

MORPHOLOGICAL FEATURES IN THE VERBAL SYSTEM OF FULA¹

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Bloomfield,² in his chapter on morphology, makes it clear that he regards morphology as being concerned not only with such linear elements as prefixes and suffixes, and with regular alternations in the shape both of affixes and of the basic radical element, but also with such features as stress, intonation, and relative pitch. It is however worth emphasizing this point – the variety of features which come under the heading of morphology – in relation to African languages, and perhaps West African languages in particular. The point could be illustrated from the verbal system of many West African languages, in which exponents of tense include a variety of combinations of various features – ranging from the common pre-radical and post-radical tense elements, to differences in the shape of the radical (as in Tiv, for example)³, differences in the shape of the subject element (as notably in Hausa), and of course differences in tone pattern.

2. Fula⁴ perhaps provides a particularly interesting illustration. For at first sight it has the appearance of a typical inflectional language, with different tenses and even three voices (Active, Middle and Passive) marked by a considerable variety of tense suffixes. A detailed study of the verbal system, however, shows that although in many cases the suffix is itself sufficient to differentiate one tense from another, nevertheless a full description of the characteristics of any tense is impossible without reference to other features. These other features include not only the shape of the subject pronoun, the radical, and even some object pronouns, but also the arrangement of the elements, the place of the verbal form in the intonation pattern of the sentence, and a special feature which is here called Final Glottality.

3. Limitations of space make it impossible to deal here with the full range of variations of this kind, but the main variations will be indicated here, illustrations being taken from the dialect spoken in Gombe Division of Bauchi Province in Nigeria.

4. It may be added, parenthetically, that the traditional term 'tense' is retained here – without implying a necessary time-distinction in the meaning – to refer not only to what are traditionally treated as tenses, but also to the Subjunctive.⁵ Since the Subjunctive is formally comparable with other verbal paradigms, it seems simpler to extend the meaning of the term 'tense' to cover it, especially since the other possible term 'aspect' is useful for referring to a different phenomenon.⁶

¹ This article is based on a paper presented at the Fourth West African Languages Congress at Ibadan in March 1964. The points made here are dealt with at greater length in the author's London Ph.D. thesis (1962), 'The tense system in Gombe Fula' (unpublished).

² Leonard Bloomfield, *LANGUAGE*, Chapter 3 (George Allen & Unwin).

³ E.g. *venda/vende* 'refuse', *lɔhɔ/lehe* 'summon', *time/tim* 'dig'.

⁴ The language of the Fulani, or *Fulɓe*, western dialects being referred to by Fula-speakers as Pular (Poular), eastern dialects as Fulfulde.

⁵ Cf. my article 'The subjunctive in Fula', *AFRICAN LANGUAGE STUDIES* II, 1961, pp. 125–38.

⁶ Viz. different aspects of meaning are associated with various verbal extensions, such as *-t-*, *-d-*,

-oy-, e.g.

'reversive'	<i>-it-</i>	: <i>maɓɓ</i>	'close'	, <i>maɓɓit</i>	'open'
'associative'	<i>-d-</i>	: <i>war</i>	'come'	, <i>ward</i>	'come in company'
'distantive'	<i>-oy-</i>	: <i>jood</i>	'sit'	, <i>joodoy</i>	'sit over there'

5. It will be noted that the list of relevant features given in section 2 above includes subject and object pronouns, which could be regarded as separate words, and certainly are normally written as such. This emphasises the point, which is perhaps now a commonplace, that the status of morphology, in the strict sense of the analysis of the word, is equivocal in languages where the delimitation of the word is often in question, and where features of the word, even when delimited, have to be described in terms of other features beyond its boundaries.

6. For the present purpose, subject and object pronouns – or Subject and Object Elements, as they will be called here – are treated as elements within a Verbal Complex, which also includes the Radical and the Tense Suffix. A distinction is here made between (1) Minimal Complexes and (2) Enlarged Complexes.

(1) MINIMAL COMPLEXES consist of Subject Element, Radical and Tense Suffix only, e.g.

'o-loot·ii	he (has) washed
'o-loot·ake	he (has) washed himself
'o-loot·aama	he has been/was washed

Radical and Tense Suffix together will be referred to as the BASE – in the above examples *loot·ii*, *loot·ake*, *loot·aama*. In citing examples Radical and Tense Suffix will be separated by a raised full stop (e.g. *loot·ii*), while hyphens will be used between Subject Element, Base and Object Element.

(2) ENLARGED COMPLEXES consist of the same elements as Minimal Complexes plus one or two Object Elements (1-object and 2-object Complexes respectively),⁷ e.g.

'o-nodd·ii-mo	he called him
'o-yaaf·ake-be	he forgave them
'o-holl·ii-yam-dum	he showed me it

7. As has been indicated, the most obvious criterion for the formal differentiation of tenses in Fula is the TENSE SUFFIX. Thus the General Past tenses Active, Middle and Passive, as shown in section A of Table I and also in section A of Table II, are distinguished by their different tense suffixes ·ii, ·ake, ·aama, while the corresponding General Future tenses have suffixes ·ai, ·oto, ·ete. Other tenses again are characterised not by single suffixes, as in the above instances, but by pairs of alternant suffixes, as can be seen in columns 2 and 3 of Table II. Thus the Relative Past⁸ Active has the pair of suffixes ·i/·u,⁹ the Relative Past Middle the pair ·ii/·i, while the Subjunctive Active and Middle are characterised by the pairs ·a/·ø¹⁰ and ·oo/·o respectively, with differing patterns of distribution within the tense paradigm. Many other such suffixes could be cited, but we are here concerned primarily with other features of the verbal complex.

⁷ Preterite complexes – complexes containing the preterite element -no/-noo- constitute another type of enlarged complex, but are not dealt with here since they do not illustrate any new principle, other than the fact that the preterite element itself has two alternant shapes correlated to some extent with tense, e.g. 'o-waal·ake-no 'he had lain down' (General Past) but ton 'o-waal·i-noo 'it was there that he had lain down' and ton mbaal·i-noo-mi 'it was there that I had lain down' (both Relative Past).

⁸ The Relative Past is a past (or perfective) tense used in certain specific contexts, e.g. relative clauses, certain types of interrogative and emphatic sentences, and in narrative sequence.

⁹ It would be more accurate to say 'the pair of suffixes (a) ·i and (b) zero or ·u', ·u occurring in place of zero with radicals of certain phonological structures – e.g. those ending in t (such as *loot·*) or in a consonant cluster (such as *nodd·*) – or as a free variant of it.

¹⁰ I.e. ·a in 1st and 3rd person complexes, zero (here symbolized as ø) in 2nd person complexes – *lootaa*, *looten*, *looton* being most appropriately analysed as radical *loot·* + zero tense suffix + subject elements -aa, -en, -on respectively, cf. section 12.

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TABLE I

A. MINIMAL COMPLEXES, SHOWING TENSE SUFFIX

GENERAL PAST

ACTIVE	'o-loot·ii	he (has) washed
MIDDLE	'o-loot·ake	he (has) washed himself
PASSIVE	'o-loot·aama	he has been/was washed

GENERAL FUTURE

ACTIVE	mi-loot·ai	I will wash
MIDDLE	mi-loot·oto	I will wash myself
PASSIVE	mi-loot·ete	I will be washed

B. ENLARGED, 1-OBJECT AND 2-OBJECT COMPLEXES

'o-nodd·ii-yam ^h	(S B O)	he called me	(General Past)
'o-nodd·ii-ma ^h	„	he called you	„
'o-nodd·ii-mo ²	„	he called him	„
'o-yaaf·ake- <u>be</u> ²	„	he forgave them	„
'o-holl·ii-yam- <u>ɗum</u> ²	„	he showed me it	„
'o-nodd·ai-mo ²	„	he will call him	(General Future)
'o-nodd·i-mo ²	„	he called him	(Relative Past)
'o-nodd·u-maa ²	„	he called you	„
nodd·u-mi- <u>be</u> ²	(B S O)	I called them	„
nodd·u- <u>ɗaa</u> - <u>be</u> ²	„	you called them	„
nodd·u-maa-mi ²	(B O S)	I called you	„
nodd·u-moo-mi ²	„	I called him	„

TABLE II

	I GENERAL PAST	2 RELATIVE PAST	3 SUBJUNCTIVE
A. (ACTIVE)			
1 sing.	mi-loot·ii ^h	loot·u-mi ²	mi-loot·a ²
2 sing.	'a-loot·ii ^h	loot·u- <u>ɗaa</u> ²	loot·aa ²
3 sing.	'o-loot·ii ^h	'o-loot·i ²	'o-loot·a ²
1 pl.	min-loot·ii ^h	min-loot·i ²	min-loot·a ²
2 pl. incl.	'en-loot·ii ^h	loot·u- <u>ɗen</u> ²	loot·en ²
2 pl. excl.	'on-loot·ii ^h	loot·u- <u>ɗon</u> ²	loot·on ²
3 pl.	ɓe-loot·ii ^h	ɓe-loot·i ²	ɓe-loot·a ²
Suffix	·ii	·i/·u	·a/·ø
	(I washed etc.)	(I washed, etc.)	(I am to wash, etc.)
(MIDDLE)			
1 sing.	mi-loot·ake ^h	loot·ii-mi ²	mi-loot·oo ²
2 sing.	'a-loot·ake ^h	loot·i- <u>ɗaa</u> ²	loot·o- <u>ɗaa</u> ²
3 sing.	'o-loot·ake ^h	'o-loot·ii ²	'o-loot·oo ²

TABLE II—contd

A (MIDDLE contd)

1 pl.	min-loot·ake ^h	min-loot·ii [?]	min-loot·oo [?]
2 pl. incl.	'en-loot·ake ^h	loot·ii·den [?]	loot·oo·den [?]
2 pl. excl.	'on-loot·ake ^h	loot·ii·don [?]	loot·oo·don [?]
3 pl.	be-loot·ake ^h	be-loot·ii [?]	be-loot·oo [?]
Suffix	·ake	·ii/·i	·oo/·o
	(I washed myself, etc.)		(I am to wash myself, etc.)

B. (MIDDLE)

1 sing.	mi-waal·ake ^h	mbaal·ii·mi [?]	mi-waal·oo [?]
2 sing.	'a-waal·ake ^h	mbaal·i·daa [?]	mbaal·o·daa [?]
3 sing.	'o-waal·ake ^h	'o-waal·ii [?]	'o-waal·oo [?]
1 pl.	min-mbaal·ake ^h	min-mbaal·ii [?]	min-mbaal·oo [?]
2 pl. incl.	'en-mbaal·ake ^h	mbaal·ii·den [?]	mbaal·oo·den [?]
2 pl. excl.	'on-mbaal·ake ^h	mbaal·ii·don [?]	mbaal·oo·don [?]
3 pl.	be-mbaal·ake ^h	be-mbaal·ii [?]	be-mbaal·oo [?]
	(I lay down, etc)		(I am to lie down, etc.)

C. (MIDDLE)

	CONTINUOUS (i)	CONTINUOUS (ii)	STATIVE (i)
1 sing.	midon-loot·oo [?]	'emi-loot·oo [?]	midon-loot·ii [?]
2 sing.	'adon-loot·oo [?]	'e'a-loot·oo [?]	'adon-loot·ii [?]
3 sing.	'odon-loot·oo [?]	'emo-loot·oo [?]	'odon-loot·ii [?]
1 pl.	mindon-loot·oo [?]	'emin-loot·oo [?]	mindon-loot·ii [?]
etc.	etc.	etc.	etc.
	(I am washing myself, etc.)		(I am washed, am clean, etc.)

8. It is convenient to begin with the structural order, or ARRANGEMENT of the elements Subject Element (S.E.), Object Element (O.E.) and Base. Here reference will be made to the tense paradigms given in section A of Table II. In most tenses, as in the General Past (column 1), the S.E. precedes the base in all forms – mi-loot·ii, mi-loot·ake, etc.; here, we may say, the arrangement of the elements is Subject-Base, or SB. In some tenses, however, such as the Relative Past (column 2) and the Subjunctive (column 3), certain forms have a different arrangement, with the S.E. FOLLOWING the base – arrangement BS. Thus in the Relative Past tenses the 1st sing. and all 2nd person forms¹¹ have arrangement BS, while the remaining forms have the more usual arrangement SB, e.g.

loot·u·mi	I washed
loot·u·daa ¹²	you washed
loot·u·den ¹²	you and I washed
loot·u·don ¹²	you (pl.) washed

in contrast with

'o-loot·i, be-loot·i	he, they washed
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¹¹ I treat the 'you and I' pronominal forms as inclusive 2ND person forms rather than inclusive 1ST person forms, as they are usually regarded. This is because grammatically they always behave more like other 2nd person forms than like the 1st person plural forms.

¹² For the different shape of the subject elements, see section 12.

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In the Subjunctive tenses, on the other hand, 2nd person forms have the arrangement BS (loot-aa,¹³ loot-en, loot-on 'you are to wash, etc.), but 1st sing. forms (e.g. mi-loot·a 'I am to wash'), like those of the remaining persons, have arrangement SB.

9. Thus in describing the tense paradigms as wholes, what is significant is not merely the fact of variation in the arrangement, but the specific forms – e.g. 2nd person forms – in which the less usual arrangement occurs.

10. Again, in 1-object complexes (illustrated in section B of Table I) the Object Element is normally last. Thus in General Past complexes such as 'o-nodd·ii-mo 'he called him' and in some Relative Past complexes such as 'o-nodd·i-mo 'he called him' the arrangement is SBO corresponding to SB in minimal complexes; and in certain other Relative Past complexes such as nodd·u-mi-ḡe 'I called them', nodd·u-ḡaa-ḡe 'you called them' the arrangement is BSO corresponding to BS in minimal complexes. But in 1st person sing. complexes of this tense where the O.E. is the 2nd sing. or the 3rd sing. personal O.E., the O.E. occurs BETWEEN the base and the S.E., giving arrangement BOS, e.g. nodd·u-maa-mi 'I called you', nodd·u-moo-mi 'I called him'. Here too, what is significant is not simply the fact that in this tense three different arrangements (SBO, BSO and BOS) are found, but also the specific categories of S.E. and O.E. involved.

11. Associated with these differences in the arrangement of the elements are differences in the SHAPE of S.E.'s (less often of O.E.'s), and of the Radical.

12. Consider first the SUBJECT ELEMENT, and section A of Table II. In the majority of tenses, such as the General Past (column 1), where the S.E. Always precedes the base, the 2nd person S.E.'s (which are underlined) have the shapes 'a-, 'en-, 'on-, as in 'a-loot·ii, 'on-loot·ake, etc. Contrast with this such tenses as the Relative Past (column 2) and the Subjunctive Middle (column 3), which are marked by arrangement BS in some forms, including all 2nd person forms; here the 2nd person S.E.'s have the shapes -ḡaa, -ḡen, -ḡon, as in loot·u-ḡaa, loot·ii-ḡen, loot·oo-ḡon, etc. And in the Subjunctive Active the 2nd person S.E.'s have yet other shapes -aa, -en, -on (without the initial glottal stop found in the General Past), as in loot-aa,¹⁴ loot-en, loot-on.

13. Further, in the Continuous and Stative tenses (section C of Table II) ALL S.E.'s may be analysed as having different shapes containing a supplementary element -ḡon- or 'e-, giving midon-, 'adon-, 'odon-, etc., or 'emi-, 'e'a-, 'emo, etc. Each of these supplementary elements could be treated as a separate pre-radical tense element, but a simpler overall statement for all dialects of the language is possible if it is treated as part of a composite S.E., as indicated above.¹⁵

14. Certain OBJECT ELEMENTS also have two or more alternant shapes found in different tenses. This is illustrated in section B of Table I (page 7). Thus the 2nd sing. O.E. is -ma in the General Past and most other tenses, e.g. 'o-nodd·ii-ma, but in the Relative Past and some other tenses it is -maa, e.g. 'o-nodd·u-maa, 'he called you', nodd·u-maa-mi 'I called you'. Again, the 3rd sing. personal O.E. is -mo in the General Past and most other tenses, and also in most complexes of the Relative Past e.g. 'o-nodd·ii-mo, 'o-nodd·i-mo; but in 1st sing. complexes of the Relative Past it is -moo, as in nodd·u-moo-mi

¹³ Cf. note 9 on p. 6.

¹⁴ Cf. note 9 on p. 6.

¹⁵ E.g. in some dialects the S.E.'s are mido-, 'ada-, 'imo-, etc., from which no common pre-radical tense element can readily be abstracted, and the whole form mido-, 'ada-, 'imo- etc. is most conveniently treated as the S.E.

'I called him'. It can be shown that the actual shape of the O.E. in these cases is correlated with the tense, and, in the case of the 3rd sing. personal O.E., to some extent also with the category of the S.E.

15. The last three paragraphs illustrate the fact that S.E.'s and some O.E.'s have alternant shapes found in different sets of tenses; and the actual shape of these elements found in any tense is an integral feature of that tense and must be included in any description of it.

16. In the case of alternation in the shape of the RADICAL, there is a slightly different pattern. It is unnecessary here to go into the full details of the characteristic consonant-alternance system which is described in most books on Fula.¹⁶ The basic relevant fact is that many verbal radicals have at least two alternant shapes – what may for the present purpose be called a FIRST FORM with a usually fricative or continuant initial consonant such as *w*, *r*, or *h*, and a SECOND FORM¹⁷ with nasal-compound or plosive initial, such as *mb*, *ŋg*, *nd*, *k*. Examples of the two forms are:

<i>w/mb</i>	<i>waal·/mbaal·</i>	lie down
<i>w/ŋg</i>	<i>war·/ŋgar·</i>	come
<i>r/nd</i>	<i>res·/ndes·</i>	put down
<i>h/k</i>	<i>holl·/koll·</i>	show

17. The distribution of the two forms is exemplified in the paradigms given in section B of Table II (page 8). In most tenses, such as the General Past (column 1), the First Form (e.g. *waal·*) is found in all singular forms, and the Second Form (*mbaal·*) in all plural forms. But in all tenses (such as the Relative Past, column 2) which have complexes with arrangement BS, i.e. with suffixed S.E., the Second Form (*mbaal·*) is used not only in plural complexes, but also in such BS complexes – in the singular forms such as *mbaal·ii-mi* and *mbaal·i-daa* as well as the plural forms such as *mbaal·ii-den* and *mbaal·ii-don*. Similarly in the Subjunctive (column 3) plural complexes and all 2nd person complexes (having arrangement BS) have the Second Form (*mbaal·*), while 1st sing. *mi-waal·oo* as well as 3rd sing. complexes have the First Form (*waal·*).

18. In this case, then, it is not the actual shape of the radical that is significant, but the distribution of the two forms of such variform radicals in any given tense, in contradistinction to other tenses.

19. So far we have been considering what might be called fixed features; by this is meant that the arrangement of the elements, the shapes of the S.E. and O.E., and the distribution of radical alternants are constant¹⁸ for any given verbal complex in any tense, no matter in what context the complex occurs. The next two features, however – intonation and final glottality – cannot be regarded as independent of the context in the same way.

¹⁶ E.g. A. Klingenheben's *DIE SPRACHE DER FUL*, J. J. Augustin, Hamburg 1963, the same author's *DIE LAUTE DES FUL*, Dietrich Reimer, Berlin 1927, and F. W. Taylor's *A GRAMMAR OF THE ADAMAWA DIALECT OF THE FULANI LANGUAGE*, Oxford, 1953.

¹⁷ The third alternant, with a plosive category initial in all cases, which is found in nominals and verbo-nominals (e.g. *baal·ii-dō* 'one who lay down', *gar-dō* 'one who has come') is ignored here, since it does not occur in pure verbal forms. When all three alternants are under consideration it would of course be preferable to call this plosive-initial alternant the Second Form and call *mbaal·*, *ŋgar·* etc. the Third Form.

¹⁸ Except in one or two instances where there is free variation between two possible alternatives.

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20. The actual INTONATION PATTERN of the verbal complex depends of course on the type of sentence in which the complex occurs – affirmation, emphatic affirmation of certain kinds, questions of various types, etc. But in the Gombe dialect, at any rate,¹⁹ the relation of verbal forms to the intonation pattern of the sentence or clause differs to some extent according to the tense involved. In this respect negative tenses differ from positive tenses, and even positive tenses fall into two distinct categories.

21. This is most clearly seen in certain types of affirmations – those not involving exclusive emphasis. (Rules can be given by which the intonation pattern of other types of sentence can be derived from that of affirmations). The general outline of the basic intonation pattern of such affirmations may be represented thus:

(—) (—) — (— — —)

It consists of a gradual descent from an INTONATION PEAK, the peak being usually, but not always, preceded by one or more syllables at a lower level. The general outline is the same throughout all tenses, but the intonation peak falls on different syllables in different tenses. This is illustrated by the sample complexes given in Table III, where the position of the intonation peak is indicated by a superscript vertical line ' placed above the vowel coinciding with the peak, thus:

'o-lóot·ake (— — —)

22. In most positive tenses the intonation peak coincides with the first syllable of the radical, as in 'o-lóot·ii, 'o-lóot·ake, 'o-lóot·ai, 'o-lóot·ete and mi-wl'·ii-mo to mbáal·ii-mi 'I told him where I lay down'. But in the Continuous (i) and Stative (i) tenses the intonation peak coincides with an element preceding the base (which, as mentioned in section 13, I analyse as part of the S.E.), e.g. midón-loot·a 'I am washing', 'odón-loot·ii 'he is

TABLE III

INTONATION PATTERNS		('=intonation peak)
(General Past, Active)	'o-lóot·ii	he washed
(„ „ Middle)	'o-lóot·ake	he washed himself
(„ „ Passive)	'o-lóot·aama	he has been washed
(Relative Past, Active)	mbáal·ii-mi	I lay down
(General Future, Active)	'o-lóot·ai	he will wash
(„ „ Passive)	'o-lóot·ete	he will be washed
(Continuous (i) Active)	midón-loot·a	I am washing
(Stative, Middle)	'odón-loot·ii	he is washed, clean
(Past Negative, Active)	mi-loot·áayi	I didn't wash
(Future „ „)	mi-loot·átaa	I won't wash
(„ „ „)	mi-nán·taa	I won't hear
(„ „ Middle)	mi-yaaf·atáako	I won't forgive
(Negative of Quality)	mi-semmbld·aa	I'm not strong
(„ „ „)	mi-'ánnd·aa	I don't know

¹⁹ There is in fact a remarkable variation in intonation patterns from one dialect to another.

washed, clean'. And in minimal complexes²⁰ of negative tenses it coincides with the penultimate vowel of the complex as in the last six examples in Table III. This penultimate vowel is, it may be noted, sometimes part of the radical, sometimes part of the tense suffix.

23. In the Gombe dialect, the position of the intonation peak does not play as vital a role in distinguishing individual tenses as do, for instance, differences in the tense suffix; but it does vary according to tense, and must be included among the characteristics of the various tenses.

24. The last of the features to be considered – FINAL GLOTTALITY, or absence of it – plays a less important role in distinguishing tenses than those previously considered; for in fact although with some speakers Final Glottality is readily observable, with others it is difficult to detect, or even non-existent. It is nevertheless to be regarded as a systematic feature; for in the speech of those who do use it, the pattern of its incidence is regular and predictable both within one idiolect and from speaker to speaker, even from dialect to dialect.²¹

25. By Final Glottality is meant a glottal feature which occurs with most speakers AT THE END OF WORDS OR COMPLEXES OF CERTAIN TYPES when they are IN PAUSE, IN CERTAIN TYPES OF SENTENCE. (In brief, it occurs in most types of affirmation, but not in most types of question.) It consists either of glottal closure (with eventual but not immediate release), or of glottal constriction, and its presence will be indicated in this material by a raised symbol ʔ at the end of the word, its absence by a raised h.

In Gombe Fula it occurs after final consonants such as -l, -m and -n as well as after final vowels, e.g.

pullo ^ʔ	a Fulani	ɓiɲɲgel ^ʔ	a child	nebbam ^ʔ	oil, fat
'odon-loot·ii ^ʔ			he is washed, clean		
'o-holl·ii-yam-ɗum ^ʔ			he showed me it		
mbaal·ii-ɗon ^ʔ			you lay down		

This glottal feature, it must be emphasised, is realised only in pause. When such words and complexes are in medial position there is no realised glottal feature; nor is there – as Carnochan shows there is in Hausa²² – any correlative feature such as absence of length.

26. Final Glottality is a feature of all nominals (but not of concordant demonstratives), absence of Final Glottality is a feature of adverbials;²³ but in the verbal system no such overall statement can be made, and separate statements must be made for various tenses and for different types of complex. As regards minimal complexes, the position is, briefly, that in some tenses all complexes are marked by Final Glottality, while in other tenses all

²⁰ Slightly different patterns are found in some enlarged complexes. E.g. in *mi-loot·átaa-ɗum* 'I will not wash it' the intonation peak again coincides with the penultimate vowel of the complex, but in *mi-yaaf·atáako-mo* 'I will not forgive him' it is on the same syllable as in the corresponding minimal complex *mi-yaaf·atáako*, but in the enlarged complex this syllable is the ante-penultimate and not the penultimate.

²¹ It was my colleague Mr Jack Carnochan who called my attention to the existence of this feature in the Adamawa dialect of Fula, as well as in Hausa.

²² See J. Carnochan, 'A study of quantity in Hausa', BSOAS, XIII, 4, 1951.

²³ E.g. (nominals) *pullo^ʔ* 'a Fulani', *ɓiɲɲgel^ʔ* 'a child', *pullo nayeejo^ʔ* 'an old Fulani', but (demonstratives) *pullo* 'o'oh 'this Fulani', 'oya^h 'that one', and (adverbials) *ton^h* 'there', *keenya^h* 'yesterday', *yaasi^h* 'outside'.

complexes are marked by its absence. This is illustrated by the complexes given in Table II. It will be seen that all complexes in the Subjunctive, Relative Past, Continuous and Stative tenses are marked by Final Glottality, while all complexes in the General Past (as in the majority of other tenses) are marked by its absence.

27. In the case of enlarged complexes, the description is complicated by the occurrence at the end of the complex of object elements, some of which are themselves characterised by Final Glottality (e.g. 3rd person O.E.'s such as mo^2 'him', be^2 'them', dum^2 'it', and the long form of the 2nd sing. O.E. maa^2 'you'), while others are marked by its absence (e.g. yam^h 'me', min^h 'us', $'on^h$ 'you (pl.)' and the short form of the 2nd sing. O.E. ma^h). Here the presence or absence of Final Glottality at the end of the complex is not correlated with the tense, but with the final object element. Thus even within the General Past tense some complexes such as $'o-nodd\cdot ii-mo^2$ 'he called him', $'o-nodd\cdot ii-be^2$ 'he called them' have Final Glottality, while others such as $'o-nodd\cdot ii-yam^h$ 'he called me' and $'o-nodd\cdot ii-ma^h$ 'he called you' do not. But enlarged complexes where such elements are not final behave in the same way as the corresponding minimal complexes; thus the Relative Past complexes $nodd\cdot u-maa-mi^2$ 'I called you' and $nodd\cdot u-moo-mi^2$ 'I called him' (with O.E.'s $-maa-$ and $-moo-$) are characterised by Final Glottality, as are all minimal complexes of this tense (cf. section 26 above).

28. Presence or absence of Final Glottality therefore has to be treated as one of several features distinguishing one tense, or group of tenses, from another, even though its actual realisation is dependent on syntactical criteria such as (a) the position of the complex in the utterance (viz. in pause or not), and (b) the type of sentence, e.g. affirmation or question.

29. Sufficient has been said to show that in addition to the tense suffixes which are the most obvious features marking off one tense from another there are various other features which are correlated with differences of tense and so must be regarded as essential features of the tense system – the arrangement of the elements in the complex, the distribution of alternant shapes of subject and object element, the intonation pattern, and the incidence of Final Glottality.

30. Not all these features are essential to the differentiation of tenses in every case where one tense is compared with another; but most of them are relevant to the total differentiation of all tenses. For instance, as can be seen in Table II, all minimal complexes of the General Past Active and the Stative Middle share a common suffix $\cdot ii$, giving a base such as $loot\cdot ii$; but these tenses are distinguished from one another by the different series of S.E.'s (e.g. $mi-$, $'a-$, $'o-$ in one case and $midon-$, $'adon-$, $'odon-$ in the other) and the fact that the Stative tense has the intonation peak on a pre-radical element and not on the radical (sections 21–22 above), and is marked by Final Glottality, while the General Past is not (section 26 above). The same suffix $\cdot ii$ also occurs in minimal complexes of the Relative Past tense Middle, but the paradigm of this tense is marked not only by a short alternant of the tense suffix ($\cdot i$) in the 2nd person singular, but also by arrangement BS in some forms, and by the use of alternant shapes of 2nd person subject elements $-daa$, $-den$, $-don$ combined with the use of the Second Form – the nasal-initial form – of the radical.

31. Moreover, features other than the tense suffix are of greater individual significance when comparable single complexes from different tenses are compared. For instance

mi-loot·ii^h is the 1st sing. complex of the General Past Active, whereas loot·ii-mi² – with the same tense suffix ·ii but arrangement BS and Final Glottality is the 1st sing. complex of the Relative Past, Middle. Again 'o-loot·ii^h is a 3rd sing. complex of the General Past Active, but 'o-loot·ii², with Final Glottality, is the corresponding complex of the Relative Past, Middle.

32. Such examples could be multiplied, but those cited are sufficient to show the importance, in the Fula tense system, of a number of other features besides the more conspicuous tense suffix.