1. The languages *Fulup* (L.A.1) and *Fulham* (L.A.2) in Koelle's *Polyglotta Africana* represent two distinct dialects of Diola (Dyola, Jola), the major language of the Diola group that also includes Kwaatay, Karan, Bayat and Gadil. This group represents one section of the Bak branch of West Atlantic, the other branches being the Manjakul (Koelle's L.B. languages) and Balanta (Koelle's *Bulanda, XII* (B).3) groups. Diola is spoken in the Lower Casamance region of Senegal, while Manjakul and Balanta are spoken to the south, primarily in Bissau Guinea.

2. Of the two dialects, *Fulham* is readily identified as Fogny, the most important dialect to the north of the Casamance River. The modern representative of *Fulup* is less certain, though it appears, from the evidence to be considered below, to be closest to Banjal (Bandial), the dialect spoken to the northwest of Niassa, south of the Casamance River in such villages as Bandial, Seleki, Kamobeul, and Essil.

3. This paper will concentrate on a number of items all stemming from an inspection of Koelle's material. They are: (A) the place of *Fulup* in Diola, (B) a discussion of the term *Fulham*, etc., (C) an evaluation of Koelle's transcription of *Fulham* vowels, and (D) a discussion of a number of consonant shifts observed between *Fulham* and Fogny which represent a general drift within Diola towards allophonic simplification, a drift apparently paralleled in the Manjakul group. In conclusion I shall briefly (E) parse Koelle's sentences.

A. The place of *Fulup*

4. The term *Fulup* (Floup, Felup) is commonly used by the Portuguese in referring, in general, to the Diola. It is given a more restricted meaning by Thomas who applies it to the Diola living around Oussouye (Husuy) and to those of Suzannah in Bissau Guinea.

5. The Diola themselves recognize three variants of the term: *fulp, fulp*, and *fulp*, where the *f>b*, and the *p>f* are regular sound correspondences diagnostic of dialect variation and recognized by the Diola as such, and the *bu* is a different class marker. *Bulp* refers to the area north of the Casamance River, to the east of the Diouloulou marigot, to
the south of the Bignona-Balla road and to the west of the Bignona marigot. Thomas refers to the region as the Djougout. Huluf refers specifically to the Diola of Oussouye and its neighbouring villages, Thomas' northern Floup. The term Fulup, at least in the Point St. Georges (Mulomp, Samatit, etc.), Oussouye and presumably the Banjal areas, is used rather vaguely to designate Diola living to the south, primarily in Bissau Guinea. However, the Diola of the border area, as in the Sénégal villages of Effoc and Youctou are generally called by themselves and others the Jamat (Thomas' Diamat), while those in Bissau Guinea, living more towards the coast, e.g., in Cassalol (Kasolo), simply call themselves Diola without further precisions. Other people to the east of Cassalol, around Aramé (Edamé) do not speak Diola at all, but rather a language they call Gadil that appears to be closer to Bayot than to Diola. Thus there appears to be no modern Diola sub-group, with the possible exception of those living around Suzannah, who specifically call themselves or their region Fulup, only Huluf and Buluf.

6. Obviously Isambakon, Koelle's informant, used Fulup in the general sense employed by the Portuguese. This would be a reasonable assumption on two counts. First, as we shall see, Isambakon's speech places him in the Banjal area where neither the term Fulup nor its variants apply. Secondly, his residence of five or more years in the Portuguese towns of Cacheu (Garou or Kacou) and Bissau (Bisso) would have surely accustomed him, despite the inaccuracy, to calling his own ethnic sub-group the Fulup.

7. Koelle's introductory remarks are somewhat helpful in locating Isambakon's place of origin. Though his birthplace, Bateendu, cannot be found, the nearby villages ('where the same language is spoken') of Bandjaal (Bandial) and Esnig (Estig) can. We are misled by his remarks that Bateendu is 'about one mile distant from the sea.' But since all inland Diola use the same word fa:l (or ha:l) for both 'ocean' and 'river', we can assume a misunderstanding between Koelle and his informant. What was meant was the Casamance River, not the Atlantic Ocean. Aside from Siggjoot, i.e., Ziguinchor (it is usually called either Sigicor or Siiicor by most Diola), the other towns mentioned cannot be identified, though the village of Buyuy (Bouyouye on the map) just to the south of Diembering off the coast might be the Buluf mentioned by Koelle, and Katag as the Fulup capital might very well have referred to Oussouye which has always been an important town, being the seat of several
powerful religious shrines.

8. The linguistic material is more substantial. There are a number of phonological and morphological parallels as well as a statistical closeness in the lexicon that link Fulup to Banjal Diola.

9. Statistical match: A comparison of 82 items from Fulup with ten modern dialects, plus Koelle's Flilham and Wintz's Carabane Diola yield the following percentages: Fulup: Banjal 87, Huluf 71, Fogny 71, Kasa 70, Carabane 68, Flilham 67, Gusilay 63, Tenduk 62, Samatiit 62, Hc 59, Kasolo 57%. Thus the correspondence is highest between Fulup and Banjal, and that by 16 percentage points. A similar count of exactly the same items between Flilham and Fogny yielded a 96 percent correspondence. The higher Flilham-Fogny percentage might indicate that Fulup was only a close neighbour to the true ascendant of Banjal. Too much cannot be made of the difference, however. The Fogny items were drawn from an extensive lexicon, while those for Banjal from a very restricted word list.


Root initial l in general Diola is lost in both Fulup and Banjal.

*moon* Fp. fićn, B. fičn, Hf, hulčn, Fm. fulhcčn, Fy. fulčn
*bat* Fp. ečdja, B. gawodza, Hf, elodza, Fm. ejlčdja, Fy. eloja
*knife* Fp. geewa, B. dziba, Fm. chlčwa, Fy. jiliba
*sword* Fp. geewa, B. dziba, Fm. chlčwa, Fy. jiliba
*two* B. -uba, Hf. -uba
*dry season* B. fit, Hf, huč, Fm. fulč

11. What was at one time a k-x alteration common to Diola (cf. 41-45) made three shifts reflexed in Fulup. Two of these appear in Banjal and one, interestingly enough, in Gusilay. Common to the three dialects: absolute initial, and medially before e and e, k-g. A few examples:

*ear* Fp. ganu, B. ganu, Gy. ganu, Hf. kanu
*lear* Fp. gato:d, B. gatodz, Gy. gatodz, Hf. katodz, Fy. katodz
*slave* Fp. amigčel, B. amigčel, Gy. amigčel, Fm. amigčel, Fy. amigčel
*yesterday* Fp. figčn, B. figčn, Gy. fugčn, Hf. hučn, Fm. fokčn, Fy. fučn

In one instance instead of medial g we get in Fulup and in Banjal h, and in Gusilay k: *buck* Fp. fidččel, B. fidččel, Gy. fujččel; cf. Kasa hudččel, Fy. fujččel, and in another Banjal word x: bunumuxčn *tree*.

Since cognates to the latter are either bunumuk as in Huluf and Gusilay or
bunumuktn as in Wtz. and Samatiit, we might assume that Banjal initially had bunumux and subsequently changed to the present form. 11

12. In root initial before i in Fuhup and Banjal, but not Gusilay, k-x shifts to Fp. sh and B. ts. There are only two Fuhup and one Banjal forms recorded:

'eye!' Fp. gishil, Fy. jikil, Wtz. djikil
'vein!' Fp. gashil, B. gatsil, Gy. gakil, Hf. and Fy. kakil.

In one instance Koelle recorded sh before İ rather than the expected g, an exception paralleled, as fujekil above, with Gusilay k: nishckct 'I die!', Fy. nikckct, 'die' Gy. cckct.

13. There is one reflex unique to Fuhup: gh before final vowel. No information is available on whether this also occurs in Banjal. ote:gha 'war!' (actually 'warriors!'), Fy. kutikia; nideujktc 'I see!' which in final position becomes x (as expected) ndjen: djud:ox 'I see!'. Compare Fy. nijuke, inje nijuk; also Fb:ham nk: duke. gh also appears in ngul boght 'I dance!', a word without a known modern cognate. An alternate form given by Koelle where gh>x assures us that we are dealing with the same set of alternates: ndjen: bokx 'I dance!'. A third alternate, however, gives us g where we would expect x (cf. 41): ndje: bogx 'I do not dance!'.

14. As a final point the distribution of the x alternate in both Fuhup and Banjal is quite regular. Gusilay x has completely merged with k. We will return to this below in paragraph 41.

15. Morphological parallels, Front-back vowel harmony in class prefixes: The general Diola class markers sg. fu- (or hu-) for both Banjal and Fuhup and the pl. si- for Fuhup (material for Banjal plurals is missing) alternate as either fu/fl and su/si depending on the first vowel of the root. We have fu- before u, o, æ, and fi before i, e, ë; su before u, o, æ, and si before i, e, ë, a. Note that a goes with the basic form in both cases: with fu- and with si-.

'blood' Fp. fisim, B. fisim, Hf. husim, Fm. fashim, Fy. fusim or fasim
'buck' Fp. fidzckel, B. fidzckel, Kasa hudzikel, Fm. fudikel
'navel' Fp. fukulot, Hf. eku:fulot, Fy. fukompolot
'head' Fp. foku: w, B. fux: w, Hf. huko w, Fy. fuko
'rope' Fp. fula:ot, B. fulaor, 'palm leaf rope!' Fy. fulawor
'cows' Fp. sibe, Fy. sibe; 'goats' Fp. sidja:men, Fy. sijamen
'chairs' Fp. sidjoc:skot, Fy. sijunkut
'mosquitoes' Fp. subox, Hf. sibuk
'noses' Fp. sunyundo.

There are a number of exceptions in the Koelle list: fume: dj 'charcoal', fullinyax 'bracelet', fure:rup 'tongue' (also a Banjal exception: furehun), and sidjoxkum given as one form for 'elbows', the other being sudjoxjort. The expected form, sudjoxkum, also appears, but as the translation for 'knees'. There can be no question, however, that the two roots are one and the same. The rule also extends to mu- (mass noun marker), though from the three words of this class recorded by Koelle, mi- seems to go only with i: misis 'salt'; the other forms being moxum 'honey' and momol 'water'. In the Banjal list there are four recorded forms indicating the expected pattern: mi with i and e, mu with u and a: mitin 'fruit', micm 'salt', mufat 'grease', moxum 'honey'. Of the remaining Fulup markers having the form (C)u, viz. u-, gu-, and bu-, none show harmony. This is true for Banjal u- and gu-, but not for bu- where the expected harmony operates: e.g., bimelum 'ceiling', bilcfedz 'arm', bulago 'road', busolo 'back', butum 'mouth', etc.

16. In Koelle the appearances ofFu- instead of fi, of momol and perhaps of bulcedj 'inner hand' (the only example of the bu class given where bi would be expected) might all have to do with his manner of eliciting, which we can assume was done slowly and word by word, if not syllable by syllable. If the case of Fulup, as well as Banjal, was anything like modern Kwaatay where this front-back harmony system is fully operative, an informant pronouncing slowly will occasionally use the alternates indifferently, though when he does so he will tend to substitute the base form, fu or si in our present case, for the expected alternate, fi or su. When speaking at a normal rate, however, the harmony rules invariably operate.

17. Outside of Fulup and Banjal this type of class marker harmony has not been recorded for Diola with the exception of two forms in Koelle's Fkliham mishish 'salt' as an alternate for mushish and bishimen 'sacrifice'. There is also one recorded form in Gusilay: bijena 'moon', otherwise the marker is always bu-. In Fquy the T and Ng classes, both with very reduced membership, are indifferently ti--tu-, ni--nu-. As mentioned, neighbouring Kwaatay operates harmony for all Cu classes as well as for si. In Bayat it operates for the fossilized plural personal u-class (cf. 20), e.g., ilf 'men' (sg. ali), ikipa 'boys' (sg. akipa), umaq 'persons' (sg. amaq), ufnaw 'women' (sg. anaw), usunguru 'girl' (sg. anaw).
18. That this form of harmony operated in Proto-Bak is suggested by the class cognates for Diola impersonal plural u- which in both Manjaku and Papel is i-, and in Balanta φ for the regent and u-~w- for the dependents. 12

19. Fossilized u-: The common plural personal class marker for Diola is ku-, and the expected form for both Banjal and Fulup is thus gu-. For Fulup this is not the case. All personal plurals recorded by Koelle that elsewhere take ku- are marked with u- (or o-) before C and w- or we- before V: u:me:ge:l 'slaves', Fy. kumikel; ware 'women', Fy. kar: ku: ar:; weine 'men', Fy. ku:me or kine, etc. Banjal generally follows the common Diola pattern by using gu-; however there are a number of basic items that retain the u- marker: ware 'women', weine 'men', uwi 'kings', unhil 'children' (though guhil is also acceptable). 13

20. The use of personal plural u- for several basic words in both Bay; and Gadil makes the marker a retention rather than an innovation: Cf. above paragraph 17 for Bayot examples and Gadil: uca 'persons' (sg. ac1), unhil 'children' (sg. an1); usisgoj 'girls' (sg. basisago). Other personal plurals are formed, in both languages, with ku-.

21. In sum: of the various evidence aligning Fulup with Banjal the strongest single item is obviously the loss of root initial l. There is no evidence that this deletion takes place in any of the other dialects or closely related languages and hence it must be taken as a common innovation. The next most convincing evidence is the k>g shift. Since it also takes place in Gusilay, there is some problem as to whether or not the shift represents a common innovation. Also of value is the relatively high percentage of common lexical forms linking Fulup to Banjal. Though lexical counts are viewed, among many linguists, with a certain mistrust, it has been my experience in working with West Atlantic, most particularly Diola, that the higher the percentages the closer the languages are in other respects, i.e., grammatically, morphologically and phonologically. This is true for dialects quite as well as it is for the more remote connections. Of much less importance are the front-back class marker harmony and the plural personal u-. They are both retentions and are thus perforce of value more in demonstrating the unity of the Diola group than they are in isolating Fulup and Banjal as something distinct. Though even here they are of use, it must be said from available material that within Diola (as opposed to the Diola group) it is only Fulup and Banjal...
that have this particular personal plural marker and that make use in any systematic way of the class marker harmony.

22. Regardless of the relative merits of any one line of evidence, they all, taken together with Koelle's rather vague geographic information, clearly show the unity of Fulup with Banjal, especially since there is nothing that contradicts the conclusion.

B. Filiham

23. Filiham is clearly modern Fogny. Today Fogny speakers refer to their language as Kajamutay, to themselves as the Kajamaat (sg. Ajamaat) and to their region, located roughly to the north and northwest of Bignona (Binjana) as the Kajamutay. The term Fogny (foni) is used by all other Diola and by other ethnic groups when referring to the Kajamaat. Koelle's word for the region, esux, in modern Diola esuk, simply means village. Other Kajamaat speakers live in the area to the east and southeast of Bignona in the region generally called the Kahanay, from the Fogny word for the Bathun (Banyun in Koelle): Kuhna (sg. Aluna)(from buhun 'spitting cobra'?). The Diola living in this area are relatively recent settlers originating for the most part from the Kajamutay, especially the villages surrounding Sindian (Sunjan). The area was occupied at the expense of the Bathun, who have either been absorbed by the Diola or have remained in isolated and scattered enclaves.

24. Koelle's term Filiham no longer designates the people; however, fii, with the literal meaning of 'breast', is used by many Diola (not just the Fogny) to mean 'clan', or more precisely 'patronym'. In modern Fogny Filiham would be pronounced fi:lam, 'my clan', and would contrast with Koelle's alternate term, Filiha:i, which would be fi:la'i, 'his clan'.

25. Koelle, interestingly enough, attributes the now general word Djola to the Manding group he calls the Kabuga. This very nicely confirms a common folk etymology current among the Fogny that derives Diola from the Manding phrase joo la, 'one who pays back, avenges himself'. When using the word today, the Diola will always use it with appropriate class markers: ajola 'a Diola', kujola 'Diola people, Diola language'.

26. Of the geographic information only two villages can be identified: Topari (Topari, Tangori on the maps), where Kaya:wo:n lived after his sixth year, is just to the east of Bignona and Kutgo (Kutgo, Kutingor on the maps) to the west of Bignona. The 'Filiham country' assuming this
meant Taposri, was thus to the east and not to the west of Kutego. At that time Bignona did not exist, having been first settled in the 1880's and 1890's.

C. Fula vowels.

27. Owing, obviously, to their complexity, Koelle's transcription of the Fula vowels was none too consistent. Fogny has ten vowel phonemes: five tense (tongue root advanced) ɪ, ɛ, ə, ʊ; and five lax (tongue root unadvanced) ɪ, ɛ, ə, ʊ, u. As is generally the case with such systems the tense set is relatively higher than the lax, though the difference between ɪ and ɪ, ʊ and u is very slight. Length is distinct for all vowels giving a total set of twenty vowel phonemes.

28. A vowel harmony system operates such that tense and lax vowels, except under certain circumstances, never appear in the same word. Harmony is controlled by the tense vowels, i.e., a lax vowel in conjunction with a tense vowel becomes tense, e.g., -baj + ati > -bajatì 15.

29. Koelle represented this system, assuming that it was the same then as now, with seven vowels, ɪ, ɛ, ə, a, ʊ, u, plus length. A comparison of his transcription with exact corresponding forms in Fogny permits the following observations.

30. Vowel Quality:

a. ɪ represented ɪ or i only; i was represented only by ɪ; and i by ɪ and e. Of the 78 occurrences of ɪ, 74, or 95 percent, were correctly transcribed by ɪ.

b. With one exception (bogun 'devil' [actually 'bush spirit'] for bugon, which was probably an unintended error) u represented u or u only; u was represented only by u; and u by o and u. Of the 72 occurrences of u, 55, or 73 percent, were correctly transcribed.

c. a represented a and a; and only a was represented by a.

d. e represented ɪ, ɛ, ə; and e was represented by e and e, of which six out of twelve, or 50 percent, were correctly transcribed.

e. ə represented e, ɛ, a; and ə was represented by e and e, of which 64 out of 68, or 94 percent, were correctly transcribed.

f. o represented o and in one case a. This latter was with one of the rare diphthongs: nlyɔŋɔɾs for nlyɔŋɔut (ni + ｙut + yaut) 'I dream', o was represented by o and u, of which 35 out of 55, or 64 percent, were correctly transcribed.

g. o represented o, o, ʊ, and o was represented by o and u, of which 12 out of 29, or only 41 percent, were correctly transcribed.
meant Tanpri, was thus to the east and not to the west of Kutcño. At that
time Bignona did not exist, having been first settled in the 1880's and
190's.

C. Filham vowels.

27. Owing, obviously, to their complexity, Koelle's transcription of
the Filham vowels was none too consistent. Fogny has ten vowel phon­
emes: five tense (tongue root advanced) i, e, a, o, u; and five lax (ton­
gue root unadvanced) i, e, a, ɔ, u. As is generally the case with such
systems the tense set is relatively higher than the lax, though the differ­
ence between i and i and u is very slight. Length is distinct for all
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with a tense vowel becomes tense, e.g., -baj + ati > -bajati.15

29. Koelle represented this system, assuming that it was the same
then as now, with seven vowels, i, e, ɔ, a, ɔ, o, u, plus length. A
comparison of his transcription with exact corresponding forms in Fogny
permits the following observations.

30. Vowel Quality:
a. i represented i or i only; i was represented only by i; and i by i and
e. Of the 78 occurrences of i, 74, or 95 percent, were correctly tran­
scribed by i.
b. With one exception (bogum 'devil' [actually 'bush spirit'] for bugon,
which was probably an unintended error) u represented u or u only; u
was represented only by u; and u by o and u. Of the 72 occurrences of
u, 55, or 73 percent, were correctly transcribed.
c. a represented a and a; and only a was represented by a.
d. e represented i, e, ɔ, a; and e was represented by e and e, of which
six out of twelve, or 50 percent, were correctly transcribed.
e. e represented e, e, a; and e was represented by e and e, of which 64
out of 68, or 94 percent, were correctly transcribed.
f. o represented o and in one case a. This latter was with one of the rare
diphthongs: niyɔyuɔs for niyɔyuɔt (ni + yaut + yaut) 'I dream'. o
was represented by o and o, of which 35 out of 55, or 64 percent, were
correctly transcribed.
g. o represented ɔ, o, u; and o was represented by o and u, of which 12 out
of 29, or only 41 percent, were correctly transcribed.
h. Of the 27 occurrences of a, for which Koelle lacked a symbol, 19 were represented with a, 4 with e and 2 with £. Since a is the lax variant of o we can say that he was correct 70 percent of the time.

31. Koelle was thus most consistent in his transcription of i, i, e, a, u, rather less so with a and u, and he was quite inconsistent with e, o and o.

32. Vowel Quantity: Koelle had some trouble judging vowel length Though he almost always marked long vowels correctly (47 times out of 52, or 93 percent of the time), he would often mark short vowels as long. Thus of 453 short vowels, 332, or only 74 percent, were correctly transcribed. Three tendencies account for the majority of discrepancies.

(1) Short vowels under stress are phonetically longer than unstressed short vowels. Many of his errors came in marking the former as long.

(2) Occasionally he would transcribe all the vowels of a word as long where in fact they were short, e.g., E:dyagmen for EjamEn, 'goat', E:bi:n for Ebin, 'calabash', etc.

(3) For some reason, and this contradicts (1), he would sometimes transcribe the initial unstressed class markers as long. This occurred most frequently with £-, where there was 20 percent occurrence of the long form.

33. As I said, this evaluation rests on the assumption that the vowel system remained unchanged in the 120 or so intervening years between Fl:ham and Fogny. Two points make the assumption plausible: First, there are no systematic differences between Fl:ham and Fogny that would permit postulating any type of change: sound shift, merger or split. Secondly, and by analogy to other West African languages, mainly Kwa, the historical trend for vowel systems involving harmony of this sort has apparently been towards reduction, not development. Now Fogny has a fully developed harmony system, 'two complete sets of five vowel qualities', and to have been different, Fl:ham must have had something less. However, if the analogy with Kwa is correct, this was unlikely and consequently the Fl:ham system must have been the same.

D. Fl:ham consonants and consonant drift in Diola.

34. There are a number of differences between Fl:ham and Fogny with respect to the consonants. Some of these represent either rather minor shifts or certain inconsistencies in Koelle's transcription. Others, however, represent a tendency towards allophonic simplification that in all probability is part of a general drift common to Diola as a whole and quite
possibly Manjaku as well. We shall start by considering the minor changes.

35. **sh** is always **s** in Fogny. **s** is Fy. **t** in final position (cf. 46 below) and Fy. **t** in two out of three cases as the final consonant before a vowel: kady:sa, Fy. kajta 'toad!', u:lasa, Fy. uwulati glossed by Koelle as 'greedy!' (actually 'not to give, 2nd per. sg.'). But çra:sa, Fy. çrassa 'chicken' (actually 'that which eats here and there!'). Otherwise **s** is Fy. **s**.

36. **l, lh, xl, hl** are always **l** in Fogny. Of these only **l** appears in final position. In one instance **l** represented the rather infrequent (and hard to hear!) geminate **l**: a:llum, Fy. a:llum 'white man'. Koelle used **lh** (etc.) to represent the slightly devoiced or breathy quality that appears in the speech of some Fogny speakers (especially those from the Baille-Balandine area). It is most evident under stress in the environment of lax vowels: [c'lo:l] for /clo:l/ 'chicken'. Actually this breathy pronunciation is common to most Diola dialects. Whether or not it ever contrasts with ordinary **l** in any particular dialect is not known.

37. **dj, dy, and sometimes dare j** in Fogny. Koelle, with one exception (ni:du:k & Fy. nijukE), transcribed medial **j** as **dj** or **dy**: kady:sa, Fy. kajta 'toad!'; nidyam:, Fy. nijamE 'I heard!'; and **j** after **n** and in final position as **d**: djundun, Fy. junjum 'stop!'; y:ad, Fy. yaj 'bee!', etc. In one case he terminated with **dj**: bol:dj 'trousers' (no Fy. cognate). In initial position he transcribed **j** with both **dj** and **d**: djk:kl, Fy. jikil 'eye'; dihl1:wa, Fy. jiliba 'knife', etc.

38. Modern Fogny speakers from a number of villages, most particularly Bignona, pronounce the complete palatal series: **j, c, ñ** in a very advanced position, making it difficult to distinguish them from **d, t, and n**. In fact, some speakers actually tend to merge the two. This might have been the case with Koelle's informant. Note also that the three times **c** appears in Ficham it is transcribed twice as **t** and once as **dj**: bata:t, Fy. baca:c 'bed!', ambadj, Fy. ambac 'boy'. In one instance **ñ** is transcribed as: e:na:b, Fy. ecab 'elephant!'.

39. Koelle had similar problems with Fuhup where he often gave two variants for final **j**: otod:~otódj 'leaves!', B. gat:dz 'leaf'; djiga:dj ~ djiga:d 'leopard!', B. dziga:dz, etc.

40. The remaining shifts are all indicative of drift and include: **k>s > k, t>r** (etc.)>t, **b>h**, and final **d>r**. I shall consider each of these in turn bringing in comparative material where appropriate (and available).
41. We have already had occasion to illustrate (11-14) the various x → g, gh, sh in Fulup. These shifts within both Fulop and Banjal are complemented by the retention (with exceptions) of the x allophone in final position and medially before u, o, and a as well as the retention of k after g. Medially x is sometimes recorded as h.

'honey' Fp. mokum, B. mukum, Gy. mukum, Hf. mukum, Fm. muku:m, Fy. mukum

'pig' Fp. ekomba, Gy. ekumba, Fm. ekombu, Fy. ekumba

'one without kin' (glossed by Koelle as 'poor') Fp. asuxat:n, Wtz. asukaten, Fm. asukaten, Fy. asukaten

'youth' B. ahambana, Gy. akambano, Fy. akamban (cf. Manding kambano)

'night' Fp. fok, B. fux, Gy. duk, Hf. duk, Fm. fok, Fy. fuk

'finger' Fp. fisex, B. fisix, Gy. fisik, Hf. fisik, Fm. fushink, Fy. fusink

'mat' Fp. gatek, B. gapex, Gy. gatek, Hf. kafek, Fm. kapenk, Fy. kapenk

'sun' Fp. bunex, B. tinax, Hf. banak, Fy. tinak

'mosquito' Fp. ekon, B. ekuk, Hf. ekuk

'seat' Fp. edjokot, Fm. edjokursh, Fy. edjukut

42. There are a number of exceptions to the medial shift: Fp. fakor, B. fakor 'smoke' (cf. Hf. hako, Fy. fakor); Fp. fokor, but B. fuxow 'head' (cf. Hf. hukow, Fy. fukor); and B. ekuk and ekuk respectively 'thief' and 'crab' (cf. Fy. ekuk, ekuk). One interesting exception is the forms for 'neck' (mistakenly glossed by Koelle as 'throat'). We have B. ekondot and Fp. ekondot in the singular, but suxondot in the plural (B. pl. is not available). General Diola has ekondor.

43. F'liham retained the x allophone in a number of items in medial and final positions associated with back vowels. k appeared in all positions. In Fogny x → k, Fm. futok, Fy. futok 'five'; Fm. fok, Fy. fuk 'night', Fm. fu:gundax 'gullet', Fy. egundak 'Adam's apple', but fushak, Fy. fusak 'bean', etc.; Fm. faxor, Fy. fakor 'smoke', Fm. daxurs, Fy. jakut 'bad'. In one instance Fm x is associated with e: kubaxed, Fy. kuba:kir 'four'.

44. The F'liham situation was probably about the same as that of modern Samatit where x is in free variation with k both medially when un-stressed and in final position.

45. The overall picture with respect to k-x appears as follows:
A k-x allophonic variation common to Diola with x in final position and before back vowels; k elsewhere. For most Diola the x disappears, being retained by Banjal and to a certain extent by Samatiit. It disappeared from Fogny after the recording of Fl:lam but sometime before the present. After isolation from other Diola dialects but with the k-x alteration intact, initial k and medial k before e shifted to g in Fulup-Banjal and Gusilay, either as a common innovation or independently.

46. Final t in Fogny was represented five different ways in Koelle's Fl:lam: as rt, ibomurt 'I don't dance!', Fy. ibomut; rs, niko:krs 'I die!', Fy. niko:kct; rash, bago:garash 'smallpox', Fy. bago:gar; s, fush:ahas 'lizard', Fy. fusa:kt; and as ts, ficts 'palm-oil', Fy. fitt 'palm-nut cluster'. Of these rt and rash follow back vowels, s (with the exception of fukompolos 'navel', Fy. fukompolot) and ts follow front vowels and rs, the most common, appears without conditioning. It is impossible to say exactly what Koelle heard for these final consonants, surely not five distinct sounds. There is comparative evidence to suggest that two sounds were involved: one, some form of t, and the other, some form of voiceless approximant, probably a voiceless r. The evidence is: (a) by analogy with other alternations discussed in this section: viz k-x, b-w, and d-r; (b) from the modern dialect of Kas:lo where general Diola t is cognate with retroflex [?] and voiceless [r], which are in complementary distribution as follows: [?] before front vowels, [r] before a and back vowels and in final position: atjam 'my same sex sibling', Fy. atjam; ralt 'here!', Fy. talc; -furz 'be rotten', Fy. -futz; hurunj 'heal', Fy. futunj; hakfr 'to die!', Fy. ekft. In one recorded example final r was heard as rs: sars 'dreams', Fy. sarrt. This distribution should be compared with that of k-x (45).

47. There is a slight correspondence between Kas:lo and Fl:lam in that the final ts was associated with t, and that rt in its one final appearance followed u. Koelle also recorded a medial rt before o: karto:ct 'leaf' Fy. katoj. At all other times the medial equivalent to Fy. t was transcribed simply as t. (c) Looking at Fulup we see there a number of variant sounds recorded for final t, viz. t, ts, and on one occasion rt, though this latter, edja:djort 'elbow' has no known cognate. t and ts seemed to have been in free variation: gats 'legs', B. goc; cmit 'God', B. cmit; fuxulot 'navel', Hf. skumfot. On one occasion he gives banyogot and banyugot as alternates for 'black' (no known cognate). Note also an l-t alternation where l appears before a final vowel (cf. Fm.
w, paragraph 49. and Fp. gh, paragraph 13) ni sheshet, ngini sc:fe 'I die!'; ni rurur: ot ngini ru:le 'I weep!'.

48. (d) A glance at the Manjaku group shows us the antiquity of alternation. There the approximant form is reflexed in Papel ɾs, the stop in Manjaku ɾ. Both are cognate with final Diola t:
'die! P. ɾArs, M. ɾats, D. -kst; 'feather' P. ɾArs, D. (Fy.) kast; 
'(to) fly' P. ɾArs, M. ɾts, D. -tt; 'star' P. ɾ-ũArs, D. (Fy.) -ott.

49. For roots of the shape C₁VC₂V, Fogy C₂ ɾ was always ɾ in Fulup: bu:wo 'stupid', Fy. -bobo; djo:wo 'cold', Fy. -jobj; chitwa 'knife', Fy. ɾiba; kuga:wo 'two', Fy. kugaba. ɾ never appears in this position in Koelle's transcription; otherwise it contrasts with ɾ (except postnasally): bo:lu/wul 'face(s)'), Fy. bul/wul; e:be 'cow', Fy. ebe; e:ya 'snake', Fy. e:ya. In Fulup we get a number of instances of this: ge:wo 'knife', B. ji:ba (<ji-iba < ji-iba, cf. 10), and the two sequences: ni robo and ngini rowo 'I sit down!'. The latter is particularly interesting for it suggests, if we can draw a parallel to Fogy, that the ɾ alternate appeared in unstressed environments, cf. Fy. ni:la,ko 'I sit down!' and ni:la,ko 'I sit down!'. Recall the x alternate of Samatiit (44) where this is still the case.

50. Further afield, Manjaku-Cur has a clear set of approximant realizations for each of the voiced stop phonemes, the distribution being: stop in initial position and after nasals, approximant elsewhere. The alternates are b-ɾ, d-ɾ, z-ɾ, g-ɾ. Similar alternations are also heard with some Manjaku-Bok speakers where the approximant is optionally heard intervocally. Finally between Pepel and Manjaku Bok there is a ɾ-correspondence equivalent to ɾs-ts (cf. 48): P. k-wars, M. ka-bats ɾwar; P. -wul, M. u-bus ɾdog', etc.

51. In Fogy, and most likely for all other Diola dialects, d and r are, or were until recently, non-contrastive, the distribution being [ɾ] finally and intervocally, [d] after nasals, [ɾ] and [d] in free variation initially (though in emphatic pronunciation [d] is invariably used). Final [ɾ] becomes a glottal closure in Huluf. In modern Fogy they are partially contrastive in that loans are accepted without change; thus Dakar is always pronounced dakar, never *rakar. In Manjaku d and r are entirely non-contrastive, though there only d appears in initial position. All loan words are altered to fit the distribution pattern.

52. For both Fulup and Ffolkh r and d (not counting j heard as d) were likewise non-contrastive; however, the distribution for both lang-
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uages was different in that d (frequently transcribed as t by Koelle for Fulup but not Fi:llam) rather than r appeared in final position. Although in one Fulup transcription we get a medial -d-: buradob 'be (sun) up', Fy. burarab.

'tone' Fp. anad, Fm. fanad, B. -anor
'girl' Fp. bodjut, B. badzu:r
'throat' Fp. ekondot, 'neck' Fm. ekondod, B. chondor, Fy. ekondor
'smoke' Fp. kakod, but: Fm. faxor (the only such example), B. fakor, Fy. fakor.

Note the alternation in Fm. fubare:fu 'the stick' and fubad 'stick' (glossed as 'tree'), cf. Fy. fubon:af, fubor '(the) stick'. Also the alternation of medial -r- with initial d- in Fm. erimba:n and dimba:n 'rich', Fy. forimbanu 'riches'.

53. These stop-approximant alternations along with parallels in the Manjaku group represent, in all probability, retentions, in various states of preservation, of a general system of allophonic variation that operated at one time in both Diola and Manjaku. The changes towards simplification, the retention of the stop at the expense of the approximant (except for r-d where the reverse seems to be the case) all represent a drift, or convergence, rather than a single set of mergers. To argue the reverse would raise too many complications, not to mention impossibilities. Koelle's word lists provide one excellent argument for drift. The alternations b-w, t-ts (etc.), and most particularly final d rather than r appear in both Fi:llam and Fulup but do not appear either in Fogny or in Banjal. Given this fact we would have to say, in arguing for common mergers that both Fogny and Banjal derive from a single source, either Fulup or Fi:llam. This, of course, is patently absurd and is in direct contradiction to all other evidence, viz. the lexical closeness between Fulup and Banjal and between Fi:llam and Fogny, and, most especially, the l deletion and k-g innovations, reflected in Banjal, that took place in Fulup after its isolation from other Diola dialects.

54. To what extent were the stop-approximant alternations postulated for early Diola functional on a grammatical level? This is a question that must be asked given the existence of grammatical consonant alternation in other branches of West Atlantic, viz. the Senegal languages (Fula, Serer, Wolof) and such Eastern Senegal-Guinea languages as Konyagi, Bassari, Biafada, etc. The answer for the Diola group must be negative. To date no really valid evidence has been uncovered suggesting any kind of gram-
matical consonant alternation, either in correlation with the noun classes, or in nominal or verbal derivation.

55. As for the other Bak groups, Greenberg has argued that survivals of grammatical consonant alternation can be spotted in Koelle's Manjaku word lists. Working from modern materials, however, Doneux has challenged much of Greenberg's argument by offering alternative, mainly phonological explanations, one of which takes into account the kinds of allophonic variations considered in these paragraphs. What does remain are C~NC alternations, reminiscent of Wolof, that link verb with noun, e.g. Manjaku-Bak -r!ts 'be heavy', nd!ts 'load'; -tan 'attach a belt (to self)', -ntani 'climbing belt', etc.

56. If the results are generally negative one worthwhile question does come up: to what extent did allophonic CA facilitate the development of grammatical CA in the languages where the latter exists? It seems to me that one fruitful line of Proto West Atlantic reconstruction could very well take this query into account by postulating, as a point of departure, the priority of allophonic CA to grammatical CA. We could then consider the former as the general condition and the latter as a later development particular to the Senegal and Eastern Senegal-Guinea languages.

E. Koelle's Sentences

57. The Puhlp sentences recorded by Koelle show a somewhat confusing variety of forms. Inspection gives six affirmative and two negative types, all commonly used in modern Diola. The affirmative constituents are: ni-, bound subject prefix 'I'; ggni or ndjeni, disjunctive pronoun 'I' equivalent to Fogny injt ni-; -e subordinate marker; and root reduplication. The constructions vary in terms of subject-noun emphasis: ni-X-(c): nirobo 'I sit down', niti:loce 'I sneeze'; ggni X-(c): ggni rowo 'I sit down', ggni t:fe 'I breathe'; ni-X-X: nitc:tey 'I run' and finally ggni X-X: ggni lumolmo 'I cough'. The negative constructions are the common ndje: X-uts equivalent to Fy. injt i-X-ut; indje: raso-uts 'I do not play' and the phrase that in Fy. is: injt imanhut a-X 'I don't want him to X' (literally I don't want, he X): ndje ma[pabox 'I do not dance'[sic] and, assuming a misprint of f for t: ndje mapuforasot 'I do not play'[sic] cf. ndjeni raso:re 'I play'.

58. The Fu:lam constructions are all similar: ni-X-(c): nilhau 'I beg', nilanyc 'I go'[sic](actually 'I return'); nde: X, nde:lu 'I laugh', and ni-X-X, nilhu:lu 'I laugh'. The negative frame is i X-urs, 1 b: mo: murs 'I do not dance' and 1 re:fris 'I do not play' (cf. Fy. i-rej-ut, or
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i-ro-ř-erí, the latter: 'I never play').

NOTES


5. The latter is erroneously called Ering on the Ziguinchor sheet of the Institut Geographique National map, 1954 (1:200,000) (Sénégal Feuille ND-28-ll).

6. My colleague, Francis Snyder, kindly provided the proper identification of ċšiŋn.

7. Le R.P. Ed. Wintz, Dictionnaire Français-Dyola et Dyola-Français, précédé d'un essai de grammaire, Elinkine (Casamance), 1909. The Huluf (town of Ouossouye), Kasa (Ouorgn), Her (Kabrousse), Banjal (Kamobeul) lists were collected by the Rev. Alastair Kennedy, the remaining by myself. Both collections were based on the 'Greenberg list', though with the exception of the Fogny items which were drawn from an extensive lexicon.

8. Since the count was based on words available in the Koelle that matched the lists in hand, the selection was quite arbitrary and should not be thought of as comparable to the standardized 'Swadesh first hundred', etc. What is significant is the relatively high percentage of Fulu-Banjal similarities.

9. But he also gives the alternate gti:vi, showing that the deletion was not completely set. Note also that the form for 'sword' is actually identical to the preceding form for 'knife' (compare the Fīlaham and Fogny examples).

10. The position of Gusiay is problematical. As a result of my lexical count of Bak (op. cit. 1971, p. 47), I placed Gusiay outside of the Diola dialect group altogether. The count, however, was solely with respect to Huluf and Fogny and did not include Banjal. The g reflex plus a number of lexical items shared by Banjal and Gusiay, but not by other dialects, suggest a close relationship between the two, a relationship not borne out by a lexical count (Swadesh list) that gave B.-Huf. 78 percent, B.-Fy. 67 percent, and B.-Gy. 63 percent. Oral tradition links the Banjal village of ċšil (Essil or Essyl) with Ćank.
Ésil (Tionk Essil) where Gusilay is spoken. Thus Francis Snyder informs me (P.c.) 'that the Essyl people call their language gusilay. Also, the ancestors of current inhabitants of Essyl drove out previous settlers in the area who went to Thionk-Essyl'. Note that the roots for gusilay and ésil are the same: -ail; -ay is an abstract suffix and é- and gu- are class prefixes. Tionk-Essil is separated from Essyl by the Casamance River and is situated to the north northwest at a distance of about 30K. from the Banjal area.

11. The root is -nuk that as bunuk is the general word for 'palm-wine' and as čnuk is the word for 'stick!' and sometimes for 'animal'. The Ful word is bëbat; which matches Fjilham fubad (the proper gloss for the latter is, following Fy., 'large stick', cf. Fy. fùbaar and bùbear 'tree!).

12. Sapir, op cit., p. 80. The isolated language of Bijagó has a complex system of front-back harmony rather similar to that of Kwaatay. Cf. op. cit., p. 97 for W.A.A. Wilson's table of Bijagó classes.

13. Snyder's informant considers uftil as 'the old pronunciation'.


15. Sapir, op. cit., 1965, pp. 5-8, 11-12. Though not realized at the time, vowel harmony in verbs operates regressively. Thus a tense morpheme introduced in the middle of a construction affects only the preceding vowels: nabajebaj 'he always has', nabajeubaj 'he always has from'.


17. Peter Ladefoged, A Phonetic Study of West African Language Monograph, No. 1), Cambridge, 1964, p. 37. Also, cf. Joseph Greenberg, 'Vowel Harmony in African Languages!', Actes du second colloque international de linguistique négro-africaine, Dakar, 1963, pp. 33-37. Other less developed systems in West African languages involve fewer vowels of which one or several are neutral, i.e. not affected by harmony (ibid). Such is the case for Huhuf as sketched by Wilson where there are only seven (or eight) vowels i, i, e, a, (ã), o, u, and where harmony apparently affects only the i/i, u/u, ã/ã contrasts. Cf. W.A.A. Wilson, 'Diola et langues de Guinée' in op. cit. p. 283. From the skimpy evidence available for Diola as a whole most dialects seem to follow the Huhuf rather than the Fogny-(Fjilham) model.

18. This geminate had not been discovered when I wrote my grammar, cf. alil 'in-law', bulil 'right of a widow, or divorcée, to live with her son'; -mëlic 'dry up, as a cut in a tree', -mëlic 'fill up to the brim with water'.

19. This particular k-x alternation is the only hint so far uncovered as to the possibility of some sort of consonant alternation connected with class permutation. Cf. paragraph 54.


