UC Berkeley
UC Berkeley PhonLab Annual Report

Title

Possessive Tone in Tswefap (Bamileke): Paradigmatic or Derivational?

Permalink

Journal

Author

Hyman, Larry M.

Publication Date

2017

DOI

Copyright Information

Peer reviewed

Possessive Tone in Tswefap (Bamileke): Paradigmatic or Derivational?

Larry M. Hyman
University of California, Berkeley

Abstract

In this paper I consider two analyses of the possessive pronoun tonal paradigm in Tswefap, a Bamileke language spoken in Batoufam, Cameroon. As in the case of related languages that have been previously described, Tswefap has a rather complex tone system that involves multiple tone heights, tonal contours, and tone alternations. Although simplified, it also maintains several of the inherited noun class distinctions. In this study attention is on the tones of possessive pronouns and their effects on a preceding modified noun. I first present a paradigmatic account as one might find in a descriptive or pedagogical grammar indicating which possessive pronouns receive which tones. I then turn to a more traditional Bamileke and Grassfields Bantu analysis in terms of underlying representations and floating tones. It is argued that all possessive pronouns are preceded by a floating L tone which affects a preceding mid tone noun in one of two ways, depending on the syllable shape of the pronoun: (i) if the pronoun begins with a consonant, the mid of the noun becomes a mid to low contour tone; (ii) if the pronoun has consists solely of a vowel, the mid is raised to a high tone. Although I argue for the latter analysis, I conclude by demonstrating that alternate tonal variations indicate on-going change which may ultimately undermine the more abstract phonological analysis in favor of a considerably simplified paradigmatic tone assignment.

1.   Introduction

In a number of studies in the 1970s, abstract tonal analyses were proposed of several Bamileke (Eastern Grassfields Bantu) languages, including Medumba [Bangangte] (Voorhoeve 1971), Fe'fe' [Bafang] (Hyman 1972), Ghomala [Bandjoun] (Nissim 1981), and Yemba [Dschang] (Tadadjeu 1974, Hyman & Tadadjeu 1976). In each case floating tones were posited to capture morphotonemic alternations, which could be quite complex, particularly as followed up in the case of Yemba (cf. Pulleyblank 1986, Hyman 1985, Stewart 1992, Clark 1992, Snider 1999). As Hyman & Tadadjeu (1976) pointed out, these floating tones could be traced back to either lexical or grammatical historical syllables in Proto Eastern Grassfields Bantu (PEGB) whose vowels had dropped out, but could still be posited in abstract synchronic representations. Tadadjeu's (1974:284) minimal quadruplet in Yemba illustrates:[1]

---

[1] Standard abbrevations and tonal accent marks are adopted in this study as follows: H(igh) is marked by an acute (´) accent, L(ow) by a grave (`) accent, M(id) by a macron ( ¯ ), downsteps by ( ꜛ ), and contours by combinations of the above accents, e.g. ML ( ˆ ). L˚ ( `˚) indicates a level L which contrasts with a falling L before pause.

(1) | | *Surface* | | *Underlying* | *PEGB* | |
|---|---|---|---|---|---|
| 'feather' | là-tóŋ | L-H | /là-tóŋ/ | *-tóŋə́ | *H.H |
| 'to call' | là-tóŋ | L-ꜜH | /là-tóŋ-`/ | *-tóŋ-ə̀ | *H.L |
| 'tooth' | là-tòŋ° | L-L° | /là-tòŋ´/ | *-tòŋə́ | *L.H |
| 'to reimburse' | là-tòŋ | L-L | /là-tòŋ-`/ | *-tòŋ-ə̀ | *L.L |

In these examples the L tone prefix /là-/ marks noun class 5 on nouns as well as verb infinitives. As indicated, bisyllabic *H.H and *L.L transparently yield monosyllabic H and L stems, while *L.H and *H.L result in new surface tonal contrasts: *L.H is realized as a level L pitch syllable, symbolized L°, which contrasts with the falling pitch of L before pause. As shown, the historical *H remains as a floating tone that blocks the automatic "downgliding" of L before pause. The fate of *H.L is even more interesting: In this case the floating L causes the preceding H to become downstepped, thereby creating the unusual contrast between L-H and L-ꜜH. To produce the downstep, Pulleyblank (1986:41) proposes a metathesis of the floating L, while Hyman (1985:72) and Snider (1999, ch.7) present different models which place the L on a second (register) tier. Other Bamileke languages produce still other tonal contrasts. Thus, from single /H, L/ contrast floating tones were assumed to be the correct mechanism to derive M tones, level L° vs. falling L, rising and falling tonal contours, and contrastively downstepped ꜜH and ꜜL (even double-downstepped ꜜꜜH and ꜜꜜL in Yemba). Although there are alternatives to abstract floating tones, including less desirable arbitrary diacritics (Hyman 2003), the great achievement was to derive the diverse Bamileke tone systems from a simple binary /H, L/ contrast which, in the generative tradition, was appreciated for its generality and its elegance. The question of course is whether the surface facts justify such abstract analyses, or whether the floating tones are simply a mirror of history.

In the current study I contrast two different tonal analyses of the possessive pronoun paradigm in Tswefap, a member of the Ndaʔndaʔ cluster of dialects spoken in Batoufam.[2] Like Fe'fe', these dialects have developed a M tone which I will take as underlying, hence a three-height contrast between /H, M, L/.[3] The question I will raise is whether the tones of possessive pronouns should be analyzed with floating tones or through a direct paradigmatic assignment of tones to pronouns according to noun class, person, and number. In §2 I first present the data and then the paradigmatic analysis. In §3 I show that an analysis recognizing a floating L neatly captures the same facts. In §4 I consider

---

[2] Research on Tswefap is based on materials collected in a 2015-16 field methods class at the University of California, Berkeley, with Guy Tchatchouang as consultant. I would like to Guy and the members of the course for their contributions and insights in studying Tswefap: Geoff Bacon, Andrew Cheng, Emily Clem, Ginny Dawson, Erik Maier, and Alice Shen. Other consulted work on Tswefap includes Ngantchui (1989, 2002), Gueche Fotso (2013) and my own notes collected in the field (Hyman 1974).

[3] As in Fe'fe', M and L are lexical tones in Tswefap, while H tones either occur on grammatical morphemes or result from grammatical processes, e.g. M to H raising of a noun tone in certain possessives (see Tables 5 and 6 below).

current variation and direction for future changes in the system, concluding in §5 with consideration of a few additional facts that may affect the analysis.

cl	gloss	noun	1sg	2sg	3sg	1pl	2pl	3pl
y	*'chief'*	fɔ̀	fɔ̀ à	fɔ̀ ò	fɔ̀ è	fɔ̀ yɔ̀	fɔ̀ zhìgɔ̀	fɔ̀ zhùb
p	*pl.*	fɔ̀	fɔ̀ pɛ̀˚	fɔ̀ pù˚	fɔ̀ pɔ̄	fɔ̀ pɔ̄	fɔ̀ pɪ̄gɔ̄	fɔ̀ pūb
	'child'	ŋwɔ̄	ŋwā à	ŋwō ò	ŋwē è	ŋwɔ̄ yɔ̀	ŋwɔ̄ zhìgɔ̀	ŋwɔ̄ zhùb
	pl.	pfwɔ̄	pfwɔ̄ pɛ̀˚	pfwɔ̄ pù˚	pfwɔ̄ pɔ̄	pfwɔ̄ pɔ̄	pfwɔ̄ pɪ̄gɔ̄	pfwɔ̄ pūb
	'animal'	nòb	nòb à	nòb ò	nòb è	nòb yɔ̀	nòb zhìgɔ̀	nòb zhùb
	pl.	nòb	nòb pɛ̀˚	nòb pù˚	nòb pɔ̄	nòb pɔ̄	nòb pɪ̄gɔ̄	nòb pūb
	'dog'	mbvɪ̄g	mbvɪ̄g à	mbvɪ̄g ò	mbvɪ̄g è	mbvɪ̄g yɔ̀	mbvɪ̄g zhìgɔ̀	mbvɪ̄g zhùb
	pl.	mbvɪ̄g	mbvɪ̄g pɛ̀˚	mbvɪ̄g pù˚	mbvɪ̄g pɔ̄	mbvɪ̄g pɔ̄	mbvɪ̄g pɪ̄gɔ̄	mbvɪ̄g pūb
y	*'egg'*	pòb	pòb ā	pòb ō	pòb ē	pòb yɔ̄	pòb zhɪ̄gɔ̄	pòb zhūb
m	*pl.*	mbòb	mbòb mɛ̀˚	mbòb mù˚	mbòb mɔ̄	mbòb mɔ̄	mbòb mɪ̄gɔ̄	mbòb mūb
	'foot'	khwɔ̀	khwɔ̀ ā	khwò ō	khwè ē	khwɔ̀ yɔ̄	khwɔ̀ zhɪ̄gɔ̄	khwɔ̀ zhūb
	pl.		nkhwɔ̀ mɛ̀˚	nkhwɔ̀ mù˚	nkhwɔ̀ mɔ̄	nkhwɔ̀ mɔ̄	nkhwɔ̀ m ɪ̄gɔ̄	nkhwɔ̀ mūb
	'ear'	tɔ́g	tɔ́g ā	tɔ́g ō	tɔ́g ē	tɔ̄g yɔ̄	tɔ̄g zhɪ̄gɔ̄	tɔ̄g zhūb
	pl.	ntɔ́g	ntɔ̄g mɛ̀˚	ntɔ̄g mù˚	ntɔ̄g mɔ̄	ntɔ̄g mɔ̄	ntɔ̄g mɪ̄gɔ̄	ntɔ̄g mūb
	'tree'	tsɔ̄	tsá ā	tsó ō	tsé ē	tsɔ̄ yɔ̄	tsɔ̄ zhɪ̄gɔ̄	tsɔ̄ zhūb
	pl.	ntsɔ̄	ntsɔ̄ mɛ̀˚	ntsɔ̄ mù˚	ntsɔ̄ mɔ̄	ntsɔ̄ mɔ̄	ntsɔ̄ mɪ̄gɔ̄	ntsɔ̄ mūb
	'hand'	pfū	pfú ā	pfú ō	pfú ē	pfū yɔ̄	pfū zhɪ̄gɔ̄	pfū zhūb
	pl.	mbvū	mbvū mɛ̀˚	mbvū mù˚	mbvū mɔ̄	mbvū mɔ̄	mbvū mɪ̄gɔ̄	mbvū mūb
ts	*'tooth'*	swɔ̀g	swɔ̀g tsɛ̀˚	swɔ̀g tsù˚	swɔ̀g tsɔ̄	swɔ̀g tsɔ̄	swɔ̀g tsɪ̄gɔ̄	swɔ̀g tsūb
m	*pl.*	nswɔ̀g	nswɔ̀g mɛ̀˚	nswɔ̀g mù˚	nswɔ̀g mɔ̄	nswɔ̀g mɔ̄	nswɔ̀g mɪ̄gɔ̄	nswɔ̀g mūb
	'name'	tsɪ̄g	tsɪ̄g tsɛ̀˚	tsɪ̄g tsù˚	tsɪ̄g tsɔ̄	tsɪ̄g tsɔ̄	tsɪ̄g tsɪ̄gɔ̄	tsɪ̄g tsūb
	pl.	ndzɪ̄g	ndzɪ̄g mɛ̀˚	ndzɪ̄g mù˚	ndzɪ̄g mɔ̄	ndzɪ̄g mɔ̄	ndzɪ̄g mɪ̄gɔ̄	ndzɪ̄g mūb
	'leaf'	hwɔ̀	hwɔ̀ tsɛ̀˚	hwɔ̀ tsù˚	hwɔ̀ tsɔ̄	hwɔ̀ tsɔ̄	hwɔ̀ tsɪ̄gɔ̄	hwɔ̀ tsūb
	pl.	hwɔ̀	hwɔ̀ mɛ̀˚	hwɔ̀ mù˚	hwɔ̀ mɔ̄	hwɔ̀ mɔ̄	hwɔ̀ mɪ̄gɔ̄	hwɔ̀ mūb
	'eye'	tsɔ̄	tsɔ̄ tsɛ̀˚	tsɔ̄ tsù˚	tsɔ̄ tsɔ̄	tsɔ̄ tsɔ̄	tsɔ̄ tsɪ̄gɔ̄	tsɔ̄ tsūb
	pl.	nɔ̄	nɔ̄ mɛ̀˚	nɔ̄ mù˚	nɔ̄ mɔ̄	nɔ̄ mɔ̄	nɔ̄ mɪ̄gɔ̄	nɔ̄ mūb
y	*'thing'*	zhwɔ̄	zhwá ā	zhwó ō	zhwé ē	zhwɔ̄ yɔ̄	zhwɔ̄ zhɪ̄gɔ̄	zhwɔ̄ zhūb
ts	*pl.*	tswɔ̄	tswɔ̄ tsɛ̀˚	tswɔ̄ tsù˚	tswɔ̄ tsɔ̄	tswɔ̄ tsɔ̄	tswɔ̄ tsɪ̄gɔ̄	tswɔ̄ tsūb

Table 1. Possessive Pronouns in Tswefap

2.   The possessive paradigm in Tswefap

In this section I will present the realization of tone on possessive pronouns in Tswefap. As will be seen, these tones depend on noun class, as well as on the syllable structure of both the noun and the possessive pronoun. As in the case of neighboring Bamileke languages, the vast majority of nouns are monosyllabic of the shape CV or CVC and carry M or L tone, e.g. *ŋwā* 'child', *fɔ̄* 'chief', *tɔ̄g* 'ear', *pòb* 'egg'. They may also have a non-syllabic nasal preceding the initial consonant, e.g. *ŋkɔ̀* 'nest', *nzhwī* 'wife', *njòb* 'axe', *mbvīg* 'dog'.[4] Possessive pronouns can have the shape V, CV, CVC or CVCV. The presence vs. absence of an initial C, as well as the identity of the initial C depend on noun class. Forms representing all of the relevant combinations of noun + possessive pronoun are given in Table 1 on the preceding page.

As seen, the nouns have first been grouped by noun class, identified by the initial consonant of the first person plural possessive *yɔ̀/yɔ̄*, *pɔ̄*, *mɔ̄*, or *tsɔ̄*. These in turn have been grouped into singular/plural pairs (or genders), of which there are four: *y/p*, *y/m*, *ts/m* and *y/ts*, the last being quite marginal. These are compared in Table 2 to other studies of Tswefap and with Proto-Eastern Grassfields Bantu and Proto-Bantu (PB) noun class numberings.

	This study	*Ngantchui (1989)*	*Gueche Fotso (2013)*	*Hyman (1974)*	*PEGB/PB*
sg	y(`)	y ~ w	w	w(`)	1
				y(`)	9
pl	p	p	p	p	2
sg	y	y	y	y	3, 7
pl	m	m	m	m	4, 6
sg	ts	ts	ts	ts	5
pl	ts	ts	ts	ts	8, 10

Table 2. Tswefap Noun Classes

As indicated, there are some differences between the present and previous studies. Ngantchui (1989:137) mostly recognized a *y* class (as our speaker for this study also has) with a restricted *w* variant, while Gueche Fotso (2013:52) has *w*. Historically the situation was as indicated in the Hyman (1974) column: There was originally a distinction between class 1 *w*(` ) vs. class 9 *y*( `), which merge as *y*(`) in the speech of our consultant, but

---

[4] Transcriptions generally follow IPA except that *y* is used for [j], and *zh* is used for [ʒ], the realization of /y/ before a high vowel. Note that while there is an extensive set of onset consonants, the only coda consonants are /b, g, m, ŋ, ʔ/, where /b, g/ are realized voiceless and unreleased in final position.

apparently as *w*(ˋ) in Gueche Fotso (2013).[5] The L (ˋ) tone indicates a different possessive tonal pattern from the other classes (see below).[6]

Focusing on the data in Table 1, we first note that except for the *y*(ˋ) class, which has L tone throughout (in green), the plural person pronouns 'our', 'your pl.' and 'their' have M tone throughout (yellow). These latter are thus analyzed as /-ɔ̄/, /- ɨ̄gɔ̄/ and /-ūb/, respectively. All that needs to be added is that M nouns become ML, e.g. *pfwɔ̄* 'children', *pfɔ̄ pɔ̄* 'our children'. This leaves predicting the tones of singular person pronouns. In the *y*(ˋ) class (plural *p*), the singular person pronouns all have the shape V with a L tone, /à/, /ò/, /è/, while the plural person pronouns begin with a consonant: /y-ɔ̀/, /y-ɨ̀gɔ̀/, /y-ùb/. In the y class (plural *m*), the singular person pronouns also have the shape V, this time with M tone (yellow). In addition, a preceding M tone noun becomes H: *tɔ̄g* 'ear', *tɔ́g ā* 'my ear'. The other singular person pronouns are all CV, also with predictable tone: First and second person pronouns have L˚ (level L) tone (in pink), while third person singular pronouns are M (yellow). As in the case of plural person pronouns, if the preceding noun is M, it becomes ML: *tsɨ̄g* 'name', *tsɨ̄g tsɛ̀˚* 'my name', *tsɨ̄g tsù˚* 'your (sg.) name', *tsɨ̄g tsɔ̄* 'his/her name'. This completes the summary of the tonal data in the possessive pronoun paradigm.[7]

The above constitutes a "paradigmatic" approach to accounting for the tones of possessive pronouns (and their effects on preceding M tone nouns), i.e. as one might find in a descriptive or pedagogical grammar. The ordered "rules" can be stated as follows:

(2) a. if the possessive pronoun is in the y(ˋ) class, assign a L
      b. if the possessive pronoun is plural, assign a M
      c. if the possessive pronoun is singular:
          i. assign M to the V in the y class
          ii. assign L˚ to second person singular CV pronouns
          iii. assign M to third person singular CV pronouns
      c. concerning a preceding M noun
          i. raise it to H before a M tone V possessive pronoun (y class singulars)
          ii. change it to ML before a CV possessive pronoun

---

[5] Interestingly, the initial *w* appears in the plural object pronouns *wɔ, wɨgə, wu*b, whose tones vary in context between H and M.

[6] Unfortunately Gueche Fotso (2013:44, 76) incorrectly indicates all possessive tones as L. Since all of his examples in the *w* class are animates, it is not clear if inanimate class 9 nouns also moved into the *w* class or whether they merged with the *y* class. Ngantchui (1989:139) marks both *y*(ˋ) and its plural *p* class with L, the *y* class with H, and the others with M (independent of person and number). Finally, in my 1974 notes, based on two hours of elicitation, I did not consistently distinguish H vs. M (except in a H-M sequence). However, I indicated plural pronouns as L in the *w*(ˋ) and *y*(ˋ) classes and wrote *sú ˋwɔ̀* 'our friend' (class 1), *njōp ˋyʌ̀* 'our axe' (class 9). The two classes merge as *y*(ˋ) in the speech of our consultant, who however also has a variant with M tone, e.g. *sū yɔ̀ ~ sū yɔ̄* 'our friend', *njòp yɔ̀ ~ njòp yɔ̄* 'our axe'. See also §4.

[7] Since our goal is only to predict the tones, we will not be concerned with predicting the different syllable shapes, the *y~ʐh* alternation in the y classes, and the different vowels in V vs. CV singular possessive pronouns: *a* vs. *C-ɛ, o* vs. *C-u*, *e* vs. *C-ə*.

As seen, in order to account for all of the patterns, the above descriptive rules have to refer to noun class, person and number, and syllable structure. The question is whether an analysis in terms of underlying representations can do better. This is taken up in the next section.

3.   A representational analysis of the possessive paradigm

As mentioned in the introduction, the tradition in Bamileke (and Grassfields Bantu) studies has been to posit abstract underlying forms with /H/ and /L/, which may be linked or float. The question is whether such an approach can be helpful here. Can we reduce the number of "rules" in (2) and replace them with a more unified representation of possessive tone? Since the four tone patterns in Yemba in (1) have merged to a simple M vs. L contrast on monosyllabic nouns, we can assume that the historical *H-H, *H-L, *L-H and *L-L stem tones have been restructured, with two possible nominal tones, /M/ vs. /L/. As we have seen, M and L also contrast on possessive pronouns, although a L° tone is also observed. I shall now consider a derivational analysis a with floating L preceding all possessive pronouns.
      My proposal is that possessive pronouns can have one of three underlying tones:

(3)   a.   *y*(`) class possessive pronouns are /L/
       b.   CV first and second person singular possessive pronouns are /LM/
       c.   remaining possessive pronouns are /M/, i.e.
             i.   all plural person possessive pronouns
             ii.   third person singular possessive pronouns

In this interpretation, /M/ is the default and all pronouns are preceded by a floating L. In the case of the y(`) class, all of the possessive pronouns are L, so nothing more need be said about these (other than the variation that will be pointed out in §4). I suggest that the L° of the CV first and second person singular possessive pronouns derives from the simplification of an underlying /LM/ contour, e.g. /nòb `p-ɛ̃/ → *nòb pɛ̀°* 'my animals', /tsɨ̄g `ts-ɛ̃/ → *tsɨ̄g tsɛ̀°* 'my name'.[8] While the floating L has no effect in the first example, it is responsible for the ML falling tone of *tsɨ̄g*, which also occurs before M and L CV possessors: /tsɨ̄g `ts-ə̄/ → *tsɨ̄g tsə̄* 'his/her name', /ŋwə̄ `y-ɔ̀/ → *ŋwə̄ yɔ̀* 'our child'. I suggest that the floating L is also responsible for the raising of M to H before a M tone V possessor, as when /tɔ̄g `ā/ is realized *tɔ́g ā* 'my ear'. This is attributable to the fact that the expected output **tɔ̃g ā* is ill-formed: the language doesn't permit a ML falling tone when the input is CVC+V. (It does however allow it when the input is CV+CV, e.g.

---

[8] In an equivalent analysis the M of the possessive could be floating: /ˋp-ɛ̀ ‾/, /ˋts-ɛ̀ ‾/. I assume that the second tone is M rather than H since, as mentioned, H tone is restricted to grammatical morphemes and derived environments, e.g. the M → H raising rule before M tone V possessors.

/pfwɔ́ `p-ɔ̄/ → *pfwɔ́ pɔ̄* 'his/her children'.) Instead, the L causes a M to raise. What this means is that the floating L has two different realizations on a preceding M noun:

(4)   a.   it converts M to ML before a CV possessive pronoun
    b.   it converts M to H before a M tone V possessive pronoun (y class)

When the preceding noun is L, the floating L has no effect: /pòb `y-ɔ̄/ → *pòb yɔ̄* 'our egg'. While one could argue that the derivational analysis in (3) does not have a great advantage over the paradigmatic analysis in (2), the fact that it is possible to derive the alternations by positing three different underlying pronominal tones, /L/, /M/, /LM/ and a floating L tone at least maintains a link with the historical source and relation to other dialects. However, in the next section we will see that on-going changes are undermining this link.

4.   Reconstruction and change in progress

In the preceding section we saw that there are two reasonable analyses of the possessive tonal paradigm in Tswefap. The relation to PEG and class 1/2 forms from other Eastern Grassfields languages and dialects can be compared in Table 3 below from Hyman (in press).[9] The PEGB forms at the bottom of the table show that the first and second singular pronominal roots reconstruct with *L tone, while the remaining pronouns reconstruct with *H(-H). In addition, the class 1 prefix reconstructs with *L, while class 2 reconstructs with *H. In principle this would produce four possibilities: *L+L, *L+H(-H), *H+L, *H+H(-H). This is most straightforwardly reflected in the first three languages, whose pronouns are L, LH, HL and H. However, we have only three possibilities in Tswefap: L, M, L˚, which correspond to the proto tones as in (5).

---

[9] I provide both my 1974 Batoufam *w(`)/p* transcriptions, where I mistranscribed L˚ as M, and M as H, as well as the *y(`)/p* agreements with correct tones on the next line.

	class 1 *gù-						class 2 *bə́-					
	1sg	*2sg*	*3sg*	*1pl*	*2pl*	*3pl*	*1sg*	*2sg*	*3sg*	*1pl*	*2pl*	*3pl*
Mankon	ɣà̰	ɣò	ɣìɛ́	wə̀ɣə́	wə̀ŋə́	wàá	bɘ̂	bô	bɣɛ́	bə́ɣə́	bə́ŋə́	báá
Bamenyan	wìɛ̀	ɣò	ɣɛ̌	wǔ	wǒ	wǒ	píɛ̀	pô	pé	pɯ́	pó	pó
Babadjou	ɣà	ɣò	ɣè°	wɔ̀°	wèì°	ɣàp°	pâ	pô	pé	pɔ́	péí	páp
Mbui	wà	ɣò	wì°	wìì°	wə̀°	wʌ̀°	bá	búó	bí	bíí	bə̀	bʌ́
Dschang	ɣà	wù	ɣì°	wə̀k°	wɛ̀°	wòp°	pá	pú	pí	pə́k	pé	póp
Ngwe	ɣà	ɣò	gyè°	wə̀k°	wʌ̀	wʌ̀p°	bá	bó	bé	bə́k	bʌ́	bʌ́p
Babete	à	ò	è°	wə̀k°	wʉ̀°	wɔ̀p°	pá	pú	pé	pə́k	pʉ́	póp
Bati	à	ù	ì	pɔ̀	yì	yàp	pá	pú	pí	pɔ̀	yí	yáp
Bagam	à	ò	è°	wíɲì	wùŋ°	wɔ̀p°	pá	pó	pé	píɲì	púŋ	póp
Bangang	à̰	ò	ì°	wə̀k°	ɥì°	wɔ̀p°	pá	pú	pé	pə́k	pí	pɔ́p
Baloum	à	ò	ì°	wʰʉ̀°	wè°	wɔ̀p°	pá	pú	pí	pʰʉ́	pé	póp
Fomopea	à	ò	ì°	wə̀k°	wɛ̌°	wɔ̀p°	pá	pú	pí	pə́k	pé	póp
Bamendjou	à	ò	ì°	wə̀k°	wʉ̀°	wòp°	pá	pó	pí	pə́k	pʉ́	póp
Baleng	à	ò	è°	wɔ̀k°	wɛ̀°	wùp°	pá	pú	pyɛ́	pə́k	pé	púp
Bandjoun	à	ò	è°	yɔ̀k°	yɔ̀°	yàp°	pǎ	pǔ	pyə́	pók	pɔ́	páp
Batie	à	ò	è	yɔ̀k°	yèè°	yàp°	pɛ́	pó	pé	pɔ́k	péé	páp
Bangou	à	ù	ì	yɔ̀h	yʉ̀	yòp	pē	pō	pə́	pɔ́h	pʉ́	póp
Bangwa	è~à	ù~ò	ì~è	yɔ̀	ʒyə̀	ʒùp	pɛ́	pú	pí	pɔ́	pyə́	púp
Batoufam1	à	ù	ì	wɔ̀	wùɣə̀	wùp	pē	pū	pə́	pɔ́	pɯ́ɣə́	púp
Batoufam2	à	ò	è	yɔ̀	ʒìɣə̀	ʒùb	pɛ̀°	pù°	pə̄	pɔ̄	pīɣə̄	pūb
Fotouni	à	ɔ̀	ì	yɔ̀°	yè°	yàp°	βá	βɔ́	βí	βɔ́	βé	βáp
Fondanti	à	ò	ì	yɔ̀	yì	yàp	bá	bó	bí	yɔ́	yí	yáp
Fe'fe'	à	ò	ì°	yɔ̀h°	yìì°	yàà°	bǎ	bǒ	bī	bɔ̄h	bīī	bāā
Bali	à	ù	ì	yʉ̀ʔ	yìn	yàp	bá	bú	bí	bʉ́ʔ	bín	báp
Bamun	à	ù	ì	ʉ̀	ʉ̀n	àp	pá	pú	pí	pʉ́	pʉ́n	páp
Bapi	á	ú	í	yúʔ	yún	yóp	pá	pú	pí	púʔ	pún	pɔ́p
Bangangte	àm	ò	è°	yàg°	zìn°	yòb°	cám	có	tsə́	cághə̀°	tsínə̀°	cóbə̀°
Limbum	yà	yò	yì	yèr	yèè	yàb	wá	wó	ví	wér	wéé	wáb
Adere	wàm	wɔ̀	wì°	-wùt°	-wùn°	-wɔ̂	bám	bɔ́	bí	-wùt°	-wùn°	-wɔ̂

PEGB: *gù-àmə̀ *gù-ò *gù-í *gù-ítə́ *gù-ínə́ *gù-ábə́ *bə́-àmə̀ *bə́-ò *bə́-í *bə́-ítə́ *bə́-ínə́ *bə́-ábə́

Table 3

(5) PEGB	*L+L	*L+H(-H)	*H+L	*H+H(-H)
Tswefap	L	L(-L)	M ~ L°	M

As indicated, both *L+L and *L+H(-H) correspond to L, while *H+H(-H) corresponds to M. The merger of *L-L and *L-H as L is quite general in Tswefap, e.g. PEGB *m-fònə̀ > fɔ̀ 'chief', *lì- sɔ̀ŋə́ > swɔ̀g 'tooth'. This leaves *H+L, which corresponds to M if V (e.g. tə́g ā 'my ear'), but L° if CV (e.g. tsīg tsɛ̀° 'my name'). Both *H-L and *H-H normally merge, e.g. on nouns: *síŋə́ > tsɔ̄g 'bird', *ŋ-gwáŋə̀ > ŋgwāg 'salt'. However, PEGB *H+L somehow yields L° on first and second person singular CV pronouns (which we

analyzed as /LM/). Historically, it is a *LHL combination that yields L˚ in Tswefap, where the initial L is the floating L that we have posited to precede all possessive pronouns. This L in turn likely had a vowel, a schwa that is sometimes heard in independent pronouns in certain Grassfields dialects.

While the link to PEGB possessive tones is clear, there are some on-going changes that will ultimately obscure the tonal connections. These involve the y(`) class, which we have already seen to be a merger of earlier classes 1 *w*(`) and 9 *y*(`). The direction of change is away from L tone possessive pronouns towards M. Interestingly, the change is proceeding differently with singular vs. plural pronouns. When the pronouns are plural, M tone is becoming an alternative independent of the tone of the noun, e.g. after L tone *nòb* 'animal' and M tone *mbvīg* 'dog':

(6)   *'our'*   *'your pl.'*   *'their'*
    nòb yɔ̀   nòb zhìgɔ̀   nòb zhùb   ~ nòb yɔ̄   nòb zhīgɔ̄   nòb zhūb
    mbvīg yɔ̀ mbvīg zhìgɔ̀ mbvīg zhùb ~ mbvīg yɔ̀ mbvīg zhīgɔ̄ mbvīg zhūb

When the pronouns are singular, M is an alternative to L only if the noun is L, hence after *nòb*, but not after *mbvīg*:

(7)   *'my'*   *'your sg.'*   *'his/her'*
    nòb à   nòb ò   nòb è   ~   nòb ā   nòb ō   nòb ē
    mbvīg à mbvīg ò   mbvīg è *vs.* *mbvīg ā *mbvīg ō *mbvīg ē

If continuing to play out in this way, classes *y*(`) and *y* would of course merge, a process that has been taking place over some time throughout in the area. However, while most of the diachronic studies of noun class merger and loss in the Grassfields area has focused on segmental marking (e.g. Hyman 1972, Good 2012), this last change in progress is strictly tonal. It is not surprising that the direction should be towards the majority pattern, pronouns with M tone.[10] The ultimate endpoint is of course loss of noun classes altogether, thereby greatly simplifying the paradigm.

5.   Conclusion

In the preceding sections I have presented both the segmental and tonal properties of the Tswefap possessive pronoun paradigm. I've suggested that a representational analysis is still possible even though the historical origins have been considerably obscured. While the floating L + M configuration works quite well for noun classes other than *y*(`), the

---

[10] The alternative is to merge towards the marking of a "prominent" class. This has happened in the Ewo dialect of Teke (Republic of the Congo) where segmentally identical classes 1 and 3 have merged with the L tone agreement pattern of class 1, since this class includes animate beings and also tends to be where borrowings are found (Hyman, Lionnet & Ngolele, in press).

one perhaps unexpected effect is the raising of M to H before when a noun precedes a M tone possessive pronoun of the shape V. This was attributed to the floating L analysis, something which is confirmed in the following independent possessive pronoun forms (where the *y*(`) class shows evidence of earlier *w* concord):

y(`) class:	ə̄wɛ̀	'mine'	ə̄yɔ̄	'ours'
	ə̄wò	'yours (sg.)'	ə̄zhɪ̄gə̄	'yours (pl.)'
	ə̄zhɨ̀	'his/hers'	ə̄zhūb	'theirs'
p class	ə̄pɛ̀°	'mine'	ə́pū	'ours'
	ə̄pù°	'yours (sg.)'	ə́pɪ̄gə̄	'yours (pl.)'
	ə́pū	'his/hers'	ə́pūb	'theirs'

Table 4. Independent Possessive Pronouns

If we assume that the initial marker is /ə̄ `/, we can predict the H tone that appears before M in the *p* class third person forms.

Although I have suggested that M raising occurs because of the following floating L, there is a potential problem in generalizing this account. As seen in the following examples, a similar M to H raising process occurs in the 'noun1 of noun2' possessive construction when noun1 belongs to any but the *y*(`) noun class:

	class	noun		noun1	noun2	
	p	pfwɔ̄	'children'	pfwɔ́	mbɪ̄g	'children of dog'
	y	tɔ̄g	'ear'	tɔ́g	mbɪ̄g	'ear of dog'
	m	ntɔ̄g	'ears'	ntɔ́g	mbɪ̄g	'ears of dog'
	ts	tsɪ̄g	'name'	tsɪ́g	mbɪ̄g	'name of dog'
But:	y(`)	ŋwə̄	'child'	ŋwə̂	mbɪ̄g	'child of dog'

Table 5. M Tone Raising of Noun1 before a M tone Noun2

As seen in the last row, if noun1 belongs to the y(`) class, its M does not raise to H, rather it becomes a ML falling tone (as in possessive pronoun paradigm). Since the fall in *ŋwə̂ mbɪ̄g* 'child of dog' is clearly attributable a floating L, something else is needed to produce the M to H raising in *pfwɔ́ mbɪ̄g* 'children of dog'. The most straightforward analysis would be a floating H tone, which also affects M tone nouns when the possessor noun2 is L tone, as in Table 6 below. Again, there is no M raising when noun1 belong to the *y*(`) class.[11] Because of this, whenever a *y*(`) noun does not have a distinct plural, the only difference between a singular and plural noun1 input will be tonal: *mbɪ̄g ŋwə̄* 'dog of child' vs. *mbɪ́g ŋwə̄* 'dogs of child', *mbɪ̄g fɔ̀* 'dog of chief' vs. *mbɪ́g fɔ̀* 'dogs of chief'. It would appear that a floating H is required or perhaps a sequence of floating tones.[12] Since

---

[11] The floating L does not appear on *ŋwə̄*, rather is "absorbed" before L tone *fɔ̀*.

[12] Similar problems arise in Fe'fe', which also has M to H raising (Hyman 1976).

M to H raising occurs elsewhere in the language, including in the verbal paradigm, more research will be needed to determine a full and comprehensive analysis.[13]

	class	*noun*		*noun1*	*noun2*	
	p	pfwɔ̄	'children'	pfwɔ́	fɔ̀	'children of chief'
	y	tɔ̄g	'ear'	tɔ́g	fɔ̀	'ear of chief'
	m	ntɔ̄g	'ears'	ntɔ́g	fɔ̀	'ears of chief'
	ts	tsɨ̄g	'name'	tsɨ́g	fɔ̀	'name of chief'
But:	y(`)	ŋwɔ̄	'child'	ŋwɔ̄	fɔ̀	'child of chief'

Table 6. M Tone Raising of Noun1 before a L tone Noun2

References

Clark, Mary M. 1992. Representation of downstep in Dschang-Bamileke. In van der Hulst & Snider, 29-73.

Good, Jeff. 2012. How to become a "Kwa" noun. *Morphology* 22.293-335.

Gueche Fotso, Hugues Carlos. 2013. *A descriptive grammar of Batoufam*. Doctoral dissertation, University of Yaounde I.

Hyman, Larry M. 1972. *A phonological grammar of Fe'fe'-Bamileke. Studies in African Linguistic*s, Supplement 4.

Hyman, Larry M. 1974. Field notes on Batoufam.

Hyman, Larry M. 1976. D'où vient le ton haut du fe'fe'-bamileke? In Larry M. Hyman, Leon C. Jacobson & Russell G. Schuh (eds), *Papers in African Linguistics in honor of Wm. E. Welmers*, 123-134. *Studies in African Linguistics*, Supplement 6.

Hyman, Larry M. 1985. Word domains and downstep in Bamileke-Dschang. *Phonology Yearbook* 2.47-83.

Hyman, Larry M. 2003. African languages and phonological theory. *GLOT International* Vol. 7, No. 6, 153-163.

Hyman, Larry M. In press. Third person pronouns in Grassfields Bantu. In John R. Watters (ed.), *East Benue-Congo: nouns, pronouns, and verbs. Niger-Congo Comparative Studies 1, 203-227*. Berlin: Language Science Press (langsci-press.org).

Hyman, Larry M., Florian Lionnet & Christophère Ngolele. In press. Number and animacy in the Teke noun class system. To appear in the Proceedings of the 48th Annual Conference on African Linguistics, Indiana University, March 30-April 2, 2017.

---

[13] One such construction worthy of further study is the presentative, marked by ə̄ before a L tone, HM before a M: ə̄ nɔ̀p 'it's an animal', ə̄ ŋwə̄ 'it's a child'. The HM appears to occur only before nouns. Thus compare: ə̄ pɔ̀ 'it's us', ə́ wūb 'it's them'. Presentative ə̄ is undoubtedly related to the initial marker of the independent possessive pronouns in Table 4.

Hyman, Larry M. & Maurice Tadadjeu. 1976. Floating tones in Mbam-Nkam. In Larry M. Hyman (ed.), *Studies in Bantu tonology*, 57-111. Southern California Occasional Publications in Linguistics 3. Los Angeles: University of Southern California. http://gsil.sc-ling.org/pubs/SCOPILS_1_3_4/studies_in_bantu_tonology.pdf

Ngantchui, Eveylne Debana. 1989. Analyse du discours: étude de la prééminence des structures nominales du Batoufam. Doctorat de Troisième Cycle, University of Yaounde.

Ngantchui, Evelyne Debana. 2002. Topic structures in Bafoussam. Doctoral dissertation, University of Florida.

Nissim, Gabriel. 1981. *Le bamiléké-ghomala' (parler de Bandjoun, Cameroun)*. Paris: Société d'Etude Linguistiques et Anthropologiques de France.

Pulleyblank, Douglas. 1986. *Tone in lexical phonology*. Dordrecht: Reidel.

Snider, Keith. 1999. *The geometry and features of tone*. Dallas: The Summer Institute of Linguistics & The University of Texas at Arlington.

Stewart, John M. 1992. Dschang and Ebrié as Akan-type downstep languages. In van der Hulst & Snider, 185-244.

Tadadjeu, Maurice. 1974. Floating tones, shifting rules, and downstep in Dschang-Bamileke. *Proceedings from the 5th Annual Conference on African Linguistics*, Stanford, March 29-31, 1974. *Studies in African Linguistics*, Supplement 5.283-290.

van der Hulst, Harry & Keith Snider (eds.). 1992. *The phonology of tone: The representation of register*. Berlin & New York: Mouton de Gruyter.

Voorhoeve, Jan. 1971. Morphotonology of the Bamileke noun. *Journal of African Languages* 10.44-53.