

NOTES ON THE HISTORY OF SOUTHWESTERN MANDE

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1. The problem

Even the most cursory glance at the literature will reveal that the consonant systems of the Southwestern Mande languages are of great interest to Africanists. In the last ten years, the particular problem of consonant gradation in Southwestern Mande has been dealt with by Welmers [1962; 1969; 1971], Manessy [1964], Meeussen [1965], Bird [1971], and Dwyer [1973]. The problem of accounting for the consonant alternations in the various languages, as well as the correspondences between languages, is a challenging one, and I should like to deal systematically with certain aspects of it.¹

I shall start by addressing myself to a limited problem in Kpelle, where I shall argue, following several other scholars, that a historical low tone homorganic nasal must be reconstructed, which triggered various consonant alternations. Then I shall turn to broader questions which arise as a result of this analysis.

2. Proto-Kpelle *N-

Except for borrowings, the following phonemic inventory of consonants given in (1) characterizes Kpelle:

(1)	p	t	k	kp
	f	s		
	b	l	ɣ	
	w	r	ɣ	
	m	n	ŋ	

¹I am extremely grateful to William E. Welmers for devoting hours of his time to discuss these issues in Southwestern Mande historical phonology with me. His numerous comments and suggestions have been extremely helpful to me, though it will be evident that he disagrees with some of my conclusions. This paper is a slightly revised version of the paper read under the title "Remarks on the Southwestern Mande Controversy" at the 3rd Annual Conference on African Linguistics, Queens College, April 6, 1973

While the language does not have any underlying voiced obstruents (stops or fricatives), such segments do occur phonetically. First, there is a morpheme, which Welmers identifies as meaning 'previous reference', though which was historically probably derived in all cases from the third person singular pronoun. The effect of this morpheme is to convert voiceless obstruents to voiced obstruents. I shall restrict myself to the possessive pronoun case only, as in (2):

(2)	<u>Stem</u>		<u>His/her</u>
	-pólù	'back'	: 'bó ù
	-túé	'front'	: 'dúé
	-kóó	'foot; leg'	: 'góó
	-kpíŋ	'self'	: 'gbíŋ
	-fíí	'hard breathing'	: 'víí
	-súá	'nose'	: 'zúá

The above stems are given preceded by a hyphen to indicate that they cannot appear alone. These so-called relational nouns (e.g. body parts, kinship terms, and place relations) require an overt possessor, either nominal or pronominal. The downstep marker in the 'his/her' forms indicates that the tone is slightly lower in pitch after these voiced consonants.²

Now, looking at (3) below, it is seen that sonorants (including the implosive [b]), are preceded by a low-tone nasal and themselves become nasalized in this same construction (Welmers [1969:81], adapted):

(3)	<u>Stem</u>		<u>His/her...</u>	
a.	-b̄aráŋ	:	ṁ-m̄aráŋ	'companion'
	- ēē	:	ṁ-nēē	'mother'
	-wó í	:	ṁ-ŋó í	'ear'
	-yéé	:	ṁ-ŋéé	'hand, arm'

²As pointed out by Welmers [1962], these voiced consonants are characterized by "heavy voicing". While I shall not be concerned with this aspect of the problem, Bird [1971] deals explicitly with the distinctive feature representation of such consonants. In addition, Dwyer [1973] has interestingly suggested that these consonants be analyzed as geminates (e.g. bb-, dd-, etc.). Notice also that the slightly lower pitch conditioned by these heavily voiced consonants is found only in isolation or utterance final positions (William E. Welmers [personal communication]). This is

b.	-mā́lólǎ	:	n̄-mā́lólǎ	'misery'
	-nā́ǎǎ	:	n̄-nā́ǎǎ	'father'
	-ŋé́í	:	ŋ-ŋé́í	'eye'
	-ŋwā́ǎŋ	:	ŋ-ŋwā́ǎŋ	'double arm span'
	-nǎ́ŋ	:	n̄-nǎ́ŋ	'tooth'

While a low tone nasal signifying 'his/her' is found only before sonorants, a high tone nasal signifying 'my' is found before all consonants, as seen in (4):

(4)	<u>My... (cf. (2))</u>	<u>My... (cf. (3))</u>
	m̄-bólù (pólù)	m̄-mā́rǎǎ (bā́rǎǎ)
	n̄-dúé (túé)	n̄-nēē (lēē)
	ŋ-góó (kóó)	ŋ-ŋólí (wólí)
	ŋ-gbǎǎ (kpǎǎ)	n̄-néé (yéé)
	m̄-víí (fíí)	m̄-mā́lólǎ (mā́lólǎ)
	n̄-zúá (súá)	n̄-nā́ǎǎ (nā́ǎǎ)
		n̄-nǎ́ŋ (nǎ́ŋ)
		n̄-nǎ́ŋ (nǎ́ŋ)
		ŋ-ŋé́í (ŋé́í)
		ŋ-ŋwā́ǎŋ (ŋwā́ǎŋ)

The above data suggest that the morpheme 'his/her' for these nouns is best reconstructed as a low tone homorganic nasal prefix *N̄-. The data in (3) show that this nasal is realized phonetically when the stem initial consonant is a sonorant. In addition, the data of (4) show that nasals in general voice following voiceless obstruents. Some historical derivations are given in (5):

(5)	(a)	(b)	(c)			
	*n̄-pólù	>	n̄-bólù	>	'bólù	'his/her back'
	*m̄-pólù	>	m̄-bólù			'my back'
	*n̄-lēē	>	n̄-nēē			'his/her mother'
	*n̄-lēē	>	n̄-nēē			'my mother'

In stage (a) the Proto-Kpelle forms are given, with low tone and high tone nasal prefixes. In stage (b), voiceless obstruents become voiced and non-nasal sonorants become nasal. In stage (c), the low tone nasal drops before voiced obstruents, although it leaves a lower pitch on the

comparable to what Welmers calls "downtilt" in the Kpelle tone system, namely an allophonic lowering (downdrifting) limited to utterance final high tones

following tone (when the form is in isolation or sentence-final position--cf. footnote 2).

3. Pre-Proto Kpelle *Nà

Welmers [1971:134] suggests that instead of a low tone nasal (which had been argued for by a number of people, e.g. Manessy [1964], Meeussen [1965] and Bird [1971]) a low tone vowel, probably *à-, is the correct reconstruction. One of his arguments [personal communication] is that such a pronoun is found in other branches of Mande, e.g. in Bambara in (6):

- (6) à ká fìni 'his cloth' (free)
à dén 'his child' (relational)

That a vowel could not have been the factor conditioning the change from voiceless to voiced obstruents is seen in (7):

- (7) í péréí 'your house'
í tããĩ 'your town'
í káĩĩ 'your hoe'
í fénáí 'your mushroom'
í sããĩ 'your (soft) mat'

In present day Kpelle there is no synchronic rule that voices intervocalic voiceless obstruents. In addition, it would be extremely difficult to explain in a non-ad hoc way the presence of a nasal in the 'his/her' forms in (3a) above. On the other hand, positing a low tone nasal prefix makes use of mechanisms independently motivated in present day Kpelle, namely voicing of obstruents and nasalization of sonorants after nasals, and, as noted in footnote 2, "downtilt" (cf. section 5).

One important point concerning the reconstructed pronouns *N̄- and *N̄-, however, is that they are only used with relational nouns. In (8), all of the possessive pronouns are seen with both kinds of nouns (Welmers [1969:74]):

- (8) 'house' (free) 'back' (relational)
N.B. ɲá péréí³ ɦ-bóíú 'my'
í péréí í póíú 'your (sg.)'

³In a small Southwestern dialect area speakers use [ɲó] instead of [ɲá]; in Northwestern Kpelle, speakers use [ɲà] instead of [ɲó]. Elsewhere the forms are pronounced [ɲá] 'my' and [ɲó] 'his/her' (William E. Welmers [personal communication]). I shall cite only the forms with [a] in my reconstructions.

N.B.	ηά πέρεί	'bóìù	'his/her'
	κú πέρεί	κú πόìù	'our'
	κά πέρεί	κά πόìù	'your (pl.)'
	'dí πέρεί	'dí πόìù	'their'

Two observations are relevant to these data. First, no consonant alternations occur in the free noun paradigm, but /p/ becomes [b] in the forms 'my back' and 'his/her back'. Second, this distinction between free and relational possessive pronouns is restricted to the first and third person singular. Otherwise, the only distinction is the possible presence of the specific suffix -ί in free nouns, but its obligatory absence in relational nouns, as seen in (9):

(9)	<u>With specific -ί suffix</u>		<u>Without specific -ί suffix</u>
	ηά πέρé-ί 'my house'		ηά πέρé 'a house of mine'
	*m̄-bóìŭT		m̄-bóìù 'my back'

In fact, Welmers [1969:75] presents an example where a noun can be interpreted in two senses depending on the first or third person singular pronoun, but which is ambiguous elsewhere, seen in (10):

(10)	ηά κῶìῶ 'a book of mine'	ή-gῶìῶ 'my skin'
	ηά κῶìῶ 'a book of his/her's'	'gῶìῶ 'his/her skin'
	<u>But:</u> í κῶìῶ 'a book of yours' or 'your skin'	

We must therefore ask why there is a pronoun difference in only two cases out of six.

With the historical reconstruction of *N̄- in section 2, we can see that the free nouns have ηα, while the relational nouns have a homorganic nasal. It is therefore possible to reconstruct high tone *Ná- for 'my' and low tone *Nà- for 'his/her' in Pre-Proto Kpelle. (The realization of the nasal consonant is [ŋ] in Kpelle, but [n] in Loma.) We can then take the reconstructions of 'my back' and 'his/her back' one step further back as in (11):

(11)	(a)	(b)	(c)	(d)	(e)
	*Ná πόìù	> N̄πόìù	> m̄πόìù	> mbóìù	
	*Nà πόìù	> N̄πόìù	> m̄πόìù	> mbóìù	> 'bóìù

In (11a) pre-Proto-Kpelle forms are set up with NV- pronouns. In (11b) the vowel drops, but only if the pronoun is prefixed to a relational noun. Since there is a constraint in the language which requires an explicit mention of a possessor in the case of relational nouns, these pronouns become fused with the stem and the vowel dropped, while in free nouns, the pronouns were not as closely associated with the noun stem, and they maintained their vocalic element (sometimes modifying *a to [ɔ]-- cf. footnote 3). In other words, the possessor of a relational noun is incorporated into the noun, while the possessor of a free noun is not. In (12) we see that direct object pronouns are also incorporated, this time into the verb (/káá/ 'to see'):

(12)	ń-gáá	'see me'	<	*ńá káá
	'gáá	'see him/her'	<	*ńà káá

The reason why it is the object pronoun and not the subject pronoun which is incorporated is that these languages all exhibit SOV word order. Thus, the closest pronoun is incorporated.

Notice that this reconstruction allows us to identify the *a of Pre-Proto-Kpelle *Nà- with the [à] of Bambara (cf. (6) above). Either Bambara and related languages lost the nasal or Southwestern Mande introduced it. The second possibility is perhaps supported by the fact that most non-Bantu Niger-Congo languages do not exhibit a nasal in third person singular pronouns (e.g. Bantu mu/ba, Gwari o/̀ba, Igbo o-̀o/fa).

4. *Na- elsewhere in Southwestern Mande

One of the problems mentioned in the literature is that the phonetic reflexes of these pronominal prefixes are quite varied in different Southwestern Mande languages. Welmers [1971:135] gives the following comparison between Kpelle and Loma in (13):

(13)	<u>Kpelle</u>	<u>Loma</u> ⁴	
	[ń-nēē]	[dèè]	'my mother'
	[f lēē]	[è léé]	'your (sg.) mother'
	[ń-nēē]	[dée]	'his/her mother'

⁴Loma has in some way reversed the expected tones of the proto prefixes.

result of the preceding nasal consonant. Finally, in stage (f), the nasal drops, since the voiced stop unambiguously signals its function. We are then left with the singular/plural alternations in (17):

- (17) Feʔfeʔ [ɣùdʔ] 'cheek', pl. [ŋŋùdʔ]
 Bandjoun [ɣùdʔ] pl. [gùdʔ]

Stages (16e) and (16f) should of course be compared with stages (15d) and (15e) in Southwestern Mande. In Bandjoun, where the homorganic nasal has not conditioned a voiced obstruent, it must be realized phonetically, as in (18):

- (18) Bandjoun [kwè] 'foot', pl. [ŋkwè]

The derivations in (15) therefore indicate that intervocalic weakening of proto voiced stops was introduced into Southwestern Mande before the loss of the prefix vowel.

After the loss of the vowel of *Na- prefixes, Proto-Southwestern Mande *p, *t and *k also weakened intervocalically, though in Kpelle this occurred apparently only morpheme-internally, since forms such as [f péréf] 'your house' are heard and not *[f wéréf] (as in Loma). In Kpelle we have seen that the homorganic nasal voices voiceless obstruents. In Loma, on the other hand, the presence of an earlier homorganic nasal (which in all cases is deleted) is felt by a blocking of the weakening found in the absence of the nasal. Thus, we have the derivations in (19) (cf. Manessy [1964:170]), where it should be noted the tones of the pronouns have been reversed (i.e. /N̂/ = 'my' and /N̄/ 'his/her'):

- (19) *tá + N̂ + tóó > tá tòò 'they will drop me'
 they-me-drop
 *gà + N̄ + tóó > gà tóó 'I will drop him/her'
 I-him/her-drop
 *tá + kò + tóó > tá wò lóó 'they will drop you'
 they-you-drop

In the forms on the right it is seen that *t weakens to [l] intervocalically only in the third form, since homorganic nasal prefixes prevented the weakening in 'they will drop me' and 'I will drop him/her'.

If weakening were to occur before the loss of the vowel of the *Na- pronouns, we would have derivations such as in (20), which is incorrect:

(20) *tá + Nà + tóó > tá Nà tóó > tá Ñtóó > tá Ñdóó > *tá dòò
'they will drop me'

Once *t has weakened to [l] there is no way to bring it back to [t].

Therefore, I suggest the following relative chronology of events in (21):

- (21)
1. Intervocalic weakening of voiced obstruents
 2. *Na > N-
 3. Modification of voiced spirants/sonorants after N-
 4. Intervocalic weakening of voiceless obstruents
 5. Kpelle voicing of voiceless obstruents after N-
 6. Loss of Kpelle Ñ-, Loma Ñ- and Ñ-

The reason why Kpelle has sonorants in utterance initial position (e.g. [ɣfɪà] 'dog' instead of *gɪfɪà), it must be assumed, is that the original intervocalic weakening has been analogized to initial position. Thus, the original rule of intervocalic spirantization, as in (22),

(22)

$$\begin{bmatrix} b \\ d \\ j \\ g \end{bmatrix} \longrightarrow \begin{bmatrix} \beta \\ l \\ \gamma \\ \gamma \end{bmatrix} / v \text{ ____ } v$$

which is highly reminiscent of the rule that must be reconstructed for Proto-Bantu (cf. Hyman [1972]), has been reinterpreted as a rule of nasalization after nasal prefixes, as in (23),

(23)

$$\begin{bmatrix} \beta \\ l \\ \gamma \\ \gamma \\ w \end{bmatrix} \longrightarrow \begin{bmatrix} m \\ n \\ \eta \\ \eta \\ \eta^w \end{bmatrix} / N \text{ ____ }$$

since Kpelle now has the underlying consonants on the left of the arrow.⁵

⁵The implosive [ɓ] phoneme has an intervocalic alternant [β] in some dialects, just as some dialects have [d] for [l] in initial position.

Finally, it should be noted that Loma, Mende and Bandi took a different course. Here the nasal prefix deriving historically from the third person singular pronoun became reinterpreted as a noun marker. Loma later lost the nasal, but Mende and Bandi still have it, as seen in (24), taken from a wordlist compiled by Prof. Welmers:

(24)	<u>Kpelle</u>	<u>Loma</u>	<u>Mende</u>	<u>Bandi</u>	
	bóá	bóá	mbówá	mboya	'knife'
	lá	dáá	ndá	nda	'mouth'
	yá	zié	njáá	nje	'water'
	γílá	gílé	ngílá	ngila	'dog'
	wóló	góló	ngóló	ngolo	'to shatter'

The nasal prefix is also incorporated into transitive verbs, as seen in the last form, which in Loma, Mende and Bandi actually means 'shatter it', though these represent the citation forms. That such a direct object pronoun would be incorporated into the citation form is no surprise, since many African languages require an overt expression of a direct object with transitive verbs. Intransitive verbs such as 'to go' are of course cited without such a prefix, e.g. Mende [lɪ].

5. Causes of the loss of *N- in Kpelle

The question which I should like to raise now is: why did Kpelle lose its low tone nasal prefix? This question can be approached in various ways. For instance, one might ask why the nasal simply did not remain. Or, one might ask that if it was to fall, why didn't the high tone nasal prefix fall as well? I shall now take up both of these questions.

The answer to the first question is that preconsonantal nasals are in a position of weakness. This is particularly true in English, where words such as can't are pronounced with a nasalized vowel but with no nasal consonant. Syllabic nasals are particularly vulnerable, and the fact that they are not dropped more often in African languages can only be attributed to their grammatical importance in so many cases. The general history is as given in (25):

(25)	(a)	(b)	(c)	(d)	(e)				
	*NV-CV	>	N-CV	>	N̂CV	>	N̂C ^x V	>	C ^x V

A language typically begins with an NV- prefix, and then the vowel is lost, leaving a syllabic nasal prefix. This prefix then loses its syllabicity (indicated by the ligature) and then may (optionally) cause some modification on the following consonant (or exert a tonal effect-- see below).⁶ As represented schematically in (26),

- (26) ni- > nd- (Loma, Mende, Bandi, Bandjoun)
 ni- > nn- (Kpelle, Fe'fe?)
 nt- > nth- (Swahili)
 nt- > nd- (Kpelle)

the homorganic nasal resulting in stage (c) can cause a voiced continuant to become a voiced stop, as seen in Loma, Mende, Bandi and Bandjoun-Bamileke; it can nasalize a sonorant as seen in Kpelle and Fe'fe'-Bamileke; it can aspirate a voiceless stop (cf. Swahili) and it can voice a voiceless obstruent as in Kpelle. The final step in (25e) occurs when the nasal is lost and the consonant alteration takes on a distinctive function, a case of rephonologization.

There is considerable evidence that this weakening of preconsonantal nasals takes place first before voiceless fricatives. This process once characterized English as pointed out by Foley [1972] in the following examples:

- | | | | | |
|------|---------|--|--------|---------------|
| (27) | English | <u>five</u> | German | <u>fünf</u> |
| | | <u>tooth</u> | | <u>Zahn</u> |
| | | <u>us</u> | | <u>uns</u> |
| | | <u>wish</u> | | <u>Wunsch</u> |
| | | <u>thought</u> [x] (cf. <u>think</u>) | | |

In these examples from English, Foley argues that the nasal consonant dropped, leaving behind a nasalized vowel which later became denasalized. The same kind of nasal loss before voiceless fricatives is found in Dschang-Bamileke. As in all Bamileke dialects, verbs are characterized by a zero/nasal opposition characterizing various tense/aspect distinctions of the verb, as illustrated in (28) from Fe'fe'-Bamileke:

- (28) tō : ntō 'to punch' |ēn : ndēn 'to say'

⁶Examples of stage (a) turning into stage (b) are numerous in Bantu (e.g. Proto-Bantu class 9/10 *ni > N-, Swahili class 1/3 *mu > m-, East Bamileke class 6 *mò- > m̄-).

In the Bafou variety of Dschang-Bamileke, however, a non-etymological prothetic [e] was introduced as seen in (29):

- (29) $\acute{n}t\acute{a}$ > $\acute{e}n\acute{t}\acute{a}$ 'to seize'
 $\acute{m}b\acute{f}\acute{a}$ > $\acute{e}m\acute{b}\acute{f}\acute{a}$ 'to be crazy'

The interesting fact is that when the verb begins with /f/, /s/ or /š/ (the only voiceless fricatives), the nasal obligatorily drops:

- (30) $\acute{m}f\acute{s}$ > $\acute{e}m\acute{f}\acute{s}$ > $\acute{e}f\acute{s}$ 'to stumble upon'
 $\acute{n}s\acute{a}$ > $\acute{e}n\acute{s}\acute{a}$ > $\acute{e}s\acute{a}$ 'to break'
 $\acute{n}\acute{s}\bar{u}$? > $\acute{e}n\acute{s}\bar{u}$? > $\acute{e}\acute{s}\bar{u}$? 'to come'

While this prothetic [e] was probably first introduced as a support for the NC- clusters (cf. Spanish prothetic [e] before #sC-), it has now taken on sociolinguistic dimensions. In fact, Bafou villagers feel very strongly about this prothetic [e], since it clearly distinguishes them from other Dschang speakers, e.g. from Foto?.

Returning to Mande, Manessey [1964:164-5] indicates that in Manyá, the first person \acute{N} - prefix, which voices voiceless obstruents, as in Kpelle, falls, but only when followed by [v] and [z] (coming from underlying /f/ and /s/):

- (31) $k\acute{o}l\acute{s}$ 'back' $\eta g\acute{o}l\acute{s}$ 'my back'
 $t\acute{o}f\acute{e}$ 'side' $nd\acute{o}f\acute{e}$ 'beside me'
 $s\acute{i}s\acute{f}$ 'chest' $z\acute{i}s\acute{f}$ 'my chest'
 $f\acute{a}$ 'father' $v\acute{a}$ 'my father'

The derivations for 'my chest' and 'my father' are given in (32):

- (32) \acute{N} - $s\acute{i}s\acute{f}$ > $\acute{N}z\acute{i}s\acute{f}$ > $z\acute{i}s\acute{f}$ 'my chest'
 \acute{N} - $f\acute{a}$ > $\acute{N}v\acute{a}$ > $v\acute{a}$ 'my father'

Thus, Kpelle may have started by dropping the third person low tone nasal only before fricatives.

The second part of the question is, then, why did Kpelle lose only the low tone nasal and not also (or instead) the high tone nasal? Loma, for example, lost both nasals, as we saw in (13) above. Why not Kpelle? The answer, I believe, has to do with tone. The question which requires an answer is: why did \acute{N} - lose its syllabicity (as hypothesized in (25) above), and not \acute{N} -, and the answer is that it could lose its syllabicity,

because its tonal effect could be maintained. The low tone conditioned a lower allophone of the tone of the following syllable. Welmers [1962:86] reports five tone classes in Kpelle, as in (33):

- (33) a. High throughout, e.g. [pá] 'come', [péré] 'house'
 b. Mid throughout, e.g. [kpɔ̃ŋ] 'help', [pērē] 'path'
 c. High followed by low, e.g. [kpɔ́ŋ] 'door', [pára] 'swamp'
 d. Mid with first vowel, then high followed by low, e.g.
 [yū́s'] 'axe', [kōná'] 'mortar'
 e. Low throughout, e.g. [kpòò] 'padlock', [tòlòŋ] 'dove'

The fifth class is reported by Welmers [1969] to be exceptional, probably consisting entirely of loan words. Thus, if we disregard this class, it now becomes clear that nouns in Kpelle all begin with High or Mid tone (where mid tones derive historically from Low-High in (33b) or from a raised Low in (33d)). Thus, a low tone nasal could very naturally exert a lowering effect on the tone of the following syllable, but a high tone could not always exert a high tone effect on the following syllable, since some nouns already begin with high tone. Stated differently, there is a rule of downdrift (termed "downtilt" by Welmers [personal communication]--cf. footnote 3) in Kpelle by which utterance-final high tones are lowered after a low tone, but there is no general high tone spreading rule by which \acute{N} - could raise a following low tone. Thus, the \grave{N} - prefix was free to lose its syllabicity (and later drop), because its tonal effect could still signal its grammatical presence. In Loma, where both high tone and low tone nasals apparently exert a tonal effect on the following syllable, both prefixes dropped. Finally, in so far as downdrift is a much commoner process than high tone spreading, we can tentatively hypothesize that low tone syllabic nasals are inherently weaker than high tone syllabic nasals.

6. Summary

In this paper it has been shown that reconstructing a low tone nasal prefix not only explains the consonant alternations in Kpelle, but also permits us to associate the third person singular possessive pronouns used with relational and free nouns. The loss of this low tone nasal was argued to be due to the inherent vulnerability of preconsonantal nasal consonants and to the nature of the tone system of Kpelle.

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