

BIAFADA, PAJADE, AND THE 'POLYGLOTTA'

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Personal data is presented on Biafada and Pajade (Guinea-Bissau), two languages related to Konyagi and Tanda, and which occur in the *Polyglotta Africana*. In Biafada there are many noun classes, both singular and plural, there is concord with several parts of speech, and consonant mutation is important in both nouns and verbs. Neither plural classes nor mutation are found any more in Pajade, however. Both languages have very similar pronoun suffixation in the verbs. Koelle's remarkable samples show how little each language has changed in the last two hundred years or so.

Une visite en pays biafada et pajade (Guinée-Bissau) a permis de faire des notes sur ces deux langues (cousines du konyagi et du bedik) qui figurent dans la *Polyglotta Africana* de Koelle. En biafada les préfixes de classe foisonnent au singulier et au pluriel, et leurs accords se font avec plusieurs catégories de mots; de plus, la mutation consonantique est importante tant dans les nominaux que dans les verbes. En pajade, par contre, ni les classes du pluriel, ni la mutation ne jouent plus. En revanche, les deux langues ont dans les verbes une suffixation pronominale semblable. Le génie de Koelle nous permet de constater à quel point ces langues ont peu changé depuis bientôt deux siècles.

0. INTRODUCTION

Some years ago (Wilson 1965) I drew attention to the close relationship between Pajade (Pj), with its extinct consonant mutation (CM) system, and Biafada (Bf), whose CM system Klingenberg (1925) had deduced from Koelle's *Polyglotta* data. I here propose to examine various details of these languages, and then discuss Koelle's samples of them both.

Personal data from Konyagi (Kg) and Tanda (Td), two members of the same West Atlantic subgroup, will also be presented. Konyagi has mainly been studied by M. Houis, to whom I am much indebted.

1. CONSONANT MUTATION

Since mutation of the stem initial consonant is important in the morphophonemics of both nominal and verbal systems, the table of Biafada consonants is presented here. The role of the geminates, or long consonants, will be seen to be crucial: by overlooking them, the nasals and semivowels appear non-mutating, and grades I and II are blurred in the voiced stops.

1.1 BIAFADA

I - f r s h b bw d j g bw l m n ny ŋ w y
 II - p t c k bb bbw dd j gg gb r mm nn nny ŋŋ ww yy
 III - mp nt nc ŋk mb mbw nd nj ŋg ŋgb nd mm nn nny ŋŋ ww yy

Comments:

Velars are rare before front vowels; palatals appear before all vowels.

r has a dual role, being grade I of one set, and grade II of another.

There are no non-mutating consonants.

Following Sapir's important article (1971), the three grades are numbered in the reverse order to the numbering in my 1965 study.

1.2 PAJADE

Though Pajade no longer operates CM, its consonants can be displayed as follows, from both internal and comparative evidence (Wilson 1965):

I - f s s Ø r Ø,w b d j m n ny ŋ w y
 II - pp tt cc kk p t c k ʙʙ dɗ ʔy mm nn nny ŋŋ
 III - pp tt cc kk mp nt nc ŋk mb nd nj mm nn nny ŋŋ

Comments:

The three types of stop in grade II are striking, as is the fact that **pp tt cc kk** are not mutation variants of **p t c k**.

The occurrence of glottals in sets with non-glottals is met in Konyagi. In Tanda they appear to be non-mutating.

The dual role of **s** in grade I is paralleled in Tanda, where **v z z ʔ** (I) correspond to **p t c k** (II).

2. VOWELS

In both Biafada and Pajade the vowels are:

i i ee aa oo uu i e ə a o u

ə occurs both as a stem vowel and as a schwa in internal sandhi. In Pajade stems **ə** does not occur after **c j ny**, while its occurrence after **s** is limited, on Biafada evidence, to items where **s < *t**. In Tanda the same six short vowels occur. Long vowels occur so seldom in our data that their phonemic status is doubtful. Similarly doubtful is the status of **ɛ** and **ɔ** which were noted; they may be variants of **e** and **o**.

3. NOUN CLASSES

The class exponents in the languages concerned are listed in the Bantu manner of treating singular (Sg) forms and plural (Pl) forms as being in different classes. This has many advantages, not least as in this subgroup there is a many-to-many relationship between most of the classes, and a single listing of each set of exponents saves much repetition. Not only are there Sg/Pl pairs of nouns, but also sets of related nouns, such as trees and their fruit, each tending to be marked by the exponent of a given class.

3.1 BIAFADA

Class	Prefix	CM	'this'	Meanings
1	u-	I	we	Sg persons
2	bə-	I	mbe	Pl persons
3	Ø(wa-)	(any)	wannə	Sg animals
4	Ø(gaa-)	I, II	gaagə	Sg loans
5	bee-	I	beegə	Sg
6	bu-	I	bugu	Sg, Pl augmentative
7	bwa-	I	bwagə	Sg, Pl insects
8	fa-	I	faagə	Sg
9	fu-	II	fuggə	Sg
10	ga-	III	gannə	Sg
11	gə-	I	geegə	Sg, Pl animals
12	gu-	III	gunnə	Sg insects
13	ju-	I	jugu	Sg
14	lu-	I	lugu	Sg
15	maa-	I	maagə	Pl
16	ma-	II	maggə	Pl diminutives
17	ma-	III	maŋ	collectives and liquids
18	nu-	III	nun	Sg diminutives
19	nya-	I	nyagə	Pl (Sg)
20	saa-	I	saagə	Pl plants
21	sa-	II	saggə	Sg

Comments:

There is a relationship between prefix form and CM grade in two respects: All **CVV-** noun prefixes require grade I; grade II occurs only with **CV-** prefixes.

The class prefix itself is subject to CM in the demonstratives, for the initial consonant in 'this' which is in grade I, corresponds to a grade III initial consonant in 'that', for classes 3 onward, for example: 3 **wwannə**, 4 **ŋgaagə**, 8 **mpaagə**, 9 **mpuggə**, 14 **nrugu**, 15 **mmaagə**, 20 **ncaagə**.

The semantic labels by each class usually apply to only a small number of items.

In my data the main Sg/Pl pairings are as follows (grade I unless otherwise stated):

Sg	u-	(gaa-)	(w-)	(w-)	(w-)	(w-)	bu-	ga-	ga-	gə-	gu-	bu-
			III	II	III	II		III	III		III	
			III	III	III	III						
Pl	bə-	ba+gaa-	nya-	gə-	ma-	maa-	maa-	maa-	nya-	ma-	bwa-	saa-
					III					III		

The prefixes **gaa-** and **w-** occur in dependent words only, nouns and some other items having \emptyset . The **(gaa-)** class contains over ten percent of nouns in my sample, including many prefixless loans; in the plural nouns take the prefixes **ba-** + **gaa-**, and singular concords are used. A few nouns in other classes have plural in **ba-** + singular form.

The tribal and language name forms a three class set:

u-joola/bə-joola/ga-njoola 'Biafada person/persons/language'

3.2 PAJADE

In Pajade class concord operates only in the singular; all plurals consisting of **bə-** + the singular form use singular concords, as occurs with Biafada plurals in **ba-**. This led Koelle to say of his informant, "I did not succeed in getting plural forms from him: it may be that the language itself has lost them" (1854:2).

The class prefixes are as follows; all take grade I, and some take the additional grade shown. The presumed Biafada related prefix is also given:

Pj	Bf	Pj	Bf	Pj	Bf
wu-	u-	pa-II	bwa-	ma-I	maa-
bə-	bə-	fa-	fa-	ma-III	ma-
wə-III	(w-)	ka-III	ga-	nə-III	nu-
ka-	(gaa-)?	ko-	gə-?	nya-	nya-
pə-II	bee-	ku-	gu-	(sə-)II	sa-

Comments:

Prefixes with **ə** have **e** in some dependent words.

(sə-) has \emptyset prefix in nouns. Most nouns in this class in our sample are Mandinka loan words. The five nouns which do not

look foreign in this class begin with **t**, of which **s** is a mutation variant. The idea that **t** might be a class prefix is supported by the pair:

toosa 'face' and **maasa** 'eye'

The latter is thought from Biafada evidence to have a stem **-*Øasa** (Bf **-gəra**), and there is a not uncommon semantic relationship between the nouns 'face' and 'eye'.

In one instance a Mandinka loan word was quoted with concords of two classes: **kunnee** is given both **sə-** class, and because of its first syllable, **ku-** class concords:

kunnee seŋ = **kunnee kuna** 'the box'

The tribal, language, and country name shows a four class set:

wu-jad/bə-jad/ka-njad/pə-jad 'Pajade person/persons/language/country'

The language name preserves a CM grade III form.

3.3 GENITIVE LINK

In Biafada the genitive link ('of') is **-be**, which agrees in class and CM grade with its controlling noun:

boofa bube usa/maagəfa maabe bəsa	'man's head/men's heads'
nənda nəmbe usa/madda mabbe usa	'man's child/children'
nnaga bbe usa/gənaga gəbe usa	'man's cow/cows'

In Pajade the genitive link is the invariable **ye**:

poofa ye wusia weŋ	'the man's head'	(weŋ = determiner)
tiŋkiŋ ye wusia weŋ	'the man's stool'	

3.4 KONYAGI AND TANDA CLASSES

For the sake of comparison we here list the class affixes and other exponents in Konyagi and Tanda. The number of **V-** prefixes, and of homonymous prefixes requiring different CM grades is striking. In both languages there is for the most part, a many-to-many relationship between singular and plural classes.

3.4.1 Konyagi

The following data is culled from Houis (1964) whom I follow in writing **f** and **v** for bilabials. The three items listed are: class prefix (pfx), determiner (det), and relative pronoun (rel). Homonymous class prefixes are listed by rows, CM grades by columns. The class for personal singular nouns is listed first, as is customary.

<u>px det rel</u>	<u>px det rel</u>	<u>px det rel</u>	<u>px det rel</u>
a- a ale		a- ŋa ante	
i- ya ile		i- ŋa inte	i- nya inte
u- wa ule		u- ŋa unte	
∅ ya le		∅ ŋa nte	∅ nya nte
fa- fa fale		fa- fa fante	
ga- ga gale		ga- ga gante	
		va- va vante	
vi- va vile		vi- va vinte	
	vu- va vude	vu- va vunte	
və- va vəle			
wa- wa wale		wa- wa wante	

The personal noun classes are: **a-** (**ale**) / **və-** (**vəle**). The **vV-** and **wV-** classes are all plural; the **u-** classes are either singular or plural. The **i-** classes have up to five possible plurals; the two **wa-** classes each provide plurals of nouns in six different singular classes. There appear to be no instances where both a singular and a plural are in a class with **ŋa** determiner. Plurals in **u-** correspond only to singulars in **i-**.

3.4.2 Tanda

The Tanda classes are fewer in number than those of Konyagi, but their exponents are analogous. In this table the three items cited are: class prefix, determiner, and genitive pronoun 'my'.

<u>px det 'my'</u>	<u>px det 'my'</u>	<u>px det 'my'</u>
a- an aram		a- aŋ andam
e/ε- eŋ eram	e/ε- εl edam	e/ε- eŋ endam
o/ɔ- ɔl/ɔŋ ɔram	o/ɔ- ɔk ɔdam	o/ɔ- ɔŋ ɔndam
∅ in iram		∅ iŋ indam
bə- bən bəram		bə- bəŋ bəndam

Here again there is a many-to-many relationship between most singular and plural classes. Personal nouns have singular **a-** (**aram**) / plural **bə-** (**bəram**). The **ɔram** class is plural only; the **ɔndam** class is either singular or plural. The **a-**, **e/ε-** and **∅** classes are all singular. The **ɔndam** plurals correspond to nouns in all singular classes except **aram**. There is vowel harmony in the **e/ε-** and **o/ɔ-** classes, whereby **e-**, **o-** precede stem vowels **i**, **e**, **o**, **u**; **ε-**, **ɔ-** precede **ε**, **a**, **ɔ**; both qualities precede **ə**.

ekekeb/oyekeb	'chin'
edew/ɔrew	'beard'

4. THE VERBAL SYSTEM

The verbal morphology in this language cluster is too complex to be grasped in a sample not specifically aimed to do so. What does appear is that pronominal elements referring to subject and object are suffixed, that there is no class concord in the main verb (but there may be in some dependent clauses), and that CM operates in the verb if it occurs elsewhere in the language. CM in the verb stem depends on a number of factors, only one of which is class concord.

In Biafada (as also in Tanda) it is usual for the object to precede the verb, but this is not so in Pajade. In Biafada the 3rd person subject suffix is not used after a noun or disjunctive pronoun subject, nor is a 3rd person object suffix used after an object NP. Both types of suffix may, however, co-occur, and special fused forms do arise.

We here give a few examples from the four languages we sampled in the cluster which show the suffixes concerned. (n/k means not known.)

Subject suffix only ('I, you, etc., came'):

	Bf	Pj	Td	Kg
Sg 1	leegələm	reende	nəka'yowkəmə	-bu
2	leegəra	reeide	nəka'yowkəd	-ru
3	leegəle	reende	nəka'yowkɔ	-k
P1 1	leegələba	reebonde	nəka'yowkəmi	-bun (incl.) -igək(excl.)
2	leegəroon	reenunde	nəka'yowkən	-run
3	leegələmma	reebənde	nəka'yowəni	-ni

Comment: Kg **ɣ** is a nasal flap.

Subject + object suffixes ('he saw me, you, etc.)

	Bf	Pj	Td	Kg
Sg 3 + Sg 1	leelia	jeenəmande	nəkawatke	n/k
	leelie	jeenəmənde	nəkawatki	
3	leelia	jeenəmande	nəkawatkɔ	
P1 1	leeliaabo	jeenəməbonde	nəkawatkəbɔ	
2	leelieen	jeenəmənunde	nəkawatkun	
3	leeliamma	jeenəməbənde	nəkawatkəbi	

Subject + object suffixes ('I, you, etc., saw him'):

	Bf	Pj	Td	Kg
Sg 1 + Sg 3	leeləməna	jeenəmanande	nəkawatkəmə	n/k
2	leerama	jeeniande	nəkawatkədə	
3	leelia	jeenəmande	nəkawatkəno	
Pl 1	leeləbana	jeenəbonande	nəkawatkəmə	
2	leeronia	jeennunnande	nəkawatkəno	
3	leeləmma	jeenəbənande	nəkawatkəno	

For comparison we list here the disjunctive pronouns and the subject and object suffixes, so far as they can be abstracted:

	Bf			Pj			Td			KG		
Sg 1	mma	-m	-m	mma	-ma	-an	wonə	-mε	-ε	mi	-bu	∅
2	iyi	-ra	-ε	wi	-i	-en	wəj	-d	-i	od	-ru	-ig
3	mom	-ma	-ia	ŋe	-me	-an	məŋ	-ɔ	-ɔ	um	-k	∅
							ajə					
Pl 1	bon	-ba	-bo	boŋ	-bon	-aborj	bi	-mi	-bɔ	vun	-buŋ	-vug
											igək	-nog
2	een	-roon	-en	nurj	-nun	-enuŋ	wən	-n	-un	ug	-run	-ug
3	nimma	-mma	-mma	bəŋee	-bən	-abəŋ	bəjɔ	-ni	-bi	vəni	-ni	?

Comment: Some of the 3rd person disjunctives are in fact demonstratives.

In each language the negative has its own distinctive mark. We give one example of each:

		negative mark
Bf	leeraam 'you did see him'	-al-
	lealaam 'you did not see him'	
Pj	damiande 'you did kill it'	-re(n)-
	damreniaŋ 'you did not kill it'	
Td	nəkazaankəd 'you went out'	CM II + -ena
	edicaanəna 'you did not go out'	+inversion
Kg	tokəru 'you ate it'	-l- + ?
	tokliŋa 'you did not eat it'	

In Biafada the relative clause verb shows class and CM concord:

usa leem uleegəre	'I saw the man who came'
bəsa leem bəleegəre	' " men " '
puula leem reegəre	' " girl " '
maafuula leem maaleegəre	' " girls " '
nənda leem nənreegəre	' " child " '
madda leem mareegəre	' " children " '

All personal plurals may take the personal plural verb **bəleegəre** by notional concord instead of strict class concord.

CM in Biafada verb forms not involving class concord is shown in the following:

lii lie	'he did it'
ntie rii	'he is to do it'
mənaa rii	'I am to do it'
salam	'I hear'
jeena calam	'I want to hear'
leega	'come!'
nreegudo	'don't come!'
rooda	'go!'
ntoodo	'don't go!'

In Pajade it is in the last two verbs that the only clear vestiges of CM are found:

raande	'I went'	reende	'I came'
taja	'go!'	teea	'come!'

The Tanda examples quoted above show **c/z** alternation because CM operates in addition to the other perturbations in the switch from affirmative to negative:

nəka-zaan-kəd	'you went out'
edi-caan-ɛna	'you did not go out'

The pronominal element is final in the affirmative, but before the stem in the negative, somewhat as in the 'is to' forms of Biafada quoted above.

For Konyagi the following set is quoted by Houis (1964), showing both nominal and finite forms; the stem is **-ŋkəd/-gəd/-wəd** meaning 'bar the way':

igəd	(name of action)
ŋkədka	he barred his way
wawədna	they barred his way
aŋkəd/vaŋkəd	small closed valley/valleys

5. COMPARISON WITH THE POLYGLOTTA

Koelle calls the languages **Bia:fada** (I.C.1) and **Padsa:de** (I.C.2). In all examples following, the Koelle data is given first and my data follows in parentheses.

5.1 PHONOLOGICAL NOTES ON KOELLE'S DATA

Koelle uses seven-vowel notation, marked with a colon when long. Since, however, **ɛ** and **ɔ** are not phonemic in these languages, I transliterate them as **e** and **o**. Unfortunately length, both in

vowels and in consonants is the weak point of Koelle's data. In vowels it randomly coincides with length in my data, but in consonants it is overlooked, except for about two examples of **nn**.

The vowel **ə** does not occur in the Koelle data; the **i** and **u** which usually occur in its place are frequently long:

Bf	musu	(mməsə)	'mouth'
	gunu:fa	(gənəfa)	'ear'
	le:gili:m(u)	(leegələm)	'I have come'
	di:nd-	(dənd-)	'weep'
Pj	ko:bele	(kobəda)	'arm'
	pimes	(pumməs)	'mouth'
	kur-	(kər-)	'run'
and note:	pebr	(pebər)	'female breast'

The presence of a long consonant is often indirectly heeded, **V:C** occurring for my **VCC**, and sometimes **CV:** for my **CCV**:

Bf	co:ga	(cogge)	'parrot'
	wuli:na	(bulənna)	'snake'
	wu:d-	(wudd-)	'cover (vb)'
	wapo:ho	(bappo)	'ten'
Pj	ku:ci	(kuccu)	'smoke'
	paku:se	(pakkusa)	'axe'
	po:de	(podda)	'rice'

Final **C**'s are rare in the Biafada data: usually where I have such, Koelle has an additional short vowel.

Bf	bu:ri/ma:ri	(bu-r/maa-r)	'tree'
	una:li	(u-naal)	'woman'
	le:gili:m(u)	(leegələm)	'I have come'

In Pajade the position is rather the reverse.

	mat	(matte)	'wood'
	pasac	(pasacci)	'hair'

Initial **b** is often weakened to **w** in Koelle's Biafada data. The **bu-** and **bwa-** prefixes are the most affected. On the other hand, initial **u-** may appear as **wu-**.

Bf	wei	(bwa-i)	'hair (collective)'
	guncu:du/	(gu-ncudu/	'bird'
	wasu:du	bwa-sudu)	
	wuce:l-	(buceel-)	'fall'
but:	wunya/banya	(u-nya/ba-nya)	'person'

The palatals are more consistently noted than in other samples, Koelle's **dʒ** nearly always appearing for **c**, and only a few times for **j**, which is usually **dy**. The use of **k** and **g** before front **V** has been mentioned; in one instance both **k** and **dʒ** are given.

Bf	gi:r-	(jiir-)	'cold'
	kera:ni	(ceran)	'knife'
	dšo:k-	(jook-)	'hot'
	gisa:du/	(ju-saadə/	'dog'
	madša:du	ma-caadə)	

Koelle's **ds** is rendered as **c** in this article. Koelle's use of accents is hard to account for. They are ignored here except where they are the focus of a discussion.

5.2 CONSONANT MUTATION

It is only in nouns that CM manifests itself in Koelle's data.

5.2.1 Biafada

From Koelle's data one readily observes the following CM pairs:

f/p r/t s/c h/k ɣ/g

Another possible pair is **l/r**, which Klingenberg (1925), unlike Krause (1897), regards as probably only variants. What one cannot decide from Koelle is whether nasal-consonant (NC) sequences should be analysed as **n + C**, with the **n** being either a nasal prefix (or part of a **CVN-** prefix), or a component of a **NC** unit within the CM system. In fact the latter solution is systemically the most convenient. The consonants which appear in Koelle may, then, be tabulated as follows for CM purposes:

f	r	s	h	b,w	d	ny(?)	ɣ	l	n
p	t	c,k	k					r	
mb	nt	nc	ŋk	mb	nd	nj	ŋg		nn

In addition there are further **C**'s which show no other CM grade in the data:

j g m ŋ y w

Missing from this scheme are what Koelle has noted only twice, and implied a third time, namely the long, or doubled **C**'s. His examples are:

ñnaya/gūna:ya	(nnaga/gənaga)	'cow'
mānna	(manna)	'milk'
ñya/gūnya	(nnyaa/maanyaa)	'coal'

The accent mark in the last implies that Koelle heard more than a simple **ny**, which possibly was the long **nny** I myself noted.

Comments:

The apparent **mb/p/f** should presumably read **mp/p/f**.

The apparent **nj/ny** mutation is not attributable to CM, since Koelle has the same pair in variation in stem medial position elsewhere.

The **b ~ w** variation is not a CM feature. In many examples Koelle seems to have heard a bilabial fricative, which would be noted as either **b** or **w**. Koelle also never notes the sound **bw**, which usually appears as **w**, sometimes as **b** + back vowel.

5.2.2 Pajade

Though the loss of plural classes has eclipsed CM in nouns, Koelle does have one semantically related pair of nouns in different classes showing the CM variants **s/t**:

	pis		'tree'
	mat	(matte)	'tree, wood'
(cf. Biafada:	bu-r/maa-r		'tree, stick')

5.2.3 The origin of CM

In his discussion of Koelle's data, Klingenheben (1925), like Krause whom he quotes at length, is led into difficulties by taking a 'class' to include both members of a singular/plural pair rather than treating each form of a noun as being in a separate class. In reference to CM this has two effects: first, it implies that some stems are non-mutating while others show CM, as if the mutation were an inherent feature of the stem itself; second, it distracts attention from the fact that other word categories also display CM. It is true that the Koelle material does not show CM outside the nominal system, but since evidence from Biafada was used to theorize about CM in Fula, this led to focussing on nouns alone.

Klingenheben sets up three groups of classes: (1) singular and plural, both fricative; (2) singular fricative/plural plosive; and (3) singular plosive/plural fricative. This is made possible by treating initial **NC** as **n** + plosive, and **CV-** + **NC** as **CVN-** + plosive. It does, however, make Klingenheben doubt Koelle unjustly. When given the two examples

ntubā:nyo/mantubā:nyo	(ma-ntəbany)	'maize'
nda:hu/gūda:hu	(ndaf/gə-daf)	'goat'

Klingenheben queries the initial **nt** of the first, but accepts the **nd** of the second, simply because of the different CM grades in the plurals and the need to set up a new singular/plural 'class' to accommodate the first noun. Was he influenced by Koelle's rather subjective accent on the word for 'goat'? But there is no problem: both singulars are in the same class, with zero prefix and grade III initial consonant, while the plurals are in classes with different prefixes, requiring different CM grades.

Klingenheben, and even some recent writers, find it a great problem to decide on the 'original' consonant, and suppose that since so many forms, including 'non-mutating' nouns, show fricative initials, this must be the original grade. If this is assumed, one then has to wrestle with the problem of how fricatives

were strengthened into plosives; perhaps by a nasal or by some consonant now lost. In fact, the fricative (grade I) is the least sure starting point, since this is the grade in which, as in Fula, one item may commonly occur in two or more CM sets. In Fula we find **w** and **y** in these sets: **mb/b/w, nj/j/y, ng/g/y,w,**'. In Konyagi **y** occurs in three sets. In Tanda **z** is related to both **c** and **t**.

On the principle that where variants overlap one should take the distinct forms as primary, there is no question that the plosive (grade II) should best be taken as primary, and not grade I. Grade III, commonly incorporating NC's, should also be taken as secondary.

Biafada happens to be particularly interesting in providing evidence of CM conditioning. We have already mentioned that there are two ways in which class prefix and CM correlate in Biafada: all **CVV-** prefixes take grade I, and grade III follows **CV-** prefixes only. In the demonstrative 'this' one sees that the grade III classes are the only ones to have nasals: **wannə, gannə, gunnə, man, nun**. There would then seem to have been an original **CVN-** prefix in these classes. In the **wannə** class, nouns now have zero prefix, with any one of the three grades, the **wa** would have been lost at some stage, but the nasal element remained in the grade III items. Possibly the items with other grades lost this or other prefixes, then were treated as having zero prefix and given **wa-**concord. The classes with grade II have demonstratives **gaagə, fuggə, maggə, saggə**. The last three all have **CV-** prefixes, and two of them are in contrast to **CVV-** prefixes with grade I: **maagə, saagə**. If the (**gaa-**) class now has two CM grades, this may be due to a blurring of classes when a ***ga-** and a ***gaa-** prefix were lost in the nouns. It is now in the (**gaa-**) class that most foreign words are found, many of which begin with the voiceless stops associated with grade II. Of the grade I classes, all the **CVV-** prefixes found in nouns also occur in 'this': **bee-, maa-, saa-**; but **faagə** and **geegə** both concord with nouns having **CV-** prefixes: the **bu-, bwa-, ju-, lu-, nya-** classes all have **CV-** in 'this'. It seems that **fa-** and **ga-** result from some vowel shortening, but the conditions escape me. The retention of length in **maa-** and **saa-** could be due to the need to maintain the contrast with **ma-** (and ***man-**) and **sa-**, but this would not account for the retention of **bee-**.

What this evidence suggests, then, is that, assuming grade II to be primary, grade III would arise from a sequence **N + C**, while grade I would arise from a weakening intervocalically, especially after a long vowel. Subsequent changes in vowel length, and other phonological developments would then obscure original conditioning. And though the changes are more easily inferred from a table of class exponents, we may be sure that the other manifestations of CM, notably in the verbal system, arose from similar conditioning.

5.3 MORPHOLOGICAL NOTES ON KOELLE'S BIAFADA NOUNS

A prefix **a-**, **e-**, or **i-** occurs in some words where we noted \emptyset with **wa-** concords:

agi:ra/magi:ra	(gəra/maa-gəra)	'eye'
acu:a/ma:su:a	(cuwa/maa-suwa)	'fowl'
ete:nje/ma:re:nye (sic)	(tenje/maa-renje)	'heel'
era:fa/ ?	(raafa/maa-laafa)	'neck'

There are several instances where there is a difference of class in Koelle's data and in mine:

ganci:ni/nyesi:ni	(nya-sin/ba-nya-sin)	'nose'
	(Koelle's singular may well mean 'nostril' as is found in other languages of the area.)	
baɣu, wayu/bawa:ɣu	(bwa-gə/maa-bwa-gə)	'belly'
gumpale:la/ ?	(mpalala/gə-falala)	'sheep'
gambo:ei/wei	(ga-i/bwa-i)	'hair'
egu:mu/ma:gu:mu	(bu-gum/maa-gum)	'knee'

In Pj, on the other hand, such differences are rare:

ku:cu	(wacu)	'bee'
ma:nye	(penny)	'tooth'
kojo:jo:r	(pecoocor)	'elbow'

As the table of prefixes shows, the prefix **maa-** occurs both long and short: **ma(:)-**, but the prefix **ma-** is written short, except here:

buca:mbu/ma:nca:mbu	(n/k)	'farm'
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This, however, is almost certainly a misprint, since **VVNC** sequences do not occur elsewhere in the language.

Koelle's singular/plural pairs are:

Sg	u-	\emptyset	\emptyset	\emptyset	e-	wu-	ndu-	gi-	ga-	gu-	bi-	i-	\emptyset
			II	II		bu-	II	gu-	III	III		II	III
Pl	bi-	ba-	nya-	ma-	ma-	ma-	ma-	ma-	nya-	wa-	sa-	gu-	gu-
			ma:-	ma:-	ma:-	ma:-	ma:-	ma-	bo-	sa:-	gu-	gu-	III

Comments: Just as Koelle's inconsistent marking of vowel length obscures the difference between **CV-** and **CVV** prefixes, so the nonmarking of long C's makes **CM** grades difficult to allocate to the classes.

Without examples of dependent words the \emptyset classes cannot be distinguished. The apparent **ndu-** class occurs in only one example, which is absent in my data.

Nouns in \emptyset /**ba-** do not have a singular prefix after the **ba-**, as in the **ba-gaa-** plurals of my data.

5.4 GENITIVES

Koelle shows two examples of a genitive construction, both of which present problems. The genitives and the corresponding isolated nouns given by Koelle are:

ndura:ŋo	begu:bida	'forearm'	buse:de	gweyo:ya	'ivory'
ndura:ŋo/mala:ŋo		'neck'	ake:de/mase:de		'tooth'
gubu:da		'arm'	iyu:ya		'elephant'

In the first set, **be-** is the genitive link with \emptyset suffix: presumably in view of the grade III initial **nd** in the noun, we should read ***bbe-**. (The expression 'neck of arm' directly translates the Mandinka **bulu-kango** 'arm-neck', which in fact means 'wrist' rather than 'forearm'. Many Mandinka calques occur in both Biafada and Pajade.)

The noun for 'neck' is itself puzzling. On the one hand we have the unique apparent class prefix **ndu-**, as shown in the singular/plural pair. On the other hand, though the **r/l** variation suggests CM after class prefixes, the plain **be-** in the genitive suggests that the singular noun has a zero prefix.

In the second set, the first noun is in the **bu-** class, which has augmentative value when contrasted with another class. The meaning therefore is 'big tooth'. But the form **gwe-** for the genitive link is mysterious. For the **bu-** class one would expect ***bube**, but Koelle does have instances of **gw** for **bw**, and I have one **ŋgb** for expected ***mbw**. So **gwe-** may result from ***bube** > ***b^wbe** > ***bbwe**, or some such transitional forms.

5.5 LOCATIVES

The following complex expressions can be recognized as locatives indicating position. In the first one **gw** occurs for **bw**, as mentioned already.

foganta:hugwa:mi:na	'outer hand' (cf. ganta:fu 'palm of hand')
foguraŋ kawa:sugu	'instep' (cf. gura:ŋka 'leg')
foguraŋ kaga:li	'sole of foot' (-do-)

The initial **fo-** is the locative marker; my data gives the following position words: **bwaaməna** 'back, rear', **bwaasəgu** 'top', **gal** 'under'. Koelle's data, then, may be rendered literally as: 'behind the hand', 'on top of the foot/leg', and 'under the foot/leg', respectively.

5.6 VERB FORMS

Since Koelle gives all his verbal glosses in the simple present, it is difficult to be sure exactly what the informant is in fact giving. For most verbs, given the interference of Krio in Sierra Leone English, we may expect a simple past, or a perfective, especially with verbs such as 'see' or 'catch', which are not readily durative. In other verbs, such as 'sew' or 'play', the informants seem to have given a progressive or imperfective form, perhaps as the action was being enacted by Koelle as he was eliciting the word. The items which Koelle glosses as adjectives are usually 3rd singular forms of adjectival verbs, meaning 'it is x'.

5.6.1 Biafada

Most verbs display the 1st singular subject suffix **-mu** (**-m** in my data), and two have the combined suffixes **-me** 'I + thee', as in my data. The 3rd singular adjectival verbs end in **-e**. These suffixes are usually preceded by an element **-ii-**, or sometimes **-uu-/-u-**, neither of which occurs in my data. Examples of verbs in **-ii-** are:

le:gili:m(u)	(leegələm)	'I come'
wuce:li:mu	(bwəjeeləm)	'I fall'
nunjili:me	(nunj-)	'I give thee'
dukili:me	(dukkələme)	'I love thee'

Adjectival verbs:

gi:rli:e	(jiirle)	'(it is) cold'
bangili:e	(bangəle)	'(it is) black'

Two of the few negative forms cited by Koelle are:

gamali:mu	'I do not dance' (?='I did not dance')
woya:le	'bad' (presumably 'it is not good'; cf. woyali:e '(it is) good')

These both show the negative marker **-al-**, being analysable as: **gam-al-ii-mu** and **woya-al-e**.

Verbs in **-uu-/-u-** denote processes which can be durative, and we may assume that this element marks duration; in these examples a noun object precedes the verb:

mambiya na:ŋu:mu	'I drink water'
wu:ruhabu:mu (sic)	'I cut a tree'
wuru: maru:mu	'I break a stick'
layi wu:dumu	'I cover a pot'

In a few instances we apparently have composite progressive forms using a verbal noun or stem + auxiliary verb, the stem of which is **-g-/-ɣ-**.

wugamu:gumu	(maa-gam verbal noun in my data)	'I dance'
boaro: a:gumu (sic)	(roo-)	'I go'
ɲi:nragu:mu	(ɲənra-)	'I snore'

The apparent auxiliary status of the **-g-** is suggested by comparing these two forms in which there is a reversal of the two main components as between affirmative and negative:

gune:hoyu:mu		'I play'
galmuni:ho	(niho-)	'I do not play'

In the affirmative we have verbal noun (**gu-nniho** in my data) + **-ɣ-uu-mu**, and in the negative **g-al-mu** + stem, where **-al-** is the usual negative marker. We see from this comparison that the negative of 'I dance', given earlier, cannot in fact be a parallel form to Koelle's affirmative.

5.6.2 Pajade

Koelle's Pajade forms are closer to my data, some being indeed identical. Often the only difference is in the vowel corresponding to my **ə**.

ko:ronde	(kooronde)	'I am ill'
da:ta:nde	(daataande)	'I slept'
co:dende	(coodənde)	'I sat down'
ɲi:manende	(-ne- = 2nd Sg object)	'I love thee'
niɲkamane:nde		'I give thee'

Adjectival verbs:

ɲa:bende	(ɲaabənde)	'it is cold'
rafonde	(rafənde)	'it is old'

An object noun follows the verb stem, but in some instances, probably in fact progressives, the subject marker follows the object. Koelle clearly had trouble with these forms, as his word division implies.

ca:mpema:no	(jaam- + pəmaano)	'I eat rice'
damem paca:fe	(daməm + pacaafe)	'I eat chicken'
munci nise na:de	(munj- 'hit'; nisen 'child')	'I beat a child'
mu:fan tou kina:de	(muuf- 'cover'; tou 'pot')	'I cover a pot'

In my data, the verb form retains its same suffixes whether before or after the noun object:

jeenəmanande wusia weɲ = **wusia weɲ jeenəmanande** 'I saw the man'

The object suffix (-na-) is present in both positions, unlike in Biafada.

Negative forms cited are:

wai:nde		'(it is) good'
wai:ra		'(it is) bad; (= not good)'
ma:mpini:na:de		'I play'
kampi ni:na	(niinaa-)	'I do not play'
ma:mpe kame:de		'I dance'
kampe kaŋ	(kam-)	'I do not dance'
na:re kono:fe		'stupid (he hasn't an ear)'

There are three different negative markers. In the first: **-re** Neg. + **-a** 3rd Sg. In the next two: **ka-** Neg. + **-m** 1st Sg + **pə-** verbal noun prefix (cf. **kampəraa** 'I'm not going'). In the last: **-re** Neg. is added to **naa-** indicating ownership. The forms glossed 'I play' and 'I dance' have no parallel in my data, but the first part seems to be 1st singular, followed by verbal noun. The occurrences of **-de** in Koelle's verb forms differ from my data in not occurring before a noun object, but sometimes following it (with the subject marker). This suggests that it may be an assertion marker, used only in the affirmative.

5.7 NUMERALS

Koelle's (K) data and mine (W) are here listed:

Biafada

(K)	(W)
1. numa	nnəmma
2. bi:he	bihe
3. bi:yo, bi:co	bijo
4. bine:hi	bənihi
5. gubi:da	gəbəda
6. mpa:gi, mpa:ji	mpaaji
7. mpa:jiŋga:ni	mpaajiŋganyi
8. wase	wose
9. lue:rubo	liberebo
10. wapo:ho	bappo
11. wapo:ho ŋganu:ma	bappo ŋga nnəmma
12. wapo:ho ŋgama:ŋge	bappo ŋga bihe
...	
20. wapo:ho wayu:ŋke	bappo waŋke/babuŋke
30.	bappo bagunjo

Pajade

	(K)		(W)	
	<u>simple</u>	<u>compound</u>	<u>simple</u>	<u>compound</u>
1.	paini		paine	(pakkaanj)
2.	ma:e		maae	
3.	macou		macaw	
4.	ma:ne		maanne	
5.	kobeda		kobəda	
6.		ɲkaine		ɲkaine
7.		kama:e		ka maae
8.		ka macou		kamacaw
9.		ka ma:ne		ka maanne
10.	papo		pappo	
11.		ɲgapa ka:ni		ɲka pakkaanj
12.		ɲkama:e		ɲka maae
20.	papo ma:e			

Comments:

In Bf '1' to '4' are concordant and subject to CM. In Pj the forms are frozen in both prefix and CM grade.

Pj **paini** '1' is used in counting only; **pakkaanj** is used in noun phrases.

Pj '6' to '9' are additions: '5+1', etc., but Koelle omits the '5', as is usual in counting.

Bf '7' seems to be '6+1', with a '1' relatable to Pj **-ine**.

Bf '10' is invariable in the multiples '10x2', '10x3', but its class concord with the multiple seems uncertain.

In the additions, '6+...', '7+1' and '10+...' Bf **ɲga** = Pj **(ɲ)ka** = 'and'. Koelle's irregular word division shows he had not grasped their structure.

6. INFORMANTS' ORIGINS

For Biafada, Koelle had an informant from the villages of Ta:ba and Wa:kora, who was captured at the age of 22. My informant was from Cubisseco. For Pajade, Koelle had an informant from Uda:cã:, who was captured at the age of 23, and was in his 60's when Koelle met him. My informant was from Canquelifā.

7. CONCLUSION

Comparing one's personal data with Koelle's is both moving and humbling. To marvel at his accuracy seems presumptuous; to point out his inconsistencies and apparent errors, however, is in no way to belittle him. Rather it is a measure of Koelle's stature that his samples are still worth close study in the light of modern data. Since most of his informants learnt their mother tongues nearly 200 years ago and were soon divorced from the communities which spoke them, Koelle gives us a rare glimpse into the past.

Fascinating as are the complexities of the concord, class, and CM systems in the Biafada subgroup, their simplification in Pajade requires comment. Where the class prefixes are phonetically simplest, many comprising a single phoneme as in Konyagi and Tanda, the plural classes, the concord, and the CM all operate much as in Biafada. In Pajade the simplification is not ascribable to phonetic reduction, but rather to non-use of available inflexions. This led to the freezing of most nouns in their singular form and the freezing of stems in one or other CM grade, while the concord was applied to demonstratives only. Koelle's material shows us that the loss of these features in Pajade is no modern development.

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