V2 and extensions in Ring languages

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Abstract

The noun stems reconstructed for Proto-Benue-Congo (PBC) and Proto-Bantu (PB) typically have the shape CVCV. But, these same CVCV lexemes have been reconstructed for Proto-Grassfields (PGr) with a loss of V2, e.g. 'animal': PBC **nama*, PB **nyàmà* 9/10, but PGr **nàm`*; 'leg, foot': PBC *\*-kudu*, PB *gòdò* 15/6 but PGr *\*ɣùl`*; 'root': PB **gàngá* 3/4, but PGr **gàŋ´*. However, a number of disyllabic monomorphemic stems are found in the Grassfields languages. This chapter attempts to identify and account for such disyllabic stems in Ring languages. We show that noun stems in Ring languages such as Babanki did indeed go from disyllabic to monosyllabic, and that contemporary disyllabic or polysyllabic nouns and verbs are usually due to multiple morphemes, either through the addition of affixes or reduplication. Besides synchronically transparent noun class affixes and verbal extensions, the incorporation of fossilized verbal extensions and noun class affixes can account for most of the data.

1. Introduction

As Watters (2003: 234) points out, Grassfields Bantu "lexical stems are commonly monosyllabic…thus, for nouns, the canonical Bantu disyllabic stems have been reduced to monosyllabic stems… verb stems are also often monosyllabic. Disyllabic stems that do occur are usually composed of two morphemes." From the Grassfields Bantu Working Group collection of over 80 Grassfields languages, the loss of V2 (and C2) can be seen, for example, by examining the Proto-Grassfields (PGr) and Proto-Bantu (PB) reflexes of three well-attested roots of different noun classes: 'animal' (PGr **nàm`*, PB **nyàmà* 9/10),

'root' (PGr **gàŋ́*, PB **gàngá* 3/4) and 'navel' (PGr **tòŋ́*, PB **tòdú* 5/6)[1]. An apparent V2 is present in[2]:

— no Western Grassfields language of the Momo and Ring groups
— no Eastern Grassfields languages of the Bamileke, Nun or Nkambe groups
— several Eastern Grassfields languages of the Ngemba group, where the V2 is regularly schwa in these nouns (e.g. Mankon *ŋ̀gàŋə́ / mɨ̀ŋgàŋə́* 3/6a 'root', *nɨ̀tɔ̀ŋə́ / mɨ̀tɔ̀ŋə́* 5/6a 'navel', and *ɨ̀ɲàmə̀ / ɨ̀ɲàmə̀* or *mɨ̀ɲàmə̀* 9/10 or 6a 'animal').

In many of these languages, not only is V2 lost but also C2. In contrast to these losses, or perhaps related to them, roots are sometimes expanded by the addition of affixes, as seen in Mfumte (Nkambe group), where an affix is present in *ɲàmwɔ̀ / ɲàmwɔ̄* 'animal', optional in *ŋgɔ̀(tə́) / ŋgɔ̄(tə́)* 'root' and absent in *tɔ̀* 'navel'.

From the comparative-historical viewpoint, the obvious question is whether the Ngemba group is conservative in this regard (preserving a reduced form of V2) or innovative either phonologically or morphologically (e.g. by having some form of an affix). In other words, did the loss of V2 occur at the PGr level or later at the proto-stage of the various Grassfields groups? As a working hypothesis for this chapter, we assume that a significant loss of V2 already occurred at or before the Proto-Western Grassfields stage common to both the Ring and Momo languages.

This loss of V2 in roots must have been the consequence of phonological processes because, as we will demonstrate, it widely affected nouns and verbs[3]. The absence of V2 in Ring and Momo noun forms of various classes is shown in Table 1.

Table 1: Monosyllabic noun stems in Western Grassfields Bantu

Language	'animal'	'horn'	'house'	'root'	'husband'
PB	**nyàmà* 9	**tóngʊ* 9 or 5	**dábò* 9	**gàngá* 3	**dúmè* 1
PGr	**nàm`* 9	**ndóŋ* 9	**ndáb`* 9	**gàŋ́* 3	**lúm`* 1
Ring					

[1] Proto-Grassfields reconstructions are those of Hyman (1979a) while Proto-Bantu reconstructions are taken from BLR3 (Bastin, Coupez, Mumba & Schadeberg 2002). Apart from the Babanki data, contemporary language forms are those collected by the Grassfields Bantu Working Group in the 1970s.

[2] In this chapter, V2 refers to the vowel of the second syllable in disyllabic roots, not the second mora of diphthongs or long vowels.

[3] In the case of nouns, the phonological processes did not take noun class affixes into consideration.

Babanki	*ɲàm*	*ǹdɔ́ŋ*	*ǹtàb*	*ə̀ɣáŋ*	*lɨ́m*
Lamnso’	*ɲám*	*lɔ̄ŋ*	*lāv*	*ɣáŋ*	*lûm*
Babessi	*ɲò:*	*nduó*	*ndɔ́ʔ*	*ɣá*	*ndó*
Isu	*ɲàm*	*ǹdɔ́ŋ*	*n̄dāw*	*íɣáŋ*	*ŋŋʌ̄m*
Momo					
Moghamo	*ɲâm*	*ǹdɔ́ŋ*	*nə́p*	*áɣāŋ*	*ínɔ́m*
Oshie	*ɲî*	*ìndɔ́ŋ*	*ìní*	*áɣāŋ*	*wɛ̄nɔ́m*

Although none of the Ring or Momo forms in Table 1 show a full V2 today, the floating tone in the PGr reconstructions is evidence of the surviving tone of the historical V2.

However, the phonological process of V2 loss is clearly not in effect today, since several disyllabic or polysyllabic noun roots are present in most if not all Ring and Momo languages, e.g. Babanki *kəɣúʔə / əɣúʔə* (7/8) ‘cowry’ and its cognates in Kom *āɣúəʔá,* Oku *kēɣɛ́kálí*, Men *āɣáʔálé*, and Bu *káɣəʔú*. Likewise, there are many disyllabic verbs in these languages today (mostly due to verbal extensions) so there apparently were also morphological or syntactic constraints on the loss of the final vowel. While phonological processes reduced roots, the incorporation of affixes extended them.

This chapter examines the history of these processes (the loss of V2 and the addition of affixes) in Ring languages with particular attention to Babanki in Central Ring. First, we concentrate on the apparent exceptions to V2 loss, i.e., current disyllabic or polysyllabic words, to see what they reveal about the history of verb and noun formation. Then we examine a few forms that show relic traces of V2, whether full vowels (e.g. Babanki *wùlɨ́m / lʉ̀ᵘ́mə́* 1/2 ‘man’) or merely tonal traces of the lost vowel (e.g. Kom *ǹtóm` / ǹtómᵘ́sə́* 9/10 ‘message’). Finally, we pull together these processes and propose a general narrative.

2. Verbs

Proto-Niger-Congo verb forms likely had final vowels but the function of those vowels is unclear. At the Proto-Bantu-Grassfields stage, it is also uncertain whether these vowels should be considered as part of the verbal root or as extensions. Roughly half of the twenty-five non-Bantu Niger-Congo languages surveyed by Nurse (2008: 260-61) had suffixal vowel *-a,* as do nearly all Narrow Bantu languages. He concludes that “the final vowels [a], [i], and a vowel copy suffix are probably old Niger-Congo features inherited

by Bantu." If so, they would also have been inherited by Proto-Grassfields. Good (2022) reviews Nurse's conclusions and examines stem-final morphology in Bantu languages, especially in the north-western area. He suggests an initial stage "where there is no system of FVs, and verb roots may or may not end in a vowel" (224). The very widespread loss of final vowels in Grassfields languages appears to have been generally phonological, with morphological factors being likely contributors to preservation.

As a result of the loss of V2, the great majority of simplex (un-affixed) verbs in Grassfields languages are monosyllabic. In Babanki, for example, of 690 simplex verbs in Akumbu (2008), only 73 are disyllabic, and none are polysyllabic. In addition, a number of verbs have extensions that add a syllable of -CV shape. While the verb system of Grassfields Bantu (GB) languages has received less attention than the noun system, verbal extensions have been the focus of several studies (Leroy 1982, Mba & Chiatoh 2003, Tamanji & Mba 2003, Ngum 2004, Blench 2011, 2016, 2022, Hyman 2018, Akumbu 2020). The predominant Ring suffixes listed in Hyman (2018) are *-tV, -kV, -sV, -lV, -nV,* and *-mV* with varying semantics. Since most verbs must have become monosyllabic, the addition of these extensions to monosyllabic verb roots is responsible for many of the disyllabic verb stems found in Ring languages, as illustrated by the Babanki forms in Table 2.

Table 2: Babanki verbal extensions[4]

root	*tə* 'DIM'	*kə* 'REP'	*sə* 'CAUS'	*lə* 'ITER'	*mə* 'ASS'	gloss
tʃò	*tʃò-tə̀*	*tʃò-kə̀*	*tʃò-sə̀*	*tʃò-lə̀*	*tʃò-mə̀*	pass
tə̀yn	*tə̀yn-tə̀*	*tə̀yn-kə̀*	*tə̀yn-sə̀*	*tə̀yn-lə̀*	*tə̀yn-mə̀*	fly
kúʔ	*kúʔ-tə́*	-	*kúʔ-sə́*	*kúʔ-lə́*	*kúʔ-mə́*	climb
ɣɔ́ʔ	*ɣɔ́ʔ-tə́*	*ɣɔ́ʔ-kə́*	*ɣɔ́ʔ-sə́*	*ɣɔ́ʔ-lə́*	*ɣɔ́ʔ-mə́*	be(come) big

DIM = diminutive, attenuative, REP = repetitive, multiplicity, CAUS = causative, ITER = iterative, ASS = associative

As seen in Table 2, extensions are underlyingly toneless and take the same tone as the root unless a conflicting suffix tone is assigned by a specific TAM (Akumbu, Hyman & Kießling 2020). For example, if the imperative final H tone is added to a L tone stem,

[4] In a number of Central Ring languages there is an alternation between *f~p/b*, and *s/l~y* in coda position when -CV extensions are added, as in Babanki (Akumbu 2020: 142-145), Men (Mua 2015: 10), Kom (Shultz 1997: 9), and Kung (Kießling 2019: 151).

the final product will be L-H, e.g. *tʃò-sá* ‘allow to pass! (imperative)’ (cf. *tʃò-sà* ‘allow to pass (declarative)’).

Although specific meanings are identified for individual extensions in Table 2, there is synchronically no exclusive semantic value for any of them. As already pointed out by Hyman (2018: 185), “any of the six suffixes can be used with varying pluractional meanings”. For example, the so-called repetitive and iterative have overlapping semantics and even the frequent *-sə* which is usually causative sometimes has different meanings. While some *-sə* extensions have clear causative meaning, e.g. *dì-sà* ‘cause to cry’ < *dì* ‘cry’, *ɲɔ́ŋ-sá* ‘cause to suck (breast milk)’ < *ɲɔ́ŋ* ‘suck (breast milk)’, other meanings are possible, e.g. *tɛ́n-sá* ‘see off, accompany, refuse/deny’ < *tɛ́n* ‘push’, *gə-sà* ‘separate’ < *gə* ‘share, divide, distribute’. At the same time, some *-sə* extensions do not add any meaning to the root and may even be optional (in which case they are given in parentheses), e.g. *kyè(-sà)* ‘scrape’. The declining nature of the erstwhile causative extension is seen also in some Kom and Oku forms in Table 3, although the extended form has apparently completely replaced the simplex form in other languages.

Table 3: Decline of causative extension in some Ring languages

Language	‘try’	‘extinguish’	‘breathe’
Babanki	*mwɔ̀m*(*-sə̀*)	*lɛ́m*(*-sə́*)	*ʒwì*(*-sə̀*)
Kom	*mwɔ̀m*(*-sɨ̀*)	*lʉ́m*(*-sɨ́*)	*ʒù-sɨ́*
Oku	*mwɔ̀m*(*-sɛ̀*)	*līm*(*-sɛ̂*)	*ʒù-sɛ̀*
Mbizinaku	*mwɔ̀m-sə̀*	*lām-sə̂*	*yʊ̀sə̀*
Men	*mwɔ̀m-sɛ̀*	*ndām-sɛ̂*	*ʒù-sɛ̀*
Bum	*mwɔ̀m-hì*	*līm-hî*	*yɔ̀x-nà*
Babessi	*mò-sə̂*	*nzɔ́ʔ-sə̂*	*zə̀-sə̀*
Babungo	*mŏŋ*	*nú-sə́*	*zwɛ̀-nə́*
Bamessing	*mû*	*lʉ́ŋ-ə̀*	*ʒwì-sə̂*

Also note that these suffixes are no longer productive, as none of them can be added to a neologized verb. In Babanki, for instance, new verbs are consistently made by means of the schwa suffix, e.g. *bíp-ə́* ‘beep’, *skán-ə́* ‘scan’, or *kɔ̀mpɛ̀-ɛ̀* ‘compare’ (where the schwa assimilates to the final root vowel *ɛ̀*). None of these loan words can accommodate the established extensions, e.g. **bíp-tə́*. As the system decayed, the number of extensions that individual verbs maintained apparently diminished and no affix was capable of attaching

to every verb. A few verbs in Ring languages actually accommodate only a single specific extension, as seen in the list from Babanki in (1).

(1) Some Babanki verbs that can accommodate only a single extension

a. *bèm-tə̀* ‘ask many people, ask many times’ < *bèm* ‘ask’
b. *ʒʉ́-tə́* ‘listen closely’ < *ʒʉ́* ‘hear’
c. *tʃʉ́ʔ-lə́* ‘heal many people, heal a person many times, heal a bit’ < *tʃʉ́ʔ* ‘heal’
d. *fəŋ-kə́* ‘many people fall, fall many times’ < *fəŋ* ‘fall’
e. *ʃéyn-sə́* ‘cause to run off’ < *ʃéyn* ‘run off’
f. *kɔ̀ŋ-mə̀* ‘love each other, love one another, many people love one another/each other’ < *kɔ̀ŋ* ‘love’

There are even a handful of Babanki verbs (complete list in 2) that do not accommodate any extension at all.

(2) Babanki verbs that do not accommodate any extension

a. *bám* ‘abstain’
b. *bás* ‘be sour’
c. *kə̀ʔ* ‘be awake, wait’
d. *káŋ* ‘search, harvest, investigate’
e. *kú* ‘give, offer’
f. *lám* ‘dwell, settle’
g. *làŋ* ‘forbid’
h. *lɨ́ʔ* ‘poison someone’
i. *mɛ̀s* ‘blow nostril’
j. *mɔ̀ʔ* ‘put on clothes’
k. *nè* ‘do’
l. *táʔ* ‘reward (gift)’
m. *tám* ‘wear (loin), plan an event’
n. *tɨ́m* ‘send’

The verb *tɨ́m* ‘send’ (PGr **túm*, PB **tʊ́m*) is a good example of a verb which semantically could easily have diminutive, causative, iterative or pluractional derivatives but does not. We can only conclude that the extension system stopped being productive in ways

that now seem unexpected. So, it is perhaps not surprising that many Ring verbs with extensions were also left isolated from their original base verbs.

Besides the Babanki cases where both a base verb and its derivation(s) with extension are attested, there are the 73 simplex verbs with disyllabic forms which need to be explained. We will see that almost all of these are likely to be verbs with frozen extensions, either of CV(C)-CV or CVC-V shape. Since verbal extensions reduced their role in the synchronic morphology and their semantic value was often bleached, forms with these extensions could easily be reanalyzed as distinct verbs independent of their original base verb, especially if the base verb disappeared.

2.1 Simplex verbs with CVC-CV structure

Many disyllabic verbs in Ring languages are cases where a base form is not attested but the CVC-CV structure makes it clear that the disyllabic verb must have been derived by the addition of an extension. Babanki and other Ring languages show similar patterns, with the relevant forms of the extensions in those languages, as seen in Table 4.

Table 4: Ring verb stems seemingly derived from extensions

Language	'help'	'deceive'	'crawl'	'be short'	'perspire'
Babanki	*gyàmtə*	*lɔ́ptə́*	*ŋàŋlə*	*tɛ́msə́*	*ʒʉ́ʔsə́*
Kom	*gàmtɨ*	*lɔ̄ptɨ́*	*ŋàŋlɨ*	*túmsɨ́*	*yōʔsɨ́*
Oku	*gyàmtɨn*	*lɔ̄ptê*	*ŋàŋlè*	*təmsê*	*zvōksîn*
Men	*tsàmtè*	*lēsê*	*ŋàŋnè*	*təmsê*	*zǒʔê*
Bum	*gàmtì*	*lɛ̄hî*	*ŋàŋlì*	*tōmhî*	*yūɣhî*
Bamessing	*gàŋtə̂*	*lʉ́tə̂*	*ŋònə̂*	*twíŋì*	*ʒwíʔì*

There is a lot of variation in the morphophonology of the extensions. CC clusters are avoided in several cases, including the word for 'deceive' in Men, Bum, Bamessing and Aghem. We assume that these languages lost one of the consonants in the cluster in specific words at some stage since they retain CC clusters in several other words. Oku has added a final consonant to the -CV extension, such as in the words for 'help' and 'perspire'. Instead of adding *-tV*, Bum and Men appear with the causative extension in the word for 'deceive', pointing to the semantic irregularity of the extensions.

Other verbs which have a CVC-CV structure but no surviving base verb in Babanki are given in (3).

(3) Babanki CVC-CV verbs without surviving base verb[5]

a. *-tə*: *bàʔtə̀* 'thresh, beat (maize)', *kɔ̀ntə̀* 'stumble', *ʃəʔtə̀* 'tell, inform'

b. *-sə:* *báŋsə́* 'frighten, cause to fear', *bɔ́ʔsə́* 'get close, put together', *bwɔ́msə́* 'praise', *náŋsə́* 'load (a gun), *sɛ́nsə́* 'plead, implore', *tʃɨ́msə́* 'condole, comfort', *zàŋsə̀* 'hurry, be fast'

c. *-mə*: *gyénmə́ 'be* childish, be foolish'*, táŋmə́* 'quarrel', *tùʔmə̀* 'look after, be careful'

d. *-lə*: *báʔlə́* 'sell', *bàŋlə̀* 'evade, dodge', *fwàʔlə̀ '*be nasty', *ɣɨ́mlə́ '*be ashamed', *ŋàŋlə̀* 'crawl', *ɲàŋlə̀* 'tickle', *sáŋlə́* 'be(come) happy', *tàblə̀* 'struggle'

e. *-kə*: *báŋkə́* 'be extraordinary, showing off', *tàŋkə̀* 'try, attempt'

Although there are now no base verbs (without extensions) for these disyllabic verbs in Babanki, the fact that they all have second syllables which correspond to verbal extensions is highly suggestive that they were built by affixing verbal extensions. Further research may reveal base forms in other languages, although the examples in Table 4 suggest that many of these extensions have been fossilized for a long time. Similar fossilized extensions are found in Obang (Menchum, Wide Grassfields), see Asohsi (2015: 117).

2.2 Verbs with CVCV shape

Contemporary verbs with the form CVCV could result from either the historical structure CV-CV or CVC-V.[6] The first group is composed of verbs that mostly seem to have familiar Grassfields extensions added to open-syllable roots.

Table 5: CVCV verb stems

Language	'resemble'	'sleep'[7]	'breathe'	'rest'
PGr	**fú-Ci*	**bÚni*	**ywè(-ti)*	**yÙti*
Babanki	*físə́*	*bínə́*	*ʒwì(sə̀)*	*ʒʉ̀tə̀*
Kom	*fʉ̄sâ*	*bʉ̄nɨ́*	*ʒʉ̀sɨ́*	*ʒvʉ̀tə̀*

[5] With or without extensions *s, m, n, ŋ,* and *ʔ* are possible in coda and word-final position in Babanki. In addition *f* is found in word-final position while *p* and *b* occur as codas.

[6] In theory, CVCV could be a reduction of CVC-CV as seen in Table 4 above with Men *lē-sê* 'deceive' and *zŏʔ-ê* 'perspire', but Babanki tolerates internal consonant clusters and there is no evidence of such reduction in Babanki.

[7] The *-ɨ́* suffix is interpreted in Isu as a perfective suffix which has become incorporated into the verb stem via lexicalization (Kießling 2017: 4).

Oku	*fūɔsîn*	*bō:nê*	*ʒùsè*	*zə:tè*
Mbizinaku	*fū:sə̂*	*bū:nə̂*	*yʊ̀sə̀*	*ʒvʊ̀tə̀*
Men	*fū(sê)*	*pwɛ̂ìŋ*	*ʒʊ̀sè*	*zɨ̀tè*
Bum	*fo:nâ*	*bvʊnî*	*yɔ̀xnà*	*yùtì*
Babessi	*fí:nə̂*	*bê*	*zəsə̀*	[*tsěŋû*]
Babungo	*fínə́*	*bwéy*	*zwɛ̀nə́*	*?*
Aghem	*félɔ́*	*bwí:*	*ʒwîì*	*zúlɔ̀*
Bamessing	*fʰòsə̂*	*bɛ̂ìŋ*	*ʒwìsə̂*	*zòtə̂*

Babanki verbs such as *fó-lə́* ‘be crowded’ and *fó-sə́* ‘make space tight for people, bear (maize)’ also do not have any known base form but they are clearly related, suggesting that such words might have had a CV base form at some stage, unless they are Babanki neologisms.

In addition, there are several vocalic suffixes that have been proposed for Bantoid languages and their descendants with causative, imperfective, perfective, stative or unknown functions, creating verbs with a CVC-V structure.

First is a group of verbs reconstructed for PGr with the structure CVC-*i*, e.g. **bèk-i* ‘carry’ (Babanki *byè?è,* Kom *bè?ì*) and **kÙd-i* ‘pour’ (Babanki *kʉ́nə́,* Men *kwɨ̀l*). The semantics of these verbs do not imply a clear value for the *-i* extension at the PGr stage. One possibility is a connection to the stative *-í* attested in Basaa, e.g. *béndí* ‘be stuck’ < *bánd*, *pùmì* ‘be dirty’ < *pùm* (Lemb de Gastines 1973) but the notion of stativity does not seem to be implied in the Ring examples. Another possible connection is to the causative **-i* known from PB. For PB, two causative extensions have been reconstructed with an original complementary distribution: **-i-* after C and **-ici-* after V (Schadeberg 2003: 73). The longer, more marked form **-ici-* is the cognate of the PGr causative extension **-sV*, which extended its range of environments and became widespread in both Bantu and Grassfields languages. The shorter causative form **-i-* has received less attention and was more vulnerable because of its brevity, but it is documented in the NW Bantu languages Tunen (A44), Nomaande (A46) and Gunu (A62) as well as Ejagham (Ekoid) (Hyman 2018: 181-182). Particularly relevant is the use of the morpheme in the Ring language Isu, e.g. *kùm* ‘arrive, reach’ > *kùm-ì* ‘bring’ and *ŋúŋ* ‘suck’ > *ŋúŋ-í* ‘breastfeed’ (Kießling 2004, 2012). Sometimes, the Isu causative suffix is accompanied by a palatal infix (also used with pluractionals and imperfectives), e.g. *bàŋ* ‘be red’ > *byàŋ-ì* ‘make red’. As with

other extensions, a semantic merger can happen so that the form with the causative suffix can unite both the intransitive and transitive meaning (and thus replace the base form), e.g. *dzwòʔì* 'become loose, make loose, loosen'.

These CVC-*i* reconstructions might help account for many of the verbs with final vowels in Ring languages, including those in Table 6.

Table 6: CVC-*i* verb stems

Language	'cough'	'lie down'	'stand'	'yawn'
PGr	**kót-i*	**nòŋ-i*	**tém-i*	**yát-i*
PB	**kóc*	**nàŋ*	**tém*	**jac*
Babanki	*kɛ́sə́*	*ɲəŋmə*	*tɨ́mə́*	*zísə́*
Kom	*kɛ̄sí*	*ɲìŋì*	*tīmɛ̂*	*yàsì*
Oku	*kɛ̄:sɛ̂*	*ɲì:m*	*tēm*	*yáyásé*
Mbizinaku	*kʉ̄:sə̂*	*nàŋà*	*tʉ̄:mə̂*	*yùasə*
Men	*kyəsɛ̂*	*ɲəŋʌ̀*	*tíə̀m*	*ʒəfɛ̂*
Bum	*kēhî*	*ɲìŋì*	*tēmî*	*ɣēfî*
Babungo	*khísɨ́*	*ɲɔ̌ŋ*	*té*	*yísə́*
Isu	*kwárí*	*nəŋì*	*təmí*	*zá*

Not all PGr forms reconstructed with *-i* have V2 in Ring languages today, e.g. Babanki *kwíʔ* 'attach' (PGr **kúd-i*), Babanki *bwáʔ* 'be tired', Kom *ból* 'be tired' (PGr **bód-i*), Babanki *tʃúŋ* 'dig' (PGr **túŋ-i* 'bury').

Another source of contemporary CVCV structures was apparently the reanalysis of stems built with the imperfective suffix PGr **-a* (Watters 2003: 245), as in Kuk where this derivational formation is done with the suffix *-ə* or a copy of the root vowel.

Table 7: Kuk imperfective formation by suffix *-ə* ~ -V (Kießling 2016: 36)

Base	imperfective	meaning
zʌ̀l	*zʌ̀lə*	'sweep'
tsúŋ	*tsúŋə́*	'pin
tɨ́m	*tɨ́mə́*	'shoot; dig'
zúʔ	*ʒúʔú*	'boil, heat'
ɲɔ̀ʔ	*ɲɔ̀ʔɔ̀*	'roast'
bàʔ	*bàʔà*	'push aside'

Of special interest are the bases for 'boil', 'roast' and 'push aside' ending in a glottal stop where the final vowel *-ə* undergoes "transglottal assimilation", i.e. copying of the root vowel. Isu also forms imperfective stems by adding the suffix *-ə,* which likewise assimilates to form an "echo vowel" after the glottal stop and velar nasal, e.g. *tá? / tá?á* 'take sides' and *sɔ̀ŋ / sɔ̀ŋɔ̀* 'be true' (Anderson 2014: 11). For Aghem, the assimilation of the imperfective suffix *-a* happens after the glottal stop, velar nasal and alveolar nasal (Anderson 1979: 78-79). However, in the case of disyllabic bases, where there is already a final vowel, Kuk usually forms the imperfective stem by means of the *-kə* suffix replacing the final vowel.

Table 8: Kuk imperfective formation by suffix *-kə* (Kießling 2016: 36)

base	imperfective	meaning
mà?à	*mà?kə̀*	'throw away'
bʌ̀?ʌ̀	*bʌ̀?kə̀*	'carry'
tɔ́ŋɔ́	*tɔ́ŋkɔ́*	'call'
kʌ́lí	*kʌ́lkɔ́*	'cough'
kʌ̀mə̀	*kʌ̀mkə̀*	'cover with soil'
tsʊ́lɔ́	*tsʊ́lkɔ́*	'sit down, become seated'

It is unclear where these disyllabic forms came from. In some cases, they may have had a disyllabic proto-history, e.g. PGr **bèk-i* 'carry' > Kuk *bʌ̀?ʌ̀,* with parallel assimilation in the Babanki cognate *byè?è*. But in other cases where we see a glottal stop and this same assimilation, we can suspect that the perfective bases were once imperfectives. The word 'throw' seems to have undergone this development following the steps in (4).

(4) Development of imperfectives

Step 1: imperfectives are created with **-a*, e.g. PGr **màk* 'throw' > PR perfective **màk*, imperfective **màk-a*

Step 2: some imperfectives are reinterpreted as perfectives, e.g. imperfective **màk-a* > Kuk perfective *mà?à*.

Step 3: new imperfectives are created by means of other suffixes, e.g. Kuk perfective *mà?à* > imperfective *mà?kə̀*

Similarly, in Aghem, it has been proposed that the imperfective final vowel /-a/ was reanalyzed as part of the root in the case of Proto-West-Ring **sàj-à* 'choose, select' (PB **càd*) and **màj-a* 'finish' (PG **mÈt-ti*, PB **màd*), yielding Aghem perfectives *sìà* and

mìà and thus generating a new imperfective */sìaa/* (Thormoset 2007: 133-4). The reinterpretation of suffixed forms as base forms (and especially the reinterpretation of imperfectives as perfectives) may be by analogy with inherited CVC-*i* forms.

As a result of step 2, Babanki now has a number of other perfective CV_1CV_1 verbs which show transglottal assimilation.

(5) Babanki $CV_1C\text{-}V_1$ verbs
   a. *màʔà* 'throw away' (Kom *màʔì*)
   b. *ʃíʔí* 'descend away/down' (Kom *sūʔî*)
   c. *byíʔí* 'fold up' (Kom *búʔnɨ́*)
   d. *tàʔà* 'be stiff'
   e. *myàʔà* 'blink'

The examples in (5a-b) seem to have a separative meaning, suggesting that these generalized vowel endings could be the result of the merger of some extensions that no longer exist. Support for frozen extensions being the source of some unusual vowels in V2 position comes from the word for 'call' which in some Central Ring languages has the frozen *-tV*: Babanki *tɔ́ŋtə́*, Kom *tɔ́ŋtɨ́*, Oku *tóŋté*, but -V in Aghem *tɔ́ŋɔ́*, Kuk *tɔ́ŋə́* (imperfective *tɔ́ŋkə́*), Men *tɔ̌ŋâ,* and Bum *tɔ́ŋâ.* Notice that Men and Bum have final *-â,* rather than their typical vowels in extensions, i.e. Men -C*e* and Bum -C*i*.

Finally, there are a few remaining Babanki verbs with CVCV structure, where C_2V_2 corresponds to a verb extension without a current base for the suffixed form (6). The CVCV structure must be old for some verbs, as we can see from the Bantoid cognates of Babanki *bvɨ̀mə* 'bury': Kom *gvɨmi*, Oku *gvàmə*, Bum *gùmà*, Kenyang *bhɛmɛ́* (Mbuagbaw 1998), Fang *gúmə́* (Mve 2013: 103). It is unclear whether these verbs have origins in CV + extension or CVC-*i* structures, old imperfectives, or some other unknown source.

(6) Some Babanki CVCV verbs without known CV or CVC base
   a. *bólə́* 'catch fire, blaze'
   b. *tyèmə* 'choke'
   c. *fɨ́lə* 'thatch'
   d. *pfɨ́sə́* 'cover'
   e. *byə́tə́* 'reserve'
   f. *bútə́* 'be transformed mystically'
   g. *zɨ́mə́* 'shout'

h. *lyèsə* ‘forget, hide’

i. *gùkə* ‘be foolish’

Of these remaining Babanki CVCV verbs, there is only one case where C2 is a consonant other than the characteristic *k, l, m, n, s,* or *t* of verbal extensions, i.e., *tsúfə* ‘sharpen, bring to point (stick)’.

One exceptional form is Babanki *ʒís* ‘feed’, historically a causative based on *ʒɨ* ‘eat’. Unlike other Ring cognates, e.g. Kom *ʒʉ́sɨ́*, Oku *yīɛsê*, Bum *yəhî*, Men *ʒǐsê*, Babessi *zâ*, Babanki *ʒís* has a different V1 from the simplex and is missing V2. V1 appears to be an indication that the Babanki form preserves an early causative akin to the disyllabic stem of PB **dí-ic-* ‘feed’, although it seems that *ʒís* lost its final vowel, as also seen in the noun *kəkʉ́s(á) / əkʉ́s(á)* (7/8) ‘knot’ where the final vowel is now optional.

Overall, the evidence suggests that, after V2 was lost in inherited CVCV verbs, extensions continued to operate for a while as separate morphemes before becoming increasingly less productive and eventually frozen in most Ring languages and finally producing the distribution seen today:

(7) Evolution of Babanki verb forms

Proto-Grassfields	Babanki
CV	CV
CVCV	CVC
CV + CV extension	CVCə
CVC-*i*	CVCə
CVCV + CV extension	CVCCə

The most probable reason why the CVC-*i* verbs did not lose V2 is that the *-i* belonged to a separate morpheme, even if its origin is unclear.

3. Nouns

Since almost all noun roots that are reconstructed as disyllabic in PB and PBC have monosyllabic reflexes in Grassfields languages, there must have been a deletion rule at some stage. Synchronically only a few simplex noun roots are disyllabic in Grassfields languages. In Babanki, for example, only 86 of 833 simplex noun stems in Akumbu (2008) are disyllabic or polysyllabic, 17 of them being borrowed words or reduplicated forms. Some of these stems deserve explanation. Once again, we will start by looking at

forms with apparent affixes, especially those derived from a verb with an extension, e.g. *kànzìtə̀* (7) 'beginning' < *zì* 'begin' or *ntsɛ̀ntə́* (10) 'unity' < *tsɛ̀ntə̀* 'gather, unite'. We will eventually consider other explanations for cases where there is no synchronic verb root that is relevant, e.g. *kə̀ɣúmlə́ / ə̀ɣúmlə́* (7/8) 'lump (clay, mud)'.

3.1 Derivatives from verbs

Like Bantu and other related languages, the Grassfields languages had and have a number of deverbative processes (Akumbu & Wills 2022). Either a prefix, suffix or both may be added to a verb base to derive disyllabic noun stems. For example, agent nouns can be derived from verbs by prefixation of N-, as in Babanki (8) and Kom (9).

(8) Babanki agent nouns (Akumbu & Wills 2022)
- a. *mbáʔlə̀* 'seller' < *báʔlə́* 'sell'
- b. *mbwɔ̀ŋsə̀* 'saviour' < *bwɔ̀ŋ* 'be safe', *bwɔ̀ŋsə̀* 'save'
- c. *nʃəʔtə̀* 'prophet, pastor' < *ʃəʔtə̀* 'tell, inform'
- d. *ndzɨ̀mtə̀* 'follower, disciple' < *dzɨ̀m* 'chase', *dzɨ̀mtə̀* 'follow'
- e. *ndʒèʔtə̀* 'prostitute' < *dʒèʔ* 'walk', *dʒèʔtə̀* 'walk around'

(9) Kom agent nouns (Loh 2001: 104)
- a. *ǹzɨ̀tɨ̀* 'beginner' < *zɨ̀tɨ̀* 'start'
- b. *ŋ̀gwòsɨ̀* 'separator' < *gwòsɨ̀* 'separate'
- c. *m̀bòesɨ̀* 'saviour' < *bòesɨ̀* 'save'
- d. *ŋ̀gàmtɨ̀* 'helper' < *gàmtɨ̀* 'help'

Various nouns of processes, results or instrumentals are also derived from verbs, as seen in Babanki.

(10) Babanki processes, results or instrumentals
- a. *ə̀lómə́ / tə̀lómə́* (3~5/13) 'frontier (of ethnic area)' < *ló* 'mark frontier'
- b. *mbwáʔmə̀* (9) 'peace, blessing' < *bwáʔmə́* 'be soft', *bwáʔsə́* 'bless'
- c. *ntsɛ̀ntə́* (9) 'unity' < *tsɛ̀ntə̀* 'gather, unite'
- d. *nsìsə́* (9) 'debt' < *sìsə̀* 'pay debt'
- e. *kànʒúŋsə̀* (7) *'burden'* < *ʒúŋ 'wrap', ʒúŋsə́* 'disturb'
- f. *mbvɨ̀mə̀* (1) 'cemetery' < *bvɨ̀mə̀* 'bury'
- g. *mətɨ́fə̀* (6a) 'account (report)' < *tɨ́fə́* 'report'
- h. *kàmfɛ́nsə̀* (7) 'blackener' < *fɛ́n* 'be black', *fɛ́nsə́* 'blacken'

i. *kàŋwàptà / àŋwàptà* (7/8) ‘fan’ < *wàf* ‘fan’

Due to other tonal processes not considered here[8], the tones on the final syllable of several derivatives do not correspond with those of the verb bases from which they are derived, e.g. *nsìsə́* (9) ‘debt’ < *sìsə̀* ‘pay debt’, *ntsèntə́* (9) ‘unity’ < *tsèntə̀* ‘gather, unite’, *mətɨ́fə̀* (6a) ‘account (report)’ < *tɨ́fə́* ‘report’, *kənʒúŋsə̀ (7) ‘burden’* < *ʒúŋsə́* ‘disturb’, *kəmfénsə̀* (7) ‘blackener’ < *fénsə́* ‘blacken’.

Deverbatives for processes, results or instrumentals are common in other Bantoid languages e.g. Western Grassfields: Kung (Kießling 2019: 150): *ūtɔ́f* ‘sense, knowledge, intelligence’ < *tɔ́f* ‘be sweet’, *ɪ̄ʃɪ̂nnə̀* ‘game’ < *ʃɪnnə̀* ‘play’, *ɪ̄ʃûɔ* ‘purging’ < *ʃùɔ* ‘purge’, *ɪ̄ɲî* ‘bitterness’ < *ɲì* ‘be bitter’, *kātɔ́ɔfə̄* ‘sweet thing’ < *tɔ́f* ‘be sweet’, *kāzúʔsə̄* ‘sweat, heat’ < *zúʔsə́* ‘sweat’, *m̄ɲî* ‘bile’ < *ɲì* ‘be bitter’, Kuk: *kəsʌ̀ʔ* ‘sifter’ < *sʌ̀ʔ* ‘sift’, *kəsʉ̀* ‘soap’ < *sʉ̀* ‘wash’; Eastern Grassfields: Mankon (Leroy 2003) *ǹtɔ̀ʔɔ́* ‘pushing’ < *tɔ̀ʔɔ́* ‘push’, *ǹbɛ̀ʔɛ́* ‘breaking’ < *bɛ́ʔɛ́* ‘break’, *ŋ̀gɔ̀ʔɔ́* ‘crushing’< *ɣɔ́ʔɔ́* ‘crush’, Bafut (Tamanji 2009) *ǹlû* ‘jumping’ < *lû* ‘jump’, *ǹbwîî* ‘sleeping’< *bwîî* ‘sleep’, *ŋ̀wòô* ‘falling’ < wòô ‘fall’; Beboid: Nchane (Boutwell 2020: 106) *kìntɛ̄ɲɛ* ‘argument’ < *tɛ́ɲɛ* ‘argue’, *fɪntēdē* ‘story’ < *tɛ̀:* ‘tell’.

3.2 Incorporation of class markers

Insofar as nouns in Ring languages typically have different segmental affixes in the singular and plural, these class markers can be perceived as inflectional and are easily distinguishable from stems. So in considering disyllabic noun stems, we have not included the typical noun forms composed of a monosyllabic stem with a class prefix or suffix, such as Babanki *kə-kwɔ́ŋ / ə-kwɔ́ŋ* (7/8) ‘bone(s)’ or *fə-nyín / fə-nyín* (19/6a) ‘bird(s)’, because these affixes are well-known parts of the active inflectional morphology.

Two-syllable surface forms for the singular of certain class 9 nouns where the initial nasal class marker was lost suggests that V2 was preserved.[9] Although ‘snake’ has been reconstructed as a monosyllable in PGr **yól* (PB **yókà*), there is reason to think that Ring inherited V2, e.g. Aghem *zúɣó*, Oku *ʒūò*, Kuk *zùgù*, Bamessing *ʒūà*. Likewise, in the singular of ‘goat’ (PGr **bÚÌ*, PB **bódi*) we see two-syllable reflexes like Lamnso *bvʌ̂ì*, Oku *bvʌ̄ì*. Even some of the one-syllable forms seem not to have lost the inherited V2 but

[8] These may be cases of distinct derivational suffixes that install their own tone – contrary to verbal extensions which take the tone of the verb root as argued in Section 2 above.

[9] For the patterns and reasons of loss of initial nasals in Ring languages, see Akumbu & Wills (2022).

rather became monosyllabic through glide formation of V1 or vowel-merger: Babanki *byí*, Aghem *dzɨ́*, Weh *dʒī*, Isu *bī*, Babungo *bí*.

It is not unusual for class markers to be re-analyzed and incorporated into the noun stem, e.g. the initial nasals in class 1, 9 and 10 in Kom *mbà?/mbà?-sɨ́* 'cloud(s), *ŋgvɨ̄/ŋgvɨ̄-sɨ̄* 'chicken(s); Men *mbà?/sé-mbà?* 'cloud(s), *mbvə̄/sé-mbvə̄* 'chicken(s); Bafanji (Hamm 2011) *ŋgɔ̀ /pà-ŋgɔ̀* 1/2 'stranger'. Occasionally, however, the incorporation of historical class markers (sometimes in associative concords or as enclitics) at the end of the noun stem is also attested, yielding a form with an additional syllable. This could most easily happen in nouns of a single class where there was no inflectional variation, often due to a meaning of liquid, mass, or plural tantum. An example of incorporation is seen in the Bantoid words for the body area 'breast', which in English can be a countable noun meaning a 'mammary' or indicate the whole chest in the phrase 'beat their breast'. In most Ekoid languages the word for 'chest' has singular and plural forms, e.g. Etung *ŋ̀-gǎŋ/ɔ̀-* (9/14) (Crabb 1965: 60), but in Ring languages the inherited class 9 nasal has been incorporated into the root, e.g. Babanki *tə̀-ŋgə́ŋ* 'chest' where the noun has been reassigned to the invariable class 13 with the *tə̀-* prefix. But in other Ring languages this word for 'chest' shows an additional syllable *-tV* which corresponds to the class 13 marker seen in Babanki, e.g. Kom *à-ŋgàŋtɨ̀* (7), Bum *à-ŋgàŋtù/ù-* (7/8), Men *à-ŋgàŋtè/è-* (7/8).[10] These languages have apparently incorporated the old class 13 enclitic marker into the stem and made a singular-plural distinction possible again by reassigning the word to classes 7/8. For a similar process where the same marker is seen in both a prefixed and suffixed form, consider the Babanki noun *ə̀tó / tə̀tó* (5/13) 'hut(s)' which has a diminutive *fə̀tótə̀ / mə̀tótə̀* (19/6a) 'tiny hut(s)'. It is not clear why the class 13 plural was the basis for the diminutive — perhaps, simply that it was the more common form.

Many other class 19/6a diminutives in Central Ring languages show unexpected suffixes that create disyllabic stems, as can be seen in Table 7 taken from Akumbu & Kießling (2020: 266-267).

Table 7: Central Ring diminutive derivation in class 19/6a and suffixation

Base	diminutive 19/6a + suffixation

[10] For the phenomenon of enclitic markers on nouns in Ring languages, see Kießling (2010).

Babanki	*wàn* (1/2) ‘child’, pl. *vúnə́* *əfwín* (5/6) ‘leg’, pl. *àfwín* *kəʃí* (7/8) ‘piece’, pl. *əʃí*	*fəwàntə̂* ‘little child’, pl. *məwàntə̂* *fəfwíntə̀* ‘small leg’, pl. *məfwíntə̀* *fəʃílə̀~fəʃínə̀* ‘tiny piece’, pl. *məʃílə̀~məʃínə̀*
Kom	*wáin* (1/2) ‘child’, pl. *wɔ́indā* *īsáŋ* (5/6) ‘corn’, pl. *āsáŋ* *ātú* (7/8) ‘head’, pl. *ātú*	*fɨ̄wáin(tɨ̀)* ‘little child’, pl. *mɨ̄wáin(tɨ̀)* *fɨ̄sáŋ(lɨ̂)* ‘small corn’, pl. *mɨ̄sáŋ(lɨ̂)* *fɨ̄tú(nɨ̀)* ‘small head’, pl. *mɨ̄tú(nɨ̀)*
Kung	*īɣáŋ* (5/10) ‘root’, pl. *səɣáŋ* *kəbê* (7/4) ‘thigh’, pl. *ībê* *sʌ́f* (9/10) ‘maize’, pl. *səsʌ́f*	*fəɣáŋə̂* ‘small root’, pl. *mɨɣáŋə̂* *fəbê(lə̀)* ‘tiny feeble thigh’, pl. *mbêlə̀* *fəsʌ̂blə̀* ‘tiny feeble maize plant’, pl. *msʌ̂blə̀*
Kuk	*zùɣù* (9/10) ‘snake’, pl. *sázûɣù* *ɲə̀m* (9/10) ‘animal’, pl. *səɲâm* *īsʌ̂b* (5/6) ‘maize cob’, pl. *ā̄sʌ̂b*	*fəzúglə̀* ‘smallish snake’, pl. *mzúglə̀* *fəɲàmə̀* ‘small animal’, pl. *mɲàmə̀* *fəsʌ̂b(lə̀)* ‘smallish maize cob’, pl. *msʌ̂blə̀*
Men	*āfɨ́á* (7/8) ‘thing’, pl. *ēfɨ́á* *váin* (1/2) ‘child’, pl. *ʌ̄ɣɔ́in* *tsə̀m* (9/10) ‘dream’, pl. *sētsə̀m*	*fēfɨ̂ə* ‘small thing’, pl. *mfɨ̂ə* *fēɣɔ́intə̂* ‘little child’, pl. *mɨɣɔ́intə̂* *fətsə́mtə̀* ‘small dream’, pl. *mtsə́mtə̀*
Oku	*əbkún* (3/6a) ‘bed’, pl. *əmkún* *kētíɛ* (7/8) ‘chair’, pl. *əbtíɛ* *ntɔ̀n* (9/10) ‘pot’, pl. *ntɔ̀nsè*	*fēkún(tè)* ‘small bed’, pl. *mēkún(tè)* *fētíɛ(lé)* ‘small chair’, pl. *mētíɛ(lé)* *fèntɔ̀n(nè)* ‘small pot’, pl. *mèntɔ̀n(nè)*

The variety and optionality of incorporated affixes, both across and inside languages, makes it clear that we are not dealing with a single derivative process. Rather it suggests that there were byforms (possibly already old diminutives) that were used as the basis for the diminutive gender 19/6a. The existence, or at least independence from gender 19/6a, of these suffixed byforms can be seen in the Kuk suffix *–lə̀* which Kießling (2016: 13) points out “is crucially involved in deriving *īɣâʔlə̀* ‘wing’ (pl. *səɣâʔlə̀*) from *īɣâʔà* ‘upper arm’ (pl. *səɣâʔà*).” The particular shapes of the frequent affixes *-lV* (cf. PB class 11 **dʊ* and class 5 pre-prefix **dI-*) and *-tV* (cf. PB diminutive class 13 **tù-* (Gibson, Guérois & Marten 2017)) suggest that these suffixes have an origin in the noun class system, and we will briefly consider those two affixes.[11]

The structure with suffixed *-lə* (or reduced variants) appears to be an inheritance, both because of its relic status in some Ring languages and because the same pattern is found

[11] Relic noun suffixes in Eastern Grassfields, including “evidence of a class 5 *-li* suffix” are discussed in Elias, Leroy & Voorhoeve (1984: 38-39).

in some Yemne-Kimbi languages which share the Lower Fungom region with the Central Ring language Kung. Koshin has numerous diminutives of this sort, e.g. *ndì* 'water' ~ *fə̀-ndì-lə̀* 'small water', *kə̄-fwá* 'snail' ~ *fə̀-fwá-lá* 'small snail' (Ousmanou 2014: 88-90). In the Mungbam lects, there is only one noun class marked by a circumfix (variously called class 13, 7a, 27): a plural class with prefix *ki-* and suffix *-lə* (or phonological variants), e.g. *ì-jɔ̄ / kí-jɔ̄-lə* (5/13) 'bee', *ì-dzām / kí-dzām-nə* 'back' (Lovegren 2013: 137-141; Hombert 1980: 93). This class 13 often appears as the plural of class 5, which would explain the origin of the suffix. The Mungbam concords are never suffixal and as prefixes they are identical with the head noun prefixes, so it would not be surprising that the cl. 5 concord **-lV* was left orphaned and became reanalyzed with a different function.

In most cases, there is no obvious reason why a united diminutive gender should incorporate (i.e. be derived from) a singular class suffix or enclitic rather than a plural one and the specifics probably are to be found in the semantics and history of each word. We regularly see circumfixal variation of singular and plurals in Tiv, e.g. *í-ʃí-ɣ́* (7) 'face' with plurals *ḿ-ʃí-ḿ* (6a) and *í-ʃí-v́* (8) (Angitso 2020: 217), but it was easily levelled in most Bantoid languages, surviving in Bu (Yemne-Kimbi) only occasionally, e.g. *kīdzə́kpə̄ / bīdzə́ptə̄*. But, as stated before, collectives or mass nouns which exist in only a single class present no problem, and it seems that class 13 once had some of those attributes.[12] For example, note the presence in classes 19 and 13 of mass nouns like Moghamo (Momo) *tí-fɔ́m* (13) 'fat' and *fì-ŋgwéŋ* (19) 'salt' and Babanki *tə̀-byú* (13) 'excreta' and *fə̀-mbváŋ* (19) 'salt'. Stallcup (1980: 209) states that in Moghamo (Momo), besides being a diminutive gender, 19/13 "also contains a number of items which occur generally in profusion – 'star, fly, bird', etc." A possible account is that PGr class 13 marker **tí* was losing its diminutive value in favor of a collective or profusional meaning and was replaced for that purpose by the collective class 6a; this led to **ti* becoming an unmarked plural in WGB and being entirely lost in EGB. The original diminutive meaning of **ti* only survives in the prefix of a few Moghamo relics and in these Ring suffixes. In the Yemne-Kimbi languages, Bu has a *-tə̀* suffix for its regular class 13 (=27) plurals, e.g. *yə̄ǹ / kī-yə̄ǹ-tə̀* (3 or 5/13) 'tail', *tˢím / kī-tˢím-tə̄* (5/13) 'axe'. Fang, another language in the Lower Fungom region, also sometimes has *tə̀* as the class

[12] See Hepburn-Gray (2020: 171) for the singular 'liquid diminutive' function of class 13 in the Bantu languages KiYombe and Luganda.

13 plural marker, both as a prefix and a suffix, e.g. *tɨ̄m / tə̀-tím-kpə̄* (6/13) ‘axe’, *gwə̀n / tə̀-gwə̄n-tə̀* (6/13) 'feather'; along with other circumfixal patterns (Mve et al. 2019: 173).

Looking beyond the nominal affixes, Lovegren (2013: 138-141) considers some overlaps in the formation of plurals in class 13 and that of deverbal adjectives in Mungbam, and Mve et al. (2019) note the parallels between Fang plural suffixes and imperfective verbal morphology.[13] Hyman (2018: 194) thinks it is possible that the diminutive/attenuative **-tV* verbal suffix might have been influenced by the nominal suffix. Akumbu & Kießling (2020: 269) also remark that the Ring diminutive suffixes *-tV* and *-lV* “resemble the verbal extensions *-tV*, and *-lV* commonly found in Bantoid and in Grassfields,” but propose the opposite direction of influence — that the nominal suffixes are a spillover from attenuative verbal suffixes. Such unusual verbal crossovers would need to have been very productive to affect basic concrete nouns like Babanki *fə-ʃɨ̀lə̀* ‘small eye’ (<*ə-ʃɨ́* (5/6) ‘eye’), and in this case it seems simpler to derive the suffix from an old class 5 concord **lə* in the same way that the class 10 suffix *-sə* developed. A detailed account of diminutive derivation and suffixation in Central Ring languages is found in Akumbu & Kießling (2020: 265-271).

A rare noun where an added syllable similar to a class marker is so pervasive that it has been reconstructed for Proto-Grassfields is the word for ‘ear’: PGr **túŋ-li*, Kom *ā-túŋlɨ́*, Oku *kē-tó:lé*, Bum *ā-tûŋló*, Men *ā-túŋnɔ́*, Isu *ká-túŋī*, Zoa *ká-tɔ́ŋgɔ̀*, Lamnso *kì-túʔᵘúr*; Bafou (EG-Bamileke) *là-tùŋŋ́*, Bambalang (EG-Nun) *tɨ́nɔ́ / pà-tɨ́nɔ́* (Babanki uses a different lexeme *kə̀-tíʔítíʔí* for this meaning). Likewise, PGr **búb´-li* ‘dust’ yields Babungo *būtɨ̄*, Bu *ká-vɔ́lɔ́*, and PGr **bàb`-li* ‘wing’ yields Babungo *ɣālɨ̀* and a different ending in Babessi *bɔ̂ʔtə̀*. There is also a disyllabic reconstruction for PGr **gómí* ‘locust’, which continues into Ring: Babanki *ŋgùmə́ / ŋgùmə́ᵘsɔ́* (9/10), Kom *ŋgōmí*, Oku *ŋgō:mé*, as well as PGr **gÙlì* ‘feather’: Bafmeng *ēwúlʌ̀*, Aghem *íɣúɔ̀ / táɣúɔ̀* (5/13).

An inherited suffix is also the likely explanation for the V2 in Babanki *kə̀-lyɨ́mə́* (7) ‘tongue’ and its cognates in Ring and Momo: Kom *ī-lɛ́mí* (5), Oku *kā-lé:mê* (7), Mbizinaku

[13] The authors are particularly curious about the similarity of the labio-velar suffix *-kpə* in some verbal imperfectives and plural nouns in Fang. But the suffix only occurs after stems ending in *-m*, which apparently labialized the **-kV* verbal iterative suffix and the **kɪ* or **kʊ* nominal class markers. One indication that the suffix was phonotactically determined at some stage is that it occurs as *-ŋkə* after nasals. In any case, the suffix is also seen as a singular element in Yemne-Kimbi, cf. ‘mouth’: Fang *dʒye / bə̀-dʒə́-ŋkə̀* (7/8) and Bu *kɨ̄-dzə́-kpə̄ / bɨ̄-dzə́-ptə̄*.

ī-lú:mâ, Lamnso' *kì-límí* (7) Babungo *ndílì*, Moghamo *í-némí*, Oshie *è-mènī*. Although not seen in West Ring or Eastern Grassfields, a final vowel is also present in Noni (Beboid) *lāmá / ē-lām* (5/6) or *jī-lāmá*, a language which usually loses V2 in nouns. A helpful clue to the origin of this V2 comes from Busam (SW Grassfields): *ɪ-lɛ́ŋní* 'tongue', where the final CV parallels that are found in *ɪ-tóŋní* 'ear' and *a-báblì* 'wing' (Blench 2010), suggesting **-lV* as the probable source of the Babanki V2, cognate with the prefix of PB **dò-dímì* 11 'tongue' (with class 5 byforms).

Some other Central Ring nouns look like they might include a suffix. However, it is difficult to tell whether the nouns in (11) have any verbal origin although they seem to have various extensions. Alternatively, it might be that some of the suffixes are class affixes.

(11) Babanki nouns with V2 or final CV of unknown origin

a. *kà-ɣú?á / à-ɣú?á* (7/8) 'cowry' (also Kom *ā-ɣúə?á,* Oku *kē-ɣɛ́kálí*, Men *ā-ɣá?álé*, Bu *ká-ɣə?ú*)
b. *ndʒù /* v*à-ndʒù* 'cane rat' (1) (also Kom *ndʒīlì*, Oku *ndʒîwìl*, Bum *ā-ndʒīlì*, Men *ndzīlè*, Bu *ndzóelì*)
c. *kà-ŋgɔ́ŋlá* (7) 'ant' (also Kom *fɨ-ŋgɔ̂ŋlī*, Men *ā-ŋgɔ́ŋné*, Isu *vá-vɔ́ŋɔ̄*)
d. *kà-záŋsá / à-záŋsá* (7/8) 'stem, stalk (of maize, millet) (also Kom *ā-yāŋsá* 'sugarcane')
e. *fə-ŋɣɔ́ʔsə / mə-ŋɣɔ́ʔsə* (19/6a) 'charm'
f. *mbàsə / və-mbàsə* (1/2) 'soup, broth, vegetable'
g. *ŋkɨ́mə / və-ŋkɨ́mə* (1/2) 'saucer'

We suspect that some of the nouns in (11) are borrowings or neologisms, but overall the origin of the nouns is unclear.

3.3 Allomorphic variation

In Ring languages, there are a few nouns in gender 1/2 with allomorphic variation between the singular and plural. They seem to preserve a historical disyllabic root in the plural. Class 1 nouns are usually marked by a zero morpheme in Ring languages, e.g. Babanki *ø-tsɔ̀ŋ / və-tsɔ́ŋ* (1/2) 'thief /thieves', but a few have the rare *w-* singular prefix (from PWG **u-*). The most prominent example is 'person'.

(12) Forms of 'person' (1/2) in some Ring languages

a. Central Ring: Babanki *wì? / ví?í*, Oku *wîl / ɣɪ̰̀lí*, Kom *ə̄wúl / əɣɛ̰̀lá*
b. West Ring: Aghem *wù / áɣî*, Weh *wù / áɣə̂*
c. East Ring: Lamnso' *wîr / wɪ̰̀rí*

From the Central and East Ring forms, we might reconstruct the Proto-Ring (PR) forms as **ù-ỲC / *bV́CỲ* 'person(s)', with paradigmatic levelling or loss of V2 in the plural of the West Ring languages.

Although the PEG form has been reconstructed as **ìn`* (Elias, Leroy & Voorhoeve 1984), some confirmation of a preserved V2 in Eastern Grassfields also comes from the Bamileke group: Bazou and Balengou *màntə̀*, and Bangwa *mìntə̀* — forms that parallel PB **mù-ntù*.[14] If we reconstruct PGr **mù-ntỲ / *bá-ntỲ*, the question becomes how various Ring languages ended up with one more syllable in cl. 2 forms than in cl. 1 forms. Do we need to explain the preservation of V2 in the plural or the reduction in the singular? Was the pattern of one-two syllable variation seen in Babanki *tsɔ̀ŋ / və̀-tsɔ́ŋ* 'thief /thieves' extended to 'person(s)'? Did the replacement of the PGr cl. 1 prefix **mù-* with PWG **ù-* somehow lead to a resyllabification that created a three-syllable singular subject to reduction (e.g. **u-ntV > *u-n̰-tV > *u-n̰-t > *wVt*)? In any case, it is not surprising to see an exceptional treatment of this common word which is often irregular cross-linguistically.

The word for 'child' (reconstructed roots PGr **án`* (1/2), PB **ánà*) has irregular Ring forms with some variation in the number of syllables between the singular and plural. The final vowel is only preserved in Babanki *wàn^{o}* (variant *wàyn^{o}*) / *vúnə́* and Obang *yə́n / bɔ́nɔ́*, in contrast to other Ring forms, e.g. Oku *wān / ɣɔ̄n*, Men *váyn / ɣɔ́yn*. The non-downgliding L tone in Babanki wàn˚ 'child' is due to a final floating H which prevents the L tone from falling. The final floating tone must have resulted from the loss of V2, confirming that the final vowel in the Babanki plural is a preservation of a Proto-Grassfields V2.

As shown in (13), Babanki derives the words for 'man' and 'woman' from the word for 'person'.

(13) Babanki derivation of 'man' and 'woman' from 'person'

[14] These conservative Grassfields forms in *-ntV* do not appear to be due to contact, at least not with the neighboring narrow Bantu languages, e.g., Tunen (A44) *mònd*, Nyokon (A45) *vàs*, Yambeta (A462) *mɔ̀ɔ̀t*, Tuki (A601) *moto*, Basaa (A43a) *mur* (Grollemund 2015).

a. *wù lím / lɯ́ᵘmá* (1/2) ‘man’ < *wìʔ*[15] *à lím* [‘person of male/husband’]
cf. *lím* / və-*lím* (1/2) ‘husband, male’ and *làmà / və-làmà* (1/2) ‘brother’, (PGr *lúm*`, PB **dúmè* 1/2, adj)

b. *wù wì̊ / kìí* (1/2) ‘woman’ < *wìʔ à wì* [‘person of wife] cf. *wì̊ / kìí* (1/2) ‘wife’ (PGr **g(w)é´*, PB **kádí* 1/2)

These nouns are unique in the language for not having class 2 forms beginning in *və-* or *v-*. Perhaps because of high frequency, these noun phrases were reduced to just the modifying second word (male, female) without any class marker, i.e. **víʔí vá vàlɯ́mV* > *lɯ́ᵘmá* and **víʔí vá kìí* > *kìí*. Or possibly the class marker in these plurals had become a suffix (which was later lost), since in the word for ‘man’ in some other Ring languages a nasal suffix is seen which looks like a marker of class 1 incorporated into the singular, e.g. Lamnso’ *lúmèn / vì-lúm* (1/2), which was sometimes generalized also to the plural, e.g. Kom *wú lùmnà / ɣà lúmnà* (1/2), Oku *èb-lómèn / è-lómèn* (1/2). In summary, the V2 in the word for ‘man’ in some Ring languages (like that seen in PB **dúmè*) was preserved either due to the general pattern of two-syllable cl. 2 forms in these languages, or due to the loss or incorporation of a class marker or enclitic. Accordingly, it seems one should also reconstruct a V2 for PGr **lúmV̀*.

3.4 Other explanations

Most of the disyllabic noun forms in Babanki have been accounted for by the proposal of likely or possible suffixes, but a few other forms that denote living creatures remain. A particular subset are those in (14) formed by reduplication of noun stems.

(14) Babanki reduplicated noun stems

a. *fə-wùfəwùfə / mə-wùfəwùfə* (19/6a) ‘fruit bat’
b. *fə-ʒùlàʒùlà / mə-ʒùlàʒùlà* (19/6a) ‘earthworm’
c. *kə-ŋgɔ́ŋgɔ́ŋ / ə-ŋgɔ́ŋgɔ́ŋ* (7/8) ‘ant’
d. *à-káləkálə / tə-káləkálə* (5/13) ‘mud wasp’
e. *fə-njìnjì / mə-njìnjì* (19/6a) ‘fly’ (PGr **njÌ*, PB **gìngì* (1a/2, 9/10))

[15] In Babanki noun phrases, the noun *wìʔ* ‘person’ regularly loses the glottal stop with modification of the vowel, cf. *wù búm / wìʔ à ə̀búm/* (1) ‘hunter’ (i.e., ‘the person of the hunt’). The vowels might have undergone coalescence and it appears that the glottal stop is lost like certain coda consonants (specifically *ŋ* and *n*) when followed by a suffix, a clitic, or the prefix of a following word (Akumbu 2016). However, it is unclear why the glottal stop is preserved in the plural cl. 2 form *víʔí búm /víʔí á ə̀búm/* (2) ‘hunters’.

These reduplicated nouns do not have a verbal origin, yet they have longer CV structures than the typical CVCV nouns reconstructed for PBC or PB and so it would not be surprising if they escaped whatever rule applied to the loss of V2 from CVCV nouns. Also, some of these are likely to have developed after the PR stage anyway, e.g. *kà-tíʔítíʔí / à-tíʔítíʔí* (7/8) 'ear', which is a Babanki neologism rather than the inherited PR **tuŋ-lV*.

In addition, there are only a few other nouns with final syllables which are not accounted for by any of the above processes. It is noteworthy that they are names of animals or insects, which often have long (expressive) stems in Bantu and other languages (Werner 1911, Walker 2008).

(15) Babanki nouns with final syllables of unknown sources

a. *tɔ̀lɔ̀kʲí / vàtɔ̀lɔ̀kʲí* (1/2) 'tortoise' (cf. Mmen *tɔ̀ləkí* (9))[16]
b. *ŋgŏŋkì / vàŋgŏŋkì* (1/2) 'crocodile' (cf. PB *gòndé* 9)
c. *kàntófù?* (7) 'spider'
d. *fəsòntʃə?* (19) 'millepede'
e. *kàlàtó / àlàtó* (7/8) 'dove'
f. *túbù / vàtúbù* (1/2) 'flea, jigger'

Finally, there is a group of disyllabic or polysyllabic stems ending in nasals, which do not have final vowels, but they are worth mentioning to complete the survey of Babanki nouns that are not monosyllabic.

(16) Babanki nouns with final nasal

a. *ɲìŋgɔ̀ŋ / và-ɲìŋgɔ̀ŋ* (1/2) 'God, god' East Grassfields: Bamoun *ɲìŋì* (or *mà-ɲìŋì*) / *pàŋìŋì* (or *ɲíŋí*) (1/2 or 4)
b. *àbìkáŋ / và-àbìkáŋ* (1/2) 'lion'
c. *támágúŋ / và-támágúŋ* (1/2) 'kingfisher'
d. *tómándʒíŋ / và-tómándʒíŋ* (1/2) 'dragonfly'
e. *títíwàn / và-títíwàn* (1/2) 'flag'
f. *ŋgwàláŋ / ŋgwàláŋ-ᵘsá* (9/10) 'sword'
g. *bălàŋ* (1) 'groundnut, peanut' (also Kom *bŏlɛŋ*, Oku *bílɛ̀ŋ*, Men *pɛ̌làŋ,* East Grassfields: Bamoun *pírɛ́n,* Baleng *bīyáŋ* (PGr **bìyáŋ* ~ **bìláŋ*)

[16] This word seems to be much more widespread and probably borrowed from Cameroon Pidgin English.

These polysyllabics may be compounds, which is why they do not have the V2 discussed in the rest of the paper.

4. Summary

The loss of V2 in inherited roots is shared by all Western Grassfields languages, so a common historical development seems to have been involved. The development must have stopped or was constrained at some later stage, due to morphological processes or borrowing, because there are a number of exceptions in today's languages, as evident in Babanki. In this paper, we have examined all the categories and proposed explanations for the contemporary forms in Ring languages.

The varying treatment of certain nouns in different languages suggests that the process of V-2 deletion might have still been active until recently, or perhaps more likely that similar vowel loss could have been applied at multiple times. The counterbalancing incorporation of nominal and verbal affixes, which added new final vowels, probably also happened in more than one way. The entire process was lengthy and quite complex, but we can sketch out some of what might have happened:

i. Grassfields inherited monosyllabic, disyllabic and possibly trisyllabic or reduplicated roots. As Kießling (2019: 140) observes for Kung, "while the overwhelming majority of nominal roots is monosyllabic, their tone pattern reflects an earlier disyllabic pattern in that two lexical tones are usually associated with a segmental root structure which basically provides only one TBU. As a consequence, the terminal tone comes to act like a floating tone…." Floating tones resulting from the loss of TBUs are present all over the area and are central to the analysis of Grassfields Bantu languages (Hyman & Tadadjeu 1976, Hyman 1979). The Ring words for 'person' and 'male' suggest that more roots should be reconstructed with full V2 at the PGr stage and that the development to floating tones or loss of V2 should be seen as later in a number of cases. For verbs, the roots might have been monosyllabic but they regularly had TAM suffixes yielding disyllabic or polysyllabic surface forms with V2, even without extensions.
ii. At an early stage (during PGr, PWG?), there was widespread reduction or deletion of V2 which needs to be clarified. This seems to have been a phonological process,

but the generalization of morphemes as monosyllabic may also have played a role. Sometimes C2 is also deleted.

iii. There are restrictions on the transition to monosyllabic stems, as verbal extensions (apparently separate morphemes not counting previously as part of the phonological word) and certain noun affixes become part of the phonological word. For example, the addition of *-Cə* extensions to CVC roots puts pressure on the vowel in the extension not to delete, as this would otherwise produce final CC sequences. Perhaps this accounts for the preservation of -Cə even after some CV roots. The results are disyllabic or polysyllabic stems with V2.

iv. Deverbatives continue to be formed from disyllabic verbs (the result of extensions).

v. Verbal extensions cease to be productive.

vi. At the contemporary state, most nouns and verbs have monosyllabic stems, but disyllabic stems exist due to the incorporation of what were once verbal and nominal affixes.

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