# A grammar of Gaahmg, a Nilo-Saharan language of Sudan
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**Citation**
Stirtz, T. M. (2012, February 7). *A grammar of Gaahmg, a Nilo-Saharan language of Sudan*. *LOT dissertation series*. LOT, Utrecht. Retrieved from https://hdl.handle.net/1887/18452

# 4 Clitics and word structure

In this chapter, we show that various clitics attach to several word categories (4.1), discuss word structure (4.2), and differentiate between the word categories nouns, adjectives, and verbs (4.3).

## 4.1 Clitics

There are eight grammatically distinct clitics which attach to more than one word category. In addition, there are other clitics which are combinations of clitics, where the morphemes from which they are formed are given in parentheses in table 6 and are explained in the sections to follow. Copular, definite, and relative clause definite clitics can have number distinction, sometimes depending on the word category to which they attach. Dative, accompaniment, locative copular, subordinate, and perfect clitics never have number distinction. The clitics in table 6 are those which attach to consonant-final words. Clitic allomorphs sometimes attach to other word-final segments, as will be discussed in relevant morphology sections. The difference between relative clauses marked and unmarked for definiteness will be discussed in 14.6.

Table 6:  Clitics on consonant-final words

| | SG | PL |
|---|---|---|
| Copular (COP) | $=\bar{\text{A}}_{\text{N}}$, $=\grave{\text{A}}_{\text{PRON}}$, ---$_{\text{ADJ}}$ | $=\grave{\text{A}}$ |
| Definite (DEF) | $=\acute{\text{A}}$ | $=\acute{\text{A}}_{\text{N}}$, $=\grave{\text{A}}_{\text{ADJ}}$ |
| Relative clause definite (RDM) | $=\acute{\text{E}}$ | $=\grave{\text{E}}$ |
| Dative (DAT) | $=\bar{\text{A}}$n | $=\bar{\text{A}}$n |
| Relative clause dative (RDTM) | $=\acute{\text{E}}\bar{\text{E}}$n (from $=\acute{E}=\bar{A}n$ ) | $=\grave{\text{E}}\grave{\text{E}}$n (from $=\grave{E}=\bar{A}n$) |
| Locative copular (LCM) | $=\bar{\text{A}}$n (from *íín/ɛ́ɛ̄n*) | $=\bar{\text{A}}$n (from *ɛ̄ggàn*) |
| Relative clause locative copular (RLCM) | $=\acute{\text{E}}\bar{\text{E}}$n (from $=\acute{E}$ *íín/ɛ́ɛ̄n*) | $=\grave{\text{E}}\grave{\text{E}}$n (from $=\grave{E}$ *ɛ̄ggàn*) |
| Accompaniment (ACM) | $=\acute{\text{E}}$ | $=\acute{\text{E}}$ |
| Relative clause accompaniment (RDM=ACM) | $=\acute{\text{E}}\acute{\text{E}}=$n$\bar{\text{E}}$ (from $=\acute{E}=n\bar{E}$ ) | $=\grave{\text{E}}\grave{\text{E}}=$n$\bar{\text{E}}$ (from $=\grave{E}=n\bar{E}$ ) |
| Subordinate (SBO) | $=\acute{\text{E}}$ | $=\acute{\text{E}}$ |
| Relative clause subordinate 'when' (RDM=SBO) | $=\acute{\text{E}}\acute{\text{E}}=$n$\acute{\text{E}}$ (from $=\acute{E}=n\acute{E}$ ) | $=\grave{\text{E}}\grave{\text{E}}=$n$\bar{\text{E}}$ (from $=\grave{E}=n\acute{E}$ ) |
| Perfect clitic (PF) | $=$r | $=$r |

Each clitic is presented below, first in an example clause, and then attached to various word categories. The meaning of each clitic, as well as the section where its

morphology is presented, is also mentioned.

## 4.1.1    Copular clitic

In answer to questions such as *ɲĩn néé* 'What is this?' and various other non-verbal clauses described in 14.6, copular clitics (COP) are attached to nouns, adjectives, or pronouns.  Singular and plural copular clauses are shown in (1).  See 7.2 and 8.3.1 for a presentation of copular clitic morphology.

(1a)   féē̠tfā = n        àggáár = **ā̠**     (b)   ṭó-gg      sèggār-g = **à**
       Feetfa =DEF    hunter =COP              cow-PL    strong-PL = COP
       'Feetfa is a hunter.'                   'Cows are strong.'

The singular copula clitic is  =*Ā* with Mid tone on nouns,  =*À* with Low tone on pronouns, and no marking on adjectives.  The plural copula clitic is  =*À* on all words.

(2) **Copular clitic**
         SG              PL
Noun    àggáár = **ā̠**    àggáàr-g = **à**        'is a hunter'
ADJ     ɟāā bánḍāl      ɟɔ̄gg bánḍāl-g = **à**   'is a weak person'
1sP     ɔ́ɔ̀n = **ə̀**       ɔ́nə̀gg = **ə̀**          'is mine'

## 4.1.2    Definite clitic

The definite clitic (DEF) indicates the speaker believes a word is active or known information in the mind of the hearer.  See also 7.3 and 8.3.2.

(3a)   á       ɲâm    àggáár = **á**     (b)   ṭó-gg      sèggār-g = **à**       nāàm
       1sN    want    hunter = DEF             cow-PL    strong-PL = DEF    eating
       'I want the hunter.'                     'The strong cows are eating.'

The singular definite clitic is  =*Á* with High tone.  The plural definite clitic is  =*Á* with High tone on nouns and  =*À* with Low tone on adjectives.  It is  =*n* on vowel-final nouns and adjectives.

(4) **Definite clitic**
         SG                      PL
Noun    àggáár = **á**            àggáār-g = **á**          'the hunter'
ADJ     ɟāā-**n** bánḍāl = (**á**)  ɟɔ̄gg-(**ɔ́**) bánḍāl-g = **à**  'the weak person'
3SP     mɔ̄sɔ̀r îinī = **n**         mɔ̀sɔ̀r-ɛ̀ɛ̀gg ínìgī = **n**   'the his horse'

In singular noun phrases with a head noun and adjective modifier, the definite clitic

attaches to the adjective unless it is consonant-final and the noun is vowel-final.

(5) **Definite clitic on singular nouns and adjectives**

| Noun-final | ADJ-final | Noun SG ADJ DEF | | |
|---|---|---|---|---|
| V = DEF | C = (DEF) | wéé = **n** | bér = (**á**) | 'the clean house' |
| C | V = DEF | kɔlèèð | íì = **ín** | 'the heavy sword' |
| C | C = DEF | ɟēn | bánḍāl = **á** | 'the weak person' |
| V | V = DEF | bààɔ̀ | fāā = **n** | 'the old father' |

In plural noun phrases with a head noun and adjective modifier, the definite clitic attaches to the adjective and optionally to the head noun.

(6) **Definite clitic on plural nouns and adjectives**

| Noun-final | ADJ-final | Noun SG ADJ DEF | | |
|---|---|---|---|---|
| C-PL = (DEF) | C-PL = DEF | wís-ɔ̄g = (**ɔ́**) | bér-g = **à** | 'the clean houses' |
| C-PL = (DEF) | C-PL = DEF | kɔlèèð-g = (**ɔ̄**) | íì-g = **ɔ̀** | 'the heavy swords' |
| C-PL = (DEF) | C-PL = DEF | ɟɔ̄gg = (**ɔ́**) | bánḍāl-g = **à** | 'the weak persons' |
| C-PL = (DEF) | C-PL = DEF | bààw-āāḍ = (**á**) | fāng = **à** | 'the old fathers' |

## 4.1.3    Relative clause definite clitic

Relative clauses are marked or unmarked for definiteness just as noun phrases. When the head of the relative clause is known information, the relative clause definite clitic (RDM) is attached to the clause-final word. See also 7.4, 8.3.3, and 14.7.

(7)  á      ɲâm    ɟāā      ná      sèggār = **ɛ́**
     1sN    want   person   REL     strong = RDM
     'I want the person who is strong.'

The singular relative clause clitic is =*É* with High tone and the plural clitic is =*È* with Low tone.

(8) **Definite relative clause clitic**

| | SG | PL | |
|---|---|---|---|
| Noun | ná àggáár = **ɛ́** | nà àggáàr-g = **ɛ̀** | 'who is a hunter' |
| ADJ | ná bánḍāl = **ɛ́** | nà bánḍāl-g = **ɛ̀** | 'who is weak' |
| Body part locative | ná ăn wéɛ́ ááɲ = **ɛ́** | nà àn wísɔ̄-g ɔ̀ɔ̀ng = **ì** | 'who is behind the house' |
| ADV | ná líɟ-ɟɔ́ ɔ̄nḍɔ́gg = **í** | nà líɟ-ɟɔ̄ ɔ̄nḍɔ́gg = **ì** | 'who came with force' |
| Verb | ná ŋāɲ = **ɛ́** | nà ŋāɲ = **ɛ̀** | 'who files' |

## 4.1.4    Dative clitic

The dative (DAT) has the semantic roles of beneficiary and recipient.  See also 7.5 and 8.3.4.

(9)    á       gàf     ɟèèm          càɔ̀r = **ān**
       1sN    give    something    rabbit = DAT
       'I give something to a rabbit.'

Singular and plural dative clitics are  $= \bar{\hat{A}}n$.

(10) **Dative clitic**

|        | SG                  | PL                        |                          |
|--------|---------------------|---------------------------|--------------------------|
| Noun   | àggáár = **ân**     | àggáār-g = **ân**         | 'to a hunter'            |
| ADJ    | ɟāā bánḍāl = **ân** | ɟɔ̄gg bánḍāl-g = **ân**   | 'to a weak person'       |

## 4.1.5    Relative clause dative clitic

When the head of the relative clause is an indirect object, the relative clause dative clitic (RDTM) is attached to the clause-final word.  See also 8.3.5.

(11)   á       gàf     ɟèèm          ɟāā       ná       sèggār = **ɛ́ɛ̄n**
       1sN    give    something    person    REL      strong = RDTM
       'I give something to the strong person
       (lit. the person who is strong).'

The singular relative clause dative clitic is  $= \acute{E}\bar{E}n$ (from the combination of the singular relative clause definite clitic and dative clitic  $= \acute{E} = \bar{\hat{A}}n$ '=RDM.SG=DAT') with HM tone and the plural is  $= \grave{E}\grave{E}n$ (from  $= \grave{E} = \bar{\hat{A}}n$ '=RDM.PL=DAT') with Low tone.

(12) **Relative clause definite and dative clitic**

|                      | SG                         | PL                             |                                       |
|----------------------|----------------------------|--------------------------------|---------------------------------------|
| Noun                 | ná àggáár = **ɛ́ɛ̄n**       | nà àggáār-g = **èèn**          | 'to the . . who is the hunter'        |
| ADJ                  | ná bánḍāl = **ɛ́ɛ̄n**       | nà bánḍāl-g = **èèn**          | 'to the . . who is the weak'          |
| Body part locative   | ná ăn wɛ́ɛ́ ááŋ = **ɛ́ɛ̄n**  | nà àn wísɔ̄-g ɔ́ə̀ŋg = **ìin**  | 'to the . . who remains behind the house' |
| ADV                  | ná líɟ-ɟɔ́ ɔ̄nḍɔ́gg = **îin** | nà líɟ-ɟɔ̄ ɔ̄nḍɔ́gg = **ìin**   | 'to the . . who came with force'      |

4.1.6    Locative copular clitic

In non-verbal locative clauses, the singular or plural locative copula *íín/ēēggàn*
separates the subject from the predicate. However in fast speech, both singular and
plural copulas attach to the subject noun phrase in the form of the clitic  *=Ân* (LCM).
The singular locative copula *íín/één* of (13a) is replaced by the clitic  *=Ân* attached
to the subject noun in (b). The plural locative copula *ēēggàn* of (c) is replaced by the
same clitic in (d). See also 7.5, 8.3.4, and 14.6.4.

(13)    **Locative copular clauses**
(a)    ɟāā       bánḍāl    **íín**    wéé       bèɲɟ
       person    weak      LCM       house     beside
       'A weak person is beside a house.'

(b)    ɟāā       bánḍāl=**ân**    wéé       bèɲɟ
       person    weak=LCM         house     beside
       'a weak person is beside a house.'

(c)    ɟɔ̄gg      bánḍāl-g   **ēēggàn**   wéé       bèɲɟ
       people    weak-PL    LCM         house     beside
       'Weak people are beside a house.'

(d)    ɟɔ̄gg      bánḍāl-g=**ân**    wéé       bèɲɟ
       people    weak-PL=LCM        house     beside
       'Weak people are beside a house.'

The locative copular clitic happens to have the same form as the dative clitic.

(14)    **Locative copular clitic (rapid speech form of *íín/één, ēēggàn*)**
              SG                  PL
Noun    àggáár=**ân**       àggáār-g=**ân**        'a hunter is'
ADJ     ɟāā bánḍāl=**ân**   ɟɔ̄gg bánḍāl-g=**ân**    'a weak person is'

4.1.7    Relative clause locative copular clitics

As in (15a), when the head of a definite relative clause is the subject of a non-verbal
locative clause, the relative clause definite clitic  *=É* is attached to the final word of
the relative clause before the locative copula *íín/één*. However, in fast speech as in
(b), the singular relative clause locative copular clitic  *=ÉĒn* (RLCM) replaces the
relative clause definite clitic  *=É* and the locative copula *íín/één*. Similarly, the
plural relative clause locative copular clitic  *=ÈÈn* of (d) replaces the relative
clause definite clitic  *=È* and the particle *ēēggàn* in (c). See also 8.3.5 and 14.7.

(15)  **Relative clause locative copular clauses**
(a)   ɟāā        ná      bánḏāl = **ɛ́**      **íīn**     wɛ́ɛ́     bɛ̀ɲɟ
      person    REL     weak=RDM.SG     LCM     house    beside
      'The weak person (lit. person who is weak) is beside a house.'

(b)   ɟāā        ná      bánḏāl = **ɛ́ɛ̄n**    wɛ́ɛ́     bɛ̀ɲɟ
      person    REL     weak=RLCM      house    beside
      'The weak person is beside a house.'

(c)   ɟɔ̄gg      nà      bánḏāl-g = **ɛ̀**     **ɛ̄ggàn**   wɛ́ɛ́     bɛ̀ɲɟ
      people    REL     weak-PL=RDM.PL    LCM     house    beside
      'The weak people are beside a house.'

(d)   ɟɔ̄gg      nà      bánḏāl-g = **ɛ̀ɛ̄n**   wɛ́ɛ́     bɛ̀ɲɟ
      people    REL     weak-PL=RLCM    house    beside
      'the weak people are beside a house.'

The singular relative clause locative copular clitic is = *ÉĒn* (from = *É íīn/ɛ́ɛ̄n*) with
HM tone and the plural is = *ÈÈn* (from = *È ɛ̄ggàn*) with Low tone, which happen
to be the same as the relative clause dative clitics.

(16)  **Relative clause locative copular clitic**
      **(rapid speech form of = *É íīn/ɛ́ɛ̄n*, = *È ɛ̄ggàn*)**

|          | SG                        | PL                              |                             |
|----------|---------------------------|---------------------------------|-----------------------------|
| Noun     | ná àggáár = **ɛ́ɛ̄n**       | nà àggáār-g = **ɛ̀ɛ̄n**           | 'the . . who is the hunter is' |
| ADJ      | ná bánḏāl = **ɛ́ɛ̄n**        | nà bánḏāl-g = **ɛ̀ɛ̄n**           | 'the . . who is weak is'     |
| Body part locative | ná ăn wɛ́ɛ́ ááɲ = **ɛ́ɛ̄n** | nà àn wísɔ̄-g ɔ́ɔ̀ŋg = **ììn**   | 'the . . who remains behind the house is' |
| ADV      | ná líɟ-ɟɔ́ ɔ̄nḏɔ́gg = **íīn** | nà líɟ-ɟɔ̄ ɔ̄nḏɔ́gg = **ììn**      | 'the . . who came with force is' |

## 4.1.8    Accompaniment clitic

The accompaniment clitic (ACM) is used on noun phrases in adjuncts introduced by
the animate preposition *ɛ̀* 'with' if the noun has the semantic role of accompaniment.
See also 7.6 and 8.3.6.

(17)  bāārg-á        áð-à̀n     ɛ̀       àggáár = **ɛ̂**
      Baggara-DEF    coming    with    hunter = ACM
      'The Baggara tribe was coming with a hunter.'

Singular and plural accompaniment clitics are =*E*.

(18) **Accompaniment clitic**

| | SG | PL | |
|---|---|---|---|
| Noun | è àggáár = **ɛ̂** | è àggáár-g = **ɛ̂** | 'with a hunter' |
| ADJ | è ɟāā bánḏāl = **ɛ̂** | è ɟɔ̄gg bánḏāl-g = **ɛ̂** | 'with a weak person' |
| Body part locative | è ɟāā ná nă wɛ́ɛ́ áán = **ɛ̂** | è ɟɔ̄gg nà nà wísɔ̄-g ɔ́ə̀ŋg = **ɨ̂** | 'with a person who remains behind a house' |
| ADV | è ɟāā ná líɟ-ɟɔ́ ɔ̄nḏɔ́gg = **ɨ̂** | è ɟɔ̄gg nà líɟ-ɟɔ̄ ɔ̄nḏɔ́gg = **ɨ̂** | 'with a person who came with force' |

## 4.1.9   Relative clause definite and accompaniment clitic

When the head of the relative clause has an accompaniment role and is introduced by the animate preposition *è* 'with', the relative clause definite and accompaniment clitics (RDM=ACM) are attached to the clause-final word.  See also 8.3.7.

(19)   bāárg-á        áð-ă`n    è       ɟāā      ná    sèggār = **ɛ́ɛ́ = nɛ̄**
       Baggara-DEF   coming  with   person   REL   strong = RDM = ACM
       'The Baggara were coming with the strong person
       (lit. the person who is strong).'

The singular relative clause definite and accompaniment clitic is  =*ÉÉ*=*nĒ* (from  =*É*=*nĒ* '=RDM.SG=ACM') and the plural is  =*ÈÈ*=*nĒ* (from  =*È*=*nĒ* '=RDM.PL=ACM'), where the relative clause definite clitic vowel is lengthened.

(20) **Relative clause definite and accompaniment clitics**

| | SG | PL | |
|---|---|---|---|
| Noun | ná àggáár = **ɛ́ɛ́ = nɛ̄** | nà àggáàr-g = **ɛ̀ɛ̀ = nɛ̄** | 'with the . . who is the hunter' |
| ADJ | ná bánḏāl = **ɛ́ɛ́ = nɛ̄** | nà bánḏāl-g = **ɛ̀ɛ̀ = nɛ̄** | 'with the . . who is weak' |
| Body part locative | ná ăn wɛ́ɛ́ áán = **ɛ́ɛ́ = nɛ̄** | nà àn wísɔ̄-g ɔ́ə̀ŋg = **ɨ̀ɨ̀ = nɨ̄** | 'with the . . who remains behind the house' |
| ADV | ná líɟ-ɟɔ́ ɔ̄nḏɔ́gg = **ɨ́ɨ́ = nɨ̄** | nà líɟ-ɟɔ̄ ɔ̄nḏɔ́gg = **ɨ̀ɨ̀ = nɨ̄** | 'with the . . who came with force' |

## 4.1.10   Subordinate clause-final clitic

In subordinate clauses, such as those beginning with the subordinate conjunction *é gārá* 'when', the clitic  =*É* (SBO) attaches to the clause-final word.  The subordinate

clause-final clitic $=\acute{E}$ (SBO) should not be confused with the subordinate verb-final clitics (SBO1, SBO2) of 10.7. In (21), the clitic $=\check{\imath}$ (SBO1) attaches to the verb *túr-s*$=\check{\imath}$ 'struck=COMP =SBO1' in addition to the clause-final clitic $=\acute{E}$ (SBO) and is a different morpheme. See also 7.7 and 8.3.8.

(21)  έ gārá      bə̀rḍ=ə̄      ṭúr-s=ǐ          ɟāā     ná     sèggār=**έ**
      GP when     lion=DEF     see-COMP=SBO1   person   REL    strong=SBO
      'When the lion saw a strong person, . . '

Singular and plural subordinate clauses have the clitic $=\acute{E}$ in clause-final position.

(22) **Subordinate clitic**

|            | SG              | PL               |                         |
|------------|-----------------|------------------|-------------------------|
| Noun       | àggáár=**έ**     | àggáàr-g=**έ**    | 'When . . . a hunter'   |
| ADJ        | ɟāā bánḍāl=**έ** | ɟɔ̄gg bánḍāl-g=**έ** | 'When . . . a weak person' |
| Body part  | ɟāā àn wéέ       | ɟɔ̄gg àn wísɔ̄-g   | 'When . . . a person    |
|  locative  | bèɲɟ=**ɛ̄**      | bèɲāāg=**έ**      | remaining beside the house' |
| ADV        | líɟ-ɟ=ǐ          | líɟ-ɟ=**n̂ǐ(ggǐ)** | 'When . . . came        |
|            | ɔ̄nḍɔ́gg=**í**   | ɔ̄nḍɔ́gg=**í**    | with force'             |
| Verb       | ŋə̄ɲ=**ǐ**       | ŋə̄ɲ=**n̂ǐ(ggǐ)** | 'When he files'         |

## 4.1.11 Relative clause definite and subordinate clitic

When a relative clause is at the end of a subordinate clause, the relative clause definite and subordinate clitics (RDM=SBO) are attached to the clause-final word. See also 8.3.9.

(23)  έ gārá      bə̀rḍə̄      ṭúr-s=ǐ          ɟāā     ná     sèggār=**έέ=nέ**
      (GP)when    lion.DEF    see-COMP=SBO1   boy      REL    strong=RDM=SBO
      'When the lion saw the strong boy, . . '

The singular relative clause and subordinate clause clitic is $=\acute{E}\acute{E}=n\acute{E}$ (from $=\acute{E}=n\acute{E}$ '=RDM.SG=SBO') and the plural is $=\grave{E}\grave{E}=n\bar{E}$ (from $=\grave{E}=n\acute{E}$ '=RDM.PL=SBO'), where the relative clause definite clitic vowel is lengthened and the subordinate clitic High tone lowers to Mid following Low in the plural clitic {M9}.

(24) **Relative clause definite and subordinate clitics**

|       | SG                  | PL                      |                    |
|-------|---------------------|-------------------------|--------------------|
| Noun  | ná àggáár=**έέ=nέ** | nà àggáàr-g=**ὲὲ=nɛ̄**   | 'When . . the . .  |
|       |                     |                         | who is the hunter' |
| ADJ   | ná bánḍāl=**έέ=nέ** | nà bánḍāl-g=**ὲὲ=nɛ̄**   | 'When . . the . .  |
|       |                     |                         | who is weak'       |

| | | | |
|---|---|---|---|
| Body part | ná ăn wéɛ́ | nà àn wísɔ̄-g | 'When . . the . . |
| locative | áán̠ = ɛ́ɛ́ = nɛ́ | ɔ́ɔ̀ŋg = ìì = nī | who remains |
| | | | behind the house' |
| ADV | ná líɟ-ɟɔ́ | nà líɟ-ɟɔ̄ | 'When . . the . . who |
| | ɔ̄n̠d̠ɔ́gg = íí = ní | ɔ̄n̠d̠ɔ́gg = ìì = nī | came with force' |

## 4.1.12   Perfect clitic

The perfect clitic (PF) indicates that a past or present action remains or results in the present or future.  See also 10.8.

(25)  ɛ̄        lā      gɔ̀f-ì                          wá,    ɛ̄      gɔ̀ù-s-íì = r.
       3sN   UNC   /gàf/give.INCP-3sAM       not    3sN   /gàf/give-COMP-IPF = PF
       'He would not give it (money), (since) he had already given.' (Fand3)

The perfect clitic =*r* optionally attaches to the verb object or verb of the clause.

(26) **Perfect clitics**
Noun    á kɔ́m-d̠á ɟɔ̄g = ɔ́ = **r**    'in order to completely cut the people'
Verb    á kɔ́m-d̠á = **r** ɟɔ̄g = ɔ́    'in order to completely cut the people'

## 4.2   Word structure

Before beginning morphology discussion on various word categories, it is important to define how a word boundary is determined and how the terms 'root', 'stem' and 'word' are used in this thesis.  The morphemes attached to roots and stems have different functions, different morphophonological alternations, or in other ways are treated as different kinds of morphemes in the language.

Word boundaries are determined by [+ATR] spreading.  A word involves all bound morphemes to which [+ATR] quality spreads; with the exception of a few compounds (see footnote 8 in section 2.2.2.2), all vowels of a word have the same [ATR] quality, all being either [+ATR] or all being [-ATR].

A root is the smallest lexical morpheme of a word and can be the entire word.  A stem is a root plus an optional suffix and can also be the entire word.   A word includes the stem and any optional clitics.

(27)    Stem = root + (suffix)
        Word = stem + (clitic) + (clitic)

All suffixes of the language are a part of the stem and all clitics in the language are outside of the stem, but inside the word.  More than one clitic in the same word is possible, but only one suffix is possible in a stem.

Nearly all stems are inflectional, having aspect (COMP, CONT, PF) or mood (IMP, SBJV).  On the other hand, clitics are derivational (VN), indicate valency (PAS, PAS.A) or have clausal functions indicating how the word relates to another constituent of the clause (DAT, ACM) or indicates its place in the clause (COP, RDM, SBO).

There are five criteria which can be used to determine whether a bound morpheme is a clitic.  The criteria are not all valid for any one clitic.  However, none of these criteria are valid for any of the suffixes.  Thus, they each individually support the claim that clitics can be grouped differently than suffixes, and how to distinguish the two.

(28)    **Criteria for determining bound morphemes are clitics**
(a)      Attaches to more than one word category
(b)      Attaches to inflectional morphemes
(c)      Attaches to surface-final segments
(d)      Stem tone assignment is the point of departure
(e)      One or more of the morphophonological rules {M1-11} is not applied.

In the previous section of this chapter, it is shown that many of the clitics are attested to attach to more than one word category.  In the introduction to noun morphology in 6.1 and the introduction to verb morphology in 9.1, as well as in relevant sections for each morpheme, the other criteria are shown to be valid for at least some clitics.  Although several inflectional suffixes cannot be combined with other inflectional suffixes, all clitics can attach to inflectional suffixes.  Although suffixes always attach to underlying-final segments of roots, clitics attach to surface-final segments of stems.  In noun morphology, it is shown that root tone assignment is the point of departure for stem tone assignment, whereas stem tone assignment is the point of departure for word tone assignment.  In verb morphology, although the morphophonological rules {M1-11} always apply to suffixes, it is common for one or more of the rules to not be applied to clitics.

## 4.3    Comparison of adjectives with nouns and verbs

Nouns and verbs are the two largest word categories in Gaahmg, both of which have significant amounts of morphology.  Adjectives (also called qualitative adjectives in this thesis), though less productive, also have a significant amount of morphology.  Before discussing the morphology of each, it is important to verify that each is a lexical category in its own right.

Although adjectives commonly function as modifiers, they can also be used nominally or verbally.  However, they are not used in some of the syntactic constructions of either nouns or verbs, and there are some differences in the morphology when used as either category.  Thus, they can be analyzed as a distinct lexical category from either nouns or verbs.

Adjectives such as *kāyáár* 'beautiful' agree in number with the head noun of the noun phrase, often marking plural number with the same suffix *-gg* as in nouns.

(29a)  á     ɲ̄ám   ɔ̰̄ḏ    kāyáár
       1sN   want   wife   beautiful
       'I want a beautiful wife.'

  (b)  á     ɲ̄ám   ɔ̄ɔ̄-**gg**   kāyáár-**g**
       1SN   want   wives-PL   beautiful-PL
       'I want beautiful wives.'

Adjectives are attested to fill the same slot in a clause as a noun when they are predicates of non-verbal clauses (with either a separate or bound copula) or follow a relativizer. However, they are generally not attested (NA) as subjects, objects, or objects of prepositions, although adjectives can modify the head noun of a noun phrase in each of these constructions.

(30) **Noun 'hunter' and adjective 'beautiful' syntactic comparison**

|  | N | ADJ | ADJ of noun phrase |
|---|---|---|---|
| Predicate separate copula | ɟēn ṭā **àggáár** 'The person is a hunter.' | ɟēn ṭā **kāyáár** ' . . is beautiful.' | ɟēn ṭā kàmàlɔ̀gg **kāyáár** ' . . is a beautiful girl.' |
| Predicate bound copula | ɟēn **àggáár=ā** 'The person is a hunter.' | ɟēn **kāyáár** ' . . is beautiful.' | ɟēn kàmàlɔ̀gg **kāyáár** ' . . is a beautiful girl.' |
| Following REL | á ɲ̄ám ɟēn ná **àggáár=ɛ́** 'I want the person who is a hunter.' | á ɲ̄ám ɟēn ná **kāyáár=ɛ́** ' . . is beautiful.' | á ɲ̄ám ɟēn ná kàmàlɔ̀gg **kāyáár=ɛ́** ' . . is a beautiful girl.' |
| Subject | **àgáár** wɛ̄ḏán 'The hunter is good.' | (NA) 'The beauty is . . ' | kàmàlɔ̀gg **kāyáár** wɛ̄ḏán 'beautiful girl is . . ' |
| Object | á ɲ̄ám **àggáárá** 'I want the hunter.' | (NA) ' . . the beauty.' | á ɲ̄ám kàmàlɔ̀gg **kāyáár=á** ' . . beautiful girl.' |
| Object of PP | ɛ̄ lɛ́ɛ́n ɛ̀ **àggáár=ɛ̄** 'She comes with a hunter.' | (NA) ' . . with the beauty.' | ɛ̄ lɛ́ɛ́n ɛ̀ kàmàlɔ̀gg **kāyáár=ɛ̄** ' . . with a beautiful girl.' |

A few adjectives such as *wɛ̄ḏán* 'good' have a different form (*wáḛ̄ḏá* 'goodness, joy') when used as a subject, object or object of a preposition. The word used in these constructions is analyzed categorically as a noun, having different syntactic functions than adjectives.

(31) **Noun *wáē̠d̠á* 'goodness, joy' and adjective *wê̠d̠án* 'good' syntactic comparison**

| Predicate | t̠ɔ́ɔ́=n **wê̠d̠án** | Object | á ɲám **wáē̠d̠á** |
|---|---|---|---|
| | 'The cow is good.' | | 'I want joy.' |
| Subject | **wáē̠d̠á** wê̠d̠án | Object of PP | ɛ̄ ád̠ ɛ̄ **wáē̠d̠á** |
| | 'Joy is good.' | | 'He became with joy.' |
| | | | (is pleased)' |

There are three differences in the stem morphology of nouns and adjectives with final consonants.  As shown in (32), singular nouns attach the copular clitic $=\bar{A}$, whereas singular adjectives do not attach any clitic.  Plural nouns attach the definite clitic $=\acute{A}$ with High tone, whereas plural adjectives attach the definite clitic $=\grave{A}$ with Low tone.

(32) **Noun 'hunter' and adjective 'beautiful' morphology comparison**

| | | N.SG | N.PL | | ADJ.SG | ADJ.PL |
|---|---|---|---|---|---|---|
| | | àggáár | àggáár-g | | kāyáár | kāyáár-g |
| COP | $=\bar{\mathbf{A}}/=\grave{A}$ | àggáár=ā | àggáàr-g=à | --/=À | kāyáár | kāyáàr-g=à |
| DEF | $=\acute{A}/=\acute{\mathbf{A}}$ | àggáár=á | àggáár-g=á | $=\acute{A}/=\grave{\mathbf{A}}$ | kāyáár=á | kāyáàr-g=à |
| LCM/ | $=\hat{A}n/$ | àggáár | àggáár-g | $=\hat{A}n/$ | kāyáár | kāyáár-g |
| DAT | $=\hat{A}n$ | =ân | =ân | $=\hat{A}n$ | =ân | =ân |
| ACM | $=\hat{E}/=\hat{E}$ | àggáár=ɛ̂ | àggáár-g=ɛ̂ | $=\hat{E}/=\hat{E}$ | kāyáár=ɛ̂ | kāyáár-g=ɛ̂ |
| RDM | $=\acute{E}/=\grave{E}$ | àggáár=ɛ́ | àggáàr-g=ɛ̀ | $=\acute{E}/=\grave{E}$ | kāyáár=ɛ́ | kāyáàr-g=ɛ̀ |
| SBO | $=\acute{E}/=\acute{E}$ | àggáár=ɛ́ | àggáár-g=ɛ́ | $=\acute{E}/=\acute{E}$ | kāyáár=ɛ́ | kāyáár-g=ɛ́ |

In addition, the definite clitic $= Vn$ with no underlying tone attaches to monosyllabic vowel-final nouns (*máà, máá.=àn* 'house=DEF'), whereas the definite clitic $=\acute{V}n$ with High tone attaches to monosyllabic vowel-final adjectives (*îí, íí.=ín* 'heavy=DEF').  The differences in syntactic function and the differences in morphology, support the claim of there being both categorical nouns and adjectives.

A few adjectives may be derived from nouns with the suffix *-i* as seen from the data of (33) taken from the *Gaahmg-English Dictionary* by Madal (2004).  The derivation from one category to the other also supports the claim of both categories.

(33) **Adjectives derived from nouns (Madal, 2004)**

| N | | ADJ | |
|---|---|---|---|
| ɔ̄ɔ̄r [17] | 'anger' | əər-i | 'sorrowful, angry' |
| d̠ùùd̠ | 'year' | d̠uud̠-i | 'annual' |
| kùsúùr | 'authority' | kusuur-i | 'forceful' |

Adjectives can also be used as verbs, often with the same syntax and morphology as

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[17] No tone marking was included with the data from the mentioned source.

verbs. Adjectives are attested to fill the same slot in a clause as verbs in the constructions of (34). Many adjectives such as *kāyáár* 'beautiful' have the same morphology as verbs for completive and continuous suffixes.

(34) **Verb 'chop' and adjective 'beautiful' syntax comparison**

|  | V | ADJ |
|---|---|---|
| INF | ɟēn d̪ɔ̀ɔs-s ɛ̄ kɔ́m | ɟēn d̪ɔ̀ɔs-s ɛ̄ kāyáár |
|  | 'The person begins to chop.' | ' . . to be beautiful.' |
| INCP | ɟēn kɔ́m | ɟēn kāyáár |
|  | 'The person chops.' | ' . . is beautiful.' |
| COMP | ɟēn kɔ́m-**sɔ́** | ɟēn kāyáár-**sá** |
|  | 'The person chopped.' | ' . . was beautiful.' |
| CONT.N | ɟēn kɔ́m-**án** | ɟēn kāyáár-**án** |
|  | 'The person was chopping.' | ' . . was beautiful.' |
| Following | á ɲám ɟēn ná kɔ́m=**ɛ́** | á ɲám ɟēn ná kāyáár=**ɛ́** |
| REL | 'I want the person who chops.' | ' . . is beautiful.' |

However, in verb paradigms such as the incompletive forms of (35), the long forms of subject pronouns precede the adjectival verb instead of short subject pronouns as in true verbs. The plural adjective suffix *-gg* and copular clitic *=A* attach to adjectival verbs of plural persons, whereas these bound morphemes are not attached to any true verb forms.

(35) **Incompletive paradigms of active verb and adjectival verb compared**

| (a) | '___ chop, cut' |  | (b) | '___ am/are/is beautiful' |  |
|---|---|---|---|---|---|
| á | kɔ́m | 1sN | āān | kāyáār | 1sN |
| ɔ́, | ú=kûm | 2sN | ɔ̄ɔn | kɔ̄yɔ́ɔ̄r | 2sN |
| ɛ̄ | kɔ́m | 3sN | ɛ̄ɛn | kāyáár | 3sN |
| āgg | kɔ́m | 1pN | āggá | kāyáár-g=ā | 1pN |
| ɔ̄gg, | ūg=kûm | 2pN | ɔ̄ggɔ́ | kɔ̄yɔ́ɔ́r-g=ɔ̄ | 2pN |
| ɛ̄ggà | kɔ̂m | 3pN | ɛ̄ggà | kāyáár-g=à | 3pN |

The adjectival verb *kāyáār* of (35) has subject tone inflection (final Mid for second person, final High for third singular, and final Low for third plural) and [+ATR] second person forms, as do true verbs. However, in some adjectives used as verbs, person inflection is not as regular as the adjectival verb paradigm in (35). Second plural forms of some adjectival verbs have Low final tone instead of Mid (*kɔ́ɔfàr, kúúfər-g=ə̀* 'thin.INCP-2pN=COP') and second person forms of some adjectival verbs have [-ATR] quality instead of [+ATR] (*bánḏāl, bánḏāl-g=ā* 'weak.INCP-2pN=COP'). These features mark adjectives as being different than true verbs.

Since adjectives have some differences in syntax and morphology compared to both nouns and verbs, they are analyzed as a separate category. Adjective clitic morphology similar to that of noun morphology is presented in 8.3, whereas

adjective morphology similar to verb morphology is presented in 10.11.

In the following chapters, word categories are discussed one-by-one. For each, we first discuss the function followed by the forms of morphemes attached to roots or stems. Because possessive pronouns are important for the discussion on nouns and verbs, pronouns in general are discussed first, followed by nouns, adjectives, verbs, prepositions, locatives, and adverbs. Each of these is a lexical category, as are conjunctions discussed in 15.2.