

Defining the Word in Kol

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In the early days of African linguistics, researchers debated as to whether or not the Bantu languages under study were agglutinative, with words made up of a long string of morphemes, or more isolating with clauses having more independent words (Doke 1929, Guthrie 1948). For the most part, this debate has been won by those in favor of the agglutinative structure, though researchers have specified that for some languages there may be differences between phonological and morphological (or syntactic) words (Myers 1995, Hyman and Katamba 2005).

Bantu languages are assumed to minimally have a verb stem preceded by subject and tense markers. This structure is illustrated by an example from Swahili (G.40), an eastern Bantu language.

- (1) ni- na- wa- heshimu
 I PRES them respect
 'I respect them.' (Mohammed 2001:ii)

Many Bantu verbs are even more complex. (2) gives an example from Cinsenga (N.40), a Bantu language spoken in Zambia and Malawi. This language allows for an initial negative marker, followed by a subject marker, tense morpheme, object marker, verb root, extension, and a final vowel. These slots are labeled above the illustrative morphemes in the example below.

- (2) Neg SM Tense OM Verb Stem
 Root Ext Fv
 si- ni- ka- mu- lil- il- a
 Neg I Fut him/her Cry Appl
 'I will not cry for him/her.' (Miti 2001:79)

Kol, a previously undocumented language from eastern Cameroon, differs from eastern, central and southern Bantu languages in that verbs do not have prefixes marking subject agreement, tense or aspect. Rather, the preverbal elements fulfilling most of these grammatical functions are independent words or clitics. Examples from Kol are given below in (3) and (4). (The data in this paper comes from my own fieldwork, and more information may be found in Henson 2007.)

- (3) **Tense¹** **Cop** **Asp** **Verb**
 [ɲ = í bə́ lé ncò... kǎ̀bò ɲ = í bì-yà.]
 /ɲ = é bə́ + H lè + H ncò + H + L kǎ̀bò ɲ = é bì-yà + H + L/
 he-P1 be IMPF come but he-P1 seize-PASS
 'He *was* coming... but he got caught.'

- (4) **Cop** **Aux** **Aux** **Verb**
 [bəsár bwó mē ncə́ tér fyàl mə́ məcì.]
 /bè- soeur bwó mé ncə́ tér fyàl mə́ məcì/
 2- sister (nun) they be (chg) Come first test (v) Me 4-blood
 'The Sisters first tested my blood.'

¹ Kol has five tenses: present (PRES), near past (P1), far past (P2), near future (FUT), distant future (F2). See section 1.6.

In contrast to what is seen in the verb phrase, the Kol noun phrase resembles those of central, southern, and eastern Bantu languages in having noun class and concord prefixes (versus independent words or clitics marking noun class membership, or indeed a lack of noun classes altogether).

This paper will first discuss the criteria which may be used to define word-hood in Kol verb phrases followed by those which may be used to define word-hood in the noun phrase.

1. In the Verb Phrase

There are four reasons to believe that Kol's verbal sequence is more loosely bound than the Bantu languages seen in eastern, central and southern Africa. These are: the placement of the non-past negative circumclitic, the positioning of the subjunctive marker, the tense concord H tone found in many tenses, and the placement of adverbs. These morphosyntactic constructions offer evidence as to which of the preverbal elements of the Kol verb phrase are independent words. The other verbal clitics will be discussed in sections 1.5-1.6.

1.1. Negation

In the perfective, the circumclitic $\acute{a}=\dots=\grave{e}$ is used to show negation. This morpheme always appears on the first full word of the verbal sequence. In the negative past tenses, the first full word of the verbal sequence is always a form of the verb *nco* 'to come' resulting in *áncè* for the negative recent past and *áncègè* for the negative far past. In the non-past tenses, the first word of the verbal sequence may vary.

If a main verb is the first element, then it hosts the negative circumclitic, as shown below in (5) and (6).

- (5) [múùz, ɲ = à = dég = é lè-kán.]
 / múùz ɲ = á = dég = è + H lè-kán /
 today he/she-NEG-see-NEG+H 5-antelope
 'Today, he didn't see an antelope.'
- (6) [ɲ = ǎ = wàzà = yè.]
 / ɲ = á = wàzà = è/
 he/she-NEG-forget-NEG
 'He doesn't forget.'

If an auxiliary is the first element in the verbal sequence, then it hosts the circumclitic as shown below in (7) for a copular auxiliary and in (8) for a non-copular auxiliary.

- (7) [tòðb á = j = è dí dùk.]
 /tòðb á = ɲì = è + H dì + H dùg/
 sheep NEG-be(att)²-NEG stay Forest
 'Sheep don't stay in the forest.'
- (8) ɲ = à = níg = é wàzà m-ùr.
 ɲ = á = nígò = è + H wàzà + H m-ùr
 he/she-NEG-return-NEG forget 1- man
 'He doesn't forget anyone anymore.'

The negative circumclitic may also be hosted by morphemes marking tense. In affirmative clauses, two tenses are marked by a morpheme consisting of a single vowel as well as an additional morpheme. These two tenses are the immediate past (marked by the present tense *ó* and the additional

² Kol has four copulas: the attributive copula shown here, *bè* the basic (or default) copula, *mé* the copula used to describe a new situation (or changed situation), and *tíg* the negative copula. See Henson 2007 for more information.

- (14) [wò bó=k ké fèndà nè m̀.]
 /wò b̀= g +H ké fèndà nò m̀ /
 you (SG) be-IMP NEG be.in.rivalry with me
 'You must not put yourself in competition with me.'

- (15) [m̀= túgò jì n̂ m = ò kwó=k bár è-byól.]
 /m̀= tùg jì n̂ m = ó kwò= g +H bár +H lè-byól /
 I be (neg) want that I-PRES again-SUBJ climb in-canoe
 'I don't want to get in a canoe anymore!'

The subjunctive enclitic confirms what was seen with the negative circumclitic, namely that preverbal auxiliaries and adverbs are indeed independent words since they pattern with main verbs in that they are able to host the subjunctive enclitic whenever they happen to be the first member of the verbal sequence. Other than the tense markers shown in (9) and (10) though, this is much as expected. It would be more interesting to look at aspect markers. For evidence that these too are independent words, we must turn to tonal behavior.

1.3. Grammatical tones

All of the tenses except the far past share a similar tonal contour, in that in addition to the tense marker, a H tone suffix is added. Compare an example of a sentence in the far past in (16) with sentences marked for other tenses in (17)-(20), namely the near past, the present, the future, and the distant future.

- (16) [ɲ = ǎ bwòg̀ kwàn.]
 /ɲ = á bwòg kwàn /
 he/she-P2 harvest (honey) honey
 'He was harvesting honey.'
- (17) [nò kùgù, ɲ = í bwòg̀ kwàn.]
 /nò kùgù, ɲ = é bwòg +H kwàn /
 with evening he/she-P1 harvest (honey) honey
 'Yesterday, he harvested honey.'
- (18) [ɲ = ǒ bwòg̀ kwàn.]
 /ɲ = ó bwòg +H kwàn /
 he-PRES harvest (honey) honey
 'He harvests honey.'
- (19) [émáné ɲ = ẽ bwòg̀ kwàn.]
 / ɲ = é bwòg +H kwàn /
 tomorrow he/she-FUT harvest (honey) honey
 'Tomorrow, he will harvest honey.'
- (20) [ɲ = ẽ bwó bwòg̀ kwàn.]
 /ɲ = é bwó +H bwòg +H kwàn /
 he/she-FUT F2 harvest (honey) honey
 'He will harvest honey [in a month].'

Not only is this H tone added after the verb as shown above, but it is also added after every preverbal element in the verbal sequence (and the main verb itself). Again, compare (21) with (22) where a H tone is added after both the imperfective marker and the verb stem in (22) but not in (21).

- (21) [$\text{j} = \check{\text{a}}$ lè bwògè kwàn.]
 / $\text{j} = \acute{\text{a}}$ lè bwòg kwàn /
 he/she-P2 IMPF harvest (honey) honey
 'He was harvesting honey.'
- (22) [$\text{j} = \check{\text{o}}$ l'è bwògó kwàn.]
 / $\text{j} = \acute{\text{o}}$ lè +H bwòg +H kwàn /
 he-PRES IMPF harvest (honey) honey
 'He harvests honey (habitually).'

This additional H tone triggers downstep in the imperfective marker which is underlyingly low. Specifically, the floating H delinks the underlying L of the imperfective marker. The underlying L cannot merge with the preceding tone because the preceding syllable is already hosting a complex contour tone. The underlying L must remain floating and thus triggers downstep.

Similarly, compare (23) with (24) where a H tone is added after the auxiliary verb and the main verb in (24) but not in (23). Since the auxiliary has an underlying L tone in (23), it surfaces with a downstepped H tone in (24).

- (23) [$\text{j} = \check{\text{a}}$ ncè bwògè kwàn.]
 / $\text{j} = \acute{\text{a}}$ ncè bwòg kwàn /
 he/she-P2 come harvest (honey) honey
 'He came to harvest honey.'
- (24) [$\text{j} = \acute{\text{i}}$ nc'è bwògó kwàn.]
 / $\text{j} = \acute{\text{e}}$ ncè +H bwòg +H kwàn /
 he/she=P1 come harvest (honey) honey
 'He came to harvest honey.'

The grammatical H tone may be absorbed into a following lexical H tone. If there are no surrounding H tones, it delinks the tone to its left and docks there, triggering downstep if there are no merger possibilities for the floating L. Both strategies are shown below in (25). (26) is a parallel sentence in the far past (P2) tense without the grammatical H tone.

Below in (25), the floating H after the auxiliary surfaces on the final syllable of the auxiliary. The auxiliary's underlying L tone is retracted to only appear on the first syllable. The floating H after the main verb merges with the underlying H tone of the object.

- (25) [nò kùgú $\text{j} = \acute{\text{i}}$ nìgó kò njáp.]
 / nò kùgú $\text{j} = \acute{\text{e}}$ nìgò +H kò +H njáb /
 with evening he-P1 return go 3-house
 'Today he returned home.'
- (26) [$\text{j} = \acute{\text{a}}$ nìgò kò njáp.]
 / $\text{j} = \acute{\text{a}}$ nìgò kò njáb /
 he/she-P2 return go house
 'He went home.'

This tonal behavior offers evidence that *all* preverbal elements, full lexical items like auxiliaries and adverbs, and more grammatical items, such as aspect markers, are independent words, since the grammatical H tone appears after any and all of the elements which may appear in the verbal sequence. Additional evidence may be found in the positioning of adverbs.

1.4. Adverbs

Adverbs differ from other verbal elements in having the most free word order. They can appear in a number of different positions within the verbal sequence and may also appear outside of the verbal sequence all together. Below is an example where the adverb *númó* 'also, too' appears as the first element in a phrase.

- (27) [**númó** bw=á kò ʃwâmb nê m̀= jì ǹ ntú m̀-çì.]
 / **númó** bwó=á kò ʃwâmb nê m̀= jì ǹ ntú m̀-çì /
also they-P2 go discover that I be(att) with 9-diarrhea 6-blood
 'Then they discovered that I had dysentery.'

Adverbs may also appear between object noun phrases, as illustrated by the adverb *njì* 'only' in bold below.

- (28) [y=á kwó bì m̀ **njì** lé-mpùh̀.
 /y=á kwó bì m̀ **njì** lé-mpùh̀.
 7SUB-P2 again seize me **only** in-10-hair
 'It snagged me in the hair.'

The relative ordering of the other preverbal elements is fixed. The only required element of the verbal sequence is the main verb, but if auxiliaries and aspect markers co-occur with the main verb, they occur in the same relative ordering.

In contrast, adverbs may insert themselves between any two words in the verbal sequence. Since there are four main possible elements, i.e. the copular auxiliary, the aspect marker, the non-copular auxiliary and the main verb, this results in three possible adverb slots. Examples will be given of each possibility below. The first available position for adverbs is after a copular auxiliary and before an aspect marker. This may be seen in (29) and (30).

- (29) [j̀= jí **náŋ** l'é bẁg̀ kwàn]
 / j̀= j̀ +H **náŋ** +H lè +H bẁg̀ +H kwàn /
 he be (att) **still** IMPF harvest (honey) honey
 'He still collects honey.'

- (30) [j̀= j̀ **njì** l'é bẁg̀ kwàn]
 / j̀= j̀ +H **njì** +H lè +H bẁg̀ +H kwàn /
 he/she be (att) **only** IMPF harvest (honey) honey
 'He still only collects honey.'

The second available position for adverbs is after the aspect marker and before the non-copular auxiliary. The fact that adverbs can appear both before and after the aspect marker offers evidence (in addition to tonal behavior) that aspect markers too are independent words.

- (31) [m=è sé **númó** kò kúŋá ncòò lól ntámè nçì.]
 /m=é sé +H **númó** +H kò +H kúŋá +H ncòò lól ntámè nçì /
 I-P1 PERF **also** go defecate time three middle fork
 'I also had to go to the bathroom three times along the way.'

Finally, adverbs can occur between the non-copular auxiliaries and the main verb.

- (32) [j̀=ǎ kò **númó** jwák cìè.]
 / j̀=á kò **númó** jwák cìè /
 he/she-P2 go **also,too** hear, feel sick
 'She got sick too.'

Adverbs may also appear after the verb, but in that position, they are outside of the verbal sequence. This may be seen because there is no extra H tone found in that position; the last two words both surface with their underlying low tones.

- (33) [ɲ = ě kwó d'í **njì** dùk.]
 /ɲ = é kwó +H dī +H **njì** dùg /
 he-FUT again stay **only** forest
 'He will continue to stay only in the forest.'

1.5. Subject pronoun proclitics

Kol verbs do not obligatorily agree with their subject, but Kol does have subject markers which show person and noun class and occur in complementary distribution with full noun phrases. Below is an example of a sentence with a full noun phrase as its subject, followed by an example of a sentence with a subject marker.

- (34) [lè-wúg á bə lé-byól.]
 /lè-wúg á bə lé-byól /
 5-hole P2 be in-canoe
 'There was a hole in the canoe.'
- (35) [y = é jì mpwógé]
 /y = é jì +H mpwógé /
 7SUB-FUT be (att) good
 'It will be good...'

The majority of pronouns in Kol show phonological patterns that resemble those seen in noun class and concord markers in that most of the subject pronouns can be analyzed as consisting only of consonants, just like the concord markers. A table of the concord markers, subject pronouns, and object pronouns is given below. The status of the noun class and concord prefixes will be discussed below in section 2.1.

(36)	Class/Person	Concord		Subject Pronouns		Object Pronouns	
	1 st person			m =	bìzó		
	2 nd person			w =	bé		
	3 rd person (1/2)	ɲ-	b-	ɲ =	bò =	ɲò	bwò
	3/4	w-	mè-	w =	mè =	wò	myò
	5/6	d-	m-	dò =	mò =	dwò	mwò
	7/8	j-	bè-	jò =	bè =	yò, jwò	byò
	9/10	ɲ-	ɲ-	ɲ =	ɲ =	ɲò	ɲò
	Non-ref			y =			

Table 3.1 Kol subject and object pronouns

If a subject pronoun appears before the vowel initial tense markers, it forms a phonological unit with the tense markers, as can be seen in (37). However, if subject pronouns appear before a consonant-initial word, the regular schwa epenthesis rule applies, as shown in (38).

- (37) [by = á lè dī njì lé-mò-kòk]
 /by = á lè dī njì lé-mò-kòk /
 8SUB-P2 IMPF stay only in-6-enclosure
 'They [animals] stayed only in enclosures.'

- (38) [nê mpwák jwá = kó = k fwôk.]
 / nê mpwág jwá = kó = g + H fwôg /
 that family.line 9SUB go-SUBJ front (of s.th.)
 '...that the family lines continues.'

Syntactically, subject pronouns do not act like prefixes. If they were prefixes, we would anticipate that they would have specific selectional requirements. However, subject pronouns may appear before any element in the verbal complex, e.g. tense markers, verbs, adverbs, or even a prepositional phrase, as shown below.

- (39) [mè = nò kwó ncè tér lè-jwók bè-wàl.]
 / m̄ = nò kwó ncè tér lè-jwóg bè-wàl /
 I with again come start INF-feel 8-fear
 'I started to be afraid.'

Additionally, these subject markers show the same phonological behavior before the circumclitic described above. Prefixes should not be allowed to occur outside of a clitic, since prefixes are generally assumed to be attached in the word-building process, while clitics are assumed to be part of syntax. However, if the subject markers are themselves clitics, then this is a case of multiple clitics being hosted by the same word (clitic stacking) which is not a problem.

- (40) múùz, j̄ = à = dég = é lè-kán.
 múùz j̄ = á = dég = è + H lè-kán.
 today he/she-NEG-see-NEG 5-antelope
 'Today, he didn't see an antelope.'

To summarize, since subject markers can be analyzed as phonologically deficient or dependent and may occur outside the circumclitic, they should be analyzed as proclitics themselves.

1.6. Tense vowels

Tenses in Kol are all marked by an initial vowel as shown below.

far past (P2)	á
recent past (P1)	é +H
immediate past ('just')	ó +lwándə̀b̀ə̀ +H
present	ó +H
near future(FUT)	é +H
distant future (F2)	é +bwó +H

The recent past and near future morphemes are phonologically underlyingly the same vowel (the front mid vowel [e]), but they participate in different morphophonemic processes which distinguish the two morphemes. (The recent past *é* is raised to [i] when following a palatal consonant and then rounded when preceding a labial approximant, while the near future *é* is not. This can be seen comparing examples (17) and (19). See Henson 2007 for more information.)

This tense vowel is in complementary distribution with the proclitic portion of the negative circumclitic as shown by the examples below.

- (41) [múùz, j̄ = ǎ = bwə̀g = é lè-kán.]
 / múùz j̄ = á = bwə̀g = è + H lè-kán /
 today he/she-NEG-see-NEG 5-antelope
 'Today, he didn't see an antelope.'

- (42) [ɲ = ɔ́ bwɔ̀gɔ́ kwà̀n.
 / ɲ̣ = ɔ́ bwɔ̀g + H kwà̀n.
 he-PRES harvest (honey) honey
 'He harvests honey.'

Since the tense vowels pattern with the proclitic element of negation, it is likely that they too are clitics.

1.7. Conclusion

The morphosyntactic constructions described above offer evidence that the preverbal morphemes (tense markers, auxiliaries and aspect markers) are independent words. Additionally the tense and negation clitic constructions offer evidence that second position, i.e. the first position in the verbal sequence, may be important in Kol.

2. In the Noun Phrase

In contrast to what is seen in the verb phrase, Kol resembles the central, eastern and southern Bantu languages in having noun class and concord prefixes (and not clitics or independent words). This may be shown by comparing lexical and post-lexical phonological rules as well as the behavior of grammatical tones.

2.1. Phonological rules

Kol has a number of phonological rules which operate in the same environments except for the crucial difference between lexical and postlexical rules.

2.1.1. Mid-high vowels before other vowels

In Kol, the high-mid vowels {e, o} trigger the creation of a glide when they precede another vowel. However, the nature of this gliding phenomenon differs depending on whether it occurs between words or between morphemes.

2.1.1.1. Gliding between words

When one word ends with the high-mid vowel [e] and the following word begins with a high-mid vowel, the palatal glide is inserted. This primarily occurs in the verb phrase between the noun (or non-clitic pronoun) and the tense marker.

- (43) [bè yó kó yé ?"]
 / bè ó kò +H yé /
 you (pl) PRES go where
 "Where are you going?"

This is an optional process, as can be seen by the example below.

- (44) [myà bé ò jê,]
 / myǎ bé ò jê /
 when you (pl) PRES arrive
 'When you all arrive, ...'

The example below shows a present tense marker which is not in a gliding environment.

- (45) [ɲ = ɔ̃ nìgó kó bêrtwà.]
 /ɲ = ó nìgò +H kò +H bêrtwà /
 he-PRES return go Bertoua
 'He is returning to Bertoua.'

This between word gliding process is restricted to occurring between the high-mid vowels. Nothing occurs when a high vowel precedes a mid-high vowel as seen in (46) or between two low vowels as seen in (47).

- (46) [mpú é bándà nwî.]
 / mpú é bándà +H nwî +H +L /
 7-rain FUT really fall (rain)
 'It will certainly rain.'

- (47) mw-àrá á bèè
 1-woman 1ASSOC second
 'second wife'

Since a high vowel does not appear underlyingly at the beginning of a word, it is not possible to know what would occur when a mid-high vowel preceded a high vowel across a word boundary.

2.1.1.2. *Gliding between morphemes*

In contrast, when noun class or concord markers occur before a root, the first high-mid vowel is replaced with its corresponding glide whenever it occurs before any vowel, not just another high-mid vowel. This is shown in (48) for a concord marker and (50a) for a noun class marker while (49) and (50b) show the underlying forms.

- (48) a. /bè-sá bè-êz/ → [bèsá by-êz]
 8-thing 8-all
 'all things'
- b. /bè-yàbèrà bè-âŋ/ → [béyàbèrà by-âŋ]
 8-effort 8-my
 'my efforts'

- (49) bè-sá bè-sís
 8-thing 8-another
 'different things'

- (50) a. [bw-àrá] b. [bò-kól]
 / bò-àrá / / bò-kól /
 2-woman 2-sister (of a brother)

Since concord markers are the target of phonological processes which are not seen between words, this suggests that the concord and noun class markers form a phonological unit with the following root and are therefore not independent words. They are unlikely to be clitics since the noun class markers only co-occur with nouns and the concord markers only co-occur with nominal modifiers.

2.1.2. *High vowels before other vowels*

Within a phonological word, a high vowel will raise a following mid-high vowel, as seen in the last word in (51) where the relative clause enclitic forms a phonological unit with the locative.

- (51) [myǎ yô= kò nìgò jê wú=î]
 / myà H+ yò kò nìgò jê wú=è /
 3-time RELCL.H+7SUB go return arrive there-RELCL
 'Arriving there, ...'

Between words, as was noted above, the [u] and the [e] do not affect each other, as shown again below.

- (52) [mpú é bándà nwî.]
 / mpú é bándà +H nwî +H +L /
 7-rain FUT really fall (rain)
 'It will certainly rain.'

2.1.2.1. *Caveat*

Those subject pronouns which are historically derived from subject agreement markers (whose status as clitics was discussed above in section 1.5), still behave the way that the noun class prefixes and concord markers do. This results in a minimal pair, as shown below.

- (53) a. /bé + ó/ → [bé yó] 'you (pl) + PRES'
 b. /bè= + ó/ → [byó] '8SUB + PRES'

2.1.3. *NC in derived environments*

Kol also has another phonological process which only occurs within nominal words. After the addition of certain nasal prefixes, the initial root consonant is devoiced. This nasal prefix may be the class 10 prefix marker which creates uncountable plurals out of class 7 singulars, or it may be a derivational prefix which creates nouns from verbs.

Below are examples of class 7 nouns which have class 10 plurals. Here the devoicing process can clearly be seen.

- (54) *Class 7/10 nouns*
- | | | |
|-------|--------|-----------------|
| bàanj | mpàanj | 'bamboo stick' |
| búúmb | mpúúmb | 'palm branch' |
| bùùnd | mpùùnd | 'skin of fruit' |
| bùmó | mpùmó | 'fruit' |

Additional class 10 nouns exist. While there is no singular to compare to the plurals to see a devoicing process, none of these plurals have voiced consonants following the nasal.

- (55) *Class 10 nouns*
- | | |
|---------|---------------|
| mpí | 'white hair' |
| mpigìbà | 'suppository' |
| mpyèl | 'trousers' |
| mpúgá | 'fracture' |
| mpwǎj | 'corn grain' |

Another devoicing process may be seen in a morphological process which turns verbs into nouns. Examples are given below.

(56)	<i>Deverbal prefix</i>		<i>from</i>	
	mpwáamb (9)	'abduction'	bwêmb	'abduct'
	mpwámîlâ (9)	'bark of dog'	bwámîlâ	'to bark'
	ntǔgǎ (9)	'agony'	dúgǎ	'agonize (death)'
	ntùm (3/4)	'pestle'	dùmð	'pound'
	mà-ncègè (6)	'sleeping disease'	jà	'sleep'
	ncàm (9)	'leprosy'	jàm	'destroy'

The process above contrasts with another morphological process which also transforms verbs into nouns. This process also has a nasal prefix, but this nasal prefix has no effect on the initial root consonant. Examples are given below. These contrast with the nouns given in (56) in that they are primarily agentive nouns.

(57)	<i>More deverbal nouns</i>			
	mbágèlâ (3)	'load'	bàgèlâ	'to load'
	ndübé (1)	'painter'	düb	'to paint'
	ndúgè (1)	'rower'	dúgè	'to paddle'
	njúl (1)	'killer'	jû	'to kill'

Most of the derived nouns given in (56) are class 9 nouns, while most of the nouns given in (57) are class 1 and 3 nouns. One nasal prefix devoices the root-initial consonant, while the other does not. There are two exceptions to this general trend, both found in (56), namely *ntùm* 'pestle' which is a class 3/4 noun, and *màncègè* 'sleeping disease' which is a class 6 noun. Of these two exceptions, the latter can probably be explained by noting that most class 9 nouns form their plurals in class 6.

Additionally, there is an interesting group of nouns which appear to be doubly-marked. Their plurals have the kind of morphological patterning that is seen in the class 10 nouns, but they also currently are marked with the class 6 prefix.

(58)	<i>Double-marked nouns</i>		
	bâl	màmpâl	'bowl'
	bé	màmpé	'toilet, latrine'
	đíbá	mǎntíbǎ	'brook, fountain'
	đíg	mǎntíg	'bush (land)'

It is interesting that noun roots beginning with /b/ are statistically over-represented in these processes. Kol does not have /p/ synchronically in native words (though there are some words beginning with /p/ that are ideophones or have been borrowed).

2.2. Grammatical tones

There are two clear examples of grammatical tones within the noun phrase. These both occur to the left of the noun class marker. While this does not prove that the noun class marker is a prefix in and of itself, taken with the phonological rules described above, it is strongly suggestive that the noun class and concord markers should be analyzed as prefixes which would allow the positioning of the grammatical tone to be described as occurring between words, as is the case in the VP.

The two constructions which are marked by a grammatical tone (H in both cases) are associative phrases and noun phrases containing modifiers.

2.2.1. Associative phrases

Associative phrases are constructions which associate, or link, a head noun with a modifying noun. These constructions may or may not have an overt associative phrase marker, but they are all marked by a H tone between the two words. Compare (59) with the default version of the second noun in (60).

- (59) [mbì mėlòp]
 / mbì H + mè-lòb /
 3-sort, type 3ASSOC-4-problem
 'sort of problems'
- (60) mè-lòb 'problems' (4)

2.2.2. Nouns and modifiers

Similarly, when a modifier which normally occurs after the noun is preposed, a H tone is inserted between the modifier and the noun. This movement serves to put emphasis on the modifier. The added H tone changes the underlying low tone of the noun class marker as seen in (61a) where the genitive is positioned before the noun instead of in its nonfocused position as shown in (61b).

- (61) a. [byàŋ báyàbərə́] b. [ntúm wàŋ]
 / bẹ̀-àŋ H + bẹ̀-yàbərə́ / / ntúm w-àŋ /
 8-my 8-effort 1-brother 1-my
 'my efforts' 'my brother'

No such H tone is added in cases where the modifier has not been moved, as can be seen in the examples below where the nouns are modified by modifiers which always occur before the noun.

- (62) a. bwàgbwàg mò-kwár
 big 6-village
 'big villages'
- b. d-úlàgà è-bá
 5-certain 5-marriage
 'a certain marriage'

3. Conclusion

This paper has explored a number of criteria which may be used to determine word breaks in Kol. These have included the positioning of clitics, phonological rules and morphosyntactic patterning. It has been shown that Kol differs from the more widely known pattern of agglutinative verbal morphology, having instead a loosely bound verbal sequence of independent words and phonologically dependent clitics. In contrast, words in the noun phrase are much more typical, with the canonical Bantu noun class and concord prefixes.

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