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5 Nouns, Adjectives, Nominal Modifiers and Numerals

5.1 Nouns

The structure of a noun in the Liko language is: noun-class prefix - noun stem - noun-class enclitic. Noun classes are primarily distinguished on the basis of concord behaviour: a unique set of concords is interpreted as a separate noun class. A noun subclass is set up when the set of concords is identical, but the form of the noun-class prefix is different. A gender is a pairing of two noun classes, where one refers to a single instance and the other to multiple instances (plural or collective) of a given noun. Noun-class pairing rules (also referred to as 'pluralization rules') determine which noun classes combine.

A description of the noun classes is presented in 5.1.1. A particular feature of the noun-class system in Liko is the existence of noun-class enclitics in addition to noun-class prefixes for a number of nouns in various noun classes. Noun-class enclitics merit a separate section, 5.1.2. The next sections present noun-class pairing in 5.1.3, noun-class mergers in 5.1.4, noun classes and semantic domains in 5.1.5, loanwords in 5.1.6, noun-to-noun derivation in 5.1.7 and compounds in 5.1.8.

5.1.1 Noun classes

Liko noun classes and the basic forms of the noun-class prefixes are presented in Table 12. Following Kadima (1969:82), three elements are used to determine a noun class: the set of concords, the noun-class prefix and the gender. The sets of concords taken into account are the adjective, enumerative and associative prefixes. First, two noun classes are different if their sets of concords are different. Second, in case of identical sets of concords, two noun classes are different if both their noun-class prefixes and their gender are different. Classes which have the same set of concords, e.g. classes 8 and 14, are identified as separate classes because their noun-class prefix and gender are different. Subclasses are posited when the concords and gender are those of a main class and only the noun-class prefix is different.

The vowel of noun-class prefixes assimilates to a [+ATR] value of the noun stem. Some classes have nouns with a noun-class enclitic. Assimilation of the vowel of a noun-class enclitic is more complex, see 3.2.4.3. The vowel of noun-class enclitics is also affected by vowel-height dissimilation (3.75). The surface forms after [+ATR] assimilation of the noun-class prefixes is added in brackets. For the surface forms of the noun-class enclitics, see 5.1.2.

Table 12 Noun-class prefixes and enclitics, underlying and [+ATR] forms

| Class number | Prefix | Enclitic |
|--------------|-----------|----------|
| 1 | mʊ- (mu-) | |
| 1a | - | |
| 1b | a- (o-) | |
| 1c | ɪ- (i-) | |
| 2 | ʙa- (ʙo-) | |
| 3 | mʊ- (mu-) | -mɔ |
| 5 | li- (li-) | -lɔ |
| 6 | ma- (mo-) | -mɔ |
| 7 | si- (si-) | -sɔ |
| 8 | ʙi- (ʙi-) | |
| 9 | - | -yɔ |
| 9a | ɪ- (i-) | |
| 9b | ka- (ko-) | |
| 2 + 9 | ʙa- (ʙo-) | |
| 13 | - | -tɔ |
| 14 | ʙu- (ʙu-) | |
| 15 | ku- (ku-) | -kɔ |
| 17 | kú- (kú-) | |
| 19 | ɪ- (i-) | -sɔ |

In the Liko noun-class system, class 4 is missing, as well as all classes from 11¹⁹⁶ to 23, except 13, 14, 15, 17 and 19.¹⁹⁷ According to the criteria formulated by

¹⁹⁶ A combination of classes 2 and 9 replaces class 10.

Maho, the Liko noun-class system is between a reduced one (having three genders or less) and a canonical class system with seven or more genders (Maho 1999:54). I refer the reader to 5.1.3 for an overview of noun-class pairing.

The expression of number is part of the noun-class system. Singular is mainly found in classes 1, 1a, 1b, 1c, 3, 5, 7, 9a, 14, 15, 17 and 19. Classes 2, 6, 8, 2+9 and 13 often have multiple instances of a given noun. Nouns in class 9 can be singular, plural or collective. All classes except classes 1, 1b, 1c, 7, 9a occur as one-class genders. The largest sets are found in class 1 and its subclasses (among others animate), 5 (among others manner), 9 (mergers and various), 9b (Infinitives) and 14 (among others abstract nouns). Infinitives are not posited in class 15 (as common in Bantu languages), because they do not share the same concords nor the noun-class prefix of class 15. Instead, they have the same concords as class 9.

Noun classes have the following sets of concords: different sets of adjective and enumerative prefixes, a set of associative prefixes, and sets for substitutives and demonstratives. The first three sets are listed in Table 13 (for other sets, see 6.1.2). Concord between the noun class and the subject (and object) prefixes in verb forms, common in many Bantu languages, is not represented in Table 13. Noun-class concord with subject prefixes is very much reduced. Agreement between the noun class and subject prefix in the verb form is only attested for class 2, regardless of animacy, see 7.4.

In glosses of concord prefixes, only the main class number, e.g. 9 instead of 9b, is used in this book, because the concords of subclasses are identical to those of the main class.

¹⁹⁷ The word for '9.place' is **pǎ**. The form **pǎ** is similar to ***pa-**, the reconstructed Proto-Bantu noun-class prefix of class 16 (Maho 1999:51). Classes 16 and 18 are not found in Liko.

Table 13 Noun-class concords

| Class | Adjective prefix ^{198,199} | Enumerative prefix | Associative prefix |
|-------|--|-----------------------|-----------------------|
| 1 | mũ- | ḃé- | wa- |
| 1a | mũ- | ḃé- | wa- |
| 1b | mũ- | ḃé- | wa- |
| 1c | mũ- | ḃé- | wa- |
| 2 | ḃú- | ḃá- | ḃá- |
| 3 | mú- | mí- | má- |
| 5 | lí- | lí- | lá- |
| 6 | mú- | má- | má- |
| 7 | sí- | sí- | sá- |
| 8 | ḃú- | ḃí- | ḃá- |
| 9 | yí- | yí- | yá- |
| 9a | yí- | yí- | yá- |
| 9b | yí- | - | yá- |
| 2+9 | ḃayí- | ḃayí- | ḃayá- |
| 13 | tí- | tí- | tá- |
| 14 | ḃú- | ḃí- | ḃá- |
| 15 | kú- | kú- | kwá- |
| 17 | yí- | yí- | wa- |
| 19 | sí- | sí- | sá- |

Class 1

The basic form of the class 1 prefix is **mu-**. Preceding [+ATR] roots, the prefix vowel takes the [+ATR] quality and the prefix surfaces as **mu-**. The overall majority of words in class 1 are people and animals. Agent nouns derived from verbs are also in this class (see 7.12.1). Plural class 2 prefixes are added in brackets.

¹⁹⁸ Adjective prefixes that agree with classes 2, 3, 6 and 14 surface with the low vowel /a/ in some specific contexts, see 5.2.1.

¹⁹⁹ Adjective prefixes have a polar tone with respect to the first tone on the stem, see 4.6.7.

- (5.1) mu-ganzá, (6a-) '1-blood brother'
 mu-gbukú, (6a-) '1-pubic louse'
 mu-nugbé, (6a-) '1-caterpillar, sp.'
 mu-zunzá, (6a-) '1-ant, sp.'
 mu-bígi, (6o-) '1-twin'
 mu-kó, (6o-) '1-woman'
 mu-ndugbõ, (6o-) '1-wasp'
 mu-yubú, (6o-) '1-caterpillar, sp.'

The concord affixes agreeing with class 1 nouns are:²⁰⁰

- (5.2) *adjective* mu-mbembí mu-dingĩ 'a big snail'
 1-snail 1.ADJ-big
enumerative mu-ganzá b́é-motí 'one blood brother'
 1-blood brother 1.NUM-one
associative mu-kó wa-nzá 'a good woman'
 1-woman 1.ASS-good
demonstrative mu-ndugbõ nǎ 'that wasp'
 1-wasp 1.DEM.I

Class 1a

Class 1a is a subclass of class 1, because the set of concords and the gender are identical, but the noun-class prefix is different (class 1a takes no prefix). Nouns in class 1a pair with class 2. Apart from people and animals, many loanwords (see 5.1.6) are in class 1a.

- (5.3) bugwé, (6a-) '1a.maternal uncle'
 gbuwó, (6o-) '1a.chimpanzee'

The concord affixes agreeing with class 1a nouns show that class 1a takes the concords of class 1:

- (5.4) *adjective* gbuwó mu-kédě 'a small chimpanzee'
 1a.chimpanzee 1.ADJ-small

²⁰⁰ Concord with the type I demonstrative is added for illustration. See 6.1.2.

| | | |
|----------------------|---|-------------------------|
| <i>enumerative</i> | bùgwé b́é-motí 1a.maternal uncle 1.NUM-one | 'one maternal uncle' |
| <i>associative</i> | bùgwé wa-nzá 1a.maternal uncle 1.ASS-good | 'a good maternal uncle' |
| <i>demonstrative</i> | gbuwó nǎ 1a.chimpanzee 1.DEM.I | 'that chimpanzee' |

Class 1b

A second subclass of class 1 is set up, because the set of concords and the gender are identical, but the noun-class prefix is different (**a-** instead of no prefix). Nouns in class 1b pair with class 2.

Nouns in class 1b take prefix **a-**, in [+ATR] contexts changed into **o-**. About 40% of these nouns have a H tone on the prefix vowel. This H tone is part of the LH tone when the class 2 prefix **ba-** precedes the noun stem with the class 1b prefix. Grégoire (2003:360) mentions the existence of a class 1 with a noun-class prefix **a-** as a characteristic of a series of languages "generally situated in the northeast of the forest. This subclass groups a small number of nouns designating animals and plants, and, more rarely, members of the family. It has been attested notably in Buja (C37), Doko (C40), Boa (C44), Lombo-Turumbu (C54), Kele (C55), Mbole-Toolí (C60), Lengola (C12), Mituku (D13) and Nyali (D33)." For instance, for Boa (C44) a separate subclass 1b is set up on the basis of the analysis of initial /a/ as noun-class prefix **a-** (Motingea 2005:38).

Class 1b nouns with prefix **a-** refer to a range of semantic categories, including animals, plants and objects, as in the examples below:

- (5.5)a. á-ďóďó, (bǎ-) '1b-snail, sp.'
 a-sambá, (ba-) '1b-electric fish, sp.'
 á-temu-témú, (bǎ-) '1b-firefly'
 a-tígbe, (ba-) '1b-sparrowhawk'
- b. a-ďóďó, (ba-) '1b-yam, sp.'
 a-kángbá, (ba-) '1b-tree, sp.'
 á-mbukó, (bǎ-) '1b-tree, sp.'
 ó-pilípíli, (bǎ-) '1b-shrub, sp.'

| | | |
|----|----------------|------------------------------|
| c. | a-dudǔ | '1b-incense' |
| | á-gbágí, (ǎ-) | '1b-home-made soap' |
| | á-gbǎgbó, (ǎ-) | '1b-footboard' |
| | o-ngútu, (ǎ-) | '1b-metal bracelet' |
| | a-nviyó, (ǎ-) | '1b-small one bedroom house' |
| | o-pungó, (ǎ-) | '1b-small drum' |
| | á-sabá, (ǎ-) | '1b-blade' |

This subclass contains also nouns with a positive or negative meaning. Some of them have a counterpart in class 1 or 1a. Where this is known, it is indicated.

Examples of class 1b nouns with a positive or endearing connotation include: **a-bǎ** '1b.father' and **a-má**²⁰¹ '1b-mother', **a-fála** '1b-mistress' or **á-yóko** '1b-good dancer or singer'. Class 1b nouns with a negative connotation include: **a-lókó**²⁰² '1b-man' (negative connotation), **á-pákímu** '1b-strong rebellious man', **á-budá** '1b-person without compassion', **á-ngbungbu** '1b-mentally deficient person' and **á-pókátu** '1b-premature baby'.

In **a-nviyó** (5.5c) and **á-yóko** (above), the vowel of the noun-class prefix does not assimilate to the [+ATR] quality of the noun. This is found in some other nouns in this subclass as well, including:

| | | |
|-------|---------------|------------------------|
| (5.6) | a-bútú, (ǎ-) | '1b-palm tree, sp.' |
| | a-budí, (ǎ-) | '1b-infertile land' |
| | a-píǎbú, (ǎ-) | '1b-cushion of leaves' |

Noun-initial /a/ has been analysed as an augment or a pre-prefix in related languages. In Budu (D33) for example, High-toned initial /a/ has been analysed as an augment: "Budu, like Bhele and Komo²⁰³, tends to use a High-toned pre-prefix for diminutive/pejorative animates. This floating High augment can be used for

²⁰¹ In class 1a are **babǎ** '1a.father' and **mamá** '1a.mother'.

²⁰² Without the **a-** prefix: **mu-lókó** '1-man'.

²⁰³ Thomas (1994:193) reports on Kumu (or Komo) (D23): "when all words containing a high toned prefix are considered together, there is significant skewing of semantic content toward small animals."

most Noun Classes that are used for animates" (Fricke 2005). However, initial /a/ cannot be analysed as an augment in Liko, because it never precedes other noun-class prefixes:

| | | | |
|-------|-----------|---|-----------------|
| (5.7) | á-gómé | '1b-treaty' | |
| | ḃă-gómé | '2:1b-treaties' | *a-ḃa-gómé |
| | a-línzyá | '1b-tree with caterpillars, sp.' | |
| | ḃa-línzyá | '2:1b-tree with caterpillars, sp.' | *a-ḃa-línzyá |
| | a-səsú | '1b-delicious food' | |
| | ḃa-səsú | '2:1b-delicious food' | *a-ḃa-səsú |
| | a-wángá | '1b-tree with bark used to heal spleen' | |
| | ḃa-wángá | '2:1b-tree with bark used to heal spleen' | *a-ḃa-wángá |
| | mū-kangú | '1-paddler' | *(a/ū)-mū-kangú |
| | mū-balá | '3-curse' | *(a/ū)-mū-balá |
| | lɪ-kóft | '5-blow with the fist' | *(a/ɪ)-lɪ-kóft |
| | ma-lílí | '6-food' | *a-ma-lílí |

Concords of class 1b nouns are the same as those of class 1:

| | | | |
|-------|----------------------|----------------------|-----------------|
| (5.8) | <i>adjective</i> | á-sabá mū-kédé | 'a small blade' |
| | | 1b-blade 1.ADJ-small | |
| | <i>enumerative</i> | á-sabá ḃé-motí | 'one blade' |
| | | 1b-blade 1.NUM-one | |
| | <i>associative</i> | á-sabá wa-nzá | 'a good blade' |
| | | 1b-blade 1.ASS-good | |
| | <i>demonstrative</i> | á-sabá nǒ | 'that blade' |
| | | 1b-blade 1.DEM.I | |

Class 1c

A third subclass of class 1 is set up, because the set of concords and the gender are identical to class 1, but the noun-class prefixes are different (**ɪ-** instead of **a-** or no prefix). Nouns in class 1c pair with class 2. The noun-class prefix **ɪ-** is changed into **i-** in [+ATR] contexts. When preceded by class 2 **ḃa-**, height coalescence (see 3.3.2) applies to the vowels of the class 2 and the class 1c vowels. Examples include:

| (5.9) | <u>Class 1c</u> | <u>Singular</u> | | <u>Class 2</u> | <u>Plural</u> |
|-------|-----------------|-------------------------------------|--|----------------|------------------------|
| | ɪ-dɔdĩ | '1c-neglected wound' ²⁰⁴ | | ʃɛ-dɔdĩ | '2:1c-neglected wound' |
| | í-ʃɛʃí | '1c-snail, sp.' | | ʃě-ʃɛʃí | '2:1c-snail, sp.' |
| | i-péʃú | '1c-locust' | | ʃɛ-péʃú | '2:1c-locust' |
| | í-danga | '1c-insect, sp.' | | ʃě-danga | '2:1c-insect, sp.' |

Concords of class 1c nouns are the same as those of class 1:

| | | | |
|--------|----------------------|-----------------------|------------------|
| (5.10) | <i>adjective</i> | i-péʃú mu-kédě | 'a small locust' |
| | | 1c-locust 1.ADJ-small | |
| | <i>enumerative</i> | i-péʃú ʃé-motí | 'one locust' |
| | | 1c-locust 1.NUM-one | |
| | <i>associative</i> | i-péʃú wa-nzá | 'a good locust' |
| | | 1c-locust 1.ASS-good | |
| | <i>demonstrative</i> | i-péʃú nǝ | 'that locust' |
| | | 1c-locust 1.DEM.I | |

Proclitics to subclasses of class 1

All nouns with initial **na-**, animate and inanimate, originate from one of the subclasses of class 1 and pair with class 2. I assume that **na-** is a proclitic. The concords of these nouns show that they are in class 1. In the glosses, I use simply class 1. With plurals, the proclitic is retained and follows the class 2 prefix **ʃa-**, which indicates that the proclitic has become lexicalized. Semantically most of these nouns refer to fauna.

The vowel of the proclitic harmonizes to a [+ATR] value in the case of historically class 1a nouns, which lack a prefix vowel, and it is subject to height coalescence in the case of historically class 1c nouns, which have a high prefix vowel. The vowel of the noun-class prefix of some [+ATR] 1b nouns is **a-**. If this is the case, the vowel /a/ of the proclitic does not harmonize.

Examples of class 1 nouns with proclitic **na-**, originating from nouns in classes 1a or 1b, include:

²⁰⁴ Also 'decayed tooth'.

| | | |
|--------|-------------------|--------------------|
| (5.11) | nǎ-ḅɔ, (ḅa-) | 'na:1-fish, sp.' |
| | na-gbalí, (ḅa-) | 'na:1-frog, sp.' |
| | na-kyǒlɔ, (ḅa-) | 'na:1-bird, sp.' |
| | na-nzókódǒ, (ḅa-) | 'na:1-larva, sp.' |
| | na-pɔnzɔ, (ḅa-) | 'na:1-vine, sp.' |
| | nǒ-dingbo, (ḅa-) | 'na:1-water snail' |
| | no-kpódǒku, (ḅa-) | 'na:1-toad' |

In the following examples of class 1 nouns with proclitic **na-**, originating from [+ATR] class 1b nouns, the vowel of the proclitic does not assimilate:

| | | |
|--------|---------------------|--------------------|
| (5.12) | na-gulumamá, (ḅa-) | 'na:1-ant, sp.' |
| | na-muyé-múye, (ḅa-) | 'na:1-insect, sp.' |
| | na-siyo, (ḅa-) | 'na:1-vine, sp.' |

Examples of nouns with proclitic **na-** originating from class 1c nouns are:

| | | |
|--------|---------------------|----------------------|
| (5.13) | né-gúlúkyá, (ḅa-) | 'na:1-medical plant' |
| | ne-ngúse, (ḅa-) | 'na:1-snail, sp.' |
| | né-lága, (ḅa-) | 'na:1-mirror' |
| | né-lungyá, (ḅa-) | 'na:1-chameleon' |
| | né-gimi-gímí, (ḅa-) | 'na:1-plant, sp.' |
| | ne-kulé, (ḅa-) | 'na:1-insect, sp.' |
| | né-púmúkyó, (ḅa-) | 'na:1-weed, sp.' |

Concords of nouns with **na-** proclitic are those of class 1:

| | | | |
|--------|----------------------|------------------|--------------------------------|
| (5.14) | <i>adjective</i> | na-kwálí mu-kédé | 'na:1-sparrowhawk 1.ADJ-small' |
| | <i>enumerative</i> | na-kwálí ḅé-motí | 'na:1-sparrowhawk 1.NUM-one' |
| | <i>associative</i> | na-kwálí wa-nzá | 'na:1-sparrowhawk 1.ASS-good' |
| | <i>demonstrative</i> | na-kwálí nǒ | 'na:1-sparrowhawk 1.DEM.I' |

All nouns with initial **st-**, animate and inanimate, have the concords of class 1. **st-** (in [+ATR] contexts **si-**) is also posited as a proclitic. All nouns with initial **st-** pair with class 2. Semantically most of these nouns refer to fauna. For example, all centipedes in my data have initial **na-** or **st-**. With plurals, the proclitic is retained and follows the class 2 prefix **ḅa-**.

Examples of proclitic **st-** are:

- (5.15) sí-gulyágí, (6a-) 'sr:1-centipede, sp.'
 st-kpetí, (6a-) 'sr:1-tortoise'
 st-zazá, (6a-) 'sr:1-crawfish'
 sí-bebetú, (6a-) 'sr:1-caterpillar, sp.'
 si-gogopé, (6a-) 'sr:1-bird'
 sí-zoluwo, (6a-) 'sr:1-scorpion'

Concords of nouns with a **st-** proclitic are the same as those of class 1:

- (5.16) *adjective* st-kpetí mu-kédé 'a small tortoise'
 sr:1-tortoise 1.ADJ-small
enumerative st-kpetí bé-motí 'one tortoise'
 sr:1-tortoise 1.NUM-one
associative st-kpetí wa-nzá 'a good tortoise'
 sr:1-tortoise 1.ASS-good
demonstrative st-kpetí nǎ 'that tortoise'
 sr:1-tortoise 1.DEM.I

Class 2

The basic form of the class 2 prefix is **6a-**. Preceding [+ATR] roots, the prefix vowel takes the [+ATR] counterpart of /a/ and the prefix surfaces as **6o-**. Class 2 is the regular noun class for plurals of class 1 and subclasses of class 1 nouns.

Examples of class 2 nouns are given in the two sets below, the first with nouns for which the singular is in class 1 and the second for which the singular is in class 1a (added in brackets):

- (5.17) 6a-gbukú '2-pubic louse' (mu-gbukú)
 6a-swá '2-Pygmy' (mu-swá)
 6o-goyó '2-flea' (mu-goyó)
 6o-túgbǔ '2-rat, sp.' (mu-túgbǔ)

- (5.18) 6a-gudú '2-barricade' (gudú)
 6a-súngbú '2-uninhabited area' (súngbú)
 6o-6ó6o '2-deaf person' (6ó6o)
 6o-kuyí '2-monkey, sp.' (kuyí)

The concord affixes agreeing with class 2 nouns are:

| | | |
|-------------------------|------------------------------------|----------------------|
| (5.19) <i>adjective</i> | 6a-mbembí 6a-kékéké ²⁰⁵ | 'small snails' |
| | 2-snail 2.ADJ-small | |
| <i>enumerative</i> | 6a-ganzá 6á-6ǎ | 'two blood brothers' |
| | 2-blood brother 2.NUM-two | |
| <i>associative</i> | 6a-kó 6á-nza ²⁰⁶ | 'good women' |
| | 2-woman 2.ASS-good | |
| <i>demonstrative</i> | 6o-ndugbõ 6ó | 'those wasps' |
| | 2-wasp 2.DEM.I | |

Preceding vowel prefixes or vowel-initial nouns, the vowel /a/ of the class 2 prefix is lost through V₁-elision (see 3.3.1), or it is subject to height coalescence (see 3.3.2). Examples include:

| | | | |
|-----------------|----------------|-----------|---------------|
| (5.20) a-ngwást | '1b-slap' | 6a-ngwást | '2:1b-slaps' |
| ɔgǔ | '1a.fish, sp.' | 6ɔgǔ | '2:fish, sp.' |
| ɪ-mbúbú | '1c-civet' | 6ɛ-mbúbú | '2:1c-civet' |

It is a characteristic of nouns in classes 1b, 1c, 9a and 17 that the class 2 plural gender prefix does not replace, but precedes the noun-class prefixes of the singular.

Class 3

The basic form of the class 3 prefix is **mu-**. Preceding [+ATR] roots, the prefix vowel takes the [+ATR] quality and the prefix surfaces as **mu-**. Some class 3 nouns take the noun-class enclitic **-mo**, which is subject to ATR vowel harmony and vowel-height dissimilation (see 5.1.2). Examples of class 3 nouns are (in brackets, the class 9 plural forms are given - plurals of class 3 nouns are found in class 9; class 4 does not exist in Liko):

| | | |
|----------------|---------|------------------|
| (5.21) mu-báǰe | (báǰe) | '3-maize ear' |
| mu-6ungú | (6ungú) | '3-lump of clay' |
| mu-gbá | (gbá) | '3-tributary' |

²⁰⁵ Plural form of **-kédé** 'small', see 5.2.1.

²⁰⁶ The surface tone on **-nza** is Low because monosyllabic modifiers have a polar tone, see 4.6.7.

| | | |
|-----------|----------|---------------------------|
| mu-yungá | (yungá) | '3-shinbone' |
| mu-ngóngu | (ngóngu) | '3-sugar cane' |
| mu-sisó | (sisó) | '3-muscle, tendon, nerve' |

The concord affixes agreeing with class 3 nouns are exemplified using the noun stem **-dótó-** with the class 3 the noun-class enclitic **-mɔ**, the vowel of which is changed into [+high] (**-mu**) following a [–high] noun stem vowel.²⁰⁷

| | | | |
|-------------------------|------------|-------------|---------------|
| (5.22) <i>adjective</i> | mu-dótó-mu | mo-kúdí | 'a short bow' |
| | 3-bow-3 | 3.ADJ-short | |
| <i>enumerative</i> | mu-dótó-mu | mí-motí | 'one bow' |
| | 3-bow-3 | 3.NUM-one | |
| <i>associative</i> | mu-dótó-mu | má-nza | 'a good bow' |
| | 3-bow-3 | 3.ASS-good | |
| <i>demonstrative</i> | mu-dótó-mu | mɔ | 'that bow' |
| | 3-bow-3 | 3.DEM.I | |

A peculiarity of class 3 is that nominal and enumerative class 3 prefixes are used for plural quantities (2, 3 and 4), instead of the noun-class prefixes of the plural part of the gender. In 'two bones' and 'two baskets' below, class 9 nominal and enumerative prefixes would have been expected. For comparison, plural concord with adjectives and demonstratives is added:

| | | | | | |
|--------|---------|---------------|------------|-----------|-----------------|
| (5.23) | mu-kúwo | mí-motí | 3-bone | 3.NUM-one | 'one bone' |
| | mu-kúwo | mí-ǂǂ | 3-bone | 3.NUM-two | 'two bones' |
| | kúwo | yí-díngídingĩ | 9.bone | 9.ADJ-big | 'big bones' |
| | kúwo | yɔ | 9.bone | 9.DEM.I | 'these bones' |
| (5.24) | mu-mbí | mí-motí | 3-basket | 3.NUM-one | 'one basket' |
| | mu-mbí | mí-ǂǂ | 3-basket | 3.NUM-two | 'two baskets' |
| | mbí-yɔ | yí-díngídingĩ | 9.basket-9 | 9.ADJ-big | 'big baskets' |
| | mbí-yɔ | yɔ | 9.basket-9 | 9.DEM.I | 'these baskets' |

²⁰⁷ The plural form in class 9 also has a noun-class enclitic: **dótó-yi**, 9.bow-9, 'bows'.

Class 5

The basic form of the class 5 prefix is **li-**. Preceding [+ATR] roots, the prefix vowel takes the [+ATR] quality and the prefix surfaces as **li-**. Some class 5 nouns take the noun-class enclitic **-lo**, which is subject to ATR vowel harmony and vowel-height dissimilation (see 5.1.2). Manner nouns derived from verbs are also found in class 5 (see 7.12.1).

Examples of class 5 nouns are (in brackets, the plural class 6 prefixes are given):

- (5.25) li-ḡókí, (ma-) '5-gourd'
 li-lumbá, (ma-) '5-witchcraft'
 li-pála, (ma-) '5-wooden roofing tile'
 li-ḡukú, (mo-) '5-pile, heap'
 li-ndímó, (mo-) '5-birdlime'
 li-sénzé, (ma-) '5-small flute'

The concord affixes agreeing with class 5 nouns are:

- (5.26) *adjective* li-kpumóká lí-dingĩ 'a big thing'
 5-thing 5.ADJ-big
enumerative li-syé lí-motí 'one day'
 5-day 5.NUM-one
associative li-gubó lá-nza 'good work'
 5-work 5.ASS-good
demonstrative li-kǒ ló 'that spring'
 5-spring 5.DEM.I

Preceding vowel-initial nouns with a low or high vowel, the vowel /l/ of the class 5 prefix is lost through V₁-elision (see 3.3.1).²⁰⁸ Otherwise, height coalescence or desyllabification would have applied to the sequence /l + a/ (see 3.3.3 and 3.3.5).

Examples of these vowel-initial nouns are:

- (5.27) lakí '5:egg' makí '6:egg'
 lǎngbo '5:cheek' mǎngbo '6:cheek'

²⁰⁸ In my data there are no class 5 noun stems with initial mid vowels /ε e ɔ o/.

| | | | |
|-------|-----------------|-------|-----------------|
| lǎnzú | '5:tooth' | mǎnzú | '6:tooth' |
| líso | '5:eye' | míso | '6:eye' |
| lóngá | '5:danger, war' | múnga | '6:danger, war' |

Notice how V₁-elision also applies to the vowel of the noun-class prefix of class 6.

Class 6

The basic form of the class 6 prefix is **ma-**. Preceding [+ATR] roots, the prefix vowel takes the [+ATR] counterpart of /a/ and the prefix surfaces as **mo-**. Some class 6 nouns take the noun-class enclitic **-mo**, which is subject to ATR vowel harmony and vowel-height dissimilation (see 5.1.2). Preceding vowel-initial nouns with a low or high vowel, the vowel /a/ of the class 6 prefix is lost through V₁-elision (see 3.3.1); examples were given in (5.27).

Examples of plural class 6 nouns are:

| | | |
|--------|--------------|-------------------------------|
| (5.28) | ma-gugú | '6-reed' |
| | ma-ngbín gbí | '6-swelling of the testicles' |
| | ma-túnda | '6-Pygmy shelter' |
| | mo-fidí | '6-leaf, sp.' |
| | mo-ngusú | '6-elbow' |
| | mo-zuní | '6-proverb' |

The concord affixes agreeing with class 6 nouns are:

| | | | |
|--------|----------------------|----------------------|-----------------|
| (5.29) | <i>adjective</i> | ma-kpómúká ma-kékéké | 'small things' |
| | | 6-thing 6.ADJ-small | |
| | <i>enumerative</i> | ma-syé má-ḃǎ | 'two days' |
| | | 6-day 6.NUM-two | |
| | <i>associative</i> | mo-gubó má-nza | 'good jobs' |
| | | 6-work 6.ASS-good | |
| | <i>demonstrative</i> | ma-kǒ mó | 'those springs' |
| | | 6-spring 6.DEM.I | |

Class 7

The basic form of the class 7 prefix is **su-**. Preceding [+ATR] roots, the prefix vowel takes the [+ATR] quality and the prefix surfaces as **si-**. Class 7 nouns take the noun-class enclitic **-so**, which is subject to ATR vowel harmony and vowel-

height dissimilation (see 5.1.2). Preceding vowel-initial nouns with a low vowel, the vowel /u/ of the class 7 prefix **st-** is desyllabified (see 3.3.5). Preceding a root-initial high vowel, V₁-elision applies (see 3.3.1).

Classes 7 and 8 have been called class 19 and 13 in earlier work. Because of concord prefixes and enclitics with /t/, reminiscent of class 13 in some other Bantu languages, class 8 has been included in class 13 and class 7 in class 19 in Kutsch Lojenga (2002), Nederveen (2004), De Wit (2006) and Augustin (2010).²⁰⁹

Class 7 needs to be set up because the noun-class prefixes and the gender are different from 19 (class 7 **st-** and pairing with class 8 vs. class 19 **t-** and pairing with class 13). Class 8 needs to be distinguished on the basis of the concords class 8 nouns take. Languages in Bantu Zone C and D for which Maho reports 19/13 all have 7/8 as well (Maho 1999:291-298). Lack of class 7 while having 19 is strange in the light of the observation that noun classes 7 and 8 have a wide distribution over the Bantu area.

Examples of class 7 nouns are (the class 8 plural forms are presented in the third column):

| (5.30) | <u>Class 7</u> | <u>Singular</u> | <u>Class 8</u> | <u>Plural</u> |
|--------|-------------------------|---------------------------|----------------|-------------------------|
| | st-bě-su | '7-thigh-7' | ḡt-bě | '8-thigh' |
| | st-lyá-su | '7-greed, cohabitation-7' | ḡt-lyá | '8-greed, cohabitation' |
| | si-wá-su | '7-bell for a hound-7' | ḡi-wó | '8-bell for a hound' |
| | syǎ [†] ngá-su | '7:year, dry season-7' | ḡyǎnga | '8:year, dry season' |

One noun in class 7, **si-kǎ-su** '7-loft, drying shed-7', has a plural form in class 8, **ḡi-kǎtu** '8-loft, drying shed', and in class 13, **kǎ-tu** '13.loft, drying shed-13'.²¹⁰

²⁰⁹ Class 19/13 pairings are reported in the northern Bantu area (Katamba 2003:109). According to Maho (1999:199): "Class 19 has a restricted distribution, being mainly confined to the rainforest area. In most languages, class 19 functions as a singular class (...). The most common pairing involving singular class 19 is that of 19/13, though 19/8 is found in a number of languages in the upper western parts, specifically zones A, B and H."

²¹⁰ The [+ATR] value of the vowel of the noun-class prefix **ḡi-** shows that, underlyingly, the

Examples of the concord affixes agreeing with class 7 nouns are:

| | | |
|-------------------------|---------------------------------|---------------------------|
| (5.31) <i>adjective</i> | su-wá-su sí-dingĩ | 'a big bell for a hound' |
| | 7-bell for a hound-7 7.ADJ-big | |
| <i>enumerative</i> | su-wá-su sí-motí | 'one bell for a hound' |
| | 7-bell for a hound-7 7.NUM-one | |
| <i>associative</i> | su-wá-su sá-nza | 'a good bell for a hound' |
| | 7-bell for a hound-7 7.ASS-good | |
| <i>demonstrative</i> | su-wá-su sɔ | 'that bell for a hound' |
| | 7-bell for a hound-7 7.DEM.I | |

Class 8

The basic form of the class 8 prefix is **ɓi-**. Preceding [+ATR] roots, the prefix vowel takes the [+ATR] quality and the prefix surfaces as **ɓi-**. Preceding vowel-initial nouns with a low vowel, the vowel /ɪ/ of the class 8 prefix is desyllabified (see 3.3.5). Preceding a root-initial high vowel, V₁-elision applies (see 3.3.1).

The class 8 nouns in my data, which are not listed in (5.30), are presented here (in the third column, the class 7 singular forms are given):

| (5.32) <u>Class 8</u> | <u>Plural</u> | <u>Class 7</u> | <u>Singular</u> |
|-----------------------|---------------------------|---------------------------|-----------------------------|
| ɓi-kǎtu | '8:loft, drying shed' | si-kǎ-su | '7:loft, drying shed-7' |
| ɓíloɓílo | '8:burnt log' | sílosí ⁴ lá-su | '7:burnt log-7' |
| ɓíngo | '8:neck, throat' | sí ⁴ ngá-su | '7:neck, throat-7' |
| ɓíngo | '8:climbing harness' | - | |
| ɓukú | '8:burning piece of wood' | sukú-so | '7:burning piece of wood-7' |
| ɓukwá | '8:yam (generic)' | sukwá-su | '7:yam (generic)-7' |
| ɓyangító | '8:shelter, den, lair' | syangí-sɔ | '7:shelter, den, lair-7' |

Two nouns in class 8 in (5.32) have a final syllable which has the same shape as the noun-class enclitic of class 13 **-tɔ**: **ɓi-kǎtu** '8:loft, drying shed' and **ɓyangító**

noun stem is [+ATR]. Preceding the [-ATR] noun-class enclitics, /o/ is changed to /a/, see 3.2.4.3.

'8:shelter, den, lair'. I assume that these final syllables are copies of the class 13 enclitic. **bílobílo** '8:burnt log' is a reduplicated form both in classes 7 and 8.

In addition to the nouns listed in (5.32), there are three class 7/8 pairs in my data in which one or both forms are petrified: **solí-so** '7:knife, sp.-7', **byǎlo** '8:knife, sp.', **sú'mbá-su** '7:cold-7', **bí-mba** '8-cold' and **syǎ'ngí-so** '7:elephant trap-7', **byíngó** '8:elephant trap'.

Examples of the concord affixes agreeing with class 8 nouns are:

| | | |
|-------------------------|--------------------------------|----------------|
| (5.33) <i>adjective</i> | ɸu-bě ɸo-kúkúkú ²¹¹ | 'short thighs' |
| | 8.thigh 8.ADJ-short | |
| <i>enumerative</i> | ɸu-bě ɸí-sáá | 'three thighs' |
| | 8.thigh 8.NUM-three | |
| <i>associative</i> | ɸu-bě ɸá-nza | 'nice thighs' |
| | 8.thigh 8.ASS-good | |
| <i>demonstrative</i> | ɸu-bě ɸo | 'those thighs' |
| | 8.thigh 8.DEM.I | |

Class 9

Class 9 does not have a noun-class prefix. Class 9 is a large and semantically diverse class. It contains nouns from class mergers (see 5.1.4), loanwords (see 5.1.6) and nominalizations (see 7.12.1). Both singular and plural nouns are found in class 9. I have not set up two classes to distinguish singular from plural, because the prefix and the set of concords are identical for the singular and the plural parts of the gender. Some class 9 nouns take the noun-class enclitic **-yɔ**, which is subject to ATR vowel harmony and vowel-height dissimilation (see 5.1.2). In the examples of singular class 9 nouns, plural class 2 + 9 prefixes are added in brackets.

| | |
|-----------------------|--------------|
| (5.34) kasínda, (6a-) | '9.syphilis' |
| kpéngbé, (6a-) | '9.finger' |
| luǔ, (6o-) | '9.debt' |
| mándé, (6a-) | '9.track' |

²¹¹ Plural form of **-kúǔ** 'short'.

| | |
|---------------|----------------|
| mbúmí, (6o-) | '9.sand' |
| ndundú, (6a-) | '9.anvil' |
| nzoyí, (6a-) | '9.desire' |
| sǔ, (6a-) | '9.smell, gas' |
| úzu, (6o-) | '9.island' |

The concord affixes agreeing with singular class 9 nouns are:

| | | |
|-------------------------|-------------------|-------------------|
| (5.35) <i>adjective</i> | tíko yí-dingĩ | 'a big field' |
| | 9.field 9.ADJ-big | |
| <i>enumerative</i> | tíko yí-motí | 'one field' |
| | 9.field 9.NUM-one | |
| <i>associative</i> | tíko yá-st | 'the whole field' |
| | 9.field 9.ASS-all | |
| <i>demonstrative</i> | ngúpá yó | 'that hill' |
| | 9.hill 9.DEM.I | |

Examples of plural class 9 nouns are:

| | | | |
|-----------------------|-------------------|----------------|-------------------|
| (5.36) <u>Class 9</u> | <u>Plural</u> | <u>Class 3</u> | <u>Singular</u> |
| gǔgǔ | '9.top of a roof' | mu-gǔgǔ | '3-top of a roof' |
| mbanzí | '9.side' | mu-mbanzí | '3-side' |
| giní | '9.legend, story' | mu-giní | '3-legend, story' |
| pumbí | '9.ladle' | mu-pumbí | '3-ladle' |

| | | | |
|-----------------------|----------------|-----------------|--------------------|
| (5.37) <u>Class 9</u> | <u>Plural</u> | <u>Class 15</u> | <u>Singular</u> |
| pasí | '9.peeling' | ku-pasí-ko | '15-peeling-15' |
| ngungí | '9.plant, sp.' | ku-ngungí-ko | '15-plant, sp.-15' |

The concord affixes agreeing with class 9 nouns (plurals of classes 3 and 15 nouns) are:

| | | | |
|-------------------------|-----------------|-----------------------|------------------|
| (5.38) <i>adjective</i> | pumbí yí-dingĩ | 9.ladle 9.ADJ-big | 'big ladles' |
| | pasí yí-dingĩ | 9.peeling 9.ADJ-big | 'big peelings' |
| <i>enumerative</i> | mu-pumbí mí-sáá | 3-ladle 3.NUM-three | 'three ladles' |
| | pasí yí-sáá | 9.peeling 9.NUM-three | 'three peelings' |
| <i>associative</i> | pumbí yá-st | 9.ladle 9.ASS-all | 'all ladles' |
| | pasí yá-st | 9.peeling 9.ASS-all | 'all peelings' |

| | | | |
|----------------------|----------|-------------------|------------------|
| <i>demonstrative</i> | pumbí yó | 9.ladle 9.DEM.I | 'these ladles' |
| | pasí yó | 9.peeling 9.DEM.I | 'these peelings' |

These concords are identical to the ones in (5.35) of singular class 9 nouns. The enumerative concord of class 3 in **mu-pumbí mĩ-sáá** is a specific characteristic of class 3, see (5.23) and (5.24).

Liko has prenasalized consonants (see 2.2.6), which occur in all positions in the noun and in all word classes. The only combinations of initial nasal + consonant in class 9 nouns are those which are analysed elsewhere as prenasalized consonants. Therefore a separate subclass with N- prefix has not been set up.²¹² Swahili loanwords with a N-prefix preceding a consonant not found in the set of Liko prenasalized consonants are adapted to Liko syllable structure, e.g. the Congolese variety of Swahili²¹³ *mfalme* 'king', *msumari* 'nail' and *mchele* 'husked rice' are borrowed as **mu-fálome** '1-king', **mu-sumáni** '3-nail' and **muséle** '9.rice'.

Examples of class 9 nouns with prenasalized consonants and their class 2 + 9 plural forms:

| (5.39) | <u>Class 9</u> | <u>Singular</u> | <u>Class 2 + 9</u> | <u>Plural</u> |
|--------|----------------|---------------------------------|--------------------|----------------------|
| | mbígo | '9.drill' | ḡo-mbígo | '2 + 9-drill' |
| | ndóḡḡ | '9.rainy season' | ḡa-ndóḡḡ | '2 + 9-rainy season' |
| | ngága | '9.chin' | ḡa-ngága | '2 + 9-chin' |
| | ngbóngú | '9.tree, sp.' | ḡo-ngbóngú | '2 + 9-tree, sp.' |
| | nzéḡe | '9.special meal' ²¹⁴ | ḡa-nzéḡe | '2 + 9-special meal' |

Class 9a

The noun-class prefix of class 9a is **ṭ-**. Preceding [+ATR] roots, the vowel is changed into **i-**. When preceded by class 2 **ḡa-**, the noun-class prefix of class 9a is

²¹² Prenasalized consonants also occur in initial position in class 1a nouns. Examples of 1a/2 gender with prenasalized consonants are: **mbumá** '1a.gaboon viper', **ḡa-mbumá** '2-gaboon viper', **ndíḡi** '1a.animal, sp. (living on river banks)', **ḡo-ndíḡi** '2-animal, sp.' and **nganyá** '1a.fish, sp.', **ḡa-nganyá** '2-fish, sp.'

²¹³ Source: Dictionnaire Swahili-Français. Lenselaer (1983).

²¹⁴ I.e. for a male fiancé.

retained and height coalescence of the class 2 and the class 9a vowels takes place.

Examples include:

| (5.40) | <u>Class 9a</u> | <u>Singular</u> | <u>Class 2 + 9</u> | <u>Plural</u> |
|--------|-----------------|--------------------|--------------------|--------------------------|
| | ɪ-dŭgá | '9a-peanut butter' | ʃɛ-dŭgá | '2 + 9:9a-peanut butter' |
| | í-bǎtu | '9a-vine, sp.' | ʃě-bǎtu | '2 + 9:9a-vine, sp.' |
| | i-dǔlu | '9a-custom' | ʃe-dǔlu | '2 + 9:9a-custom' |
| | í-kawé | '9a-scabies' | ʃě-kawé | '2 + 9:9a-scabies' |

Concords of class 9a nouns are the same as those of class 9:

| | | | |
|--------|----------------------|--------------------|-------------------|
| (5.41) | <i>adjective</i> | ɪ-tambǎla yí-dingǐ | 'a big scarf' |
| | | 9a-scarf 9.ADJ-big | |
| | <i>enumerative</i> | ɪ-tambǎla yí-motí | 'one scarf' |
| | | 9a-scarf 9.NUM-one | |
| | <i>associative</i> | ɪ-tambǎla yá-sɪ | 'the whole scarf' |
| | | 9a-scarf 9.ASS-all | |
| | <i>demonstrative</i> | ɪ-tambǎla yɔ | 'that scarf' |
| | | 9a-scarf 9.DEM.I | |

Class 9b

Class 9b contains Infinitives only, which are verbal nouns from a morphological point of view, because they have a noun-class prefix and concord affixes.²¹⁵ They have the same concords as class 9 nouns, but their noun-class prefix is different. Because of these characteristics, they are seen as a subclass of class 9. The noun-class prefix of class 9b is **ká-**.²¹⁶ Before [+ATR] stems the prefix surfaces as **kó-**. The vowel of the class 9b prefix has a H tone irrespective of the tone on the first syllable of the verbal base. Positing class 9b for Infinitives is unusual as in Bantu languages verb Infinitives are generally assigned to class 15.²¹⁷ In Liko, however, both the noun-class prefix and the concords of class 15 are different from the Infinitives. The noun-class prefix of class 15 is **ku-**, whereas the prefix for

²¹⁵ Infinitives also have verbal characteristics such as the possibility to include an object or reflexive prefix as well as verbal extensions.

²¹⁶ I would like to thank André Motingea Mangulu (p.c.) for drawing attention to the similarity between the general preposition **ká** and the class 9b prefix of verbal nouns.

²¹⁷ Schadeberg (2003:80) mentions that class 9 is sometimes employed for Infinitives.

Infinitives is **ká-**. Class 15 concords are **kó-** (adjective), **kó-** (enumerative) and **kwá-** (associative), whereas the Infinitive concords are **yí-** (adjective) and **yá-** (associative), identical to class 9 concords.

Examples of class 9b Infinitives are:

- (5.42) *ká-tuk-á* '9b-take care of s.o.-FV'
ká-túk-á '9b-leave-FV'
kó-dík-ó '9b-show disapproval-FV'
kó-dík-ó '9b-cover-FV'

The concord affixes agreeing with class 9b nouns are exemplified in the following phrases: with an adjective prefix (5.43a) and with an associative prefix (5.43b). Concord of an Infinitive with a numeral has not been attested. Combining an Infinitive with a demonstrative is rejected by my Liko consultants.

- (5.43)a. *ká-lyály-á* *yí-dingĩ*
 9b-graze-FV 9.ADJ-big
 'the big grazing', i.e. eating a lot
- b. *ká-ag-ă* *yá-⁴kú-slí*
 9b-leave-FV 9.ASS-17-downstream
 'the downstream leaving', i.e. going downstream

Class 2+9

The basic form of the prefix of plural class 9 nouns is **ba-**. Preceding [+ATR] roots, the prefix vowel takes the [+ATR] quality and the prefix surfaces as **bo-**. This prefix is analysed as a combination of the class 2 prefix **ba-** and a class 9 prefix, based on the concords of this class which are a combination of class 2 **ba-** and a class 9 prefix:²¹⁸

- (5.44) *class 2 + 9*
- | | |
|--------------------|---------------|
| adjective prefix | <i>ba-yí-</i> |
| enumerative prefix | <i>ba-yí-</i> |
| associative prefix | <i>ba-yá-</i> |
| demonstrative | <i>ba-yó</i> |

²¹⁸ Related Boa has complex 2+9 prefixes as well (Motingea 2005:53).

Class 2 + 9 is the regular noun class for plural of class 9 nouns. Examples of class 2 + 9 nouns are:

| (5.45) | <u>Class 9</u> | <u>Singular</u> | <u>Class 2 + 9</u> | <u>Plural</u> |
|--------|----------------|----------------------|--------------------|--------------------------|
| | kópí | '9.shield' | ɓa-kópí | '2 + 9-shield' |
| | nzúyɪ | '9.body' | ɓa-nzúyɪ | '2 + 9-body' |
| | đúnga | '9.winnowing basket' | ɓo-đúnga | '2 + 9-winnowing basket' |
| | túmó | '9.flood' | ɓo-túmó | '2 + 9-flood' |

Evidence for the analysis as two prefixes, the class 2 prefix **ɓa-** and the class 9 adjective, enumerative or associative prefix comes from the examples below. Only the prefix adjacent to the noun harmonizes to the [+ATR] feature, which indicates that two prefixes are involved.

| | | | |
|--------|----------------------|--|----------------|
| (5.46) | <i>adjective</i> | ɓa-sembé ɓayi-kúkúkú | 'short fences' |
| | | 2 + 9-fishing fence 2 + 9.ADJ-short | |
| | | ɓo-tíko ɓayí-đingĩ | 'many fields' |
| | | 2 + 9-field 2 + 9.ADJ-big | |
| | <i>enumerative</i> | ɓa-sembé ɓayí-sáá | 'three fences' |
| | | 2 + 9-fishing fence 2 + 9.NUM-three | |
| | | ɓo-tíko ɓayí-sáá | 'three fields' |
| | | 2 + 9-field 2 + 9.NUM-three | |
| | <i>associative</i> | ɓa-sembé ɓayá- ⁴ ngbángányá | 'open fences' |
| | | 2 + 9-fishing fence 2 + 9.ASS-open | |
| | | ɓa-kpɔzyɔ ɓayó-ndodí | 'young plants' |
| | | 2 + 9-plant, sp. 2 + 9.ASS-sticky, young | |
| | <i>demonstrative</i> | ɓa-sembé ɓayó | 'those fences' |
| | | 2 + 9.fishing fence 2 + 9.DEM.I | |
| | | ɓa-kpɔzyɔ ɓayó | 'those plants' |
| | | 2 + 9.plant, sp. 2 + 9.DEM.I | |

Class 13

Class 13 does not have a noun-class prefix. Class 13 nouns take the noun-class enclitic **-to**, which is subject to ATR vowel harmony and vowel-height dissimilation (see 5.1.2). Examples are (the class 19 singulars are presented in the third column):

| (5.47) | <u>Class 13</u> | <u>Plural</u> | <u>Class 19</u> | <u>Singular</u> |
|--------|-----------------|-----------------|-----------------|-----------------|
| | gbă-tu | '13.eyebrow-13' | t-gbă-su | '19-eyebrow-19' |
| | kpɔngɔ-tu | '13.bed-13' | t-kpɔngɔ-su | '19-bed-19' |

| | | | |
|------------|-----------------------------|--------------|-----------------------------|
| kpókúkú-tò | '13.skull, forehead- 13' | ɪ-kpókúkú-sò | '19-skull, forehead- 19' |
| tí-tò | '13.whistle-13' | ɪ-sí-sò | '19-whistle-19' |
| bokú-to | '13.skin, bark-13' | i-bokú-so | '19-skin, bark-19' |
| kukǔ-to | '13.clapper on door- 13' | i-kukǔ-so | '19-clapper on door- 19' |
| tikimá-tu | '13.tree, sp.-13' | i-tikimá-su | '19-tree, sp.-19' |

Examples of the concord affixes agreeing with class 13 nouns are:

| | | |
|-------------------------|---|-------------------------|
| (5.48) <i>adjective</i> | bukú-tò ti-kúkúkú | 'short shrubs' |
| | 13.shrub, drug-13 13.ADJ-short | |
| <i>enumerative</i> | bukú-tò tí-sáá | 'three shrubs' |
| | 13.shrub, drug-13 13.NUM-three | |
| <i>associative</i> | bukú-tò tó- ^h pólí | 'light (weight) shrubs' |
| | 13.shrub, drug-13 13.ASS-light (weight) | |
| <i>demonstrative</i> | bukú-tò tò | 'those shrubs' |
| | 13.shrub, drug-13 13.DEM.I | |

Class 14

The basic form of the class 14 prefix is **bu-**. Preceding [+ATR] roots, the prefix vowel takes the [+ATR] quality and the prefix surfaces as **bu-**. Most abstract nouns are in class 14. The majority of class 14 nouns are plants and trees (the fruit of which are often found in class 5). Examples of class 14 nouns are: (in brackets, the noun-class prefixes of the plurals in class 6 are given):

| | |
|--------------------|----------------------|
| (5.49) bu-bǎ | '14-appetite' |
| bu-dǐ | '14-cold' |
| bu-gɔgɔ | '14-sunset, evening' |
| bu-dílidí | '14-doubt' |
| bu-bombu, (ma-) | '14-fruit tree, sp.' |
| bu-bedubedú, (mo-) | '14-fruit vine, sp.' |
| bu-mbílí, (ma-) | '14-fruit tree, sp.' |
| bu-mbútí, (mo-) | '14-tree, sp.' |

There are two class 14 nouns with an initial vowel in my data: **bu-utú** (**ma-utú**) '14-tree, sp.' and **buwalí** '14:sperm'.

Examples of the concord affixes agreeing with class 14 nouns are:

| | | |
|-------------------------|------------------------------------|-------------------------|
| (5.50) <i>adjective</i> | ɓu-tambú ɓu-kúfú | 'a short tree' |
| | 14-tree, sp. 14.ADJ-short | |
| <i>enumerative</i> | ɓu-ɓála ɓí-motí | 'one cohabitation' |
| | 14-cohabitation 14.NUM-one | |
| <i>associative</i> | ɓu-mbúti ɓó- ^h póli | 'a light (weight) tree' |
| | 14-tree, sp. 14.ASS-light (weight) | |
| <i>demonstrative</i> | ɓu-mbúti ɓó | 'that tree' |
| | 14-tree, sp. 14.DEM.I | |

Class 15

The basic form of the class 15 prefix is **ku-**. Preceding [+ATR] roots, the prefix vowel takes the [+ATR] quality and the prefix surfaces as **ku-**. All class 15 nouns have an enclitic, which is underlyingly **-ko** (see 5.1.2). Examples of class 15 nouns are:

| | | | |
|---------------------------|--------------------|----------|----------------|
| (5.51) ku-ɓisyá-ku | '15-smithy-15' | ma-ɓisyá | '6-smithy' |
| ku-kwá-ku | '15-death-15' | mo-kwó | '6-death' |
| ku-ngá-ku | '15-fish hook-15' | ma-ngá | '6-fish hook' |
| kú ^h wá-ku | '15:thorn-15' | mówo | '6:thorn' |
| kū-mǎ ^h ngú-ko | '15:branch-15' | mǎngu | '9.branch' |
| kwá ^h lá-ku | '15:nail, claw-15' | mála | '6:nail, claw' |

The final example shows that the vowel of the noun-class prefix is desyllabified preceding noun-initial /a/.

Examples of the concord affixes agreeing with class 15 nouns are:

| | | |
|-------------------------|---------------------------------|------------------------|
| (5.52) <i>adjective</i> | ku-pasí-ko kú-dingĩ | 'a big peeling' |
| | 15-peeling 15.ADJ-big | |
| <i>enumerative</i> | ku-pasí-ko kú-motí | 'one peeling' |
| | 15-peeling 15.NUM-one | |
| <i>associative</i> | ku-vĩ-ko kwó- ^h póli | 'a light (weight) net' |
| | 15-net 15.ASS-light (weight) | |
| <i>demonstrative</i> | ku-vĩ-ko kwó | 'that net' |
| | 15-net 15.DEM.I | |

Class 17

The basic form of the class 17 prefix is **kú-**.²¹⁹ Preceding [+ATR] roots, the prefix vowel takes the [+ATR] quality and the prefix surfaces as **kú-**. A plural form of nouns in class 17 is rare, there are no examples in natural or translated texts in my data. Using elicitation, the noun-class prefix of the plural is class 2 **ba-**, which precedes the class 17 prefix and the noun stem. The vowel of the plural prefix does not assimilate to the [+ATR] value of the noun, e.g. **ba-kú-bi** 'other riversides' because of the presence of the class 17 prefix.

| | | |
|--------|-----------------------------------|--------------------------|
| (5.53) | kú-ḡombólo | '17-back' |
| | kú-gǔ, (ba-) | '17-top' |
| | kú-sílí | '17-downstream' |
| | kú-syáku | '17-side across a river' |
| | kú-sǎ | '17-inside' |
| | kú-bi, (ba-) | '17-riverside' |
| | kú-bumǔtí, (ba-) | '17-side' |
| | kú-mbúso | '17-back' |
| | kú-nzi | '17-outside' |
| | kú-silí | '17-bottom' |
| | kú-syokoto ²²⁰ , (ba-) | '17-bottom of a bed' |
| | kámbwa | '17:front' |

The nouns in class 17 are locative nouns.²²¹ They function syntactically as adjuncts. The productive locative system in Liko uses the general preposition **ká**. The prefix **kú-** of noun-class 17 cannot be combined with nouns of other noun classes.

²¹⁹ One of the location adverbs has the same form.

²²⁰ An alternative form is **kútokosyo**.

²²¹ According to the definitions used by Gregoire in her study *Les locatifs en bantou*, the class 17 forms in Liko are 'locatifs restreints' because "il est constitué à partir d'un *substantive restraint*, c'est-à-dire d'un substantive que le système utilise exclusivement ou principalement en locative avec des sens comme "au-dessus (de)", "au-dessous (de)", "dehors", "à l'intérieur (de)" etc.." (1975:4). I have used the term locative nouns because Liko does not have the other possibilities she mentions, i.e. locative nouns which have a locative prefix instead of their noun-class prefix, or nouns with a locative pre-prefix. There

The concord affixes agreeing with class 17 nouns are:

| | | |
|-------------------------|-----------------------------|----------------|
| (5.54) <i>adjective</i> | kú-gǔ yí-kédé | 'a small top' |
| | 17-top 17.ADJ-small | |
| <i>enumerative</i> | kú-gǔ yí-sáá ²²² | 'three tops' |
| | 17-top 17.NUM:three | |
| <i>associative</i> | kú-gǔ wa-t-kpakpá-su | 'top of a hat' |
| | 17-top 17.ASS-19-hat-19 | |
| <i>demonstrative</i> | kú-gǔ yó | 'that top' |
| | 17-top 17.DEM.I | |

The associative prefix **wa-** in **kú-gǔ wa-t-kpakpá-su** 'top of a hat' is the regular associative concord for class 17.

I assume that in **kám̄bwa** '17:front', the vowel of the noun-class prefix has been lost through V₁-elision (see 3.3.1). **kám̄bwa** is a class 17 noun, because it takes the same concords as the other nouns in class 17, e.g. **kám̄bwa yí-kédé**, 17:front 17.ADJ-small, 'a small front side',²²³ and **kám̄bwa wo-túmó**, 17:front 17.ASS-9.flooding, 'before the flooding', literally, 'the front side of flooding'.

Class 19

The basic form of the class 19 prefix is **t-**. Preceding [+ATR] roots, the prefix vowel takes the [+ATR] quality and the prefix surfaces as **i-**. Eight class 19 nouns have or optionally have prefix **st-**. Class 19 nouns take the same noun-class enclitic as class 7, **-sɔ**, which is subject to ATR vowel harmony and vowel-height dissimilation (see 5.1.2).

Examples of class 19 nouns are (the class 13 plural forms are presented in the third column):

| | | | | |
|--------|-----------------|---------------------|-----------------|---------------------|
| (5.55) | <u>Class 19</u> | <u>Singular</u> | <u>Class 13</u> | <u>Plural</u> |
| | t-ɓalá-sɔ | '19-stool-19' | ɓalá-tɔ | '13.stool-13' |
| | (s)t-bukú-sɔ | '19-shrub, drug-19' | bukú-tɔ | '13.shrub, drug-13' |

is no locative prefix in the language attested with noun classes other than 17.

²²² The numeral indicates plural, but **kúgǔ** has class 17 (singular) form.

²²³ Also, with adjective-to-adverb derivation, 'a bit forward'.

| | | | |
|-------------|--------------------|--------|----------------------|
| (s)ɪ-múí-sɔ | 19-circumcision-19 | múí-tɔ | '13.circumcision-13' |
| si-kpí-so | '19-hat-19' | kpí-to | '13.hat-13' |

Examples of the concord affixes agreeing with class 19 nouns are:

| | | |
|-------------------------|-------------------------------|----------------------|
| (5.56) <i>adjective</i> | (s)ɪ-múí-sɔ sí-dingĩ | 'a big circumcision' |
| | 19-circumcision-19 19.ADJ-big | |
| <i>enumerative</i> | (s)ɪ-bukú-sɔ sí-motí | 'one shrub' |
| | 19-shrub-19 19.NUM-one | |
| <i>associative</i> | (s)ɪ-bukú-sɔ sá-nza | 'a good shrub' |
| | 19-shrub-19 19.ASS-good | |
| <i>demonstrative</i> | (s)ɪ-múí-sɔ sɔ | 'that circumcision' |
| | 19-circumcision-19 19.DEM.I | |

There is a regular correspondence between the plosives /t/ and /d/ in some class 13 noun roots (plurals of nouns in the gender 19/13) and the fricatives /s/ and /z/ in class 19 noun roots. There are only a few cases in my data where it occurs, listed here:

| | | | |
|------------------|--------------------------|----------|--------------------------|
| (5.57) ɪ-sásá-su | '19-feather-19' | tátá-tu | '13.feather-13' |
| ɪ-sí-sɔ | '19-whistle-19' | tí-tɔ | '13.whistle-13' |
| ɪ-zagǎ-su | '19-raffia arrow-19' | dagǎ-tu | '13.raffia arrow-13' |
| (s)ɪ-zingi-só | '19-bunch of bananas-19' | dingi-tó | '13.bunch of bananas-13' |

5.1.2 Noun-class enclitics

A characteristic of the Liko noun-class system is the existence of noun-class enclitics in addition to noun-class prefixes. Noun-class enclitics²²⁴ are also reported in related Boa (C44) (Motingea 2005:50ff) and in Pagabete (C401) (Boone and Olson 1995:20). All or almost all nouns in classes 7, 13, 15 and 19 have a noun-class enclitic. In classes 3, 5, 6 and 9, nouns with a noun-class enclitic are rare. Nouns in classes 6 and 9 with a noun-class enclitic are invariably plurals, pairing

²²⁴ Also referred to as nominal suffixes. I regard them as enclitics because they do not assimilate to the [+ATR] value of roots in the same way as suffixes do and because they probably originate from type I demonstratives.

with classes 3, 5 or 15. An exhaustive list of nouns with a noun-class enclitic in classes 3, 5, 6 and 9 in my data is given in this section.

The underlying shape of noun-class enclitics is **-Cɔ**, with surface realizations /ɔ/, /o/ and /u/. The realization of the vowel of a noun-class enclitic is determined by the values of the preceding vowel for [ATR] and [high], see 3.2.4.3 for description and analysis of the underlying vowel and for vowel-height dissimilation. Surface realizations of the noun-class enclitics are given in Table 14. For comparison, the type I demonstratives, possibly at the origin of the noun-class enclitics in Liko, are added in the third column.

Table 14 Noun-class enclitics - surface forms

| Class | Enclitic | DEM.I |
|-------|--------------------|-------|
| 3 | -mɔ | mɔ |
| 5 | -lɔ | lɔ |
| 6 | -mo, -mɔ | mɔ |
| 7 | -sɔ, -so, -sɯ | sɔ |
| 9 | -yɔ, -yo, -yɯ, -yɪ | yɔ |
| 13 | -tɔ, -to, -tɯ | tɔ |
| 15 | -kɔ, -ko, -kɯ | kɔ |
| 19 | -sɔ, -so, -sɯ | sɔ |

The noun classes where the majority of nouns have a noun-class enclitic is attested, i.e. classes 7, 13, 15 and 19, show all three potential realizations of the underlying vowel /ɔ/. In class 9, three realizations are also found, but /ɔ/ is missing in classes 3 and 6 and /o/ is absent in class 5. The noun-class enclitic of class 9 has a fourth surface form, **-yɪ**.

The previous section contains examples of noun-class enclitics for classes 7, 13, 15 and 19. The noun stems in classes 3, 5, 6 and 9 with an enclitic in my data are listed below, together with their singular or plural counterpart.

Class 3:

- (5.58) mɔ-mbɪ '3-basket' mbɪ-yɔ '9-basket-9'
 mu-gɪ '3-village' gɪ-yɔ '9.village-9'

| | | | |
|------------|------------------|---------|------------------|
| mú-kpú-mú | '3-stick, sp.-3' | kpú-yú | '9.stick, sp.-9' |
| mú-dótó-mú | '3-bow-3' | dótó-yú | '9.bow-9' |
| mú-kéké-mú | '3-lath-3' | kéké-yú | '9.lath-9' |
| mú-kókó-mú | '3-trunc-3' | kókó-yú | '9.trunc-9' |

In the above set, the expected forms of the noun-class enclitic of **-kpú-** would be **-mó** for class 3 and **-yó** for class 9. With respect to the last class 9 nouns above, the vowel of the enclitic, /i/ instead of /u/, is ideosyncratic.²²⁵

Class 5:

| | | | | |
|--------|----------|-------------|----------|-------------|
| (5.59) | lú-ká-lú | '5-ember-5' | ma-ká-mú | '6-ember-6' |
| | lú-tá-lú | '5-stone-5' | ma-tá-mú | '6-stone-6' |

Possible petrified forms of the noun-class enclitic of class 5 are (plural class 6 nouns are given in brackets):

| | | | |
|--------|---------------|------------------------|-----------------|
| (5.60) | lú-gílíló | '5-rod to lock a door' | (ma-gílíló) |
| | lú-bebélu | '5-summit, top' | (ma-bebélu) |
| | lú-kakalú | '5-big anthill' | (ma-kakalú) |
| | lú-ngbengbělu | '5-tree, sp.' | (ma-ngbengbělu) |

Apart from the two class 6 plurals of class 5 nouns given in (5.59), there is one other class 6 noun in my data with a noun-class enclitic: **mo-í-mo** '6-bark-6', the plural of **ku-í-ko** '15-bark-15'.

Certain nouns with a noun-class enclitic display a peculiar tonal phenomenon which I have not been able to understand: a tone realized at a pitch between High and Low on the final TBU of the noun. In the examples, the notation of a non-automatic downstepped H tone is used. I will present the details and leave this for further research. Table 15 presents an overview of what is found in my data:

²²⁵ Class 15 also has some unexpected vowels in the surface form of its noun-class enclitic. The two cases in my data are: **ku-lekú-ke** '15-left side-15' and **ku-ngú-ku** '15-chequered mat-15' (they have /e/ or /u/, instead of /o/).

Table 15 Surface tone on the final TBUs of noun stems and noun-class enclitics²²⁶

| Underlying tone Noun stem | Noun class | Surface tone Noun stem | Surface tone Noun-class enclitic |
|------------------------------|------------------|---------------------------|-------------------------------------|
| L.L | 13 and 19 | L.L | H |
| L.H or L + H | 7, 13, 15 and 19 | L.H or LH | L |
| H | 7, 13, 15 and 19 | H | L |
| H.L | 7, 13, 15 and 19 | H.'H | L |
| H.H | 13 and 19 | H.H | L |
| (L.)H.H | 15 | (L.)H.'H | L |

One noun with a noun-class enclitic has a L tone pattern. The tone on its noun-class enclitic is High: **(s)j-zingi-só** '19-bunch of bananas-19', **dingi-tó** '13.bunch of bananas-13'.²²⁷

A noun with a H tone on the final TBU preceded by a L tone, does not show tonal changes when it has a noun-class enclitic, for example:

- (5.61)a. kú-bísyá-ku '15-smithy-15' ma-bísyá '6-smithy'
 ku-lulú-ko '15-shadow-15' mo-lulú '6-shadow'
 kú-nzumbú-kó '15-plant, sp.-15' nzumbú '9.plant, sp.'
 kú-pasí-kó '15-peeling-15' pásí '9.peeling'
 i-bikyá-su '19-fury, madness-19' bikyá-tu '13.fury, madness-13'
 i-gumí-so '19-root, stump-19' gumí-to '13.root, stump-13'
- b. st-bě-su '7-thigh-7' št-bě '8-thigh'
 ku-ví-ko '15-fishing net-15'²²⁸ mo-ví '6-fishing net'
 t-kš-su '19-fish shelter-19'²²⁹ kš-tu '13.fish shelter-13'

Examples of monosyllabic nouns with a H tone are:

²²⁶ Nouns in classes 3, 5, 6 and 9 with noun-class enclitics are not included in this table because of they are rare and nouns in these classes often have lexicalized enclitics.

²²⁷ The surface tone on type 1 demonstratives is also High following a noun with a L tone pattern. Otherwise, the surface tone on a type I demonstrative is identical to the tone that precedes it, which is different from the surface tone of noun-class enclitics. See 6.1.2.

²²⁸ I.e. a circular fishing net.

²²⁹ Also 'compost'.

- (5.62) su-lyá-su '7-greed, cohabitation-7' ɓu-lyá '8-greed, cohabitation'
 ku-yá-ku '15-fishing net-15' mo-yó '6-fishing net'
 si-kpí-so '19-hat-19' kpí-to '13.hat-13'

A number of nouns with a noun-class enclitic surfaces with a tone between High and Low (in the examples represented as a non-automatic downstepped H tone) on the final stem TBU, whereas the noun in the paired class with the opposite number has a L tone:

- (5.63) sílosí⁴lá-su '7:burnt log-7' bílobílo '8:burnt log'
 sí⁴ngá-su '7:neck, throat-7' bíngo '8:neck, throat'
 kú-ɓó⁴kú-kó '15-hand, arm-15' ma-ɓóku '6-hand,arm'
 kú-kpǔ⁴tá-ku '15-cassava-15' ma-kpǔta '6-cassava'
 kwá⁴lá-ku '15:nail, claw-15' mála '6:nail, claw'
 kú-mǎ⁴ngú-kó '15:branch-15' mǎngu '9.branch'
 kú-nzě⁴nzé-ku '15-leaf, sp.-15' nzěnze '9.leaf, sp.'
 kú-pá⁴kú-kó '15-leaf, sp.-15' ma-páku '6-leaf, sp.'
 kú⁴wá-ku '15:thorn-15' mówo '6:thorn'

If the noun-class enclitics would have a preceding floating H tone, one would expect that the final TBU in the above examples would be realized with a LH tone. Elsewhere in the language, leftward linking of a H tone to an associated L tone surfaces as a LH tone, not as a tone between High and Low.

One noun, **ku-tíli-ko** '15-ear-15', **mo-tíli** '6-ear', has a H tone on the first and a L tone on the second syllable, regardless of the presence of an enclitic. One other noun, **(s)i-kú⁴bá-su** '19-chest, cough-19', **kú⁴bá-tu** '13.chest, cough-13', has a tone between High and Low preceding the enclitic in both parts of the gender.

Finally, the last two sets have two or more TBUs with a surface H tone preceding a noun-class enclitic. The first set shows a sequence of two H tones in classes 19 and 13. In class 15 nouns, the second High is non-automatic downstepped.

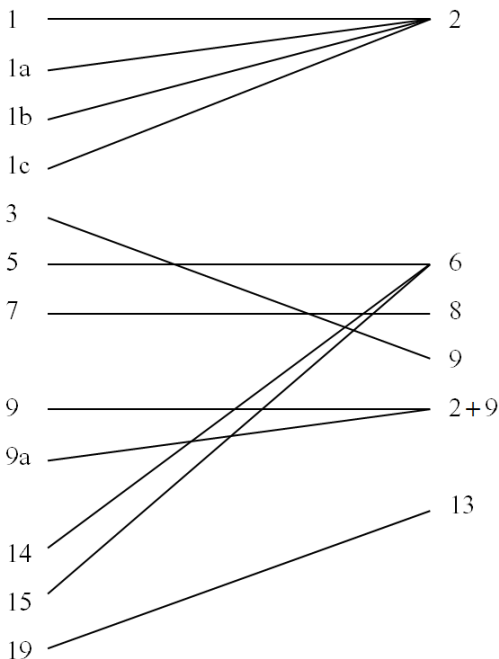
- (5.64) ɪ-kúkú-só '19-wooden musical instrument-19' kúkú-tó '13.wooden musical instrument-13'
 su-panání-só '19-love-19' panání-tó '13.love-13'

| | | | | |
|--------|----------------|-------------------------|-------------|-------------------------|
| | i-kpóngóbá-su | '19-shell, carapace-19' | kpóngóbá-tu | '13.shell, carapace-13' |
| | (s)u-dúkúfí-sò | '19-hip, waist-19' | dúkúfí-tò | '13.hip, waist-13' |
| (5.65) | ku-ká'sá-ku | '15-leaf, sp.-15' | ma-kásá | '6-leaf, sp.' |
| | ku-mbó'ngú-ko | '15-mushroom, sp.-15' | mbó'ngú | '9.mushroom, sp.' |
| | ku-kpukú'má-ku | '15-cassava-15' | kpukúmo | '9.cassava' |
| | ku-sí'ngí-ko | '15-shoulder strap-15' | mo-síngí | '6-shoulder strap' |
| | ku-tá'ngá-ku | '15-aubergine-15' | a-tángá | '1b-aubergine' |
| | ku-mbú'tí-ko | '15-plant, sp.-15' | o-mbú'tí | '1b-plant, sp.' |

5.1.3 Noun-class pairing

Nouns are not only lexically specified for class, but also for gender, i.e. a pairing of two noun classes, where one refers to a single instance and the other to multiple instances of a given noun. The major noun-class pairing (gender) rules in Liko can be visualized as:

(5.66)



These major noun-class pairing rules are:

| (5.67) <u>Single</u> | <u>Multiple</u> | <u>Single</u> | <u>Multiple</u> |
|-------------------------|--------------------------|-------------------------|----------------------------|
| Noun _{SG CL1} | → Noun _{PL CL2} | Noun _{SG CL7} | → Noun _{PL CL8} |
| Noun _{SG CL1a} | → Noun _{PL CL2} | Noun _{SG CL9} | → Noun _{PL CL2+9} |
| Noun _{SG CL1b} | → Noun _{PL CL2} | Noun _{SG CL9a} | → Noun _{PL CL2+9} |
| Noun _{SG CL1c} | → Noun _{PL CL2} | Noun _{SG CL14} | → Noun _{PL CL6} |
| Noun _{SG CL3} | → Noun _{PL CL9} | Noun _{SG CL15} | → Noun _{PL CL6} |
| Noun _{SG CL5} | → Noun _{PL CL6} | Noun _{SG CL19} | → Noun _{PL CL13} |

An example of each pairing is given below (with for each class a [-ATR] and a [+ATR] noun); other examples can be found in the previous two sections.

| (5.68) <u>Single</u> | | <u>Multiple</u> | |
|----------------------|--------------------------|-----------------|------------------------|
| mu-ganzá | '1-blood brother' | ɓa-ganzá | '2-blood brother' |
| mu-ɓígi | '1-twin' | ɓo-ɓígi | '2-twin' |
| níné | '1a.aunt' | ɓa-níné | '2-aunt' |
| míkí | '1a.child' | ɓo-míkí | '2-child' |
| á-gbɔgbɔ | '1b-footboard' | ɓǎ-gbɔgbɔ | '2:1b-footboard' |
| o-ngútu | '1b-metal bracelet' | ɓo-ngútu | '2:1b-metal bracelet' |
| í-ɓeɓí | '1c-snail, sp.' | ɓě-ɓeɓí | '2:1c-snail, sp.' |
| í-danga | '1c-insect, sp.' | ɓě-danga | '2:1c-insect, sp.' |
| mu-dǔkpɔ | '3-walking stick' | dǔkpɔ | '9.walking stick' |
| mu-kúwo | '3-bone' | kúwo | '9.bone' |
| li-kpɔmú | '5-anvil' ²³⁰ | ma-kpɔmú | '6-anvil' |
| li-ngusú | '5-elbow' | mo-ngusú | '6-elbow' |
| si-bě-su | '7-thigh-7' | ɓi-bě | '8-thigh' |
| si-wá-su | '7-bell for a hound-7' | ɓi-wó | '8-bell for a hound' |
| mándé | '9.track' | ɓa-mándé | '2+9-track' |
| luɓú | '9.debt' | ɓo-luɓú | '2+9-debt' |
| ɪ-dúgá | '9a-peanut butter' | ɓe-dúgá | '2+9:9a-peanut butter' |
| í-kawé | '9a-scabies' | ɓě-kawé | '2+9:9a-scabies' |
| ɓu-kpótɔ | '14-vine, sp.' | ma-kpótɔ | '6-vine, sp.' |

²³⁰ I.e. a piece of metal used as anvil.

| | | | |
|-------------|----------------------------|-----------|----------------------------|
| bu-ndodĩ | '14-tree, sp.' | mo-ndodĩ | '6-tree, sp.' |
| ku-mbigã-ku | '15-shoulder-15' | ma-mbigã | '6-shoulder' |
| ku-lí-ko | '15-knee-15' | mo-lí | '6-knee' |
| si-pangã-su | '19-hide of a palm nut-19' | pangã-tu | '13.hide of a palm nut-13' |
| i-tikimá-su | '19-tree, sp.-19' | tikimá-tu | '13.tree, sp.-13' |

All classes except classes 1, 1c, 7 and 9a occur as one-class genders. One-class genders with many nouns are 1a, 5, 9, 15 and 17. Examples include:

| | | | |
|---------------|---------------------|------------|-------------------------|
| (5.69) d̄inga | '1a.period' | b̄ingo | '8:climbing harness' |
| ōbílí | '1a.life, world' | ɔ̄ngó | '9.distance' |
| a-d̄ambi | '1b-soft clay' | kungũku | '9.mist' ²³¹ |
| a-dula | '1b-leprosy' | ɔ̄-nginí | '2 + 9-pastime' |
| ɔ̄a-múdége | '2-melody' | ɔ̄a-sikpí | '2 + 9-jokes' |
| ɔ̄o-ngulú | '2-infected wound' | tiyã-tu | '13.pus-13' |
| mu-liɔ̄ | '3-end' | tukú-tɔ | '13.clay-13' |
| m̄u-tíwɪ | '3-advice' | ɔ̄u-ngú | '14-sweat' |
| lɪ-ɔ̄ése | '5-fate' | ɔ̄u-tɔtɔ | '14-laugh' |
| lɪ-swá | '5-Pygmy behaviour' | ku-luká-ku | '15-sculpture-15' |
| ma-kána | '6-wine' | ku-dudú-ko | '15-mould-15' |
| mo-lingó | '6-oil' | | |

All examples of class 17 in my data are listed in (5.53) above. For Infinitives (class 9b), see examples in (5.42).

It is remarkable that class 4 is missing in the Liko noun-class system. Class 9 serves as the plural noun class for class 3, with a few exceptions, listed here: **m̄** '3:head', **ɔ̄a-m̄** '2 + 9-head', **m̄ma** '3:belly', **ɔ̄a-m̄ma** '2 + 9-belly', **m̄-p̄ɔ̄sɪ** '3-shrub, sp.', **ɔ̄a-p̄ɔ̄sɪ** '2 + 9-shrub, sp.', **m̄u-sɔ̄pú** '3-intestine', **ɔ̄a-sɔ̄pú** '2 + 9-intestine'. Class 3 concord for **m̄** is shown in the expressions **na m̄ má-p̄** 'with 3:head 3.ASS-strong', meaning: 'stubborn'. In addition to regular pairing with class 5, class 6 is the default plural for classes 14 and 15.

²³¹ Probably from Congo Swahili *ukungu* 'humidity, mist'.

The noun-class pairing rules account for the great majority (over 95%) of dual-class genders. The most common exception to these rules is that certain nouns in classes 5 and 15 pair with class 9 (instead of class 6), if the individual items cannot be counted or if they are considered as a collection. It often but not exclusively concerns flora:

| (5.70) <u>Single</u> | | <u>Multiple</u> | |
|----------------------|-----------------------------------|-----------------|------------------|
| lɪ-ɡɪní | '5-ripe banana' | ɡɪní | '9.ripe banana' |
| lɪ-ndikó | '5-palm-nut pit' | ndikó | '9.palm-nut pit' |
| lɪ-pándá | '5-one spot of scabies' | pándá | '9.scabies' |
| lɪ-séle | '5-grain of rice' | muséle | '9.rice' |
| ku-kpukú'má-ku | '15-cassava-15' | kpukúmo | '9.cassava' |
| kū-ngungí-kò | '15-plant, sp.-15' ²³² | ngungí | '9.plant, sp.' |

Most nouns referring to objects in which individual items are not distinguished, are indeed found in class 9. This can be seen in the following one-class gender nouns:

| | |
|--------------|------------------|
| (5.71) ɓángú | '9.blood' |
| butulú | '9.mud' |
| gbángítá | '9.thick forest' |
| musogǔ | '9.rubbish' |
| mbúmí | '9.sand' |

There are, however, also cases in which the noun referring to a single instance is in class 5, whereas the noun for the quantity of which individual items cannot be counted is found in classes 6 or 13, e.g.:

| | | | |
|------------------|--------------------------|-----------------------|-------------------|
| (5.72) lɪ-mbúnga | '5-hailstone' | ma-mbúnga | '6-hail' |
| lɪ-ngatá | '5-single uncombed hair' | ma-ngatá | '6-uncombed hair' |
| lɪ-tónító | '5-piece of garbage' | tónító ²³³ | '13.garbage' |
| lɪ-tú'kátu | '5-single hair' | tú'kátu | '13.hair' |

²³² The leaves of this plant are used as toilet paper.

²³³ The class 5 forms in this and the next example shows that the class 13 enclitic **-to** has become part of the noun stem. In **tú'kátu**, the underlying vowel of the second syllable is /o/.

Class 6 contains liquids such as (they are one-class genders):

| | | |
|--------|----------|----------------------------|
| (5.73) | ma-káli | '6-mix of water and ashes' |
| | ma-kána | '6-wine' |
| | mo-lingó | '6-oil' |
| | ma-mínyo | '6-dew' |
| | ma-nyé | '6-urine' |
| | ma-wése | '6-quality oil' |

Some classes 5 or 15 nouns have a plural in two different noun classes. In these cases, class 6 expresses quantities in which individual items can be counted. Class 9 is used for collections in which individual items are not distinguished. For countable quantities, class 6 is used:

| | | | | | |
|--------|--------------------------|-----------------|--------|-------------|----------------|
| (5.74) | <u>Single</u> | <u>Multiple</u> | | | |
| | lt-gúlílo | ma-gúlílo má-bă | 6-rod | 6.NUM-two | 'two rods' |
| | 5-rod | ma-gúlílo ní-mó | 6-rod | COP-6.DEM.I | 'these rods' |
| | ku-ká ⁴ sá-ku | ma-kásá má-bă | 6-leaf | 6.NUM-two | 'two leaves' |
| | 15-leaf, sp.-15 | ma-kásá ní-mó | 6-leaf | COP-6.DEM.I | 'these leaves' |

For collections, class 9 is used (see 5.1.7):

| | | | | | |
|--------|--------------------------|--------------------------------|--------|-------------|----------------|
| (5.75) | <u>Single</u> | <u>Multiple</u> | | | |
| | lt-gúlílo | gúlílo yí-dingí ²³⁴ | 9.rod | 9.ADJ-big | 'many rods' |
| | 5-rod | gúlílo ní-yó | 9.rod | COP-9.DEM.I | 'these rods' |
| | ku-ká ⁴ sá-ku | kásá yá- ⁴ kpókú | 9.leaf | 9.ASS-big | 'big leaves' |
| | 15-leaf, sp.-15 | kásá ní-yó | 9.leaf | COP-9.DEM.I | 'these leaves' |

There are very few nouns for which the singular and the plural are expressed by a different noun stem. The cases in my data are (the plurals are non-countable):

| | | | | | |
|--------|---------------|-----------------------|-----------------|-------------------|--|
| (5.76) | <u>Single</u> | | <u>Multiple</u> | | |
| | lúkí | '5:thing, object' | mukúmbó | '9.thing, object' | |
| | mu-sákti | '3-piece of firewood' | mísá | '9.firewood' | |

²³⁴ *gúlílo yí-bă 9.rod 9.NUM-two is ungrammatical because the use of class 9 in this gender indicates an uncountable quantity.

5.1.4 Noun-class mergers and near mergers

There is one merger and two near mergers in the Liko noun-class system. The merger involves class 4. Class 4, commonly found in the gender 3/4 in Bantu languages, has merged completely with plural class 9. The class 4 prefix has been lost.²³⁵

The near mergers involve classes 7/8 and 19/13. Both classes contain a few nouns, a dozen (0.6% of the data set of nouns) in the case of class 7 and less than thirty in the case of class 19. A merger involving 7/8 is common in the area where Liko is spoken.²³⁶ Nouns in 7/8 and 19/13 may have merged with gender 1c/2 (animate) or 9a/2 + 9 (inanimate).

Possible class 7 or 19 to class 1c (and 8 or 13 to 2) mergers are:

| | | | | |
|--------|---------|-----------------------|----------|-------------------------|
| (5.77) | í-ḃeḃí | '1c-snake, sp.' | ḃé-ḃeḃí | '2:1c-snake, sp.' |
| | í-mangé | '1c-starling' | ḃě-mangé | '2:1c-starling' |
| | i-ḃulú | '1c-black snake, sp.' | ḃe-ḃulú | '2:1c-black snake, sp.' |
| | i-tungé | '1c-fish, sp.' | ḃe-tungé | '2:1c-fish, sp.' |

Possible class 7 or 19 to class 9a (and 8 or 13 to 2 + 9) mergers are:

| | | | | |
|--------|------------|------------------------|-------------|---------------------------------|
| (5.78) | ɪ-kpangula | '9a-rhythm instrument' | ḃe-kpangula | '2 + 9:9a-rhythm instrument' |
| | ɪ-yagí | '9a-wild yam, sp.' | ḃe-yagí | '2 + 9:9a-wild yam, sp.' |
| | i-síḃé | '9a-rainbow' | ḃe-síḃé | '2 + 9:9a-rainbow' |
| | i-zǒmbu | '9a-vine, sp.' | ḃe-zǒmbu | '2 + 9:9a-vine, sp.' |

²³⁵ A trace of class 4 prefix may be the enumerative prefix **mí-**: **mu-gi mí-ḃá** 3-village 3.NUM-two 'two villages'.

²³⁶ Maho (1999:166): "Attested mergers and near-mergers involving class 7 are chiefly restricted to the rainforest area. (...) When it comes to mergers and near-mergers involving class 8 we find an interesting east-west divide. Mergers and near-mergers involving classes 4 and 8 are chiefly restricted to the western Bantu area, while mergers and near-mergers involving classes 8 and 10 are chiefly found in the eastern Bantu area."

The noun classes 7 and 19 are in the process of merging. Their concords are identical, which corresponds with the second stage of merging mentioned in Kadima (1969:121). The optional /s/ preceding the noun-class prefix **ɬ-** of five class 19 nouns, three class 19 nouns with prefix **st-** and the class 13 suffix of two class 8 nouns reflect the beginning of the next stage.

Noun-class distribution figures show that most nouns belong to one of the genders 1/2, 5/6 and 9/2 + 9 (including subclasses of 1 and 9), in total over two thirds of the nouns in my data. They are followed by the genders 3/9 and 14/(6). The smallest genders are 7/8, 15/(6), 17 and 19.

5.1.5 Noun classes and semantic domains

Table 16 displays the semantic categories often found in the noun classes:

Table 16 Noun classes and semantic categories

| Class | Semantic category |
|-------|--|
| 1 | human, animals, birds, fish |
| 1a | human, animals, birds, fish, agent nouns |
| 1b | human, animals, birds, fish, various |
| 1c | human, animals, birds, fish |
| 2 | <i>plural of class 1 and subclasses of class 1</i> |
| 3 | plants, nature, body parts |
| 5 | plants, nature, culture, body parts, instruments, (parts of) constructions, illnesses, manner nouns |
| 6 | <i>plural of classes 5, 14 and 15</i> |
| 7 | body parts, instruments, plants, nature, culture |
| 8 | <i>plural of class 7</i> |
| 9 | culture, instruments, (parts of) constructions, illnesses, nature, needs, quantity, time, body parts, action nouns |
| 9a | culture, instruments, plants, nature, emotions, illness |
| 9b | Infinitives |
| 2 + 9 | <i>plural of class 9</i> |
| 13 | <i>plural of class 19</i> |
| 14 | abstract nouns, plants |
| 15 | paired body parts, plants, fishing gear |

| | |
|----|--|
| 17 | locative nouns |
| 19 | body parts, instruments, plants, nature, culture |

Nouns in class 1a with **nV-** proclitic involve mainly small fauna and plants, and some objects. Nouns in class 1b (prefix **a-**) have in addition flora, jewelry and various other categories. Nouns in class 1c (prefix **ɿ-**) almost always belong to the semantic category of animates.

There are several classes with body parts, each class having specific semantic characteristics. The body parts in class 3 are bones, sinews, muscles, back, belly and tail. Body parts in class 5 are parts of the face, parts that can bend (elbow, etc.), inner and taboo parts. Nouns designating different kinds of illness in class 5 mainly refer to pains and boils, related to inner parts. The word for 'taboo' itself also belongs to this class: **li-ginyó**. In class 9, the extremities of the body are found, like finger, foot, nose, ear lobe (also: tusk, cock's comb) and words for 'something on the skin', like a moustache, eyelashes, a scar. Class 15 has paired body parts (and the words for left and right). Most body parts in class 19 relate to the skin.

Nouns referring to major stages in life are found in different classes, e.g. **li-búkúfí** '5-giving birth', **(s)ɿ-móf-so** '19-circumcision-19', **vonóni** '9-marriage', **i-bisókú** '9a-official marriage', **ku-kwá-ku** '15-death-15'.

The nature words in class 9 include the directions **zibó** '9.north', **ɿ-ngéngé** '9a-east', **zebu** '9.south' and **dumbé** '9.west'.

Two human qualities, in class 7 and in class 19, are derived from verbs, **si-lyá-su** '7-greed, cohabitation, overeating-7' from **-lí-** 'eat' and **si-panání-so** '19-love-19' from **-pa-** 'want' with a reduplicated Associative extension **-an-** with reciprocal meaning.

All nouns in class 17 are locative nouns.

5.1.6 Loanwords

Liko has borrowed words from several languages, among others from neighbouring Mangbetu and Budu, from the regional languages Swahili (through the Congo

variety used as a lingua franca in the Liko area) and Lingala (used as lingua franca less than 100 km to the north of the Liko area), from French, the national language of the Democratic Republic of the Congo and from English (via Congo Swahili). Nouns such as **négbă** '1a.lizard' and **némbala** '1a.tree, sp.' are reported to be Mangbetu loanwords by the Liko consultants I worked with. They are present in a Mangbetu wordlist (Larochette 1958:161-196). These two and other Liko nouns with initial **nV**²³⁷ and corresponding shape and meaning in Larochettes wordlist are:

| (5.79) <u>Liko</u> | | | <u>Mangbetu</u> | |
|----------------------|-------------------|--|------------------|--|
| négbă, (6a-) | '1a.lizard' | | <i>nagbá</i> | ' <i>sorte de lézard</i> ' |
| nekóbí, (6a-) | '1a.bark clothes' | | <i>nekobu</i> | ' <i>pagne en écorce</i> ' |
| nekókí, (6a-) | '1a.bracelet' | | <i>nekokí</i> | ' <i>anneau que les femmes portent aux chevilles</i> ' |
| némbala, (6a-) | '1a.tree, sp.' | | <i>námambara</i> | ' <i>sorte d'arbuste</i> ' |
| nakuyé-kuyé, (6a-) | '1a.bird, sp.' | | <i>nakuá</i> | ' <i>perroquet</i> ' |
| néndutu-ndútí, (6a-) | '1a.mouse, sp.' | | <i>nándutu</i> | ' <i>sorte de rat</i> ' |

Mangbetu loans according to my Liko consultants, but not in Larochettes wordlist are **né-gbélé** 'na:1-braid', **né-susú** 'na:1-spider' and **ne-tíke** 'na:1-sweet banana'.²³⁸

Examples of Budu loanwords, according to the Liko consultants I worked with, include:

| (5.80) <u>Liko</u> | | <u>Budu</u> ²³⁹ |
|--------------------|----------------------------------|----------------------------|
| á-dwěba, (6a-) | '1b-drummer' | |
| bumbádú | '1a.third boy to be circumcised' | |

²³⁷ I have made no attempt to try to assign these loanwords with initial **nV**- to other subclasses of class 1.

²³⁸ Fricke (2007:57) has a list of **nV**-nouns in related Budu of which she says that they are Mangbetu loanwords. In the case of Liko, however, there are only few **nV**- nouns with matches in Larochettes wordlist. It is likely that Liko has borrowed the Mangbetu **nV**- prefix and has attached it also to non-borrowed noun stems.

²³⁹ Source of the Budu words: Fricke-Kappers (2007:57).

| | | | |
|-------------------|---|------------------|---------------------|
| bázanáná | '1a.fourth boy to be circumcised' | | |
| ngúsu-bábu, (6a-) | '1a.plant, sp.' | | |
| nakwábodu, (6a-) | '1a.caterpillar, sp.' | <i>nakwábodu</i> | 'green caterpillar' |
| néko, (6a-) | '1a.fetish' | <i>nekó</i> | 'charm' |
| nékókó, (6a-) | '1a.wooden musical instrument for rhythm' | <i>nekokó</i> | 'small wooden drum' |
| nepíte, (6a-) | '1a.black frog, sp.' | <i>nepíte</i> | 'edible frog' |

Nouns borrowed from a Congolese variety of Swahili are found in the genders 1/2, 1a/2, 3/9, 5/6, 9/2 + 9 and 14/6 as well as in one-class genders 1a, 9 and 14. The consonants and syllable structure are adapted to the receptor language, e.g. /r/ is replaced by /l/ and a (high) vowel is epenthesized to separate consonant clusters. The Swahili /b/ in the roots of noun and verb borrowings is realized in Liko as /b/, e.g. **balówa** 'letter' from *barua*. Reflexes of Swahili contrastive vowels /ɛ/ and /ɔ/ are /ɛ e/ and /ɔ u/.²⁴⁰

Loanwords from Swahili have a single H tone in Liko corresponding to the stressed syllable in Swahili.

Examples of borrowings from a Congolese variety of Swahili:

| | | |
|--------------------|----------------------|-------------------------------------|
| (5.81) <u>Liko</u> | | <u>Congo Swahili</u> ²⁴¹ |
| mu-kalimáyi, (6a-) | '1-interpreter' | <i>m-kalimani</i> |
| mu-fálume, (6a-) | '1-king' | <i>m-fálme</i> |
| masúwa, (6a-) | '1a.car, motor boat' | <i>mashua</i> ²⁴² |
| kondǒl, (6a-) | '1a.sheep' | <i>kondoo</i> |

²⁴⁰ Apart from nouns, some frequently used conjunctions like **lakíni** 'but' (*lakini*) and a number of verbs are also borrowed from Congo Swahili. Often borrowed verbs represent new actions, like **kó-líp-ó** '9b-pay-FV' (*ku-lipa*), **kó-tumík-ó** '9b-work (for money)-FV' (*ku-tumika* 'be engaged, work'), **ká-sóm-á** '9b-read-FV' (*ku-soma*) and **ká-ndík-á** '9b-write-FV' (*ku-andika*).

²⁴¹ Source: Lenselaer (1983)

²⁴² A 'boat', not a 'car'.

| | | |
|---------------------|-----------------|-----------------------------|
| mũ-pánga (pánga) | '3-machete' | <i>mpanga</i> |
| mũ-salába, (salába) | '3-cross' | <i>msalaba</i> |
| li-dílisa, (ma-) | '5-window' | <i>dirisha</i> |
| li-fungúla, (ma-) | '5-key' | <i>ufunguo</i> |
| muséle | '9.husked rice' | <i>mchele</i> |
| sókɔ, (6a-) | '9.market' | <i>soko</i> |
| bu-túnda, (ma-) | '14-fruit tree' | <i>tunda</i> ²⁴³ |

Loanwords and expressions for hairstyles from Lingala include²⁴⁴:

| (5.82) <u>Liko</u> | | <u>Lingala</u> ²⁴⁵ |
|-----------------------------------|---|---|
| fufũ | '1a.cassava flour' | <i>fufu</i> |
| li-mápa (mápa) | '5-bread' | <i>li-pa, (ma-)</i> |
| ma-kála | 6-charcoal | <i>li-kála, (ma-) 'ember, piece of charcoal'</i> |
| lupángu | 5:residential parcel | <i>lo-pángo, (ma-)</i> |
| bólókɔ | 9.prison | <i>boloko</i> |
| ndúmbá | 1a.single woman ²⁴⁶ | <i>ndúmbá, (ba-) 'prostitute'</i> |
| máfinataba | '1a.small balls in hair' ²⁴⁷ | <i>taba, (ba-) 'goat'</i> |
| mútuka munéné | '1a.single thick braid' | <i>mu-tuka, (mi-) 'car'</i> <i>mu-nene, (mi-) 's.th. big, fat'</i> |
| tía mbanda na koté ²⁴⁸ | '1a.brands all to one side' | <i>kotia 'to put'</i> <i>mbanda, (ba-) 'rival (in love)'</i> |

French loanwords are found in noun classes 1a, 5, 9 and 14. Some loanwords from French have both [+ATR] and [–ATR] vowels (which is not allowed in non-borrowed Liko nouns) in an attempt to approximate French vowel qualities, see the word for 'television set' below. French nasalized vowels are rendered with [–ATR]

²⁴³ In Congo Swahili: 'fruit'.

²⁴⁴ Congo Swahili borrowings are much more frequent in Liko than loanwords from Lingala.

²⁴⁵ From: <http://dic.lingala.be>.

²⁴⁶ With negative connotation: a woman with multiple relationships with men.

²⁴⁷ Literally, 'goat droppings'.

²⁴⁸ from French *côté* 'side'.

Liko vowels. Because a word-final consonant is not allowed in Liko, a vowel is added when a French borrowing ends with a consonant. A vowel is inserted in order to avoid consonant clusters. Like in Congo Swahili loanwords, /r/ is replaced by [l] and the Liko reflex of the syllable with primary stress in French consists of a H tone.

Examples include:

| (5.83) <u>Liko</u> | | <u>Standard French</u> |
|--------------------|--------------------|------------------------|
| alómé, (6a-) | '1a.army' | <i>armée</i> |
| li-moló, (ma-) | '5-number' | <i>numéro</i> |
| li-bilíki, (mo-) | '5-brick' | <i>brique</i> |
| televizyó, (6a-) | '9.television set' | <i>télévision</i> |
| biló, (6a-) | '9.office' | <i>bureau</i> |
| 6u-kokotiyé | '14-coconut palm' | <i>cocotier</i> |

Borrowings from English via a Congolese variety of Swahili are also adapted to Liko phonology, e.g.:

| (5.84) <u>Liko</u> | | <u>Congo Swahili</u> |
|---------------------|-------------------|----------------------|
| balangíti, (6a-) | '9.blanket' | <i>bulangeti</i> |
| búku, (6a-) | '9.exercise book' | <i>buku</i> |
| kópó, (6a-) | '9.cup' | <i>kopo</i> |
| kóti, (6a-) / (6o-) | '9.coat' | <i>koti</i> |

5.1.7 Noun-to-noun derivation

Derivation of a noun from another noun is productive and it involves shifting from one class or gender to another.

Manner nouns are derived from classes 1 or 1a by shifting to class 5. For example:

| | | | |
|----------------|----------------------|----------|-----------------------|
| (5.85) mu-6ígi | '1-twin' | li-6ígi | '5-twin behaviour' |
| mu-budya | '1-developed person' | li-budya | '5-modern behaviour' |
| mu-lumbá | '1-sorcerer' | li-lumbá | '5-spell, witchcraft' |
| mu-siká | '1-girl' | li-siká | '5-coquetry' |
| wayí | '1a.friend' | li-wayí | '5-friendship' |

To create an abstract noun, a noun from class 1 or 1a can be shifted to class 14:

| | | |
|----------------|----------------|--|
| mu-vaḃokó | '1-polygamist' | < -va- 'take' + ḃo-kó '2-woman' |
| mu-yungabobuló | '1-spokesman' | < -yung- 'speak' + ḃo-buló '2-palaver' |
| ḃu-ḃúnombungú | '14-tree, sp.' | < -ḃún- 'break' + mbungú '1a.elephant' |

Forming a compound from an inflected verb and a complement or ideophone is less productive. This type of compound is used for descriptive names of plants, birds and animals, as in:

- (5.92) apukamakúmá '1a.bird, sp.' < -puk- 'prick' + ma-kúmá 'ḃ-hole in a trunk'
 nókwómugwé '1a.bird, sp.' < -kú- 'die' + mugwé 'ḃ.bad luck'
 osyonabasá '1a.vine, sp.' < -si- 'come down' + na 'with' + basá 'ḃ.baraza'
 adwagbu '1a.thorny bush' < -dú²⁵⁰ 'offend' + "gbu" 'IDEO, hit hard'

The meaning of the parts of the compounds is: 'he (3SG **a-**) will prick (Future TAM melody) holes in a trunk', 'I (1SG **na-**) died (Past TAM melody) of bad luck', 'he (3SG **a-**) will come down with a "baraza", a place where public meetings are held' and 'he (3SG **a-**) will offend "gbu"'.²⁵⁰

Compounds of the form noun + noun involve nouns denoting family members or something young or small. Examples of noun + noun denoting family members are:

- (5.93) a-bǎkí-ḃomíkí '1b-father of the children'
 < a-bǎkí '1b-father:3SG POSS' + ḃo-míkí '2-child'
 a-bǎkí-mukó '1b-father of the woman'
 < a-bǎkí '1b-father:3SG POSS' + mu-kó '1-woman'

In **a-bǎkí-ḃomíkí**, the children are the offspring of **a-bǎkí**, the father, and in **a-bǎkí-mukó**, the woman is the daughter of **a-bǎkí**. In family relations like **a-bǎkí-ḃomíkí** and **a-bǎkí-mukó** a compound is often used instead of a genitival construction. In genitival constructions, the genitive prefix **ka-** occurs between the possessee and the possessor (see 6.2.2).

²⁵⁰ The vowel of the verb root in this example is not subject to height coalescence together with the final vowel (which would result in /ɔ/), see 3.3.3. I regard it as an exception because this is the only case in my data.

Noun + noun compounds with **míkyá** '1a.something young or small' include:

- (5.94) *míkyá-ndábu* '1a.cupboard'
 < *míkyá* '1a.something young or small' + *ndábu* '9.house'
míkyá-ınvá '1a.puppy'
 < *míkyá* '1a.something young or small' + *ı-ınvá* '1c-dog'

5.2 Adjectives

5.2.1 Adjectives and adjective prefixes

Adjectives in Liko are a small word class of eight stems, of which six stems form pairs of antonyms²⁵¹. These adjectives are:

- (5.95) *-kédě* 'small' *-dingǐ* 'big'
-kúdú 'short' *-ndă* 'long'
-bisǐ 'raw, uncooked, new' *-lǐlă* 'too well done, ripe'
 -tǐ 'heavy'
 -kóngú 'tall, high, great'

Adjectives follow the noun they modify and the adjective prefixes agree with the noun class of the head of the noun phrase. The set of adjective prefixes is different from the noun-class prefixes. Table 17 lists the nominal and adjective prefixes ([+ATR] forms are given in brackets). For examples of concords, I refer the reader to 5.1.1.

Table 17 Noun-class prefixes and adjective prefixes

| Class | Noun-class prefix | Adjective prefix |
|-------|---------------------------|---------------------------|
| 1 | <i>mɔ-</i> (<i>mu-</i>) | <i>mɔ-</i> (<i>mu-</i>) |
| 1a | - | <i>mɔ-</i> (<i>mu-</i>) |
| 1b | <i>a-</i> (<i>o-</i>) | <i>mɔ-</i> (<i>mu-</i>) |
| 1c | <i>ɨ-</i> (<i>i-</i>) | <i>mɔ-</i> (<i>mu-</i>) |
| 2 | <i>ɓa-</i> (<i>bo-</i>) | <i>ɓú-</i> (<i>ɓú-</i>) |
| 3 | <i>mɔ-</i> (<i>mu-</i>) | <i>mú-</i> (<i>mú-</i>) |

²⁵¹ The usual tests to determine which is the unmarked part of the antonym did not lead to the identification of either of the parts as the unmarked one.

| | | |
|-------|-----------|---------------|
| 5 | lu- (li-) | lí- (lí-) |
| 6 | ma- (mo-) | mú- (mú-) |
| 7 | su- (si-) | sí- (sí-) |
| 8 | bu- (bi-) | bú- (bú-) |
| 9 | - | yí- (yí-) |
| 9a | ɪ- (i-) | yí- (yí-) |
| 9b | ká- (kó-) | yí- (yí-) |
| 2 + 9 | ba- (bo-) | bayí- (bayí-) |
| 13 | - | tí- (tí-) |
| 14 | bu- (bu-) | bú- (bú-) |
| 15 | ku- (ku-) | kú- (kú-) |
| 17 | kú- (kú-) | yí- (yí-) |
| 19 | ɪ- (i-) | sí- (sí-) |

Noun-class prefixes and adjective prefixes differ in tone and in segments. Noun-class prefixes have L tone, except classes 9b and 17 (H tone) and classes 1b, 1c and 9a (L or H tone). Adjective prefixes have a L tone on class 1 and a polar tone on classes 2 to 19 (see 4.6.7), except class 2 + 9. The prefix is different in classes 1b, 1c, 9a, 9b, 2 + 9, 17 and 19, the vowel is different in classes 2, 6 and 8, and in classes 1a, 9 and 13, a segmental adjective prefix contrasts with the absence of a noun-class prefix.

The next examples illustrate the polar tone on adjective prefixes which agree with classes 2 to 17. If the tone of the first TBU of the adjective stem is High (5.96a), the tone of the adjective prefix is Low, otherwise, it surfaces as a H tone (5.96b):

- (5.96)a. *úmó yi-kúdú* 9.savanne 9.ADJ-short 'short (stretch of)
savanne'
bumbúti bu-kúdú 14-tree, sp. 14.ADJ-short 'short tree, sp.'
- b. *úmó yí-dingí* 9.savanne 9.ADJ-big 'large savanne'
bu-mbúti bú-dingí 14-tree, sp. 14.ADJ-big 'big tree, sp.'

The final tone of the preceding noun is of no influence, see the other examples in this section.

The adjectives **-dingí** 'big' and **-kédé** 'small' in NPs with plural nouns are used as a quantifier (see 5.4.5):

| | | | |
|----------|---------------------|--------------------|---------------|
| (5.97)a. | ba-tú bú-dingĩ | 2-man 2.ADJ-big | 'many people' |
| | ma-kpumúká mú-dingĩ | 6-thing 6.ADJ-big | 'many things' |
| b. | bo-sí ba-kédě | 2-fish 2.ADJ-small | 'few fish' |
| | ma-syé ma-kédě | 6-day 6.ADJ-small | 'few days' |

If the adjective modifies a plural head noun, then the form of the adjective is reduplicated in one way or another. For instance, **ba-tú bú-díngídingĩ**,²⁵² 2-man 2.ADJ-big:PL, 'big men'. The tone pattern of the long adjective form is not predictable. The way in which the form is made longer is not consistent either. Monosyllabic adjectives modifying plural referents are triplicated: **-ndandandã** 'long' and **-titítí** 'heavy'. Two adjectives repeat only the initial CV: **-kékéké** for **-kédě** and **-kúkúkú** for **-kúdí**, e.g. **bo-sí ba-kékéké**, 2-fish 2.ADJ-small.PL, 'small fish'.

Other examples include:

| | | | |
|----------|--|-----------------------------------|-------------------|
| (5.98)a. | ma-lúmba ma- ndandandã ²⁵³ | 6-prayer 6.ADJ-long:PL | 'long prayers' |
| | tú ⁴ kátu ti-ndandandã | 13.hair 13.ADJ-long:PL | 'long hair' |
| b. | ma-kumbá mú-titítí | 6-hoop net 6.ADJ-heavy:PL | 'heavy hoop nets' |
| | ma-mbengí mú-titítí | 6-heart 6.ADJ-heavy:PL | 'heavy hearts' |
| c. | tú ⁴ kátu ti-kúkúkú | 13.hair 13.ADJ-short:PL | 'short hair' |
| | tátá-tu ti-kúkúkú | 13.feather-13 13.ADJ- short:PL | 'short feathers' |
| d. | ba-ngámá bú-díngídingĩ | 2-chief 2.ADJ-big:PL | 'big chiefs' |
| | ma-ngbólól mú-díngídingĩ | 6-dugout 6.ADJ-big:PL | 'big dugouts' |

When the head noun designates a collection, the adjective form is also longer:

| | | | |
|----------|----------------------|--------------------|----------------------------|
| (5.99)a. | gúlílo yí-dingĩ | 9.rod 9.ADJ-big | 'many rods' |
| | gúlílo yí-díngídingĩ | 9.rod 9.ADJ-big:PL | 'big rods' (collection) |

²⁵² Preceding **-díngídingĩ**, the tone on the adjective prefix is High instead of Low. With the initial H tone on **-díngídingĩ**, a L tone on the prefix would be expected.

²⁵³ Preceding **-ndandandã**, the tone on the adjective prefix is Low instead of High. With the initial L tone on **-ndandandã**, a H tone on the prefix would be expected.

| | | | |
|----|-------------------------|--------------------------|----------------------------------|
| b. | kásá yí-ndă | 9.leaf 9.ADJ-long | 'long leaves' |
| | kásá yɪ-ndandandă | 9.leaf 9.ADJ-long:PL | 'long leaves' (collection) |
| c. | *ma-búgu má-ndă | 6.plantain 6.ADJ-long | 'long plantains' |
| | ma-búgu ma-ndandandă | 6.plantain 6.ADJ-long:PL | 'long plantains' (countable) |
| | búgu yí-ndă | 9.plantain 9.ADJ-long | 'long plantains' |
| | búgu yɪ-ndandandă | 9.plantain 9.ADJ-long:PL | 'long plantains' (collection) |
| d. | *ma-sambiyá má-ndă | 6.plant 6.ADJ-long | 'long plants' |
| | ma-sambiyá ma-ndandandă | 6.plant 6.ADJ-long:PL | 'long plants' (countable) |
| | sambiyá yí-ndă | 9.plant 9.ADJ-long | 'long plants' |
| | sambiyá yɪ-ndandandă | 9.plant 9.ADJ-long:PL | 'long plants' (collection) |

In (5.97b), the class 2 adjective prefix is **ba-** instead of **bú-**: **bo-sí ba-kédě**, 2-fish 2.ADJ-small, 'few fish'. This is also the case for class 6 adjective prefix **mú-** preceding **-kédě**, the only adjective with mid vowels, the prefix surfaces as **ma-** as in **ma-kpomóká ma-kédě**, 6-thing 6.ADJ-small, 'few things'. The vowel of these two adjective prefixes, /u/, is different from the noun-class prefix /a/, but class 3 **mú-** and class 14 **bú-**, where the vowel of the nominal and the adjective prefix is identical, have the same vowel change. The adjective prefix of classes 2, 3, 6 and 14 surfaces with /a/ (/o/ in a [+ATR] context) when the prefix occurs with one of the following adjective stems: **-kédě** 'small, few', **-kúfú** 'short', **-kóngú** 'tall, high, great' and **-ndă** 'long'.

Compare the following two sets. The first set has one of the four adjectives where the prefix vowel is /a, o/, the second set has an adjective where the prefix vowel is /u, u/. Note that all adjective prefixes of classes 2, 3, 6 and 14 surface with /u, u/ if the first vowel of the following adjective stem is /t i/.

| | | | |
|---------|------------------------|----------------------------|----------------------|
| (5.100) | bo-sí ba-kékéké | 2-fish 2.ADJ-small:PL | 'small fish (pl.)' |
| | ba-nzeki bo-kúkúkú | 2-termite 2.ADJ-short:PL | 'short termites' |
| | mu-nziná ma-kédé | 3-speech 3.ADJ-small | 'small talk' |
| | mu-sáďá mo-kúďú | 3-needle 3.ADJ-short | 'short needle' |
| | mo-ndímó ma-kékéké | 6-birdlime 6.ADJ-small:PL | 'little birdlime' |
| | ma-kǔ mo-kúkúkú | 6-stick 6.ADJ-short:PL | 'short sticks' |
| | bu-yí ba-kédé | 14-possession 14.ADJ-small | 'little possessions' |
| | bu-kápu bo-kúďú | 14-tree, sp. 14.ADJ-short | 'short tree, sp.' |
| | | | |
| (5.101) | ba-nzeki bú-díngídingĩ | 2-termite 2.ADJ-big:PL | 'big termites' |
| | mu-sáďá mú-dingĩ | 3-needle 3.ADJ-big | 'big needle' |
| | ma-kǔ mú-díngídingĩ | 6-stick 6.ADJ-big:PL | 'big sticks' |
| | bu-kápu bú-dingĩ | 14-tree, sp. 14.ADJ-big | 'big tree, sp.' |

There are two other adjective prefixes with /u/: class 1 **mu-** and class 15 **kú-**. For these classes, the vowel does not change:

| | | | |
|---------|---------------------|----------------------------|-----------------|
| (5.102) | mukó mu-kúďú | 1-woman 1.ADJ-short | 'short woman' |
| | mukó mu-dingĩ | 1-woman 1.ADJ-big | 'big woman' |
| | kpóló mu-kúďú | 1a.side 1.ADJ-short | 'short side' |
| | kpóló mu-dingĩ | 1a.side 1.ADJ-big | 'big side' |
| | ku-pasí-kó ku-kédé | 15-peeling-15 15.ADJ-small | 'small peeling' |
| | ku-pasí-kó kú-dingĩ | 15-peeling-15 15.ADJ-big | 'big peeling' |

The prefixes of classes 1 and 15 shows that the surface vowel of the adjective prefix is not determined by its environment. If the underlying vowel of the adjective prefix of classes 2, 3, 6 and 14 is /u/, there is no phonological reason for the variety in surface realizations.

If the underlying vowel of classes 2, 3, 6 and 14 adjective prefixes would be /a/, the only candidate for triggering the surface high round vowel would be the following high unrounded vowel of the adjective stem, a rather unusual phonological process. That this is not the case can be shown from verb-to-adjective derivations (see 7.12.2), which use the set of adjective prefixes and where the prefix vowel /u/ (or [+ATR] /u/) occurs preceding low and high vowels:

| | | |
|--|---------------------------------|------------------------------|
| (5.103) mukó mu-mbangă | 1-woman 1.ADJ-surprise | 'surprising woman' |
| mukó mu-búngǒ | 1-woman 1.ADJ-lose | 'lost woman' |
| kpóló mu-mbangă | 1a.side 1.ADJ-surprise | 'scary side' |
| kpóló mu-búngǒ | 1a.side 1.ADJ-lose | 'lost side' |
| ba-nzeki bú-mbangă | 2-termite 2.ADJ-surprise | 'scary termites' |
| ba-nzeki bú- ⁺ búngǒ ²⁵⁴ | 2-termite 2.ADJ-lose | 'lost termites' |
| mu-sáďá mú-gabă | 3-needle 3.ADJ-sell | 'sold needle' |
| mu-sáďá mú- ⁺ búngǒ | 3-needle 3.ADJ-lose | 'lost needle' |
| mo-ndímó mú-mbangă | 6-birdlime 6.ADJ-surprise | 'surprising birdlime' |
| mo-ndímó mú- ⁺ búnikǒ | 6-birdlime 6.ADJ-break | 'broken birdlime' |
| bu-bála bú-mbangă | 14-cohabitation 14.ADJ-surprise | 'surprising cohabitation' |
| bu-bála bú- ⁺ tíkyǒ | 14-cohabitation 14.ADJ-close | 'ended cohabitation' |
| ku-pasí-kǒ kú-gabă | 15-peeling-15 15.ADJ-sell | 'sold peeling' |
| ku-pasí-kǒ kú- ⁺ búngǒ | 15-peeling-15 15.ADJ-lose | 'lost peeling' |

Neither for underlying /u/ nor /a/, a satisfactory phonological explanation has been found for the surface realization of the non-high prefix vowel of the four adjectives **-kédé** 'small, few', **-kúďú** 'short', **-kóngó** 'tall, high, great' and **-ndă** 'long'. Based on the evidence from deverbative adjectives and the existence of classes 1, 3, 14 and 15 nominal and adjective prefixes with /u/, I posit /u/ as the underlying vowel of 2, 3, 6 and 14. Until an explanation is found, it needs to be specified when the vowel of these adjective prefixes is changed into /a/.

Adjectives can be used both as attributes directly following the head noun like in the examples given thus far in this section, or as predicates following a form of the verb 'to be':

| | | | |
|-----------|-------------------------|--------|-----------|
| (5.104)a. | ma-lílí | a | mú-bisí |
| | 6-food | 3SG:be | 6.ADJ-raw |
| | 'The food is uncooked.' | | |

²⁵⁴ Preceding deverbative adjectives the adjective prefix tone is not polar; instead, non-automatic downstep occurs preceding a derived stem with a H tone, see 4.6.5 and 7.12.2.

- b. kínga²⁵⁵ a mbéyi mu-bísĩ áka²⁵⁶
 1a.bicycle 3SG:be yet 1.ADJ-raw CT
 'The bicycle is still NEW.'
- (5.105)a. níné mu-kédě / níné a mu-kédě
 1a.aunt 1.ADJ-small 1a.aunt 3SG:be 1.ADJ-small
 'a small aunt' / 'Aunt is small'
- b. 6a-níné 6a-kékéké / 6a-níné 6a 6a-kékéké
 2-aunt 2.ADJ-small 2-aunt 3PL:be 2.ADJ-small
 'small aunts' / 'Aunts are small'
- c. 6a-níné 6a-kédě / 6a-níné 6a 6a-kédě
 2-aunt 2.ADJ-small 2-aunt 3PL:be 2.ADJ-small
 'a few aunts' / 'There are few aunts'

Typically, the semantic types of DIMENSION, VALUE, AGE and COLOUR are associated with the adjective word class (Dixon 1994, 2004). In Liko, the set of underived adjectives express only DIMENSION. Nominal modifiers express COLOUR (5.106a), VALUE (5.106b) and AGE (5.106c). For a description of nominal modifiers, the reader is referred to 5.3.

- (5.106)a. ku-tú-ko kwó-tu 15-clothes-15 15.ASS-white 'white piece of clothing'
 ku-tú-ko kwó-pi 15-clothes-15 15.ASS-dark 'black piece of clothing'
- b. ku-tú-ko kwá-nza 15-clothes-15 15.ASS-good 'nice piece of clothing'
 líbó lá-nyε 5:water 5.ASS-bad 'dirty water'
- c. li-mbĩ lá-mbiya 5-toilet 5.ASS-new 'new toilet'
 ma-kpomúká má-¹ndéli 6-thing 6.ASS-old 'old habits'

²⁵⁵ A loanword from Congo Swahili.

²⁵⁶ The particle **áka** indicates contrast, see 8.6.2. The contrasted phrase is marked with underlining. In the free translation, it is marked with capitals. The surface tones on **áka** are H.L. when the preceding tone is High, and L.H. when the preceding tone is Low.

5.2.2 Derivation to other word classes

a. Adjective-to-noun derivation

Nouns derived from the set of Liko adjectives are in class 14 and they have the semantic feature of "quality" or "abstractness". The noun-class prefix **bu-** is added to the adjective stem. The set of adjectives is too small to make a generalization about the tone in this derivation process:

| | | | | | |
|---------|----------|------------------------------------|---|--------|-----------------------|
| (5.107) | bu-kédě | '14-smallness' | < | -kédě | 'small, few' |
| | bu-dingí | '14-size' | < | -dingĩ | 'big, vast' |
| | bu-kúďú | '14-shortness, abbreviation' | < | -kúďú | 'short' |
| | bu-ndă | '14-distance, length' | < | -ndă | 'long' |
| | bu-ďisi | '14-watchfulness, stubbornness' | < | -ďisi | 'raw, uncooked, new' |
| | - | | < | -útlă | 'too well done, ripe' |
| | bu-tĩ | '14-weight' | < | -tĩ | 'heavy' |
| | bu-kúngú | '14-height' | < | -kúngú | 'tall, high, great' |

b. Adjective-to-verb derivation

Verbs that denote the idea of coming into a state are derived from adjective stems by adding **-man-** and the verb-final vowel **-a** to the adjective stem:

| | | | | | |
|---------|-----------------------------|----------------------------|---|-------|---------|
| (5.108) | ká-kíďmán-á | 'to become small' | < | -kédě | 'small' |
| | 9b-become small-FV | | | | |
| | kó-kúndúmón-ó | 'to become short or small' | < | -kúďú | 'short' |
| | 9b-become short or small-FV | | | | |

In the derivation, mid vowels are replaced by high vowels. Verb roots do not have underlying mid [-ATR] vowels. The overall majority of verb roots has either high or low vowels. This derivation with **-man-** is also available for nominal modifiers, see 5.3.3.

c. Adjective-to-adverb derivation

Adverbs are derived from adjective stems by adding prefix **yí-** ([+ATR] **yí-**) with polar tone compared to the tone on the first TBU of the adjective stem, e.g. **yí-kédě**, ADV-small, 'a little' and **yí-dingí**, ADV-big, 'a lot'. Other examples include:

- (5.109)a. á-dík-a yí-kédé
 3SG^P-cool-FV ADV-small
 'It cooled somewhat down.'
- b. ká kpáká wa-ly-a yí-ḃisi
 PREP 9.trap 2SG-eat-FV ADV-raw
 '[When it comes] to traps, you will eat raw food.' (T2006.1)

5.3 Nominal modifiers

5.3.1 Nominal modifiers

Nominal modifiers form a large group of words that occur as part of a noun phrase and modify the head noun. Nominal modifiers do not belong to a noun class, so that they cannot be considered to be nouns, neither do they belong to the class of adjectives. To distinguish them from other modifiers, I refer to them as "nominal modifiers". Nominal modifiers take an associative prefix, which agrees with the class of the head noun. Table 13 in 5.1.1 showed that the associative prefixes are different from the noun-class, adjective and enumerative prefixes.

The concords of the associative prefixes were listed in 5.1.1 and are repeated here. Classes 1 and 9 also represent their subclasses. Both the [−ATR] and the [+ATR] forms are given as well as, in brackets, the underlying form. The associative prefix consists of a pronominal prefix which agrees with the head noun and the associative stem **-a** with L tone. In this book, it is referred to as associative prefix; the underlying structure is not represented in the glosses.

Table 18 Noun-class concords for associative prefixes

| Class | Associative prefix | Class | Associative prefix |
|-------|--------------------|-------|---------------------------|
| 1 | wa- / wo- (/wa-a/) | 9 | yá- / yó- (/yá-a/) |
| 2 | ḃá- / ḃó- (/ḃá-a/) | 2+9 | ḃayá- / ḃayó- (/ḃa-yá-a/) |
| 3 | má- / mó- (/má-a/) | 13 | tá- / tó- (/tá-a/) |
| 5 | lá- / ló- (/lá-a/) | 14 | ḃá- / ḃó- (/ḃá-a/) |
| 6 | má- / mó- (/má-a/) | 15 | kwá- / kwó- (/kú-a/) |
| 7 | sá- / só- (/sá-a/) | 17 | wa- / wo- (/wa-a/) |
| 8 | ḃá- / ḃó- (/ḃá-a/) | 19 | sá- / só- (/sá-a/) |

Nominal modifiers occur primarily in noun phrases where the head noun is followed by an agreeing associative prefix and the nominal modifier. Nominal modifiers also occur in predicate nominal constructions involving a form of the verb 'to be' between the referent subject of the clause and the nominal modifier. Polysyllabic nominal modifiers have a floating H tone word finally when they take an associative prefix. The floating H tone either merges with the preceding H tone, or it is associated with a TBU with a L tone, creating a surface LH tone.

A large number of nominal modifiers can be preceded by either an associative prefix or the general modifier prefix **ḡ-**, sometimes reflecting a difference in attributive vs. predicative usage. **ḡ-** is the prefix of manner adverbs (see 6.3.3), but is also used outside this category. Many ideophones are preceded by this prefix and there is one instance of an adjective with **ḡ-**: **kítí ḡ-tí** 1a.chair MOD-heavy 'a heavy chair' as alternative to **kítí mu-tí** 1a.chair 1.ADJ-heavy.

An associative prefix and the general modifier prefix **ḡ-** are subject to [ATR] vowel harmony. The prefix vowel harmonizes with [+ATR] when it occurs within the domain of [+ATR] spreading, i.e. immediately preceding a stem associated with the [+ATR] value (see 3.2.2.3).

First, nominal modifiers that are preceded by an associative prefix are described, followed by those nominal modifiers that occur with both an associative prefix and the modifier prefix **ḡ-**.

a. Nominal modifiers preceded only by an associative prefix

The examples in (5.110) show the agreement between the head noun and the associative prefix and [+ATR] spreading of the [+ATR] value which is associated with the nominal modifier (5.110a):

| | | | |
|-----------|----------|--------------|----------------|
| (5.110)a. | ḡa-lúkú | ḡó-ngũ | 'strong men' |
| | 2-man | 2.ASS-strong | |
| b. | ma-páku | má-kakǎ | 'rough leaves' |
| | 6-leaf | 6.ASS-rough | |
| c. | mo-lingó | má-kpengbě | 'fresh oil' |
| | 6-oil | 6.ASS-fresh | |

- | | | | |
|----|------------------|-------------------------|------------------------|
| d. | li-mbĩ | lá-mbɪya ²⁵⁷ | 'a new toilet' |
| | 5-toilet | 5.ASS-new | |
| e. | mémí | wa-pǔpu | 'a healthy goat' |
| | 1a.goat | 1.ASS-strong (health) | |
| f. | i-bokú-so | sá-kɪnkɪnĩ | 'a many-coloured hide' |
| | 19-skin, bark-19 | 19.ASS-many-coloured | |

The semantic dimensions of VALUE, COLOUR and AGE are expressed by nominal modifiers; they include **-nza** 'good, nice', **-nye** 'bad, ugly, dirty', and temperature or appreciation of food: **-zũ** 'warm', **-de** 'cold, tasteless':

- | | | | |
|-----------|---------------|-------------|----------------------------|
| (5.111)a. | líbó | lá-nyɛ | 'dirty water' |
| | 5:water | 5.ASS-bad | |
| b. | ku-tú-ko | kwá-nza | 'a nice piece of clothing' |
| | 15-clothes-15 | 15.ASS-good | |
| c. | o-vivĩ | wa-zũ | 'a hot wind' |
| | 1b-wind | 1.ASS-hot | |
| d. | ma-lílí | má-de | 'tasteless food' |
| | 6-food | 6.ASS-cold | |

The nominal modifiers **-nye** in (a), **-nza** in (b) and **-de** in (c) have a surface polar tone depending on the tone of the preceding associative prefix. Other monosyllabic nominal modifiers with a level tone have the same property, for example (5.113a, c) and (5.114). For polar tone, see 4.6.7.

The following nominal modifiers are taking an associative prefix, adding to the possibilities to express DIMENSION:

- | | | |
|---------|------|----------------------|
| (5.112) | -du | 'deep' |
| | -hũ | 'wide, large (area)' |
| | -kpú | 'big, enormous' |

- | | | | |
|-----------|---------|------------|----------------|
| (5.113)a. | líbó | ló-du | 'a deep river' |
| | 5:water | 5.ASS-deep | |

²⁵⁷ This nominal modifier does not have a surface LH tone on the final syllable when it takes an associative prefix.

- b. tíko yá-hǔ 'a large field'
 9.field 9.ASS-wide
- c. mu-kó wa-kpú 'a huge woman'
 1-woman 1.ASS-big, enormous

b. Nominal modifiers preceded by an associative prefix or modifier prefix *ǂí-*.

A large number of nominal modifiers, there are almost a hundred in my data, may occur with an associative prefix or the modifier prefix. They include the basic colours **-tú** 'white (light colours)', **-pí** 'black (dark colours)' and **-ngbú** 'red':

- (5.114)a. ku-tú-ko kwó-tu / ǂí-tú
 15-clothes-15 15.ASS-white MOD-white
 'white or light-coloured clothes'
- b. lúkí ló-pi / ǂí-pí
 5:object 5.ASS-black MOD-black
 'a black object'
- c. ku-tú-ko kwá-ngbu / ǂí-ngbú
 15-clothes-15 15.ASS-red MOD-red
 'red clothes'
- (5.115)a. mu-pumí má-kpwǎ / ǂí-kpwǎ
 3-door 3.ASS-narrow MOD-narrow
 'a narrow door'
- b. (s)ɪ-bukú-sɔ só-zyo / ǂí-zyo
 19-drug-19 19.ASS-bitter MOD-bitter
 'a bitter-tasting drug'
- c. ɪ-mbǔ ló-wililí / ǂí-wilili
 5-ball 5.ASS-round MOD-round
 'a round ball'

Notice in the following examples, that non-automatic downstep does not occur in the context of two adjacent H tones across the morpheme boundary between the modifier prefix and the nominal modifier. The second H tone remains at the same pitch level following the H tone of the modifier prefix **ǂí-**:

- (5.116)a. ku-tú-ko kwó-^lpólí / ǂí-póli
 15-clothes-15 15.ASS-light MOD-light
 'light (weight) clothes'

- b. písi yá-⁴ngbángányá / bí-ngbángányá
 9.path 9.ASS-open MOD-open
 'a wide road'
- c. ma-ḡóku má-⁴ngbémúngbémú / bí-ngbémúngbémú
 6-arm 6.ASS-sturdy MOD-sturdy
 'sturdy arms'

An associative prefix or the modifier prefix are used interchangeably with nominal modifiers. However, a tentative distinction between these prefixes concerns attributive vs. predicative use. When I asked my Liko consultants to give a translation in French of the structures in (5.117), the one with an associative prefix were translated by a noun phrase and the ones with a modifier prefix by a clause.

- (5.117) Associative prefix Modifier prefix
- a. ḡo-míkí ḡá-lyă ḡo-míkí bí-lyă
 2-child 2.ASS-small 2-child MOD-small
 'small children' 'the children are small'
- b. líḡó lá-sekedě líḡó ḡí-sekedě
 5:water 5.ASS-shallow 5:water MOD-shallow
 'a shallow river' 'the river is shallow'

In attributive use, an inherent quality of a noun is expressed, whereas in predicative use, some quality is ascribed to the referent. The distinction is, however, not always evident. Both prefixes are attested almost as frequently in constructions in which the noun-class prefix follows a form of the verb 'to be'. Both (a) and (b) in (5.118) - (5.120) are grammatical and equally acceptable to the Liko consultants I worked with.

- (5.118)a. ku-tú-ko kămu a bí-póli
 15-clothes-15 1SG.POSS 3SG:be MOD-light
 'My piece of clothing is light (weight).'
- b. ku-tú-ko kămu a kwó-⁴póli
 15-clothes-15 1SG.POSS 3SG:be 15.ASS-light
 'My piece of clothing is light (weight).'

- (5.119)a. 6u-tĩ ǃĩ a ǃí-póli
 14-weight 14.DEM.III 3SG:be MOD-light
 'The load is light (weight).'
- b. ɪ-kí yó a yó-¹póli
 9a-what 9.DEM.I 3SG:be 9.ASS-light
 'What is easier?'
- (5.120)a. ká-pɥy-án-á a ǃí-nzá kúgbe
 9b-forgive-ASS-FV 3SG:be MOD-good very
 'To forgive each other is very good.'
- b. míkǎmɪ a wa-nzá kúgbe
 1a.child:1SG.POSS 3SG:be 1.ASS-good very
 'My child is very good.'

Many nominal modifiers show a form of reduplication. In some cases, only the form with repetition is attested, e.g. **-kókólókokolo** 'rigid, stiff', **-ndengendenge** 'sweet' and **-vukuvuku** 'uncombed (hair)'. Other examples, with the modifier prefix (the associative prefix given after the forward slash is also allowed) are:

- (5.121)a. mɯ-lúkú ǃí-díkídíkí / wo-díkídíkí
 1-man MOD-fat 1.ASS-fat
 'a fat man'
- b. nzúyɪ ǃí-kalabukalabu / yá-kalabukalabũ
 9.body MOD-rough 9.ASS-rough
 'a rough body here and there'
- c. tkpáku ǃí-nzikinziki / yó-nzikinzikĩ
 9.shoe MOD-shining black 9.ASS-shining black
 'a shining black shoe'

The majority of nominal modifiers have an adjectival function. Some nominal-modifier stems can be used adverbially or as ideophones. In those cases, the prefix is always the modifier prefix **ǃí-**. For instance, **-ǃalu-ǃalu** 'sticky' is used attributively, modifying the noun in **ma-lílí má-ǃalu-ǃalũ**, 6-food 6.ASS-sticky, 'sticky food', but it also occurs as **ǃí-ǃaluuu** 'syrupy' when used as an ideophone, or with adverbial use as in:

- (5.122) ma-lílí kakí o-ḃy-í ḃí-daludalu
 6-food 3SG.POSS 3SG/PL-cook- FV.ANT MOD-sticky
 'Her food has cooked sticky.' (which is not appreciated)

Another example is **-gbogḃo** 'flat', which is attested as **pině yá-gbogḃḃ**, 9.tyre 9.ASS-flat, 'a flat tyre', as **pině a ḃí-gbogḃo**, 9.tyre 3SG:be MOD-flat, and as **ḃí-gbogḃoḃo**, ideophonic use expressing going flat.

5.3.2 Associative constructions

Associative constructions consist of a head noun, an associative prefix and a dependent noun which modifies the head noun. The dependent noun keeps its noun-class prefix in the associative construction, which means that the associative prefix precedes the noun-class prefix in these constructions. The associative prefix agrees with the class of the head noun.

Some examples of associative constructions are:

- | | | | |
|-----------|---|---|--|
| (5.123)a. | kú-syáku 17-side across a river | wo-Móndíyó 17.ASS-"Mondiyo" ²⁵⁸ | 'across the Mondiyó' |
| b. | su ²⁵⁹ 9.smell | yá-li-kísi 9.ASS-5-delicious dish | 'smell of delicious food' ²⁶⁰ |
| c. | mo-zíko 6-joint | má- ⁴ nzúyɪ 6.ASS-9.body | 'joints of the body' |
| d. | li-ḃíso 5-colour | lá-ku-tú-ko 5.ASS-15-clothes- 15 | 'colour of clothes (sg)' |
| e. | (s)ɪ-bukú-sḃ 19-talisman-19 ²⁶¹ | sá- ⁴ ndáḃu 19.ASS-9.house | 'talisman of the house' |
| f. | p̃isi 9.path | yá-ḃu-ngámá 9.ASS-14-kingdom | 'road of the kingdom' |
| g. | mu-bikó 1-visitor | wa-mu-g̃i 1.ASS-3-village | 'visitor of the village' |

²⁵⁸ The Mondiyó is a river in the Liko area.

²⁵⁹ The H tone of the LH contour on **s̃** merges with the following High.

²⁶⁰ Used for fresh meat or fish grilled or smoked.

²⁶¹ Also drug, shrub.

- | | | | |
|----|-----------------------|--------------------------------|-----------------------|
| h. | 6a-nguyá 2-warthog | bá-mu-sengí 2.ASS-3-village | 'pigs of the village' |
|----|-----------------------|--------------------------------|-----------------------|

The floating L tone of the associative prefix causes an initial H tone of nouns in classes 1a or 9, as in (c) and (e) to surface as a non-automatic downstepped H tone (see 4.6.5). Non-automatic downstep occurs in **mo-bíso má-^hndábu**, 6-colour 6.ASS-9.house, 'colours of the house', whereas it does not occur in **mo-bíso má-6a-ndábu**, 6-colour 6.ASS-2 + 9-house, 'colours of the houses'. In the latter case, the floating L tone of the associative prefix merges with the adjacent L tone of the noun-class prefix.

When class 17 nouns function as prepositions, they are followed by an associative construction, see 6.4.

Associative constructions often form idiomatic expressions, e.g.:

- | | | | |
|-----------|-------------------------------|--|---------------------------------|
| (5.124)a. | ma-kí 6-egg | mó-mbumbó 6.ASS-9.thunderstorm | 'infertile eggs' |
| b. | mu 3.head | má-sengí 3.ASS-9.village | 'first of a number of villages' |
| c. | ndt ²⁶² 9.beard | yá- ^h mémí 9.ASS-1a.goat | 'plant, sp.' |

5.3.3 Derivation to nouns and verbs

a. Nominal modifier-to-noun derivation

Nouns derived from nominal modifiers are generally found as abstract nouns in class 14 taking the noun-class prefix **bu-**. Derived nouns from nominal modifiers are marked by means of a H tone on the final vowel.

Examples include:

- | | | | | |
|---------|------------------|------------------|------------------|------------|
| (5.125) | bu-dú | '14-depth' | < -du | 'deep' |
| | bu-kpú | '14-size' | < -kpú | 'enormous' |
| | bu-ndenge-ndengé | '14-sweetness' | < -ndenge-ndenge | 'sweet' |
| | bu-nyé | '14-guilt, pain' | < -nye | 'dirty' |

²⁶² The H tone of the LH contour on **ndt** merges with the following High.

| | | | |
|--------------|----------------|---------|------------------|
| bu-yaka-yaká | '14-lightness' | < -yaka | 'light (weight)' |
| bu-zǔ | '14-heat' | < -zú | 'hot' |

The surface tone on the final vowel of **bu-dĩ** and **bu-zǔ** is LH, the result of the effect of voiced obstruents on a following H tone (see 4.5).

b. Nominal modifier-to-verb derivation

Verbs that express the idea of coming into a state are derived from nominal modifiers by adding **-man-** and the verb-final vowel **-a** to the stem of the nominal modifier (see 5.2.2):

| | | | |
|----------------------------|----------------------|----------------|------------|
| (5.126) ká-lundímán-á | 'to become smooth' | < -lendε | 'smooth' |
| 9b-become smooth-FV | | | |
| ká-kpókúódúmán-á | 'to become narrow' | < -kpókódĩ | 'narrow' |
| 9b-become narrow-FV | | | |
| ká-ngómán-á | 'to become clean' | < -ngó | 'clean' |
| 9b-become clean-FV | | | |
| ká-yapámán-ág-á | 'to become lukewarm' | < -yapa(-yapa) | 'lukewarm' |
| 9b-become lukewarm-PLUR-FV | | | |

In the derivation, mid vowels are replaced by high vowels. Verb roots do not have underlying mid [–ATR] vowels.

5.4 Numerals

5.4.1 Numerals which take enumerative prefixes

The stems **-motí** 'one', **-fǎ** 'two', **-sáá** 'three' and **-kwanganya** 'four' take enumerative prefixes, which agree with the class of the head of the noun phrase. Numerals follow the noun they modify.

The concords of the enumerative prefix were listed in 5.1.1 and are repeated here. Classes 1 and 9 also represent their subclasses.

Table 19 Noun-class concords for enumerative prefixes

| Class | Enumerative prefix | Class | Enumerative prefix |
|-------|--------------------|-------|--------------------|
| 1 | bé- | 9 | yí- |
| 2 | bá- | 2 + 9 | bayí- |
| 3 | mí- | 13 | tí- |
| 5 | lí- | 14 | bí- |
| 6 | má- | 15 | kú- |
| 7 | sí- | 17 | yí- |
| 8 | bí- | 19 | sí- |

Table 13 in 5.1.1 showed that the enumerative prefixes are different from the noun-class, adjective and associative prefixes. Numeral 1 is [+ATR] and numerals 2 to 4 are [-ATR]. The vowel of the enumerative prefix assimilates to [+ATR] value of **-motí** 'one'. Examples of **-motí** 'one' include:

- (5.127) mu-póst bé-motí 1-larva, sp. 1.NUM-one 'one larva'
 ngága yí-motí 9.chin 9.NUM-one 'one chin'
 ku-vĩ-ko kú-motí 15-fishing net-15 15.NUM-one 'one fishing net'

The enumerative prefix has an underlying and surface H tone. In the following examples, the numeral stem also has a H tone:

- (5.128) ba-póst bá-sáá 2-larva, sp. 2.NUM-three 'three larvae'
 ba-ngága bayí-sáá 2 + 9-chin 2 + 9.NUM-three 'three chins'
 mo-vĩ má-sáá 6-fishing net 6.NUM-three 'three fishing nets'

The vowel of classes 3, 8, 13 and 14 enumerative prefix is /u/, for example:

- (5.129) mu-mbí mí-bǎ 3-basket 3.NUM-two 'two baskets'
 bu-bě bí-bǎ 8-thigh 8.NUM-two 'two thighs'
 tí-to tí-bǎ 13.whistle-13 13.NUM-two 'two whistles'
 bu-ngámá bí-bǎ²⁶³ 14-kingdom 14.NUM-two 'two kingdoms'

²⁶³ Class 14 enumerative prefix **bí-** with **-motí** 'one', resulting in **bímotí**, occurs in free variation with **búmotí**, e.g. **bu-ngámá bí-motí** 14-kingdom 14.NUM-one 'one kingdom' vs. **bu-ngámá bú-motí**.

In **mu-mbí mí-ǂǂ**, the head is singular while the quantifier is plural, see (5.23) and (5.24).

Numbers between 10 and 20 are formed by **tékéǂé** '9.ten', **na** 'with' and a number from 1 to 9. When a referent is present, the enumerative prefix of stems for 1 to 4 generally agrees with the head noun in the singular, as the following examples show:

- (5.130) **ǂa-ǂibýá tékéǂé na ǂé-motí**²⁶⁴ 'eleven followers'
 2-follower 9.ten with 1.NUM-one
ǂo-míkí tékéǂé na ǂá-sáá 'thirteen children'
 2-children 9.ten with 2.NUM-three
mu-mbí tékéǂé na mí-sáá 'thirteen baskets'
 3-basket 9.ten with 3.NUM-three
ma-ngótu tékéǂé na má-sáá 'thirteen stars'
 6-star 9.ten with 6.NUM-three

Numbers 20, 30 and 40 are formed by the plural of **tékéǂé** '9.ten' and a number from 2 to 4 preceded by the class 2 (plural) prefix, **ǂa-tékéǂé ǂa-ǂǂ**, 2 + 9-ten 2.NUM-two 'twenty', **ǂa-tékéǂé ǂa-sáá**, 2 + 9-ten 2.NUM-three 'thirty', **ǂa-tékéǂé ǂa-kwanganya**, 2 + 9-ten 2.NUM-four 'fourty'. Numbers 50 and up have **ǂa-tékéǂé** followed by a numeral without prefix. Numbers between tens from 21 to 99 are formed by the plural of **tékéǂé** '9.ten', **na** 'with' and a number from 1 to 9.

In absolute counting when no reference is made to a noun, the four numeral stems function as nouns taking the noun-class prefixes of classes 5 and 6: **lí-motí** '5.NUM-one', **má-ǂǂ** '6.NUM-two', **má-sáá** '6.NUM-three', **má-kwanganya** '6.NUM-four'. This is also the case for numbers higher than 10 in constructions in which the referent is absent:

- (5.131) **tékéǂé na lí-motí** 9.ten with 5.NUM-one 'eleven'
tékéǂé na má-ǂǂ 9.ten with 6.NUM-two 'twelve'

²⁶⁴ To express 'one' in 'ten and one', the numeral **-motí** 'one' takes the prefix of the singular class of the referent, **mu-ǂibýá** '1-follower'. Another example is **ma-ngótu tékéǂé na lí-motí**, 6-star 9.ten with 5.NUM-one, 'eleven stars'.

| | | |
|-----------------------------|--------------------------|--------------|
| ba-tékébéé bá-ḃǎ na lí-motí | 2 + 9-ten 2.NUM-two with | 'twenty-one' |
| | 5.NUM-one | |
| ba-tékébéé bá-ḃǎ na má-ḃǎ | 2 + 9-ten 2.NUM-two with | 'twenty-two' |
| | 6.NUM-two | |

5.4.2 Numerals without enumerative prefixes

The numbers 5 and higher are expressed by nouns or attributive juxtaposition. The basis of 5 is 'one hand': **ku-bḃ'kú-ko kú-motí** 15-hand-15 15.NUM-one. Number 6 is **madiya** (class 9), e.g. **ba-mbánzó madiya** 2-person 9.six 'six persons'. Number 7 is formed by 'six', **na** 'with' and **u-ká** '9a-odd/even'. **uká** is used for both 'odd' and 'even'. The order determines the meaning, e.g. **uká yá ikpáku yímotí** 'a pair of shoes' vs. **wakatípónító búgu na uká !** 'do not give us an odd number of bananas!'.

Numbers 8, 9 and 10 are class 9 nouns. The plural of 10 is class 2 + 9 **ba-tékébéé**. Liko has specific class 9 nouns for 'zero' **pápuví** ('something empty'), 'a dozen' **kómbá** and 'two dozen' **lidí**. Numbers 100 and higher are loanwords from Congo Swahili or French.

| | | | |
|---------|------------------|------------|---------------------------|
| (5.132) | kuḃúkúmutí | 'five' | |
| | madiya | 'six' | |
| | madiya na uká | 'seven' | |
| | búguna | 'eight' | |
| | kuḃómú | 'nine' | |
| | tékébéé, (ḃa-) | 'ten' | |
| | ḃatékébéé madiya | 'sixty' | |
| | míya | 'hundred' | Congo Swahili <i>mia</i> |
| | élofu | 'thousand' | Congo Swahili <i>elfu</i> |

5.4.3 Ordinals

Ordinals are expressed in associative constructions in which they follow the head noun and an associative prefix, which agrees with the head noun. Numbers 2, 3 and 4 are prefixed with the class 9 enumerative prefix **yí-**.

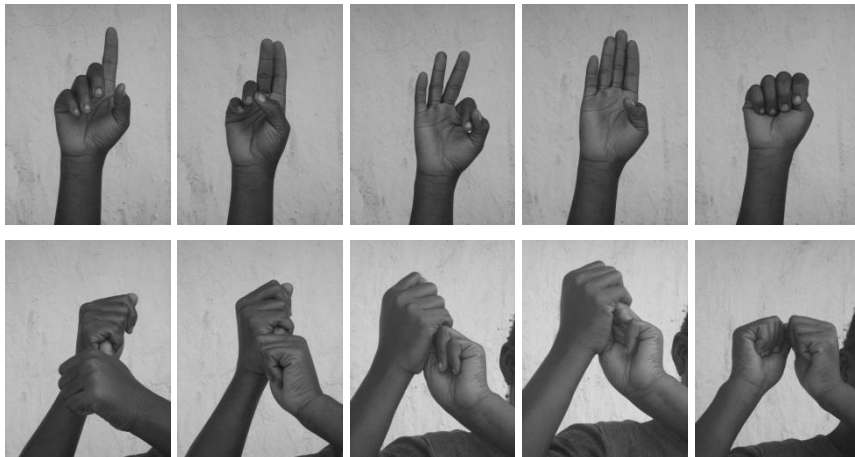
| | | | |
|---------|---|-----------------------------|--------------------------|
| (5.133) | mu-sí wa-yí-bǎ | 1-fish 1.ASS-9.NUM-two | '2 nd fish' |
| | bu-likí bá- ²⁶⁵ yí-bǎ | 14-chair 14.ASS-9.NUM-two | '2 nd chair' |
| | bu-likí bá- ²⁶⁵ yí-sáá | 14-chair 14.ASS-9.NUM-three | '3 rd chair' |
| | bu-likí bá- ²⁶⁵ yí-kwanganya | 14-chair 14.ASS-9.NUM-four | '4 th chair' |
| | bu-likí bá-kuúúkúmutí | 14-chair 14.ASS-9.five | '5 th chair' |
| | bu-likí bá-maḍiya | 14-chair 14.ASS-9.six | '6 th chair' |
| | bu-likí bá-maḍiya na uká | 14-chair 14.ASS-9.seven | '7 th chair' |
| | bu-likí bá-ḅuguna | 14-chair 14.ASS-9.eight | '8 th chair' |
| | bu-likí bá-kuḅómú | 14-chair 14.ASS-9.nine | '9 th chair' |
| | bu-likí bá- ²⁶⁵ tékébé | 14-chair 14.ASS-9.ten | '10 th chair' |

'First' and 'last' are referred to with nouns, **mambwá** '1a.first one' and **mu-pipiló** '1-last one'. They are used in the same associative constructions.

5.4.4 Gestures for numbers

Liko speakers employ gestures for absolute numbers and for counting, as shown in the two sets of pictures. The first set of pictures shows the gestures for absolute numbers, from 1 to 10.

(5.134)

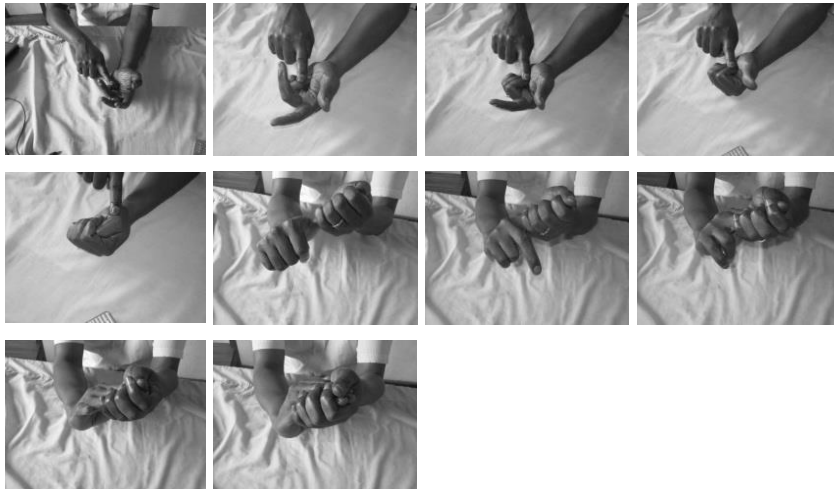


²⁶⁵ For the non-automatic downstepped H tone, see 4.6.5.

- 1: raise index of right hand;
- 2: raise index and middle finger of right hand, thumb touches ring finger;
- 3: raise middle, ring and little finger of right hand, thumb touches index;
- 4: all fingers of right hand raised;
- 5: closed palm of right hand with all fingers bent over thumb;
- 6: fingers of right hand bent over thumb of left hand, other fingers of left hand bent, thumb of right hand against index;
- 7: fingers of right hand bent over thumb and index of left hand, other fingers of left hand bent, thumb of right hand against index;
- 8: fingers of right hand bent over thumb, index and middle finger of left hand, other fingers of left hand bent, thumb of right hand against index;
- 9: fingers of right hand bent over thumb, index, middle finger and ring finger of left hand, little finger of left hand bent, thumb of right hand against index;
- 10: closed palm of both hands with all fingers bent over thumb, hand held against each other with finger bones touching.

The second set of pictures shows the gestures used in counting from 1 to 10.

(5.135)



In counting from 1 to 10, the palm of the left hand faces upwards and the palm of the right hand faces downwards.

- 1: little finger of left hand bent, extended index of right hand touches little finger of left hand;
- 2: little and ring fingers of left hand bent, extended index of right hand touches ring finger of left hand;
- 3: little, ring and middle fingers of left hand bent, extended index of right hand touches middle finger of left hand;
- 4: all fingers of left hand bent over thumb, extended index of right hand touches thumb of left hand;
- 5: all fingers of left hand bent, extended index of right hand touches index of left hand;
- 6: fingers of left hand bent over thumb of right hand;
- 7: fingers of left hand bent over thumb and index of right hand;
- 8: fingers of left hand bent over thumb, index and middle finger of right hand;
- 9: fingers of left hand bent over thumb, index, middle finger and ring finger of right hand;
- 10: fingers of left hand bent over thumb and all fingers of right hand.

5.4.5 Quantifiers

-st 'all' is a nominal modifier, which takes an associative prefix which agrees with the head noun. Other quantifying expressions are constructions involving adjectival or numeral stems. **-st** occurs at the end of the noun phrase (5.136a, b, c), or at the end of a clause of which the referent is the subject (5.136d, e, f):

- (5.136)a. $\text{b}\epsilon\text{-vananza}$ kakí bayá-st
 2+9:9a-family 3SG.POSS 2+9.ASS-all
 'all his family (members)' (T2007.8)
- b. ba-nyamá bá-st bá-zǔkan-a
 2-animal 2.ASS-all 3PL^P-jump up-FV
 'All animals jumped up.' (T2006.3)
- c. bá-vǎ ndí bu-yí ní-bó bá-st
 3PL^P-take:FV P₃ 14-possession COP-2.DEM.I 14.ASS-all
 'They took all these possessions.' (T2007.15)
- d. ba-kangú bó-zǔzuk-og-o bá-st
 2-paddler 3PL^P-wake up-PLUR-FV 2.ASS-all
 'All the paddlers woke up.' (T2006.2)

- e. 6a-lókú ní-bó 6ó-dog-ó-kú ndi 6á-st
 2-man COP-2.DEM.I 3PL^P-come:PLUR-FV^P-DIR P₃ 2.ASS-all
 'All the men who came.' (T2006.2)
- f. 6o-kó 6á-mu-sengí kakí 6ó-do-kú ndi 6á-st
 2-woman 2.ASS-3-village 3SG.POSS 3PL^P-come:FV-DIR P₃ 2.ASS-all
 'All women of his village came.' (T2009.19)

-st also occurs independently when the referent is known from the context, e.g. **6ásu 6ósilyono** 'All arrived.' (T2006.3).

-kaká 'alone' is a nominal modifier of class 1 nouns, which takes the adjective prefix **mu-**, which agrees with class 1, e.g. **tyí mu-kaká**, 1.PRO 1.ADJ-alone, 'he by himself'. **-kaká** takes enumerative prefix **yí-** for all classes, including class 1, if **-kaká** refers to a referent who performs an action by himself or if **-kaká** refers to one instance of a collection. For example, **tyí yí-kaká**, 1.PRO 9.NUM-alone, 'he by himself, only him', **li-tómbó yí-kaká**, 5.ground 9.NUM-alone, 'the ground by itself' (i.e. without human labour). **yí-kaká** is reduplicated and it has the meaning 'each, every' when it identifies each instance of a group, e.g. **mu-mbánzó yí-kakáyikaká**, 1-person 9.ADJ-alone:PL, 'each person' or **(s)u-bukó-so yí-kakáyikaká**, 19-shrub-19 9.ADJ-alone:PL, 'every shrub'.

Other quantifying expressions are constructions involving adjectival or numeral stems:

| (5.137) <u>Basis</u> | <u>Quantifier usage</u> |
|--------------------------------------|-------------------------|
| adjectival stem -kédě 'small' | 'few' |
| adjectival stem -dingí 'big' | 'many' |
| numeral stem -6ă 'two' | 'both' |

In the following phrases, the first one of each pair exemplifies adjectival or numeral usage and the second one quantifier usage:

- (5.138)a. sukó mu-kédě 1a.dove sp. 1.ADJ-small 'a small dove, sp.'
 ma-syé ma-kédě 6-day 6.ADJ-small 'few days'
- b. mu-kó mu-dingí 1-woman 2.ADJ-big 'a big woman'
 6o-kó 6ú-dingí 2-woman 2.ADJ-big 'many women'

- c. 6a-tú 6á-6ǎ 2-man 2.NUM-two 'two men'
 6a-tú 6á-si 6á-6ǎ 2-man 2-all 2.NUM-two 'both men'

The use of a singular form of the adjective in combination with a plural referent yields a collective interpretation for the referent in (a) and (b). Recall that the adjective stem is reduplicated when the head noun is plural, e.g. **6a-sukó 6á-kékéké**, 2-dove 2-ADJ-small:PL, 'small doves' and **6o-kó 6ú-díngidingí**, 2-woman 2-ADJ-big:PL, 'big women'. In (c), **6á-6ǎ** modifies **-si** 'all' and indicates that the total equals 'two', hence the meaning 'both'.

The stem **-ínga** 'how many' requires an enumerative prefix. The prefix vowel is lost through V₁-elision or it merges, e.g. **mu-mbí mí-ínga** 3-basket 3.NUM:how many 'how many baskets'. Other examples include:

- (5.139)a. wa na 6o-míkí 6ínga ?
 2SG:be with 2-child 2.NUM:how many
 'How many children do you have?'
- b. na-kwanan-a ká-puly-á kádwe ká ngángá yínga ?
 1SG-should-FV 9b-forgive-FV up to²⁶⁶ 9.time 9.NUM:how many
 'How many times should I forgive?'

Expressions denoting 'the same', 'other' or 'one self' are formed in different ways.

For 'the same', a construction with several demonstratives is used: DEM.III followed by the copula²⁶⁷ and DEM.I, followed by **áka** 'only' and again DEM.I, e.g. **yi ní-nǎ áka nǎ**, 1.DEM.III COP-1.DEM.I only 1.DEM.I, 'the same'. The opposite of 'the same' is expressed by **-gogo** 'other', a nominal stem taking an associative prefix.

Reflexives like 'one self' are marked on the verb form with the reflexive prefix (see 7.5.2).

The first set exemplifies 'the same', the second 'other':

- (5.140)a. kó ngbínɡó yi ní-nǎ áka nǎ
 PREP 1a.time 1.DEM.III COP-1.DEM.I only 1.DEM.I
 'at that same time'

²⁶⁶ **kádwe ká** is a fixed expression meaning 'up to'. The basis is the verb **-du-** 'arrive'.

²⁶⁷ See 8.3.2 and 6.1.2.

- b. 6o-kó bi ní-6ó áka 6o
 2-woman 2.DEM.III COP-2.DEM.I only 2.DEM.I
 'those same women'
- c. ɩ-syé li ní-ló áka lo
 5-day 5.DEM.III COP-5.DEM.I only 5.DEM.I
 'that same day'

- (5.141)a. ngbíngó wă-gɔgɔ 'another time'
 1a.time 1.ASS-other
- b. 6o-kó bá-gɔgɔ 'other women'
 2-woman 2.ASS-other
- c. ɩ-syé lá-gɔgɔ 'another day'
 5-day 5.ASS-other

In a negative context, 'nothing' is expressed by a combination of **lúkí** '5:object', **gútógu** 'even' and **lí-motí** '5.NUM-one': **lúkí gútógu límotí**.

- (5.142) nýyó ngbíngó wa-kigisö 6o-lubú bi ní-6ayó
 when 1a.time 1.ASS-9.returning 2+9-debt 2.DEM.III COP-2+9.DEM.I
 í-túly-án-á, si-bĩ Ø-ké-gũ ndt no
 3SG^p:REFL-be ready-ASS-FV^p si:1-tortoise 3SG-NEG:be:FV-NEG P₃ with
lúkí gútógu lí-motí áka
 5:object even 5.NUM-one CT
 'When the time to return these debts arrived, tortoise had NOTHING.'
 (T2007.3)