ACCOUNTING FOR THE MORPHOPHONOLOGICAL ALTERNATIONS IN CLASSES 1 AND 2 OF BANTU LANGUAGES OF ZONE A

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ABSTRACT Generally, noun class prefixes of Bantu languages have two or more variants which can be accounted for by phonological and/or morphological rules. These rules might be straightforward, natural and psychologically real, or sometimes complicated and less natural in that it is not always clear what phonological processes are involved. These complications have been noticed with gender 1/2 prefixes of the Bantu languages of Zone A. This paper examines the alternations noted in classes 1 and 2 (for the lexemes "man," "woman" and "child") of two Bantu languages, Bankon (A42) and Mokpe (A22) to demonstrate the difficulty in accounting for those alternations. A detailed analysis is provided with a wide range of alternative hypotheses.

Key Words: Bantu languages; Noun classes; Gender 1/2; Prefix; Bankon; Mokpe; Autosegment.

INTRODUCTION

Nouns in Bantu languages are made up of a prefix followed by a noun stem. The nouns are divided in classes and numbered from 1 to 24, without 20, 21, 22, and 23 (Meeussen, 1967). The classes are generally paired (1/2, 3/4, 5/6, 7/8, 9/10, etc.), but some nouns are single gendered, as in class 14. When paired, the first member of the pair (uneven) denotes the singular while the second (even) denotes the plural. Note that the numbers in the pairing may not be consecutive. Depending on the language there exist many combinations such as 3/6, 19/6, and 5/4, as each language selects its classes and organises them in its own way.

It is common knowledge that the prefix of a class may have two or more variants which are accountable by phonological and/or morphological rules. In the unmarked case, the phonological rules are straightforward, natural and psychologically real. However, there are cases where accounting for the surface alternations poses a problem for phonologists. This is because it is not always clear what phonological processes are involved. This is precisely the case with gender 1/2 prefixes of the Bantu languages of Zone A. Interestingly enough, the same challenges have also been observed with the same class gender in a number of languages in the continuum.

This paper examines the alternations noted in classes 1 and 2 (for lexemes "man," "woman" and "child") of two Bantu languages, Bankon (A42) and Mokpe (A22), demonstrating how difficult it is to account for those alternations.

I provide here a detailed analysis and a wide range of alternative hypotheses. I submit that the knowledge of the investigated phenomena may be furnished by historical linguistics, taking into account the history of Proto Bantu.

The paper is organised in three sections. After this introduction, the next briefly introduces the phonological traits of the two languages under investigation. The third presents the analysis of the allomorphs listed for classes 1 and 2 of the two languages.

BANKON AND MOKPE: TWO NARROW BANTU LANGUAGES

I. Classification and Location

Bankon and Mokpe are classified as Bantu languages of Zone A, according to Guthrie's (1967/1971) classification of Bantu languages in zones labeled A through S.

Bankon (Abo, Bo, Abaw) is spoken in the Littoral Province of Cameroon, in the north of Douala and west of the Wouri River and Dibombari. It is related to Barombi, spoken in the Meme Division in the South-West Province of Cameroon, and Basaa spoken in the Center and Littoral Provinces (Gordon, 2005).

Mokpe (Mokpwe, Bakweri) on its part, is spoken in the South-West Province of Cameroon, mainly in the Fako Division, and the Buea, Limbe, Muyuka and Tiko subdivisions. It entertains a dialectal relationship with Wumboko, Bubia and Isu (Gordon, 2005).

My choice of these two languages amongst the entire Zone A languages is due to the fact that the phenomenon under study is recurrent in them.

II. Phonological Features

1. Bankon
Bankon has the consonant and vowel systems below:

(1)

a)   Consonants   b)   Vowels

ɓ						ɪ		u
p	t		k	kw/kp		e		o
	d		g			ɛ		ɔ
	tʃ						a	
	dʒ							
f	s		ɣ					
m	n	ɲ	ŋ					
mb	nd	ndʒ	ŋg					
bw			ŋgw					
mw								
mbw								
w		j						
	l							
	r							

Atindogbé (1996)

Bankon has two tones: low (ˋ) and high (ˊ), as exemplified in (2). Both combine to produce two contour tones: falling (ˆ) and rising (ˇ).

(2)   mbàlà   "truth"
           kwéé   "death"
           ǹsɔ́n   "work"
           tʃăt   "claw"
           ìwɔ́lɔk   "to insult"

2. Mokpe

Mokpe has the following consonant and vowel systems:

(3)

a)   Consonants   b)   Vowels
    (p)   t   k   kp   ɪ   u
    (b)   d   gb   e   o
                         dʒ   ɛ   ɔ
                     ts   a
         ɸ   s
         β
      m   n   ŋ   ŋm
      mb   nd   ndʒ   ŋg   ŋgb
                                         ŋw
      w   j
                     l
                  rz

Mokpe also makes use of two tones: low (ˋ) and high (ˊ). These two level tones combine to form two contour tones in the language, rising (ˇ) and falling (ˆ).

(4)
           zràlì   "small"
           zrómbé   "star"
           dʒòlì   "firewood"
           kémà   "monkey"
           tǔ   "room"
           ŋgbâ   "dog"

ANALYSIS OF CLASSES 1/2 OF BANTU NOUNS

This section examines nominal forms of lexemes such as "man," "woman" and "child" of classes 1 and 2 and identifies the problems posed by these nouns to analysts. Bankon (A42) and Mokpe (A22) will provide the relevant data for the analysis.

I. "Man," "Woman" and "Child" in Bankon

Consider the data in (5) where the nouns are presented in full forms and (6) where the same nouns are divided into two parts: the prefix and the stem.

The examples above give the various realisations of classes 1 and 2 prefixes. Class 1 exhibits five variants (m-, mw-, ǹ-, ŋ̀-, and ø-) whereas class 2 shows only two (ɓà- and ɓ-). As said earlier, accounting for the words in (6a) and (6b) are problematic while accounting for the nouns from (6c) through (6h) is relatively more straightforward. These forms have been exhaustively explained in Atindogbé (1996 and 2003). However, I provide here a brief overview of these alternations.

The forms in (6c) "spouse" and (6d) "spouses" could be accounted for by the postulation of a glide formation (GF) rule whereby the vowel /u/ of the basic prefix /mù-/ desyllabifies when it occurs in front of an open vowel, that is /a/. The vowel /a/ of the basic prefix /ɓà-/ in (6d), on the other hand, can be said to undergo a vowel deletion (VD) rule in front of another vowel. This analysis shown in (7), of course, is based on the strong assumption that the basic prefixes are the proto forms /mù-/ and /ɓà-/ for the singular and plural forms respectively. Note that for the derivation below and all other subsequent derivations, the assumption that every autosegment floats in the underlying representation, and that the association of the various tiers is done in a one-to-one fashion from left to right (Pulleyblank, 1986).

(5)   class 1   class 2
    a) mùt   "man"   b) ɓòt   "men"
       mùùtăŋ   "woman"   ɓòòtăŋ   "women"
       mòòlóm   "masculine sex"   ɓòòlóm   "masculine sexes"
       măn   "child"   ɓŏn   "children"
    c) mwàá   "spouse"   d) ɓàá   "spouses"
    e) ǹtán   "slave"   f) ɓàtán   "slaves"
       ŋ̀kĕn   "guest"   ɓàkĕn   "guests"
    g) ɲăŋ   "mother"   h) ɓàɲăŋ   "mothers"
       ndóm   "sister"   ɓàndóm   "sisters"

(6)   class 1   class 2
    a) m-ùt   "man"   b) ɓ-òt   "men"
       m-ùùtăŋ   "woman"   ɓ-òòtăŋ   "women"
       m-òòlóm   "masculine sex"   ɓ-òòlóm   "masculine sexes"

	m-ăn	"child"		ɓ-ɔ̌n	"children"
c)	mw-àá	"spouse"	d)	ɓ-àá	"spouses"
e)	ǹ-tán	"slave"	f)	ɓà-tán	"slaves"
	ŋ̀-kěn	"guest"		ɓà-kěn	"guests"
g)	ø-ɲǎŋ	"mother"	h)	ɓà-ɲǎŋ	"mothers"
	ø-ndóm	"sister"		ɓà-ndóm	"sisters"

The examples above give the various realisations of classes 1 and 2 prefixes. Class 1 exhibits five variants (m-, mw-, ǹ-, ŋ̀-, and ø-) whereas class 2 shows only two (ɓà- and ɓ-). As said earlier, accounting for the words in (6a) and (6b) are problematic while accounting for the nouns from (6c) through (6h) is relatively more straightforward. These forms have been exhaustively explained in Atindogbé (1996 and 2003). However, I provide here a brief overview of these alternations.

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(7)   /mù-àá/   /ɓà-àá/

    X X   X   X X   X
    | | /\ | | /\
    m u-   a a   Mapping   ɓ a-   a a

    X X   X   X X   X
    | | /\ | | /\
    m w   a a ← GF   VD → ɓ   -   a a
    [mwàá]   Phonetic Representation (PR)   [ɓàá]

As for the nouns in (6e), i.e. [ǹ-tán] and [ŋ̀-kěn], they are explained through a rule of /u/ deletion in front of consonants, and a rule of homorganic nasal assimilation in place of articulation (HNA), while the nouns in (6g), i.e. [ø-ɲǎŋ] and [ø-ndóm] successively undergo the same /u/ deletion (u-del) rule, but this time this rule is rather followed by /m-/ dropping in front of another nasal (nasal deletion, Nas-deletion). Note that the plural counterparts i.e. (6f) and (6h) undergo no rules. The derivation of [ǹ-tán] and [ø-ɲǎŋ] is presented in (8).

(8)   /mù-tán/   /mù-ɲáŋ/

```
X  X  X  X  X                                    X    X   X   X  X
|  |  |  |  |                                    |    |   |   |  |
m  u- t  a  n          Mapping            m    u-  ɲ   a  ŋ

X  X  X  X  X                                    X    X   X   X  X
|  |  |  |  |                                    |    |   |   |  |
m- t  a  n             u-deletion         m-       ɲ   a  ŋ

X     X  X  X                                          X   X  X
|     |  |  |                                          |   |  |
n-    t  a  n  ← HNA        Nas-deletion →          ɲ   a  ŋ
    [ǹtán]                      PR                        [ɲǎŋ]
```

Note that the lexeme for "slave" [ǹtán] surfaces with a low tone on the ini-
tial nasal. This is obviously due to the fact that the low tone of the deleted /ʊ/
survives and docks onto the initial nasal and makes it syllabic. Tone stability,
i.e. the survival and reassociation of a tone after the deletion of its original
bearer, is also shown in the case of [ɲǎŋ] "mother," but this time the result is
a contour tone on the single syllable.

Now, the nouns in (6a) and (6b) are problematic forms. What is striking
in these nouns is the alternations in the roots. The basic allomorph is /mù-/
for the singular (class 1) and /ɓà-/ for the plural (class 2). Assuming that our
morpheme in isolation is correct, all the derivational problems encountered with
these nouns result from the root. The nouns in (6a) exhibit the alternations pre-
sented in (9):

(9)   A   B
   a)   [-ut]   ~   [-ot]
   b)   [-utaŋ]   ~   [-otaŋ]
   c)   [-an]   ~   [-ɔn]

To account for these problematic forms, I shall propose two hypotheses: A
synchronic hypothesis where one of the surface variants is selected as the basic
form, and a diachronic approach whereby the reconstructed Proto Bantu form is
used. With the synchronic approach, the attested surface form will be derived
but with much complexity. Seeking a better and simpler solution, I find that the
diachronic approach leads to the derivation of ad hoc forms.

1. Synchronic Perspective
First of all the alternants in (9) are divided into two sets: [-ut]/[-ot] and
[-utaŋ]/[-otaŋ] sharing a similar structure and behaving alike, and [-an]/[-ɔn].
Second, I present two solutions. The first one seems to be the most appropri-
ate because it is simple and economic. However, the second solution can also be
considered. I start with the roots for "man/men" [-ut]/[-ot] and "woman/women"

[-utaŋ]/[-otaŋ], where the variants with [-ut] and [-utaŋ] are considered basic.
   The first solution provides the representation in (10):

(10)   a.   /u-u/   →   [u]
            /a-u/   →   [o]
therefore:
       b.   /mu-ut/   →   [mut]
            /ɓa-ut/   →   [ɓot]
   c.   /mu-utaŋ/   → |mutaŋ| →   [muutaŋ]
            /ɓa-utaŋ/   → |ɓotaŋ| →   [ɓootaŋ]

   The representation in (10a) suggests that the correct output may be derived
with two rules: a vowel coalescence rule (VCo) to derive [mut], [ɓot] and the
intermediary forms *|mutaŋ| and *|ɓotaŋ|, and a compensatory lengthening rule
(CL) to yield the correct surface forms [muutaŋ] and [ɓootaŋ] as schematised
in (10b) and (10c). Note that the vowel coalescence rule applies prior to the
lengthening rule on the forms in (10c). Thus, after the application of the coales-
cence rule, a timing slot on the skeletal tier is left empty. Then, the vowel that
results from coalescence links to that empty slot and lengthening is created.
However, it should be noted that lengthening is sensitive to the structure of the
root. It applies only to -VCVC roots and not to -VC roots. That is the reason
why the surface forms [mùt] "man" and [ɓòt] "men" are attested and not the
forms *[mùùt] "man" and *[ɓòòt] "men." Indeed, the root for "man/men" is of
a -VC structure. In contrast, since the root for "woman/women" has the struc-
ture -VCVC, the derivation yields the correct forms [mùùtăŋ] "woman" and
[ɓòòtăŋ] "women." This assumption is supported by the lexemes [mòòlóm]
"masculine sex" and [ɓòòlóm] "masculine sexes" whose root structure is equally
-VCVC. The two rules are depicted in (11) and (12).

(11) Vowel Coalescence (VC₀)

       X   X   X   X
       | | |
       V$_i$ (or V$_j$)   V$_i$ →   V$_i$ (or V$_k$)
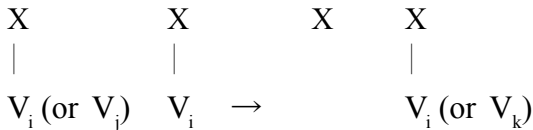
   Note that when the two vowels are identical (Vi and Vi) the result is Vi.
When the two vowels are different, the output is Vk, i.e. a vowel whose qual-
ity differs from the two underlying vowels.

(12) Compensatory Lengthening (CL)

       X X X X X   X X X X X
       | | | | ⋰ | | | |
       V C V C   →   V C V C
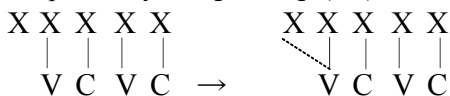
The application of the rules onto the forms in (10b) and (10c) yields the results in (13) and (14).

(13)

```
        [mùt]                                    [mùùtǎŋ]
   X   X   X   X                        X   X   X   X   X   X
   |   |   |   |                        |   |   |   |   |   |
   m   u  -u   t        Mapping         m   u  -u   t   a   ŋ

   X   X   X   X                        X   X   X   X   X   X
   |       |   |                        |       |   |   |   |
   m      -u   t         VC₀            m      -u   t   a   ŋ

                                        X   X   X   X   X   X
                                        |     \ |   |   |   |
   Inapplicable          CL            m      -u   t   a   ŋ

   [mùt] "man"           PR                [mùùtǎŋ] "woman"
```

(14)

```
        [ɓòt]                                    [ɓòòtǎŋ]
   X   X   X   X                        X   X   X   X   X   X
   |   |   |   |                        |   |   |   |   |   |
   ɓ   a-  u   t        Mapping         ɓ   a-  u   t   a   ŋ

   X   X   X   X                        X   X   X   X   X   X
   |       |   |                        |       |   |   |   |
   ɓ      -o   t         VC₀            ɓ      -o   t   a   ŋ

                                        X   X   X   X   X   X
                                        |     \ |   |   |   |
   Inapplicable          CL            ɓ      -o   t   a   ŋ

   [ɓòt]  "men"          PR                [ɓòòtǎŋ] "women"
```

As for the second solution, it is assumed that the vowel of the prefix deletes. The results are [mut] and *|mutaŋ| for the singular forms. Then, the compensatory lengthening rule in (12) applies to derive the correct form [mùùtǎŋ]. The prefix vowel deletion rule (PVD) is postulated in (15), and the derivation of [mùt] and [mùùtǎŋ] is exemplified in (16).

(15)   Prefix vowel deletion (PVD)

```
X   X   X   X   X   X        X   X   X   X   X   X
|   |   |   |   |   |        |       |   |   |   |
C   V  -V   C  (V   C)   →   C      -V   C  (V   C)
```

(16)   [mùt]   [mùùtǎŋ]

X X X X   X   X X X X   X
| | | | | | | | | |
m u- u   t   mapping   m   u- u   t   a   ŋ

X X X X   X   X X X X   X
| | | | | | | | | |
m-   u   t   PVD   m-   u   t   a   ŋ

                                   X   X X X X   X
                                    | ﹨ | | | |
Inapplicable   CL   m-   u   t   a   ŋ

[mùt] "man"   PR   [mùùtǎŋ] "woman"

As for the plurals, the results after the application of the prefix vowel dele-
tion rule in (15) are *|ɓùt| and *|ɓùtǎŋ|. These odd intermediary forms will
be adjusted by a feature changing rule (FCR) whereby the /u/ of the root is
changed to [o], because the language does not allow a sequence implosive
+ high vowels, i.e. [ɓu] and [ɓɪ]. Indeed, in Bankon, only [bu] and [bi] are
attested. All the other vowels can follow the implosive. Therefore, since /u/ and
/ɪ/ are not permitted to occur in this environment, they will lower to become [o]
and [e] respectively. It is after this rule that CL will intervene to produce the
required form for the noun "women." For illustration, the FCR is proposed in
(17), and the derivation of the plural forms in (18).

(17) Feature changing rule (FCR)

C   V   C   V
| | | |
ɓ   u   →   ɓ   o

(18)   [ɓòt]   [ɓòòtǎŋ]

X X X X   X X X X X X
| | | | | | | | | |
ɓ a- u   t   Mapping   ɓ a- u   t   a   ŋ

X X X X   X X X X X X
| | | | | | | | | |
ɓ-   u   t   PVD   ɓ-   u   t   a   ŋ

X X X X   X X X X X X
| | | | | | | | | |
ɓ-   o   t   FCR   ɓ-   o   t   a   ŋ

```
                                            X  X  X  X  X  X
                                            |   ͘ ͘ ͘⌋ |  |  |
        Inapplicable        CL             ɓ-    o  t  a  ŋ
        [ɓòt] "men"         PR             [ɓòòtǎŋ] "women"
```

Of the two solutions presented above for the derivation of [mùt]/[mùùtǎŋ] and [ɓòt]/[ɓòòtǎŋ], the first seems preferable because it looks simpler and more economic. However, the second solution is also acceptable. The rules are well motivated and supported by the phonotactics of the language. Now, I turn to the root for "child".

1) [-ǎn] ~ [-ɔ̌n] (the root for the noun "child")
    Here, I analyze, alternately, the two surface forms as basic.

a. The /-án/ form as basic
i) I assume that it is the vowel of the root which is deleted
    If the variant /-án/ is taken as the basic form, and if its vowel is deleted, the result of this first rule is the unattested surface form *[mùn], since the prefix is /mù-/ for the singular. This result is wrong not only segmentally , but also tonally. Consequently at least two rules are needed, one at each level. One of them will change /u/ to [a], in order to have *[màn], and the tonal rule will change the simple tone to a contour tone. But the question is: how? What is the motivation for this tonal complexification? Not only is there none, but it is very strange and quite unnatural to have such a rule. Segmentally on the other hand, the phonotactics of the language accepts /u/ after /m/ as well as before /n/. The change from /u/ to [a] is therefore not justified. The plural form [ɓɔ̌n] will not be derived. A deletion of the root vowel will lead to *[ɓàn], once more segmentally and tonally odd, and none of the postulable rules can help to repair the oddity.
ii) I assume that it is the vowel of the prefix which is deleted
    Secondly, if the vowel of the prefix is the one which is dropped, the correct output, [mǎn], is obtained in the singular. For the plural, there will be *[ɓǎn], and nothing motivates a rule that will change /a/ to [ɔ] (cf. *[ɓàn] above).

b. The /-ɔ̌n/ form as basic
i) I assume that it is the vowel of the root which is deleted
    With /-ɔ̌n/ as the basic variant, and with the assumption that the vowel of the root is deleted, the results for both singular and plural, and the difficulties encountered, are not different from what followed in point i) of a) of sub-section 3.1.1.2 above.
ii) I assume that it is the vowel of the prefix which is deleted
    Finally, if the prefix vowel is targeted, the results are *[mɔ̌n] and [ɓɔ̌n] respectively for the singular and the plural. Here, it seems that the rule to correct the odd form *[mɔ̌n] is more or less acceptable, to change /ɔ/ to [a] when it occurs in between /m/ and /n/ ((19) below). The reader may want to know

why it is necessary to state this rule with both nasals. The answer is simple. Stating the environment with just one of the nasals will result in unattested claims. Indeed, the sequences [mɔ...] and [...ɔn] are well attested in the language, as proven by [mɔɔ́ mɔ̄ŋ] "your head" and [fiɓɔ̂n] "cartridge" respectively. Thus, the only alternative left is to include both nasals, in the hope that this sequence is not part of the combinations of the language. To my surprise and for our good, I have not encountered the [mɔn] sequence in the language. Consequently, I assume for now that this solution is the correct one. The derivation of these forms will be as follows:

(19) Feature changing rule (FCR)

```
  C    V    C              C    V    C
  |    |    |              |    |    |
  m    ɔ    n    →         m    a    n
```

(20)   [mǎn]   [ɓɔ̌n]

```
  X    X    X  X                        X   X   X   X
  |    |    |  |                        |   |   |   |
  m    u-   ɔ  n        Mapping         ɓ   a-  ɔ   n

  X    X   X  X                         X   X   X   X
  |    |   |  |                         |   |   |   |
  m-       ɔ  n    ← (u-del)   (a-del) → ɓ-          ɔ   n

  X    X   X  X
  |    |   |  |
  m-       a  n            FCR              Inapplicable
      [mǎn] "child"        PR          [ɓɔ̌n] "children"
```

But I am not really comfortable with this solution. And that is exactly my main interest in the following sections on the derivation of "man," "woman" and "child." The reasons for this uneasiness are at least three. First, I am not really sure whether sequence [mɔn] is effectively nonexistent in the language, since my data may not contain all the lexemes attested in the language. Secondly, it is a bit absurd that one sequence [mɔn] does not exist while another sequence [mɔŋ] (cf. [mɔ́ŋ] "your") is fully present in the language, especially when [m, n and ŋ] form a true natural class in Bankon. Therefore it is difficult to believe that the sequence [mɔn] is excluded from the language. Thirdly, in some Bantu languages of the zone, the combination [mɔn] is well attested. More interesting, it is found, in the Eton, Ewondo and Bulu word for "child," [mɔ́n].

However, there is a fact in the language that might help dissipate any doubt on the derivation of the noun [mǎn] "child." Here I repeat the data (5) above, with the nouns [mwàá] "spouse" and [ɓàá] "spouses" along side with [mǎn] "child," [ɓɔ̌n] "children," as (21) for convenience.

(21)   class 1   class 2
   a) m-ăn   "child"   b) ɓ-ɔ̆n   "children"
   c) mw-àá   "spouse"   d) ɓ-àá   "spouses"

Looking at those words, the question is: if the noun prefix is /mu-/, as established, how is it that its vowel in /mu-ăn/ "child" does not desyllabify to become a glide when it occurs in front of the vowel /-a/ of the root just as in [mw-àá] "spouse"? In other words, why does [m-ăn] exist instead of *[mwăn]?

The answer is that [măn] is derived from the prefix and stem /mu-ɔn/, via the u-deletion rule followed by a feature changing rule whereby /mɔn/ becomes [man]. In other words, if the basic form for the word [măn] were really /-an/, there should exist [mwăn], just as there exist [mwàá]. This fact vindicates my solution and suggests the correct derivation for the surface form [măn].

Now, although I have derived the correct outputs for "man/woman" (16), "men/woman" (18), and for "child/children" (20), I shall test if the choice on the reconstructed forms will suggest a simpler and more natural solution.

2. Diachronic Perspective

1) [mùt] "man"

A diachronic solution means the use of the reconstructed form to explain the attested surface form. Indeed, the form */-ntù/ (Meinhof, 1899, 1932) has been reconstructed for the noun "man." If I consider */-ntù/ as the root, and if I assume that this root crumbled or became exhausted in the course of the evolution of the proto language, or simply that this root has undergone various transformations according to each language, to become */-t/ in Bankon, when the prefix /mù-/ is added to this residue, the output is the expected [mùt]. But on the other hand, the plural will produce the unattested form [ɓàt] that requires a readjustment rule whereby /a/ becomes [o]. Unfortunately, the prediction made by such a rule is contradicted by the phonotactics of the language where the sequence [ɓat] is well attested: [ă ɓāt] "he adds," from infinitive [ìɓátâk] "to add."

2) [mùùtăŋ] "woman"

As for [mùùtăŋ], if it is accepted that it originated from the combination /*ntù + *àná/, and that the first (i.e. ntù) gives /-t/, and the second (àná) gives /-aŋ/ after all possible transformations, the combination of both residues produces /-taŋ/. The surface form will therefore be the odd form *[mùtăŋ], if the class 1 prefix is added. The problem now is to move from the short vowel (-ù-) to the long vowel (-ùù-). A rule requiring the lengthening of /u/ before /t/ will be contradicted by surface [mùt], where /u/ is not lengthened. To twine round this, one may want to say that lengthening is possible only when /u/ occurs before a -CVC syllable. The claim made

by such a rule is that the consonant occurring after /u/ should be a member of a syllable that contains a coda in addition to the nucleus. This contention is supported by surface forms such as [fúmá] in [ɓě fūmā dʒɔ́m] "you bring the parcel" or [wúmsɛ́] in [ǎ wûmsɛ̀] "he is resting," where there is no lengthening of /u/ because the syllable following /u/ is not arrested by a coda. However, it begs the question as to why the presence of a coda in the following syllable is so relevant in the formulation of that rule. Even if the lengthening rule is adopted, the derivation of the plural form is discouraging. Indeed, the result following the addition of the plural prefix /ɓà-/ is *[ɓàtǎŋ]. Once more the question of moving from /a/ to [o] is unanswered.

Now, let me assume that instead of the reduced form of the reconstructed root /-t/, at issue here is the fully reconstructed form */-ntu/. When the prefixes are added, the results are /muntu/ and /ɓantu/ on the one hand, and /mu-ntuana/ and /ɓa-ntuana/ on the other. Following two deletion rules (n-del and final u-del) for "man," the forms [mùt] and *[ɓàt] are derived. As for "woman," in addition to n-del and u-del, final a-del and velar formation are necessary to derive *[mu-taŋ] and *[ɓa-taŋ]. Here still, all the reserves formulated above resurface. Thus, it is quite impossible to achieve satisfactory results using the reconstructed form.

Now I present the less problematic forms in (5e) and (5g).

3) Derivation of [ǹ-tán] "slave" and [ø-ɲǎŋ] "mother"

The derivations of these two nouns do not pose any problem. After the deletion rule whereby the /u-/ of the prefix is deleted, a homorganic nasal assimilation (HNA) rule applies to the former for "slave" and a nasal deletion rule applies to erase the nasal at word initial position in the latter. This is illustrated in the derivation in (22):

(22)

a) Derivation of [ǹ-tán]   b) Derivation of [ø-ɲǎŋ]

X   X   X   X   X   X   X   X   X   X
| | | | | | | | | |
m   u- t   a   n   Mapping   m   u- ŋ   a   ŋ

X   X   X   X   X   X   X   X   X   X
| | | | | | | | | |
m   t   a   n   ← u-del →   m   ŋ   a   ŋ

X   X   X   X   X   X   X   X   X   X
| | | | | | | | | |
n   t   a   n   ← HNA Nas-del →   ŋ   a   ŋ

   [ǹtán] "slave"   PR   [ɲǎŋ] "mother"

To summarise what I have discussed so far, the synchronic perspective is preferable to the diachronic approach.

The pairing of the classes in Bankon is as follows:

(23)		class 1	class 2
	Underlying forms	[mù-]	[ɓà-]
	Surface forms	[mw-]	[ɓà-]
		[m-]	[ɓ-]
		[ǹ-]	[ɓà-]
		[ŋ̀-]	[ɓà-]

II. "Man," "woman" and "child" in Mokpe

The data in (24) with full forms and (25) where prefixes are isolated show the noun prefixes of classes 1 and 2 in Mokpe.

(24)	class 1		class 2	
	mòtò	"person"	ɓàtò	"persons"
	mòmbákí	"elder"	ɓàmbákí	"elders"
	mòkòmí	"slave"	ɓàkòmí	"slaves"
	mólánà	"woman"	ɓálánà	"women"
	múɲánà	"man"	wúɲánà	"men"
	ŋmánà	"child"	ɓánà	"children"
	ŋmèní	"guest"	ɓèní	"guests"

(25)		class 1				class 2	
	a)	mò-tò	"person"		b)	ɓà-tò	"persons"
		mò-mbákí	"elder"			ɓà-mbákí	"elders"
		mò-kòmí	"slave"			ɓà-kòmí	"slaves"
	c)	mó-lánà	"woman"		d)	ɓá-lánà	"women"
				or			
	c')	m-ólánà	"woman"		d')	ɓ-álánà	"women"
	e)	mú-ɲánà	"man"		f)	wú-ɲánà	"men"
				or			
	e')	m-úɲánà	"man"		f')	w-úɲánà	"men"
	g)	ŋm-ánà	"child"		h)	ɓ-ánà	"children"
		ŋm-èní	"guest"			ɓ-èní	"guests"

The nouns in (25a) show that /mò-/ is the most recurrent prefix. (25c) and (25c') exhibit the possibility of /mó-/ or /m-/ variant. (25e) and (25e') tell us

that /mú-/ or /m-/ are also possible realisations of class 1 prefix, while (25g) introduces the eventuality of a sub-class in class 1. As for the plural forms, (25d) and (25d') show that /βá-/ and /β-/ are two variants, whereas (25f) and (25f') indicate that /wú-/ or /w-/ is also present.

High toned nominal prefixes such as /mó-/, /mú-/, /wú-/ and /βá-/ obviously constitute a dilemma to researchers in Bantuistics. At first sight indeed, one does not know whether the high toned prefix is to be considered a variant, especially i) when in the literature, noun class prefixes are, in the unmarked case, low toned, and ii) when one of the many variants of class 1 bears a low tone (/mò-/ in mòtò "person" or mòmbákí "elder" for example). Thus the obvious question is: if /mò-/ is the prefix, why does it bear a high tone instead of a low one as in (25a). The same question stands for /mú-/, /wú-/ and /βá-/. So definitely, the problem here is the presence of a high tone on the prefix, when prefixes generally bear the low tone in Bantu languages of Zone A (Ebobisse, 1989). In short, prima facie, I might want to suggest the following alternants for classes 1 and 2 of the Mokpe language:

(26)

    a. [mò-] ~ [mó-] ~ [m-] ~ [mú-] ~ [ŋm-] (singular prefix)
    b. [βà-]   ~ [βá-] ~ [β-]   ~ [wú-] ~ [w-] (plural prefix)

Obviously, the variants in (26) encounter serious explanatory problems, both at the segmental and prosodic levels. At the segmental level, an explanation is necessary as to the moves from /mo-/ to [mu-] (cf. 27a) or /mu-/ to [mo-], from /mo-/ to [ŋm-] (cf. 27b) or /ŋm-/ to [mo-], from /mu-/ to [ŋm-] or /ŋm-/ to [mu-], depending on the alternant choosen as basic. At the tonal level, it will be difficult, if not impossible, to obtain the high tone on variant [mó-], that is, to move from the low tone on *[mòɲánà] in (27a) to the attested high tone in (25e). It is not worth going into all these details by considering all the possibilities because the results will be tortuous, odd or unattested. But in this endeavor I posit here the illustrative derivation in (27), where only the /mò-/ variant is taken as basic. The derivation will be obtained with a vowel deletion rule (VD).

(27) Underlying form   VD   Surface form
  a) /mò-ɲánà/ →   not applicable → *[mòɲánà] (but rather [múɲánà])
  b) /mò-ánà/ →   [m-ánà] →   *[mánà] (but rather [ŋmánà])

In fact, the point I want to raise here is that the first problem encountered as far as the Mokpe data is concerned is the one of correct or appropriate segmentation (i.e. the isolation of the prefix from the stem). Let me elaborate on this.

1. /mó-lánà/ or /m-ólánà/ and /mú-ɲánà/ or /m-úɲánà/
Here, the question is to know the correct or appropriate segmentation for the words "woman" and "man." At first sight, the presence of prefix [mò-] in

words in (25a), [mó-] in the word in (25c) and [mú-] in (25e) will suggest the segmentation /mó-lánà/ and /mú-ɲánà/ where the roots are /-lánà/ and /-ɲánà/ respectively. But as I pointed out earlier, no simple explanation is be available to justify the presence of the high tone on the prefix when prefixes generally bear the low tone in Bantu languages of Zone A. For that reason, I suggest that the segmentation is rather, /m-ólánà/ and /m-úɲánà/ in (25c') and (25e') where the roots are /-ólánà/ and /-úɲánà/. Given this, the derivation of [mólánà] "woman" and [múɲánà] "man" (the singular forms) will be obtained with the use of a deletion rule whereby the vowel /o/ of /mo-/ is deleted in front of another vowel:

(28)   [mólánà]   [múɲánà]

X   X   X   X   X   X   X   X   X   X   X   X
| | | | | | | | | | | |
m   o- o   l   a   n   a   Mapping   m   o- u   ɲ   a   n   a

X   X   X   X   X   X   X   X   X   X   X   X
| | | | | | | | | | | |
m-   o   l   a   n   a   ← o-del →   m-   u   ɲ   a   n   a

    [mólánà]   "woman"   PR   [múɲánà] "man"

This rule is supported by the fact that the segmentation of the word for "child" (ŋm-ánà), which may seem more obvious, demonstrates that some roots of the language do start with high toned vowels. In other words, I am not going to isolate prefix /βá-/ in (βá-nà) for the plural lexeme since the singular form indicates that the root is /-ánà/. Therefore, I think that /β-ánà/ is the correct segmentation. Put differently, the prefix of the singular form cannot be (ŋmá-). The high tone on the vowel discourages this approach. In fact, all this may stand if by juxtaposing the vowel in the root, i.e. /móánà/, /m-úɲánà/, /ŋm-ánà/ and /β-ánà/ only a prefixal vowel deletion rule will be needed to account for the alternations. Note that the tone of the deleted vowel does not surface at all. The principle of tone stability or Clement and Ford's (1979) Stranded Tone Principle, seems to be violated in these forms. This is really puzzling because in the unmarked case stability effect is observed in the language, as shown by the words in (29) below.

(29)
a) Nouns
/mò-ózrìŋgà/   →   [mǒzrìŋgà]   "thread"   (Class 3)
/mò-ólèŋgù/   →   [mǒlèŋgù]   "sheep"   (Class 3)
/mò-émà/   →   [ŋměmà]   "heart"   (Class 3)
/mò-émὲ/   →   [ŋměmὲ]   "bat"   (Class 3)
/ɦì-ízrɔ̀/   →   [ɦǐzrɔ̀]   "eye"   (Class 5)

/ĥì-íkpà/	→	[ĭ̀kpà]	"bag"	(Class 5)
/ĥì-ámà/	→	[ljǎmà]	"jaw"	(Class 5)
/ĥì-ɔ́ŋgɔ́ŋgɔ́/	→	[ljɔ̌ŋgɔ́ŋgɔ́]	"knee"	(Class 5)
/è-ɔ́ndò/	→	[jɔ̌ndò]	"axe"	(Class 7)
/è-ázrù/	→	[jǎzrù]	"chin"	(Class 7)
/è-ómà/	→	[jǒmà]	"thing"	(Class 7)
/wù-ɔ́lɔ̀/	→	[wɔ̌lɔ̀]	"canoe"	(Class 14)
/wù-úβà/	→	[wǔβà]	"chicken"	(Class 14)
/wù-ómbé/	→	[wǒmbé]	"vulture"	(Class 14)

b) Verbs (infinitive)

/ĥì-íɓà/	→	[ĭ̀ɓà]	"to still"	(Class 5)
/ĥì-émbà/	→	[lěmbà]	"to sing"	(Class 5)
/ĥì-ɛ́nɛ̀/	→	[lɛ̌nɛ̀]	"to see"	(Class 5)
/ĥì-ákà/	→	[lǎkà]	"to pass"	(Class 5)
/ĥì-ɔ́ŋgɔ̀/	→	[lɔ̌ŋgɔ̀]	"to look for"	(Class 5)
/ĥì-óɸà/	→	[lǒɸà]	"to say"	(Class 5)

Note: the infinitive marker is ĥì-, a class 5 noun prefix.

In the surface forms in (29), after the deletion of the vowel of the prefix, the tone stabilizes and docks onto the vowel of the root, creating a contour tone. The question therefore is why tone stability is observed here and not there. The answer to that question might be that there is definitely tone stability in the forms [mólánà] and [múɲánà] at an earlier stage, but that the contour tone resulting from the combination of the floating and the fixed tone is simplified into a level tone. This is illustrated in (30) where T. Float., T. Reas., T. Simpl. stand for "tone floating," "tone reassociation" and "tone simplification" respectively:

(30) Derivation of [mólánà] and [múɲánà]

Skeleton	X X X X X X X		X X X X X X X
	│ │ │ │ │ │ │		│ │ │ │ │ │ │
Melody Tier	m o- o l a n a	Mapping	m o- u ɲ a n a
	│ │ │ │		│ │ │ │
Tonal Tier	L H H L		L H H L

Skeleton	X X X X X X X		X X X X X X X
	│ │ │ │ │ │ │		│ │ │ │ │ │ │
Melody Tier	m- o l a n a	o-del	m- u ɲ a n a
	│ │ │ │		│ │ │ │
Tonal Tier	(L) H H L	T. Floats.	(L) H H L

Skeleton   X X X X X X X   X X X X X X
                  | | | | | | | | | | | | |
Melody Tier m-   o   l   a   n   a   m-   u   ɲ   a   n a
                                                                |
Tonal Tier   L   H   H   L   T. Reas.   L   H H   L

Skeleton   X X X X X X X   X X X X X X
                  | | | | | | | | | | | | |
Melody Tier m-   o   l   a   a   m-   u   ɲ   a n   a
                                | | | |
Tonal Tier   H   H   L   T. Simpl.   H   H L

PR   [mólánà] "woman"   [múɲánà] "man"

However, the question comes back in a different form: why is there tone simplification in [mólánà] and [múɲánà] but not in all the instances in (29)? The answer might be that tone simplification occurs in all the classes of the language except in classes 1 and 2. That is, classes 1 and 2 might be exceptions to a general rule operating in the language. Indeed, the examples in (29) on tone stability resulting in a rising contour tone are all drawn from classes 3, 5, 7, and 14. In other words, the simplification rule is noun class sensitive. This situation is an additional argument to illustrate that accounting for those two classes is not an easy task. The derivation of the plural form confirms the contention that tone simplification really occurs in classes 1 and 2 only.

2. Derivation of [βálánà] "women"

For the plural, the deletion of the prefixal vowel will lead to the unattested output *[βólánà] (31a), and the alternative solution to delete the root vowel will not help much, since the result, *[βàlánà] (31b), is unattested as well. That is:

(31)
a) Deletion of prefix vowel   b) Deletion of root vowel

X X X X X X X   X X X X X X X
| | | | | | | | | | | | | |
β a- o   l   a   n   a   Mapping   β a- o   l   a   n   a

X X X X X X X   X X X X X X X
| | | | | | | | | | | | | |
β-   o   l   a   n   a   ←a-del   o-del→   β a-   l   a   n   a
       *[βólánà]   PR   *[βàlánà]

In (31a), the oddity is segmental, while in (31b) it is tonal. So, how does one move from *[βólánà] to [βálánà], or from *[βàlánà] to [βálánà]? In short,

how can one obtain the attested surface form [βálánà]?

An attempt to convert *[βàlánà] to [βálánà] via a tonal rule should be abandoned because it is undermined by lexemes such as [màlálὲ] "locks," since such a tonal rule claims that the possibility of L H L tonality is excluded from tonal patterns of the language, and that they should then be changed to H H L tonality.

Maybe, there will be more success if one thinks that after o-del (i.e. the deletion of the root vowel) there is tone stability and tone docking which results in contour tone formation. This melodic tone is then simplified to a high tone since a contour tone is not accepted at morpheme boundary in classes 1 and 2. This is exemplified below:

(32) Deletion of root vowel

Skeleton	X X X X X X X	
Melody Tier	β a- o l a n a	Mapping
Tonal Tier	L H H L	

Skeleton	X X X X X X X	
Melody Tier	β a- l a n a	← o-del
Tonal Tier	L (H) H L	← Tone floats

Skeleton	X X X X X X X	
Melody Tier	β a- l a n a	
Tonal Tier	L H H L	← Re-association of tone and Tone delinking

PR   [βálánà]

In earlier pages I have stated that the tone of the deleted vowel does not surface. Here it is just the contrary. It is the tone of the deleted vowel which surfaces. This indicated that the tone that is deleted in the two classes (1 and 2) must be the tone of the prefix. In the first case it re-associates and deletes, and in the second it delinks from its tone bearing unit (TBU) as soon as the floating high tone of the deleted root vowel re-associates with the prefix vowel. The contention that classes 1 and 2 do not allow for contour tones at morpheme boundary is, once again, confirmed.

Let me now turn to the derivation of the lexeme [wúɲánà] "men" which poses another puzzling case.

3. Derivation of [wúɲánà] "men"

As for [wúɲánà], the first intricacy is the presence of the prefix [wú-] instead

of the traditional [βà-], i.e. [wúɲánà] instead of *[βáɲánà] or *[βúɲánà]. The second problem with this form is that, statistically, it is the only noun in the class with the [wú-] prefix. How then does one account for the lexeme [wúɲánà] "men"? The answer to that question is that the surface sound [w] is just a phonetic variant of [β]. In other words, since the phonetic distance between [β] and [w] is not wide, the speaker has the tendency of reducing [β] to [w] when the [β] appears in front of [u].

(33) Derivation of [wúɲánà]

Skeleton	X X X X X X X	
Melody Tier	β a- u ɲ a n a	Mapping
Tonal Tier	L H H L	

Skeleton	X X X X X X X	
Melody Tier	β u ɲ a n a	a-deletion
Tonal Tier	(L) H H L	Tone floats

Skeleton	X X X X X X X	
Melody Tier	β u ɲ a n a	
Tonal Tier	L H H L	Tone re-associates

| PR | [βúɲánà]→[wúɲánà] "men" | Free variation |

It is worth mentioning that Connell (1997) reported that the Mokpe class pre-fix /βà/ is realized /β`/ when it is followed by the high vowels /i/ and /u/
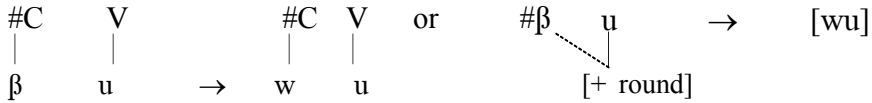
(34)   mò-   >   mw- ` / -{i, e, ɛ, a}
                    m- `   / -{u, o, ɔ}
        βà-   >   β- `   / -{i, u}

This means that the form [βúɲánà] might have existed by the time Edwin Ardener (Connell, 1997) collected the linguistic material on Mokpe between 1952 and 1969. It might then be that with the evolution of the language, [βúɲánà] has become [wúɲánà]. I say "might" because although Connell (1997) pro-posed the rule in (34) above, there is no single word starting with the sequence [β + u] in his data. Note however that [wúɲánà] is what people say today, as proven by the interview of many speakers. Without hesitation, all the literate speakers who were asked to write the plural for the word "men" wrote it with [w-].

However, an alternative is to think about the [w-] in [wúɲánà] as a vari-

ant generated by a context sensitive rule whereby the /β-/ becomes [w-] when it occurs in front of /u/ word-initially. In other words, the consonant /β-/ copies the roundness of the vowel /u/. That rule is depicted in (35)

(35) Defrication rule

$$\begin{array}{ccccc} \#C & V & & \#C & V \\ | & | & & | & | \\ \beta & u & \rightarrow & w & u \end{array} \quad \text{or} \quad \begin{array}{cc} \#\beta & u \\ & | \\ & [+\text{ round}] \end{array} \quad \rightarrow \quad [wu]$$

The use of (35) in the derivation of "men" will yield (36) where the root selected for the singular form is /-úɲánà/.

(36) Derivation of [wúɲánà]

Skeleton	X	X X X	X X X	
Melody Tier	β	a- u ɲ	a n a	Mapping
Tonal Tier		L H	H L	

Skeleton	X	X X X	X X X	
Melody Tier	β	u ɲ	a n a	a-deletion
Tonal Tier		(L) H	H L	Tone floats

Skeleton	X	X X X	X X X	
Melody Tier	w	u ɲ	a n a	Defrication
Tonal Tier		L H	H L	Tone re-associates

Skeleton	X	X X X	X X X	
Melody Tier	w	u ɲ	a n a	Tone simplification
Tonal Tier		H	H L	

PR   [wúɲánà]   "men"

As I have shown, the expected form [wúɲánà] is derived by deleting the vowel of the prefix and by applying the defrication rule in (35). Of course, the question might arise as to whether it is really economically profitable to write a rule to account just for a single form. Facts from the language however indicate that the passage from the deep structure /β/ to the phonetic representation

[w] at word-initial position is, somehow, real. Indeed, the claim made by such a rule is justified in the language, where there is no sequence of [β + u] word-initially at the surface level. The words in (37a) below indicate that [β] can occur in front of all vowels of the language word-initially except vowels [u], [o], and [ɔ]. (37b) provides occurrences of [u], [o] and [ɔ] immediately after [β] but at medial position, while (37c) gives instances of [w + u] word-initially.

(37)

a) βíjà   "know"   b) èβùmá   "fruit"   c) wû   "night"
   βénì   "four"   ɦìβùmbú "hear"   wŭβà   "fowl"
   βènɔ̀ní   "birds"   βèβùβà   "rainy seasons" wùndè   "secret"
   βá   "they"   ɦìβɔ̀ŋgɔ̀ "swelling"   wùɲà   "day"
                            ɦìβɔ̀kɔ̀   "moth"
                            ɦɦìβówá   "open"

For a better appraisal of the situation, it is important to signal that in Connell (1997) the sound [ɸ], that is the voiceless counterpart of [β], does not have the restriction observed in [β]. The words in (38) below prove that [ɸ] does occur side by side with all the vowels of the language including the vowel [u] at word-initial position:

(38)

ɸíndí   "gunpowder" ɸémbé   "chalk"   ɸô   "bush rat"
ɸíndéɸíndè   "ebony tree"   ɸàká   "zinc roof" ɸóndá   "time"
ɸê   "viper"   ɸàkì   "paddle"   ɸɔ́mbɔ̀ "upper arm"
ɸéjá   "sore"   ɸúlú   "foam"   ɸɔ̀ŋgɔ́ "seed"
ɸé   "again"   ɸùɸá   "flood"

This situation of course questions the psychological reality of a rule stating that [β] should not appear before [u] at word-initial position.

The discussion and the derivation of the forms [mólánà], [βálánà], [múɲánà] and [wúɲánà], the most problematic forms, have led me to reduce the variants observed in the Mokpe data (25) and (26) to three for the singular and two for the plural.

(39)

a.   mò-   ~   m-   ~   ŋm-   (singular prefix)
b.   βà-   ~   β-   (plural prefix)

The variants in (33) lead to the problem of words with the full prefixes [mò-] as in [mòkòmí] "slave" and [βà-] as in [βàkòmí] "slaves," as well as the lexemes with [ŋm-] ([ŋmánà] "child"). I start with [ŋmánà].

4. Derivation of [ŋmánà] "child" and [βánà] "children"

The Mokpe noun for "child" is definitely problematic because it is obviously

not straightforward to derive the surface form [ŋm-] from the basic prefix [mò-]. A solution to resolving the alternation posed by the lexeme [ŋmánà] might come from a series of rules. The first is a glide formation (GF) rule whereby /o/ becomes /w/ before the vowel /a/. After the GF rule there is a nasal velar insertion rule which is the result of an assimilation of the nasal of the place articulation of the glide. This leads to /ŋmw/ which changes to /ŋm/ via a w -deletion rule. The derivation will then be as (40).

(40)

a)   Derivation of [ŋmánà]   b)   Derivation of [βánà]

```
     X   X   X   X   X                                X   X  X  X  X
     |   |   |   |   |                                |   |  |  |  |
     m   o-  a   n   a        Mapping                 β   a- a  n  a


     X   X   X   X   X                                X   X  X  X  X
     |   |   |   |   |                                |   |  |  |  |
     m   w-  a   n   a     ← GF      a-del →          β      a  n  a


     X   X   X   X   X
    ⟋|   |   |   |   |
   ŋ m   w-  a   n   a     ← ŋ-insertion              not applicable


     X   X   X   X   X
    ⟋|   |   |   |   |
   ŋ m   w-  a   n   a     ← w-deletion               not applicable
        [ŋmánà]                    PR                 [βánà]
```

As for the tone it follows the same route as discussed in [mólánà].

5. Derivation of [mòkòmí] "slave" and [βàkòmí] "slaves"

   There is no derivation problem since these are the basic forms, occurring in front of a consonant.

(41)

Skeleton	X	X	X	X	X	X		X	X	X	X	X	X
Melody Tier	m	o	k	o	m	ɪ	Mapping	β	a	k	o	m	ɪ
Tonal Tier		L		L		H			L		L		H
PR		[mòkòmí] "slave"						[βàkòmí] "slaves"					

6. Class pairing in Mokpe

   I conclude this section on the Mokpe nouns of class 1 and 2 by summarizing the prefixes and their variants (42).

(42)

class 1		class 2
[mò-]	→	[βà-]
[m-]	→	[β-]

CONCLUSION

In this paper, I have demonstrated that classes 1 and 2 nominal prefixes in the Bantu languages of Zone A always have variants and that it is not easy to account for those alternants. My discussion on Bankon (A42) and Mokpe (A22) illustrates that contention. The derivation of the alternants in both languages demanded deletion, compensatory lengthening and feature changing rules. Although the attested surface forms were successfully derived, some solutions, as well as some rules remain questionable. This constitutes a starting point for more investigation into the matter.

NOTES

(1)   Similar phenomena have been noted in other languages of the Zone: Akosse (A15), Bafaw (A14), Barombi (A41), Basaa (A43), Oroko (A12), and even Grassfield Bantu languages. For example, referring to class 1/2 of Basaa (A43), Hyman (2003) stated:
Class 1/2 nouns show a wide array of prefixal irregularity, usually involving a nasal in the singular and an implosive labial in the plural. While many members of 1/2 designate humans, many others do not. Most of these lack a nasal prefix in the singular and can be identified as class 1a: *tolo* 'mouse' (pl. *ɓa≠tolo*), *ɓɔŋ*á 'brain' (pl. *ɓa≠ɓɔŋá*), sap 'type of trap' (pl. *ɓa≠sap*).
However, I have not used all these languages to illustrate the phenomenon because this would have made the paper too cumbersome.

REFARENCE

Atindogbé, G.G. 1996. *Bankon A40: phonologie, morphologie et tonologie.* Rüdiger Köppe Verlag, Cologne.
———— 2003. *Accounting for prenasals in Bantu Languages of Zone A. Occasional Paper No. 14.* The Centre for Advanced Studies of African Society (CASAS), Cape Town.

Clements, G.N. & K. Ford 1979. Kikuyu tone shift and its synchronic consequences. Linguistic Inquiry, 10: 179-210.

Connell, B. (ed.). 1997. *Mokpe (Bakweri) – English Dictionary.* [Material collected by Erdwin Ardener 1952-1969.] Rüdiger Köppe Verlag, Cologne.

Ebobisse, C. 1989. Dialectométrie lexicale des parlers sawabantu. *Journal of West African Languages*, 19(2): 57-63.

Gordon, R.G. Jr. (ed.) 2005. *Ethnologue: Languages of the World. 15th edition.* Summer Institute of Linguistics, Dallas.

Guthrie, M. 1967/1971. *Comparative Bantu. (4 volumes).* Gregg Press, Farnborough.

Hyman, L. 2003. Basaá. In (D. Nurse & G. Phillipson, eds.), *The Bantu Languages.* pp. 257-282. Routledge, London and New York.

Meeussen, A.E. 1967. Bantu lexical reconstructions. *Africana Linguistica III, Annales Linguistiques*, 61: 79-121. Musée Royal de l'Afrique Centrale, Tervuren.

Meinhof, C. 1899. *Introduction to the Phonology of the Bantu Languages.* Translation by N. J. van Warmelo, 1932. D. Reimer, Berlin.

——— 1932. *Introduction to the Phonology of the Bantu Languages.* Translated and revised by N. J. van Warmelo. D. Reimer, Berlin.

Pulleyblank, D. 1986. *Tone in Lexical Phonology.* D. Reidel, Dordrecht.

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