The question I would like to address in this paper is: What was the nature of the verbal unit (VU) in Proto-Bantu (PB)? Pre-Proto-Bantu? As seen in (1), the stem constituent is universally accepted at the PB level, which consisted of (i) an obligatory verb root or radical, (ii) optional extensions (either derivational suffixes or formal “expansions”), and (iii) an obligatory inflectional final vowel (FV), e.g. the -a ending found in most verb forms.

(1) Structure of the verbal unit (VU) proposed by Meeussen (1967)

\[ \text{VU} \]

\[ \text{pre-stem} \quad \text{stem} \]

\[ \text{base} \quad \text{FV} \]

\[ \text{radical} \quad \text{(extensions)} \]

Less clear is the status of the “pre-stem” in Proto-Bantu—or, as we will see, even in present-day Bantu languages. While Meeussen (1967) elaborates the pre-stem as in (2), it is not clear whether the pre-stem is or was a constituent, and whether it formed a word with the stem or was independent.

(2) Pre-initial + Subject + Negative + Tense + Formative + Object (followed by verb stem)

Excluding present-day proclitics and enclitics from the VU, we must still choose between three hypotheses:

(3) Hypothesis #1: The VU was fully formed at the PB stage, as reconstructed by Meeussen.

Hypothesis #2 The VU did not exist at the PB stage, but rather evolved subsequent to PB.

Hypothesis #3: The VU partially existed at the PB stage. That is, some of the preposed inflectional morphemes were prefixes in PB, while others were not.

In attempting to evaluate the evidence, I make the following standard assumptions in (4).

(4) a. All of the preposed inflectional morphemes in present-day Bantu languages derived originally from words

b. The universal pathway was *word > clitic > prefix, as amply documented in the literature on grammaticalization

c. Complex affixal systems may be subject to erosion and loss

The question, therefore, is not whether the preposed markers of subject, negative, tense, object etc. derive historically from full words and clitics, but rather what their status was at the PB level. In this paper I will argue that at least some pre-stem morphemes were prefixes, e.g. the subject marker (SM) and object marker (OM). From this point, Bantu languages diverge largely along geographic lines. As
exemplified in the rather extreme example from Kinande in (5), provided by Philip Ngessimo Mutaka to Nurse & Philippson (2003:9), many Central Bantu languages have elaborated the pre-stem.

(5) tu-né-mu-ndi-syá-tá-sya-ya-ba- [king-ul-ir-an-is-i-á]stem = kyô
   ‘we will make it possible one more time for them to open it for each other’

While some prefixal systems are limited to one morpheme per Meeussenian “slot”, some of the more elaborated prefixal systems are clearly a secondary development.

Showing quite the opposite trend, large numbers of Northwest Bantu languages have broken down the pre-stem – to such an extent that the verb stem clearly constitutes a word on its own. Part of the Basaá verb paradigm is shown in (6), where /lɔ/ ‘come’ often appears as a separate word (Hyman 2003):

(6) Some NW Bantu languages have few verb prefixes and look “West African”, e.g. Basaá.

<table>
<thead>
<tr>
<th>TAM</th>
<th>Affirmative</th>
<th>Negative</th>
<th>Main Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>a n- lɔ</td>
<td>a n- lɔ ₁bé</td>
<td>today past tense</td>
</tr>
<tr>
<td>P2</td>
<td>a bí lɔ</td>
<td>a bí lɔ ₁bé</td>
<td>general past tense, e.g. yesterday or earlier</td>
</tr>
<tr>
<td>P3</td>
<td>a lɔ瘠</td>
<td>a lɔ瘠 ₁bé</td>
<td>pluperfect; distant past</td>
</tr>
<tr>
<td>Present</td>
<td>a ní-lɔ</td>
<td>a ní-lɔ ₁bé</td>
<td>present; habitual; near ‘about to’</td>
</tr>
<tr>
<td>F1</td>
<td>a gá lɔ瘠</td>
<td>a gá lɔ瘠 ₁bé</td>
<td>future</td>
</tr>
<tr>
<td>F2</td>
<td>aa lɔ</td>
<td>aa lɔ ₁bé</td>
<td>distant or unspecified future</td>
</tr>
<tr>
<td>Future</td>
<td>á lɔ瘠</td>
<td>á lɔ瘠 ₁bé</td>
<td>future perfect or consecutive; conditional ‘if’</td>
</tr>
<tr>
<td>Perfect</td>
<td>u/ni lɔ ₁báá瘠</td>
<td></td>
<td>subjunctive/hortative; future</td>
</tr>
<tr>
<td>Subjunctive</td>
<td>á lɔ瘠 ₃</td>
<td>a lɔ ₁báá瘠</td>
<td>consecutive</td>
</tr>
<tr>
<td>Imperative</td>
<td>lɔ瘠 (pl. lɔ瘠 (pl. lɔ瘠)</td>
<td>u/ni lɔ ₁báá瘠</td>
<td>commands</td>
</tr>
</tbody>
</table>

Given the very clear demarcation between the pre-stem and a consonant-initial stem in Basaá, a form such as [a bí lɔ] ‘he came’ is subject to at least three interpretations:

(7) a. Prefixes + stem  b. INFL stem + lex stem  c. Independent stems (words?)


(Meeussen 1967) (Myers 1987, 1998)

Unlike Central Bantu languages, Basaá has a single series of stops /p, t, k/ which are realized voiceless stem-initially, but voiced stem-externally:

(8) /p, t, k/ are realized voiced when not stem-initial (→ continuant if post-vocalic and non-final)

<table>
<thead>
<tr>
<th>Underlying</th>
<th>Orthographic</th>
<th>Phonetic</th>
</tr>
</thead>
<tbody>
<tr>
<td>/pi-pótól/</td>
<td>bi-pódól</td>
<td>bi-póról ‘arguments’ (class 8)</td>
</tr>
<tr>
<td>/tì-kótá/</td>
<td>di-kódá</td>
<td>di-kórá  ‘pipes’ (class 13)</td>
</tr>
<tr>
<td>/à pí ` lɔ/</td>
<td>a bí lɔ</td>
<td>a bí lɔ  ‘he came’ (P2)</td>
</tr>
<tr>
<td>/à ká ` lɔ ʾ/</td>
<td>a gá lɔ瘠</td>
<td>a ỹá lɔ瘠 ‘he will come’ (F1)</td>
</tr>
</tbody>
</table>
As a result, when the class 13 prefix /ti-/ occurs before a consonant-initial root, it is pronounced di-, as in (9a).

(9) a. hi-tám ‘kidney’ pl. di-tám  b. hy-āy ‘leaf’ pl. c-āy
    hi-keŋ ‘knife’ pl. di-keŋ  hy-oŋ ‘hair’ pl. c-oŋ

However, as seen in (9b), when /ti-/ occurs before a vowel-initial root, it is incorporated into the stem, where it fails to become voiced. Instead, it first glides to ty-, and is then affricated to c- [tʃ].

It is common for languages to do as Basaá does and mark stem-initials in a special way, particularly when they can occur without prefixes—which was only possible in the singular affirmative imperative in PB. Thus, if the prefixes were not prefixes in PB, we would expect the stem to have word-like properties in the proto language. The consonant distributions in (10) do not support this:


<table>
<thead>
<tr>
<th></th>
<th>*p</th>
<th>*t</th>
<th>*c</th>
<th>*k</th>
<th>*b</th>
<th>*d</th>
<th>*g</th>
<th>*m</th>
<th>*n</th>
<th>*j</th>
<th>*mb</th>
<th>*nd</th>
<th>*nj</th>
<th>*ng</th>
<th>totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>pref</td>
<td>2</td>
<td>5</td>
<td>9</td>
<td>5</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>C1</td>
<td>222</td>
<td>281</td>
<td>181</td>
<td>300</td>
<td>205</td>
<td>253</td>
<td>207</td>
<td>172</td>
<td>43</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>C2</td>
<td>71</td>
<td>116</td>
<td>40</td>
<td>180</td>
<td>93</td>
<td>360</td>
<td>50</td>
<td>80</td>
<td>126</td>
<td>100</td>
<td>12</td>
<td>173</td>
<td>119</td>
<td>31</td>
<td>213</td>
</tr>
<tr>
<td>C3</td>
<td>1</td>
<td>22</td>
<td>4</td>
<td>54</td>
<td>10</td>
<td>124</td>
<td>1</td>
<td>5</td>
<td>34</td>
<td>15</td>
<td>1</td>
<td></td>
<td></td>
<td>9</td>
<td>280</td>
</tr>
<tr>
<td>suff</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>16</td>
</tr>
</tbody>
</table>

The only striking skewing in these tabulations, based on 1939 lexical records in Meeussen (1969) and the grammatical morphemes reconstructed by Meeussen (1967), is the restriction of *NC sequences to the C2 position of the stem, i.e. the second position of *-CV(V)C- roots.

On the other hand, as indicated in (11), Meeussen’s PB stem is universally assumed to be a locus of prosodic activity in Bantu languages:

(11) a. vowels: distribution, vowel harmony
    b. tones: distribution, Meeussen’s reconstruction of extension tones
    c. reduplication: verb reduplication is usually limited to the stem

As seen in (12), the seven PB vowels (*i, *ɨ, *ɛ, *u, *ʊ, *ɔ, *a) are attested in the first root syllable, and perhaps also on the final vowel (when nouns and other parts of speech are brought into the picture), but not on the intervening extension vowels, which are limited to the vowels *i, *ʊ, *a and (marginally) *i:

(12) Distributions by position in the Bantu (verb) stem

<table>
<thead>
<tr>
<th></th>
<th>root</th>
<th>extensions</th>
<th>final vowel</th>
</tr>
</thead>
<tbody>
<tr>
<td>All 7 *V’s</td>
<td>+</td>
<td>-</td>
<td>(+)</td>
</tr>
<tr>
<td>Both *H &amp; *L</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
</tbody>
</table>

As Meeussen also indicated, the lack of an opposition among the extension vowels set the scene for *i and *ʊ to undergo vowel height harmony, from which root vowels and the FV are generally exempt (as are prefix vowels). As also indicated, extension vowels also do not show a tonal contrast. Thus, both vowels and tones suggest an internal “prosodic trough”, to which some Northwest Bantu languages also add consonant contrasts and realizations. Finally, as mentioned in (11c), a third property is that verb reduplication is usually limited to the stem.
While (11) lists three diagnostics for the stem as a locus of prosodic activity, they all "leak" in present-day Bantu. First, extension vowels are supposed to harmonize, but de-adjectival and de-ideophonic verbs often violate vowel height harmony:

(13) **Regular** | **Irregular**  
--- | ---  
*a.* Chichewa nyem-gl-a ‘break + appl’ | nyezi-m-a ‘shine’  
*b.* Luganda zib-uk-a ‘come unstopped’ | zito-w-a ‘be heavy’

Of course the reason for this is that the irregular forms are derived from the ideophone nyezi ‘shiny’ and the adjectival stem -zito ‘heavy’.

The second diagnostic also fails in cases where “FV tones” act as if they are enclitic, i.e. not originating in the FV suffix. This is particularly evident in the case of the perfective/imperfective suffixes *-id-* and *-ag-a (? -a-ga), whose segmental contents also sometimes appear to not count as part of the stem, as summarized in (14).

(14) a. -id- (variant -it-) does not count in computing pre-antepenultimate vowel shortening in Kimatuumbi (Odden 1996)  
b. -id- doesn’t lose its count as a tone-bearing unit where other suffixes do in V-truncation in Kinande (Mutaka 1994)  
c. -id- conspires with causative -i- and passive -o- to cause a H tone “enclitic” to follow the verb stem which then ends in -a in Luganda (Hyman and Katamba 1990)  
d. -id- (and -ag-) have tonal effects in Safwa (Voorhoeve 1973) that possibly suggest an infixation later in the derivation (cf. Bastin 1983); also for tonal reasons, -ag-a appears better analyzed as -a =ga in Ciyao (Hyman & Ngunga 1994)  
e. the “prefinal” -(n)ga follows the FV -e in many Bantu languages like a clitic (Sebasoni 1967)

Finally, concerning verb-stem reduplication, it is well-established that reduplicants sometimes include non-stem prefixal material, e.g. Kihehe (Odden & Odden 1985).

One of the criteria for establishing an internal structure of the word concerns the operation of Meeussen Rule (MR), a process by which a H tone becomes L or is deleted when immediately following another H tone. As indicated in (15), MR applies within different domains in different Bantu languages:

(15) a. within the stem e.g. Kinande  
b. within the “macro-stem” (= OM + stem) e.g. Chichewa  
c. within the verbal unit e.g. Luganda  
d. across words or word-like units e.g. Shona, Ikalanga

As the example in (16a) shows, MR is said to require a macrostem or clitic boundary in Shona (Myers 1998):
Reconstructing the Proto-Bantu Verbal Unit

(16) a. [va-cha-] [tenga] \( \rightarrow \) vá-chá-tenga ‘they will buy’ (ku-téngá ‘to buy’)

\[ \begin{array}{c|c|c}
H & H & H \\
\hline 
\end{array} \]

\( \text{-cha-} < \ast \text{-kí-à-} \)

b. [ku] [ri-tenga] \( \rightarrow \) ku-rí-téngá ‘to buy it’ (the class 5 OM

\[ \begin{array}{c|c|c}
H & H & H \\
\hline 
\end{array} \]

ri- belongs to the “macrostem”)

c. [Ø] [ti-tenge] \( \rightarrow \) tí-ténge ‘that we buy’ (subjunctive)

\[ \begin{array}{c|c|c}
H & H & H \\
\hline 
\end{array} \]

d. [ne] [banga] \( \rightarrow \) né bangá ‘with a knife’ (cf. bángá ‘knife’)

\[ \begin{array}{c|c|c}
H & H & H \\
\hline 
\end{array} \]

(proclitic + noun)

(<PB*ì-pángà ‘machete’)

e. [mwana] [i] \( \rightarrow \) mwaná i ‘which child’ (cf. munhu í ‘which

\[ \begin{array}{c|c|c}
H & H & H \\
\hline 
\end{array} \]

(person’)

(< PB *mù-jánà ‘child’)

MR fails to apply in (16b,c), where the two H tones occur within the same macrostem, consisting of the stem preceded by a single OM or SM prefix, respectively. Outside the verb, MR again applies between a proclitic and following word in (16d) and between a word and following enclitic in (16e). While this proposal does seem to work synchronically, it requires Myers to place the SM of the subjunctive within the macrostem in (16c), whereas various TAM markers, which cannot be part of the macrostem, occur between the SM and the verb stem in other parts of the paradigm. If one considers the reconstructions given to the right of each example, an interesting generalization arises: In each case where MR applies, there is a lost tone-bearing unit (TBU) which carried a L tone wedged between two H tones (-à-, ì-, and mù-). In other words, the source of MR in Shona is as indicated in (17).

(17) H + ` + H > H-à-H > H-L

What this means is that the explanation for the (non-)application of MR has more to do with the historical tones and shift of the TBU from mora to syllable than it does with the internal morphological structure of the verb.

How, then, can we tell whether a pre-stem + stem sequence constitutes a “word” or not? As Guthrie (1948) originally pointed out, we can cite either morphological or phonological criteria. Hyman & Katamba (2005) in fact cite MR as defining the word in Luganda. As seen in (18a), MR applies throughout the prefix+stem word in Luganda:
(18) MR applies throughout the prefix+stem word in Luganda, but not across clitics

a. \[[a-ba-ta-li-[tu-[lab-a]]_{STEM}]_{MS}\]
   \[| | | | |\]
   H H H H H
   ↓ ↓ ↓ ↓ ↓
   L L L L

\[a-bá-tà-li-tù-làb-a\]
IV-3pl-neg-fut-us-see-FV
‘they who will not see us’

b. \[né=[kí-gùùndù]_{PW}\]
   \[| | \]
   H H

‘with Kiguundu’

L L L L

c. \[[a-sib-á]_{W}=kô\]_{CG}
   \[| | |\]
   H H

‘he who ties a little’

However, (18b) and (18c) show that MR does not apply between a proclitic and a word or between a word and an enclitic. In other words, Luganda shows something quite different from Shona: the reality of the traditional Bantu word as assumed by Guthrie, Meeussen and others.

This brings me to the question of whether stress-accent may be useful in determining whether a prefix+stem constitutes a single word domain. Many Central bantu languages have special penultimate properties: (i) penultimate vowel lengthening (which originates at the phrase level, but may be “narrowed” to the word domain); (ii) attraction of tone to the penult. On the other hand, many Western bantu languages have special stem-initial properties: (i) more consonant and vowel contrasts in \(C_1V_1\); stronger realizations of \(C_1\) than elsewhere (cf. Basaa above). As shown now in (19), Punu appears to have elements of both (Blanchon 1994):

(19) a. vowel length is contrastive only on the root syllable
   (i) u-šíngá ‘to rub’
   (ii) u-šíngá ‘to agree’
   b. long vowels are typically shortened in phrase-pre-penultimate position
   (i) u-já:ba ‘to know’
   (ii) u-nyó:ga ‘become angry’
      u-jábísa ‘to make know’
      u-nyó:GISA ‘anger someone’

In fact, Meeussen was very skeptical about stress-accent in Bantu, as seen in his statement about Kirundi:

(20) “S’il y avait un accent d’intensité caractérisant l’un ou l’autre élément, on s’attendrait à une prononciation différente de paires de mots comme la suivante:
   ba-ra-ru-tan-a ils l’étirent (la peau)
   ba-ra-rut-an-a ils se surpassent l’un l’autre

Or on dit indifféremment dans les deux cas: bararutana.” (Meeussen 1959:20)

I therefore present the claim in (21).

(21) Claim: Proto-Bantu had no stress-accent

a. development of phrase-penultimate prominence on the Eastern side of the zone, partly in response to loss of vowel length contrast and to the drift from paradigmatically contrastive to syntagmatically restrictive tone (Voorhoeve 1973, Schadeberg 1973)

b. development of stem-initial prominence on the Western side of the zone, partly in response to the drift from full to limited (e.g. prosodically restricted) agglutinative morphology
While the division between the penultimate East and the stem-initial West is quite robust, it should be noted that the stem-initial boundary is always available. Thus, note the tonal data from Ndebele in (22).

(22) Stem-initial L “depressor” in Ndebele (Sibanda 2004:229-230)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>b.</td>
</tr>
<tr>
<td>ku-phek-a</td>
<td>ú-kú-phek-a</td>
</tr>
<tr>
<td>ku-phek-is-a</td>
<td>ú-kú-’phek-is-a</td>
</tr>
<tr>
<td>ku-phek-is-el-a</td>
<td>ú-kú-’phek-és-el-a</td>
</tr>
<tr>
<td>ku-phek-is-el-an-a</td>
<td>ú-kú-phek-is-él-an-a</td>
</tr>
</tbody>
</table>

‘to cook’
‘to make cook’
‘to make cook for’
‘to make cook for each other’

As seen in (22a), the verb root -phek- ‘cook’ is underlyingly toneless. In (22b) the only underlying H tone originates on the (underlined) augment ú-. As seen, this H spreads to the antepenult. However, also seen is that there is a downstep before the stem in the second and third examples, i.e. internal to the H tone span. The last example shows that when the form is long enough, the Hs are delinked from the stem initial syllable up to and including the pre-antepenultimate syllable. The analysis is that the left stem bracket is accompanied by a L boundary tone which has the same effect as a depressor consonant in Ndebele.

While there is plenty of evidence that the pre-stem + stem constitutes a word in Central Bantu, the verb stem is demonstrably more autonomous or isolable than the noun stem. I attribute this to the fact that verbs are more “paradigmatic”, i.e. they have much more highly developed paradigms than nouns, whose prefixes cohere more tightly than the prefixes on verbs. One sign of this is that within the same language, e.g. Kinande in (23), noun reduplication may include the prefix, while verb reduplication does not:

(23) a. (o-) mu-swí ‘grinder’  (o-) mu-swí-mu-swí ‘a real grinder’
    b. (e-) ri-swá ‘to grind’  (e-) ri-swí-swí-swí ‘to grind here and there’

In addition, in many Bantu languages noun prefixes fuse with the root while verb prefixes do not. Thus, Swahili class 7 ki- > č- before a vowel in nouns and other form classes in (24a).

(24) a. ch-uma ‘iron’, ch-eusi ‘black’, ch-angu ‘my’ (cf. ki-atu ‘shoe’ with a ghost consonant)
    b. a-ki-oná ‘he sees it’ (*a-ch-oná)

As seen in (24b), however, the class 7 OM -ki- does not palatalize before a vowel-initial verb. Or, as a second example, Kinande /a+i/ is realized differently according to lexical stratum (Mutaka 1994). The /a+i/ sequence fuses as a mid vowel when the vowels occur within the verb stem in (25a) or between a prefix and noun stem in (25b). As seen in (25c), however, the /a/ of an OM deletes before a verb root which begins with /i/. If fusion of /a+i/ is a stratum 1 process, as Mutaka proposes, it would seem that verb prefixes enter at stratum 2. The same is presumably the case in the diminutivization process in (25d).

(25) a. within verb stem:  /mɔ-tw-a-tá-ir-e’l/  →  mɔ-tw-a-téli-r-e’ ‘we buried’
    b. prefix + noun stem:  /a-ma-íšɔ/  →  a-mé:šɔ  ‘eyes’
    c. OM + verb stem:  /e-ri-va-ít-a/  →  e-ři-vít-t-á  ‘to kill them’
    d. diminutivized noun:  /a-ka-íšɔ/  →  a-ki:šɔ  ‘small eye’  (~ ?a-kë:šɔ)
While it appears that the prefixes are less tightly bound to the verb stem than they are to the noun stem in Central Bantu, many of the Northwest Bantu languages have gone even further to free prefixes from their stems. Consider, for example, the stem properties in Kukuya (Paulian 1975) enumerated in (26).

(26) a. Five syllable shapes: CV, CV.V, CV.CV, CVV.CV, CV.CV.CV b. Five tonal "melodies": L, H, LH, HL, LHL c. Six C₂ or C₃ consonants: /p, t, k, l, m, n/(vs. large inventory of C₁ consonants) d. Six C₂-C₃ combinations: C-n-m, C-t-k, C-l-k, C-l-p, C-t-p, C-k-p (5/6 are T-P, T-K) e. Weak C₂, C₃ realizations: /p, t, k/ are realized [b ~ β], [ɾ] and [k ~ g ~ γ], respectively.

f. V₂ of CV.CV.CV is predictable, subject to reduction/deletion:
   C - n - m : / (kì-) .pùnumà/ ‘to knock over accidentally’
   (‘renverser sans le vouloir’) C - t - k : / (kì-) .bítikà / ‘to be numerous’ (‘être nombreux’) C - l - k : / (kì-) .bólókò/ ‘to break’ (‘casser’) [.bòlágò] C - l - p : / (kì-) .lèlèpè/ ‘to slow down’ (‘ralentir’) C - k - p : / (kì-) .pákàpà/ ‘to rip, tear’ (‘craquer, se déchirer’) C - t - p : / (kì-) nàtāpà / ‘be set, stuck’ (‘être fixé, collé’)

As seen, the stem is subject to massive constraints on size, syllable structure, and distribution of tones, consonants and vowels. Paulian also claims that stems are demarcated by an initial primary accent and an “echo” secondary accent on the final CV of bi- and trisyllabic stems. Most important for our purpose, there is no interaction between a prefix and a consonant-initial stem in Kukuya. In fact, Paulian demonstrates that prefixes join the PRECEDING stem to form a prosodic constituent. The examples in (27a) illustrate the H-L stem of mà.témè, where (.) indicates the beginning of the stem domain:

(27) a. mà.témè ‘hoes’
    mà.témè mà ‘these hoes’
    mà.témè mà.kìmà ‘other hoes’
   b. mà.témè máá.bvì ‘the hoes fell’ (*H-L-H)
   c. mì.tí mì.sénèmè ‘six trees’
   d. /uni02C8\ CVCV CV /uni02C8\ CVCVCV CV /uni02C8\ CV... (p.29)

Since there is a constraint against *H-L-H sequences in Kukuya, in (27b), the H-L of .témè becomes H-H when followed by the H tone marker máá, which may be regarded as a prefix on the verb or as a proclitic, but not as a stem. The crucial example is (27c), where the H-L-H sequence is interrupted by a stem boundary. As seen, this H-L-H sequence is realized unchanged. Paulian’s analysis is schematized in (27d), where she refers to a stem as an “accentogène” and to a stem plus possible following prefixes/proclitics as an “unité accentuelle”.

Additional evidence for the postlexical stem + prefix domain is seen from the fact that /b, m/ may delete when not stem-initial (Paulian 1975:145). Thus, the [m] of /mu/ and the [b] of /báá/ delete in (28a,b), but the stem-initial [m] and [b] of the first word do not:
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(28) a. /mbànà wù mòvbè/ → ['mbùànà wò bvbè] ‘this beautiful child’
   child this beautiful
b. /báana báá ngò/ → ['bá:ná: ngò] ‘children of the panther’
   children of panther

This is because a prefix combines with a vowel-initial root into the stem; cf. kyààlì 'chicken nest', pl. bvyààlì (7/8). As Paulian puts it: “Les termes mbànà, báanà, fonctionnent comme des unités insécables et ce n’est qu’au niveau structural que l’on peut proposer de les décomposer en : préfixe + nominal.” (p.170). She goes on to point out, however, that this does not happen with verbs, which are always consonant-initial: “Le référent qui apparaît en combinaison avec le verbal... n’est jamais amalgamé au radical du verbal (qui commence d’ailleurs toujours par une consonne) mais à la modalité de temps....” (p.210) So, again, verb stems are more autonomous than noun stems.

The Kukuya facts are particularly important in that they provide evidence that the Northwest Bantu analytic tendency can be innovative. For our purposes, if the historical noun and adjective prefixes can be prosodically “detached” and become autonomous of their stems in Kukuya, then so can verb prefixes. In fact, this detachment can lead to insertion of other elements, ultimately S AUX O V word order. Consistent with this interpretation is Mous’ (2005) account of the SOV properties of Tunen as an innovation.

Prosodic correlates of the above-mentioned drift towards analyticity in Northwest Bantu are particularly robust. I have already alluded to the enhancement of the stem-initial CV, which is sometimes viewed as “accented”. In addition Northwest Bantu languages often impose size constraints on their prosodic stems (Hyman, in press), e.g. maximum of four syllables in Bobangi, three in Koyo and Kukuya, two in Ngemba, also restrictions on which consonants and vowels can appear in which syllables. Because of the size constraints, many verbs will not be able to take causative, applicative and other extensions, since there will be no room within the maximum size template. Periphrastic alternatives will thus be required, which then spread to replace extensions even on shorter derived verbs. This replacement of the synthetic derivational strategy by an analytic periphrasis corresponds with what is seen in the inflectional system.

What can we conclude from the aforegoing? First, it is still not clear whether the pre-stem was affixal in PB. The phonological status of “prefixes” varies widely within present-day Bantu, even among those languages that are solidly in the “synthetic” area (cf. the current need for the “macrostem”). We see this, for instance, in the tremendous variation there is in the applicability of MR. What I would like to suggest is that the morphological developments have gone in both directions: build-up and break-down of the VU. In other words, both of the pathways in (29) are natural:

(29) a. “particles” > prefixes
   b. prefixes > “particles”

In order to come up with a more definitive account we must look at the details of more Bantu languages from this historical perspective. I suggest that the focus should be on potential archaisms such as the following:
(30) a. the final vowel (Grégoire 1979)
    b. the tense prefix -a- (Bastin 1994, Goldsmith 1984)
    c. OMs with an initial vowel: -itu-, -imu- (Polak 1986)
    d. the Law of Initials and Finals (where the SM and FV have the same tone, especially in relative clauses)
    e. other tonal quirks, e.g. the tone of causative -i- and passive -u- (Hyman & Katamba 1990)

It is my intuition that the most agglutinative Bantu languages hold the greatest clues to figuring out what was present in PB vs. innovated subsequently.

References


Guthrie, Malcolm. (1948) *Bantu word division*. International African Institute Memorandum XXII.


