m̀*
[[millet DefPl] harvest] **say=and.SS**
*[[tɛ̀wá kù] m̀bɔ̀tú-wɔ̀rɛ̀]*
[[large.harvest.pile in] be.gathered-Pfv1a]
'After the millet (grain spikes) were harvested, they were gathered together in the large heaping area.' (2004-2a.06)

### 15.2.1.3 Temporal simultaneity (*dá gà* 'while …')

A sequence *dá gà*, presumably including *dá* 'be' (§11.2.2.1) and with a mysterious final element, is added to a verb stem (in the latter's combining form) to constitute a temporal adverbial clause denoting simultaneous (or background) activity. In interlinears, *gà* will be glossed 'while' for lack of a better gloss. The construction is common in texts. The subject of the clause is coindexed with that of the main clause. The clause with *dá gà* may be repeated several times for narrative effect ('kept VP-ing and VP-ing') (523d).

(523) a. *[bírá* *m̀* *bìrú* *dá* *gà]*
work(n) 1Sg work **be** **while**]
*[nùŋɔ́* *m̀* *â:* *núŋgú-rɔ̀]*
[song 1SgSbj Ipfv sing-Ipfv]
'I sing while I work.'

b. *[lɛ́* *lí* *dá* *gà]* *tègú* *tègù-kú*
[meal eat **be** **while**] speech speak-Proh
'Don't-2Sg speak while eating!'

c. *[[ŋ̀gí* *sí* *kày$^{n}$]* *[círú* *dá* *gà]*
[[DemPl kind like] [fly **be** **while**]
*á* *yày-rà* *ŋ́]* *sàrà*
Ipfv go-Ipfv Rel] not.be
'There is none of its (=*Kraussaria* grasshopper) going (along) flying like those other (species).' (2004-1b.03)

d. *[kɔ́* *yɛ̀]* *[níŋ* *kày]* *[zɔ̌w* *dá* *gà]* *[zɔ̌w* *dá* *gà]*
[then] [now] [run **be** **while**] [run **be** **while**]
*[zɔ̌w* *dá* *gà]* *[zɔ̌w* *dá* *gà]* *[zɔ̌w* *dá* *gà]*
[run **be** **while**] [run **be** **while**] [run **be** **while**]
*[zɔ̌w* *dá* *gà]* *[zɔ̌w* *dá* *gà]* *[zɔ̌w* *dá* *gà]*
[run **be** **while**] [run **be** **while**] [run **be** **while**]
*[kó* *yè-só]* *[kó* *yè-só]*
[NonhSg come-Pfv2] [NonhSg come-Pfv2]
*[kó* *ígú* *dà]*
[NonhSg stand be]
'Then it (=hyena) ran and ran and ran and ran and ran and ran and ran and ran, it came, it came, it stopped.' (2004-1a.07)

### 15.2.1.4 Clause-initial *má* '(and) then …'

A distinction must be made between the clause-initial *má* … considered here and various similar-looking particles that occur at the end of constituents or clauses: interrogative *ma* (which acquires its tones from the preceding morpheme), the perhaps related 'or' disjunction *mà→*, clause-final *má* 'if', clause-final VP-chaining *mà* (glossed 'and.SS'), and reflexive possessor *mà* following a noun or core NP.

The clause-initial particle *má* indicates a **chronological sequence** between the current event and the previously described one. (524a) and (524b) are from the same text; in (524a) the woman specifies that eating the meal precedes the

rescue effort, while in (524b) Crane insists that the chronological order be reversed, using *tí→* (and *kà:$^{n}$-tí→*) 'first(ly)' in preceding clauses (rescue effort), followed by the *má* clause (eating the meal), which also includes an explicit 'now (= at this/that point)' adverbial. In (524b), the relevant *má* is in the final line of text; the example also includes clause-final *má* 'if' (line 2) and clause-chaining *mà* 'and.SS' (line 4).

(524) a. *ká ké yèrí [kɔ̀ lɛ̀*$^{L}$ *kúnú] lɛ́=m̀, má ká,*
say NonhPl come [DiscDef meal$^{L}$ DefSg] eat=and.SS, **then** saying
*ké [[àsí* $^{HL}$*égà] jèré mà]*
NonhPl [[LogoPoss $^{HL}$husband] hold and.SS]
*yèrí [àsí dé],*
come.Imprt [Logo Dat]
*[[àsí* $^{HL}$*égà] dùr$^{n}$ó mà] yèrí*
[[LogoPoss $^{HL}$husband] track and.SS] come.Imprt
'(Woman to birds:) hey you-Pl, come and eat the meal, **and then** (she continued) you-Pl come back with my husband for me, (go) track down my husband and come (back)!' (2004-1a.04)

b. *kùw$^{n}$á ká, [àsí kày] kà:$^{n}$-tí→,*
crane say, [Logo Top] **firstly**,
*[àsí [kɔ̀* $^{HL}$*égà] wɔ̌:-sì má]*
[LogoSbj [NonhSgPoss $^{HL}$husband] see-Pfv1b if,
*[ɛ̀s*$^{L}$ *[kà: sɨ̌:] [kɔ̀* $^{HL}$*égà] á sòr$^{n}$í-yàr$^{n}$à ŋ́*
[thing$^{L}$ [Rel with] [NonhSgPoss $^{HL}$husband] Ipfv call-Fut Rel
*tí→], [àsí kày] [wò dé] nùŋú tótó mà,*
**firstly**], [Logo Top] [3Sg Dat] sing show and.SS,
*má [níŋ kày] [àsí kày] àsí á lí-yàrà*
**then** [now Top] [Logo Top] LogoSbj Ipfv eat-Fut
'Crowned crane said: as for me, **first**, when I see your husband, that with which (=the way) I will call the husband **first**, having sung ("sung and shown") for him, **(only) then**, as for me, will I eat.' (2004-1a.04)

In narrative, several *má* clauses may follow each in rapid-fire succession, giving an incantational effect. In (525) we see five such clauses. *má* is apparently absent from the 'stir' clause, but I interpret this as a repair of the final part of the immediately preceding 'do whatchamacallit?' clause. In the fifth and final clause beginning with *má*, the particle ccurs not only at the beginning (before a dative PP), but also again in the middle. The clauses are also linked by clause-final *mà* 'and.SS', and in one case by clause-final *má* 'if/when'.

(525) *má* *núwⁿɔ́* *bì-tó* *mà,*
**then** fire set and.SS,
*má* *[kɔ̀* *jèmᴸ* *kúnú]* *látá* *mà,*
**then** [DiscDef shardᴸ DefSg] put.up and.SS,
*má* *[kɔ̀* *jèmᴸ* *kúnú]* *dǒy-wɔ̀rè* *má,*
**then** [DiscDef shardᴸ DefSg] get.hot-Pfv1a if,
*[má* *[kɔ̀* *àyⁿà* *kúnú]* *ɛ́n-ná* *kárⁿá* *mà]*
**then** [DiscDef medicine DefSg] whatchamacallit do and.SS]
*[híló* *mà],*
[stir and.SS]
*má* *[ǒw-[à-nú]]* *dè]* *[má* *ɛ́n-ná* *kárⁿá* *mà]*
**then** [lion Dat] [then whatchamacallit do and.SS
'(Goat, to lioness and hyena:) **Then** we will set a fire, **then** put a waterjar shard up on it, **then** when the shard has become hot, **then** do whatchamacallit to that medicine (= magical potion), stir it (with a ladle), and **then** make whatchamacallit for Lioness …' (2004-1a.06)

15.2.1.5 Headless or headed (*tùŋ kà:*) relative '[the time] when …'

In (526a), *tùŋ kà:* '(the) time when …' is the head of a rather long relative clause that is finally brought to a close with relative *ŋ́* and *yàgàfú:* 'all'. *tùŋ* is the slightly reduced L-toned form taken here by *tùwⁿɔ́* 'time, moment', as in *tùwⁿɔ́ jérè* 'sometimes'. The perfective-1b in (526a) is unusual in a relative, but the complexity of this example (i.e. the distance between the head NP and the inflected verb) seems to have allowed it. In (526b-c), a similar head '(the) time when …' is understood, but omitted. In both the headed and headless versions, the usual interpretation is 'after …', indicating sequence rather than simultaneity.

(526) a. *ká* *tùŋᴸ* *kà:* *[àsí* *mǎ:]* *[kɔ̀* *bàtú]* *mɔ̀tɔ́=m̀*
say timeᴸ Rel [Logo Pl] [DiscDef meeting] gather=and.SS
*gá=m̀* *ní,* *níŋ* *kày↑,* *tégú-wɔ̀s-è* *ŋ́* *yàgàfú:,*
say=and.SS just, now Topic, speak-Pfv1b-3PlSbj Rel all,
*háyà* *ká* *kó* *èlá*
well say NonhSg look.Imprt
'(saying:) when we have gathered for the meeting, and after that now when they have said everything, well, you, look!' (2004-1b.01)

b. *[àr$^{n}$á* *mùrú-sɔ̀* *ŋ́* *yà:fú:]*
[rain rain.fall-**Pfv2** **Rel** **all**]
*[àrǎ-m* *yà:fú:]* *[ór* *kù]* *bò-só*
[man-Pl all] [field in] go.to-Pfv2
'After the rain fell, all the men went to the fields.'

c. *[bɛ́* *lɛ́* *lí-sà* *ŋ́* *yà:fú:]*
[3PlSbj meal eat-**Pfv2** **Rel** **all**]
*[lú:mà* *kù]* *bò-s-é=bɛ́*
[market in] go.to-Pfv2-3Pl-3PlSbj
'After they ate (the meal), they went to the market.'

For the headless type see also … *kúlú-sò ŋ́* in (671) in Text 1.

A recurring discourse function of headless relatives (with final *ŋ́*, but without *kà:*) is in narrative sequences of the type [… X; *when/after X*, Y], where X and Y represent events. On its first occurrence, X is a foregrounded event. It is then repeated as background for the next foregrounded event Y. In (527), note the verbatim repetition of '(a/the) storm encountered them in the bush', except for relative *ŋ́* in the second occurrence.

(527) *àr$^{n}$à-kúsó* *kɛ́* *dìr$^{n}$ú-sà* *[sǎŋ* *kù],*
storm NonhPlObj encounter-Pfv2 [the.bush in]
*[àr$^{n}$à-kúsó* *kɛ́* *dìr$^{n}$ú-sà* *[sǎŋ* *kù]* *ŋ́]*
[storm NonhPlObj encounter-Pfv2 [the.bush in] Rel]
*[[àw$^{n}$à-ùrò*$^{L}$ *pòtú],* *á* *dà],*
[[aardvark-hole$^{L}$ former], Exist be],
*kó* *zɔ̌w-sɔ̀=cɛ́* *[kò* *dé]*
NonhSg run-Pfv2=NonhPlSbj [NonhSg Dat]
'… a storm encountered them (= animals) in the bush (i.e. outback). When the storm encountered them in the bush, there was an old aardvark burrow there, so they ran for it (= burrow).' (2004-1a.07)

### 15.2.2 'Since …' and 'until …' clauses

#### 15.2.2.1 'Since …' (*zǎ: …*)

Clause-initial *zǎ:* 'since …' has temporal rather than causal ('because') reference. *zǎ:* is borrowed from Songhay. The verb of the clause has relative *ŋ́* following the perfective-2 suffix, suggesting the virtual presence of an implicit relative-clause head ('since [the moment] when …'). (528b) has paired

'since …' and 'until …' clauses, giving boundaries on both sides of a temporal span.

(528) a. *[zǎ:* *wó* *yè-só* *ŋ́]*
[**since** 3SgSbj come-Pfv2 Rel]
*[ní* *dì-rí-wɔ́]*
[water bathe-PfvNeg-3SgSbj]
'Since he/she came, he/she has not bathed.'

b. *[zǎ:* *wɔ́* *lǎr-s-è* *ŋ́]*
[**since** 3SgObj bear-Pfv2-3PlSbj Rel]
*[hálì* *nǔm-s-ɔ̌:]*
[**until** die-Pfv2-3SgSbj]
*[kɔ̀:$^{n}$sɔ́* *nì-r$^{n}$í-wɔ́]*
[millet.beer drink-PfvNeg-3SgSbj]
'From (the time) they bore him (=he was born), until he died, he did not drink millet beer.'

15.2.2.2 'Until …' (*hálì …*) plus "imperative" verb

The 'until' word is *hálì* (variant *hâl*), preceding its complement. (It is also used in the sense 'all the way to' with a nominal or adverbial complement). *hálì* or variant is found in all languages of the region.

In one quite common pattern, the *hálì* clause ends with an **unsuffixed verb identical to the imperative** (not the combining form, nor any verbal noun). The imperative-like form is unmistakable from the stem-final non-high vowel in (529a-c), though of course the functional label "imperative" would be nonsensical here. One can think of this (unaffixed) form as a pure lexical stem that can be used without further morphology as an imperative, in this 'until' construction, etc. A subject pronominal appears preverbally as needed (529a) but it is omitted in some fixed phrases (529b-c).

(529) a. *[[gàllè*$^{L}$ *ŋú]* *zàtí-yàrà-wɔ́]*
[[courtyard$^{L}$ DemSg] sweep-Fut-3SgSbj]
*[hálì* *kɔ́* *dùw$^{n}$ɔ́]*
[**until** NonhSgSbj **be.finished.Imprt**]
'He/She will sweep this courtyand until it is finished.'

b. *[â: lí-rà=kɔ̀] [hálì dùwⁿɔ́]*
[Ipfv eat-Ipfv=NonhSgSbj] [**until be.finished.Imprt**]
'they (=locusts) eat (the millet) until it is finished (=nothing left).' (2004-1b.03)

c. *[kó kày] [círú dá gà] [á yǎy bɛ̀-tà], [hálì wⁿáŋú-lá]*
[NonhSg Top] [fly be while] [Ipfv go can-Ipfv] [**until far-Inch.Imprt**]
'As for it (=grasshopper), it is capable of flying along until it has gone a long way.' (2004-1b.03)

d. *pɛ̀:l-lòᴸ kún, zákkà, í á gùŋgù-rò, hálì [yùᴸ ú bɛ̀-sá ŋ́ yà:fú:] dùwⁿɔ́*
ten-Ordinalᴸ DefSg, annual.charity, 1PlSbj Ipfv take.out-Ipfv, until [milletᴸ 2SgSbj get-Pfv2 Rel all] be.finished.Imprt
'We take out (= reserve) the tenth (basketful of millet grain spikes) as charity (Islamic zakat), until all the millet that you-Sg have gotten is finished.' (2004-2a.06)

The examples in (530) may well be of the same type as in (529), but for the verbs in question ('arrive', 'come') there is no audible distinction between the imperative and the combining form.

(530) a. *yǎy-yèr-è=bɛ́ [hálì bɛ́ ìní yèrí dɔ́]*
go-Fut-3PlSbj=3PlSbj [**until** 3PlSbj here come **arrive.Imprt**]
'They will walk until they come and arrive here.'

b. *[í bírá bìrí-yàrà] [níŋ̀ sɔ́] [hálì nǔ-m yèrí]*
[1PlSbj work(n) work(v)-Fut] [now take] [**until** person-Pl **come.Imprt**]
'We will work from now until the people come.'

c. *[gɔ̌ŋ mánì] [kúwɔ́-HLnây yà:fú:] sɔ́rⁿú mɔ̌t-tɔ̀, hálì [èwrá jèsù] dɔ́*
[elephant too] [foot-HLfour all] call be.together-Pfv2, **until** [frog on] **arrive.Imprt**
'Elephant likewise called all the quadrupeds together, until it arrived on (=ended with) frog.' (2004-1b.01)

d. *[ní* *í* *á* *nì-r$^{n}$à]*
[water 1PlSbj Ipfv drink-Ipfv]
*[hálì* *[zìr$^{n}$à$^{L}$* *làgú]* *bìrǐy* *yèrí]*
[until [rainy.season$^{L}$ other] go.back come.Imprt]
'We drink water (from artificial ponds) until another (= the next) rainy season comes back.' (2004-2a.04)

It is semantically natural that 'arrive' be so common as the final verb in an 'until …' clause, especially since this verb is easily chained to preceding VPs. In addition to the construction illustrated above, I have several examples where *dɔ́* 'arrive' is followed by a form of *dà* 'be'. This is the regular **stative construction** (§10.1.3.1), and here *dɔ́* must be taken as the combining form, which is used in the stative construction, rather than as (a form identical to) the imperative (531a-c). (531a) is my assistant's rephrasing of (530c), above.

(531) a. *mɔ̀tú-s-è=bɛ́*
come.together-Pfv2-3PlSbj=3PlSbj
*[hálì* *[èwrá* *jèsù]* *dɔ́* *dà]*
[**until** [frog on] arrive **be**]
'They (=quadrupeds) came together until it arrived at (=ended with) frog.'

b. *hâl* *[kɔ̀* *$^{HL}$kúrɔ̀]*
**until** [NonhSgPoss $^{HL}$hair]
*[[[kɔ̀* *$^{HL}$púrò]* *$^{L}$kà]* *kù]* *dɔ́* *dà*
[[[NonhSgPoss $^{HL}$belly] $^{L}$mouth] in] arrive **be**
'until (=to the point that) its (=grasshopper's) outer wing ("hair/feather") reaches the tip of its abdomen ("belly").' (emended from 2004-1b.03)

c. *yǎy-s-è=bɛ́*
go-Pfv2-3PlSbj=3PlSbj
*[hálì* *ìní* *yèrí* *dɔ́* *d-è=bɛ́]*
[**until** here come arrive **be**-3PlSbj=3PlSbj]
'They walked until they had come and arrived here.'

15.2.2.3 Clause with final "imperative" verb and implied 'until'

In (532), the final clause *[kɔ́ yàyá]* has no overt complementizer, and the preceding clause is in chained VP (rather than inflected main-clause) form. However, *yàyá* is identical in form to the corresponding imperative, and the

context suggests that this clause expresses a final outcome, so some connection between this and the overt 'until …' construction with imperative-like verb (described in the preceding section) seems likely.

(532) *ú* *ká* *àsí* *kɔ́* *áw-é* *tán↑,*
2SgSbj say LogoSbj NonhSgObj catch-Hort if,
*má* *á* *bàmbù-rà=kɔ́,*
then Ipfv go.around-Ipfv-NonhSgSbj,
*[má* *kɔ́* *tóró* *mà]* *[kɔ́* *yàyá]*
[then NonhSgSbj jump and.SS] [NonhSgSbj go.Imprt]
'Just when you say (= think) you'll try to catch it (= grasshopper), then it moves around, then it hops until it has gone (away).' (2004-1b.03)
(*bămǀǀbàw$^{n}$á*)

15.2.2.4 'Until …' (*hálì …*) plus perfective verb

See (528b) in §15.2.2.1, above, for an example with a simple perfective verb in the 'until' clause.

15.2.3 'Before …' clause (*tùŋ kà:* … VERB*-rĕŋ cɛ́là*)

A 'before …' clause is multiply characterized by the features in (533).

(533) a. optionally, clause-initial *tùŋ kà:* ('time when …' including relative *kà:*, cf. *tùŋ kálá:* 'always');
b. verbal noun with suffix *-rĕŋ* ;
c. clause-final temporal adverbial $^{HL}$*cɛ́là* (cf. *yàgá* $^{HL}$*cɛ́là* 'when?')

One might speculate that this use of *-rĕŋ* may have originally represented a negative participle of some kind (cf. perfective negative *-rí-*, participial *-ŋ*), hence an original structure of the type 'at the time when [subject NP] had not (yet) VP-ed'. This would make sense of the relative-clause structure (including *kà:*). Whether or not there is any truth to this etymological speculation, synchronically this *-rĕŋ* is just a special case of the verbal noun suffix. The consonantal morphophonology of *-rĕŋ* is usually distinct from that of perfective negative *-rí-* (§10.1.2.2), while matching that of imperfective *-rà-* (§10.1.1.6). Therefore a specific etymological equation of *-rĕŋ* with perfective negative *-rí-* is ruled out on multiple grounds: consonantal morphophonology, vocalism, and word-level tone pattern.

A pronominal subject (including third person) is preverbal, not suffixed (534d-e).

(534) a. *[lɛ́ í lí-yàrà]*
[meal 1PlSbj eat-Ipfv]
*tùŋ*$^{L}$ *kà: lú:mà í bó-tɛ̌ŋ* $^{HL}$*cɛ́là*
**time**$^{L}$ **Rel** market 1PlSbj go.to-**VblN** $^{HL}$**time**
'We will eat, before we go to the market.'

b. *[gìró léy céló]*
[eye sleep do.well.Imprt]
*tùŋ*$^{L}$ *kà: ú wàrá wá-lɛ̌ŋ* $^{HL}$*cɛ́là*
**time**$^{L}$ **Rel** 2SgSbj farming farm-**VblN** $^{HL}$**time**
'Sleep-2Sg well (imperative), before you do farm work.'

c. *tùŋ*$^{L}$ *kà: ú nùŋɔ́ núŋú-rɛ̌ŋ* $^{HL}$*cɛ́là*
**time**$^{L}$ **Rel** 2SgSbj song sing-**VblN** $^{HL}$**time**
'before you-Sg sing (a song)'

d. *jíŋgá:rú kár$^{n}$ú-wɔ̀sì-wɔ́*
prayer do-Pfv1b-3SgSbj
*wɔ́ lɛ́ lí-rɛ̌ŋ* $^{HL}$*cɛ́là*
3SgSbj meal eat-**VblN** $^{HL}$**time**
'He said a prayer before eating.'

e. *zɔ̌w-s-ɛ̀=cɛ̀*
run-Pfv2-3Pl=NonhPl
*[tùŋ*$^{L}$ *kà: kɔ́ yé-tɛ̌ŋ* $^{HL}$*cɛ́là]*
[**time**$^{L}$ **Rel** NonhSg come-**VblN** $^{HL}$**time**]
'They (=sheep) fled, before it (=hyena) came (back).' (2004-1a.07)

f. *í bíríy-tɛ̌ŋ* $^{HL}$*cɛ́là*
1PlSbj go.back-VblN $^{HL}$time
'before we return'

The alternative is a **negative temporal adverbial clause** (in the form of a relative clause with overt or covert 'time', 'moment', 'day', or the like as head) e.g. 'since (the time when) we have not (yet) eaten' = 'before we eat'.

(535) *jérè wá→, [á bìrǐy yè-tò]*
certain certain, [Ipfv go.back come-Ipfv]
*[zǎ: í wàrá dɔ̀-rí ŋ́]*
[**since** 1PlSbj do.farming **arrive-PfvNeg** **Rel**]
'Some of them (young people who work seasonally in the south) come back, before we have reached the farming (season).'

### 15.2.4 Spatial adverbial clause ('where …')

*dĕŋ* 'place' occurs as the head of a relative clause, in L-toned form *dèŋ*$^{L}$.

(536) *dèŋ*$^{L}$ *kà: á là ŋ́*
place$^{L}$ Rel Ipfv go.Ipfv Rel
'(they considered) where to go' (2004-1a.05)

For double *dèŋ*$^{L}$ … $^{L}$*dèŋ* in a single relative clause (one internal, and one postposed in "possessed" form), see (480) in §14.1.12.

### 15.2.5 Manner adverbial clause ('how …')

A headless relative clause (§14.1.5) may have a manner-adverbial interpretation depending on context.

(537) *ká, kùló, kà: á kùl-l-è ŋ́*
say, cooking, Rel 2PlSbj cook-Ipfv-3PlSbj Rel
'He said (= asked about) cooking, (about) the way they cook.' (2004-2b.01)

An irregularly reduplicated form *ká-kâ:*$^{n}$ is attested in an embedded question in manner-adverbial function, in the same textual passage. Cf. *kâ:*$^{n}$ (variant of *kálá:*) 'any'.

(538) *[[[yù-kúsù mà] dè] só mà]*
[[[millet-spike ReflPoss] Dat] take and.SS]
*[ká-kâ:*$^{n}$ *á bì-t-è ŋ́*
[**how** Ipfv cook-Ipfv-3PlSbj Rel
'the way they use ("take") their millet grain spikes and cook' (2004-2b.01)

# 16 Conditional constructions

## 16.1 Hypothetical conditional with *má*

The clause-final particle *má* is used in conditional antecedent ('if') clauses. It should not be confused with clause-chaining *mà* (§15.1.4) or with interrogative particle *ma* (which acquires its tone from the preceding word and is often prolonged intonationally). A historical connection with the interrogative particle cannot be ruled out. In conditionals, *má* follows a verb with regular AN inflection, and does not contract to *=m̀*. Also, *má* may be followed by topic morpheme *kày* (§19.1.1).

The **antecedent** and **consequent** clauses may have shared or distinct subjects, as usual cross-linguistically with conditionals. The unmarked aspectual categories are perfective for the antecedent clause, and imperfective (future) with suffix *-yàrà* for the consequent clause. This assumes that both clauses denote temporally bounded events that are conceptualized as occurring in sequence.

(539) a. *[bèlù*$^{L}$ *ŋ̀gú]* *ìní* *lú-wòrè* *má,*
[sheep$^{L}$ DemSg] here enter-**Pfv1a** **if**,
*í* *kɔ́* *cí-yàrà*
1PlSbj NonhSgObj slaughter-**Ipfv**
'If that sheep comes in here, we will slaughter it.'

b. *[cèrù*$^{L}$ *mútú]* *m̀* *bɛ̌:-sì* *má,*
[money$^{L}$ much] 1SgSbj get-**Pfv2** **if**,
*ìní* *máy$^{n}$* *m̀* *mǎy$^{n}$-yàr$^{n}$à*
here construction 1SgSbj build-**Ipfv**
'If I get (=make) a lot of money, I will build (a home) here.'

The particle *má* **may be repeated at the onset of the consequent** clause. This is especially helpful to the listener parsing the utterancet, in cases where the antecedent is complex (multi-clausal), so any clues as to the location of the break between antecedent and consequent is much appreciated. In (540a), two antecedent ('if') clauses are followed by a consequent that begins with *má*.

(540) *[àr$^{n}$á* *mùrú-wɔ̀rè* *má]*
[rain rain.fall-Pfv1a **if**]
*[nŭ-m* *bɛ̀-rɛ́* *tòw$^{L}$-tɔ́* *má]*
[person-Pl go.to-Pfv1a seedstock$^{L}$-sow.VblN **if**]
*[má* *jɛ́* *á* *jí-yèr-è=bɛ́]*
[**then** dance(n) Ipfv dance-Fut-3PlSbj=3Pl]
'When the rain has fallen, and when the people have gone in order to sow the (millet) seedstock, then they will dance.'

Where required by the context, the antecedent may be **imperfective or stative**.

(541) a. *ní* *dɛ̌ŋ* *dɔ̌y* *dà* *má* *kày,*
now place hot **be** **if** **Top**,
*kŭmnɔ̀* *í* *á* *òn-nò*
above 1PlSbj Ipfv go.up-Ipfv
'If (=when) the place is hot, we go up on the roof (to sleep).'

b. *lɛ́* *í* *á* *lì-rà* *má,*
meal 1PlSbj Ipfv eat-Ipfv if,
*í* *tègú* *tègù-nó*
1PlSbj talk(n) speak-IpfvNeg
'If we are eating, we don't talk.'

The consequent may also be an **imperative** (positive or negative) or a **hortative**.

(542) a. *àr$^{n}$á* *mù-tɔ̀* *má,* *[lú:mà* *kù]* *bòrù-kú*
rain rain.fall-Ipfv **if**, [market in] go-Proh
'If it's raining, don't-2Sg go to the market!' (*mùrɔ́*)

b. *[àr$^{n}$á* *mù-lí* *má]*
[rain rain.fall-PfvNeg if]
*[á* *í* *y$^{n}$ɛ̌:* *lú:mà]*
[2PlAddr 1Pl go.to.Hort market]
'If it doesn't rain, let's go to the market!' (*mùrɔ́*)

**Third person subject pronominals are preverbal** (like first and second person subject pronominals) rather than suffixed in conditional antecedents.

(543) a. *wɔ́* *lɛ́* *nì-r$^{n}$á* *má,*
**3SgSbj** meal eat-IpfvNeg **if**,
*sɛ̀w-lù-n-ɔ́:*
fat-Inch-IpfvNeg-3SgSbj
'If he/she doesn't eat, he/she won't grow.'

b. *bɛ́* *yèrú-wòrè* *má,* *lɛ́* *í* *lí-yàrà*
**3PlSbj** come-Pfv1a **if**, meal 1PlSbj eat-Ipfv
'If they come, we will eat.'

c. *wó* *sátállà* *zê:rú-wòrè* *má,*
**3SgSbj** kettle bring-Pfv1a **if**,
*lɛ́* *lí-yɔ̀r-ɔ̌:*
meal eat-Ipfv-3SgSbj
'If he/she brings the kettle, he/she will eat.'

The antecedent normally precedes the consequent, but of course an antecedent added as an afterthought follows the consequent.

(544) *lɛ́* *í* *lí-yàra*
meal 1PlSbj eat-Fut
*bɛ́* *[kɔ̀* *lɛ́]* *zê:rú-wòsì* *má*
3PlSbj [DiscDef meal] bring-Pfv1b **if**
'We will eat — if they bring the meal.'

For *yà:fú:* 'all' as right-edge marker in conditionals, see under "willy-nilly" antecedents, just below.

### 16.2 Hypothetical conditional with *táŋ* ~ *tán*

*táŋ* ~ *tán* is borrowed from Fulfulde *tan* 'only'. It is used in TT in its secondary Fulfulde function as a marked clause-final 'if' particle (as also in Humburi Senni, a Songhay language). It is a little more emphatic than *má* in stressing the causal relationship between the antecedent and the consequent.

(545) a. *ní* *àr$^{n}$á* *mù-nɔ́* *táŋ,*
now rain rain.fall-IpfvNeg **only**,
*[àrzàkà*$^{L}$ *ŋí]* *nǔm-màrà*
[animal$^{L}$ DemPl] die-Ipfv
'If it doesn't rain, the animals will die.' (*mùrɔ́*, *nùw$^{n}$ó*)

b. *[bùréymá sátállà zê:-nó táŋ],*
[Boura kettle bring-IpfvNeg **only**]
*lɛ́ nì-r$^{n}$-ɔ̌:*
meal eat-IpfvNeg-3SgSbj
'If Boura doesn't bring the kettle, he won't eat.'

For this particle in counterfactuals, see §16.7 below.

### 16.3 'Even if …' (*fây … ńdè*, *mú:rà:*)

The most direct translation of 'even if …' is a construction with initial *fây* 'even' (§19.1.4) and a clause-final *ńdè* 'if' (546).

(546) a. *fây [ǹ dé] àtê: ów-s-è ńdè]*
even [1Sg Dat] tea give-Pfv2-3PlSbj if]
*ǹ nì-r$^{n}$á*
1SgSbj drink-PfvNeg
'Even if they give tea to me, I don't drink (it).'

b. *húw$^{n}$ɔ̀ í bírá bìrí-yàrà*
tomorrow 1PlSbj work(n) work(v)-Fut
*fây ú yè-nó ńdè*
even 2SgSbj come-IpfvNeg if
'Tomorrow we will work, even if you-Sg don't come.'

An alternative 'even if' construction is with initial *mú:rà:*. For the relevant example see (674) in Text 1.

### 16.4 Willy-nilly and disjunctive antecedents ('whether X or Y …')

In this construction, the two polar opposite propositions (the second normally being the negation of the first) are conjoined, so *lěy* 'and, with' is added to the second (§7.1.1.1). This in turn is followed by *yà:fú:* 'all' (§6.6.2, §7.1.1.3), here functioning as right-edge marker (indicating the boundary between antecedent and consequent). There is no 'if' conjunction, and there is no special preference for perfective aspect in the antecedent clauses. The consequent has ordinary main-clause form.

(547) *ú* *â:* *yá-rà˖:,*
2SgSbj Ipfv come-Ipfv-&,
*[ú* *yè-nó]* *lěy]* *yà:fú:,*
[2SgSbj come-IpfvNeg] **and]** **all**,
*í* *[lé* *mà]* *lí-yàrà*
1PlSbj [meal ReflPoss] eat-Fut
'Whether you-Sg are coming or aren't coming, we will eat our meal.'

## 16.5 'Unless' antecedent

A regular negative antecedent is sufficient to translate 'unless …'.

(548) *sírà* *wàrá* *í* *wàrí-yàrà,*
tomorrow farming 1PlSbj farm-Ipfv,
*ní* *àr$^{n}$á* *mù-lí* *má*
if rain rain.fall-PfvNeg if
'Tomorrow we will farm (=work in the fields), if if doesn't rain.' (= '…unless it rains')

## 16.6 'Supposing that' antecedent (*săn-sà* … *má*)

A form *săn-sà*, possibly in the form of an otherwise unattested inflected verb (perfective-2), may occur at the beginning of a conditional antecedent clause with final *má*. The meaning is 'if it's the case that …', 'in the event that …', or 'supposing that …' Since there is otherwise no clear break between 'if …' and 'when …' in TT conditionals, *săn-sà* emphasizes the hypothetical or even unlikely status of the antecedent proposition.

(549) *săn-sà* *[à-nù*$^{L}$ *kúnú]* *yèrú-wòrè* *má,*
supposing [man-Sg$^{L}$ DefSg] come-Pfv1a if,
*ká* *wó* *tégó*
say 3Sg speak.Imprt
'If that man happens to come, let him say: …' (2004-1b.01)

## 16.7 Counterfactual conditional

Counterfactuals differ in form from ordinary conditionals chiefly in including the past morpheme *nɔ̀* in the antecedent. The verb of the antecedent is perfective-2 (positive) or perfective negative, and the usual conditional particles

(final *má* or *tán*, occasionally initial *nǐ*) are present. *tán* is the preferred particle in this context, but *má* is accepted. A negative consequent is expressed by the perfective negative, since the corresponding positive event is assumed to have actually taken place before the present. A positive consequent is expressed by the future in my examples, here as a "future in the past" denoting an event that would have ensued.

(550) a. *bɛ́ bá-sà [[ìwá túrú]* $^{HL}$*bír-ù] nɔ̀ tán,*
3PlSbj accept-Pfv2 [[month one] $^{HL}$work(v)-VblN] **Past** if,
*téwó gàsù*$^{L}$ *dɔ̀-lí-yɛ̀r-è = bɛ́*
well dig$^{L}$ arrive-Caus-Fut-3PlSbj=3PlSbj
'If they had accepted (=been willing to do) one month's work, they would have finished digging the well.'

b. *ní wɔ́ sígásò bò-lí nɔ̀ tán*
if 3SgSbj S go.to-PfvNeg **Past** if
*ìní wàrá wàrí-yàra-wɔ́*
here farming farm-Fut-3SgSbj
'If he hadn't gone to Sikasso, he would have done some farming work here.'

c. *wɔ́ [[gɔ̌ŋ jìrè] kà yày-rí nɔ̀ tán,*
3SgSbj [[elephant front] at] go-PfvNeg **Past** if,
*gɔ̌ŋ wɔ́ wɔ̀w-nɔ́*
elephant 3SgObj kill-PfvNeg
'If he hadn't walked in front of the elephant, the elephant wouldn't have killed him.'

# 17 Complement and purposive clauses

## 17.1 Quotative complement

In reported speech, pronominals and spatiotemporal deictics are updated to conform to the here-and-now of the current speech event, as in English ('he told me that he would come here to see me', where the second 'he' along with 'here' and 'me' have been updated from the original utterance 'I will go there to see you').

For logophoric pronoun *àsí* (plural *àsí mǎ:*) replacing an original first person pronominal if coindexed with a higher-clause third person reported speaker, see §18.2.

### 17.1.1 'Say that …' with inflectable 'say' verb (*gá-*)

*gá-* is the morphologically regular 'say' verb, with a quotative complement in the form of a main clause (indicative, interrogative, imperative, etc., as in the original utterance).

(551) a. *ŋ̀* *gà-rí* *[ŋ̀* *yè-nó]*
1SgSbj say-PfvNeg [1SgSbj come-IpfvNeg]
'I didn't say I am not coming.'

b. *gâ:-ɾ-ǒ:* *[àsí* *â:* *yá-rà]*
say-Ipfv-3SgSbj [LogoSbj Ipfv come-Ipfv]
'He$_x$ will say that he$_x$ is coming.'

c. *ú* *ŋ̀gú* *gá* *bɛ̀-ná*
2SgSbj DemSg say can-IpfvNeg
'You-Sg cannot say that.'

### 17.1.2 Quotative particle *ká*

This particle takes no AN suffixes and cannot be negated. It is interpreted as perfective positive. It may be preceded by a subject NP or pronominal. If the

reference of the speaker is understood, as in extended reported speech, the subject is usually omitted.

(552) a. *ká* *[súkkárà* *y$^{n}$á-ŋ̀gó]*
say [sugar not.be]
'He/She said, there is no sugar.'

b. *ŋ̀* *ká* *[súkkárà* *y$^{n}$á-ŋ̀gó]*
1SgSbj say [sugar not.be]
'I said, there is no sugar.'

Quotative *ká* does not occur with inflectional or derivational affixation. When such affixation is necessary, the regular verb *gá-* 'say' must be used. Likewise, *ká* does not occur as a verb in a verb chain, e.g. before *bɛ̀rá* 'be able to'.

In addition to cases like those in (552), where *ká* functions like a 'say' verb and has an overt or understood subject, *ká* is often repeated inside the quoted matter itself. Long quotations attributed to a single speaker may be peppered with many such occurrences of *ká*. I will use the interlinear gloss 'saying' rather than 'say' in such cases, but will generally disregard them in the free translation. In this 'saying' function, *ká* typically occurs at the beginning of a clause, or after a subject NP or a vocative. In (553) there is an initial *ká* 'say' indicating that Squirrel's speaking turn has begun, and this is followed by two further instances of *ká* glossed 'saying' within the quoted matter.

(553) *ḿʔm̀!* *kúy$^{n}$ɔ́* *ká* *kɔ̀rú,*
no! squirrel **say** lie,
*yàgá* *ká* *wɔ́* *[[lòg-gònò*$^{L}$ *ŋ̀]* $^{H}$*kú]*
how **saying** 3Sg [[pit$^{L}$ DemSg] $^{H}$in]
*ká* *[kɔ̀* *ténǎm]* *á* *gùŋú* *bɛ̀-tà* *mà*
**saying** [DiscDef hyena] Ipfv take.out be.able-Ipfv Q
'"Nope," said Squirrel, "that's a lie. How could you-Sg get the hyena out of the (deep) earth pit?"' (2004-1a.05)

### 17.1.3 Jussive complement

#### 17.1.3.1 Quoted imperative

In this construction, an original imperative is quoted (i.e. embedded under a 'say' verb). Unlike main-clause imperatives, whose second person subject is not overtly indicated by a pronominal, quoted imperatives require an overt NP or pronoun corresponding to the original addressee. An overt nonpronominal NP

in this function is a quoted vocative, and is set off intonationally from the imperative clause itself. In the absence of a nonpronominal NP, we get an independent pronoun. Unless the original addressee happens to correspond to a current speech-act participant, as in (554a), the independent pronoun is in third person form. Therefore an independent third person pronoun in a quotative context (with *ká* 'say') and preceding an imperative (or hortative) clause, as in (554b-c), should be interpreted as a **quoted vocative**, i.e. an original 'hey you!'.

The quoted imperative verb is morphologically the regular imperative form (554a-b), or in negative contexts the regular prohibitive (554c).

(554) a. *[ú bá] ká [ú yèrí]*
[2SgPoss father] say [**2SgSbj** come.Imprt]
'Your-Sg father said for you to come.'

b. *ŋ̀ ká [[ì-mú yà:fú:] dé] [bé yèrí]*
1SgSbj say [[child-Pl all] Dat] [**3PlSbj** come.Imprt]
'I told all of the children to come.'

c. *ŋ̀ ká [[ì-mú yà:fú:] dé] [bé yèrì-kú]*
1SgSbj say [[child-Pl all] Dat] [**3PlSbj** come-Proh]
'I told all of the children not to come.'

See also (669) in Text 1, with 3Sg *wó* as the reported vocative.

### 17.1.3.2 Quoted hortative

Since a hortative ('let's …!') presupposes the participation of the speaker along with one or more others, in quoted hortatives the subject takes logophoric plural form *àsí mă:* (§18.2.1). The regular hortative suffix appears on the verb.

(555) a. *ká [àsí mă:] [lú:mà kù] y$^{n}$-ĕ:*
say [Logo Pl] [market in] **go.to-Hort**
'He/She said, let's go to the market!'

b. *gà: sírà, [dèŋ$^{L}$ ŋ̀gú] dé, wàgàtù$^{L}$ ŋ̀ú,*
but tomorrow, [place$^{L}$ DemSg] Dat, time$^{L}$ DemSg,
*[àsí mă:] túnŏm-mà ká dàg-é*
[Logo Pl] each.other saying **meet-Hort**
'(Sheep to Hyena:) But tomorrow, at this place, at this time, let's meet each other!' (2004-1a.02)

## 17.2 Factive (indicative) complements

### 17.2.1 'Know that …' complement clause

The complement of 'know' has the form of an ordinary main clause. The complement clause follows the stative 'know' quasi-verb *ùkú* (§11.2.5).

(556) a. *ú ùkú má [ìlò*$^{L}$ *ŋú] lŭw-wòrè má*
2SgSbj **know** Q [house$^{L}$ DemSg] fall-Pfv1a Q
'Do you-Sg know that the house fell?'

b. *m̀ ùkú [wɔ́ kɔ̀ [ḭ̀* $^{HL}$*cérù] lí-wɔ̀sì]*
1SgSbj **know** [**3SgSbj** Focus [1SgPoss $^{HL}$money] eat-Pfv1b]
'I know that it was he/she [focus] who ate (=spent) my money.'

c. *m̀ ùkú èsˈ-túrú-kòy pàsù-rí=cɛ́*
1SgSbj know anything leave-PfvNeg-NonhPlSbj
'I know that they (nonhuman) had not left anything.'

### 17.2.2 'See (find, hear) that …'

#### 17.2.2.1 Complement with fronted 3rd person subject pronouns

When the matrix verb 'see', 'find', or 'hear' is followed by a complement denoting a situation or recent event that the matrix subject has comprehended based on visual or other evidence, as in 'I see that you have been hurt' (as opposed to 'I saw you getting hurt'), the complement has a regular verb form, such as a perfective. However, third person subject pronouns do not appear in postverbal (enclitic) form, as in ordinary main clauses. Rather, they occur in clause-initial subject position (557b), like first and second person pronouns and like full subject NPs.

(557) a. *[ǹ dìr$^{n}$ˈí-sà] [nŭ-m yăy-wɔ̀rè]*
[1SgSbj find-Pfv2] [person-Pl go-Pfv1a]
'(On arriving there) I found that the people had gone (away).'

b. *[m̀ wɔ̀-sɔ́] [wɔ́ yăy-wɔ̀rè]*
[1SgSbj see-Pfv2] [3SgSbj go-Pfv1a]
'I saw that he/she had gone.'

c. *[m̀ᵇ* *ègí-sà]* *[ú* *írú* *wɔ̌w-sɔ̀]*
[1SgSbj hear-Pfv2] [2SgSbj gazelle kill-Pfv2]
'I have heard that you (have) killed a gazelle.'

d. *[ŋ̀* *wɔ̀-kí* *dà]*
[1SgSbj see-Prog be]
*[ú* *yⁿàrⁿá* *[m̀* *HL bárù]]*
[2SgSbj not.want [1SgPoss HL help]]
'I see that you-Sg don't want to help me.'

e. *[ǹ* *dìrⁿú-sà]* *[kàyá* *[m̀* *HL órù]* *lí-wɔ̀sì]*
[1SgSbj find-Pfv2] [grasshopper [1SgPoss HL field] eat-Pfv1b]
'I found that the grasshoppers (=locusts) had eaten my field.'

f. *[ǹ* *dìrⁿú-sà]* *[ès-túrú-kòy* *pàsì-rí=cé]*
1SgSbj find-Pfv2 [anything leave-PfvNeg-NonhPlSbj]
'I found that they (nonhuman) had not left anything.'

The construction can also be used to denote actually perceived events (with 'see' or 'hear'). Here the complement is normally imperfective (558). Again, third person subject pronouns are clause-initial. See also (677) in Text 1.

(558) a. *[m̀* *wɔ̀-sɔ́]* *[wɔ́* *ú* *á* *làpù-rà]*
[1SgSbj see-Pfv2] [3SgSbj 2SgObj Ipfv whip-Ipfv
'I saw that he/she was hitting you-Sg.'

b. *yⁿà:ŋá* *m̀* *á* *ègù-rà*
night 1SgSbj Ipfv hear-Ipfv
*[[nìwⁿěy* *mă:]* *zɔ́ŋɔ̀* *â:* *zɔ́ŋgú-rɔ̀*
[[cat Pl] fighting Ipfv fight-Ipfv
'At night, I hear the cats fighting.' (*zɔ́ŋ\\zɔ̀ŋɔ́*)

### 17.2.2.2 Relative-clause complement

It is also possible to express the complement of a perception verb in the form of a relative clause, with final relative morpheme *ŋ́* (559c), compare colloquial English *I saw where (i.e. that) they had eaten*. As usual in relative clauses, all perfective positives are neutralized into perfective-2. The other relative morpheme, *kà:*, is not attested in this construction. This is presumably because there is no true relative head NP in these perception complements.

(559) a. *[m̀ wɔ̀-sɔ́] [wɔ́ lɛ́ lí-sà ŋ́]*
[1SgSbj see-Pfv2] [3SgSbj meal eat.meal-Pfv2 Rel]
'I saw that he had eaten (the meal).'

b. *[àsí wɔ̀-cí dà]*
[LogoSbj see-Prog be]
*[wɔ́ á á làpù-r-è ŋ́↑],*
[3SgSbj 2SgObj Ipfv whip-Ipfv-3PlSbj Rel]
*[àsí wɔ̀-cí dà] [wɔ́ á zɔ̀w-rɔ̀ ŋ́↓]*
[LogoSbj see-Prog be] [3SgSbj Ipfv run-Ipfv-3PlSbj Rel]
'(He said:) I could see him whip(ping) you. I could see him running.' (2004-1a.9)

### 17.2.2.3 Recognition (inference, hearsay) construction

In this construction the embedded clause has main-clause form.

(560) *m̀ égú-sà [[yá gìrɛ̌y] àr$^{n}$á mùrú-wɔ̀rè sánní]*
1SgSbj hear-Pfv2 [[there around] rain rain.fall-Pfv1a much]
'I heard that it rained a lot around there.'

## 17.2.3 Obligationals

### 17.2.3.1 Weak obligational (*dàgú dà* 'be right, proper')

The fixed stative verb phrase *dàgú dà* means 'it is right, normal, proper' (i.e. the socially approved thing to do). It is close to the English modals *should* or *ought to*, but has a stronger sense of social norms. It may occur with a following clause with a verb in imperative form, often with 'and' particle *má*. The subject may precede *dàgú dà*, and other constituents may also be fronted (topicalized).

(561) a. *dàgú dà-∅ [ŋ́ yá [yá gìrɛ̌y]]*
be.proper be-3SgSbj [1SgSbj go.Imprt [there around]]
'I am supposed to go there.'

b. *sáydù dàgú dà-∅ [má [yá gìrɛ̌y] yá]*
Seydou be.proper be-3SgSbj [and [there around] go.Imprt]
'Seydou is supposed to go there.'

c. *dàgú* *dà-∅* *[má* *ŋ̀* *wàsá* *ìní]*
be.proper be-3SgSbj [and 1SgSbj remain.Imprt here]
'I am supposed to stay here.'

*dàgú\\dàgá* is also a common verb meaning 'encounter (someone, on a path)', with extended meanings like '(man) marry (woman)'.

**Negation** is expressed in the higher clause. The negative counterpart of *dàgú dà* is *dàgù-rí*, with perfective negative suffix.

(562) a. *ìní* *dàgù-rí-∅* *[bé* *yèrí]*
here be.proper-PfvNeg-3SgSbj [3PlSbj come.Imprt]
'They shouldn't come here.'

b. *dàgù-rí-∅* *[ú* *ǹ* *dɔ́]*
be.proper-PfvNeg-3SgSbj [2SgSbj 1SgObj insult.Imprt]
'You-Sg shouldn't insult me.'

#### 17.2.3.2 Strong obligational (*kàlà* 'must')

*kàlà* (probably borrowed from Songhay) is a sentence-initial impersonal 'must' expression similar to French *il faut (que)* and Spanish *hay (que)*.

(563) *kàlà* *àrǎ-m* *mɔ̀tɔ́* *mà,* …
**must** man-Pl assemble and.SS, …
'The men had to come together, and …' (2005-2a.03)

## 17.3 Verbal noun *-rěŋ ~ -těŋ* or *-ú* (and other nominal) complements

A number of main-clause verbs take complements whose verb appears in the form of a verbal noun.

Of the two morphological verbal nouns, that in *-ú* is used in this type of complement **chiefly when the complement precedes the main-clause verb**. (I have some elicited examples where the *-ú* complement is extraposed, but this may be a case where my assistant was influenced by the linear order in the French cues.) The type in *-rěŋ ~ -těŋ* is used **when the complement follows the main-clause verb**. There is a distinct construction, often interpreted as purposive, where the *-ú* verbal noun complement follows an inflected motion verb, see §17.5.1. For *-rěŋ ~ -těŋ* in a 'before …' clause construction, see §15.2.3.

In the *-ú* verbal noun type, there is no suffix for monosyllabic *Cv́-* stems. For longer stems, the suffix imposes a {LH} overlay, only the suffixal vowel being H-toned. The final *-ú* is apocopated after semivowels and *m*, including *m* from /w$^{n}$/, in which case the resulting final *CvC* syllable ends up with rising tone. The *-ú* verbal noun is always segmentally identical to the combining form of the same verb, but if the verb is nonmonosyllabic and has lexical all-H-tone, the combining form remains all-high while the *-ú* verbal noun has {LH} overlay.

*-rěŋ* has variants *-těŋ*, *-lěŋ*, etc., due to *CC*-cluster rules following Early *u*-Syncope; see §4.2.2.2.

### 17.3.1 Structure of Verbal-Noun phrase

#### 17.3.1.1 Structure of *-ú* Verbal-Noun phrase

The verbal noun with *-ú* is more nouny than that with *-rěŋ* (discussed in the following section), and it lends itself to compounding, usually with a nominal initial that represents the logical direct object. The nominal compound initial **drops its tones** to all low.

Many compounds of this type are **lexicalized**, and may be used as nouns in any syntactic function. Two tonal types are distinguished. In both, the compound initial is a bare noun stem (or compound) without determiners or quantifiers (other than suffixes), and is L-toned. In one tonal type (x̀ n̄), the verbal noun has its regular {LH} tones; for examples see §5.1.3. In the other tonal type (x̀ ń), the verbal noun unexpectedly shifts to all-H tones; for examples see §5.1.4. The two tonal types can only be distinguished when the verbal noun is bisyllabic or longer. (564) is an example with a monosyllabic verbal noun that could be of either tonal type; see §5.1.5 for more such cases.

(564) *sáydù* *lɛ̀*$^{L}$*-lí* $^{HL}$*íwà* *[nîŋ* *dà]*
Seydou meal$^{L}$**-eat.blN** $^{HL}$want [now Emph]
'Seydou wants to eat a meal right now.' (*lɛ́* 'meal')

Other direct object NPs (e.g. those with determiners or quantifiers) and proper nouns have their **regular tone patterns** and are treated as **possessors** of the verbal noun. A pronominal direct object also functions as a possessor. After a possessor, the verbal noun itself has the usual tone overlays of possessed nouns, i.e. {HL} after a pronoun (565b) or a complex NP (565c), and {L} after a simple noun such as a personal name (565a). The absolute (unpossessed) forms of the verbal nouns are given in parentheses after the free translations.

(565) a. *á:mádù* *[sáydù* $^{L}$*tèw-∅]* $^{HL}$*íwà*
A [S $^{L}$hit-VblN] $^{HL}$want
'Amadou wants to hit Seydou.' (*tĕw-∅*)

b. *á:mádù* *[ǹ* $^{HL}$*têw-∅]* $^{HL}$*íwà*
A [1SgPoss $^{HL}$hit-VblN] $^{HL}$want
'Amadou wants to hit me.' (*tĕw-∅*)

c. *sáydù* *[[nàw$^{n}$à*$^{L}$ *ŋú]* $^{HL}$*kûw-∅* $^{HL}$*íwà*
Seydou [[meat$^{L}$ DemSg] $^{HL}$eat(meat)-VblN $^{HL}$want
'Seydou wants to eat this meat.' (*nàw$^{n}$á*, *kŭw-∅*)

d. *[[y$^{n}$à-r$^{n}$ù*$^{L}$ *ŋú]* $^{HL}$*zâŋ-∅]* *yè-lé*
[[woman-Sg$^{L}$ DemSg] $^{HL}$seek-VblN] come-ImprtNeg
'(He) should not (= tell him not to) come and court this woman!' (2004-1b.01) (*zàŋ-ú* ~ *zăŋ-∅*)

e. *má* *[níŋ* *kày]* *[[nù-mú* *yà:fú:]* $^{HL}$*hél-ù],*
and.then [now Top] [[person-Pl all] $^{HL}$distribute-VblN]
And now (there is) the distribution of (= to) all the people.' (2004-2b.01) (*hèl-ú*)

In addition to direct objects, **other non-subject constituents** may function as possessors, as shown by the appearance of possessed-noun tone overlays on the verbal noun (566).

(566) a. *ká* *àsí* *bá-wɔ̀sì* *[[í* *níŋèy]* $^{HL}$*bór-ù]*
say LogoSbj consent-Pfv1b [[1Pl beside] $^{HL}$go-**VblN**]
'He said he agreed to go along with us.' (*bòr-ú*)

b. *[[órú* *kù]* $^{HL}$*bór-ù]* *íw-ɔ̌:*
[[field in] $^{HL}$go-VblN] want-3SgSbj
'He/She wants to go to the field(s).' (*bòr-ú*)

c. *[[kàrá* *kù]* $^{HL}$*ís-ù]* *íw-ɔ̌:*
[[mat in] $^{HL}$lie.down-VblN] want-3SgSbj
'He/She wants to lie down on the mat.' (*ìs-ú*)

d. *[yó* *[L]yèr-ù]* *yⁿà-rⁿ-ɔ́:,*
[today [L]come-VblN] not.want-3SgSbj,
*[sírà* *[L]yèr-ù]* *íw-ɔ̌:*
[tomorrow [L]come-VblN] want-3SgSbj
'He/She doesn't want to come today, (rather) he/she wants to come tomorrow.' (*yèr-ú*)

In constructions with main-clause verbs like *gàŋá* 'prevent' that do not typically have coindexed subjects, a **lower-clause subject** NP or pronominal may also occur with a verbal noun in *-ú*. If there is no direct object, the subject may function as possessor of the verbal noun. If there is a direct object, the preferred construction is one where the logical lower-clause subject is expressed as the direct objet of *gàŋá*.

(567) a. *àrⁿá* *[ŋ̀* *[HL]yér-ù]* *gàŋú-sà*
rain [1SgPoss [HL]come-Nom] prevent-Pfv2
'The rain prevented my coming.'

b. *àrⁿá* *ŋ̀* *gàŋú-sà* *[yù[L]-[H][zé:r-ú]]*
rain 1SgObj prevent-Pfv2 [millet[L]-[H][bring/VblN]]
'The rain prevented me from bringing millet (to market0.'

A **verb chain** also takes compound form when converted into a verbal noun with *-ú*. The final verb is the morphological verbal noun. The nonfinal verb stem occurs in the combining form and is {L}-toned (as a compound initial). See §15.1.1 for examples.

### 17.3.1.2 Structure of *-rěŋ* ~ *-těŋ* Verbal-Noun phrase

The verbal noun with suffix *-rěŋ* ~ *-těŋ* allows direct objects and other nonsubject constituents to appear **in their normal form** (i.e. with no special tone overlays or other modifications). For examples with 'want' see (574) in §17.3.4, below.

However, I do have one textual occurrence where the *-rěŋ* ~ *-těŋ* verbal noun is possessed by a pronominal direct object. The verbal noun therefore has overlaid possessed-noun {HL} tone overlay (568).

(568) *[kùwɔ̀-kà*$^{L}$ *ŋ̀gú]* *lìw-ná*
[foot-mouth$^{L}$ DemSg] be.afraid-IpfvNeg
*[kɔ̀* $^{HL}$*záŋgú-rèŋ]* *mà*
[NonhSgPoss $^{HL}$seek-VblN] Q
'Is not (the owner of) these tracks afraid to court her?' (2004-1b.01)

### 17.3.2 'Prevent' (*gàŋá*)

When the main-clause verb is *gàŋá*, the logical structure is of the type [X prevent [Y VP]], with lower-clause subject Y. This construction is favored when the VP does not include non-subject constituents other than the verb. It is realized with Y as possessor of the verbal noun in *-ú* of the lower clause.

A 'prevent' construction may also be structured as [X prevent Y [VP]], where Y is treated as the direct object of the 'prevent' verb, so the complement is reduced to the lower-clause VP. This construction is favored when the VP includes a direct object or other complement, which becomes the possessor (or compound initial) of the verbal noun.

(569) a. *àr$^{n}$á* *[ŋ̀* $^{HL}$*yér-ù]* *gàŋú-sà*
rain [1SgPoss $^{HL}$come-Nom] prevent-Pfv2
'The rain prevented my coming.'

b. *àr$^{n}$á* *ŋ̀* *gàŋú-sà* *[yù*$^{L-H}$*[zé:r -ú]]*
rain 1SgObj prevent-Pfv2 [millet$^{L}$-$^{H}$[bring/VblN]]
'The rain prevented me from bringing millet (to market0.'

When the complement follows *gàŋá*, the verb of the complement may also have its verb appear in the verbal noun form with *-rěŋ* or *-těŋ* (570).

(570) *àr$^{n}$á* *ŋ̀* *gàŋú-sà* *[ú* *kà*$^{L}$*-dágú-rěŋ]*
rain 1SgObj prevent-Pfv2 [2SgObj meet$^{L}$-meet-VblN]
'The rain prevented me from meeting you-Sg.'

For 'prevent', see also *há:mnà kár$^{n}$á* (§17.3.8.2).

### 17.3.3 'Consent' (*bá*)

*bá* means 'consent, agree to, accept (a proposal)'. When the complement has the same subject as 'consent', it has verbal-noun form (571).

(571) a. *ká* *àsí* *bá-wɔ̀sì* *[[í* *níŋèy]* [HL]*bór-ù]*
say LogoSbj consent-Pfv1b [[1Pl beside] [HL]go-VblN]
'He said he agreed to go along with us.'

b. *bá-wɔ̀sì-wɔ́* *[ǹ* *dé]* *mòbîl* *ów-rĕŋ*
consent-Pfv1b-3SgSbj [1Sg Dat] car give-VblN
'She agreed to give me the car.'

With a switch in subjects, my elicited data show a hortative verb in the complement (572).

(572) *[m̀* [HL]*bá]* *bá-sà* *[ǹ* *yⁿɛ̌:* *bámákò]*
[1SgPoss [HL]father] consent-Pfv2 [1SgSbj go.to.Hort B]
'My father consented that I go to Bamako.'

### 17.3.4 'Want' ([HL]*íwà*, *ìwá*)

The basic 'want' predicate is a defective stative quasi-verb [HL]*íwà* or *ìwá* (§11.2.4). A clausal complement may take either of two forms when the subjects of the higher and complement clauses are coindexed.

When the complement **precedes** 'want', the tone of the latter is [HL]*íwà*. The verb of the complement shows up as a **verbal noun** with suffix *-ú* (573); see §17.3.1.1, above. The {HL} overlay suggests a possessive construction.

(573) a. *sǎy* *cìr-ú* [HL]*íwà=kɔ́*
bird fly-VblN [HL]want=NonhSgSbj
'The bird wants to fly.' (*círó*)

b. *sáydù* *lɛ̀*[L]*-lí* [HL]*íwà* *[nîŋ* *dà]*
Seydou **meal**[L]**-eat.VblN** [HL]want [now Emph]
'Seydou wants to eat a meal right now.' (*lɛ́* 'meal')

With simple transitive complements, an alternative is a purposive complement, with {L}-toned initial denoting a (mostly nonspecific) object and {HL}-toned verb, see (443a) in §13.2.1.

When the complement **follows** 'want', the tone of the latter is *ìwá*, presumably revealing the lexical melody of the quasi-verb. The verb of the complement appears as the alternative verbal noun with suffix *-rĕŋ* ~ *-tĕŋ* (§17.3.1.2). A direct object has the same form as it has in main clauses, and there is no possessor-possessed tonology.

(574) a. *sǎy* *ìwá=kɔ́* *cí-tɛ̌ŋ*
bird want fly-VblN
'The bird wants to fly.'

b. *sáydù* *ìwá* *[[nàwⁿà*$^{L}$ *ŋú]* *kúw-rɛ̌ŋ*
Seydou want [[meat$^{L}$ DemSg] eat(meat)-VblN
'Seydou wants to eat this meat.' (*nàwⁿá*)

c. *á:mádù* *ìwá* *[sáydù* *tɛ́w-rɛ̌ŋ]*
A want [S hit-VblN]
'Amadou wants to hit Seydou.'

d. *á:mádù* *ìwá* *[ǹ* *tɛ́w-rɛ̌ŋ]*
A want [1SgObj hit-VblN]
'Amadou wants to hit me.'

Negation ('not want to …') is expressed by a suppletive 'not want' verb *yⁿàrⁿá-* (§11.2.4) in the main clause. Either of the two verbal noun constructions, with *-ú* (575a-c) and with *-rɛ̌ŋ* ~ *-tɛ̌ŋ* (575d), with their associated differences in syntax, may be used.

(575) a. *yⁿàrⁿ-ɔ̌:* *[bámákò* $^{HL}$*bór-ù]*
not.want-3SgSbj [Bamako $^{HL}$**go.to-VblN**]
'He/She doesn't want to go to Bamako.

b. *yⁿàrⁿ-ɔ̌:* *lɛ̀*$^{L}$*-lí*
not.want-3SgSbj meal$^{L}$**-eat.VblN**
'He/She doesn't want to eat (a meal).'

c. *yèr-ú* *yⁿàrⁿ-ɛ́=bɛ́*
**come-VblN** not.want-3PlSbj
'They don't want to come.'

d. *[èsé* *dé]* *ú* *àtè:*$^{L}$*-ní* *yⁿàrⁿá* *má*
[what? Dat] 2SgSbj tea$^{L}$**-drink.blN** not.want Q
'Why don't you-Sg want to drink (the) tea?'

e. *yⁿàrⁿ-ɔ́:* *[ǹ* *tɛ́w-rɛ̌ŋ]*
not.want-3SgSbj [1SgObj **hit-VblN**]
'He/She doesn't want to hit me.'

With **non-coindexed subjects**, either a **hortative verb or a verbal noun** (*-rĕŋ* ~ *-tĕŋ*) occurs in the complement. The lower-clause subject must be expressed, minimally by a subject pronominal. The subject and all complements have their regular main-clause forms, as usual in hortatives (which are fully finite) and in the *-rĕŋ* ~ *-tĕŋ* verbal noun.

(576) a. *[ù* *$^{HL}$bá:$^{n}$sà]* *ká*
[2SgPoss $^{HL}$owner] say
*àsí* *ìwá* *[ú* *gònó* *gàs-ɛ́]*
LogoSbj want [2SgSbj pit dig-**Hort**]
'Your boss said that he wants you-Sg to dig a pit.'

b. *m̀$^{b}$* *ìwá* *[ìní* *ú* *wású-rĕŋ]*
1SgSbj want [here 2SgSbj remain-**VblN**]
'I want you-Sg to stay here.'

### 17.3.5 'Forget' (*ná*) and 'remember' (*nátúrá*)

'Forget' is *ná*, while 'remember' is *nátúrá* (frozen reversive derivative, i.e. originally 'un-forget'). A clausal complement, in the sense 'forget/remember to (do something)' is expressed with the *-rĕŋ* ~ *-tĕŋ* verbal noun.

(577) a. *ná-w$^{n}$ɔr$^{n}$-ɔ:* *[bìdôŋ* *ɔ́tú-m-tĕŋ]*
forget-Pfv1a-3SgSbj [jug wet-Fact-**VblN**]
'He/She forgot to moisten the jug.'

b. *ǹ* *nà-r$^{n}$í* *[bèrĭm* *bérúm-tĕŋ]*
1SgSbj forget-PfvNeg [greeting greet-**VblN**]
'I did not forget to give greetings.'

c. *[sáydù* *dé]* *ǹ* *ná-w$^{n}$ɔr$^{n}$è* *[kèrú* *ów-rĕŋ]*
[Seydou Dat] 1SgSbj forget-Pfv1a [money give-**VblN**]
'I forgot to give the money to Seydou.'

d. *ǹ* *nátúrú-wɔ̀sì* *[bìdɔ̂ŋ* *ɔ́tú-m-tĕŋ]*
1SgSbj remember-Pfv1b [jug wet-Fact-**VblN**]
'I remembered to moisten the jug.'

### 17.3.6 ‘Be afraid to, fear’ (*líwá*)

This verb takes a complement with *-rěŋ* ~ *-těŋ* VblN. The complement follows the ‘be afraid’ clause.

(578) a. *m̀ â: líw-rà yé-těŋ*
1SgSbj Ipfv fear-Ipfv come-**VblN**
‘I am afraid to come.’

b. *sáydù líw-wɔ̀rè [nă: kúw-rěŋ]*
Seydou fear-Pfv1a [meat eat(meat)-**VblN**]
‘Seydou was afraid to eat the meat.’

c. *[bòŋù-nú á lìw-rà] [[mìrá mà] tégú-rěŋ]*
[cripple-Sg Ipfv fear-Ipfv] [[voice ReflPoss] speak-VblN]
‘The cripple was afraid to speak (in) his voice (=out loud).’ (2004-1a.09)

d. *[kùwɔ̀-kà*$^{L}$ *ŋ̀gú]*
[footprint$^{L}$ DemSg]
*lìw-ná=kɔ́ záŋú-rěŋ má*
fear-IpfvNeg=NonhSgSbj court-VblN Q
‘Does not (the owner of) these footprints fear to court it (=female)?’ (2004-1b.01)

### 17.3.7 ‘Be capable of doing’ (*wɔ́-*)

The verb *wɔ́-* attested as imperfective *wɔ́-rɔ̀-* and imperfective negative *w$^{n}$ɔ̀-r$^{n}$ɔ́-*, homophonous with and perhaps equatable with the corresponding forms of *wɔ́-* ‘see’, is used in combination with *kàr$^{n}$-ú*, verbal noun of *kár$^{n}$á* ‘do’, in the sense ‘be capable of’. A domain of reference is added as a NP (perhaps deverbal) with dative postposition *dè*. One might compare colorful English idioms like *X can(not) hack it*. For the common ‘be able to VP’ construction with *bèrá* ‘get’, see §17.4.4.

(579) a. *[yú dè] kàr$^{n}$-ú w$^{n}$ɔ̀-r$^{n}$-é=cɛ́*
[millet Dat] do-VblN be.capable-IpfvNeg-3PlSbj=NonhPlSbj
‘They (=small grasshoppers) aren’t as strong as (=cannot eat) millet.’ (2004-1b.03)

b. *[ìlò*$^{L}$*-máy dè] á kàr*$^{n}$*-ú wɔ̀-rɔ̀-wɔ́*
[house$^{L}$-construction Dat] Ipfv do-VblN be.capable-Ipfv-3SgSbj
'He/She has the ability (skill) to do house construction.'

### 17.3.8 Complements with dative of *-ú* verbal noun

Since the *-ú* verbal noun is highly noun-y, it may function as NP complement of a postposition. Certain main-clause verbs take dative verbal noun complements, as detailed below.

#### 17.3.8.1 'Cease' (*dèlá*)

The main clause has *dèlá* 'stop (halt), stand up' in the sense 'cease (an activity)'. The complement is expressed as a nominal with dative *dé*, or as a chained VP. The subject of the complement is coindexed with that of the main clause and is not overtly expressed in the complement.

In the type with nominal complement, a (generic) object NP in the complement may appear as a compound initial (580a). Other constituents such as adverbials may also appear (580b).

(580) a. *[sìgìrèt*$^{L}$*-ní dé] ǹ dèlú-wɔ̀rè*
[cigarette$^{L}$-drink.VblN **Dat**] 1SgSbj **cease**-Pfv1a
'I have stopped (=abandoned) smoking.'

b. *[ìní jìrò*$^{L}$*-*$^{HL}$*lêy dé] ǹ dèlú-wɔ̀rè*
[here eye$^{L}$-$^{HL}$sleep **Dat**] 1SgSbj **cease**-Pfv1a
'I have stopped sleeping (=no longer sleep) here.'

The chain construction is seen in (581).

(581) *ànànsá:rá [níŋ kày] bɛ́ táy dɛ̌l-sà*
European [now Top] 3PlObj shoot **cease**-Pfv2
'Now the white ceased shooting at them.' (2004-2a.01)

The negation of *dèlá* ('not cease') is used in the sense '(do) continuously'.

(582) a. *hálì yó mà, í gàsú dèl-lí*
until today also, 1PlSbj dig cease-PfvNeg
'Even nowadays, we have (still) not ceased excavating (artificial ponds).' (2004-2a.04)

b. *[ú* *ùsú* *dèl-lí* *tán]* *[ú* *ègí-yàrà]*
[2SgSbj ask **cease**-PfvNeg if] [2SgSbj hear-Fut]
'If you-Sg haven't stopped asking (= have more questions), you-Sg will hear.' (2004-2b.02)

17.3.8.2 'Prevent' (*há:mnà kárⁿá*)

Alongside *gàŋá* 'prevent, obstruct' (§17.3.2) is a synonymous expression *há:mnà kárⁿá-*, consisting of a noun *há:mnà* (< Fulfulde) and the 'do' verb. The complement is expressed as a dative PP including the *-ú* verbal noun (583).

(583) *sáydù* *m̀* *há:mnà* *kárⁿú-wɔ̀sì*
Seydou 1SgObj prevention do-Pfv1b
*[bèlùᴸ-cí* *dè]*
[sheepᴸ-slaughter.VblN Dat]
'Seydou prevented me from slaughtering the sheep.'

## 17.4 Verbs with preceding directly chained VP as complement

A number of constructions involving a control verb and an infinitival or similar complement in English, requiring shared subjects, are in fact expressed as direct VP chains in TT. Typically there is a high-frequency, perhaps semantically specialized final verb ('begin', 'be able to', etc.), which is preceded by a VP ending in the combining form of a verb. As a reminder, the combining verb is homophonous with the verbal noun in *-ú* for those verbs with lexical /LH/ melody, and for *Cv́-* monosyllabic stems. It is therefore useful to give examples with nonmonosyllabic, H-melody verb stems to demonstrate that the chained verb is in its combining form. In addition, in chained VPs the direct object has its regular tones (it does not drop tones in the manner of compound initials).

Direct chaining generally indicates that the two (or more) linked verbs denote aspects (or co-events) of a conceptually integrated event type.

The shared subject NP (or first or second person pronominal) typically appears before the first chained verb. I normally bracket it with the final (i.e. the inflected) verb. Non-subject constituents such as direct objects and adverbials are often best bracketed with the relevant nonfinal verb, but some adverbials (e.g. temporals) may have scope over the entire chain and are therefore not bracketed with nonfinal verbs. Non-subject constituents that ought to be bracketed with a nonfinal verb optionally appear after the final verb, making it

difficult to bracket. This is because such elements do not intervene between the nonfinal and final verb, which are directly adjacent.

For *bàrá* 'help' (§17.4.3), as an alternative to the regular chain construction, the complement may also be expressed as a postposed verbal noun clause with suffix *-rěŋ ~ -těŋ*. The other verbs covered in this section always use the chain construction.

### 17.4.1 'Begin' (*dɛ̀wrá*)

'Begin' is *dɛ̀wrá* (cf. ordinal *dɛ́wrú* 'first'), but in the perfective-1a it often irregularly contracts from *dɛ̀wrú-wɔ̀rɛ̀-* to *dɛ̌w-wɔ̀rɛ̀-*. The complement VP is the combining form, hence e.g. *tórú* 'jump' (lexically /H/-toned). The complement may include a direct object with its normal tones (i.e. not as {L}-toned compound initial).

(584) a. *ì-r$^{n}$ú* *[yɛ́* *yí]* *dɛ̌w-wɔ̀rɛ̀*
child-Sg [weeping weep] begin-Pfv1a
'The child began to weep.'

b. *[jɛ́* *jí]* *dɛ̌w-wɔ̀r-è=bɛ́*
[dance(n) dance] begin-Pfv1a-3PlSbj=3PlSbj
'They have begun to dance.'

c. *[nàw$^{n}$á* *kúw]* *dɛ̌w-wɔ̀r-è=bɛ́*
[meat eat] begin-Pfv1a-3PlSbj=3PlSbj
'They have begun to eat the meat.'

d. *á* *[lɛ́* *kár$^{n}$ú]* *dɛ̀wrá*
2PlSbj [meal make] begin.Imprt
'Begin-2Pl cooking the meal!'

e. *dɔ̂m* *[nùŋɔ́* *nùŋú]* *dɛ̀w-l-ɛ́=bɛ́*
yet [song sing] begin-PfvNeg-3PlSbj=3PlSbj
'They have not yet begun to sing.'

f. *[nàw$^{n}$á* *dùŋgùrú]* *dɛ̌w-wɔ̀r-è=bɛ́*
[meat cut] begin-Pfv1a-3PlSbj=3PlSbj
'They have begun to cut the meat.'

### 17.4.2 ‘Finish’ (*dùwⁿɔ́*)

The complement clause has a verb in the combining form. The usual perfective positive form is perfective-1a *dǔm-bɔ̀rè-* ~ *dǔm-mɔ̀rè-* ~ *dùm-mᵇɔ̀rè*.

(585) a *[ú lɛ́ lí] dǔm-mɔ̀rè mà* ?
[2Sg meal eat] finish-Pfv1a Q
‘Have you-Sg finished eating?’

b. *nò-mú [[nă: kúw] dùmbù-rí*
person-Pl [[meat eat] finish-PfvNeg
‘The people have not finished eating the meat.’ (*nàwⁿá*)

c. *tórú dǔm-mɔ̀rè-wɔ́*
jump finish-Pfv1a-3SgSbj
‘He/She finished jumping.’

### 17.4.3 ‘Help’ (*bàrá*)

‘Help’ is *bàrá*. The relevant core sense of the verb is ‘add, gather’, implying that the helper is adding his effort to those of others. A direct object (denoting the person or entity helped) is present. The complement denoting the collective action may be a dative NP, perhaps one denoting an action (586).

(586) *sáydù m̀ bàrú-wɔ̀sì [bírá dè]*
Seydou 1SgObj **help**-Pfv1a [work Dat]
‘Seydou helped me work.’ (lit. “… for work[n]”)

When the complement is expressed as a clause, its verb appears in the combining form in the usual case where the complement precedes the ‘help’ verb (587). In (587a), combining form *wàrú* has L-tones (*wàrù*) because it is linked prosodically to the following future verb which controls a {LH} overlay on both verbs. That the two verbs are closely linked is also suggested by (587b), where the logical object of ‘dig’, namely ‘well’, appears to the right of the ‘help’ verb (it could also be placed before the 1Pl object morpheme).

(587) a. *m̀ᵇí [ú bá]*
1SgSbj [2SgPoss father]
*wàrùᴸ bàrí-yàrà [wò* ᴴᴸ*órù kù]*
farmingᴸ **help**-Fut [3SgPoss ᴴᴸfield in]
‘I will help your father farm in his field.’ (*órú*)

b. *[nù-m*$^{L}$ *ŋí]* *í* *gàsú* *bàrú-sà* *téwó*
[person-Pl$^{L}$ DemPl] 1PlObj dig **help**-Pfv2 well(n)
'Those people helped us dig a well.'

c. *lɔ̀gú* *m̀*$^{b}$*í* *ú* *á* *tɔ́* *bàrú* *bɛ̀-tà*
banco 1SgSbj 2SgObj Ipfv stomp.on **help** can-Ipfv
'I can help you-Sg stomp on the banco (mud for bricks).'

d. *lɔ̀gú* *ǹ* *tɔ́* *bà-lí-wɔ́*
banco 1SgObj stomp.on help-PfvNeg-3SgSbj
'He/She didn't help me stomp on the banco.'

e. *ǹ* *tórú* *bàrú-s-ɔ̌:*
1SgObj jump help-Pfv2-3SgSbj
'He/She helped me jump.'

In (588), the complement is **postverbal**. The combining form of the verb is not generally used in this position. In (588a), the verbal noun *-rɛ̌ŋ* occurs. In (588b), a nominal compound ('house-building') is used; here a dative postposition is understood and may appear overtly.

(588) a. *í* *bárá* *[kà:* *kár*$^{n}$*á* *mà]*
1PlObj **help**.Imprt [Rel do and.SS]
*[gònó* *gású-rɛ̌ŋ]*
[hole dig-VblN]
'Help us manage (find a way) to dig the hole.'

b. *ǹ* *bárú-s-ɔ̀:* *[ìlɔ̀*$^{L}$*-*$^{H}$*máy*$^{n}$ *(dè)]*
1SgObj **help**-Pfv2-3SgSbj [house$^{L}$-$^{H}$build (Dat)]
'He/She helped me build a house.'

### 17.4.4 'Be able to, can' (*bɛ̀rá*)

The verb *bɛ̀rá* 'get, obtain' is used, as in several other Dogon languages (e.g. Jamsay) with a complement clause in the sense 'be able to'. The two clauses have a shared subject. The complement appears as a subjectless VP ending in a verb in the combining form, which immediately precedes *bɛ̀rá*. In the future form *bɛ̀rí-yàrà* 'will be able to', the complement verb is {L}-toned as part of the {LH} overlay controlled by the future suffix on both verbs (589f).

(589) a. *m̀* *ùrú* *bɛ̀-ná*
1SgSbj get.up can-IpfvNeg
'I can't get up.'

b. *[ú* [HL]*bá]* [HL]*túr-ì→* *wàrá* *wàrú* *bɛ̀-ná*
[2SgPoss [HL]father] [HL]singly farming farm(v) can-IpfvNeg
'Your father can't do the farming alone.'

c. *àyé* *kɔ̀* *[íló* *kù]* *á* *gú* *bɛ̀-tà* *mà*
who? SFocSg [house in] Ipfv exit can-Ipfv Q
'Who can go out of the house?'

d. *ú* *á* *wɔ̌w* *bɛ̀-t-ɔ̌:*
2SgObj Ipfv kill can-Ipfv-3SgSbj
'He/She can kill you-Sg.'

e. *[nàw$^{n}$á* *yà:fú:]* *kúw* *kám* *bɛ̀-n-ɔ́:*
[meat all] eat complete can-IpfvNeg-3SgSbj
'He/She cannot complete eating all the meat.'

f. *tòrù*[L] *bèrí-yàrà-wɔ́*
jump[L] can-Fut-3SgSbj
'He/She will be able to jump' (*tórú*)

See also the less common construction with *wɔ́-* 'be capable of (doing)' (§17.3.7).

### 17.4.5 'Be accustomed' (*lɔ́wɔ́*)

The verb *lɔ́w**lɔ́wɔ́* is used with a preceding VP ending in a verb in the combining form. It has a full paradigm, but in time contexts that encompass the present it is used in a stative form; positive *lɔ́w dà*, negative *lɔ́w ŋ̀gó*. The sense is 'be accustomed to VP' or '(be known to) VP occasionally'.

(590) a. *[yàgá* [HL]*dêŋ]* *ìsú* *lɔ́w* *d-ɔ̌:* *mà*
[which? [HL]place] lie.down be.accustomed be-3SgSbj Q
'In what place is he accustomed to sleeping?'

b. *[hálì bó:ní] í kɔ́w lɔ́w dà*
[until B] 1Pl go.get.water be.accustomed be
'We have been known to (go and) get water as far away as Boni.' (2004-2a.04)

c. *ǹ túsú lí lɔ́w ŋ̀gó*
1SgSbj sorghum eat be.accustomed not.be
'I am not accustomed to eating sorghum.'

The tones of *túsú* in (590c) show that it is not a compound initial for 'eat'.

## 17.5 Purposive, causal, and locative clauses

### 17.5.1 Purposive clause with *-ú* verbal noun after motion verb

This construction is common when the main clause has a simple **motion verb** ('go', 'come', etc.). The verbal noun with purposive sense follows the motion verb. Admittedly, with motion verbs the semantic distinction between chronological sequence and purpose is subtle, as in 'went and ate' versus 'went to eat'.

For the forms of this verbal noun, see §4.2.2.1. There is no *-ú* suffix for monosyllabic stems, and the *-ú* is apocopated to *-∅* after semivowels. For many verbs, the verbal noun in *-ú* and the combining form are homophonous, but the verbal noun always has rising tone when added to stems of more than one mora.

Although the verb may have its usual /H/ or /LH/ melody, when the purposive clause consists only of the verb it may have low pitch phonetically (I consider this to be intonational and indicate it by ↓).

(591) a. *[tɛ́nǎm bò-só] ǎw-∅↓*
[hyena go.to-Pfv2] catch-VblN
'Hyena went (there) to grab (at it).' (2004-1a.05)

b. *bɛ̀-ré-wɔ́ ɛ̀l-ú*
go.to-Pfv1a-3SgSbj look-VblN
'He/She went (there) to look.'

c. *àsí á là ɛ̀l-ú*
LogoSbj Ipfv go.to.Ipfv look-VblN
'($He_x$ said) $he_x$ would (first) go and (= in order to) look.' (2004-2a.01)

See also *tùg-ú* in (669) in Text 1.

This purposive clause type may be expanded by **adding an object**. In (592), this takes the form of a simple noun, in {**L}-toned form**, suggesting that it functions morphologically as a **compound initial** (with the verb as compound head). The verb 'drink' has the regular verbal-noun form *-ní* in most combinations, hence *sìgìrèt-ní* 'smoking ("drinking") cigarettes' and *èm-ní* 'drinking milk'. In the high-frequency combination 'water-drink' (with *ní* 'water' as initial, in L-toned form), 'drink' regularly appears in the form *-né* (identical to the combining form), as in (592a). A variant with *-ní* was also accepted by my assistant (*nì-nî*). See §5.1.3-5 for discussion and examples of such compounds.

(592) a. *bɛ̀rɛ́-wɔ́* *nì*$^{L}$*-né*
go.to.Pfv1a-3SgSbj water$^{L}$-drink
'He/She went (there) to drink water.' (*ní* 'water')

b. *yèrú-wòrè-wɔ́* *yɛ̀wtà*$^{L}$*-[kàr*$^{n}$*-ú]*
come-Pfv1a-3SgSbj chat$^{L}$-[do-VblN]
'He/She came to have a chat.' (*yɛ́wtà*)

d. *bɛ̀rɛ́-wɔ́* *kòlù*$^{L}$*-lí*
go.to.Pfv1a-3SgSbj lunch$^{L}$-eat.VblN
'He/She went (there) to eat lunch.' (*kòlú*)

If the **object is a pronoun**, or a complex NP (i.e. with a determiner and/or nonsuffixal quantifier), it functions as a "possessor," or arguably as a compound initial in the compound type (x̄ n̂) (§5.1.7). The verb takes the {HL} tone overlay as in those constructions. See §17.3.1.1 for more details.

(593) a. *bɛ̀-rɛ́-wɔ́* *[ú* $^{HL}$*ɛ́l-ù]*
go.to-Pfv1a-3SgSbj [2SgPoss $^{HL}$look-VblN]
'He/She went (there) to look for you.' (*ɛ̀lú*)

b. *bɛ̀rɛ́-wɔ́* *[í* $^{HL}$*tɛ̂w-∅]*
go.to.Pfv1a-3SgSbj [1PlPoss $^{HL}$hit-VblN]
'He/She went (there) to hit us.' (*tɛ́w*)

An **adverbial PP** may also appear in the verbal-noun clause. It too functions as a "possessor," controlling {HL} overlay on the verbal noun. In (594), the final verbal noun has a basic form *bǎm-∅* with rising tone, but here it adopts possessed-noun {HL}.

(594) *èsé ú kúlú-sò ká [[[ùró kà] kù]* $^{HL}$*bâm-∅]*
what? 2SgObj put-Pfv2 saying [[[hole mouth] in] $^{HL}$go.around.VblN
'(He) said: what put (=brought) you, (for you to) circle around at the mouth of the hole …?' (2004-1a.05)

If the purposive clause contains two chained verbs, the final verb takes its verbal noun shape, and the nonfinal verb is in combining form but with tones dropped (as a compound initial); see §15.1.1 for verbal nouns of verb-chains.

### 17.5.2 Purposive clause with final *ńdè* after hortative or imperative

In this construction, the verb of the purposive clause ends in …*ndè*. Perhaps *dè* here is the dative postposition (for a clearer case of dative *dè* in a purposive clause see §17.5.5, below), and one might connect the nasal with relative *ŋ́*, but the morphemic segmentation is far from clear.

In (595a-f), we have a **same-subject** construction, and the verb of the purposive clause is in **hortative** form with suffix *-ɛ́*, *-é*, or other allomorph, e.g. *tór-é ńdè* 'in order to jump', *tɛ́w-ɛ́ ńdè* 'in order to hit', *ní-y$^{n}$é ńdè* 'in order to drink' (§10.4.4). The purposive clause may precede or follow the main clause.

I transcribe e.g. *tɛ́w-ɛ́ ńdè*, though with different segmentations and morphemic identifications we could write e.g. *tɛ́wɛ́-ndè*, *tɛ́wɛ́-n dè*, *tɛ́wɛ́ ŋ́ dè*, etc.

(595) a. *ígú-s-è = bɛ́ [ǹ tɛ́w-ɛ́ ńdè]*
stop-Pfv2-3PlSbj=3PlSbj [1SgObj hit-**Hort** **Purp**]
'They stopped in order to hit me.'

b. *ígú-s-ɔ̌: [ǹ tɛ́w-ɛ́ ńdè]*
stop-Pfv2-3SgSbj [1SgObj hit-**Hort** **Purp**]
'He/She stopped in order to hit me.'

c. *[[sɔ́gɔ́ sǐ:] tìr$^{n}$ú dùŋgùr-ɛ́ ńdè]*
[[ax with] firewood chop-**Hort** **Purp**]
*ígú-s-è = bɛ́*
stop-Pfv2-3PlSbj=3PlSbj
'They stopped in order to chop the firewood with an ax.'

d. *ígú-s-è=bɛ́*
stop-Pfv2-3PlSbj=3PlSbj
*[tùwó* *[dèlé* *mà]* *pás-ɛ́* *ńdè]*
[stone [put.down and.SS] leave-**Hort** **Purp**]
'They stopped in order to put down and leave the stone.'

e. *ígú-s-è=bɛ́*
stop-Pfv2-3PlSbj=3PlS
*[[sígírɛ́tì* *mà]* *ní-y$^{n}$ɛ́* *ńdè]*
[[cigarette ReflPoss] drink-**Hort** **Purp**]
'They stopped in order to smoke their cigarettes.'

f. *m̀* *bírá* *bìrɛ́-sà* *[ɛ́r$^{n}$ásòŋí:* *ɛ́w-ɛ́* *ńdè]*
1SgSbj work(n) work(v)-Pfv2 [bicycle buy-**Hort** **Purp**]
'I worked in order to buy a bicycle.'

In (596), we again have *ńdè* but this time with a **switch in subjects**. The verb of the purposive clause is now in the **imperative** stem. (596a) should be compared to (595f), above.

(596) a. *[sáydù* *dè]* *ŋ̀* *cèrú* *ów-sò*
[Seydou Dat] 1SgSbj money give-Pfv2
*wɔ́* *ɛ́r$^{n}$ásòŋí:* $^{H}$*ɛ́wá* *ńdè*
3SgSbj bicycle $^{H}$buy.Imprt **Purp**
'I gave Seydou some money, so that he could buy a bicycle.'

b. *bámákò* *m̀* *wɔ́* *tíw-sò*
Bamako 1SgSbj 3SgObj send-Pfv2
*wɔ́* *[m̀* $^{HL}$*bá]* *bàrá* *ńdè*
3SgSbj [1SgPoss $^{HL}$father] help.Imprt **Dat**
'I sent him/her to Bamako (city), to help my father.'

### 17.5.3 Purposive clause as tonal compound (ǹ v́)

With 'go' and 'come', a following transitive complement may be expressed by a compound consisting of an **L-toned initial** plus an **H-toned verb** stem. The latter is segmentally compatible with either the combining form or the *-ú* verbal noun; the {H} tone overlay wipes out the tones that elsewhere distinguish the two. In (597), I give the imperative of the final verb in parentheses after the free translation, since the imperative clearly shows the lexical tone.

(597) a. *bɛ̀rɛ́-wɔ́* *[àlá* *kù]* *bìrà*$^{L-H}$*élú*
go.Pfv-3SgSbj [city in] **work**$^{L-H}$**look.for**
'He/She went in order to look for work in the city.' (*èlá*)

b. *yè* *dá-wɔ́* *bìrà*$^{L-H}$*bírú*
come be-3SgSbj **work(n)**$^{L-H}$**work**
'He/She has come in order to work.' (noun *bírá*, verb *bìrá*)

c. *yè* *d-é=bɛ́* *cèrù*$^{L-H}$*bérú*
come be-3PlSbj=3PlSbj **money**$^{L-H}$**get**
'They came in order to gain (=earn) money.' (*bɛ̀rá*)

d. *bɛ̀-ré-wɔ́* *tìr*$^{n}$*ù*$^{L-H}$*dúŋgúrú*
go.to-Pfv1a-3SgSbj **firewood**$^{L-H}$**chop**
'He/She went (there) to drink water.' (*dùŋgùrɔ́*)

This purposive compound construction is also sometimes used in transitive complements of 'want' (§17.3.4). An example is (443a) in §13.2.1.

### 17.5.4 Purposive compound plus *dà* 'be'

This purposive compound with **L-toned initial** and **H-toned verb** also occurs with a following *dà* 'be' (in invariant form). My examples show the purposive clause preceding rather than following the main verb. This construction may involve some focalization of the purposive clause.

(598) a. *[nàw*$^{n}$*à*$^{L-H}$*kúw* *dà]* *kɔ́* *á* *yè-tò*
[**meat**$^{L-H}$**eat** **be**] NonhSgSbj Ipfv come-Ipfv
'It (=animal) comes to eat meat.'

b. *[gàllè*$^{L-H}$*zátú* *dà]* *á* *yè-t-ɔ̌:*
[**courtyard**$^{L-H}$**sweep** **be**] Ipfv come-Ipfv-3SgSbj
'He/She comes to sweep the courtyard.'

c. *[gàllè*$^{L-H}$*zátú* *dà]* *á* *yè-t-è=bɛ́*
[**courtyard**$^{L-H}$**sweep** **be**] Ipfv come-Ipfv-3PlSbj=3PlSbj
'They come to sweep the courtyard.'

d. *[[y*$^{n}$*à-r*$^{n}$*ù]*$^{L-H}$*záŋgú* *dà]* *kɔ́* *á* *yè-tò*
[**[woman-Sg**$^{L}$**]-**$^{H}$**court** **be**] NonhSgSbj Ipfv come-Ipfv
'It comes in order to court a woman.' (2004-1b.01)

### 17.5.5 Purposive compound plus dative *dè*

In (599), a verbal noun of the type with suffix *-ú* (§4.2.2.1) with L-toned compound initial takes dative *dè* to form a purposive clause. (Monosyllabic verbs have no suffix in this verbal-noun form.) That the *dè* here is not 3Pl *d-è* 'they are' is shown by the invariability of *dè* across numbers and persons of subjects.

(599) a. *[sìgìrèt*$^{L}$*-ní dè]* *m̀* *ígú-wòrè*
[cigarette$^{L}$-drink.VblN Dat] 1SgSbj stop-Pfv1a
'I stopped in order to smoke.' (*sìgìrêt*)

b. *dǐŋ-wòr-è=bé* *[lɛ̀*$^{L}$*-lí* *dè]*
sit-Pfv1a-3PlSbj=3PlSbj [meal$^{L}$-eat Dat
'They sat down in order to eat a meal.' (*lɛ́*)

c. *dǐŋ-wòrè-wɔ́* *[lɛ̀*$^{L}$ *-lí* *dè]*
sit-Pfv1a-3SgSbj [meal$^{L}$-eat Dat]
'He/She sat down in order to eat a meal.' (*lɛ́*)

d. *yèrú-wòrè=bɛ́* *[gàs*$^{L}$*-ú* *dè]*
come-Pfv1a=3PlSbj [dig$^{L}$-VblN Dat]
'They came in order to dig.'

### 17.5.6 Verbal noun *-rɛ̌ŋ* ~ *-tɛ̌ŋ* as purposive

In (600), a subject ('water') distinct from that of the main clause is present, along with an adverbial PP. The purposive clause 'so that the water can run out of the shed' is expressed as a verbal noun 'going out' with a full set of intraclausal constituents. Here the verbal noun is with suffix *-rɛ̌ŋ* ~ *-tɛ̌ŋ*.

(600) *[í* *póló* *gàsí-yàrà]*
[1PlSbj canal dig-Ipfv]
*[kà:* *kár$^{n}$á* *mà]*
[Rel do and.SS]
*[ní* *[dáŋkì* *$^{L}$dòsù]* *gú-rɛ̌ŋ]*
[water [shed $^{L}$under] exit-VblN]
'We will dig a (rainwater) channel in such a way that the water can run out of the shed.'

A textual example with two parallel occurrences is (601).

(601) *èr$^{n}$á* *á* *èw-rà-∅,* *mɔ́y$^{n}$-r$^{n}$ĕŋ,*
goat Ipfv buy-Ipfv-3SgSbj, raise-**VblN**,
*zàndúrú* *á* *èw-r-è,* *mɔ́y$^{n}$-r$^{n}$ĕŋ*
donkey Ipfv buy-Ipfv-3PlSbj, raise-**VblN**
'… he buys a goat, for raising; (or) they buy a donkey, for raising.' (2004-2a.06)

### 17.5.7 Causal ('because') clause (*ká:wá*)

The noun *ká:wá* means 'reason, cause'. A kind of causal clause may be constructed by treating *ká:wá* as a possessed noun, where the possessor is either a headless relative clause or a verbal noun phrase. *ká:wá* therefore appears with possessed-noun tone overlay as $^{HL}$*ká:wà* or $^{L}$*kà:wà* depending on the type of possessor.

Headless relative-clause examples are in (602). The construction resembles English *because of the fact that …* with the empty noun *the fact* omitted.

(602) a. *[m̀* *bɛ̀lú* *wɔ̌w-wɔ̀sì]*
[1SgSbj sheep kill-Pfv1b]
*[ké* *[m̀* $^{HL}$*móŋgɔ̀rɔ̀]* *lí-sà* *ŋ́]* $^{HL}$*ká:wà*
[NonhPlSbj [1SgPoss $^{HL}$mango] eat-Pfv2 Rel] $^{HL}$**reason**
'I killed the sheep, because (of the fact that) they ate my mango (tree).'

b. *[m̀* *[wò* *dé]* *cɛ̀rú* *ów-sò]*
[1SgSbj [3Sg Dat] money give-Pfv2]
*[m̀* *[wò* *dé]* *á* *yírímínà* *kà-là* *ŋ́]* $^{HL}$*ká:wà*
[1SgSbj [3Sg Dat] Ipfv pity(n) do-Ipfv Rel] $^{HL}$**reason**
'I gave him some money, because (of the fact that) I had pity for him.'

In (603), $^{L}$*kà:wà* follows a verbal noun in *-rĕŋ* ~ *-tĕŋ*. Whereas in (602) the 'because' clause has its own subject (whether or not it happens to be coindexed with the subject of the main clause), in (603) the two clauses have coindexed subjects and the 'because' clause omits the subject. This suggests that the verbal-noun phrase here may be a subordinated VP rather than a full clause in form. The 'because' phrase is literally "(for) reasons of stepping in the water," since it is not morphologically possible to negate 'step in' in verbal-noun form.

(603) *[tórú* *yⁿàŋú-s-ɔ́:]*
[jump go.past-Pfv2-3SgSbj]
*[[[ní* *kù]* *tɔ́-rěŋ]* *ᴸkà:wà]*
[[[water in] step.in-VblN] ᴸ**reason**]
'He jumped across, so as not to step in the water.'

### 17.5.8 'Because of' (*X ᴸkà:wà*)

*ká:wá* 'reason, cause' in possessed tonal form may function as a kind of postposition after a NP in the sense 'because of' or 'for the sake of (e.g. God)' (604). After a simple nonpronominal NP it has L-tones (NP *ᴸkà:wà*). It has the {HL} tone overlay after a pronoun (*ú* *ᴴᴸká:wà* 'because of you') and after a more complex NP (e.g. with a determiner, or a conjoined NP).

'Because of' may have the simple retroactive causal sense 'due to' (604a), but it may also mean 'for the sake of, out of respect for' with human or divine complement (604b).

(604) a. *[àrⁿá* *ᴸkà:wà]* *zɔ̌w-s-è=bɛ́*
[rain ᴸ**reason**] run-Pfv2-3PlSbj=3PlSbj
'They fled because of the rain.'

b. *m̀* *[wò* *dé]* *ów-sò* *[dìsì-ná:* *ᴸkà:wà]*
1SgSbj [3Sg Dat] give-Pfv2 [God ᴸ**reason**]
'I gave him/her (something) for the sake of God.'

### 17.5.9 Negative purposive (prohibitive) clause

Negative purposive clauses are uncommon but it was possible to elicit some.

In (605), the negative purposive clause contains a prohibitive verb in a relative clause that is followed by the {HL}-toned possessed form of *ká:wá* 'reason', as in the preceding section (§17.5.8).

(605) *í* *[tìwⁿá* *ᴸlò* *mă:]* *tígú-wòsì,*
1PlSbj [tree ᴸhand Pl] block-Pfv1b,
*[[àrzàká* *mă:]* *lù-kú* *ŋ́]* *ᴴᴸká:wà*
[[animal Pl] enter-**Proh** Rel] ᴴᴸ**reason**
'We made tree branches into a barrier (= fence), so that the animals won't get inside.'

A similar example, but with the *ńdè* clause-final purposive morpheme instead of the relative *ŋ́* and *ká:wá* is (606).

(606) *í* *[íló* *[L]kà]* *sɔ̀gí-yàrà*
1PlSbj [house [L]mouth] lock-Fut
*[ì-m-í:* *lù-kú* *ńdè]*
[child-Pl-Dimin enter-Proh **Purp**]
'We'll lock the door, so the kids don't come in.'

In (607), the word *yěyyà* appears to function as a 'lest' operator. The verb of the purposive clause is (otherwise) in positive form (hortative verb and clause-final purposive *ńdè*).

(607) *í* *[màŋgòrò[L]* *ŋ̀gú]* *sàrí-yàrà,*
1PlSbj [mango[L] DemSg] soak-Fut,
*kɔ́* *yěyyà* *ɔ́r-ɛ́* *ńdè*
NonhSgSbj **lest** rot-Hort Purp
'We'll moisten these mangoes, lest they rot (= so that they don't rot).'

# 18 Anaphora

## 18.1 Reflexive

### 18.1.1 Transpersonal reflexive possessor (*mà* ~ *nà*)

#### 18.1.1.1 With clause-mate subject as antecedent

When a non-subject NP has a possessor that is coindexed with the **clausemate subject** (whether the latter is pronominal or nonpronominal), the possessor is expressed by **reflexive possessor** morpheme *mà*, following the possessed noun, which has its normal tones. This reflexive is **transpersonal**, i.e. it does not agree with the antecedent in pronominal category (person or number). A variant *nà* is attested, with *n* by dissimilation to an *m* in the preceding word (608g).

(608) a. *m̀* *[ìrⁿú* *mà]* *tɛ́w-wɔ̀sì*
1SgSbj [child **ReflPoss**] hit-Pfv1b
'I hit-Past my child.'

b. *[èsé* *dé]* *ú* *[ìrⁿú* *mà]* *tɛ́w-sà* *mà*
[what? Dat] 2SgSbj [child **ReflPoss**] hit-Pfv2 Q
'Why did you-Sg hit your-Sg child?'

c. *ɛ̌yⁿ* *[[ùró* *mà]* *kù]* *lú-wòrè*
mouse [[hole **ReflPoss**] in] enter-Pfv1a
'The mouse$_x$ went (back) into its$_x$ burrow.'

d. *sáydù* *[ìrⁿú* *mà]* *wɔ̌ː-sì*
Seydou [child **ReflPoss**] see-Pfv1b
'Seydou$_x$ saw his$_x$ child.'

e. *[sáydù* *[á:mádù* *lɛ̌y]]* *[ǐ-m* *mà]* *wɔ̌ː-sì*
[Seydou [Amadou and]] [child-Pl **ReflPoss**] see-Pfv1b
'Seydou$_x$ and Amadou$_y$ saw their$_{xy}$ (own) chidren.' (*ì-mú*)

f. *m̀* *sáydù* *gǎŋ-wɔ̀sì*
1SgSbj Seydou prevent-Pfv1b
*[wɔ́* *[ì-r$^{n}$ú* *mà]* *wɔ́-rěŋ]*
[3SgSbj [child-Sg **ReflPoss**] see-VblN]
'I prevented Seydou$_x$ from (him$_x$) seeing his$_x$ child.'

g. *[ì-m-í:* *nà]* *pású-wɔ̀sì*
[child-Pl-Dimin **ReflPoss**] leave-Pfv1b
'They (=animals) abandoned their offspring.' (2004-1a.06)

See also examples (8b), (228a), (443b), (501c), (502), (508b), (538), (547), (578c), and (595e).

The other Dogon language known to have a transpersonal reflexive pronoun specifically in possessor function is Togo Kan, where the form is *má*. The Toro Tegu and Togo Kan morphemes need to be considered diachronically as part of a larger potential cognate set involving general possessor morphemes (e.g. Jamsay *mà*) and specifically 1Sg possessor forms. Togo Kan also has a more general transpersonal reflexive pronoun *sǎ$^{n}$*, for example in object function. The two compete in possessor function. Tomo Kan has a transpersonal reflexive *hà* (dialectally *sà*) in all of these functions.

Reflexive possessor *mà* directly follows the head noun of the possessed NP, and may itself be followed by modifiers, such as 'all' (609a), or an adjective and a numeral (609b).

(609) a. *[nù-mù* *ŋí]* *[bɛ̌l* *mà* *yà:fú:]*
[person-Pl DemPl] [sheep **ReflPoss** all]
*màr-kú-wɔ̀sì*
be.lost-Caus-Pfv1b
'These people lost all of their sheep.'

b. *m̀* *[bɛ̌l* *mà* *šɛ́w* *lěy]* *màr-kú-wɔ̀sì*
1SgSbj [sheep **ReflPoss** big two] be.lost-Caus- Pfv1b
'I lost my two big sheep.'

Reflexive possessor *mà* may be followed by plural *mǎ:* (610).

(610) *m̀* *[bɛ̌l* *mà* *mǎ:]* *màr-kú-wɔ̀sì*
1SgSbj [sheep **ReflPoss** **Pl**] be.lost-Caus-Pfv1b
'I lost my sheep-Pl.'

Although reflexive possessor *mà* is routinely used with 2Sg and 2Pl (among other) subjects in main clauses, it is not used in corresponding **imperatives**. We

therefore have *mà* instead of a pronominal possessor in (611a), but just a pronominal possessor in (611b). In other words, the covert 2Sg or 2Pl subject often assumed to be latently present in e.g. English imperatives (*help yourself!* is treated as nonexistent for this purpose in TT. A prohibitive example of the same type is (611c).

(611) a. *ú* *[ì-r$^{n}$ú* *mà]* *bárú-sà* *mà*
2SgSbj [child-Sg **ReflPoss**] help-Pfv2 Q
'Did you-Sg help your child?'

b. *[ú* *$^{HL}$í-r$^{n}$ù]* *bárá*
[**2SgPoss** $^{HL}$child-Sg] help.Imprt
'Help your-Sg child!'

c. *[ú* *$^{HL}$í-r$^{n}$ù]* *tɛ̀w-kú*
[**2SgPoss** $^{HL}$child-Sg] hit-Proh
'Don't-2Sg hit your child!'

Likewise, the usual reflexive object form *kú mà*, which contains reflexive possessor *mà*, is replaced by the corresponding pronominally possessed form of *kú* 'head' in imperatives (612). In (612b), /kû/ with {HL} overlay is realized as *kú* plus downstep on the following H-toned verb.

(612) a. *[yé* *dè]* *ú* *[kú* *mà]* *tɛ́w-sà* *mà*
[what? for] 2SgSbj [**head** **ReflPoss**] hit-Pfv2 Q
'Why did you-Sg hit yourself?'

b. *[ú* *$^{HL}$kú]* *ˡtɛ́wá*
[**2SgPoss** $^{HL}$head] hit.Imprt
'Hit yourself!' (lit. "hit [your head]")

However, hortatives are another matter. Since the 1Pl subject is separately expressed (clause-initially), it counts as a real subject and requires reflexive possessor *mà*. Indicative clauses like (613a) are therefore parallel to hortatives like (613b), only the form of the verb being changed.

(613) a. *í* *[ǐ-m* *mà]* *bárú-sà*
1PlSbj [child-Pl **ReflPoss**] help-Pfv2
'We helped our children.'

b. *í* *[ǐ-m* *mà]* *bàr-é*
1PlSbj [child-Pl **ReflPoss**] help-Hort
'Let's-2Sg help our children!'

Togo Kan and Tomo Kan likewise avoid transpersonal reflexives in imperatives, but do have them in hortatives and indicatives. The remaining Dogon languages lack transpersonal reflexives (or, in the case of Jamsay, have a nominal rather than pronominal transpersonal reflexive object form), so the issue does not arise.

#### 18.1.1.2 With another antecedent

Reflexive possessor *mà* is occasionally used when the antecedent is in a higher clause. This is especially the case when there is no other intervening third person NP (as clause-mate subject) that could be (mis-)interpreted as the antecedent. So (614a) with the general reflexive (and logophoric) pronoun *àsí* as possessor, and (614b) with reflexive possessor *mà*, are synonymous. In (614c), the clause-mate NP (Amadou), not the more distant higher NP (Seydou), is interpreted as the antecedent of *mà*. Therefore (614d) with *àsí* is used in the long-distance antecedent sense.

(614) a. *sáydù* *ŋ̀* *gǎŋ-wɔ̀sì*
Seydou 1SgObj prevent-Pfv1b
*[[àsí* *HL**í-r$^{n}$ù]* *wɔ́-rěŋ]*
[[**ReflPoss** HLchild-Sg] see-VblN]
'Seydou$_x$ prevented me from seeing his$_x$ child.'

b. *sáydù* *ŋ̀* *gǎŋ-wɔ̀sì* *[[ì-r$^{n}$ú* *mà]* *wɔ́-rěŋ]*
Seydou 1SgObj prevent- Pfv1b [[child-Sg **ReflPoss**] see-VblN]
'Seydou$_x$ prevented me from seeing his$_x$ child.'

c. *sáydù* *á:mádù* *gǎŋ-wɔ̀sì* *[[ì-r$^{n}$ú* *mà]* *wɔ́-rěŋ]*
S A prevent- Pfv1b [[child-Sg **ReflPoss**] see-VblN]
'Seydou prevented Amadou$_x$ from seeing his$_x$ child.'

d. *sáydù* *á:mádù* *gǎŋ-wɔ̀sì* *[[àsí* *HL**í-r$^{n}$ù]* *wɔ́-rěŋ]*
S A prevent- Pfv1b [[**ReflPoss** HLchild-Sg] see-VblN]
'Seydou$_x$ prevented Amadou from seeing his$_x$ child.'

A **topicalized NP** may be followed by a clause beginning with a subject NP containing reflexive possessor *mà* coindexed with the topic (615).

(615) *[kúyⁿɔ́* *ᴸàyⁿà* *kày]*
[genital.disease ᴸmedication Top]
*[lúgúró* *mà]* *dùm-nɔ́-∅*
[count(n) **ReflPoss**] finish-IpfvNeg-3SgSbj
'As for the (medicines for) genital disease, they are innumerable ("their number does not end").' (2004-2a.07)

### 18.1.2 Reflexive non-subject arguments with *kú* 'head'

'I hit myself' is expressed as a transitive sentence with possessed 'head' as the object: 'I hit [my head]' (616). The possessor of 'head' in this construction is coindexed with the clause-mate subject, so this possessor appears in reflexive possessor form. The result is *kú mà*, an invariant form used with plural as well as singular antecedent.

(616) a. *ŋ̀* *[kú* *mà]* *tɛ́w-wɔ̀sì*
1SgSbj [**head** **ReflPoss**] hit-Pfv1b
'I hit-Past myself.'

b. *í* *[kú* *mà]* *tɛ́w-wɔ̀sì*
1PlSbj [**head** **ReflPoss**] hit-Pfv1b
'We hit-Past ourselves.'

c. *[kú* *mà]* *sǐ:]* *gàsí* *bɛ̀-n-ɛ̀*
[**head** **ReflPoss**] Instr] dig be.able-IpfvNeg-3PlSbj
'They (lizards) cannot dig by themselves (=on their own).' (2004-1a.10)

### 18.1.3 Non-reflexive emphatics with *tùr-í→* 'alone, singly'

*tùr-í→* , a variant of *túrú* 'one' (§4.7.1), optionally accompanied by intensifier *lók!*, can be used with a pronoun or other NP to express e.g. 'myself' in the non-reflexive emphatic sense (i.e. 'by myself, without help').

(617) *[ǹ* *tùr-í→* *lók!]* *lɔ̀gú* *tɔ́-sɔ̀*
[1SgSbj **one.single** **alone**] banco stomp. on-Pfv2
'I stomped on the banco by myself (=without help).'

For falling-toned $^{HL}$*túr-ì→* after an NP, see (589b) in §17.4.4 and comments in §4.7.1.1.

### 18.1.4 Non-reflexive emphatics with *húlè*

Another type of emphatic involves a noun-like form *húlè*. Perhaps its tone pattern was originally the {HL} overlay for possessed nouns, but *húlè* does not drop tones after a nonpronominal NP. It is followed by topic particle *kày* (§19.1.1) or by *mánì* 'also, too, even' (§19.1.3).

(618) a. *[ŋ̀ húlè kày] bò-nò*
[1SgPoss **self** Top] go.to-IpfvNeg
'Myself, I'm not going.'

b. *[sáydù húlè mánì] bò-nò*
[Seydou **self** too] go.to-IpfvNeg
'Seydou himself is not going.'

## 18.2 Logophoric pronouns and related forms

### 18.2.1 True logophoric function (*àsí*)

*àsí* is the basic logophoric pronoun. That is, in reported speech, *àsí* replaces a 1Sg pronoun in the original utterance, when this pronoun denotes the (original) speaker. The plural form *àsí mă:* is likewise used to replace an original 1Pl pronoun. Logophorics are used chiefly when the reported speaker is a third person (not the current speaker or addressee).

(619) a. *sáydù ká [àsí lɛ́ lì-rí]*
Seydou say [**LogoSbj** meal eat-PfvNeg]
'Seydou$_x$ said that he$_x$ hasn't eaten.'

b. *sáydù ká [ú ká àsí tɛ́w-wɔ̀sì]*
Seydou say [2SgSbj saying **LogoObj** hit-Pfv1b]
'Seydou said that you-Sg hit him.'

c. *sáydù* *ká*
Seydou say
*[ú* *ká* *[àsí* *dé]* *kɛ̀rú* *òw-rí]*
[2SgSbj saying [**Logo** Dat] money give-PfvNeg]
'Seydou said that you-Sg didn't give the money to him.'

The fact that *àsí* is pluralized by *mă:* suggests that it has a noun-like rather than pronoun-like syntactic status (regular pronouns have monosyllabic suppletive plurals). Another NP-like feature is the preverbal position of *àsí* as direct object in quoted imperatives, see (350) in §10.4.6. Etymologically, it might be that *àsí* is a composite of logophoric *a (found as such in some Dogon languages) and an element *sí that might be related to the rather grammaticalized *sí* '(someone's) possession' (§11.5.2), and/or to self-benefactive *símà* (§18.5).

Logophoric pronouns are not absolutely restricted to third person antecedents. In (620), the quoted speaker/thinker is in the form of a generic second person (as in: *if you can't beat 'em, join 'em*), but it is co-indexed with a logophoric. The original thought, in hortative form, might have been "hey, let me catch it!"

(620) *[ú* *yèrú-wòrè]*
[2SgSbj come-Pfv1a]
*[ú* *ká* *[àsí* *kɔ́* *áw-é]]*
[2SgSbj say [**LogoSbj** NonhSgObj grab-Hort]
'(suppose) you have come, and say (think) you'll try to catch it.'

A logophoric may be a **possessor**. In this case, the possessed noun takes the {HL} tone overlay, as with other pronominal possessors (and plural NP possessors with *mă:*).

(621) a. *sáydù* *ká* *[àsí* $^{HL}$*bɛ́lù]* *m$^{b}$àrú-wɔ̀rè*
Seydou say [**LogoPoss** $^{HL}$sheep] be.lost-Pfv1a
'Seydou said that his sheep-Sg was lost.'

b. *ká* *[àsí* *mă:]* $^{HL}$*bɛ́lù]* *m$^{n}$àrú* *dà*
say [**Logo** **Pl**] $^{HL}$sheep] be.lost be
'They said that their sheep-Pl were lost.'

In a context like 'X said that [X slaughtered X's (own) sheep]', [X's own sheep] is expressed using reflexive possessor *mà* rather than another logophoric *àsí*.

(622) a. *gá-s-ǒ:* *[àsí* *[bɛ̀lú* *mà]* *cí-sà]*
say-Pfv2-3SgSbj [**LogoSbj** [goat **ReflPoss**] slaughter-Pfv2
'He$_x$ said that he$_x$ slaughtered his$_x$ (own) goat.'

b. *àsí* *símà* *[nàw$^n$á* *mà]* *kúw-é*
**LogoSbj** for.self [meat **ReflPoss**] devour-Hort
*[cìló* $^{L}$*dòsù]*
[shade $^{L}$under]
'(Hyena thought:) … and (let me) eat my meat like that in the shade.' (2004-1a.06)

Aside from examples like this in which a more local anaphoric trumps the logophoric, there are no syntactic barriers that prevent the use of logophorics. In particular, an intervening subject NP denoting a different referent does not block the use of a logophoric in a lower clause if it is coindexed with the quoted speaker (623).

(623) *sáydù* *ká* *[m̀* *ów* *mú:dù* *[[àsí* $^{HL}$*í-r$^n$ù]* *dɛ̀]]*
Seydou say [1Sg give money [[**LogoPoss** $^{HL}$child-Sg] Dat]]
'Seydou$_x$ told me to give the money to his$_x$ child.'

As might be expected, informants had difficulty (in direct elicitation) with logophoric usage in the lower syntactic depths of stacked reported quotations. However, a logophoric can certainly be used with either higher or lower reported speaker as antecedent, as long as there is only one logophoric in the clause. In (624a), I take *àsí* to refer back to the higher antecedent 'Seydou', since it is singular in form. In (624b), the plural logophoric unmistakably refers back to the lower antecedent 'children'. However, the informant who provided these foms preferred to avoid two referentially distinct overt logophorics in the same clause, which would inevitably cause processing difficulties. In (624a), one really should have a (plural) subject logophoric *àsí mă:* preceding the singular object logorphoric *àsí*, like the *àsí mă:* in (624b), but the speaker left it out.

(624) a. *sáydù* *ká* *[ì-mù*$^{L}$ *ŋí]* *ká* *àsí* *wɔ̌w-wàrà*
Seydou say [child-Pl$^{L}$ DemPl] say **LogoObj** kill-Ipfv
'Seydou$_x$ said that the children said they would kill him$_x$.'

b. *sáydù* *ká* *[ì-m-ì:*$^{L}$ *ŋí]* *ká*
Seydou say [child-Pl-Dimin$^{L}$ DemPl] say
*[àsí* *mă:]* *yèrì-kí* *dà*
[**Logo** **Pl**] come-Prog be
'Seydou said that the children$_x$ said they$_x$ will come.'

Nevertheless, double logophorics can be elicited. With its embedded imperative, (625) has two distinct logophorics, each one corresponding to a different level of quotation (and to a different antecedent). The first two occurrences of *ká* are genuine 'say verbs with subjects. The third occurrence (inside the bracket) is a pure quotative, here glossed 'saying' and disregarded in the free translation (which also uses masculine and feminine gender to clarify the references).

(625) *ká* *[wó* *ká* *[ká* *àsí* *àsí* *tɛ́wá]]*
say [3SgSbj say [saying **LogoSbj** **LogoObj** hit.Imprt]]
'He$_x$ said that she$_y$ told him$_x$ to hit her$_y$.'

### 18.2.2 Logophoric *àsí* not used in topic-indexing function

I did not observe *àsí* in cases like (626), where a preposed topical NP is coindexed with the subject of a following conditional antecedent or similar backgrounded (e.g. 'when …') clause. Instead, the regular 3Sg pronominal is used, as in the 'if he comes here' clause in (626).

(626) *búrâ:,* *ìní* *á* *yè-t-ɔ̌:* *má,*
Boura, here Ipfv come-Ipfv-3SgSbj if,
*[lɛ̀*$^{L}$ *cíní]* *á* *lí* *kàmbù-r-ɔ̌:*
[meal$^{L}$ DefPl] Ipfv eat do.completely-Ipfv-3SgSbj
'Boura, if he comes here, he eats all of the food.' (*kám\\káw$^{n}$á*)

Likewise, a nonsubject relative clause whose subject is coindexed with the subject of the higher clause is not marked by *àsí* (627).

(627) *lòsù-r$^{n}$ú* *[lɛ̀*$^{L}$ $^{HL}$*íwà* *ŋ]* *á* *lì-rà*
guest-Sg [meal$^{L}$ $^{HL}$want Rel] Ipfv eat.meal-Ipfv
'A guest eats (any) meal that he/she wants.'

## 18.3 Reciprocal

### 18.3.1 Simple reciprocals (*túnǒm-mà*)

The reciprocal morpheme is *túnǒm-mà*. It arguably ends in reflexive possessor *mà*, and the initial portion may be related to noun *túnú* 'comrade', but the form is not completely transparent and I transcribe it as one word.

The examples in (628) illustrate *túnǒm-mà* in various syntactic functions, in each case coindexed with the clause-mate subject.

(628) a. *[ǒw kù] í túnǒm-mà ká dàgú-sà*
[bush in] 1PlSbj **Recip** meet encounter-Pfv2
'We encountered each other in the bush (= outback).'

b. *[túnǒm-mà kù] tór-s-è=bé*
[**Recip** in] jump-Pfv2-3PlSbj=3PlSbj
'They jumped (or: fell) on each other.'

c. *dàgú dà nù-mú [túnǒm-mà dè] cèrú ów*
must be person-Pl [**Recip** Dat] money give.Imprt
'The people must give money to each other.'

d. *[nù-ŋ*$^{L}$ *kálá:] [túnǒm-mà* $^{HL}$*ílò]*
[person-Sg$^{L}$ each] [**Recip** $^{HL}$house]
*á ìsú bɛ̀-tà*
Ipfv lie.down can-Ipfv
'Each person goes to bed (=sleeps) in the other's house.'

In examples like (629), the antecedent is the clausemate direct object (with a verb like 'put'), and the reciprocal occurs in an adverbial adjunct.

(629) *[kàrà*$^{L}$ *ŋgí] í kɛ́ jìpú-wɔ̀sì*
[mat$^{L}$ DemPl] 1PlSbj NonhPlObj superimpose-Pfv1b
*[túnǒm-mà kù]*
[**Recip** in]
'These mats, we piled them one on top of the other.' (*jìpá*)

18.3.2 ‘Together’

Adverbial ‘together’ in English is often expressed by chaining *mɔ̀tɔ́* ‘be/do together’ (hence *mɔ̀tɔ́ mà*, variant *mɔ̀tɔ́=m̀*) with a regular VP. See §15.1.8 for examples and further details.

An adverb *níŋèy* ~ *níŋgèy* can also be used in the sense ‘(physically) together’. For its postpositional function with sense ‘beside X’ see §8.2.12, cf. also §6.3.3.3.

## 18.4 Restrictions on reflexives

18.4.1 No antecedent-reflexive relation between coordinands

In a conjunction, the left conjunct does not induce a reflexive possessor form in a coindexed possessor of the right conjunct. Therefore in (630), ‘his’ in ‘his father’ may or may not be coindexed with ‘Seydou’. The result is the same kind of ambiguity in TT as in the English counterpart.

(630)

| *sáydù* | *[wɔ̀* | HL*bá* | *lěy]* | *zɔ̌ŋ-gɔ̀r-è* |
|---|---|---|---|---|
| Seydou | [3SgPoss | HLfather | and] | squabble-Pfv1a-3PlSbj |

‘Seydou and his father squabbled.’

One would infer from this that ‘I and my father’ would appear as #*ǹ [m̀ bá lěy]*, beginning with two consecutive 1Sg pronominals that would probably blur into a single nasal phonetically. In fact, this is avoided by shifting the simple pronoun to **right conjunct** position (631).

(631) a.

| *[m̀* | HL*bá]* | *[ǹ* | *lěy]* |
|---|---|---|---|
| [1SgPoss | HLfather] | [1Sg | and] |

‘my father and I’

b.

| *[ú* | HL*áwⁿà]* | *[ú* | *lěy]* |
|---|---|---|---|
| [2SgPoss | HLaunt] | [2Sg | and] |

‘your-Sg aunt and you-Sg’

c.

| *[í* | HL*bá* | *mǎː]* | *[í* | *lěy]* |
|---|---|---|---|---|
| [1PlPoss | HLfather | Pl] | [1Pl | and] |

‘our fathers and we’

### 18.5 Self-benefactive *símà* 'for oneself'

This element is common in texts, but its sense is subtle and I often omit it in free translations. Since it does not correspond to anything in Jamsay or other Dogon languages known to me, I will delve into it here in some detail.

The form itself could be decomposed into *sí* 'thing, possession', as used in 'X is Y's possession' = 'X belongs to Y' predications (§11.5.2), plus reflexive possessor *mà*, i.e., '(one's) own (thing)'. My assistant made this connection in discussing the form. However, it is usually not possible to translate it in this fashion. Often the sense seems to be something like 'for oneself'. I will gloss it as 'for.self' in interlinears.

*símà* does occur in some passages where acquisition or possession are part of the context (632). However, a gloss 'for oneself' would work here as in other cases, and *símà* co-occurs with (rather than replacing) a possessed NP; in (632a) and (632b) the possessed noun (with reflexive possessor *mà*) follows *símà*.

(632) a. *[níŋ kày] èsà-àrá símà*
[now Top] chicken-male **for.self**
*[yⁿà-rⁿú mà] bɛ̌ː-sì*
[woman-Sg ReflPoss] get-Pfv1b
'Now Rooster got his wife (after a difficult courtship).' (2004-1b.01)

b. *[jèré mà] símà [tórú dá gà]*
[hold and.SS] **for.self** [jump be while]
*[á yày-rà=kɔ́]*
[Ipfv go-Ipfv=NonhSgSbj
'It (=female grasshopper) holds (male grasshopper) and it goes hopping around.' (2004-1b.03)

c. *má [àsí èlá mà]*
and [LogoSbj look and.SS]
*[àsí símà [èrⁿá mà] tɛ́w sí-tó mà],*
[LogoSbj **for.self** [goat ReflPoss] hit go.down-Caus and.SS],
*àsí símà [nàwⁿá mà] kúw-é [cìló ᴸdòsù]*
LogoSbj **for.self** [meat ReflPoss] devour-Hort [shade ᴸunder]
'(Hyena to himself: … I will look (for a good spot), and knock down (=kill) my goat, and eat my meat like that in the shade.' (2004-1a.06)

In several passages, *símà* co-occurs with a topic switch, and I have been tempted to consider topic-switching as one of its functions. However, in the

passages in question, the 'for oneself' reading is also possible (and therefore preferable), since the actions involve eating food, keeping something, escaping from a predator, or some other action beneficial to the agent. In addition to (633a-c), see (664) in Text 1.

(633) a. *[tùŋ*$^{L}$ *kà:* *kɔ́* *bìrǐy* *yé-tĕŋ* *cɛ́là]*
[time$^{L}$ Rel NonhSgSbj go.back come-VblN time]
*[bèl-à:rá* *símà]* *yǎy-wɔ̀rè*
[goat-male **for.self**] go-Pfv1a
'Before he (=hyena) came back, (the) ram itself went (and escaped).' (2004-1a.07)

b. *[ŋ̀kǎy*$^{n}$ *kár*$^{n}$*á=m̀]* *[ŋ̀gí* *kày]* *símà*
[thus do=and.SS] [DemPl Top] **for.self**
*sáy-s-è=bɛ́*
scatter-Pfv2-3PlSbj=3PlSbj
'In that way (=doing thus), as for those (animals), they scattered (and escaped).' (2004-1a.05)

c. *[[kɔ̀* $^{HL}$*y*$^{n}$*á-rù]* *símà* *[pùró* *kù]* *lí-sà]*
[[NonhSgPoss $^{HL}$woman-Sg] **for.self** [inside in] eat-Pfv2]
*[kó* *nà]* *kúwó=m̀*
[NonhSg now] devour=and.SS
*[símà* *ìlì-ká* *á* *gù-rò]*
[**for.self** outside Ipfv exit-Ipfv]
'Its (=Hyena's) wife herself ate in the burrow. She ate and was going outside.' (2004.1a.07) [introduction of new discourse referent at end of tale about Hyena]

Further textual examples supporting the 'for oneself' reading of *símà* are in (634). The hatching of eggs in (634d) is reminiscent of the 'escape' context of some earlier examples.

(634) a. *[ŋ̀gú* *gòlú* *ŋ́]* *èn-n-é=cɛ́,*
[DemSg bitter Rel] look-IpfvNeg-3PlSbj=NonhPlSbj,
*[ŋ̀gú* *gòlú* *sàrá* *ŋ́]* *èn-n-é=cɛ́,*
[DemSg bitter not.be Rel] look-IpfvNeg-3PlSbj=NonhPlSbj,
*kĕwlà:fú:* *á* *lì-r-è=cɛ́* *símà*
everything Ipfv eat-Ipfv-3PlSbj=NonhPlSbj **for.self**
'They (=tree locusts) don't consider ("look") whether it's bitter-tasting, they don't consider whether it isn't bitter, they eat everything.' (2004-1b.02) (*èlá* 'look')

b. *[pàŋá kù] kɔ́ lú-wòrè má nà,*
[granary in] NonhSgSbj enter-Pfv1a if now,
*nùm-nó=kɔ́ símà [[yù mày$^{n}$]$^{L}$ kúnú]*
die-IpfvNeg=NonhSgSbj **for.self** [[millet dry]$^{L}$ DefSg]
*símà â: lí-rà=kɔ́,*
**for.self** Ipfv eat-Ipfv=NonhSgSbj,
*á wày-rà=kɔ́*
Ipfv remain-Ipfv=NonhSgSbj
'If now it (= grasshopper) has gone into the granary, it doesn't die. It eats that dry millet (in granaries), it remains.' (2004-1b.03)

c. *[… jéy$^{n}$-cìrì jéy$^{n}$-jéy$^{n}$-cìrì] símà [níŋ kày]*
[(sound of drums)] **for.self** [now Top]
*[cɛ̀ná mà] cɛ́k!*
[fun ReflPoss] only
*á cɛ̀n-n-è=cɛ́*
Ipfv have.fun-IpfvNeg-3PlSbj=NonhPlSbj
'… *jeykiri jeyjeykiri* [sound of drums]. Now they (= birds) were just having their fun (= dancing).' (2004-1b.01)

d. *pɛ́$^{n}$-w$^{n}$ɔ̀r$^{n}$è má,*
be.ripe-Pfv1a if,
*[yá símà [tɔ́lɔ́ mà] gú-yàrà=kɔ́]*
[there **for.self** [hatch and.SS] exit-Fut=NonhSgSbj
'… when they (= pythons) are ready to hatch, they will hatch there and go out.' (2004-1a.10)

In (635), *símà* occurs in contexts where the speaker is summing up a description of general nature (appearance and behavior) of an insect, reptile, or similar creature. Here it would be difficult to construe *símà* as meaning 'for oneself', so I gloss in this context as 'by.nature'.

(635) a. *dɔ̀ymú dà=kɔ́ sánní*
be.fast be=NonhSgSbj very
*kò símà ŋ̀kǎy$^{n}$ dá=kɔ́*
NonhSg **by.nature** thus be=NonhSgSbj
'… (and) it (= reptile) is very fast. It's like that (as described above, by nature).' (2004-1a.10)

b. *[èsù*[L] *ŋ̀gú]* *mɔ̀sú,* *[kó* *símà* *yá]*
[thing[L] DemSg] nasty, [NonhSg **by.nature** there]
'(to conclude:) this thing (= snake) is nasty (= dangerous), it (by nature) is there (=what I've said).' (2004-1a.10)

# 19 Grammatical pragmatics

## 19.1 Topic

### 19.1.1 Topic (*kày*, *kà*)

This is a general topicalizing particle ('as for X, …'). It is especially common after (independent) personal pronouns and after demonstrative pronouns, but it also occurs after nonpronominal NPs and adverbials. The full form is *kày*, sometimes reduced to *kà* especially after personal pronouns. In most cases, a topicalized constituent with *kày* is presentential and is set off with a pause or other prosodic marking. The adverb 'now' is more often *[níŋ kày]* than simple *nîŋ*.

Pronominal combinations include 3Sg *wó kày*, 3Pl *bé kày*, nonhuman singular *kó kày*, nonhuman plural *ké kày*, 2Sg *ú kày*, and 1Sg *mí kày*.

(636) *[mí kà] [ù dé] bírá bì-ná*
[1Sg Top] [2Sg Dat] work(n) work(v)-IpfvNeg
'As for me, I don't do work for you-Sg.'

Less often, *kày* occurs at the end of a clause. This construction may be glossed 'as for (the case that) …', and occurs in discourse contexts of the type 'if A, then B; if however C (=as for the case that C), then D'.

(637) a. *wó ìní yèrú-wòrè kày, jèrⁿú-jèrⁿú lí-yàrà-wɔ́*
3Sg here come-Pfv1a Topic, good-good eat-Fut-3SgSbj
'(As for) if she comes here, she will eat well.'

b. *gà: nîŋ, àrkírí kɔ́ sà-rá,*
but now, hunger NonhSgSbj have-Neg,
*àrkírí kɔ́ sá má kày,*
hunger NonhSgSbj have if Topic,
*dógò àsí kŭw-wàrà nà*
only LogoObj devour-Fut now
'(Sheep said:) But now you (=hyena) are not hungry. When on the other hand you are hungry (at a later time), only then will you devour me.' (2004-1a.02)

### 19.1.2 ‘Now’ (*nà*)

A particle *nà* may be roughly glossed ‘now’, in the context of discourse-internal immediacy, rather than in the external temporal sense ‘at this moment’, which is expressed by *nîŋ* or more often by *níŋ kày*. The combination *níŋí nà* ‘now’ is also found but is less common than *níŋ kày*. Another common temporal expression is *yó nà*, which can mean ‘today’ or ‘again’.

This *nà* should be distinguished from *ná* ‘mother’, which has an L-toned form when preceded by a simple nominal possessor (*y$^{n}$à-r$^{n}$ú* $^{L}$*nà* ‘the woman’s mother’). It should also be distinguished from the occasional *nà* variant of reflexive possessor *mà*, which follows nominal direct objects (never pronouns) that include an *m*. There is also a verb *ná* ‘forget’.

*nà* is basically a **topicalizer**, and it cliticizes to a preceding constituent, usually a pronoun or other NP. It differs from the common topic morpheme *kày* only in that *nà* explicitly refers to a chronological sequence in the discourse, as one topic is brought to a close and a new one is opened. It is common in texts where, for example, two related topics are discussed in succession, with a well-defined break point where the second topic is introduced. This is the case in (638), uttered by a speaker playing the role of interviewer, asking the featured speaker to describe various reptile species, one at a time.

(638) *bon*, [*àw*$^{L}$ *jɛ́m nà]* *y$^{n}$àŋêy* *á* *kà-là* *mà*
well, [snake$^{L}$ black now] how Ipfv do-Ipfv Q
‘Well, (turning to) spitting cobra now, what is it like?’

Pronominal forms include 3Sg *wó nà*, 3Pl *bé nà*, nonhuman singular *kó nà*, nonhuman plural *ké nà*, 2Sg *ú nà*, and 1Sg *mí nà*. The 1Sg form in particular shows that independent pronouns must be used. These forms are tonally distinct from combinations of these pronominals, as possessors, with *ná* ‘mother’ (e.g. *wó* $^{HL}$*ná* ‘his/her mother’, note the high tone on $^{HL}$*ná*).

*kó nà*, with nonhuman singular pronoun in abstract function (i.e. not denoting a specific discourse referent), is common at the beginning of clauses. It may be glossed ‘then’, ‘at that point’, or ‘thereupon’, but it has no strong chronological sequencing element. Mainly it helps to frame a narrated event, and it is sometimes best left untranslated. There are two instances in (639), which also begins with the more vivid framing particle *zákà* ‘lo!’.

(639) *zákà ìndêy kà:yŭŋ tíw dĕn d-è,*
lo! over.there bee send Tr be-3PlSbj,
*[kó nà] [yày-cí d-è=cé]*
**[Nonh now]** [go-Prog be-3PlSbj=NonhPlSbj]
*túnŏm-mà ká dàgú-s-è=cé,*
each.other say encounter-Pfv2-3PlSbj=NonhPlSbj,
*[kó nà] kà:yŭŋ, tɛ́năm bɛ̀rú dĕw-sà*
**[Nonh now]** bee, hyena get begin-Pfv2
'Lo, over there they had sent the honey bees. **Then** they (=hyenas and honey bees) were going, they encountered each other. **Thereupon** the honey bees began to get (= attack) the hyenas.' (2004-1b.01) (*dèwrá*)

In (640), the topical pronoun with *nà* occurs at a strongly contrastive topic switch-point, though a chronological element is still present.

(640) *ká àsí < àsí—, > àsí césú kúw-é,*
say LogoSbj < LogoObj—, > LogoObj cut devour-Hort,
*[àsí nà] ká [[kó kày] kà-ná]*
[**Logo now**] say [[NonhSg Top] be.done-IpfvNeg
'(Monkey:) He (= Hyena) says (=intends) that he will cut up and eat me. I now (= on the contrary) say, as for that, it won't happen!' (2004-1a.05)

*nà* occasionally comes at the end of a clause. An example is (637b) in the preceding section ('… only then will you devour me'). In (641), *nà* follows *má* 'if/when'.

(641) *[[ní* $^{L}$*pùrò] kù] [kɔ̀ déŋ-*$^{HL}$*dìŋ],*
[[water $^{L}$inside] in] [NonhSgPoss place-$^{HL}$sit]
*ní dŭm-bɔ̀rè má nà,*
water finish-Pfv1a **if** **now**,
*[[ùró kù] ló mà] á húrà kà-là=kɔ́*
[[hole in] enter and.SS] Ipfv hibernation do-Ipfv=NonhSgSbj
'Its (= python's) dwelling is in the water. If now the water is finished (= dried up), it hibernates in a hole.' (2004-1a.10)

### 19.1.3 'Also, too, even' (*mánì* ~ *mà*, *mánĭ:ní*)

The particle *mánì* means 'also, too', pragmatically sliding into 'even' (but cf. *fây* 'even', next section below). *mánì* is grouped prosodically (i.e., cliticized to) some preceding constituent, such as a NP.

Pronominal combinations: 3Sg *wó mánì*, 3Pl *bé mánì*, nonhuman singular *kó mánì*, nonhuman plural *ké mánì*, 2Sg *ú mánì*, and 1Sg *mí mánì*. In these pronominal combinations, *mánì* may reduce to *mà*, hence *wó mà*, etc. This *mà* should not be confused with reflexive possessor *mà* (the latter can only follow a noun) or with verb-chain morpheme *mà* (which follows a verb stem).

The sense may be logically simple ('also, too'), focusing on one constituent, as in 'X went, and Y went too'. Here a prior proposition is extended, by expanding the referential range of one constituent (Y). This is usually a NP or adverbial, and since this constituent is necessarily topical, it is usually positioned at the beginning of the clause. However, *mánì* may also follow a predicate that adds more information about a discourse referent that has already been activated (642b).

(642) a. *[sày bólíkì]* *lí-sà, …*
[firefinch] eat-Pfv2, …
*kó* *[[sày*$^{L}$ *pírí]* *mánì]* *lí-sà*
Nonh [[bird$^{L}$ white] **also**] eat-Pfv2
'Firefinch ate … Then golden sparrow too ate.' (2004-1a.04)

b. *àrà*$^{L}$*-jèr*$^{n}$*ú* *sá=kó↑,* *bà:ní* *sá=kó↓,*
male$^{L}$-beauty have=NonhSgSbj, peace have=NonhSgSbj,
*gùrú=kó* *mánì*
long=NonhSgSbj **also**
'It (= python) is pretty, it's peaceful (= harmless to humans). It's also long.' (2004-1a.10)

*mánì* may also have sentence-wide scope, not focusing semantically on any one constituent, so that the free translation should begin with presentential 'furthermore, …', 'moreover, …', 'in addition, …', or 'likewise, …' It is difficult to detect this wide-scope sense, since *mánì* is prosodically cliticized to a constituent (usually a pronoun), so there is no surface-syntactic difference between cases of wide scope and cases with local constituent scope. In (643a), *[kó mánì]* could be rendered 'likewise', with nonhuman *kó* interpreted as nonreferential (or as resuming the entire proposition); alternatively, *kó* here could be taken as the indirect discourse version of an original second singular pronoun addressed to the (nonhuman) hyena, hence in the free translation 'You too, if you go …'. In (643b), though, the wide-scope 'furthermore' translation seems inescapable.

(643) a. … *àsí* *[[bɛ̀lù* *làgù]*$^{L}$ *cíní]* *bà-r$^{n}$á,*
… LogoObj [[sheep other]$^{L}$ DefPl] accept-IpfvNeg,
*kó* *mánì,* *[tɛ̀nàm*$^{L}$ *làgú]* *dɛ̀*
**NonhSg** **too**, [hyena$^{L}$ other] Dat
'(Sheep to hyena:) … the other sheep won't believe me. Likewise, if you (H) go (and say something incredible) to the other hyenas …' (2004-1a.2)

b. *záká* *[kɔ̀gùsù* *kúnú]* *jɛ̌n* *dà,* *ú* *á* *wɔ-rɔ↑,*
lo! [roughness DefSg] more be, 2SgSbj Ipfv see-Ipfv
*[kɔ̀* *$^{HL}$kɔ́rù* *kún]* *dîŋŋémá,* *kó* *mánì,*
[NonhSgPoss $^{HL}$spots DefSg] than, **NonhSg** **too**,
*[kɔ̀gùsù* *kúnú]* *á* *gà:-lù-tà=kɔ́* *wállà:↑*
[roughness DefSg] Ipfv big-Fact-Ipfv=NonhSgSbj *voilà!*
'You see (=notice) its (= snake's) roughness (coarse skin) more than its markings. Furthermore, its roughness increases (its size).' (2004-1a.10)

An extended form *mánǐ:ní* is also found in the texts. Aside from *mánì*, it may contain *ní* (§15.2.1.1) but its morphological composition is nontransparent. The wide-scope 'furthermore' sense is present in (644a). A narrow constituent-specific scope is probably present in (644b), which responds to the question 'Does it (= grasshopper species) eat millet or not?' (other species, including some millet pests, had been previously discussed).

(644) a. *kúrɔ́* *sà-rá=cɛ́,* *báná* *sá=cɛ́,*
hair have-Neg=NonhPlSbj, tail have=NonhPlSbj,
*kɛ̀* *kú* *mánǐ:ní,* *[[ǎw* *$^{L}$kù]* *$^{HL}$kây$^{n}$]* *dà* *dá*
NonhPlPoss head also, [[snake $^{L}$head] $^{HL}$like] Emph be
'They (= lizards) have no hair (fur). They have a tail. Their head, moreover, is like a snake's head.' (2004-1a.10)

b. *kó* *mánǐ:nì,* *yú* *â:* *céŋgúrú-tò*
NonhSg also, millet Ipfv gnaw-Ipfv
'It (=grasshopper) too, (it) eats millet.' (2004-1b.03)

### 19.1.4 'Even' (*fây*)

This particle precedes the foregrounded topical constituent.

(645) *[fây zèrí] bɛ̀w-rí-∅*
[**even** Eragrostis] sproud-PfvNeg-3SgSbj
'Not even the *Eragrostis* grass has sprouted.' (2004-2a.03)

For clause-initial *fây* in conditional antecedent clauses in the sense 'even if', see §16.3.

## 19.2 Presentential discourse markers

### 19.2.1 'Well, …' (*háyà*)

*háyà* (also pronounced *hàyà* and *hà:*) is the common presentential 'well, …' morpheme, essentially a hesitation form, as in some other languages of the zone. French *bon* is also in the process of becoming common.

(646) *háyà, tɛ́nǎm ɛ̀r$^{n}$á á:=m̀ kúw-wòsì-∅*
well, hyena goat seize=and.SS devour-Pfv1b-3SgSbj
'Well, Hyena seized and devoured Goat.' (2004-1a.01) (/*áwá=m̀*/)

### 19.2.2 'But …' (*gà:*)

The usual 'but' discourse marker is *ga:*, which is heard variably with high or low pitch at the beginning of a clause. Perhaps one should take L-toned *gà:* as the lexical form, with the high-pitched variant reflecting a nonterminal intonation rise, but I hesitate on this point and I transcribe either *gà:* or *gá:* depending on how I hear the pitch in a particular instance.

'X but Y' with two propositions means that X and Y are mildly discordant in some fashion, as in 'I did smoke marijuana once, but I didn't inhale' (with apologies to Bill Clinton!). (647) is in answer to the question whether people eat a particular grasshopper species. The point of the *gá:* clause is that although this species is not edible, it does have other uses.

(647) *kɔ́ kùw-n-é, gá: [ày$^{n}$á níŋèy kày]*
NonhSgObj devour-IpfvNeg-3PlSbj, **but** [medicine with Top]
*kɔ́ â: dɔ́ mɔ́tú-r-è*
NonhObj Ipfv burn do.together-Ipfv-3PlSbj
'They don't eat them. But they (=sorcerors) do put them together and roast them with a potion.' (2004-1b.03)

### 19.2.3 'So, …' (*kàmá-ní*)

The particle (or particle complex) *kàmà-ní* is used like English preclausal discourse marker *so,* ... or French *donc*, … (i.e. with or without some causal connection). It may contain *ní* (§15.2.1.1).

(648) *[yó kày] [tègù*$^{L}$ *mútú kálá: →] y*$^{n}$*á-ŋgó,*
[today Top] [talk(n)$^{L}$ much any] not.exist,
*kàmá-ní àsí kó áw kúwó*
**so** Logo NonhSgObj catch eat.Imprt
'(Hyena to goat:) 'today (=this time), there is not (= there won't be) any great deal of talk; so, I must just catch and eat you.' (2004-1a-01)

### 19.2.4 'Lo, …' (*zákà*)

As a preclausal particle, *zákà* marks striking or surprising events in a narrative. I render it as 'Lo, …' in free translations. However, it may also be used to introduce a striking revelation, in which case English 'Now, …' might be better in a free translation. I will normalize as 'lo!' in interlinears because of the ambiguity of 'now'.

This preclausal *zákà* should be distinguished from the complex postposition *[[X* $^{HL}$*zákà] (kù)]* 'among X, in the midst of X' (§8.2.11).

(649) a. *[y*$^{n}$*à-r*$^{n}$*ú dè] á òw-r-ɔ̌:, zákà dǔm-bɔ̀rè*
[woman-Sg Dat] Impr give-Ipfv-3SgSbj], lo! finish-Pfv1a
'… (and) he would give it (= millet) to the woman. Lo, (one day) it (= millet in granary) was exhausted.' (2004-1a.04) (*dùw*$^{n}$*ɔ́*)

b. *zákà [jèrèŋgésì: kày]*
**lo!** [pigeon Top]
*fây [à-n*$^{L}$ *tùrí→] [wò dé]* $^{HL}$*césù*
even [man-Sg$^{L}$ one.single] [3Sg Dat] $^{HL}$strength
'Lo, as for Pigeon, even one (ordinary) man is stronger than he (is).' (2004-1a.03) (surprising revelation, since Pigeon had been thought to have a huge body)

### 19.2.5 *kɔ́ yɛ̀*, *kó nò*, *kó* 'then …'

*kɔ́ yɛ̀* contains a form of nonhuman third person pronoun *kó* (for the full set of pronominal forms see §4.3.1-4), cf. also prenominal definite demonstrative *kɔ̀*

(§4.4.2). The particle *yɛ̀* is not otherwise known to me in TT. *kɔ́ yɛ̀* functions in discourse to summarize the state of affairs existing up then, and is followed by new material. The most accurate gloss would be 'That being the case, …'. A freer gloss is 'At that point, …' or just 'Then …'.

*kó nò* is used similarly. The *nò* is a variant of the (not very referential) 'now' discourse marker *nà* §19.1.2.

Both *kɔ́ yɛ̀* and *kó nò* have the appearance of being single words phonologically. In particular, the vowels have either totally assimilated (*kó nò*) or show ATR harmony (*kɔ́ yɛ̀*).

The simple form *kó* may also be used in this function. I sometimes hear it as *kɔ́*.

Examples (all in Text 1): *kɔ́ yɛ̀* in (668), *kó nò* and simple *kó* in (671), and *kɔ́* in (672).

## 19.3 'Only' particles

### 19.3.1 'Only (*cɛ́k*)

An interjection *cɛ́k*! (variant *cɛ́kù*) is very common in texts. It can be glossed, in various contexts, as 'exactly, precisely' or as 'only'.

(650) *àr$^{n}$á* *mùrú-sɔ̀* *tégɛ̌y* *kɛ́k!*
rain rain.fall-Pfv2 a.little only
'It rained only a little.'

### 19.3.2 'Exclusively' (*má-dógò*, *dógò*)

A form *má-dógò* is fairly common in texts. It has a range of meanings in the general area of 'exclusively, strictly, invariably, necessarily'.

(651) *[kó kày]* *sɔ̀lɔ́* *má-dógò↑,*
[NonhSg Top] grass **exclusively**,
*[yú kày]* *ŋ̀* *wɔ̀-rí* *[kɔ́* *á* *lì-rà* *ŋ́]*
[millet Top] 1SgSbj see-PfvNeg [NonhSgSbj Ipfv eat-Ipfv Rel]
'As for that (grasshopper species), (it feeds on) grass exclusively. Regarding millet, I haven't observed that it (=grasshopper) feeds on it.' (2004-1b.03)

The initial element *má-* is usually present. However, *dógò* occurs by itself in (652) at the intersection of two clauses that denote causally linked eventualities. It seems to mean 'only then (will …)'.

(652) *gà:* *nîŋ,* *àrkírí* *kɔ́* *sà-rá,*
but now, hunger NonhSgSbj have-Neg,
*àrkírí* *kɔ́* *sá* *má* *kày,*
hunger NonhSgSbj have if Topic,
*dógò* *àsí* *kŭw-wàrà* *nà*
**only** LogoObj devour-Fut now
'(Sheep to Hyena:) "but now you are not hungry. (Later) if/when you are hungry, only then will you devour me."' (2004-1a.02)

### 19.3.3 'A mere …' (*lók!*)

*lók!* (variant *lókù!*) is another interjection-like intensifier. It is used after *tùr-í→* 'one (single)'. Its core meaning is 'precisely one', but in many contexts 'merely one' (or something stronger) is more idiomatic in translation, cf. English *he gave me one lousy dollar*.

## 19.4 Phrase-final emphatics

### 19.4.1 Phrase-final *já:tì*

The regionally ubiquitous form *já:tì* 'indeed, exactly' is used as a one-word confirmation of the truth of what the interlocutor has just said. It is also attested in the combination *[já:tí ní]* at the beginning of a clause, where it seems to take the truth of the proposition expressed by the clause in its scope.

(653) *[já:tì* *ní]* *àsí* *bɛ́* *dìrⁿú-wⁿɔ̀rⁿè*
[indeed just] Logo 3PlObj encounter-Pfv1a
'(He said:) "Indeed, now I have found you all."' (2004-1a.04)

### 19.4.2 Phrase-final *dá*

While *dá* is most familiar as the H-toned version of *dà* 'be' (§11.2.2.1), there are a few textual passages where *dá* seems to function as a phrasal emphatic (there are similar uses of *da* in Songhay languages).

(654) *[y$^{n}$à:ŋá-y$^{n}$à:ŋá dá] á yày-rà=kɔ́*
[night-night **Emph**] Ipfv go-Ipfv=NonhSgSbj
'It (= pilgrim locust) goes around at night.' (2004-1b.03)

### 19.4.3 Clause-final *kǒy* ~ *kòy*

This clause-final particle strongly asserts the truth of a proposition, or confirms a proposition made by an interlocutor.

(655) a. *[wɔ́ yè-nó déy] [àsí kày] sìgí-yàrà kǒy*
[3SgSbj come-IpfvNeg if] [Logo Top] go.down-Fut **Emph**
'(Man inside granary, to himself:) if (=seeing that) she isn't coming, as for me, I will definitely go down.' (2004-1a.04)

b. *[kó kày] mɔ̀sú kǒy*
[NonhSg Top] nasty **Emph**
'That one (= viper) is definitely nasty (=dangerous).'

*kǒy* with rising tone can be heard in careful speech. In texts it is often heard as *kòy* prepausally.

### 19.4.4 Clause-final *láy*

This emphatic particle (also found in Humburi Senni) is used with positive (656b) as well as negative clauses (656b). Negative contexts are more common, and the translation 'not at all' is often appropriate, but cf. *fɛ́y!* (§19.4.6). The particle is usually clause-final but occasionally precedes a negative verb (656c).

(656) a. *[níŋ kày] á sàtù-r-ɔ́: cɛ́k!,*
[now Top] Ipfv flee-Ipfv-3SgSbj only,
*ìgù-n-ɔ́: láy*
stand-IpfvNeg-3SgSbj **Emph**
'Now he was just fleeing, he wasn't stopping at all.' (2004-1a.09)

b. *[yú* $^{L}$*jèsù] jɛ̌n dà* $^{HL}$*mɔ́sù=kɔ́ láy,*
[millet $^{L}$on] be.more be $^{HL}$nasty=NonhSgSbj **Emph**,
*[kɔ̀ sɔ̀lɔ̀*$^{L}$ *péré]* $^{L}$*jèsù*
[DiscDef grass$^{L}$ free] $^{L}$on
'It (= harmful grasshopper) is definitely worse (=more harmful) on millet than on ordinary grass.' (2004-1b.03)

c. *[bùrú jérè nà],* *láy* *bè-n-é*
[year certain now], **Emph** get-IpfvNeg-3PlSbj
'Some years, they don't get (anything) at all.' (2004-2a.03)

### 19.4.5 Clause-final *dɛ́*

This particle is similar to *kòy* in its emphasis on the truth of a proposition. In (657), the particle is used in a forceful reply to a question.

(657) Q: *má* *sùŋù-ná:* *[tàrù*$^{L}$ *mútú]* *á* *sì-tù-rò* *mà→↑,*
and python [egg$^{L}$ many] Ipfv go.down-Caus-Ipfv Q,
*tèɡɛ̌y* *mà*
little Q
'Does a python lay lots of eggs? Or (just) a few?'

A: *sùŋù-ná:* *[tàrù*$^{L}$ *mútú]* *á* *sì-tù-rò* *dɛ́*
python [egg$^{L}$ many] Ipfv go.down-Caus-Ipfv **Emph**
'A python lays lots of eggs indeed!' (2004-1a.10)

However, *dɛ́* may also have an admonitive flavor, warning the addressee about a danger.

(658) a. *wó* *ségìlà* *kár$^{n}$á* *dɛ́*
3Sg readiness do.Ipfv **Emph**
'(She told him:) (you had better) get ready (for a fight)!' (2004-1b.01)

b. *á!* *ká* *[[ŋ̀kǎy$^{n}$* *má* *kày]* *ká,*
ah! say [[thus if] Top] say,
*[àsí* *mǎ:]* *dǔm-bàrà* *dɛ́*
[Logo Pl] be.finished-Fut **Emph**
'(They) said: ah, if it's (= if it keeps up) like that, we will be wiped out indeed!' (2004-1b.01) (*dùw$^{n}$ɔ́*)

### 19.4.6 Clause-final '(not) at all!' particle (*fɛ́y!*)

The usual clause-final emphatic '(not) at all!' particle is *fɛ́y!*.

(659) *lí* *kàmbù-rí-wɔ́* *fɛ́y!*
eat do.completely-PfvNeg-3SgSbj at.all
'He/She didn't eat (anything) at all.' (*kám\\káwⁿá*)

Several such particles are used in other languages in the area and they are easily borrowed back and forth.

See also *láy* (§19.4.4).

## 19.5 Greetings

The verb 'to greet' is *bèrŭ-m*. Some of the major greeting phrases are described below.

### 19.5.1 Time-of-day greetings

Some basic greetings related to times of day and night are in (660). Paired forms consist of a greeting and the standard response to it. Unless otherwise indicated the form is the same for singular and plural addressee.

| (660) | form | gloss | time |
|---|---|---|---|
| a. | *náwⁿá→* | 'good morning' | morning |
| | *ná: kɔ̀* | [response] | |
| b. | *ú bà:ní lá dà (mà)* | 'have you passed the night well?' | morning |
| | *bà:ní kɔ́ⁿ→* | [response] | |
| c. | *ú bà:ní dɛ̌n dà (mà)* | 'have you passed the day well?' | mid-day to dusk |
| | *bà:ní kɔ́ⁿ→* | [response] | |
| d. | *á pó: dɛ̌n dà (mà)* | 'good afternoon' (2+ people) | 2 PM to dusk |
| | *síyɛ̀→* | | |
| e. | *dɛ̀rmá* | 'good evening' | after sunset |
| | (*á dɛ̀rmá* if more than one addressee) | | |
| | *síyɛ̀→* | | |
| f. | *áy bà:ní ná-yⁿɛ́* | 'good night' | before retiring |

*bà:ní lá [í dé]*

The forms in (660a) are grammatically opaque. In (660b-d), we have 2Sg *ú*, *bà:ní* 'peace, well-being' borrowed from Songhay greetings, and a stative form of a time-of-day verb, either *lá* 'spend night' or *dèr$^{n}$á* 'spend mid-day'. The response *bà:ní kɔ́:$^{n}$* is not fully transparent, but by analogy to other Dogon, Fulfulde, and Songhay greetings it should mean 'peace only' (Jamsay *jàmí sǎy*, Humburi Senni *kàl bà:nì*, etc.).

The greeting in (660f) is a hortative, literally 'let us spend the night in peace' (verb *lá-*).

### 19.5.2 Nontemporal situation greetings

Greetings associated with situations other than times of day are in (661). The response to any of these greetings is either *bárá:jì* (as in Fulfulde) or *bárkà*.

| (661) | form | gloss | situation |
|---|---|---|---|
| a. | *pô→* | 'greetings!' | esp. to one in or coming from the fields |
| b. | *pó là* | 'greetings!' | to one at or coming from work |
| c. | *pó tàgà* | 'greetings!' | to one at or coming from a well |
| d. | *pó bìrì* | 'greetings!' | to one at or coming from a market |

### 19.5.3 Islamic greetings

The formal greeting to one or more men, as when entering a room or courtyard, preceding any other individualized greetings, is the inevitable *àsàlà:mú àlè:kûm* (Arabic for 'peace to you-Pl'). The response is *wà'álè:kûmmàsálâ:m* (Arabic 'and to you-Pl peace!').

Another Arabic expression is *àlbárkà* (compare *bárkà* as greeting response, §19.5.2 just above). The original sense is 'blessing', but it is used primarily in either of two contexts: a) a polite rejection of a price offered, while haggling; b) a 'thank you' expression on finishing a meal offered by one's host.

The invitational greeting ('welcome!' or 'come join us!') is *bìsìmíllà* (Arabic for 'in the name of God'). The response is *sá:ŋà*.

*àmí:nà* 'amen!' (variant *à:mí*) is a response to various formulae expressing best wishes (for a safe trip, etc.).

### 19.5.4 Condolences and holy days

When a death occurs, it is customary for friends and relatives to visit the family of the deceased to express condolences.

Informants indicated that there was no specialized formula for the greetings exchanged by the visitor and the surviving relatives in this context.

However, a visitor who is leaving after paying his or her respects is told: *dìsì-ná: [yó yây ŋ̀gú kây$^{n}$] w$^{n}$áŋ́ú-lá*, literally something like 'May God keep you far from this today's going' (i.e. from death).

*pò zôw* is the greeting to one returning from giving condolences.

On annual holy days (Feast of the Ram, and the holy day at the conclusion of Ramadan), and at marriages, it is customary to wish other villagers good health until the same time the following year. The expressions used in TT are from Songhay. *ká-yé:sí*, response *íbérì mà yé:sí*.

### 19.5.5 Other formulaic expressions

'Bon voyage' (i.e. 'have a safe trip') is *bà:ní yèrí* ('come back in peace') or *[yá mà] yèrí bà:ní* ('go and come back in peace'). Response is *àmí:nà* or *à:mí* 'amen!'.

# 20 Text

Each numbered segment contains TT transcriptions with the usual interlinear glosses, followed by a free translation and by an italicized set of references to relevant grammar sections. Material in the transcriptions enclosed by < … > consists of false starts or mispronounced words and is disregarded in the translations. The dash — means an interrupted (incomplete) phrase.

Text 1 below is a rather amusing tale about an inept tandem of crop thieves. The opening and closing formulae occur in all such tales. Throughout, listeners give backchannel feedback (uh-huh), not shown here (and not easily audible on the tape).

Other TT texts are presented in a separate document.

**Text 1**
**The blind and crippled thieves (tale)**
**(recording reference: 2004-1a.09)**

(662)
A: *á ènè ènè énè*
[story-proposing phrase]
B: *kùsì bèlè bèlè bélè*
[audience response agreeing to listen]

(663) A:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| *gùy$^{n}$-mú* | $^{HL}$*énè,* | *[jìrìm-nú∴* | *bòŋù-nú* | *lěy],* | | | |
| thief-Pl | $^{HL}$story, | [blind-Sg-& | cripple-Sg | and], | | | |
| *bé* | *kɔ̀* | *gùy$^{n}$-mú,* | *bé* | *[mɔ̀tɔ́* | *mà]* | *á* | *yày-rà,* |
| 3PlSbj | SFoc | thief-Pl, | 3PlSbj | [be.together | and.SS] | Ipfv | go-Ipfv, |
| *năy$^{n}$* | *túrú↑,* | *bé* | *bǎm-bɔ̀rè* | *má,* | | | |
| day | one, | 3PlSbj | go.around-Pfv1a | if, | | | |
| *á* | *bò-t-è=bé↑,* | *[[[nǔ-n* | *túrú]* | $^{HL}$*órù]* | *kù],* | | |
| Ipfv | go-Ipfv-3PlSbj=3PlSbj, | [[[man-Sg | one] | $^{HL}$field] | in] | | |

A story of (about) thieves. A blind man and a cripple, it's they [focus] who were thieves. They were going together. One day, when they were going around, they went into a man's field.

*[{HL} possessor-controlled overlay (twice) §6.2.1.1; NP coordination with lěy 'two' and ∴ dying-quail intonation on left conjunct as in Jamsay §7.1.1.1; subject focus kɔ̀ §13.1.1; verb-chain with mɔ̀tɔ́ 'be/do together' §15.1.8; irregular 'go' verbs §10.1.4.1; subordinator mà 'and', usually*

*same-subject §15.1.4; imperfective expressed by preverbal particle à plus {L}-toned verb with imperfective -rv̀- or allomorph §10.1.1.6, §11.1.1.1; clause-final conditional má 'if', here translated 'when' §16.1; túrú '1' does not tone-drop preceding noun §4.7.1.1; locative kù §8.2.3.]*

(664) *má* *[[wɔ̀* HL*órù]* L*yù]*
and.then [[3SgPoss HLfield] Lmillet]
*á* *tùgù-r-è=bɛ́,*
Ipfv break.off-Ipfv-3PlSbj=3PlSbj,
*má* *núwⁿɔ́* *bì-tó* *mà,* *[yù*L *cíní]* *yàwá* *mà,*
and.then fire ignite and.SS, [millet DefPl] roast and.SS,
*símà* *á* *tèmbù-r-è=bɛ́↑,*
for.self Ipfv munch-Ipfv-3PlSbj=3PlSbj
*jérè* *símà* *[jèré* *mà]* *[á* *yày-r-è=bɛ́],*
some for.self [hold and.SS] [Ipfv go-Ipfv-3PlSbj=3PlSbj],

Then they were breaking off (grain spikes of) the millet of (=in) his field. They lit a fire, they were roasting the millet (grain spikes) lightly (on the fire). They munched on (some of) it, some (=the rest) they held on to (as) they were going along.

[*clause-initial má 'and then' §15.2.1.4; this refers to a type of millet that ripens early and is consumed immediately after light roasting on a fire; self-benefactive símà 'for oneself', often untranslatable §18.5; tɛ́wⁿá 'munch'*]

(665) *jìrìm-nú* *kɔ̀—,* *< kɔ̀* *tùgú— >,*
blind-Sg SFoc—,
*kɔ̀* *tùg-ú* *á* *túgú* *zɛ̂:-t-ɔ̌:↑,*
SFoc break.off-VblN Ipfv break.off bring-Ipfv-3SgSbj,
*bòŋù-nú* *kɔ̀* *èl-ú* *á* *èl-là,*
cripple-Sg SFoc look-VblN Ipfv look-Ipfv
*kó* *[[órú* L*bà-m]* L*jèrè* *kà:* *[gó* *mà]*
it [[field Lowner-Pl] Lside Rel [exit and.SS]
*á* *yè-tò* *ŋ́],*
Ipfv come-Ipfv Rel],
*háyà* *[kó* *cɛ́k!]* *kɔ̀* *[bɛ̀* HL*bírà],*
well … [it exactly] SFoc [3PlPoss HLwork],
*[[bírá* *mà]* *táŋgú-r-é=m̀=bɛ́]*
[[work(n) ReflPoss] become-Tr-3PlSbj=and.SS=3PlSbj]
*[símà* *á* *bì-t-è=bɛ́],*
[for.self Ipfv work(v)-Ipfv-3PlSbj=3PlSbj],

It was the blind man [focus] who—, who was breaking off and bringing (millet). It was the cripple [focus] who was looking out, (in) the direction

that the owners of the field would come from. Well, exactly that [focus] was their work. They were performing their work, they were doing (it).

*[tùg-ú and èl-ú are verbal nouns, here used as cognate object nominals, i.e. 'break off (= do) the breaking off' and 'look (= do) the looking'; túgú zê:-t-ǎ: 'break off and bring', direct verb-verb-chain with suffixal inflection on second verb only §15.1; 'owner' compound §5.1.12; nonsubject relative §14.3; irregular verbs 'come' §10.1.4.3 and 'bring' §10.1.4.2; transpersonal reflexive possessor mà §18.1.1; optional 3Pl subject clitic after subordinator =m̀ §15.1.5]*

(666) *[órú* *ᴸbàsà]* *yèrú-wòrè* *ní→,*
[field ᴸowner] come-Ipfv1a if,
*[órú* *ᴸbàsà]* *yèrú-wòrè* *ní→,*
[field ᴸowner] come-Ipfv1a if,
*wǒ:-sì* *[á* *yà-rà]* *má,* *< xxx >,*
see-Pfv1b [Ipfv come-Ipfv] if,
*bòŋù-nú* *á* *gà-rà* *[jìrìm-nú* *dè]*
cripple-Sg Ipfv say-Ipfv [blind-Sg Dat]
*háyà* *[órú* *ᴸbàsà]* *yèrì-cí* *là,*
well [field ᴸowner] come-Prog be,
*[órú* *ᴸbàsà]* *yèrì-cí* *là,*
[field ᴸowner] come-Prog be,

If the owner of the field came, if he (= cripple) saw that he (= owner) was coming, the cripple would tell the blind man: hey, the owner of the field is coming! The owner of the field is coming!

*[ní 'if/when' §15.2.1.1; á yà-rà 'be coming' §10.1.4.3; progressive §10.1.3.2]*

(667) *háyà* *má* *móŋéy→,* *bǎ:ⁿ* *mà,*
well and.then slowly, go.around and.SS,
*[súrɔ́* *mà]* *á* *yày-r-è=bé,* *< jìrìm-nú—, >*
[crawl and.SS] Ipfv go-Ipfv-3PlSbj=3PlSbj,
*jìrìm-nú* *kɔ̀* *bòŋù-nú* *á* *dèmìyⁿ-tò,*
blind-Sg SFoc cripple-Sg Ipfv hold.up-Ipfv,
*má* *[[wò* *dé]* *ósú* *tótú* *dá* *gà]* *á* *yày-rà,*
and.then [[3Sg Dat] road show be while] Ipfv go-Ipfv,
*háyà* *[ŋ̀kǎyⁿ* *ŋ̀kǎyⁿ],*
well [thus thus]

(Then) slowly (=quietly) going around (=changing direction), they would go (away) crawling (=sneaking). It was the blind man [focus] who would hold up (=carry) the cripple (on his shoulder), then he (cripple)

would go showing the way to him (blind man). Well, it was (continuously) like that.

*[bă:$^{n}$ variant of bàw$^{n}$á 'go around'; dá gà §15.2.1.3]*

(668) *[nǎy$^{n}$ túrú] [bɛ́ wɔ́-rɛ̌ŋ cɛ́là]*
[day one] [3PlSbj see-VblN time]
*[úró $^{L}$bàsà] yɛ̌r dɔ̂:-rè,*
[field $^{L}$owner] come arrive-Pfv1a
*[bòŋù-nú á lìw-rà] [[mìrá mà] tégú-rɛ̌ŋ],*
[cripple-Sg Ipfv fear-Ipfv] [[voice ReflPoss] speak-VblN],
*[kɔ́ yɛ̀] [bòŋù-nú kày] súrú jèré=m̀ gú-wòrè,*
[then] [cripple-Sg Top] crawl keep=and.SS exit-Ipfv1a,
*jìrìm-nú á dà dìŋú dà dâm!,*
blind-Sg Exist be sit be unaware,

One day, before they saw (him), the owner of the field (had) approached. The cripple was afraid of speaking his voice (=out loud). So, as for the cripple, he kept crawling away. The blind man was (still) sitting there, blithely unaware.

*[-rɛ̌ŋ cɛ́là 'before' §15.2.3; dɔ́ 'arrive' really means 'reach the gate/outskirts', and sometimes (as here) is better translated as 'approach'; 'be afraid' with 'lest' complement tégú-rɛ̌ŋ §17.3.6; kɔ́ yɛ̀ 'then' §19.2.5; jèré=m̀ with preceding chained VP as durative adverbial clause §15.1.5; á dà 'be there' §11.2.2.1; stative dìŋú dà 'be sitting' §10.1.3.1]*

(669) *gɔ́:ŋà, ká bòŋù-nú bòŋù-nú,*
true, say cripple-Sg cripple-Sg,
*í!, yù$^{L}$-tìw$^{n}$á yàgá dà yèy,*
ah!, millet$^{L}$-tree where? be Q,
*wó súgúm zérì ní→,*
3Sg pick.off bring.Imprt just,
*à:! ká wɔ́ bɛ̀rɛ́ tùg-ú,*
ah! say 3SgSbj go.to.Pfv cut.off-VblN,

Yes. (Blind man) said: Cripple! Cripple! Hey! The millet tree (=stem), where is it? (Hey) you, pick it (=grain) off and bring it! (When there is no reply, Blind man to himself:) Ah, he (=cripple) has (=must have) gone to cut off (millet grain spikes).

*[gɔ́:ŋà 'truly' < Fulfulde, often pragmatically 'that's right!' as a response, here introducing a new text "paragraph"; uninflectable ká 'say' §11.3.1, §17.1.2; yàgá dà 'where is?'; yèy clause-final interrogative expressing anxiety §13.2.1; quoted vocative (jussive) with 3Sg wó functioning as reported vocative §17.1.3.1; ní→ 'just' §15.2.1.1;*

*perfective bèrɛ́ 'went to' §10.1.4.1; tùg-ú verbal noun in purposive function after motion verb §17.5.1]*

(670) B: < *xxx* >
A: *[á d-ɔ̌:] [dìŋú dà dâm!],*
[Exist be-3SgSbj] [sit be unaware]
*[órú* L*bàsà] [[nàŋà-sɔ̀rí: mà] túgɔ́ mà]*
[field Lowner] [[branch.whip ReflPoss] cut.off and.SS]
*á yà-rà,*
Ipfv come-Ipfv,

He (=blind man) was just sitting there, blithely unaware. The owner of the field cut off his (flexible) tree branch (as a whip) and was coming.

*[Listener B presumably asks for clarification (unintelligible on the tape); branches are commonly cut off and quickly stripped of their leaves to be used as light whips]*

(671) *[kó nò] wɔ́ èlá=m̀*
[then] 3SgSbj look=and.SS
*[[jìrìm-nú* L*tùŋɔ̀]* L*bèl-cɛ̀là] wɔ́ kúlú-sò ŋ́,*
[[blind-Sg Lback] Lmiddle] 3SgSbj put-Pfv2 Rel,
*kó jìrìm-nú mă:$^{n}$=m̀ úŋgúrú-sò dâl!,*
then blind-Sg toss=and.SS get.up-Pfv2 crunch!,
*ít-t-ɔ̌: [ŋ̀gú kày]*
recognize-Pfv2-3SgSbj [DemSg Top]
*[bòŋù-nú [[àsí* HL*léy-lò-n] kúnú kày] jìní],*
[cripple-Sg [[LogoSbj HLtwo-Ordinal-Sg] DefSg Top] not.be],

Then, when he looked and put (=struck) the stick in the middle of the blind man's back, the blind man jumped to his feet with a crunching sound. (Then) he (=blind man) realized that this one (next to him) was not his second (=his companion in crime) that he had brought (with him).

[*kó nò and later simple kó 'then' §19.2.5*; *recursive possession ('middle of blind man's back'); kúlú-sò ŋ́ headless nonsubject relative clause in temporal adverbial function §15.2.1.5 (another example is in the following text segment); àsí léy-lò-n 'his second (i.e. his companion) is in apposition to the preceding bòŋù-nú ; logophoric àsí is used since the passage is "quoted" from the protagonist's mental cogitations §18.2.1; tone overlay of léy-lò-n is {HL} due to the preceding pronominal possessor, and this overlay is unaffected by the following definite morpheme; jìní negative copula §11.2.1.2]*

(672) *wɔ́* *kúlú* *bǐ-t-tò* *ŋ́,*
3SgSbj put go.back-Caus-Pfv2 Rel,
*kɔ́* *[[[yù*$^{L}$ *ŋgí]* $^{HL}$*zâ:]* *kù]* *sɔ́:rà* *kár$^{n}$ú-s-ɔ̌:,*
then [[[millet$^{L}$ DemPl] $^{HL}$among] Loc] penetration do-Pfv2-3SgSbj,
*dâl!* *dâl!* *dâl!* *dâl!*
crunch! crunch! crunch! crunch!
*[wɔ́* *kày]* *ká* *[àsí* *w$^{n}$áŋú-lú-wɔ̀rè],*
[3Sg Top] say [LogoSbj far-Inchoative-Pfv1a]
*háyà* *má* *[yírò* *sì:]*
well and.then [whistling Instr]
*túnɔ̌m-mà* *á* *sò-t-è = bɛ́,*
Recip Ipfv shout-Ipfv-3PlSbj=3PlSbj,

When he (owner) put it (=struck him with it) again, he (blind man) penetrated (=went thrashing around) among those millet plants. Crunch! Crunch! Crunch! Crunch! [sound of stepping] As for him (blind man), he said (=figured) he had (now) gone a long way (so he was safe). Well, then they (=blind man and cripple) called out to each other (=communicated) by whistling.

*[causative bì-tó 'repeat, do again', see (254) in §9.2;* $^{HL}$*zâ: 'among' §8.2.11; sɔ́:rà kár$^{n}$ú exemplifies the use of kár$^{n}$ú 'do, make' as conjugatable auxiliary for uninflectable loanwords, here sɔ́:rà 'penetration (into dense brush, etc.)'; inchoative adjectival verb §9.4; instrumental sì: §8.1; reciprocal §18.3; sór$^{n}$ó 'call, summon']*

(673) *[yírò* *pé→t],* *kó* *[órú* $^{L}$*bàsà]* *ká* *[wò* *dɛ́]*
[whistling tweet!], then [field $^{L}$owner] say [3Sg Dat]
*[yírò* *pé→t],* *[á* *á* *dà],*
[whistling tweet!], [2PlSbj Exist be],
*[yírò* *pé→t]* *[túnɔ̌m-mà* *dàgú-s-è = bɛ́],*
[whistling tweet!], [Recip encounter-Pfv2-3PlSbj=3PlSbj],
*[órú* $^{L}$*bàsà]* *èlá = m̀* *[nàŋà-sɔ̀rí:* *sì:]*
[field $^{L}$owner] look=and.SS [branch.whip Instr]
*[[wɔ̀* $^{HL}$*túŋɔ̀]* *kù]* *kúlú-sò* *ŋ́,*
[[3SgPoss $^{HL}$back] in] put-Pfv2 Rel,
*kɔ́ddà* *sát-t-ɔ̌:,*
at.once slash.field-Pfv2-3SgSbj

Whistling: tweet! Then the owner of the field said to him, (I hear) whistling: tweet! (So) you-Pl are there! Whistling: tweet! They (=whistles) met each other. When the owner of the field looked and put it on his back with the whip, at once he (=blind man) ran away with long strides (leaving slash marks in the field).

*[kɔ́ddà 'at once', reduced from kɔ́ túr(ú) dà ; sátá 'make slashes in a field with a pick-hoe', as in planting seeds, here humorously referring to the footprints left by the blind man in his hasty flight]*

(674) *[níŋ kày] á sàtù-r-ɔ́: cɛ́k!,*
[now Top] Ipfv slash.field-Ipfv-3SgSbj only,
*ìgù-n-ɔ́: láy!,*
stop-IpfvNeg-3SgSbj indeed,
*kó [órú L̀bàsà] ká yírò pé→t páttì!,*
then [field L̀owner] say whistling tweet! phooey!
*jìrìm-nú ká [mú:rà: wɔ́ sísà-sísà]*
blind-Sg say [even.if 3SgSbj flute-flute]
*[àsí yè-nó kòy],*
[LogoSbj come-IpfvNeg Emph]

Now he (=blind man) was just running (leaving slash marks), he wasn't stopping at all. Then the owner of the field said: whistling, phooey! The blind man said (=thought): even if he (plays) the flute, I certainly won't come!

*[imperfective negative §10.1.2.3; clause-final emphatic particles láy! §19.4.4 and kòy §19.4.3; páttì is an emphatic negative interjection, used regionally]*

(675) *bǎm jèré=m̀*
go.around keep=and.SS
*[kɔ̀ HL̀péràʼ] túnǒm-mà wɔ̀-s-é=bɛ́,*
[NonhSgPoss HL̀behind] Recip see-Pfv2-3PlSbj=3PlSbj,
*wì: ká yállà yⁿàŋêy yèy,*
hey! say whether how? Q,
*yé ŋ̀ kárⁿú-sà yèy,*
what? 1SgSbj do-Pfv2 Q,

They kept going around. After that, they (=blind man and cripple) saw (=met) each other. (Blind man) said: (I'm wondering) how (could this be)? What have I done?

*[jèré=m̀ with preceding chained VP as durative adverbial clause §15.1.5; X HL̀péràʼ 'behind X, after X' §8.2.8; yállà 'whether' indicates wondering and uncertainty; interrogatives 'how?' §13.2.6 and 'what? §13.2.3; in 'what have I done?' the narrator quotes the blind man directly, rather than using a logophoric]*

(676) *[órú* *[L]bàsà]* *yèrí* *dɔ̂:-rè,*
[field [L]owner] come arrive-Pfv1a,
*àsí* *zɔ̌w* *bɛ̀-ná,*
LogoSbj run get-IpfvNeg,
*àsí* *[wò* *dé]* *tégú-wòsì* *má,*
LogoSbj [3Sg Dat] speak-Pfv1b if,
*[àsí* *mă:]* *wù-nɔ́,*
[Logo Pl] escape-IpfvNeg,
*[àsí* *kày]* *móŋɛ́y* *súrú* *gó = m̀*
[Logo Top] slowly crawl exit=and.SS
*[àsí* *kày]* *[àsí* *lɛ̀-lɛ́píy* *dà]*
[Logo Top] [LogoSbj lie.low be]
*[àsí* *zɔ̌w* *bɛ̀-ná* *sákù]* *[àsí* *lɛ̀-lɛ́píy* *dà]*
[LogoSbj run get-IpfvNeg could.not] [LogoSbj lie.low be]

(Cripple) said: the owner of the field had come (too) close. I could not run! If I spoke to you (=blind man), we would not get away! As for me, dragging myself along slowly (=quietly) to get out, I was lying low (e.g. hiding among the bushes), I could not run at all, instead I was lying low.

*[bèrá 'get' as chained 'can, be able to' §17.4.4; wùrɔ́ 'escape'; reduplicated stative lɛ̀-lɛ́píy dà §10.1.3.1; sákù emphatic 'cannot']*

(677) *[àsí* *wɔ̀-cí* *dà]* *[wɔ́* *á* *làpù-r-è* *ŋ́↑],*
[LogoSbj see-Prog be] [3SgObj Ipfv hit-Ipfv-3PlSbj Rel],
*[àsí* *wɔ̀-cí* *dà]* *[wɔ́* *á* *zɔ̀w-rɔ̀* *ŋ́↓],*
[LogoSbj see-Prog be] [3SgSbj Ipfv run-Ipfv Rel]
*háyà* *[àsí* *kày]*
well [Logo Top]

I could see that they were whipping you. I could see that you were running. Well, as for me…

*[two complements of 'see (that)' with relative ŋ́, the second one having a fronted 3Sg subject, §17.2.2.2; in both of these 'see' complements 3Sg wɔ́ is indirect discourse for original 'you', but it is the object in the first clause and the fronted subject in the second]*

(678) *ŋ̀kǎy$^{n}$* *kár$^{n}$á = m̀,* *ɛ́n-ná* *kár$^{n}$á = m̀* < *xxx* >
thus do=and.SS, whatchamacallit? do=and.SS
*[kú* *mà]* *bɛ̀-s-é = bɛ́,* *háyà* *ŋ̀kǎy$^{n}$,*
[head ReflPoss] get-Pfv2-3PlSbj=3PlSbj, well thus,
*[bé* *mà]* *[kɔ̀* *bírá]* *á* *bì-tà*
[3Pl too] [DiscDef work(n)] Ipfv work(v)-Ipfv

Doing thus, doing whatchamacallit, they escaped ("got their heads"). Well, in that way, they too did the work (=did what they did).

*[ɛ́n-ná 'whatchamacallit?' containing ɛ́sú 'thing'; mà 'too' §19.1.3; definite kɔ̀ with no tonal effect on the noun §4.4.2]*

(679) *á [énè [kɔ̀ HL bánà] lěy] kútè-kàtè-kútè*
ah! [tale [NonhSgPoss HL tail] and]
The story and its tail are finished.
*[standard tale-ending phrase; the initial á is superfluous; kútè-kàtè-kúte has no lexical sense]*

# Abbreviations and symbols

### Abbreviations

| | |
|---|---|
| Acc | accusative (in 1SgAcc), §6.7) |
| Adj | adjective |
| Adv | adverbial (especially derived from adjective) |
| AdvP | adverbial phrase |
| Agent | agentive nominal |
| Ant | anterior (subordinated clause) |
| ATR | advanced tongue root (vowel feature) |
| C | consonant (in e.g. CvCv) |
| Caus | causative, §9.2 |
| Char | characteristic (nominal derivative, §4.2.1) |
| Dat | dative, §8.3 |
| Def | definite, §4.4.3 |
| Dem | demonstrative |
| Det | determiner (demonstrative or definite) |
| DF | discourse-functional elements |
| Dimin | diminutive, §4.2.3 |
| DiscDef | (strong) discourse-definite, §4.4.2 |
| EA | expressive adverbial, §8.4.5 |
| Emph | emphatic (clause-final particle), §19.4 |
| Exist | existential particle, §11.1.1.1 |
| ExpPrf | experiential perfect, §10.1.1.4 |
| Fact | factitive (‘cause to become’ with adjective), §9.5 |
| Foc | focus |
| Fut | (delayed) future, §10.2.2.4 |
| H | high (tone) |
| Hort | hortative, §10.6.2 |
| Hum | human |
| Imprt | imperative |
| Inch | inchoative (‘become’ with adjective), §9.5 |
| Inst | instrumental, §8.1.2 |
| Ipfv | imperfective |
| Iter | iteration (full reduplication) |
| L | low (tone) |
| Loc | locative |

| | |
|---|---|
| Logo | logophoric |
| MP | mediopassive |
| N | noun |
| (n) | noun (in interlinearl glosses) |
| Neg | negative |
| Nom | nominalization |
| Nonh | nonhuman |
| NP | noun phrase |
| Num | numeral |
| Obj | object |
| Pf | perfect (in ExpPf) |
| Pfv | perfective |
| Pl | plural |
| Poss | possessor, possessive (*kè*), §6.2.3 |
| PP | postpositional phrase |
| Ppl | participle (in Ppl.Perf, in relative clauses) |
| Prog | progressive |
| Pron | pronoun |
| Prox | proximate |
| Proh | prohibitive |
| Purp | purposive |
| Q | question |
| QTop | interrogative topic (‘what about X?’), §19.1.4 |
| Quot | quotative particle, §17.1.3 |
| QuotS | quotative subject particle, §17.1.4 |
| Rdp | reduplication |
| Recip | reciprocal, §18.3 |
| Refl | reflexive, §18.1 |
| Rel | relative clause (verb participle) |
| Rev | reversive (verb derivation, §9.1 |
| Sbj | subject (in e.g. “2PlSbj”) |
| SFoc | subject-focus |
| Sg | singular |
| SS | same subject (subordinator), §15.2.1.3-4, §15.2.2.1-3 |
| Stat | stative, §10.4 (derived), §11.2-4 (lexical) |
| Top | topic |
| Tr | transitive, §9.3 (derivational suffix), §10.1.3.1 (*dĕn*) |
| TT | Toro Tegu |
| V | verb (in e.g. S-O-V) |
| (v) | verb (as part of a gloss) |
| v | vowel (in e.g. CvCv) |

| | |
|---|---|
| VblN | verbal noun |
| VP | verb phrase |

**Symbols**

| | |
|---|---|
| * | reconstructed |
| # | ungrammatical, unacceptable, unattested |
| á, à, â, ǎ, ã̌ | tones on vowels (or syllables), §3.7 |
| x̄, x̀, x́, x̂, $^{p}$x | tone changes on stem in compounds, Chapter 5 |
| <…> | a) contour tones on a single syllable, e.g. <HL> and <LH><br>b) false starts in texts (omitted from translations), e.g. (665) |
| /…/ | a) lexical tone melody, e.g. /LH/, /H/<br>b) underlying or lexical representation, e.g. /gàrá/ |
| {…} | a) tone overlay, e.g. {HL}, {H}, {L}<br>b) enclosing any set, e.g. {*u a i*} |
| […] | a) phonetic (IPA) representation, e.g. [bŭ:] |
| ˡ | downstep |
| […]$^{L}$ | {L} tone overlay controlled by an element to the right, §6.1.4 |
| […]$^{L+H}$ | like preceding but with extra H-tone on final syllable/mora |
| $^{HL}$[…], $^{H}$[…] | {H} or {HL} tone overlay controlled by a possessor to the left, §6.2.1 |
| $^{L}$[…] | {L} on demonstrative or numeral in certain combinations, §3.7.3.5, §4.6.1.4 |
| → | "intonational" prolongation of final vowel or sonorant, §3.8.3 |
| ∴ | dying-quail terminal intonation effect, §3.8.4 |
| = | clitic boundary, §3.6 |
| & | conjunction (in interlinears, e.g. X.& Y.& 'X and Y') |

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