

Diola in the Polyglotta Africana

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1. The languages **Fuhup** (L.A.1) and **Fɪ:lham** (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, Karon, Bayot and Gødil. This group represents one section of the Bak branch of West Atlantic, the other branches being the Manjaku (Koelle's L.B. languages) and Balanta (Koelle's **Bulanda**, XII.(B).3) groups.¹ Diola is spoken in the Lower Casamance region of S n gal, while Manjaku and Balanta are spoken to the south, primarily in Bissau Guinea.

2. Of the two dialects, **Fɪ:lham** is readily identified as Fogny, the most important dialect to the north of the Casamance River.² The modern representative of **Fuhup** 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 **Fuhup** in Diola, (B) a discussion of the term **Fɪ:lham**, etc., (C) an evaluation of Koelle's transcription of **Fɪ:lham** vowels, and (D) a discussion of a number of consonant shifts observed between **Fɪ:lham** and Fogny which represent a general drift within Diola towards allophonic simplification, a drift apparently paralleled in the Manjaku group. In conclusion I shall briefly (E) parse Koelle's sentences.

A. The place of **Fuhup**

4. The term **Fuhup** (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.³

5. The Diola themselves recognize three variants of the term: fulup, huluf, and buluf, where the $f > h$, 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. **Buluf** refers to the area north of the Casamance River, to the east of the Diouloulou marigot, to

the south of the Bignona-Baila road and to the west of the Bignona mari-got. Thomas refers to the region as the Djougout.⁴ 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, Samatiit, 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 Youtou 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 (Edame) do not speak Diola at all, but rather a language they call Gədi 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 (**Gadjou** or **Kadji:ou**) and Bissau (**Bisa:o**) 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 **Ĕshiq** (Ĕsiq) can.^{5, 6} 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 **Sigidjoot**, i.e., Ziguinchor (it is usually called either **Sigicor** or **Si:cor** 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 **Bufui** mentioned by Koelle, and **Katɔŋ** 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 **Fi:lham** and Wintz's Carabane Diola⁷ yield the following percentages: **Fulup** : Banjal 87, Huluf 71, Fogny 71, Kasa 70, Carabane 68, **Fi:lham** 67, Gusilay 63, Tɛnduk 62, Samatiit 62, Hɛr 59, Kasɔɔ 57%. Thus the correspondence is highest between **Fulup** and Banjal,⁸ and that by 16 percentage points. A similar count of exactly the same items between **Fi:lham** and Fogny yielded a 96 percent correspondence. The higher **Fi:lham**-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.

10. Phonological parallels: The loss of l, a common innovation. Root initial l in general Diola is lost in both **Fulup** and Banjal.

'moon' Fp. **fiɛ:n**, B. **fiɛŋ**, Hf. **hulɛŋ**, Fm. **fulhɛ:ŋ**, Fy. **fulɛ:ŋ**

'bat' Fp. **ɛo:dja**, B. **gawɔdza**, Hf. **ɛɔdza**, Fm. **ɛxɔ:dja**, Fy. **ɛɔja**

'knife' Fp. **geewa**, B. **dzi:ba**, Fm. **ɛhli:wa**, Fy. **jiliba**

'sword'⁹ Fp. **gi:va**, Fm. **dihli:wa**, Fy. **ɛliba**

'two' B. **-uba**, Hf. **-ɔba**

'dry season' B. **fiɛ**, Hf. **hulɛ**, Fm. **fulhɛ**

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.¹⁰ Common to the three dialects: absolute initial, and medially before ϵ and e, k>g. A few examples:

'lear' Fp. **ganu**, B. **ganu**, Gy. **ganu**, Hf. **kamu**

'lear' Fp. **gatɔ:d**, B. **gatɔdz**, Gy. **gatɔj**, Hf. **katɔdz**, Fy. **katɔj**

'slave' Fp. **ame:gɛl**, B. **amɛ:gɛl**, Gy. **amɛ:gɛl**, Fm. **ami:kɛl**, Fy. **ami:kɛl**

'yesterday' Fp. **figɛn**, B. **figɛn**, Gy. **fugɛn**, Hf. **hukɛn**, Fm. **fokɛn**, Fy. **fukɛn**

In one instance instead of medial g we get in **Fulup** and in Banjal h, and in Gusilay k: 'buck' Fp. **fidjɛ:hɛl**, B. **fidzɛhɛl**, Gy. **fujɛkɛl**; cf. **Kasa** **hudzikɛl**, Fy. **fujɛkɛl**, and in another Banjal word x: **bununuxɛn** 'tree'. Since cognates to the latter are either **bununuk** as in **Huluf** and **Gusilay** or

bununukɛn as in Wtz. and Samatiit, we might assume that Banjal initially had bununux 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. **gishi:l**, Fy. **jikil**, Wtz. **djikil**

'vein' Fp. **gashil**, B. **gatsil**, Gy. **gakil**, Hf. and Fy. **kakil**.

In one instance Koelle recorded **sh** before **ɛ** rather than the expected **g**, an exception paralleled, as fujɛkɛl above, with Gusilay k: **nisheshɛt** 'I die', Fy. **nikɛkɛt**, 'die' Gy. **ɛkɛt**.

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. **kuti:kə**; **nidju:ghɛ** 'I see' which in final position becomes x (as expected) **ndjeni: djudjox** 'I see'. Compare Fy. **nijukɛ**, **injɛ nijujuk**; also Fi:ham **ni: dukɛ**. **gh** also appears in **ngini boghɛ** '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: **ndjeni bobox** 'I dance'. A third alternate, however, gives us **g** where we would expect **x** (cf. 41): **ndje: bɔ:guts** '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/fi** and **su/si** depending on the first vowel of the root. We have **fu-** before **u**, **o**, **ɔ**, **a** and **fi** before **i**, **e**, **ɛ**; **su** before **u**, **o**, **ɔ**, and **si** before **i**, **e**, **ɛ**, **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. **fushim**, Fy. **fusim** or **fəsim**

'buck' Fp. **fidjɛ:hɛl**, B. **fidzɛhɛl**, Kasa **hudzikɛl**, Fm. **fudikɛl**

'navel' Fp. **fuhulo:t**, Hf. **ɛkumfulot**, Fy. **fukompolot**

'head' Fp. **fokɔu**, B. **fuɔ^w**, Hf. **huko^w**, Fy. **fuko**

'rope' Fp. **fula:ɔt**, B. **fulaor**, 'palm leaf rope' Fy. **fulawɔr**

'cows' Fp. **sibe**, Fy. **sibe**; 'goats' Fp. **sidja:mɛn**, Fy. **sijamɛn**

'chairs' Fp. **sudjo:ŋkot**, Fy. **sijunkut**

'mosquitoes' Fp. **subox**, Hf. **sibuk**

'noses' Fp. **sunyundo**.

There are a number of exceptions in the Koelle list: **fume:dj** 'charcoal', **fuli:nyax** 'bracelet', **fure:rup** 'tongue' (also a Banjal exception: **furelum**), and **sidjo:ɲkum** given as one form for 'elbows', the other being **sudjo:djort**. The expected form, **sudjo:ɲkum**, 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 **momɛl** 'water'. In the Banjal list there are four recorded forms indicating the expected pattern: **mi** with **i** and **ɛ**, **mu** with **u** and **a**: **mitɪn** 'fruit', **miɛm** 'salt', **mufat** 'grease', **muxum** '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', **bilɛfedz** 'arm', **bulago** 'road', **buso:l** 'back', **butum** 'mouth', etc..

16. In Koelle the appearances of **fu-** instead of **fi**, of **momɛl** and perhaps of **bulɛfedj** '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 **Fi:lhām mishish** 'salt' as an alternate for **mushish** and **bishi:men** 'sacrifice'. There is also one recorded form in Gusilay: **bijɛna** 'moon', otherwise the marker is always **bu-**. In Fogny the **T** and **Ñ** classes, both with very reduced membership, are indifferently **ti-~tu-**, **fi-~fu-**. As mentioned, neighbouring Kwaatay operates harmony for all **Cu** classes as well as for **si**. In Bayot it operates for the fossilized plural personal **u-** class (cf. 20), e.g., **ilf** 'men' (sg. **ali**), **ikiɲa** 'boys' (sg. **akiɲa**), **umɔɔ** 'persons' (sg. **amɔɔ**), **uñaw** 'women' (sg. **añaw**), **usunguru** 'girl' (sg.

asunguru).

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 Papɛl is *i-*, and in Balanta \emptyset 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: *ume:gɛl* 'slaves', Fy. *kumikɛl*; *ware* 'women', Fy. *kare* *ku + are*; *weine* 'men', Fy. *kuine* 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', *uɲi:l* 'children' (though *guɲi:l* is also acceptable).¹³

20. The use of personal plural *u-* for several basic words in both Bayot and Gɛdil makes the marker a retention rather than an innovation: Cf. above paragraph 17 for Bayot examples and Gɛdil: *uco* 'persons' (sg. *aco*), *uɲi:* 'children' (sg. *aɲi:*), *usisiɛŋ* 'girls' (sg. *bəsisɛŋ*). 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,¹⁴ 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 **Fuhup** with Banjal, especially since there is nothing that contradicts the conclusion.

B. **Fi:lham**

23. **Fi:lham** is clearly modern Fogny. Today Fogny speakers refer to their language as **Kujamutay**, to themselves as the **Kujamaat** (sg. **Ajam-aaat**) and to their region, located roughly to the north and northwest of Bignona (Binjona) as the **Kajamutay**. The term Fogny (**fofi**) is used by all other Diola and by other ethnic groups when referring to the **Kujamaat**. Koelle's word for the region, **eshux**, in modern Diola **esuk**, simply means village. Other **Kujamaat** speakers live in the area to the east and southeast of Bignona in the region generally called the **Kalunay**, from the Fogny word for the **Bafun** (**Banyu:n** in Koelle): **Kuluna** (sg. **Aluna**) (from **bulun** '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 **Bafun**, who have either been absorbed by the Diola or have remained in isolated and scattered enclaves.

24. Koelle's term **Fi:lham** no longer designates the people; however, **fi:l**, 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 **Fi:lham** would be pronounced **fi:lom**, 'my clan', and would contrast with Koelle's alternate term, **Fi:lho:l**, which would be **fi:lol**, 'his clan'.

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

26. Of the geographic information only two villages can be identified: **Taŋɔri** (**Toŋa:ri**, **Tangori** on the maps), where **Kaya:wɔ:n** lived after his sixth year, is just to the east of Bignona and **Kuteŋɔ** (**Kuteŋo**, **Kutingor** on the maps) to the west of Bignona. The '**Fi:lham country**' assuming this

meant Taḡri, was thus to the east and not to the west of Kutḡḡ. At that time Bignona did not exist, having been first settled in the 1880's and '90's.

C. **Fi:lham** vowels.

27. Owing, obviously, to their complexity, Koelle's transcription of the **Fi:lham** vowels was none too consistent. Fogny has ten vowel phonemes: five tense (tongue root advanced) i, e, ə, o, u; and five lax (tongue root unadvanced) i, ε, a, ɔ, u. As is generally the case with such systems the tense set is relatively higher than the lax, though the difference between i and i, u 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 + əti > -bəjəti.¹⁵

29. Koelle represented this system, assuming that it was the same then as now, with seven vowels, i, e, ε, 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 **ī** and **e**. Of the 78 occurrences of **i**, 74, or 95 percent, were correctly transcribed by **i**.
 - 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 ə; and only a was represented by **a**.
 - d. **e** represented i, e, ε, ə; and e was represented by **e** and **ε**, of which six out of twelve, or 50 percent, were correctly transcribed.
 - e. **ε** represented e, ε, ə; and ε was represented by **e** and **ε**, of which 64 out of 68, or 94 percent, were correctly transcribed.
 - f. **o** represented ɔ and in one case ə. This latter was with one of the rare diphthongs: **niyɔuyɔurs** for **niyəuyəut** (ni + yəut + yəut) 'I dream'. **o** was represented by **o** and **ə**, 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.
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h. Of the 27 occurrences of ə, for which Koelle lacked a symbol, 19 were represented with a, 4 with e and 2 with ε. Since a is the lax variant of ə we can say that he was correct 70 percent of the time.

31. Koelle was thus most consistent in his transcription of i, i, ε, a, u, rather less so with ə and u, and he was quite inconsistent with e, ɔ 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., ε:dya:gmɛ:n for ɛjamɛn, 'goat', ε:bi:n for ɛbin, '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 ε-, 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 **Fi:lham** and Fogny. Two points make the assumption plausible: First, there are no systematic differences between **Fi:lham** 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.¹⁶ Now Fogny has a fully developed harmony system, 'two complete sets of five vowel qualities';¹⁷ and to have been different, **Fi:lham** must have had something less. However, if the analogy with Kwa is correct, this was unlikely and consequently the **Fi:lham** system must have been the same.

D. **Fi:lham** consonants and consonant drift in Diola.

34. There are a number of differences between **Fi:lham** 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: **ka:dye:sa**, Fy. **kajsta** 'toad', **u:lasi**, Fy. **uwuləti** glossed by Koelle as 'greedy' (actually 'not to give, 2nd per. sg.'). But **εra:sa**, Fy. **εrasa** '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**: **ahulum**, Fy. **əhullum** 'white man'.¹⁸ 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 Baila-Balandine area). It is most evident under stress in the environment of lax vowels: [ɛ'lo:l] for /ɛlo: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 **d** are **j** [j] in Fogny. Koelle, with one exception (**ni:duke** 'I saw', Fy. **nijuke**), transcribed medial **j** as **dj** or **dy**: **kadye:sa**, Fy. **kajsta** 'toad'; **nidyamε**, Fy. **nijamε** 'I heard'; and **j** after **n** and in final position as **d**: **djundu:n**, Fy. **junjum** 'stop'; **ya:d**, Fy. **yaj** 'bee', etc. In one case he terminated with **dj**: **bolidj** 'trousers' (no Fy. cognate). In initial position he transcribed **j** with both **dj** and **d**: **dji:kil**, Fy. **jikil** 'eye'; **dihli:wa**, Fy. **jiliba** 'knife', etc..

38. Modern Fogny speakers from a number of villages, most particularly Bignona, pronounce the complete palatal series: **j**, **c**, **ɲ** 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 **Fi:lham** it is transcribed twice as **t** and once as **dj**: **bata:t**, Fy. **baca:c** 'bed', **ambadj**, Fy. **ambac** 'boy'. In one instance **ɲ** is transcribed **n**: **εna:b**, Fy. **εɲa:b** 'elephant'.

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

40. The remaining shifts are all indicative of drift and include: **k~x > k**, **t~rs (etc.) > t**, **b~w > b**, 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 $x \sim k$ >g, gh, sh in Fulup. These shifts within both Fulup and Banjäl 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 ŋ. Medially x is sometimes recorded as h.

'honey' Fp. *moxum*, B. *muxum*, Gy. *mukum*, Hf. *mukum*, Fm. *muku:m*, Fy. *mukum*

'pig' Fp. *ɛxo:mba*, Gy. *ɛkumba*, Fm. *ɛku:mba*, Fy. *ɛkumba*

'one without kin' (glossed by Koelle as 'poor') Fp. *asuxatɛ:n*, Wtz. *asukatɛn*, Fm. *a:shukate:n*, Fy. *əsukəten*

'youth' B. *ahambana*, Gy. *akambanɔ*, Fy. *akamba:ni* (cf. Manding *kambano*)

'night' Fp. *fox*, B. *fu:x*, Gy. *fuk*, Hf. *huk*, Fm. *fox*, Fy. *fuk*

'finger' Fp. *fise:x*, B. *fisi:x*, Gy. *fusi:k*, Hf. *husi:k*, Fm. *fushi:ŋk*, Fy. *fusink*

'mat' Fp. *gapɛ:x*, B. *gapɛx*, Gy. *gapɛ:k*, Hf. *kafɛ:k*, Fm. *kapɛnk*, Fy. *kapɛnk*

'sun' Fp. *bunax*, B. *tinax*, Hf. *banak*, Fy. *tinak*

'mosquito' Fp. *ɛbɔx*, B. *ɛbux*, Hf. *ɛbuk*

'seat' Fp. *ɛdjo:ŋkot*, Fm. *ɛ:djuŋkursh*, Fy. *ɛjuŋkut*

42. There are a number of exceptions to the medial shift: Fp. *fakɔ:d*, B. *fakɔr* 'smoke' (cf. Hf. *hakɔ*, Fy. *fakɔr*); Fp. *fokɔu*, but B. *fuxɔw* 'head' (cf. Hf. *huko^w*, Fy. *fuko*); and B. *əkɔ:* and *ɛkub* respectively 'thief' and 'crab' (cf. Fy. *əkɔ*, *ɛkub*). One interesting exception is the forms for 'neck' (mistakenly glossed by Koelle as 'throat'). We have B. *ɛhɔndɔr* and Fp. *ekondɔt* in the singular, but *suxondɔt* in the plural (B. pl. is not available).¹⁹ General Diola has *ɛkɔndɔr*.

43. **Filham** 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 $x \sim k > k$. Fm. *futɔx*, Fy. *futɔk* 'five'; Fm. *fox*, Fy. *fuk* 'night', Fm. *fu:gundax* 'gullet', Fy. *ɛgundak* 'Adam's apple', but *fusha:k*, Fy. *fusa:k* 'bean', etc.; Fm. *fakɔr*, Fy. *fakɔr* 'smoke', Fm. *daxurs*, Fy. *jakut* 'bad'. In one instance Fm x is associated with e: *kubaxe:d*, Fy. *kuba:kir* 'four'.

44. The **Filham** situation was probably about the same as that of modern Samatiit where x is in free variation with k both medially when unstressed and in final position.

45. The overall picture with respect to $k \sim x$ appears as follows:

A $k \sim x$ 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 **Fi:lham** but sometime before the present. After isolation from other Diola dialects but with the $k \sim x$ alteration intact, initial k and medial k before ϵ 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 **Fi:lham**: as **rt**, **ibɔ:murt** 'I don't dance', Fy. **ibɔmut**; **rs**, **nike:kɛrs** 'I die', Fy. **nikɛkɛt**; **rsh**, **bago:ngorsh** 'smallpox', Fy. **bagɔngɔt**; **s**, **fush-a:lhes** 'lizard', Fy. **fusa:lɛt**; and as **ts**, **fi:ts** 'palm-oil', Fy. **fit** 'palm-nut cluster'. Of these **rt** and **rsh** follow back vowels, **s** (with the exception of **fukompolo:s** '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 $k \sim x$, $b \sim w$, and $d \sim r$; (b) from the modern dialect of Kasɔɔ where general Diola t is cognate with retroflex $[ɖ]$ and voiceless $[ɖ̥]$, which are in complementary distribution as follows: $[ɖ]$ before front vowels, $[ɖ̥]$ before a and back vowels and in final position: **aɖiɔm** 'my same sex sibling', Fy. **atiɔm**; **ɖaɖɛ** 'here', Fy. **tatɛ**; **-fuɖɛ** 'be rotten', Fy. **-putɛ**; **hurɔnj** 'heal', Fy. **futɔnj**; **hukɛɖ** 'to die', Fy. **ɛkɛt**. In one recorded example final r was heard as ɾ : **sɔ̀urs** 'dreams', Fy. **sə̀ut**. This distribution should be compared with that of $k \sim x$ (45).

47. There is a slight correspondence between Kasɔɔ and **Fi:lham** in that the final **ts** was associated with i , and that **rt** in its one final appearance followed u . Koelle also recorded a medial **rt** before o : **karto:ɛt** '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, **edjɔ:djort** 'elbow' has no known cognate. t and **ts** seemed to have been in free variation: **gɔts** 'legs', B. **gɔ:t**, **ɛmits** 'God', B. **ɛmit**; **fuxulo:t** 'navel', Hf. **ɛkumfulot**. On one occasion he gives **banyo:ɛt** and **banyu:ɛts** as alternates for 'black' (no known cognate). Note also an $l \sim t$ alternation where l appears before a final vowel (cf. Fm.

w, paragraph 49. and Fp. gh, paragraph 13) ni sheshet, ngini se:fe 'I die!'; ni ruru:t, 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 Pepel rs , the stop in Manjaku ts . Both are cognate with final Diola t :

'die' P. kɛrsi, M. cɛts, D. -kɛt; 'feather' P. kirs, D. (Fy.) kasi:t;
'(to) fly' P. irsi, M. its, D. -it; 'star' P. -oursu, D. (Fy.) -ɔt.²⁰

49. For roots of the shape $\text{C}_1\text{VC}_2\text{V}$, Fogny $\text{C}_2 = \text{b}$ was always w in **Fi:ham**: bu:wɔ 'stupid', Fy. -bubɔ; djo:wi 'cold', Fy. -jobi; ehi:wa 'knife', Fy. ɛliba; kuga:wa 'two', Fy. kugaba. b never appears in this position in Koelle's transcription; otherwise it contrasts with w (except postnasally): bo:l/wo:l 'face(s)', Fy. bul/wul; e:be 'cow', Fy. ebe; ewɛ:la 'snake', Fy. ewɛla. In Fulup we get a number of instances of this: ge:wa 'knife', B. ji:ba (<ji-iba <ji-liba, cf. 10), and the two sequences: ni rɔbɔ and ngini rɔwɔ 'I sit down'. The latter is particularly interesting for it suggests, if we can draw a parallel to Fogny, that the w alternate appeared in unstressed environments, cf. Fy. ni'la,kɔ 'I sit down' and 'injɛ i,lakɔ '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 $\text{b} \sim \beta$, $\text{d} \sim \text{r}$, $\text{z} \sim \text{j}$, $\text{ɣ} \sim \text{g}$. Similar alternations are also heard with some Manjaku-Bok speakers where the approximant is optionally heard intervocalically. Finally between Pepel and Manjaku Bok there is a $\text{w} \sim \text{b}$ correspondence equivalent to $\text{rs} \sim \text{ts}$ (cf. 48): P. k-wars, M. ka-bats 'ear'; P. -wul, M. u-bus 'dog', etc.²¹

51. In Fogny, and most likely for all other Diola dialects, d and r are, or were until recently, non-contrastive, the distribution being [r] finally and intervocalically, [d] after nasals, [r] and [d] in free variation initially (though in emphatic pronunciation [d] is invariably used). Final [r] becomes a glottal closure in Huluf. In modern Fogny 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.²²

52. For both **Fulup** and **Fi:ham** r and d (not counting j heard as d) were likewise non-contrastive; however, the distribution for both lang-

uages was different in that *d* (frequently transcribed as *t* by Koelle for **Fuhup** but not **Fi:lham**) rather than *r* appeared in final position. Although in one **Fuhup** transcription we get a medial *-d-*: *bura:dɔb* 'be (sun) up', **Fy. burarab**.

'one' **Fp. anɔd**, **Fm. fanɔd**, **B. -anɔr**

'girl' **Fp. bɛdjut**, **B. badzu:r**

'throat' **Fp. ekɔndɔt**, 'neck' **Fm. ekɔndɔd**, **B. ɛhɔndɔr**, **Fy. ekɔndɔr**

'smoke' **Fp. kakɔ:d**, but: **Fm. faxɔr** (the only such example), **B. fakɔr**, **Fy. fakɔr**.

Note the alternation in **Fm. fuba:refu** 'the stick' and **fuba:d** 'stick' (glossed as 'tree'), cf. **Fy. fubɛ:rɛf**, **fubɛ:r** '(the) stick'. Also the alternation of medial *-r-* with initial *d-* in **Fm. ɛ:rɪmba:n** and **ɔɪmba:n** 'rich', **Fy. fɛrɪmbɛno** '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:lham** and **Fuhup** but do not appear either in **Fogny** or in **Banjali**. Given this fact we would have to say, in arguing for common mergers that both **Fogny** and **Banjali** derive from a single source, either **Fuhup** or **Fi:lham**. This, of course, is patently absurd and is in direct contradiction to all other evidence, viz. the lexical closeness between **Fuhup** and **Banjali** and between **Fi:lham** and **Fogny**, and, most especially, the *l* deletion and *k>g* innovations, reflexed in **Banjali**, that took place in **Fuhup** 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.²³ 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.²⁴ What does remain are C~NC alternations, reminiscent of Wolof, that link verb with noun, e.g. Manjaku-Bak -rits 'be heavy', ndits '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 **Fuhup** 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'; **ngini** or **ndjeni**, disjunctive pronoun 'I' equivalent to Fogy inje ni-; **-ε** subordinate marker; and root reduplication. The constructions vary in terms of subject-noun emphasis: **ni-X-(ε)**: **nirɔɔ** 'I sit down', **nitisulo:ε** 'I sneeze!'; **ngine X-(ε)**: **ngine rɔɔ** 'I sit down', **ngini i:ε** 'I breathe!', **ni-X-X**: **nite:tey** 'I run' and finally **ngini X-X**: **ngini lumolumo** 'I cough!'. The negative constructions are the common **ndje: X-uts** equivalent to Fy. inje i-X-ut; **indje: raso:-ruts** 'I do not play' and the phrase that in Fy. is: inje imanhut a-X 'I don't want him to X' (literally I don't want, he X): **ndje mantabɔx** 'I do not dance'[sic]and, assuming a misprint of f for t: **ndje manuforasot** 'I do not play'[sic cf. **ndjeni raso:re** 'I play'.

58. The **Fi:ham** constructions are all similar: **ni-X-(ε)**: **nilhau** 'I beg!', **nila:nye** 'I go! [sic] (actually 'I return!); **nde:-X**, **nde:lhu** 'I laugh', and **ni-X-X**, **nilhu:lhu** 'I laugh!'. The negative frame is **i X-urs**, **i bɔ:-murs** 'I do not dance' and **i rε:ri:rs** 'I do not play' (cf. Fy. **i-rəri-ut**, or

i-rəri-erit, the latter: 'I never play').

NOTES

1. J. David Sapir, 'West Atlantic: An inventory of the languages, their noun class systems and consonant alternation', in Thomas Sebeok et al. (eds.) *Linguistics in Sub-Saharan Africa*, Vol. VII of *Current Trends in Linguistics*, The Hague, 1971, pp. 45-112.
 2. Described in J. David Sapir, *A Grammar of Diola-Fogny* (West African Language Monograph, No. 3), Cambridge, 1965.
 3. *Les Diola* (Mémoire de l'IFAN, No. 55) T.I. Dakar, 1958, pp. 12-13. Also, L.V. Thomas: 'Esquisse sur les mouvements de populations et les contacts socio-culturels en pays Diola (Basse-Casamance)', *Bulletin de l'IFAN, Série B.*, XXII, Nos. 3-4, 1960, pp. 491-493.
 4. *Op. cit.*, 1960, p. 489.
 5. The latter is erroneously called Ering on the Ziguinchor sheet of the Institut Géographique National map, 1954 (1:200,000) (Sénégal Feuille ND-28-11).
 6. My colleague, Francis Snyder, kindly provided the proper identification of Éshij.
 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 Oussouye), Kasa (Ourong), 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 **Fuhup**-Banjal similarities.
 9. But he also gives the alternate **gill:va**, 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 **Filham** and Fogny examples).
 10. The position of Gusilay is problematical. As a result of my lexical count of Bak (*op. cit.* 1971, p. 47), I placed Gusilay 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 Gusilay, 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. -Hf. 78 percent, B. -Fy. 67 percent, and B. -Gy. 63 percent. Oral tradition links the Banjal village of Ésil (Essil or Essyl) with Conk
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Essil (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 essil are the same: -sil; -ay is an abstract suffix and ε- and gu- are class prefixes. Tionk-Essil is separated from Essil by the Casamance River and is situated to the north northwest at a distance of about 30K. from the Banjul area.

11. The root is -nuk that as bunuk is the general word for 'palm-wine' and as enuk is the word for 'stick' and sometimes for 'animal'. The Fuhup word is bubat, which matches Fihham fubad (the proper gloss for the latter is, following Fy., 'large stick', cf. Fy. fubær and bubær 'tree').
 12. Sapir, op. cit., p. 80. The isolated language of Bijago 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 Bijago classes.
 13. Snyder's informant considers ufiil as 'the old pronunciation'.
 14. Op. cit.
 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: nabajɛbaj 'he always has', nɔbɔjɛubaj 'he always has from'.
 16. Cf. John Stewart, 'Cross-Height vowel harmony in the Kwa languages', mimeographed. Paper given at the 1969 meeting of the West African Languages Society at Abidjan.
 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 Huluf as sketched by Wilson where there are only seven (or eight) vowels i, i, ɛ, a, (ä), o, u, u and where harmony apparently affects only the i/i, u/u, ä/a 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 Huluf rather than the Fogny-(Fihham) model.
 18. This geminate had not been discovered when I wrote my grammar, cf. alɔl 'in-law', bulɔll 'right of a widow, or divorcée, to live with her son'; -mɛlɛn 'dry up, as a cut in a tree', -mɛllɛn '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.
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20. The Manjaku and Papel items are taken from word lists provided by M. Jean Doneux. Cf. his note 'Le phonème ɾs est l'équivalent pɛpɛl du $/\text{ts}/$ dans le dialecte bɔk et d'autres dialectes manjaku'. 'Le Manjaku, classes nominales et questions sur l'alternance consonantique', in *La classification nominale dans les langues négro-africaines*, CNRS, Paris, 1967, p. 273. There is also a D. s:M. ts:P. ɾs correspondence: 'ear' D. (Fy.) ka-wɔs , M. -bats, P. -wars.
 21. Jean Doneux, 'La langue Manjaku et l'alternance consonantique initiale', in *African Language Review*, 8, 1969, pp. 263-271.
 22. Doneux, *op. cit.*, 1967, p. 271.
 23. 'Polyglotta Evidence for Consonant Mutation in the Mandyak Languages', *Sierra Leone Language Review*, 5, 1966, pp. 106-111.
 24. *Op. cit.*
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