

**Current Approaches  
to African  
Linguistics (vol.2)**

# Publications in African Languages and Linguistics

The aim of this series is to offer, at regular intervals, carefully worked out studies or collections of papers in African linguistics. In this way, it is hoped that important work can be brought to the attention of a wider linguistic audience including scholars who are not primarily concerned with African linguistics but who wish to keep abreast of recent advances in the fields of historical linguistics, theoretical phonology and linguistic typology, all of which, incidentally, tend to rely rather heavily on African language data.

At the same time, the editors intend to include occasional volumes which offer general accounts of major language groups, hoping that such surveys will be of assistance not only to linguists working on African languages but also to those who specialize in other areas.

Throughout the series an attempt will be made to strike a healthy balance between theory oriented and data oriented research.

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# Introduction

This volume contains a selection of papers presented at the 13th Annual Conference on African Linguistics held at the University of Quebec at Montreal (U.Q.A.M.) on April 29 - May 2, 1982, the first such conference to be held outside the United States. These proceedings document the increasing participation at this conference by Africanists from several continents: Africa, North America, Europe. The selections, which offer a representative sample of papers given at that meeting, illustrate a variety of approaches both in content as well as method, and reflect the diverse interests and formation of the participants.

The editors have chosen to include as large a selection of papers as possible. The manuscripts have undergone only minor editorial revision, and appear in much the same form as that in which they were submitted to the proceedings. Articles have been grouped under the following headings: (1) Areal and Historical Linguistics, (2) Phonetics and Phonology, (3) Syntax, and (4) Semantics, Morphology, and the Lexicon.

The editors

# Introduction

Ce volume contient une sélection des communications présentées lors du 13e Colloque annuel de Linguistique Africaniste qui s'est tenu à l'Université du Québec à Montréal (U.Q.A.M.) du 29 avril au 2 mai 1982. Ces articles constituent un éventail représentatif des communications de ce colloque. On peut se féliciter de la participation croissante d'africanistes de plusieurs continents (Afrique, Amérique du Nord, et Europe). Dans le même sens, les articles de ce volume illustrent une variété d'approches autant dans le contenu que par les méthodes, à l'image de la diversité des participants.

En ce qui concerne la politique de rédaction, le comité de rédaction a jugé bon de favoriser la plus large représentation possible, plutôt que d'exercer une sélection plus sévère. Par ailleurs, afin d'en assurer une parution rapide, les textes définitifs n'ont subis que très peu de modifications, le cas échéant, par rapport aux textes soumis pour publication.

D'une façon plus prosaïque, nous regroupons les articles sous les quatre rubriques suivantes: (1) Areal and historical linguistics, (2) Phonetics and phonology, (3) Syntax, (4) Semantics, morphology and the Lexicon.

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## Chapter 1

# Vestiges de Suffixes de Classes Nominales dans les Langues du Groupe Boua (Tchad - Adamawa-13 de J.H. Greenberg)

P. Boyeldieu

En proposant de faire des langues bua, nielim et koke un sous-groupe (13) de la branche Adamawa (famille Adamawa-Eastern du grand ensemble Niger-Congo), J.H. Greenberg (1963, p. 9 et 12) se fondait en partie sur les traces de suffixes de classes nominales qu'il pouvait observer dans les vocabulaires alors disponibles sur ces langues: "There is evidence for the [Niger-Congo] -le suffix in Nielim *tu-la* 'ear', Koke *gi-l* 'eye', Nielim *su, su-l* 'head', Koke *su-l* 'head'. The *ma* formative occurs in Bua *hu-ma* 'blood', *nu-mo* 'fat' and Koke *li-m* 'water, rain'."

Depuis quelques années la connaissance des langues du groupe Boua (toutes parlées dans le centre-sud du Tchad) s'est enrichie des travaux de C. Pairault sur le kulaal (ou goula d'Iro), de P. Palayer sur le tun (ou tounia) et de mes propres recherches sur le lua (nom propre du niellim). Cette communication a pour objet de montrer en quoi les acquis récents viennent confirmer l'hypothèse de J.H. Greenberg: dans ces trois langues l'expression de l'opposition nominale du nombre répond à des modèles divers d'alternances qui affectent les segments ultimes (suffixes vocaliques et/ou consonantiques) ou internes (infixes vocaliques) des unités concernées. L'étude langue par langue puis la comparaison de ces procédés qui manifestent, d'une langue à l'autre, des ressemblances immédiates ou fondées sur l'observation de correspondances phoniques régulières rendent très forte l'hypothèse selon laquelle ces systèmes d'oppositions formelles sont hérités d'un état de langue qui fonctionnait peu ou prou selon le principe de la classification nominale. Le kulaal lui-même (mais non plus le lua ni le tun) peut encore être considéré comme une langue à classes dans la mesure où les noms (à rigoureusement parler les ensembles amalgamés et insécables d'une unité nominale et d'une marque de nombre) sont, dans certaines conditions, déterminés par des éléments grammaticaux (transcrits entre parenthèses par C. Pairault) dont l'identité révèle la répartition du stock nominal en 7 classes, couplées dans 5 genres principaux:

(kulaal)	kè/kî	kḶḶá(kè)/kóré(kî)	"dette"
	lè/tù	hól(lè)/hón(ɬù)	"étoile"
	mè/kî	ím(mè)/íɬè(kî)	"eau"
		...etc.	

Selon toute vraisemblance il convient d'interpréter ces déterminants classificatoires comme des innovations qui sont venues doubler les marques encore observables - avec plus ou moins de clarté - sur le nom lui-même.

Dans un premier temps on proposera donc de restituer, avec la valeur d'une hypothèse de travail, les alternances qui ont pu caractériser un système archaïque, ancêtre commun du lua, du tun et du kulaal. Par commodité on désignera ce système linguistique abstrait par le terme de "Proto-Boua" bien que les autres langues du groupe (boua, fanyan, mana, koke, bolgo, noy, goula du Guéra), toutes très mal connues, n'aient pas été prises en compte.

J.H. Greenberg (ibidem) ayant évoqué l'existence de langues à classes dans d'autres sous-groupes Adamawa ("The Tula language has a fully functioning system of class suffixes with clear points of contact with the general Niger-Congo system."), on procédera ensuite à une comparaison - plus exactement à une confrontation - du système du "Proto-Boua" avec celui du tula précisément.

*L'expression de l'opposition nominale de nombre en lua, tun et kulaal et le système du "Proto-Boua"*

Par commodité, et pour éviter une présentation des systèmes qui déborderait largement le cadre de cet exposé, on envisagera conjointement les trois langues à partir de leurs traits essentiels et communs, tels qu'ils apparaissent en illustration du système restitué (cf. premier tableau de documents), c'est-à-dire en suivant une démarche inverse de celle qui a été observée pour l'élaboration de cette reconstruction.

Il convient auparavant d'établir une distinction - plus clairement illustrée par le lua et par le kulaal - entre les procédés historiquement primaires que constituent les différents types de suffixations, vocaliques ou consonantiques, exemple:

(lua)	(kulaal)
-a/-i	-a/-e
ʔūmā/ʔūmī "épine"	hālā(kê)/hālē(ki) "gallinacée"
-l(-)/-r-	-l/-n
súl/súrí "tête"	púl(lê)/pún(ṭṭ) "bouillie"
...etc.	...etc.

et les procédés historiquement secondaires que constituent certaines altérations vocaliques qui touchent principalement un segment interne du nom (infixation), exemple:

a/ə		a/o	
kā̀r/kə̀r	"varan"	sār(kè)/sór(kì)	"cruche"
ua:/u:		ε/e	
sūā:/sūū:	"phacochère"	ṭṭl̄á(kè)/ṭṭl̄é(kì)	"ciseau"
...etc.		...etc.	

Dans ces deux langues indépendamment l'une de l'autre, il est de bonnes raisons (fréquences, place dans le mot, complémentarité de certaines formes canoniques, aptitude essentielle à fonctionner, encore aujourd'hui, comme des procédés subordonnés à d'autres ...etc.) de considérer que ces oppositions représentent, en vertu d'un processus d'attraction vocalique ou d'"umlaut", une conséquence historique des précédentes. Le fait qu'elles puissent actuellement fonctionner comme des marques autonomes de l'opposition de nombre (notamment en lua où elles ont pris une importance prépondérante en tant que telles) ne doit pas masquer leur caractère relativement récent. Même si elles ont pu, de fait, affecter un stade antérieur commun au lua, au tun et au kulaal, nous en ferons abstraction dans la restitution proposée.

*L'alternance \*-A/\*-I*

Bien attestée en lua et en kulaal sous des formes identique ou proche, elle est plus exceptionnelle en tun (de façon générale on tiendra compte du caractère restreint du corpus tun; les nombres d'occurrences totales et cas par cas d'oppositions de nombre attestées sont donnés entre parenthèses).

*L'alternance \*-U/\*-I*

Elle ne semble pas (plus ?) avoir de correspondant en lua ni en tun, mais rien ne permet de réduire ce procédé en kulaal.

*L'alternance \*-L/\*-N*

Le procédé est bien avéré bien que de faible fréquence en lua et en tun. En lua le suffixe du singulier s'est assimilé à n (identique au pluriel)

après voyelle nasale, ce qui a déterminé la perte d'un certain nombre d'oppositions, préservées en tun et en kulaal:

		(lua)	(tun)	(kulaal)
Sg.	*-V-L →	-vl	-vy, -v	-vl
	*-V-L →	-vn	-vj, -v	-vl
<hr/>				
Pl.	*-V-N →			
	*-V-N →	-vn	-vn	-vn

En lua il se présente le plus souvent sous les formes -l/-ni ou -la/-ni: faut-il y voir une combinaison plus ou moins systématique avec l'autre procédé que constitue l'alternance -a/-i? Enfin le kulaal connaît des variantes -il/-un, ĩl/-on qui affectent toujours des polysyllabes et doivent, en tant que telles, représenter des suffixes d'application plus récente.

*L'alternance \*-L/\*-R*

*/\*-RI ?*

Elle n'est bien avérée qu'en lua, l'interprétation des rares exemples du tun et du kulaal qui pourraient lui être assignés étant incertaine. La forme du pluriel (qui pourrait être double?) est également sujette à caution.

*L'alternance \*-M/\*-(M)RI*

Cette opposition n'est bien attestée qu'en kulaal, les formes de pluriel étant quasiment inexistantes en lua et en tun. La persistance d'une forme figée de pluriel en tun (sīri "sang") est hautement vraisemblable.

*L'alternance \*XXX/\*-KI*

Ce procédé mal déterminé aurait pris une extension sensible en lua. La correspondance avec le lua et le tun des formes du kulaal est-elle juste?

L'alternance \*XXX/\*-M

/\*-BV ?

Là encore il s'agit d'un procédé formellement mal déterminé, mais dont l'unité et l'originalité ne semblent pas devoir faire de doute. Alors qu'il est éminemment résiduel en lua et en kulaal (où l'identité du (des) genre(s) avec le(s)quel(s) il est jumelé n'est pas claire) il a pris une importance prépondérante en tun. Les formes en -oybì du lua ont été classées ici pour des raisons qui sont externes au groupe Boua lui-même (cf. infra).

Ainsi s'achève l'exposé des oppositions connues du lua, du tun et du kulaal qu'il semble licite de rapporter à un système ancien de marques de classes suffixées, commun aux trois langues sinon à l'ensemble du groupe Boua. Les autres procédés, d'extension plus récente, sont mentionnés dans un souci d'exhaustivité et, par contraste, d'appréciation de ceux qui viennent d'être présentés.

*Le système des classes du tula et leur rapport aux alternances du "Proto-Boua"*

Les documents qui ont servi à cette présentation ont été recueillis avant la guerre par un missionnaire inconnu et publiés plusieurs années plus tard dans *Afrika und Uebersee* (1955). Le tula - qui est la seule langue pour laquelle j'aie pu accéder à des matériaux assez complets - forme avec le dadiya, le waja, le cham et le kamu le sous-groupe 1 de l'Adamawa de J.H. Greenberg. Toutes ces langues sont parlées au Nigéria.

Le tula répond au schéma classique des langues à classes: son stock nominal est réparti en 6 sous-ensembles commodément symbolisés par les lettres W, D, K, B, T et Y. Cette classification est manifestée par l'accord des noms avec plusieurs séries de référents non nécessaires qui sont formellement de deux types: les premières (que l'on illustrera ci-dessous par les formes du *démonstratif*) sont phoniquement très proches des symboles que l'on vient d'énoncer; les secondes (illustrées par le *connectif*) manifestent plus de ressemblance avec les marques qui affectent la finale du nom et qui doivent, selon toute vraisemblance, être elles-mêmes comprises comme les vestiges d'un ancien système de suffixes:

classe	référents		marques finales du nominal
	démonstratif	connectif	
W	wo	-ε	voyelles fréquentes, notamment -e et -ε
D	dədo	-n	-r, -n, -l
K	kəko	-(a)ŋ	-a, -aŋ, -ko
B	bəbo	-m	-bo, -m
T	təto	-i	-i, -to, -bi, -ən
Y	yiyo	-i	-i, -ti, -ni

L'expression du nombre est assurée par l'appariement des 6 classes en 8 genres d'importance inégale (W/Y, K/Y, D/T, D/Y, B/Y, W/B, K/T et K/B, cf. détails et occurrences dans le deuxième tableau de documents). Elle se manifeste à la fois par une opposition des référents et par une alternance des marques finales du nom (à cet égard il s'agit d'une situation identique à celle que l'on observe en kulaal):

tε/tεbo (W/B) "père"  
 ben/beni (D/T) "langue"  
 ku/kuti (W/Y) "tortue"  
 ...etc.

Dans un travail précédent (Boyeldieu, 1980) j'avais considéré que les marques "anciennes" (amalgamées au nom) du tula étaient seules significatives du point de vue d'une confrontation avec l'expression du nombre en lua. Il semble en fait que la mise en rapport de ces alternances, assez nombreuses, avec celles du "Proto-Boua" soit souvent problématique et qu'il soit utile de surmonter leur diversité en privilégiant le genre "moderne" dont elles relèvent.

#### *Le genre W/Y*

Il s'agit du genre prépondérant. Il implique le plus fréquemment une suffixation du nom pluriel par -ti mais on observe plusieurs cas de suffixation de -i à une voyelle finale ou, mieux, d'oppositions -ε=e/-i qui peuvent être mises en parallèle avec le "Proto-Boua" \*-A/\*-I. Les constantes lexicales d'un ensemble à l'autre sont sans doute peu significatives du fait de la

fréquence des procédés. Signalons toutefois la présence partagée du nom qui désigne l'animal ou la viande et, peut-être, ceux d'animaux spécifiques comme la tortue.

*Le genre K/Y*

De faible occurrence il offre toutefois, entre autres, l'exemple d'oppositions -a/-i qui pourraient encore être mises en rapport avec le "Proto-Boua" \*-A/\*-I.

*Les genres D/T et D/Y*

L'appariement D/T constitue le second genre en importance du tula. A une consonne finale qui est presque toujours -r, -n ou -l il oppose un pluriel suffixé en -to, en -i ou en -ən. Il me semble fondé de rapprocher ce genre de l'une des oppositions \*-L/\*-N ou \*-L/\*-R(/\*-RI ?) du "Proto-Boua", sans pouvoir toutefois décider laquelle. La position de D/Y, genre exceptionnel, est également problématique. Peut-être faut-il d'ailleurs, de façon indifférenciée, conserver ces deux genres du tula face aux deux alternances du "Proto-Boua". Les rapprochements formels que l'on peut faire entre eux sont douteux mais on observe des constantes sémantiques plus nettes: tous deux se partagent notamment des termes qui désignent des parties constitutives du corps comme la tête, le nez, la peau, l'oeuf et le ventre.

*Le genre B/Y*

A elle seule la comparaison du genre B/Y, essentiellement accompagné de l'opposition -m/-nti, avec l'alternance \*-M/\*-(M)RI compense pour une bonne part les hésitations nées des confrontations précédentes. Elle s'impose tant du point de vue formel que du point de vue sémantique en ce qu'elle implique, de part et d'autre, des noms qui désignent des masses non dénombrables (notamment des liquides et des poudres). Mais en "Proto-Boua" comme en tula l'originalité de ces modèles est encore structurelle dans la mesure où rares sont les langues à classes des familles apparentées qui traitent cette classe en -m comme le terme singulier d'une opposition de nombre.

*Le genre W/B*

Là encore le genre W/B se laisse aisément rapprocher de l'alternance \*XXX/\*-M(/\*-BV ?) du "Proto-Boua". Les finales en -m sont les mêmes. Quant à celles qui ont la forme -bo, elles pourraient être rapprochées des formes en -(oy)bɪ du lua (mais quid des autres parlars ?). La constante sémantique elle aussi est patente, les deux ensembles partageant des termes qui désignent des êtres humains comme l'enfant, le chef, la personne et l'homme.

Le parallélisme des procédés, si tant est qu'il soit acquis, n'est pas parfait puisque

- les alternances \*-U/\*-I et \*XXX/\*-KI du "Proto-Boua" ne trouvent pas d'équivalent en tula (peut-être conviendrait-il à cet égard d'envisager une possibilité d'adéquation - au moins partielle - entre W/Y et \*-U/\*-I ?);

- à l'inverse le genre K/B (exceptionnel) et surtout le genre K/T du tula ne peuvent, à mon sens, être mis en parallèle avec des procédés observables dans le groupe Boua.

*Conclusion*

Ainsi aura-t-on pu, du moins je l'espère, se convaincre des affinités particulières qui relient les groupes extrême-occidental (tula) et extrême-oriental (groupe Boua) de l'aire linguistique Adamawa, par delà des langues comme le laka, le duru, le mbum, le kim (dit masa)... qui, pour leur être sans doute apparentées, n'en sont pas moins caractérisées par une unique marque de pluriel nominal et ignorent le phénomène de classification nominale, même sous une forme résiduelle.

C'est bien le mérite de J.H. Greenberg d'avoir su découvrir (deviner ?) ces caractéristiques morphologiques à travers l'analyse des documents succincts dont il a pu, à l'époque, disposer.<sup>1</sup>

I - ESSAI DE RESTITUTION DES ALTERNANCES DE SUFFIXES<sup>2</sup>  
 NOMINAUX EN "PROTO-BOUA" ET LEURS AVATARS EN  
 LUA, TUN ET KULAAL

LUA (/386)	TUN (Doc. (/56) P. Palayer)	KULAAL (Doc. (/395) C. Pairault)
*-A/*-I		
-a/-i (63)	-e=a/-i (5)	-a(kê) /-e(kî) (106)
	= sêé/sîi poisson	= hââpá(kê)/hââpé(kî) poisson
= tflā/térī arbre	= tōgā/tígī arbre	
ʔūmā/ʔūmī épine	êlé/ilí mâle	nômá(kê)/nômé(kî) moustique
hínā/hénī queue		ŋānā(kū)/ŋōnē(kî) notabilité féminine
*-U/*-I		
/	/	-u=o(kū) :-i=e(kî) (83)
		tūlū(kū)/tūli(kî) biche-cochon
		páárū(kū)/póórī(kî) coupelle à huile
*-L/*-N		
-l(-)/-n(-) (15)	-y=ŋ=∅/-n (12)	-l(lê) /-n(ʔū) (55)
		-i=el(lê) /-u=on(ʔū) (41)
= bāā:l/bāā:n poutre de soutien		= pāál(ê) /pāán(ʔū) poteau de porte
kūlā/kōnī poterie	= hōy/hōn mortier	= fōól(ê) /fōón(ʔū) mortier
	= sōŋ/sōn étoile	= hól(lê) /hōn(tū) étoile
	= hōō/hōn oeuf	= fāá(ê) /fāán(ʔū) oeuf
		êkíl(lê) /êkún(ʔū) seuil

---

*-L/*-R		
/*-RI ?		
-l(-)/-r-      (20)	-y=ŋ/∅ ?      (3) -ŋ=∅/-ri ?    (2)	-l(lè)/∅(kì) ?      (3) -l(lè)/-tɛ(kì) ?    (1)
= wá:l/wórgɛ̃ champ	= wāy/wāā champ	
tɛlā/térī arbre	sāŋ/sāā nourriture	
súl/súrí tête	= māŋ/máárī sein	= máál(è)/móó(kì) sein
	īī/íírī oeil	ùl(lè)/ùtɛ(kì) chemin

---

*-M/*-(M)RI		
pluriels inconnus ou (re)construits sur un autre modèle	(*-m/*-ri ?) pluriels inconnus sauf un cas figé ?	-m(mè)/-tɛ(kì)      (6) et 3 formes de pluriel figées (sans singulier)
= hùm farine		= fòm(mè)/fòrè(kì) farine
= hām/hómngɛ̃ bière	= sām bière	= hām(mè)/hóŋtɛ̃(kì) bière
= sí:m fumée	= sēm fumée	= hēém(è)/hēéntɛ̃(kì) fumée
= hímá sang	= sīrí sang	= hētɛ̃(kì) [ sans sing. ] sang                    (sg. *hēm ?)

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*XXX/*-KI		
∅/-gɛ̃=ngɛ̃      (62)	xxx/-ngɛ̃=u      (3)	∅(kè)/-kì(kì)      (4) ∅(kù)/-kì(kì)
= dáāŋ/dǎngɛ̃ pied	= dāŋ/dǎngɛ̃ pied	yāā(kè)/yòòkì(kì) trou d'eau
hūū/hú:gɛ̃ corne	cēē/cīngɛ̃ main	
bǎǎr/bǎrgɛ̃ homme		tòŋ(kù)/tòŋkì(kì) maison

---

*XXX/*-M		
/*-BV ?		
xxx/-m      (3)	∅/-m      (26)	xxx(xxx)/-m(mv)      (5)
= bǎ: /bǐ:m enfant	= bātǎ/bātóm enfant	pòil(lè)/pòùm(mè) mâle
= wāŋ/mūm chose	kōlī/kōlēm poterie	= ð(kí)/òm(mò) chose
= wāŋ/wòm chef	= wānī/wānūm chef	wòsà/pisè(m) (mè) personne

-a:/-oybɪ (3)  
 kúā:/kōybɪ oncle utérin  
 wāā:/wōybɪ belle-soeur

Procédés interprétés comme des innovations, soit par conséquence de certaines des alternances précédentes, soit par création originale

fermeture vocalique ou "umlaut" (294)	fermeture vocalique ou "umlaut" (6)	fermeture vocalique ou "umlaut" (137)
lág/lǝg hanche	tĕĕ/tĕm village	yāāmá (kɔ̃)/yòòmé (ki) vêtement
duá:l/dó:l ceinture	lǝǝ/lòn forgeron	sár (kĕ)/sǝr (ki) cruche
ouverture vocalique sous la pression de règles de combina- toire vocalique (24)	∅/-ʔe (6) extension du pronom indépendant de 3ème pers. pl. (P. Palayer)	
būrā/bōri mensonge	kōř/kōřʔĕ couteau	

II - COMPARAISON DES ALTERNANCES DE SUFFIXES NOMINAUX EN  
 "PROTO-BOUA" AVEC LES GENRES (APPARIEMENTS DE CLASSES) DU TULA

"PROTO-BOUA"	TULA (Doc. Anonyme) (/144)		
*-A/*-I	W/Y (57)	-v/-vti (19) -v/-vni (6) -ɛ/-i (6) -e/-i (5) -v/-vi (5)	nam/nai viande, animal ku/kuti tortue
	K/Y (8)	-a/-i (4) xxx/-ni (3)	
*-U/*-I	?		
*-L/*-N	D/T (28)	-r/-to (8) -n/-ni (6) xxx/-bi (4) ∅/-ən (3) -r/-ri (2)	D/Y (2)

*-L/*-R /*-RI ?	dur/duto tête cwon/cwonən nez bal/balən peau far/fato oeuf		fur/funi ventre
*-M/*-(M)RI	B/Y (14)	-m/-nti (11)	mim/minti farine yim/yinti bière yem/yenti lait kotom/konti sang
*XXX/*-KI	?		
*XXX/*-M /*-BV ?	W/B (15)	xxx/-bo (9) xxx/-m (6)	bwε/bwεzim enfant mai/matəm chef ni/nəbo personne kwarta/kwartabo homme
?	K/T (19)		
?	K/B (1)		

## NOTES

1. A en juger d'après la composition qu'il donne du groupe (bua, nielim et koke), J.H. Greenberg n'a eu accès qu'aux vocabulaires publiés par J. Lukas *Zentralsudanische Studien*, Hamburg, Friederichsen, de Gruyter et Cie, 1937, 191 p.
2. Le signe = préposé à 2 (3) termes d'un même alinéa signale les formes lexicales qui sont apparentées d'une langue à l'autre.

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Palayer P., 1975, *Esquisse phonologique de la langue tounia, Les langues du groupe Bova, Etudes phonologiques*, N'djaména, INSH (Etudes et documents tchadiens, Série C, Linguistique, no 2), p. 131-195.

\*[Je suis redevable à P. Palayer de documents sur le tun (ou tounia) qu'il m'a très aimablement communiqués. Qu'il en soit ici remercié]



*Chapter 2*

# Noun Class Affix Renewal in Southern West Atlantic

Tucker Childs

## *1.0 Introduction*

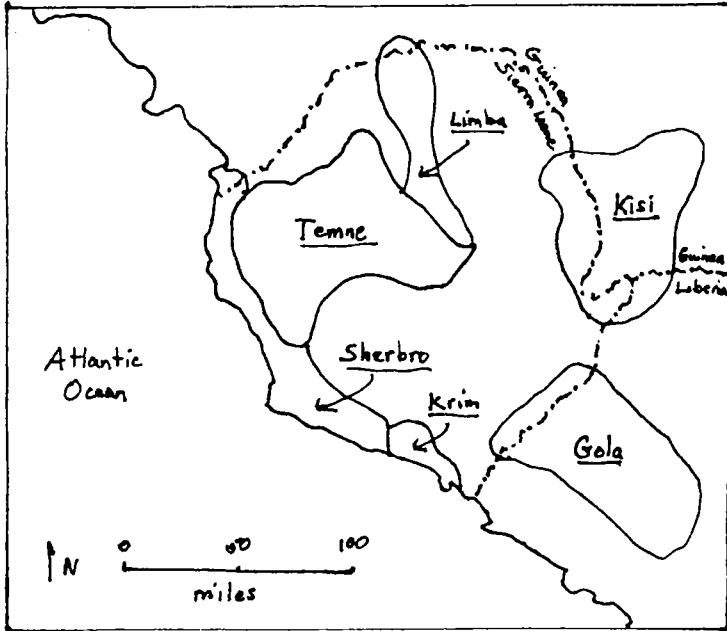
One of the most interesting and widely discussed features of Niger-Kordofanian languages is that of their noun class systems. Typically, a language with a fully operant noun class system has divided all nouns into a number of classes, and these nouns control the concord shown by dependent elements such as adjectives, anaphoric pronouns, etc. Nouns usually show to which class they belong by means of an affix.

Numerous questions have arisen as to the form of the proto-system in Niger-Kordofanian. One particular problem has been that within a set of genetically related languages some languages will have only prefixes, some only suffixes, and others will have both. Earlier treatments suggest that both prefixes and suffixes were found in the proto-language (Dalby 1965:6, Welmers 1973:209), but it is now generally accepted that noun class affixes can be renewed (Greenberg 1977, 1978).

One sub-group of Niger-Kordofanian which has generally received little attention and has not been examined in light of these formulations is the Southern Branch of the West Atlantic Group. It will be my claim that one language within this group, Kisi, represents the most innovative language within this subgroup in leading the Southern Branch from an older system of prefixation to one of suffixation. In examining how this process takes place, I will depart from the systematization of Greenberg to a certain extent and will propose a more refined and detailed sequence of events.

Southern Branch languages are found along the Atlantic coast of West Africa, surrounded by speakers of Mande languages. As the map on the next page shows, most of the languages are found in Sierra Leone.

(1)



Adapted from Dalby (1962, 1965).

Southern Branch languages not shown on the map are found north of Sierra Leone along the Atlantic coast up to Guinea-Bissau.

In the display below I show how the languages of Southern Branch have been classified. I have integrated Sapir's (1971) classification into that of Greenberg (1966).

(2)

*Niger-Congo*

I. West Atlantic

A. Northern Branch: Wolof, Fulani, etc.

B. Southern Branch

1. Sua

2. Mel languages

a. Temne, Baga languages, Banta, Landuma, Tyapi

b. Sherbro, Mmani, other Bullom dialects, Krim, Kisi

3. Limba

II. Gur, etc.

As a framework for my analysis, I have adopted the thesis propounded in Greenberg (1977), "Niger-Congo noun class markers: prefixes, suffixes, both, or neither" and Greenberg (1978), "How does a language acquire gender markers?" Greenberg proposes a general process by which a set of noun affixes can be renewed by another set of affixes, which emerge first from the demonstrative, through the definite article, and on to the non-definite noun marker. What I attempt to do (perhaps unfairly) is derive some predictive force from his thesis and test these created predictions in a group of languages he mentions only peripherally. I look first at two languages appearing at the ends of the evolutionary continuum Greenberg proposes, and then move on to an evaluation of the entire Southern Branch. It turns out that an examination of the entire branch (intra-genetic comparison) is far more illuminating, and I arrive at an outline of just exactly how the languages are moving from a system of prefixation to one of suffixation by using the technique of implicational scaling.

## 2.0 Greenberg's thesis

Greenberg's proposal consists of two parts. The first concerns the origin of noun class markers and the second the renewal of already established markers. The renewal process can recapitulate the original sequence of events, namely, the change of a purely deictic element through stages of decreasing definiteness to a final stage of indefiniteness, where the form marks only the fact that the word with which it is associated is a noun. In the discussion which follows, I will be looking at languages with already established noun class markers to see how they have renewed their systems of affixation.

Specifically, Greenberg proposes four stages in the evolution of noun class markers, which are presented below.

(3) Stage	Examples from Gurma (Gur)
0: Demonstrative	Moba: no prefixes
1: Definite article	Gurma: definite article preposed
2: Non-generic article	Gangan: prefixed article with more functions than definitizing
3: Noun marker	Akasele: marker obligatory

Greenberg's analysis works as follows. He first identifies a set of languages in which there are different systems of affixation and in which a dominant and older pattern of affixation can be established. He then looks to see if

there might be different degrees of employment of the newer system. One way is with the newer system's being incompletely established: the new system of affixation has fuller phonetic substance and may be related to other defini-tizing forms in the language, such as the demonstrative and definite article. The second way is by seeing remnants in the more advanced language of an earlier system, such as initial consonant alternation registering the former presence of a prefixing system.

With this framework in mind, we could predict that in a set of related languages with synchronically different systems of affixation, we would find evidence of the process Greenberg suggests. The first prediction is that in the Southern Branch languages, which are generally prefixing, a comparison of two languages diametrically opposed in their systems of affixation, namely, Temne: prefixing, and Kisi: suffixing, would reveal in the more innovative language (Kisi) remnants of an earlier prefixing system.

The second prediction is that a wider comparison involving the other languages in the group will furnish additional evidence for the process Greenberg details, that is, renewal through an increasingly indefinite ar-ticle. It will be seen that there is evidence for earlier prefixes in Kisi, but the process by which the suffixes arose is not that proposed by Greenberg.

### *3.0 A comparison of Temne and Kisi*

There are a number of different ways one can look for remnants of prefixes in suffixing Kisi. One way would be by examining cognates. Three possibili-ties arise in such a comparison, the first highly unlikely since the suffixes are newer. The first possibility is that Temne has incorporated the elements which appear as noun class suffixes in Kisi; this state of affairs could have arisen from a Kisi reanalysis of earlier forms as represented in Temne. That is, Kisi analyzed proto-forms as consisting of a stem and suffix, separating a final element from the stem and treating it as a suffix. Nega-tive evidence for this possibility would lead us to believe that the Kisi suffix came from outside the proto-stem, that is, from another part of the language. Such is indeed the case, for none of the twenty-one cognate pairs I found exhibited this pattern.

The second possibility, and a far more likely one given the facts of the language group, is that Kisi has incorporated elements, which figure as prefixes in Temne, as part of Kisi stems. Evidence for the possibility would show that prefixes remained intact during the changeover from a pre-

fixing to a suffixing system. Four of the twenty-one cognate pairs displayed this tendency. The percentage (19%) is hardly convincing that this process is the dominant one; moreover, there are important qualifications to these pairs. Two of the four words are borrowed from Mande languages (Wilson 1961: 56, 63), and one, the word for '100', has no noun class suffix in Kisi. The two other examples are the words for 'millet' and 'water'. The former might also be borrowed, and the latter belongs to the interesting liquid class of Kisi, which has among its members a number of words beginning with *m* (more on this fact below).

The third possibility is that Kisi and Temne share only roots, and this was the situation with seventeen of the twenty-one cognate pairs. Since the Southern Branch is generally prefixing, this is convincing evidence that there is little tendency for prefixes to be preserved as the language evolves toward suffixes. This fact might also hint that a necessary first step in the switch might be the erosion of the phonetic substance and grammatical importance of the prefixes. That is, as prefixes fade in importance in signaling noun class membership, the slack must be taken up elsewhere. Because of the syntax of these languages, elements which signal noun class membership often follow the nouns with which they agree. Thus, these elements would be likely candidates for assuming responsibility for signaling noun class membership.

A second systematic way to look for remnants of an originally prefixing system in Kisi is to examine the initial segments of the nouns in each class. In this way it is possible to overcome the shortcomings of the small sample furnished by cognate pairs. In regarding Kisi nouns by class, a pattern to the initial segments is sought, one which would betray the presence of original prefixes. The results of such an analysis are shown below.

(4) Initial segment	Noun classes			
	-o	-laŋ	-leŋ	lexicon
k	29%	27%	13%	11%
p	10%	9%	9%	6%
b	19%	22%	15%	10%
s	25%	17%	18%	10%
Total number of different C's:	20	15	17	

(from Paulme 1964)

The first column represents the most common initial segments, and the next three represent the three most numerous classes. The fourth column shows the percentage of words in the total lexicon which begin with the given segments. The bottom row shows the total number of different segments beginning the nouns in each class. We see that the percentages for each noun class roughly parallel each other and are roughly comparable to the distribution of initial segments in the language as a whole. Thus, we find no evidence for the preservation of proto-prefixes in Kisi, just as we did when we examined cognate pairs.

We have seen, then, that it is difficult to secure evidence for prefixes in Kisi, yet this fact should not prevent us from seeing evidence elsewhere. In fact, there are a number of well-placed hints in the language.

One hint as to an originally prefixing system in Kisi occurs with members of the liquid class, a fact mentioned above. A number of the class's members begin with the bilabial nasal, and the noun class pronoun is *ma*.

(5)	mɛndaŋ	'water'	mɛmiaŋ	'tears'
	meeyaŋ	'milk'	mweyaŋ	'liquor'

Even more suggestive is the fact that the word for 'liquor' drops its suffix and prefixes its pronoun when negated.

(6)	i no mweyaŋ	'I have liquor'
	i no ma-mwe-le	'I don't have any liquor'
	pro-stem-neg	

There is at least a hint, then, that the liquids might have originally had a prefix corresponding to that found in the proto-language, for the bilabial nasal marks liquids throughout the group (see below).

A second hint occurs in the verbal morphology. Mukarovsky noted this fact in his comparison of Kisi and Bantu (1958:40), calling such forms "fossilized prefixes" (*estarrtes Prāfix*). In at least one tense/aspect as well as in nominalized forms, Kisi verbs partake of the noun class system. In most cases the verbs suffix the markers, but in some cases the elements are prefixed.

(7) *Suffixed*

kɔl	'drink'	kɔlaŋ	'drinking'
cal	'sit'	calli	'sitting'

*Prefixed*

kɔ	'go'	lakɔ	'going'
sim	'stand'	isisi	'standing'

Thus, we have a second piece of evidence for seeing Kisi as originally prefixing.

The most powerful evidence is that adduced by Sapir (1971), which presents a summary of Southern Branch affixes.

(8)	Temme	Sherbro	Krim	Gola	Kisi
Function					
Anim. sg.	ɔ-	∅	∅	o-/-o	-o
Inan. sg.	ɔ-	∅	∅	õ-	-o
Sg.	aŋ-	---	a-/-hã	---	-a
Sg.	ka-	---	ka-/-ga	ke-/-ε	---
Sg.	---	∅	ku-/-gu	ko-/-o	---
Sg.	ra-	li-/-li	li-/-li	ye-/-le	-leŋ
Anim. pl.	aŋ-	a-/-a	a-/-hã	a-/-nyã	-a
Pl.	ta-	thi-/-thi	tha-/-tha	---	-laŋ
Pl.	as-	si-/-si	sε-/-sε	---	---
Neutral	ma-	m-,n-,ŋ-	ma-/-ma	ma-/-ma	-aŋ
Neutral	ε-	i-	i-/-hĩ	e-/ye	-ei
Neutral	na-	---	mo-/-mo	---	-uŋ

Notes: "/" separates prefixes from suffixes.

"∅" signifies that there is a representative class but no affix.

All Temme prefixes are in the definite form.

The close phonological similarity among the affixes is readily apparent. Though Sapir invokes semantics only to identify each class as singular, plural, or neutral, and to mark three classes with an animate/inanimate feature, other semantic associations can be made. For example, the *ma*-class, the first "neutral" class in (8), commonly contains most liquids and juicy fruits. As mentioned above, it is not difficult to reconstruct a bilabial

nasal as part of the proto-affix. From this display it is clear that the affixes of Southern Branch languages are closely related. Thus, the suffixes of Kisi have a direct connection with the prefixes of Temne, which can be interpreted as representing the earlier forms.

We see, then, that there is evidence in Kisi for an earlier prefixing system, just as Greenberg's thesis would lead us to believe. It is interesting to note that I was unable to uncover such evidence in word-by-word or class-by-class comparisons. What the analysis of cognates and initial segments shows, however, is that the prefixes have almost completely eroded by the time we reach the stage represented by Kisi. It could be inferred from this fact that erosion of prefixes is a preliminary step in the shifting of the functional load of signaling noun class membership from prefixes to suffixes.

#### *4.0 Patterns of affixation in Southern Branch*

In the last section we saw how Kisi conformed to the first prediction of Greenberg's thesis. It remains to be seen if the languages exhibit the processural development he outlines. A look at Southern Branch as a whole shows clearly how Kisi has developed its suffixing system from a proto-prefixing system, which was probably similar to that found in present-day Temne. Though a number of languages show mixed systems of affixation, only Kisi has a fully developed suffixing system.

In his brief discussion of Southern West Atlantic, Greenberg correctly claims that the languages are predominantly prefixing, as was probably the case with the proto-language of this sub-group. Though he mentions that Limba suffixes an article, he states, "no language has developed suffixed class markers" (1977:100) probably on the basis of the same claim in Westermann and Bryan (1957). Moreover, he looks at two dialects of Temne (Sande and Konike) to show how the prefixing system is being renewed. He thus misses the predominant trend in the Southern Branch toward suffixation, represented at its zenith in Kisi. He also finds problematic the situation with Gola, with simultaneous prefixing and suffixing (1977:100). If one were to place the Southern Branch languages into the stages he sets up, it would be difficult to see the true state of affairs. In his focus on the definite article (and the definitizing function), he would see contrary trends in what is actually a unified system.

A second reason for discarding Greenberg's stages in terms of Southern

Branch is that his schematization does not display the full process. This may be criticizing Greenberg for something he was not trying to do, but it is nonetheless true we need a more finely articulated system for describing how suffixes actually arose. The display below shows what such a system would look like.

- (9) An implicational scale showing the probable diachronic sequence of events in the changeover from a prefixing to a suffixing system

## Feature

	<i>Temn</i>	<i>Sua</i>	<i>Limb</i>	<i>Sher</i>	<i>Krim</i>	<i>Gola</i>	<i>Kisi</i>
1. Binding	+	+	+	+	+	+	+
2. Animate concord	+	?	+	+	+	+	+
3. Suf marks plural	<u>+1</u>	<u>+2</u>	+	+	+	+	+
4. Prefix erosion	-	+	+	+	+	+	+
5. Noun class suf	-	-	+	+	+	+	+
6. Suf, sg & pl	<u>+3</u>	-	-	+	+	+	+
7. Suf all classes	-	-	-	-	<u>+4</u>	+	+
8. Suf exclusively	-	-	-	-	-	-	+

- Notes: 1. In Temne these suffixes mark only animate plurals.  
 2. In Sua the suffix marks only animate nouns but is suffixed to dependent elements for all classes.  
 3. Though the Temne suffix is used for singulars and plurals, it marks only animate nouns.  
 4. There was only one example of a suffixed form for one of the noun classes in Krim.

This more perspicuous display involves the same sort of approach as Greenberg's, namely, using functional and distributional criteria, yet it excludes consideration of the definitizing function in concentrating solely on the affixes themselves. At the ends of the continuum lie Temne (*Temn*) and Kisi with the other languages distributed in between. The different features (and the probable steps in the changeover) are explained below.

The first feature, binding (Sapir 1971), refers to the fact that a concord element may appear at the end of a noun phrase or a relative clause. For example, in Temne an agreeing pronoun appears after the noun when the noun is frontshifted for emphasis. In Limba a binding element appears at the end

of relative objectivals. The second feature is animate concord, which refers to the affix's losing its function of controlling concord; when a noun is animate, it will take concord in the animate class, not in the class determined by its affix. For example, in Sherbro the word for 'birds' *si-vee* takes concord in the animate class (A-class) despite its belonging to the S-class by virtue of its prefix.

Since these first two features are found in all languages of the Southern Branch, it might be argued that they should properly not be included as steps in the process. Yet it does seem they are necessary for the switchover from prefixation to suffixation to take place. For concord to be shown after the noun, there must be something there to show it. It seems highly unlikely that a suffix would appear there *ex nihilo* or via a hop over the noun. This element is provided by binding. Animate concord appears to be the foot in the door of the erosion in the functional importance of the prefixes. Namely, the prefix of a noun loses its function of controlling the agreement of adjectives, demonstratives, and the like, and agreement is determined by the feature [+animate]. For these reasons I have included the two obligatory features on the chart.

The next step is for the suffix to mark plurality (Feature 3). In Sua, for example, only one plural class is marked with a suffix, the animate plural, just as in Temne. In Sherbro two of the six plural classes use suffixes. The prefix suffers erosion next (Feature 4), and there are some forms with no noun class markers. Sherbro has two classes which have nouns without prefixes, and Krim has three.

Suffixes are then used, wholly or in part, to denote noun class membership and hence to determine concord (Feature 5). This is done in all Southern Branch languages except Temne and Sua. The use of functional suffixes spreads to both singular and plural classes (Feature 6) until they are used in all classes (Feature 7). Prefixes may be used simultaneously with suffixes with no functional difference between the two, as occurs in both Krim and Gola. According to Greenberg's proposal, the newer affix has to serve a greater definitizing function, but this requirement is not necessary for the scenario I have sketched. The last stage in the process is when suffixes are used exclusively (Feature 8), as in Kisi.

Thus, we see an analysis of synchronic variation leads us to a probable diachronic ordering of events. Two general processes are at work. The first is the erosion of the functional importance and the phonetic substance of the prefix. The second is the spread of the importance of the suffix, ex-

panding its domain from animate nouns, to plural nouns, to all nouns. It should be mentioned that I make no claim as to causality; the display in (9) represents only an implicational hierarchy, however suggestive it may be.

### 5.0 Conclusion

While it is certainly true that Greenberg's thesis allowed us to see that Kisi suffixes supplanted earlier prefixes, it did not allow us to see exactly how the changeover occurred. A more finely articulated approach was adopted, using an implicational model as a heuristic device. The features which supplied the values were those directly relevant to the noun class systems. Arranging the languages according to the features, I was able to construct a hypothetical step-by-step process.

It is still uncertain which element provides the source material for the noun class suffix, but it seems established that Southern Branch syntax allows for a number of possibilities. In Sherbro a definite article immediately following the noun is optionally followed by a noun class marker. In Limba the definite article has two suffixed forms (near and remote), and it seems likely that the suffixes evolved from the demonstratives (as in Greenberg's formulation). In both Gola and Krim, on the other hand, there is no definite article, though suffixes have already made considerable inroads in the languages.

In Kisi the process is clear. Kisi nouns (with their suffixes) are almost always followed by their class pronouns when in subject position, and Kisi pronouns are close in form to the suffixes of the nouns with which they agree. If we can assume that animate nouns are most often subjects of Kisi sentences, this might explain why animate nouns are the first to develop suffixes. To confirm that similar processes are at work in the other languages in the group, it would be necessary to examine the syntax of each language, an endeavor beyond the scope of this paper. Nonetheless, I have suggested that the feature of binding may be a clue to the process. Binding allows for a concordant element, unattached to a dependent form, to appear after nouns, and this feature is found in all Southern Branch languages.

An unexplored question is that of causality. Why is there this initial need to mark first animacy then plurality with an additional element? I can only point to analogous situations in other languages, a fact noted by Comrie, who has developed a hierarchy of animacy.

On the one hand, we have synchronic cross-linguistic evidence, such as the observation that separate accusative marking and verb object agreement are more likely with noun phrases that are high in animacy or definiteness. This generalization can be taken further, however, since it also characterizes the diachronic acquisition or loss of accusative case marking or verb object agreement. When these rules enter a language, they often apply first to noun phrases highest in animacy, only subsequently spreading to less animate/definite noun phrases.

(1981:212)

It would be interesting to test this hierarchy against the languages of Southern Branch, to see if it is the most animate nouns that are marked first.

Professor Greenberg (p.c.) has suggested one way in which animate concord might make its first foray into a language. In Lunda, a Bantu language of Angola, there is full animate concord; in a closely related language, Luvale, the process is at an earlier stage: only a few words show animate concord. In the example below the word for 'jackal' has a prefixed element identical to that for 'person' and takes concord in 1/2.

- (10) 1/2 mu-tu/va-tu 'person'  
 3/4 mu-tondo/mi-tondo 'tree'  
 mu-koko/mi-koko 'sheep'  
 mu-umbe/va-my-umbe 'jackal'

Professor Greenberg suggests that 'jackal' takes concord in the human being class because a personified jackal figures so prominently in folk tales. It seems, then, from the remarks of Comrie and Greenberg that the motivation for a change in a system proceeds from some combination of animacy and saliency, and may be a universal tendency.

A last question is whether or not there is any inevitability to the process. It would seem so, as much as there can be any inevitability to language change. The pressures of analogy seem to be fairly powerful within Southern Branch, and we have seen that there are hints of a move towards suffixation in all the languages. Temne appears to be the most resistant, but there are signals of suffixation there as well. Thus it seems at least probable that all of the Southern Branch languages will eventually follow the lead of Kisi and become fully suffixing.

## NOTES

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### Chapter 3

# The Expansion of the Gusii Tense System

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Bantu tense morphemes have two sources. A short list of some six to seven morphemes is reconstructable for the proto-language (Guthrie 1967-70, Meeussen 1967). Some tense morphemes, however, now used to mark tense in languages in the northeast cannot be plausibly reconstructed with their present functions.<sup>1</sup> Working out the morphosyntactic principles governing the transformation of this latter, semantically disparate, group of morphemes into tense morphemes is the focus of this paper.

The paper has two sections. First a brief review is presented of the complementary positions of Meeussen (1967) and Givon (1972) on the origin of Bantu tense morphemes. Meeussen focuses on those morphemes which are reconstructable as tense markers for the protolanguage while Givon concentrates on the appropriation of auxiliary verbs with aspectual meanings into the tense morphology. Morphemes which originally had other functions and the tenses in which they occur will be called "derived", and those which have always been tense morphemes and the tenses formed exclusively from such morphemes will be called "non-derived". The second section is devoted to an analysis of the tense system of Gusii, a language which makes a remarkably large number of distinctions, even for the northeastern area, where it is typical to find rich tense morphologies. The internal reconstruction carried out there will show one way a Bantu language might expand its tense system; first by introducing new tense morphemes and then by multiplying their arrangements and combinations.

#### 1. ONE- AND TWO-WORD TENSES

Meeussen (1967) has reconstructed a verb complex very similar to that found in many northeastern languages (1 is adapted from Meeussen; morphemes are listed in the positions and with the meanings he reconstructs):

(1.1)

Pr-Sc-NEG--TP-OC-	✓	VERB STEM		
		ROOT	-X1-X2-TS	
-tá-	-a-	recent	-a	neutral
-tĩ-	-ã-	remote	-jde	perfective
	-ngá-	conditional	-iite	present
	-ka-	future		perfective
-da-		disjunct (?)	-e	subjunctive
			-i	negative

The verb root can be preceded by up to five functionally distinct morphemes: a preprefix, marking negation or topic shift (Pr); a subject concord prefix (SC); a negative prefix (NEG); a tense prefix (TP); and an object concord prefix (OC) and can followed by two layers of baseforming extensions (X1 includes various valence suffixes, while X2 is habitual *-ag-*); and is terminated by a tense suffix (TS) with a characteristic final vowel.

There are restrictions on the combination of tense prefixes and suffixes -- only *-a* freely combines with all tense prefixes -- but tense suffixes and prefixes have evolved independently of one another. Despite attrition due to phonological interactions between the preceding verb base and *-jde* and some cases of outright loss, the system of tense suffixes has remained stable enough that reconstruction is fairly straightforward, at least for *-a*, *jde*, and *-e*.

The prefix system is comparatively unstable. The following examples from Bemba (Sharman 1956, Sharman and Meeussen 1955) show that a finite verb can have no, one, and even two tense prefixes:

(1.2)	a. No prefix:	tu- $\emptyset$ -fik-ile 1p-PROX-arrive-PAST	we arrived recently
	b. One prefix:	tu-a-fik-ile 1p-DIST-arrive-PAST	we arrived yesterday
	c. Two prefixes:	tu-a-ci-fik-a 1p-HODP-arrive-NEUT	we arrived today
	d. Preprefix:	ta-tu- $\emptyset$ -fik-ile NEG-1p-PROX-arrive-PAST	we haven't arrived
	e. Preprefix + One prefix:	ta-tu-laa-fik-a NEG-1p-ANTI-arrive-NEUT	we haven't arrived yet
	f. Prefix + two prefixes:	ta-tu-a-ka-fik-e NEG-1p-PROX-FUT-arrive-FUT	we won't arrive today

as well as having a preprefix. Meeussen breaks his tense prefix slot in two, reconstructing negative prefixes right after the subject concord followed by all other tense morphemes (-NEG-TP- in 1). The Bemba examples with two tense prefixes (2c,f) make it clear that more than one non-negative prefix can occur at one time. Negative elements are clearly not restricted to the position after the subject concord but can (and must in Bemba) occur in preprefix position.

The fluctuation in position of negative morphemes and the more troubling elasticity of the tense slot makes it premature to assign individual morphemes to particular slots between the subject and object concords in the protolanguage. However, individual morphemes have remained separable and identifiable in the modern languages, making the central concern less a question of the etymology of the tense prefixes and more a matter of figuring out what conditions might have stimulated the expansion of the tense slot, what principles control how elements may be rearranged, and what sorts of new elements can be introduced into the tense slot.

Apparent language-specific additions to the list of tense prefixes were the stimulus for Givon's (1972) revision of the traditional view that highly structured one-word tenses predominated in Proto-Bantu. Givon proposes that verbs with aspectual meanings, such as *begin*, *finish*, *continue*, and also *go* and *come*, were used during a preProto-Bantu stage as auxiliaries in front of a infinitive main verb complement. These verbal nouns lacked subject concord prefixes, as they typically still do in modern periphrastic constructions, outside of zone S, where languages such as Tswana have developed participles with subject concord (Cole 1955). Later these two-word constructions fused into a single word and the auxiliary became a tense prefix. Cross-linguistic differences are then explained by the fact that individual languages differ both in what verbs they used as auxiliaries and in the extent to which two-word tenses fused into single words.

Most likely the fusion of two-word tenses into single words has continued throughout the Bantu period. However, fusion has not eliminated two-word tenses; they are still quite common and in some groups, notably Sabaki, they are in turn replacing old one-word tenses (Nurse 1982).

Though Givon has clearly glimpsed a necessary complement to Meeussen's analysis, a number of problems still remain. Some tense prefixes show no sign of having been anything other than tense prefixes, and with the exception of *go*, *come*, and perhaps *finish*<sup>2</sup>, few derived tense morphemes can be traced back to verbs; many more are simply morphemes which got caught in between

when two-word tenses fused. These morphemes were reinterpreted as tense morphemes because of their *position* rather than any semantic appropriateness. Specifically, the morphemes *-ku-* or *-ko-* from the class 15 infinitive prefix, *-na-* from a particle meaning 'with, and', and *-li-* from a copula are among the more common of the new tense prefixes produced by fusion. The only way this reinterpretation of morphemes would be plausible is if Proto-Bantu already had one-word tenses where the tense marker occurred as a prefix after the subject concord, in the position where any morphemes caught by fusion would end up.

In those languages where *-ku-* is a tense morpheme, it also typically marks infinitives, which like finite verbs may take object concord, between *-ku-* and the verb stem, as in the following examples of two-word tenses with infinitival complements from Mwera (Harries 1950):

- |       |    |                              |                           |                    |
|-------|----|------------------------------|---------------------------|--------------------|
| (1.3) | a. | a-mal-ile<br>3s-finish-PERF  | ku-enda<br>INF-go         | he has gone        |
|       | b. | a-mal-ile                    | ku-va-koma<br>INF-3p-beat | he has beat them   |
|       | c. | tu-naa-pinga<br>1p-PRES-want | ku-m-wona<br>INF-3s-see   | we want to see him |

Fusion of these two-word constructions would produce the correct order of morphemes, with subject and object concords bracketing "tense" prefixes. *-ku-* also occurs inside verbs in Mwera, though it does not mark tense, but rather must appear in certain tenses when a verb shows object concord,

- |       |    |                                      |          |                     |
|-------|----|--------------------------------------|----------|---------------------|
| (1.4) | a. | tu-ci-gona<br>1p-IMMP-sleep          |          | we were sleeping    |
|       | b. | tu-ci-ku-n-koma<br>1p-IMMP-*-3s-beat |          | we beat him         |
|       | c. | tu-ci-ku-wa-apa<br>3p-give millet    | lipeemba | we gave them millet |

In these examples, *-ci-* comes from an auxiliary, which is also used with infinitives bearing a locative prefix in front of the infinitive prefix:

- |       |         |                 |                    |
|-------|---------|-----------------|--------------------|
| (1.5) | tu-ci   | n-ku-n-koma     | we beat him (= 4b) |
|       | 1p-IMMP | LOC-INF-3s-beat |                    |

Tense prefixes can appear in front of *-ci-* in both one- and two-word constructions: