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Studies in African Linguistics
Volume 10, Number 2, July 1979

A COMPARATIVE AND HISTORICAL STUDY OF LOCATIVE-BASED PERIPHRASTIC VERBAL FORMS IN FULA DIALECTS

Josh Ard
Indiana University

This paper is an investigation of periphrastic verbal constructions developed from locative expressions in Fula. First, a comparison of relevant features in the verbal systems of nine Fula dialects is given. Second, the dynamics of the verbal system of Fula is reconstructed through an analysis of these data. It is shown that the most significant and linguistically relevant aspects of the developments were several semantic shifts, some motivated by the appearance of new items in the verbal paradigm which led to changes in the status of existing items. An explanation of the direction and nature of these changes is offered. This explanation requires the notion of a prototype, as developed by Rosch [1973], and thereby argues for its utility in modelling semantic changes. Moreover, implications of these results for aspectual theory are presented.

1. Introduction[1]

In recent years there has been a great deal of interest in the functions of constructions developed from locative structures in verbal systems. According to one semantic theory, the localist theory, there is a universal semantic relationship between locatives and certain verbal aspects. Most semantic theories do not mark this relationship as one of equivalence, but rather consider it one of similarity, perhaps metaphorical.

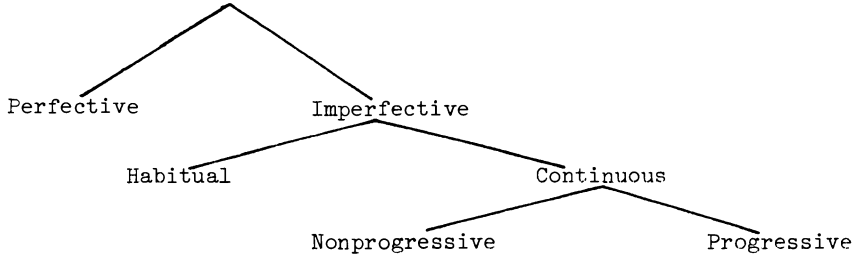
The data bearing on this question must come from natural languages. There have been a number of excellent cross-linguistic studies of

[1]I would like to express my gratitude to Mr. Alpha Diallo of Senegal who was the consultant in a UCLA field methods class on Fula. Had it not been for his interest in his language, this paper would never have been written. I would also like to thank Prof. Russell Schuh, who conducted the class and helped me see patterns in a morass of data.

locative constructions in verbal systems [Anderson 1973, Blansitt 1975, Comrie 1976, Welmers 1973], but the studies concentrated on rather superficial features of the languages described. In this paper an in-depth comparative study will be made of locative-based structures in Fula dialects, augmented by a dynamic description of the changes that have ensued in these constructions since their origin.

1.1. Caveat lector. The terminology dealing with tense and aspect is by no means as standardized as it should be. This, unfortunately, can lead to confusion. For example, it is often difficult to determine the precise sense a linguist attributes to a term such as "perfective". Therefore, I have adopted the practice of referring to a form by means of the term used by the author of the source publication. In some instances it was possible to determine that the author assumed a highly nonstandard meaning for a term, e.g. Taylor's use of *continuous* in the sense of "habitual". In these instances a note to this effect is given. Even so, there are other instances in which a term may not be especially perspicuous. Therefore, remarks on the meaning of verbal temporal and aspectual terminology as given by Comrie [1976] and by Akhmanova [1969] will be given for the reader's benefit.

Comrie [1976:25] classified the aspectual oppositions as follows:



He defined these terms in the following manner:

perfective presents the totality of the situation referred to without reference to its internal temporal constituency (p. 3)

habitual describes a situation which is characteristic of an extended period of time, so extended in fact that the situation

referred to is viewed not as an incidental property of the moment but, precisely, as a characteristic feature of a whole period (p. 27-28)

progressive combination of continuous meaning and nonstativity (p. 38)

continuous = *durative* (p. 26)

Additional terms defined by Comrie:

contingent = *temporary* (p. 38)

stative refers to states, i.e. situations that continue as before unless changed (p. 13)

aorist in some languages equivalent to past perfect (p. 12)

perfect refers to a past situation which has present relevance (p. 12)

Akhmanova's definitions are somewhat different:

aorist aspectual-temporal verbal form in the Indo-European languages used for the expression of past action as instantaneous, i.e. without indication of its development or completeness or limits

permansive (1) in the Semitic languages, an aspect that represents the activity as permanent; (2) categorial form of aspect (or its lexical equivalent) representing a given situation as the result of earlier completed action

durative = *progressive* aspect characterizing action as found in the process of development

imperfective aspect representing the activity (process) in its unfolding, i.e. as unbounded, having no limits

perfective aspect representing the activity in its limits, results, etc.

middle voice form of the verb which indicates that the action is concentrated on the subject, leading to changes in its situation; subtypes: reciprocal, reflexive, dynamic middle

Although there is no certainty that an individual author did not have a radically different meaning in mind when he or she used a given term, these definitions should serve to effectively narrow the range of possible interpretations of a given term.

2. The Localist Theory of Aspects

In a number of languages there is an overt similarity if not complete identity between locative constructions and certain verbal expressions,

usually involving progressive aspect and contingent state.[2] The fact that this similarity is found in languages unrelated to each other in either the genetic or areal sense and with a wide variety of different surface manifestations of locative constructions would seem to imply that there is some natural semantic relationship between locative constructions and these verbal expressions.[3] Exactly how natural this relationship is is a matter of dispute. The localist theory advocated by Anderson [1973] and Miller [1972] among others would suggest that both of these construction types should be analyzed as locatives at an underlying level. Others admit a relationship, but maintain there is less than formal identity at underlying levels.

The fundamental conception of the localist theory, of course, is that certain verbal expressions are equivalent at an underlying level to locatives. Since localists appear to be generative semanticists and adherents of the universal base hypothesis, the localist theory would seem to be equivalent to the hypothesis that these verbal constructions are semantically equivalent to certain locative constructions. There is less than unanimity within the localist camp as to the particulars of the equivalence. Exactly which verbal expressions correspond to locative constructions and exactly which locative construction(s) is(are) involved constitute the major controversy. On the first point, Miller [1972] suggests a parallel between being in a state and imperfective aspect. Anderson [1973:5],

---

[2]Throughout this paper I will be following the aspectual terminology used by Comrie [1975,1976].

[3]Terminological difficulties can arise from the fact that a number of terms can be used ambiguously for semantic functions and surface morphological forms. In general there is a great deal of overlap, since a surface morphological form described as a perfective marker generally is perfective in function. In general, I will refer to semantic functions as functions or expressions and surface manifestations as forms (roughly the terminology of Hjelmslev [1969]). Furthermore, when there is variation in the shape of a surface morphological form (depending on different paradigms, for example), "form" will be used to designate the entire surface pattern, however it is best to analyze it formally.

however, suggests a more narrow relationship: "The progressive, for instance, is analyzed as predicating location-in-existence-at-a-certain-time of the event whose predicate is the 'main verb'. Contingent adjectival and predicate nominal sentences are given an analogous interpretation, within a framework where all major lexical items originate as predicates."

The localist theory of aspects seems to be especially compatible with the picture theory of language and the notion of possible worlds as a semantic model, both of which derive directly from Wittgenstein [1922], but certainly the localist theory and these notions are logically independent.

2.1. Evidence bearing on the theory. As mentioned above, there is morphological evidence for the localist theory found in the wide-apread parallelism in the shapes of the aspectual/locative pairings suggested by Anderson and Miller. Blansitt [1975], Comrie [1976], Anderson [1973], and Welmers [1973] provide examples from scores of languages.

One interesting, if unexpected, feature of the data is that the same verbal function can correspond to different locational constructions. In investigating the manifestations of progressive aspect Blansitt [1975:14] found that both verb phrases with a copula[4] as an auxiliary and verb phrases with a motional or postural verb as auxiliary are used to represent progressive structure in different languages. Even finer distinctions can be made in the precise nature of the locative expressions. For example, among the languages using prepositions different prepositions may be found.[5] Moreover, different postural verbs, e.g. 'sit', 'stand', and 'lie', can be used as the auxiliary in periphrastic progressive constructions [Blansitt 1975:25].

---

[4]Blansitt grouped together overtly locative constructions and more general ones under the heading of copula. One might argue, of course, that all copulas are semantically locative. Many copulas are etymologically locational verbs.

[5]"In Irish [Dillon and Cróinín 1961:44], the progressive structures

The facts are both a blessing and a curse for localist theory. They certainly demonstrate that progressives are quite often expressed by locative constructions, yet the lack of uniformity in the locative expressions must be an embarrassment to any theory that assumes a universal, fully-specified base. In such a theory the representation of progressives cannot just be *any* locative expression. It must be some particular one.

For the localist theory of aspect to hold, the similarities between the verbal forms and locative forms must be more than mere resemblances. They must be underlying equivalents. Comrie [1975:89] has noted that in some cases the parallelism is a result of historical change, as in the English progressive 'they had been fighting' for older 'they had been a(t) fighting'. He further notes that in many languages "the parallelism is one of similarity rather than absolute identity" [Comrie 1975:90].[6]

---

are formed with the appropriate form of the copula + ag 'at' + the verbal noun. The verbal noun is regularly formed by suffixing -adh to the verb stem. A direct object with a progressive aspect predicate is in the genitive case.

(a) tá sé ag dunadh an dorais
be he at shutting the of-door
'he is shutting the door'

(b) dúnann sé an doras
shuts he the door
'he shuts the door'

(c) bhíodar ag glanadh na bhfuinneog
they-were at cleaning the of-windows
'they were cleaning the windows'

[Dillon and Cróinín 1961:168]
[Blansitt 1975:19]

Swahili ninasoma 'I am reading' consists of ni 'I', na and the verb stem soma , na being used elsewhere as a preposition meaning 'with' (erda nam 'go with me') [Anderson 1973:17]. In Welsh, the preposition used is yn (usually 'n after a vowel), e.g. y mae hi'n gweithio 'she is working', literally 'is she in work(ing)', y mae hi'n ein taro ni 'she is hitting us', literally 'is she in our hitting us' [Comrie 1976:99].

[6]For an example of this in Welsh see Comrie [1976:100].

Another problem with this morphological evidence is that there are other periphrastic constructions for expressing progressive aspect which are not at all equivalent to location-in-a-situation at all [Blansitt 1975:14].[7]

The situation may be parallel to future tenses. 'Want', 'have', 'go', and 'come' are all frequently used as future auxiliaries, so there must be some natural connection between their meaning and that of future tense, yet it is impossible to say that all futures involve volition, or that all futures involve obligation or that all futures involve a change of state.

---

[7]In the Mouroum dialect [of Ngambay-Moundou] the motional verb áo 'go' is the progressive auxiliary.

(a) m-áo m-úsá né
'I'm eating (something)' [Vandame 1963:95]

In Tatar [Poppe 1968:101] certain motional and postural verbs (kil- 'come'; bar- 'walk'; tor- 'stand'; yat- 'lie down') are used with a preceding gerund in progressive constructions:

(b) uŋiš ölgerep kilä
'the crops are ripening'

(c) samolyot očip kilä
'an airplane is flying'

(d) yaxšira bara
'he is improving'

(e) eš betep kilä
'the work is ending'

A verb glossed as 'do' is used as auxiliary in progressive constructions in Southern Barasano [Smith 1973:19-20]. The head verb precedes the auxiliary and the two verbs agree in gender:

(f) bagʉ yami
'he's eating' (eat-masc. doing-he)

(g) bago yamo
'she's eating' (eat-fem. doing-she)

(h) yigʉ yimi
'he is saying'

(i) isigo yama
'she's giving'

(j) wacʉ yami
'he's leaving' (all from Blansitt [1975:28-9])

There are two remaining difficulties with the morphological support for the localist hypothesis. First, locative constructions have wider functions in some languages than in others (imperfective vs. progressive and contingent state). Hence, it is problematical what the correct semantic equivalence is. Second, in many languages the locative constructions involve verbal nouns, while in other languages participles are involved, frequently without any preposition or other overt marker of location type. Anderson [1973:19-25] attempts to analyze all participles as nominal forms. It is questionable how successful this attempt is. Certainly a locative construction with a verbal noun seems easier to interpret literally than one with some sort of participle.

There is some syntactic support for the localist theory of verbal aspect. Many languages have an overtly locative structure that seems to paraphrase the progressive, as in English and French *je suis en train de manger* 'I am in the process of eating'. Miller [1972] provides a number of syntactic parallels between adjectives, imperfective verbs, and locative expressions in Russian. For example, a number of predicate adjectives seem equivalent to a locative expression using a noun.

(1) *general otčajannyj*
'the general is desperate'

(2) *general v otčajanii*
'the general is in despair'

(3) *general v zdanii*
'the general is in the building' [Miller 1972:224]

As in the examples above, a possible refutation would be that these examples show resemblances, but not necessarily equivalence.

In summary, there is ample evidence that there must be some natural connection between locative constructions and certain verbal expressions such as contingent states and progressives (or perhaps better, imperfectives), but the nature of the connection is in dis-

pute. Also, a number of fine details are controversial: Which is more basically locative--the progressive or the imperfective? Which locative expression more properly corresponds to this form? Do these relationships have more of an etymological or underlying basis in those languages in which they can be justified? Moreover, there are some questions ignored by the general statement of the localist theory: Is it possible for two different locative constructions to be used contrastively within the verbal paradigm of a language? If so, are the functions of each in any sense predictable? Fula data should prove helpful in answering some of these questions.

3. The Fula Speech Area

Fula, a member of the Northern subdivision of the West Atlantic branch of the Niger-Kordofanian languages [Sapir 1971], is perhaps the most widely dispersed indigenous language in sub-Saharan Africa, due to massive migrations, with significant concentrations of speakers stretching from Senegal in the west to Cameroon in the east, a distance of over 3000 miles. This widespread representation of speakers is probably primarily responsible for the availability of detailed analyses of various Fula dialects. First, European investigators were intrigued by a people they viewed as "vigorous", and often attributed special features of "vigorousness" to their language. Second, the sheer size of the Fula speaking population attracted attention. Third, significant concentrations of Fulaphones in different colonial domains enhanced the possibility of multiple European grammars, since each colonial authority could independently authorize a study. Whatever the motivation of the authors, a comparative dialectology is more feasible for Fula than for virtually any other language of sub-Saharan Africa.

This paper is based on analyses of most of the major Fula dialects, here listed in roughly a west-east order with sources used included:

Senegal

Toucouleur--UCLA field methods notes

Fouta Toro--Giraudon [1894], Gaden [1912-14], Labouret [1952]

Gambia--Swift and Tambudu [1965]

Fouta Djallon (Guinea)--Arensdorff [1913], Reichardt [1876]

(Masina (Mali)--one citation from Arnott [1970])

Sokoto (NW Nigeria)--Krause [1884], Westermann [1909]

Gombe (central Nigeria)--Arnott [1970]

Dageeja (now northern Cameroon; the group recently migrated from the Bornu area of NW Nigeria)--Labatut [1973]

Adamawa (Nigeria and Cameroon)--Taylor [1953], Lacroix [1963], Stennis [1967]

Unfortunately, these sources differ enormously in reliability and comprehensiveness. Some of the earliest studies are highly inadequate. Giraudon dismissed some as "buffoneries". As an example, most of the early studies ignored the distinction between normal voiced stops and laryngealized stops, e.g. d vs. ɗ, really [d̰]. Another difficulty is the individual differences in the description both in phonetic/phonological transcription and in the descriptive grammatical terms used. In general, I have followed the procedure of using an author's own description, augmented by an explanation where his usage is confusing or aberrant.

4. Fula Long Form Pronouns as a Reflex of Locative Constructions

Within Fula dialects there are two sets of non-emphatic pronouns which are used depending on the type of verbal expression[8] in the sentence (the details differ from dialect to dialect and will be discussed below). In this section I will show that both sets have their historical origin in locative constructions. The first set, short forms, is given in Appendix I. The second set, long forms, is somewhat more complicated. In the western dialects

[8]Unless there is a statement to the contrary, all discussions deal only with active affirmative constructions.

there is one set of long forms, while two contrastive sets are found in the eastern dialects. A complete listing is found in Appendix II.

A major difference between western and eastern dialects with respect to the long forms is that the single set found in the west is the result of a suppletion of the two sets found in the east [Lacroix 1963:47, Arnott 1970:195]. For example, compare:

(4)	Senegal (West)	Gombe (East)	
	midɓo	midɓɔn	(set A)
	hidɓa	'e'a	(setB)
	himo	'emo	(set B)
	meɓen	mindɓɔn	(set A)
	hiɓen	'e'en	(set B)
	hiɓon	'e'on	(set B)
	hiɓe	'eɓe	(set B)

A cursory glance at Appendices I and II suffices to show that long form and short form pronouns are related phonologically. The relationship is most transparent in the three easternmost dialects, where the relationship is:

(5) Form (A): short form pronoun + ɓo(n)

(6) Form (B): e + short form pronoun[9]

Presumably the more opaque forms in the western dialects resulted largely from phonological assimilations and perhaps paradigmatic analogy. The exact description of these developments awaits a comprehensive comparative phonology of the dialects.

The non-pronominal elements in (5) and (6) are phonologically similar to locative elements: ɓoo means 'here', ɓon 'there' in Sengalese Fula; ʔe , he , ɓoo (the form varies depending on the dialect) is a preposition meaning 'in, in the vicinity of'. Moreover, ɓon is quite frequently used in locative constructions.

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[9]For the o/mo alternation, see below.

(7) deftere ɗon 'there is a book'

(8) o ɗon nder gelle jooni 'he is in the town now'

[Arnott 1970:32]

A number of authors have noted the similarity between (5) and (6) and locative constructions.[10] Arnott has noted that that parallelism

---

[10]Some sample analyses:

"The effect of this long form of the personal pronouns is to make an equational or situation sentence. A more literal translation of [miɗo laaroya gaynaakoqam 'I'm looking for my shepherd'] would be 'I'm in the (as yet incomplete) state of going to look for my shepherd'. In this translation the parenthetic phrase 'as yet incomplete' refers to the fact that the imperfective verb form indicates action not yet complete." [Swift and Tambudu 1965:41]

A. Chataigner: "Le Prof. Lacroix, parallèlement au rapprochement qu'il a fait entre l'element -Do suffixé aux sujets (?o-Do wara, debbo-Do wara) et le monème libre Do , à sens de proximité spatiale: 'ici', serait-il prêt à accepter un rapprochement semblable entre l'élément ?e/he affixé aux sujets (?e-mo wari , gorko-?e-wari) et le monème libre au'on trouve sous les formes ?e et he/hen , dont il a donné un exemple (?e kuro) et dont la signification général paraît être celle de co-localisation ou de countenance."

J. Lacroix: "Nous inclinons à penser qu'un rapprochement peut être fait entre l'élément ?e/he et le monème fonctionnel phonématequement identique à valuer associative et/ou instrumentale, rapprochement que suggère par ailleurs l'existence d'énoncés du type:

(a) shehu ?e sifaawa
'le shaikh est (ou était) à Sifaawa'

(b) _____ Don sifaawa
(same translation)

où les deux monèmes Do(n) et ?e/he ont une valuer (et ici un sens) identiques. Mais il convient aussi de remarquer que le parallélisme entre ces deux unités n'est pas total et que leur comportement syntagmatique dans un complexe verbal où figure un pronom sujet n'est pas identique:

(c) ?e mi jooDi

(d) mi Don jooDi [Lacroix 1963:51]

"In Bantu wird das Verbum durch angehängtes a partizipial, und auch das Ful-Präsens ist wahrscheinlich als Partizip-Form aufzufassen: miɗo = 'ich bin'" [Westermann 1909:225].

is not complete.[11] This would seem to imply that the derivation of long form pronouns (A) from a locative construction is easier to justify diachronically than synchronically. The pattern is quite reminiscent of the Welsh example mentioned in footnote 6. It is, of course, not unusual for words and phrases used in periphrastic verbal constructions to differ phonologically (especially in terms of suprasegmentals) from the forms from which they are derived. Consider:

(9) I'm gonna go.

(10) *I'm gonna Boston.

The divergence in form is even stronger for long form pronouns (B). A major problem is the form of the pronoun occurring after ʔe/he/hi . We would expect short form pronouns:

(11) e+mi
e+a
e+o
e+min
e+en
e+on
e+ɓe

but what is found in the form of the pronoun occurring after ʔe/he/hi is

(12)	Senegal (West)	Gombe (East)
	n.a.	mi
	ɓa	ʔa
	mo	mo

[11]"This ɓon (locative) may be distinguished from the ɓòn segment which is part of the subject element in the Continuous and Stative tense by the fact that the latter is pronounced on a level pitch (at least by my informants), whereas the stabilizing element ɓon is marked by a falling pitch, as is usual with words having CVC structure." [Arnott 1970:32]

(12) cont.

n.a.	min
ɗen	en
ɗon	on
ɓe	ɓe

Another problem is that ʔe/he , when used as a preposition, require object pronouns:

(13)

Senegal	Gombe
lam	yam
le	ma
me	mo
men	men
ʔen	ʔen
ʔon	ʔon
ɓe	ɓe

[Arnott 1970:212]

With the exception of mo , this list is even more divergent from the required forms.

A more promising parallel locative construction involves another structure witnessed in the Gombe dialect involving headless relative adverbial constructions[12] [Arnott 1970:317]. ʔe 'where' can introduce these clauses. For some reason Arnott cites no example with ʔe , but they are presumably analogous to those with to which also means 'where'.

---

[12]Another promising parallel construction found in Gombe involves clause-initial hiin 'here you are, here is', used in proferring something:

(a) hiin nde
'here it (e.g. book) is' [Arnott 1970:32-33]

Arnott states that the pronouns used in this construction are object pronouns, but all of his cited examples are ambiguous between subject and object forms.

(14) to Bello yahi, walaa na?i

'where Bello has gone, there are no cows'

This construction is a more likely source construction for Form B pronouns since ?e is followed by subject pronouns.

There still remains the problem of explaining the exact form of the pronoun following ?e . Two different possibilities come to mind. The first is purely phonological. The greater phonological assimilation in the western dialects in long form subject pronouns probably indicates that the boundary between ?e/he/hi and the following pronoun is of a weaker degree than is found in eastern dialects.[13] In fact, it is quite possible that there is no boundary at all in synchronic western forms, i.e. the forms have been analyzed as monomorphemic. In those situations in which a subject pronoun beginning with a vowel (actually ?V in isolation) follows a verbal root ending in a vowel (this occurs in certain cases involving so-called "relative" tenses[14]), the subject pronouns have the form ɗV-- [Arnott 1970:194].[15] Thus, the ɗ forms in the west may be a reflex of this process after boundary weakening. Mo is sometimes used as a subject pronoun. It is the regular form in Dageeja. In Gombe [Arnott 1970:193] mo is occasionally used, especially after words ending in ?e or ey . Hence mo , too, in Form B could be phonological in origin.

A second possible explanation involves the fact that headless relative clauses require verbal forms in "relative" tenses. This in itself might motivate the similarity with the form of pronouns occurring in relative constructions.[16]

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[13]For a discussion of boundaries in phonology, see Stanley [1973].

[14]See Arnott [1970] for a discussion of relative tenses.

[15]The situation is more complicated in that an inserted vowel may trigger this rule.

[16]Mo can be used as a subject pronoun only in certain relative constructions in Toucouleur.

The last remaining problem with the analysis of (5) and (6) as reflexes of locative constructions is that the following verbal form should be non-finite. Three different morphological verbal forms occur in this construction in the various dialects, those with desinences -a/-o/-e; -i/-ii /-aa; -(u)de/-aade/-eede (active, middle, passive).[17] -(u)de/-aade/-eede is unambiguously non-finite, as it is also the infinitive in the dialects where it is used in periphrastic verbal constructions. The other two forms are the only apparently finite verbal forms that can be used in Gombe without a subject element:

(15) ndaa mo ton joodii
'there he is sitting over there'

(16) ndaa mo ton wara
'there he comes' (lit. there he is yonder coming)

[Arnott 1970:243]

Presumably, this means that these forms can be used as participles. Thus, they, too, are at least ambiguously non-finite.

Therefore, it appears that (5) and (6) are indeed the reflexes of a locative construction.

5. Long Form Pronouns in Modern Fula

The function of verbal constructions involving long form subject pronouns and their diachronic development prove to be more interesting than the mere fact that they are ultimately locative constructions in origin. Dialect differences greatly complicate the problem of giving a succinct description of modern Fula. Perhaps foremost among these differences is the fact that the same[18] verbal form can bear different

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[17]The details will be given in the following section.

[18]Here, "same" really means equivalent, cognate. Various phonological changes have caused divergences in the actual shape of morphemes. Here, as elsewhere, form refers to the entire pattern for all voices and persons.

functions in different dialects. This, of course, complicates both a reconstruction of the verbal system and a clear presentation of contemporary Fula patterns. Another complicating factor is that while in some dialects the verbal forms that require long form subject pronouns and those that require short form subject pronouns are distinct, in other dialects there may be considerable overlapping between these sets, i.e. a given verbal form bears different functions depending on the type of subject elements used. Therefore, to present a clearer picture of contemporary Fula, verbal forms that can occur with long form subject pronouns and their semantic function will be described separately.

5.1. Verbal forms that can occur with long form pronouns. In this section desinences will be viewed from a purely phonological point of view. The reason for this, as mentioned above, is that the same phonological forms may bear different functions in different dialects. It seems reasonable that this divergence occurred after the break up of Common Fula. Hence, a number of phonological desinences bear a different function from the one they once bore. Thus, it proves helpful in historical reconstruction to observe the purely formal patterns, since this formal pattern may well antedate the semantic function associated with these desinences today.

The general pattern is: Long form pronouns are found with the following verbal desinences:[19]

1) -(u)de/-aade/-eede (infinitive) when used in periphrastic verbal forms (obligatory wherever found)

2) -a/-o/-e (obligatory in Senegal, Gambia, Sokoto, and Adamawa; optional in Fouta Djallon and Dageeja)

3) -i/-ii/-aa (obligatory in Toucouleur and Gambia; optional in Gambia, Fouta Djallon, and Adamawa; in Fouta Tora and Sokoto this set of desinences co-occurs only with short form pronouns)

First, we will consider verbal forms that require long forms.

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[19]Verbal forms will be cited in a pan-dialectal form that may not correspond to the actual shapes in a given dialect.

Senegal: Giraudon [1913:26] cites only the form with desinence -a/-o/-e. For Toucouleur long forms are required with three separate verbal forms, those with desinences -a/-o/-e; -i/-ii/-aa;[20] -(u)de/-aade/-eede.

Gambia: Long forms are obligatory for verbal forms with the desinence -a/-o/-e [Swift and Tambudu 1965:41].

Fouta Djallon: Reichardt [1876:120] feels that long forms are just emphatic forms which can occur anywhere. This is undoubtably an error. For Arensdorff [1913:143,152,179] -(u)de/-aade/-eede requires long form pronouns.

Sokoto: Long forms are required for verbal forms with desinence -a/-o/-e and -i/-ii/-aa [Arnott 1970:Appendix 13].

Dageeja: No verbal form requires long form pronouns.

Adamawa: For Stennis [1967:136] long forms are required for verbal forms with the desinence -a/-o/-e.

In many dialects a given verbal form may optionally require long forms. There are no such forms cited in Senegal, Sokoto, Gombe, or Adamawa.

Fouta Djallon: Arensdorff's [1913] data is rather confusing. For the form -a/-o/-e he lists both long and short forms for the active [p. 142], just long forms for the middle [p. 179], and just short forms for the passive [151]. For the form -i/-ii/-aa he lists just long forms for the active [p. 142], just short forms for the passive [p. 153], and no form at all with this desinence for the middle. I will assume that these are gaps only within his data and not within the language, i.e. that -a/-o/-e and -i/-ii/-aa can take either set of pronouns.

Dageeja: Long forms are optionally used with verb forms with desinences -a/-o/-e or -i/-ii/-aa [Labatut 1973:110].

Adamawa: Stennis lists long forms with verbal forms with

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[20]There are forms which could be analyzed as this form + no , which require short forms.

desinence -i [1967:136]. Later an example of this construction involves a middle verb [p. 146]. Perhaps passive forms exist also, but if they do, they are rare.

Summarizing these data, verbal forms with desinence -(u)de/-aade/-eede require long forms in all dialects in which this form is used in periphrastic constructions. Forms with desinence -a/-o/-e require long forms in Senegal, Gambia, Sokoto, Gombe, and Adamawa, and occur optionally with long forms in Fouta Djallon and Dageeja. Forms with desinence -i/-ii/-aa require long forms in Toucouleur and Gombe, may optionally take them in Gambia, Fouta Djallon, Dageeja, and Adamawa, and apparently co-occur only with short forms in Fouta Toro and Sokoto.

5.2. Semantic functions that are expressed with constructions involving long form pronouns. There is a fairly wide discrepancy between dialects. This is to be expected since the original meaning of a desinence may have changed over time and the semantic association with long forms would have become quite opaque. There are, nevertheless, some generalizations that can be made. In all dialects progressives are expressed by a construction that involves long form pronouns. There is a similar general association of stativity with long forms, although the situation is not so clear. Some dialects use long form pronouns in the expression of all statives. In other dialects long form pronouns are used only in the expression of contingent statives. Finally, there are some dialects for which no constructions involving long form pronouns in the expression of statives was reported. This may well have been an oversight on the part of the investigator.

Senegal: In Toucouleur, the progressive, stative, and habitual are expressed through a long form construction.

(17) (stative, verb form -i/-ii/-aa)
himo mawni
'he is big'

(18) (habitual, verb form -a/-o/-e)

himo yaha

'he goes'

(19) (progressive, verb form -(u)de/-aade/-eede)

himo yaade

'he is going'

For Fouta Toro the progressive (*présent absolu* for Giraudon [1894], verb form -a/-o/-e) is expressed using long forms:

(20) mi͡do 'ara

'je viens (en ce moment), je suis en train de venir' [p. 26]

Gambia: Swift and Tambudu [1965] progressives and contingent statives are expressed through a long form construction:

(21) (progressive, verb form -a/-o/-e)

mi͡do laaroya gaynakoqam

'I'm looking for my shepherd' [p. 39]

(22) (contingent stative, verb form -i/-ii/-aa)

qomo qari

'he is come' (he has come and is presumably here as a result)

qomo hebi

'he has' (he is in the state of possessing)

cf. qo hebi

'he has' (he secured--hence he has generally) [pp. 78-79]

Fouta Djallon: Arensdorff [1913] lists three types which are somewhat difficult to properly separate or interpret.

(23) (*aoriste* (some), verb form -a/-o/-e)

miḍo gnyâma

'je mange' [p. 142]

(24) (*présent vague*, verb form -i/-ii/-aa)

miḍo gnyâmi

'je mange' [p. 142]

(25) (*présent absolu ou de simultanéïté*, verb form -(u)de/-aade/-eede)
mịdo gnyâmude
'je suis en train de manger' [p. 143]

Sokoto: Westermann [1909] states that long forms are used to express the present. It isn't clear how inclusive this term is, although it certainly includes the progressive.

(26) (present, verb form -a/-o/-e)
mi'do lila
'ich schiche' [p. 217]

Gombe:[21] Long forms are used for continuous (= progressive) and stative forms [Arnott 1970:195].

(27) (continuous, verb form -a/-o/-e)
odɔ̀n huwa
'he is working' [p. 282]

(28) (stative, verb form -i/-ii/-aa)
'odɔ̀n joodɔ̀i
'he is seated' [p. 279]

Dageeja:[22] For uses of forms with ʔe see 5.3. Forms with dɔn are used to express progressives and permansives ("qui implique que le procès est présenté statiquement comme terminé et se maintenant à titre d'état dans ses conséquences ou ses resultats") [Labatut 1973: 105].

(29) (progressive, verb form -a/-o/-e)
Be Don nana habaru
'ils sont en train d'apprendre la nouvelle'

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[21] Note that there are two long form pronoun sets in Gombe.

[22] In Dageeja dɔn and ʔe are contrastive and can even co-occur, see below.

(30) (permansive, verb form -i/-ii/-aa)
laami Do gereema Don joDi wuro mum
'le "lamido" Guéréma est assis dans son campement'

Adamawa:[23] Long forms are used to express the continuative progressive and the continuative durative (= stative) [Stennis 1967:145-46].

(31) (progressive, verb form -a/-o/-e)
ɓe ɗo ŋgooka
'they are crying'

(32) (stative, verb form -i/-ii/-aa)
'o ɗo joodi
'he is sitting'

5.3. Differences between the two long forms. In Adamawa the differences can only be found in rather archaic language forms. In Gombe the two forms are contrastive. In Dageeja the two morphemes ɗon and ʔe are independent, and can even co-occur. In all other dialects there is only one merged set of long form pronouns.

In Adamawa, (B) forms (those with ʔe) have a habitual function in archaic speech forms. For Taylor [1953:73] they are habitual. He uses the term "continuous" for this usage, but remarks that it is "used in reply to such a question as 'what does he do for a living?'" For Lacroix "elles constituent des paradigmes ayant une valeur particulière marquant l'habitude" [Lacroix 1963:48]. Stennis [1967] cites no forms based on ʔe at all.

In Gombe [Arnott 1970] forms based on ɗon are used (a) in main clauses and sentences without dependent clauses

(33) 'oɗon wondi 'e 'oppel
'he has (lit. is in company with) a mild fever' [p. 283]

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[23] See 5.3 for differences between long form.

(b) in clauses after perceptual verbs, e.g. where the fact is emphasized

(34) mi-yi'ii 'oɗɓn jooɗi

'I saw that he was sitting down' [p. 284]

(c) in temporal, conditional, and causal clauses

(35) tò oɗɓn ɗaanii, ŋgar-aa mbi'aa-yam

'if/when he is asleep, come and tell me' [p. 284]

Forms based on ʔe are used

(a) with gerundives [Arnott 1970]

(36) 'o-darii 'emo-ronndii tummude

'she stood with a calabash on her head (loaded with a calabash)' [p. 284]

(b) in complements to perceptual verbs where the situation is emphasized

(37) mi yi'ii mo 'emo-jooɗii/mi yi'ii 'emo jooɗii

'I saw him sitting down'

(c) after ndaa 'here is'

(38) ndaa mo 'emo-ɗaanii

'here he is asleep' [p. 287]

(d) in the first clause of a serial sentence to describe simultaneous (or immediately preceding) events or situations.

(39) 'emo waansha, sey mo-footi 'e ndottiijo goɗɗo

'as he strolled along, he met an old man' [p. 287]

(e) in co-ordinate sentences when both clauses have this form to indicate simultaneity.

(40) 'emo-darii 'emo-ŋgaaɓii

'he was standing agape'

From these data it seems that all forms involving ʔe indicate some sort of simultaneity.

In Dageeja "cette particule e implique que le procès a lieu en même temps qu'un autre."[24] [Labatut 1973:106] It can be found with

(41) habitual

mi nani ooldu e halBa

'j'ai entendu le lion rugir'

(42) projective

ko tummude pamarde hettinaama woyla goDDo e ɲaway

'si la (plus) petite calabasse est placée au nord, quelqu'un sera malade'

(43) progressive

yiite Don wula mo emo Don voya

'le feu ne cesse de la brûler, tandis qu'il ne cesse de crier'

(44) narrative

min ~gi'i e mo Borni ~ga pale daneewol

'nous vîmes qu'il portait un boulou blanc'

(45) permansive

ko ~dottijo maako lili mo kuugal koo jemma e mo ummo mo waDa

'si son mari la charge d'un travail, même si c'est de nuit, pendant qu'elle dort, elle se lève pour le faire'

In both Dageeja and Gombe forms with ʔe are used to indicate simultaneity. The constructions are more restricted morphologically in Gombe, where ʔe can co-occur only with stative and continuous forms. In Dageeja ʔe can co-occur with other verbal expressions,

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[24] Labatut adds after these examples: "Sur les cinq énoncés que nous venons de citer, quatre présentent des cas d'asyndète hypotactique: la dépendance de la proposition qui renferme la particule e résulte d'une implication due à l'aspect concomitif. Cela explique qu'Arnott ait appelé ces "temps": "subordinate stative" et "subordinate continuous", cependant on ne peut considerer l'aspect en e comme dépendant ni faire de la particule e une marque de subordination, car une proposition indépendante peut très bien avoir la valeur temporelle en question qui exprime que le procès a lieu soit pendant que le sujet parle: e mi ɲaama 'je mange', soit en même temps que les autre procès de la séquence et équivant à un "alors": jananɓe na e tokkay no mo? 'les étrangers le suivaient-ils alors?'"

such as habituals and projectives which can be used in a clause marking simultaneity. That is, ʔe has become a general indicator of simultaneity.

6. The Dynamics of Locative Constructions in Fula

In the preceding sections of this paper various contemporary and nearly contemporary dialects of Fula have been described. Now it is proper to turn our attention toward dynamic aspects of locative-based periphrastic verbal forms in Fula. This involves a reconstruction of the Common Fula patterns, but perhaps even more importantly an explanation for all of the changes witnessed in the dialects required. A dynamic account of linguistic phenomena crucially depends on some suitable model. In general there are no comprehensive models capable of describing the dynamics of an entire language system. Morphological systems involve an association between form (the individual morphs) and content (the meaning and/or function of the morphs). The dynamics of forms (phonological theory) has been elaborated much more greatly than the dynamics of content. Unfortunately, it is questions of content that are more important and baffling in modeling the events undergone by the Fula verbal system. The phonological changes are less striking than the semantic ones. The best model available for modeling semantic dynamics is the semantic field. The version of semantic field theory I will be using in this section is briefly described in Appendix III. This model allows us to account for a number of developments in the Fula verbal system as the result of the pressure of different forms upon each other.

6.1. A reconstruction of the Common Fula locative-based verbal constructions. In Common Fula periphrastic locative constructions were in all probability used to express progressives and probably contingent statives as well. Periphrastic locative constructions with ʔe and with ɓon were both used. It is likely that they were not synonomous, but perhaps the difference in meaning was more in the

nature of subtle nuances than clear-cut meaning distinctions. In all dialects progressives are expressed using a long form pronoun construction. Given the cross-linguistic frequency of locative-progressive constructions, there is no reason to doubt this was the case in Common Fula.[25] The verbal form used in this expression was in all likelihood the one with desinences -a/-o/-e , as this is the most common manifestation in the modern dialects and there is a plausible explanation for other constructions used (to be discussed below).

With regard to statives in some dialects there is no attestation of locative-based constructions, in some dialects long form pronouns are used in the expression of contingent statives, while in other dialects statives are expressed using long form pronouns. Cross-linguistically a greater similarity obtains between locatives and contingent statives than between locatives and statives in general, so a relationship between locatives and contingent statives would be a more natural one.[26] Progressives are expressed using periphrastic locatives more frequently than contingent statives, so perhaps the latter became expressed through a locative construction in the dialects, yet the widespread locative-stative relationship in Fula points toward a Common Fula origin. It may be that they would be found in all dialects if a sufficiently large corpus were obtained.

Hence progressives could be expressed in Common Fula through a locative construction involving the verbal form -a/-o/-e ; and contingent statives through a locative construction involving -i/-ii/-aa . It is likely that these verbal forms could occur either in locative constructions or normal finite clauses in Common Fula, similar to the

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[25] It is possible that these constructions developed independently in a number of dialects, due to some drift-like mechanism. With regard to the parsimony of science this suggestion should be ignored until the facts force it upon us.

[26] Also expansion of function in this instance is better attested than contraction.

pattern found in modern Wolof [Diagne 1971:102],[27] a closely related language. This is supported by the widespread occurrences of such a pattern in the modern dialects.

Another problem is that locative constructions are better attested in the active voice than in other voices. The active voice is unmarked and more frequent. Thus, it is likely that more distinctions will be found there. This can be due to a greater tendency to innovate in the unmarked/statistically predominant member of a paradigm, to a tendency of these forms to retain older structures longer, or simply to a skewing of the data: the greater frequency of active forms would lead to distinctions being discovered more quickly there.

It is possible that periphrastic constructions with ʔe and ɓon were equivalent in Common Fula and then became contrastive in the eastern dialects. In general, if two forms have approximately the same meaning within a semantic field, three developments are possible: a) one form may drop out of use; b) their meanings may become more divergent; or c) they may merge to form a suppletive paradigm. All of these developemnts obtain with ʔe and ɓon based forms in the Fula dialects. I will show below that the details of these developments can more easily be explained if ʔe and ɓon based locatives were already non-equivalent in Common Fula. The original distinction seems to be along the lines found in Gombe and Dageeja. Ɓon is used in unmarked locative constructions, while locative constructions containing ʔe are marked as explicitly coterminous, primarily in the temporal sense. The use of ʔe with projectives (roughly equivalent to futures) and progressives in Dageeja

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[27]It is quite likely that -a/-o/-e were originally verbal extensions not tense markers. Other northern West Atlantic languages have verbal extensions, i.e. derivational affixes, which serve to give verbs a basically passive or middle meaning, without having a full-fledged three way tense distinction. Homburger [1949:123] gives -oh as the verbal extension for reflexive and -el as the verbal extension for passives in Serer, the language most closely related to Fula.

must be an innovation. No analogy is found in other dialects. Furthermore, these constructions

(46) ʔe + pronoun + ʃon + verb stem + -a/-o/-e

(47) e + pronoun + verb stem + -ay/-oto/-ete

can in no wise be analyzed as literal locative constructions, since there is no possibility of ʃon + verb stem + -a/-o/-e or verb stem + -ay/-oto/-ete being either a nominalized verb or a participle.

6.2. Developments in the dialects. The developments in the dialects can best be described through the dynamics of the semantic field and the concept of a focal meaning of a form. The major developments in the dialects are the result of either a spreading of function of unmarked constructions in the field, e.g. the spread of erstwhile progressives into the domain of other imperfectives, or the entry of new items into the field, e.g. the new progressives of Toucouleur, and the subsequent restructuring of the field, often leading to the creation of residues, e.g. the habitual of Toucouleur, which are old forms which largely express the meaning of that given form minus the focal point of the new periphrastic item.

Certain forms have had the tendency to expand their domain in the semantic field. There is no thorough explanation of which morphological markers are the most likely to spread in semantic function, although there does seem to be some connection with markedness, with unmarked members of an opposition likely to invade the territory of marked members. The most unmarked imperfective is the progressive. Therefore, we see progressive forms invading the domain of other imperfectives and perhaps even into perfectives.[28] In the vast majority

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[28] "In Irish, the locative expression ag + verbal noun is still a true progressive; in Scots Gaelic its range has widened, so that it embraces the whole of Continuous aspect, and at least some instances of Habitual aspect; in some forms of Welsh (in particular, those that have lost the so-called 'Imperfect tense' as a marker of Habitual aspect in the past) the locative construction yn + verbal noun is a general marker of Imperfective aspect, and even includes some instances of Perfective aspect." [Comrie 1975:91]

of dialects the form consisting of short form pronouns + verb stem + -a/-o/-e does not exist. The originally progressive long form + verb stem + -a/-o/-e has invaded their domain and pushed them out of the language. There is no evidence that the locative origin of this construction played any role at all in these developments, the unmarked character of the progressive alone suffices.

Similar developments occurred with stative forms. Recall that in those dialects which can have both long and short forms co-occurring with verbs stem + -i/-ii/-aa , the constructions with long forms are glossed as contingent or permansive (= Comrie's [1976:56-58] perfect of result). The contingent of course marks a state as temporary. The permansive describes a state which results from some past event as still in existence. Thus, the very rationale of the permansive is that these states are temporary. Hence, the real difference between contingent statives and permansives is that the latter is marked in that the state depends on some prior event. Thus, one would expect contingent stative forms to have the dynamic tendency to expand to include statives. Moreover, virtually all contingent statives could be interpreted as permansives. Consider

(48) The water is cold.

This could be interpreted as 'the water has become cold, and now remains so'. The only statives that could not be interpreted in this way are those that describe states that have always been in existence, but then, these states could hardly be viewed as contingent. Furthermore, it is unlikely that the investigators obtained such fine nuances in their data. It may well be that the corpus in a given dialect is sufficient to determine whether forms are contingent statives or permansives.

In several Fula dialects all statives are expressed by constructions involving long forms. Again this seems to be the result of the expanded domain of an unmarked member. In some sense all states are contingent. Of course, some are more contingent than others, but there

is no state which cannot be viewed as contingent.

Some of the more interesting semantic field developments involve the restructuring that occurs after a new form invades the set of words participating in the field. There were two different sources for new forms in this portion of the Fula set of verbal markers--original syntactic constructions that became reinterpreted as periphrastic verbal markers and a single form which an optional sound change split into two contrastive forms.

In a number of languages there are syntactic paraphrases for certain verbal expressions. Usually these paraphrases have a rather narrow function and, hence, serve to make a meaning more precise, as in

(49) I am in the process of eating.

(50) Je suis en train de manger.

These forms are marked forms, not members of the verbal paradigm, because a more general verbal form can be used in their stead.

(51) I am eating.

(52) Je mange.

If for some reason constructions like (51) and (52) cease to bear the functions of (49) and (50), (hence (49) and (50) become obligatory to express a function) then (49) and (50) become members of the verbal paradigm. By virtue of the nature of this type of development, periphrastic verbal forms usually originate with a narrow range of functions, a relatively precise meaning, e.g. progressive rather than imperfective or present.

Analogical sound change can produce a new morphological opposition when a regular form is created where once there was only an irregular one. In most instances the irregular form is lost, but in some instances both remain as in English *latter, later*. If both remain a distribution of functional load often takes place in accord with the general dynamics of semantic fields.

When a new form competes for space in the semantic field, restructuring of the fields of existing forms is almost inevitable. In the case of periphrastic verbal forms, these new forms generally have a narrow focal area which quite often belongs to the focal area of an existing construction. As mentioned above, the periphrastic verbal forms only become a part of the paradigm, when the original form ceases to bear this function. The original form is relegated to a residue of its original semantic field. In the case of morphological pairs created by analogical sound change the new form generally adopts the core of the focal area and the old form is relegated to a residue area.

In Toucouleur as well as in other dialects the original progressive form, long form pronouns + verb stem + -a/-e/-o had greatly expanded its function. When the new progressive long form pronoun + infinitive appeared, the old form was relegated to a residue semantic field (in Toucouleur imperfective-progressive = habitual).

The habitual is the Fula example *par excellence* of residue semantic fields. In all dialects except Gombe for which I have evidence of a special form for habituals, it is a form which was superceded in its original function by a new form. The Toucouleur case has already been discussed. In Dageeja the original construction short form pronoun + verb stem + -a/-e/-o has remained with habituals as its residue semantic field [Labatut 1973:92] (again imperfective-progressive habitual). A similar equation obtained in archaic Adamawa. Recall that originally ɓon was used in unmarked progressives and statives, ʔe in those marked as emphasizing co-location, especially simultaneity. In Adamawa this relationship apparently became changed to simply unmarked/marked. The original progressive had expanded to cover imperfectives. The end result of the developments is that constructions with ɓon were used for unmarked imperfectives (progressives) those with ʔe as marked imperfectives ("ayant une valeur particulièrement marquant l'habitude."). The last example of habitual forms developed from original futures. The term future may be imprecise. Future was

certainly the focal point of this form, although a number of authors mark it as potential or projective to show its wider function.[29] In the middle and passive voices the future marker is -oto/-ete respectively. In the active there are two forms -ay vs. -ata or -at . t# → y is a common sound change[30] and the forms -ata/-at are analogical preservations. Futures and habituals are closely related in the semantic field. As Swift and Tambudu [1965:134] note, they both indicate a likelihood that something will happen, so both are in some sense predictive.[31] In different dialects (Gambia [Swift and Tambudu 1965:134] and Fouta Djallon [Arensdorff 1913:143]) the form in -ata/-at is used in a future or projective sense.[32] In the middle and passive voices there is a neutralization of this distinction.

Lastly, there are some locative constructions which seem to have come into existence as a means of expanding oppositions into greater parts of the verb paradigm. In Dageeja, as discussed above, ?e has expanded into a general marker of simultaneity, being used in progressive and projective structures. In some western dialects, including Toucouleur, periphrastic locatives as progressive markers can be used in relative clauses:

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[29] With semantic fields in general focal areas are easier to distinguish than boundaries.

[30] There are obviously a lot of details not given here. It may be that this was an optional sound change. The analogy drawn here is much sharper if -at/-ata is viewed as a preservation, not as a new form.

[31] In Gombe -ay/-oto/-ete is the form used to express habituals [Arnott 1970:271].

[32] In Dageeja there is an opposition -ay/-ata in the active voice also. The former is a projective form [Labatut 1973:110], the latter is described as emphatic (which implies "une valeur d'inaccompli, tantôt habituel, tantôt projectiv: c'est une opposition purement formelle, entraînée par l'emphatisation d'un des constituents non-prédicatifs (sujet ou expansion)") [Labatut 1973:94].

(53) gorko wonuɗo e dʸaŋŋgude deftere

'man who is reading a book'

wonude is the regular verb of location 'be at'.

7. Conclusion

What are the implications of these Fula data for the localist theory of aspects? In general, the answer would have to be that the theory is too inflexible to account for all these developments. The localist theory is perhaps best qualified to account for syntactic paraphrases of verbal expressions, such as

(54) He is in the process of eating.

Once a construction such as that represented in (54) enters the verbal paradigm, it becomes subject to the dynamics of the semantic field and can become more divergent in function from what the localist theory would predict. Another shortcoming of the localist hypothesis that can be more readily described through the notion of a semantic field is that when a language has two distinct locative paraphrases for verbal expressions, these two paraphrases are apt to diverge in meaning.

Furthermore, it has been shown that semantic fields can profitably be applied to another sphere of the grammar. The notions that have been used to describe such phenomena as color terms are also applicable to verbal paradigms, where a set of forms divides a semantic domain. The meanings of morphological forms have frequently been described in terms of distinctive features. The semantic field model incorporates all of the advantages of distinctive feature analysis within a more flexible framework.

APPENDIX I — Short Form Pronouns[1]

Senegal[2]	Gambia[3]	Fouta Djallon[4]
mi	mi	mi (A), miṅ (R)
ʔa	qu	ʔa (A), an (R)
ʔo	qo	ʔo
men	meŋ	meñ (A), meṅ (R)
ʔen	qen	ʔen (A)
ʔon	qon	ʔoñ (A), ʔoṅ (R)
ɓe	ɓe	be (A), beṅ (R)

Sokoto[5]	Gombe[6]	Dageeja[7]	Adamawa[8]
mi	mi	mi	mi
a	ʔa	a	'a
o (W), o (K)	ʔo	mo	'o
men (W), min (K)	min	min	min
en (W)	ʔen	el	'en
on	ʔon	ol	'on
'be (W), be/bẽ/ben (K)	ɓe	Be	ɓe

Notes:

[1]The order is 1sg., 2nd sg., animate sg., 1st pl. excl., 1st pl. incl., 2nd pl., animate pl.

[2]From UCLA field methods notes.

[3]From Swift and Tambudu [1965:35]. q here represents [ʔ].

[4]From Arensdorff [1913:108] (A) and Reichardt [1876:120] (R). No 1st pl. incl. form appears in R's data, presumably through an oversight. The 3rd pl. b should undoubtedly be marked as ɓ in both A and R.

[5]From Westermann [1909:217] (W) and Krause [1884:45]. Lack of 1st pl. incl. form in K is presumably an oversight.

[6]From Arnott [1970:194].

[7]From Labatut [1973:68]. B and D represent [ɓ] and [ɗ] respectively.

[8]From Stennis [1976:102]. The symbol ' represents [ʔ].

APPENDIX II — Long Form Pronouns

Senegal[1]	Gambia[2]
midɔ (f.m.), mido (Gi), miDo/moDo/bodo (G & L)	midɔ
hidɑ (f.m.), 'ada (Gi), ?aDo/?aDa (G & L)	qadɑ
himo (f.m.), 'ombo (Gi), ?omo/?o~bo/?imo (G & L)	qomo
medɛn (f.m.), midomen (Gi), ?emin (G & L)	midɛn
hidɛn (f.m.), 'eden (Gi), ?iDen (G & L)	qedɛn
hidɔn (f.m.), 'odon (Gi), ?oDon (G & L)	qodɔn
hiɓe (f.m.), 'ebe (Gi), ?iBe (G & L)	ɓedɔ

Fouta Djallon[3]	Masina[4]	Sokoto[5]
mido (A), mido (R)	midɔ	mi'do (W), mído (K)
hida (A), hida (R)	'adɑ	a'da (W), áda (K)
himo	'omo	omo (W), ómo (K)
medeṅ (R)	midɔn	me'don (W), mídon/mídon (K)
hideṅ (A)	'edɛn	e'don (W)
hidoṅ̄ (A), hidoṅ (R)	'odɔn	o'don (W), ódon (K)
hibe	'eɓe	e'be (W), ébe/ẽbẽ/ébeṅ (K)

Gombe[6] (two forms)		Dageeja[7] (two forms)	
(A)	(B)	(A)	(B)
midɔn	'emi	short form	e + short form
'adɔn	'e'a	pronoun + Don	pronoun
'odɔn	'emo		
mindɔn	'emin		
'endɔn	'e'en		
'ondɔn	'e'on		
ɓedɔn	'eɓe		

Adamawa[8]

(A)	(B)
short form	emi
pronoun + Do(n)	ea
	emo
	emin
	ø
	eon
	eBe

Notes:

[1]From UCLA field methods notes (f.m.), Giraudon [1894:8] (Gi), Labouret [1953:39] (L), Gaden [1914] (G) as cited by Lacroix [1963:49]. ~ here represents prenasalized consonant.

[2]From Swift and Tambudu [1965:41].

[3]From Arensdorff [1913:107] (A) and Reichardt [1876:56] (R).

[4]From Arnott [1970:195].

[5]From Westermann (1909:217] (W) and Krause [1884:45] (K).

[6]From Arnott [1970:194].

[7]From Labatut [1973:104-105].

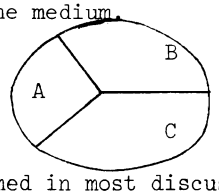
[8]From Stennis [1967:145] for A forms and Taylor [1953:73] for B forms. The B forms are now archaic.

APPENDIX III — Brief Remarks on Semantic Fields

The most appropriate model for describing the semantics of verbal forms is the notion of semantic fields developed by Trier [1931, 1973]. Quoting Kutschera [1975:156], "According to Trier certain groups of words form a *word field*. What is characteristic of a word field is (1) that it is correlated with a semantic region (Sinnbezirk), i.e. there is some relationship of meaning among the words in the field, and (2) that the meaning of one word depends on that of the other words in the field and can only be defined together with and in distinction from their meanings." Semantic fields are most commonly used to describe subsets of the lexicon such as color terms, where a set of terms covers a unified semantic domain. Semantic fields can be applied to other domains with these characteristics as well, especially domains that have often been described in terms of sets of oppositions of distinctive features. In fact, the distinctive feature model can be seen as an idealized instance of a semantic field.

In general semantic fields have not been adequately formalized. One question is the geometry of the medium in which the field is located (and encompasses). Should it have co-ordinates or should it be co-ordinate free? A set of distinctive features would be sufficient co-ordinates. The reasons it is not always advisable to rely on distinctive features are (a) they are in practice difficult to determine, (b) there is no compelling reason to believe that distinctive features are in any sense more important than non-distinctive ones, and (c) the set of distinctive features is susceptible to variation over time, i.e. what is redundant at time X may be distinctive at time X + Y, and vice versa.

There are also questions as to the nature of the shape of the field itself. The simplest solution would be for the words to completely partition the medium.



This is generally assumed in most discussions. In the classic example of a semantic field, color terms, Rosch [1973] has shown that the picture is not so simple. The partition model would imply that the boundaries are sharply defined, which Rosch failed to confirm empirically. Rather she suggests that the most salient aspect of words is its focal area within the field. Points in the medium outside of the focal area are expressed by a word with a sufficiently proximal focal area. There can be cases where there are two sufficiently proximal focal areas, in which case either form could be used. Presumably the focal area of a given form is a connected set. If a given form has two separate focal areas, it would most naturally be described as a homophonous form.

As for the dynamics of semantic fields, the fields associated with different forms tend to be repulsive, i.e. words tend to become more distinct in meaning. Special problems arise with the insertion of a new form into the set of those participating in the field. Generally this leads to a restructuring of the field. Also, there are dynamics associated with features such as context which can cause a realignment of the field. Olson [1970] has shown that the choice of a descriptive term varies depending on possible alternatives in the situation. Some allowance needs to be made for markedness here. Lastly, the configuration of fields can change diachronically.

It is possible that there are natural focal areas in a semantic field. This has been demonstrated for color terms [Berlin and Kay 1969]. Also, it is possible that certain focal areas have a natural associated dynamics, i.e. tend to expand or contract in all languages.

REFERENCES

Akhmanova, O. 1969. *Slovar lingvističeskix terminov.* Moscow.

Anderson, J. 1973. *An Essay Concerning Aspect.* The Hague: Mouton.

Arensdorff, L. 1913. *Manuel pratique de la langue peulh.* Paris: P. Geuthner.

Arnott, D. 1970. *The Nominal and Verbal Systems of Fula.* London: Oxford University Press.

Berlin, B., and P. Kay. 1969. *Basic Color Terms: Their Universality and Evolution.* Berkeley: University of California Press.

Blansitt, E.L. 1975. "Progressive aspect." Working papers on language universals. 18:1-34.

Comrie, B. 1975. Review of *An Essay Concerning Aspect,* by J. Anderson. *Lingua* 37:89-92.

Comrie, B. 1976. *Aspect.* Cambridge: Cambridge University Press.

Diagne, Pathe. 1971. *Grammaire de wolof moderne.* Paris: Présence Africaine.

Dillon, M., and D. O. Cróinín. 1961. *Teach yourself Irish.* London: English Universities Press.

Gaden, H. 1912-14. *Le poular.* Paris: Leroux.

Giraudon, T.G. de. 1971. *Bolle fulbe. Manuel de la langue foule.* Paris and Leipzig: H. Weltern.

Hjelmslev, L. 1969. *Prolegomena to a Theory of Language* [translated by Francis J. Whitfield]. Madison: The University of Wisconsin Press.

Homburger, L. 1949. *The Negro-African Languages.* London: Routledge and Kegan Paul.

Krause, G.A. 1884. *Ein Beitrag zur Kenntnis der fulischen Sprache in Afrika.* Leipzig: Brockhaus.

Kutschera, F. von. 1975. *Philosophy of Language.* Dordrecht: D. Reidel.

Labatut, R. 1973. *Le parler d'un groupe de peuls nomades. Nord-Cameroun.* Paris: Société d'études linguistiques et anthropologiques de France.

Labouret, H. 1952. *La langue des peuls ou Foulbé.* Mem. I.F.A.N. 16.

Lacroix, P.F. 1963. "Observations sur les formes verbales a 'habitude' dans les parles peuls de l'adamawa." *Actes du second solloque international de linguistique négro-africaine,* pp. 39-51 . Dakar.

Miller, J. 1972. "Towards a generative semantic account of aspect in Russian." *Journal of Linguistics.* 8:217-236.

Olson, D. 1970. "Language and thought: aspects of a cognitive theory of semantics." *Psychological Review* 4:257-273.

Poppe, N. 1968. *Tatar Manual.* Research Center for the Language Sciences. Indiana University.

Reichardt, C.A.L. 1876. *Grammar of the Fulde Language.* London: C.M.S.

Rosch, E. 1973. "Internal structure of categories." In T. Moore (ed.), *Cognitive Development and the Acquisition of Language,* pp. 111-144. New York: Academic Press.

Sapir, John David. 1971. "West Atlantic: An Inventory." In Thomas A. Sebeok (ed.), *Linguistics in Sub-Saharan Africa,* pp. 45-112. Current Trends in Linguistics, vol. 7. The Hague: Mouton.

Smith, R.D. 1973. *Southern Barasano Grammar.* Summer Institute of Linguistics.

Stanley, R. 1973. "Boundaries in phonology." In S.R. Anderson and P. Kiparsky, *A Festschrift for Morris Halle,* pp. 185-206. New York: Holt, Rinehart and Winston, Inc.

Stennis, L.H. 1967. *A Reference Grammar of Adamawa Fula.* African Studies Center, Michigan State University.

Swift, L.B., and K. Tambudu. 1965. *Fula Basic Course.* Washington: Foreign Service Institute.

Taylor, F. 1953[2]. *A First Grammar of the Adamawa Dialect of the Fulani Language.* London: Oxford University Press.

Trier, J. 1931. *Der deutsche Wortschatz im Sinnbezirk des Verstandes-Die Geschichte eines sprachlichen Feldes.* Heidelberg.

Trier, J. 1973. *Aufsätze und Vorträge zur Wortfeld theorie.* The Hague: Mouton.

Vandame, C. 1963. *Le Ngambay-Moundou.* Dakar: Institut Français d'Afrique Noire.

Welmers, Wm. 1973. *African Language Structures.* Berkeley: University of California Press.

Westermann, D. 1909. *Handbuch der Fulsprache.* Berlin: D. Reimer.

Wittgenstein, L. 1922. *Tractatus Logico-Philosophicus.* London: Kegan Paul.

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TONOLOGY OF THE BABANKI NOUN

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In the present paper an abstract analysis is proposed to account for a number of intricate tonal alternations found in Babanki, a Grassfields Bantu language of the Ring (Nkom) subgroup spoken in Cameroon. This analysis, which makes heavy use of floating tones in underlying forms differing markedly from their surface realizations, as well as postulating ten ordered tone rules, essentially recapitulates the tonal history of the language.

1. Introduction

Within the last few years a sizeable body of tonal data has been collected and analyzed from several of the Grassfields Bantu (GB) languages spoken in Cameroon. Central to the analysis of of each unraveled system has been the use of floating tones, both lexical and grammatical. Pursuing the findings of Voorhoeve [1971] for Bamileke-Bangangte, a comparative study by Hyman and Tadadjeu [1976] presented the general tonal properties of the Mbam-Nkam languages, the languages of the eastern branch of GB (see Hyman and Voorhoeve [in press]). Concerning the western branch, the members of the Grassfields Bantu Working Group are now in the position to build on the start made in Ngie [Hombert 1976], Ngamambo [Asongwed and Hyman 1976], and Ngwo [Voorhoeve 1978], all of the Momo subgroup of WGB (cf. also Stallcup [1978]).

The present paper is intended as a contribution to the understanding of tone in the Ring [formerly Nkom] subgroup of

WGB.[1] As demonstrated in Hyman [in press], this group consists of a western group, e.g. Aghem, Weh, Isu, a central group, e.g. Kom, Bum, Babanki, Oku, and an eastern group, e.g. Lamnsoq, Babessi Babungo, Bamessing. While a few comparative remarks will be made in section 5, I have chosen in this paper to illustrate the tonal properties of this subgroup by focusing on Babanki, the southernmost Ring language. As in the above cited works, my concern will be the nature of underlying tonal representations as well as the nature of the rules required to bring these tonal representations to the surface. The analysis presented in the following sections is a highly abstract one, since underlying tonal representations differ considerably from their surface realization. It is, however, the one analysis that has been found to account for Babanki tone in an explanatory way.

2. The Surface Tones

Babanki has a terrace-level tone system with downstepping of high tone. In addition to high (H) and low (L) tone, downstepped high ('H) is thus possible after another H (whether downstepped or not). Babanki also has an opposition between low (L) vs. non-

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[1]Work on the languages of the Ring subgroup of GB was accomplished on two separate trips to Cameroon. In 1974 I was supported by grants from the National Science Foundation, Social Science Research Council, and Wenner-Gren Foundation for Anthropological Research. In 1977 I was supported by a National Science Foundation grant no. BNS76-81261. I would like to thank my two principal language consultants, Joseph Ntangse (who introduced me to the Babanki language in Berkeley, 1973), and Abel Vukugah, with whom I was able to work both in 1974 and 1977. I have on many occasions benefitted from discussions with several members of the Grassfields Bantu Working Group, both in Cameroon and elsewhere and would like to particularly thank Harriet Jisa with whom the Babanki materials were investigated in 1977. Earlier versions of this paper were presented at the Vrijdagklub, University of Amsterdam, September 1, 1978 and at the University of California, Santa Barbara, November 21, 1978.

falling or level low (L°) before pause, as in many GB languages. Finally, a mid (M) tone occurs, but with the unusual constraint that it must be followed by a H tone. The possible phonetic sequences involving three syllables are illustrated in (1):

(1) a.	H-H-H	[¯ ¯ ¯]	L-H-H	[_ ¯ ¯]
	H-H-'H	[¯ ¯ -]	L-H-'H	[_ ¯ -]
	H-H-L°	[¯ ¯ _]	L-H-L°	[_ ¯ _]
	H-H-L	[¯ ¯ ¬]	L-H-L	[_ ¯ ¬]
b.	H-'H-H	[¯ - -]		
	H-'H-'H	[¯ ¯ -]		
	H-'H-L°	[¯ - _]		
	H-'H-L	[¯ - ¬]		
	H-M-H	[¯ - ¯]	L-M-H	[_ - ¯]
c.	H-L-H	[¯ _ ¯]	L-L-H	[_ _ ¯]
	H-L-L°	[¯ _ _]	L-L-L°	[_ _ _]
	H-L-L	[¯ _ ¬]	L-L-L	[_ _ ¬]

In the tonal sequences on the left the initial tone is H; in the sequences on the right the initial tone is L. The sequences in (1a) involve a H as the second tone; the sequences in (1b) involve a tone one step lower than H (either 'H or M, as seen); and the sequences in (1c) involve a L as the second tone. There are thus 20 different tonal sequences possible on three syllable stretches.

The following generalizations thus characterize the Babanki tone system: (i) there is only a two-way contrast after pause (H and L); (b) each successive 'H establishes a ceiling; and (c) M tone is possible only if followed by H (and never utterance-initially). Note that the sequence H-M is identical, phonetically, to the sequence H-'H. The two are distinguishable, however, since 'H establishes a ceiling for future H tones within the same tonal phrase, while M does not (and indeed requires a higher tone to

immediately follow it). It is the generalization in (c) which makes Babanki slightly different from other terrace-level tone systems, and I shall provide an account of the M tone phenomenon below.

Given the above properties of the surface tone system, we can now address the surface tones of nouns in Babanki. Although the discussion of Babanki tonology will be restricted to nouns (indeed to a very limited set of noun phrase data), what will be said about the tonal properties of these forms is directly applicable to verbal constructions, as work jointly conducted with H. Jisa has demonstrated. We shall be concerned only with the vast majority of nouns whose stems are monosyllabic. The following tonal patterns were discernable from a corpus of 195 Babanki nouns with monosyllabic stems:

(2)		pattern	#	%	example		remarks
	a.	L-L	37	18.97	kə̀kɔ̀s	'slave'	
	b.	L-L°	16	8.21	kə̀mbò°	'bag'	type 2b almost all have stem initial -NC
	c.	L-H	113	57.95	kə̀kə́m	'crab'	
	d.	L	8	4.10	ñàm	'animal'	all in class 1 or 9
	e.	L°	15	7.69	dzɛ̀m°	'back'	
	f.	H	5	2.56	ḅʊ́	'dog'	
	g.	H'H	1	.51	mú'ú	'water'	only example of its kind

As can be seen in (2), nouns with monosyllabic stems are found both with and without a prefix. In the latter case there are three patterns, L, L°, and H, representing the three tones contrasting before pause. All such nouns belong either to class 1 (which includes human singulars) or class 9 (which includes animal singulars). The noun class prefixes and concords are given in (3):

(3)

class	noun prefix	concord	class	noun prefix	concord
1	Ǿ̀-, Ǹ-	ɣ̀	7	kə-	k′
2	və-	v′	8	ə-	v′
3	ə-	ɣ′	9	Ǿ̀- Ǹ-	z̀
5	ə-	z′	10	Ø-, Ǹ-...-sə́	s′
6	a-	ɣ′	13	tə-	t′
6a	mə-	m̀	19	fə-	f′

Classes 1 and 9 have either a low tone nasal prefix or a non-segmental (floating) L as their prefix. All of the other classes have prefixes whose tone is phonetically L in most cases, but underlyingly H in all but a few constructions (see section 3). It is for this reason that their tone has been left unmarked (except for Ǹ- in class 10, the only class which also marks nouns with a suffix, e.g. ñám-'sə́ 'animals'). Although the concords will not be relevant to our discussion, note that classes 1, 6a, and 9 have L while the remaining classes have H tone concord.

The bulk of our discussion will center around bisyllabic nouns which typically consist of a L tone prefix and either a L, L̥, or H monosyllabic stem, as seen in (2a-c). Of these patterns, (2a) and (2c) are very frequent, while (2b) seems restricted, especially to nouns which have stem-initial NC sequences. We shall have more to say about these below.

3. The Underlying Tones

We begin our discussion of underlying tones by considering nouns whose surface pattern is L-H (2c). As seen in (2c), these comprise 113 of the 166 bisyllabic nouns in the sample, or slightly over two-thirds. The statistical lopsidedness of this pattern is something which requires an explanation. The nouns we shall use to illustrate the tonal properties of the L-H pattern are: A. kə̀-fɔ́ 'medicine'; B. kə̀-fɔ́ 'thing'; C. kə̀-kə́m 'crab'. As indicated, class 7 nouns fall into three

subclasses, A, B, and C, which behave differently in context. These differences in behavior cannot be predicted from the segmental or syllabic composition of these words. In all examples, whether illustrating surface or underlying tonal structure, the segmental information is in broad phonetic transcription.

The noun-plus-noun ("N_1 of N_2") associative construction offers an ideal context for the study of the tonal properties of nouns, as has been demonstrated for other GB languages. Thus, consider the above three nouns in N_1 position in (4):

(4)	A	kə̀fɔ́	'ká ñàm	'medicine of animal'
	B	kə̀fó	'ká ñàm	'thing of animal'
	C	kə̀kə́m	ká ñàm	'crab of animal'

Here we observe that when these nouns occur in N_1 position followed by the H tone associative marker ká of class 7, which they condition, the latter is lowered to 'H after A and B, but not after C. We therefore have cause to separate L-H nouns in two groups, A/B vs. C.

However, consider the examples in (5):

(5)	A	ñàm	ə̀	kə̀fɔ̀°	'animal of medicine'
	B	ñàm	ə̀	kə̀fó	'animal of thing'
	C	ñàm	ə̀	kə̀kə̀m°	'animal of crab'

Here, we see that when these nouns occur in N_2 position after the L tone associative marker ə̀ of class 9, A and C become L-L°, while B remains L-H. We therefore have the second grouping, A/C vs. B.

A third grouping arises when nouns occur in N_2 position after the H tone associative marker ká of class 7, as in (6):

(6)	A	kə̀ší	ká	kə́fɔ̀°	'place of medicine'
	B	kə̀ší	ká	kə́'fó	'place of thing'
	C	kə̀ší	ká	kə́'kə́m	'place of crab'

A becomes H-L°, while B and C become H-'H, giving a third grouping, A vs. B/C.

From the examples in (4), (5), and (6), it is clear that A, B and C nouns require different underlying tonological representations if we are to account for their different tonal behavior in context. To account for tone in other GB languages, it has been proposed that each stem consists of an underlying segmental tone (H or L), followed by a nonsegmental or floating tone (also either H or L). The 'H created in (4) suggests that A and B have a floating tone L ($\underset{\circ}{L}$) in their underlying representation, i.e. kə̀-fɔ̃̀ and kə̀-fɔ́̀ , while C forms have a floating H tone ($\underset{\circ}{H}$), i.e. kə̀-kə́m′ . While this would effectively distinguish A and B from C in (4), it would not account for the different behaviors of A and B in either (5) or (6). For this the analysis must become considerably more abstract.

Looking at the data in (5) we note that A and C have what would have been pronounced L-H in isolation (or N_1 position) being pronounced L-L° in N_2 position after a L tone associative marker. Our experience from the GB languages suggests that the L° tone comes from the simplification of L-L-$\underset{\circ}{H}$. There seem to be two possible channels: (i) L-L-$\underset{\circ}{H}$ becomes L-L-$\underset{\circ}{L}$° by lowering of $\underset{\circ}{H}$ before pause, and then the floating tone is deleted (or absorbed into the preceding syllable), leaving L-L°; or (ii) L-L-$\underset{\circ}{H}$ becomes L-LH by "grounding" the $\underset{\circ}{H}$ to the preceding syllable. This creates a rising tone which can then simplify to L° before pause. Looking at the data in (5) and (6), we see that the following underlying forms can be given to N_2 nouns:

(7) A /kə̀-fɔ̃′/ (in N_2 position only)
B /kə̀-fɔ́̀/
C /kə̀-kə́m′/

The L-L-$\underset{\circ}{H}$ structure of (7A) simplifies to L-L° through an intermediate L-L-$\underset{\circ}{L}$° stage (see section 4 for an explicit statement of all of the tone rules in the order in which they apply). The L-H-$\underset{\circ}{H}$ structure of (7C) requires first the application of a L-spreading rule which converts this to L-L-$\underset{\circ}{H}$, and then C nouns

undergo the same rules as A nouns to derive L-L°.

This analysis opens up a number of questions, the most serious of which is: why is it that the L prefix of nouns in N_2 position causes A and C nouns to become L-L°, but the L prefix of nouns in isolation (and, in fact, in most grammatical positions) does not? The answer is that noun prefixes in Babanki are underlyingly H *unless* a noun is in N_2 (or locative) position (or contains a tone depressor, e.g. a nasal—see below). Thus, the underlying forms corresponding to (7) but which are found other than in N_2 position are those in (8):

(8) A /kə́-fɔ̀′/
B /kə́-fó̀/
C /kə́-kə́m′/

Thus, the complete underlying tonal representations for the phrases in (6) are given in (9):

(9) A /kə́-ší′ # kə́ + kə̀-fɔ̀′/
B /kə́-ší′ # kə́ + kə̀-fó̀/
C /kə́-ší′ # kə́ + kə̀-kə́m′/

In order to derive the correct surface forms, we first need a H-spreading rule to convert H-L to H-HL. This raises the tone of the kə̀- prefix in N_2 position, which then in the case of (9B) and (9C) gives the intermediate sequence HL-H, i.e. ...kə́ kə̂-fó̀ and ...kə́ kə̂-kə́m′ . This sequence simplifies to H-'H, unlike (9A), where the intermediate form is ...kə́ kə̂-fɔ̀′ . This latter form goes on to become ...kə́ kə̂-fɔ̀° .

What evidence is there that some L prefixes are underlyingly H and others are L? We will not insist, but only mention in passing that the western Ring languages, e.g. Aghem, have phonetic H and L tone prefixes in the environments where the above abstract Babanki analysis would predict them. The same analysis was argued for Ngamambo [Asongwed and Hyman 1976] and probably charac-

terizes all of the WGB languages. The major piece of corroborating evidence from Babanki itself involves the analysis of nouns which are L-L. The example given in (2a) was kə̀kɔ̀s 'slave'. In the present analysis such nouns will have H-L-L̥ structure in all environments except N_2, where they have L-L-L̥ structure. However, consider the surface tones in (10):

(10) O kə̀kɔ̄s ká ñàm 'slave of animal'
N kə̀ndɔ̀ŋ ká ñàm 'throat of animal'

We observe that L-L nouns must be subdivided into two classes, indicated by the letters O (for "oral") and N (for "nasal"). A noun in the O class changes from L-L to L-M when in the N_1 position before a H tone associative marker. A noun in the N class, e.g. kə̀ndɔ̀ŋ 'throat', remains L-L. The question is why?

One's initial temptation is to say that there is a rule which raises L-L to L-M before H, but which is blocked if the L-L noun belongs to the N class. It turns out that most N nouns have a -N- wedged between their prefix and the stem-initial consonant. Could this nasal be blocking the raising of the following L tone syllable?

There is reason to believe that this nasal is involved, but that a more general process is at work. A rule exists in Babanki of the form in (11):

(11) L-HL-H → L-M-H

A HL falling tone is simplified to M if preceded by L and followed by H. A particularly clear example is obtained in certain possessive forms such as those given in (12) involving the class 5 form ə̀žɔ́mə́ 'mine':

(12) a. ə̀wúm ə̄žɔ́mə́ 'my egg'
b. ə̀sɔ́ŋ ə̄žɔ́mə́ 'my tooth'
c. = ə̀sūū žɔ́mə́

Both ə̀wúm 'egg' and ə̀sɔ́ŋ 'tooth' are A nouns, i.e. their proposed

underlying tonal shape is H-L-$\underset{\circ}{\text{H}}$, although B and C nouns behave identically in this environment. In (12a) and (12b) we see that the L tone prefix of the possessive pronoun /ə̀-žɔ́mə́/ rises to M when it occurs between two H tones (we shall have more to say about this rule below). In (12c), however, the rule that deletes /ŋ/ intervocalically has applied, which creates the intermediate structure ə̀só ə̀žɔ́mə́ (which is followed by assimilation of ə to derive oo , which then raises to uu in open syllable position in Babanki and acquires M tone by rule (11)).

Coming back to the M tone in the O noun in (10), it is suggested that it can be derived through rule (11) if we begin with the same H prefix we established for L-H nouns earlier. The proposed derivation is given in (13):

(13) kə́kɔ̀s` kə́ → kə́kɔ̀s kə́ → kə́kɔ̂s kə́ → kə̀kɔ̂s kə́ → kə̀kɔ̄s kə́ ...
(a) (b) (c) (d) (e)

The underlying tones are given in (a). In (b) the final $\underset{\circ}{\text{L}}$ has been absorbed into the preceding stem L. In (c) the H-spreading rule has applied. In (d), the prefix-lowering rule (yet to be formalized) has lowered the initial kə́- . Finally, in (e), rule (11) has applied to derive the correct L-M-H sequence. Thus, a more general application of rule (11) is possible, explaining the odd distributional constraint requiring that M be followed by H. This leaves the question of N nouns.

It has been stated that most N nouns have a stem-initial NC-sequence. It also was indicated that most L-L° nouns also have such a nasal. All L-L° nouns are realized L-L in N_1 position before a H tone associative marker, e.g.

(14) kə̀mbɔ̀ kə́ ñə̀m 'bag of animal'

Finally, N L-L nouns and L-L° nouns do not undergo H-spreading onto their prefix, as seen in (15a) and (15b):

(15) a. kèší ká kèndɔ̀ŋ 'place of throat'
b. kèší ká kèmbò° 'place of bag'
c. kèší ká kékɔ̀s 'place of slave'

As seen in (15c), the H of ká has spread onto the prefix of N_2 /kè-kɔ̀s`/, but not onto $N_2$ /kè-ndɔ̀ŋ`/ or /kè-mbò´/. What this suggests is that L tone is somehow associated with prefixes followed by a NC sequence. It can be proposed, then, that even in N_1 position, N L-L nouns and L-L° nouns have an underlying L prefix, rather than the underlying H proposed for other noun prefixes. Thus, the reason why 'throat' does not become L-M in (10) is that it has an underlying L prefix, and the noun can therefore not undergo the derivation in (13). All L-L° nouns will have underlying L prefixes in all cases, although they necessarily represent a neutralization of underlying L-L-H̥ and L-H-H̥, since we have seen that these two sequences merge as the result of the L-spreading rule. Then, what about the possibility of some L-H nouns having an underlying L tone prefix?

Such nouns would have to have the underlying structure L-H-L̥, since as we have just indicated, L-H-H̥ merges with L-L-H̥ and surfaces as L-L°. There are some L-H nouns which have stem-initial NC- (we shall refer to these as D nouns). Examples are kèŋkwí? 'belt' and kèmpfó 'cadaver'. These nouns behave differently from other L-H nouns when in N_2 position after a H associative:

(16) kèší ká kə̄ŋkwí? 'place of belt'

Instead of obtaining ...ká'ŋkwí? in (16), the H-spreading rule is blocked by the nasal. Since this leaves a L prefix between two H tones, it undergoes a raising rule and is pronounced M. The same blocking affect is observed when N_2 noun belongs to class 2 or 6a. Thus, the class 2 noun vètsɔ́ŋ 'thieves' is pronounced M-H instead of H-'H in (17):

(17) kèší ká və̄tsɔ́ŋ 'the place of the thieves'

Compare the tonal differences obtained in the following forms involving a class 19 singular vs. a class 6a plural N_2 noun. Underlying stem tones are given to the right:

(18)	a.	kàší	ká	fácò	'place of squirrel'	/-cò`/
		kàší	ká	màcò	'place of squirrels'	
	b.	kàší	ká	fáñìn°	'place of bird'	/-ñìn´/
		kàší	ká	màñìn°	'place of birds'	
	c.	kàší	ká	fá'ḅá?	'place of gorilla'	/-bá?`/
		kàší	ká	māḅá?	'place of gorillas'	
	d.	kàší	ká	fá'sɛ́s	'place of pepper'	/-sɛ́s´/
		kàší	ká	màsɛ̀s°	'place of peppers'	

There are two alternative explanations for the behavior of classes 2 and 6a in N_2 position. The first is to treat the và- and mə- prefixes as having an abstract tone depressor equivalent to a nasal. Such an abstract mark may be needed anyway because of such exceptional nouns as in (19):

(19) /kà-bhì?´/ → [kàbhì?°] 'dust'

where an underlying L prefix occurs without a following nasal. Perhaps this exceptional lowering is due to a nasal which was once present, historically, but which has dropped out in the present day language. Since many class 2 nouns begin with a NC sequence, e.g. và-ntòn 'pots', pl. of ntòn , and since a few GB languages, e.g. Mbizinaku, have mànə- as their class 6a prefix, this hypothesis has at least some justification. The second alternative is to say that it is the *voicing* of the prefix-initial consonant which blocks the H-spreading. This is a possible analysis since the other CV- prefixes all involve voiceless consonants, i.e. class 7 kə- , class 10 -sə/sə- , class 13 tə- , and class 19 fə- . The choice between these two alternatives can be made on the basis of the tonal behavior of L-L°. As seen in

(18b), if the noun belongs to class 6a (or 2), it also remains L-L°. However, if the noun neither has a nasal nor belongs to class 2 or 6a, but rather has an abstract tone depressor mark, as in (19), it *does* undergo H-spreading, as seen in (20):

(20) kə̀ší ká kə́bhì?° 'place of dust'

Thus, the abstract mark hypothesis which equates the class 2 and 6a prefixes with exceptional L tone prefixes such as that in 'dust', fails to make the correct prediction in (20), thereby leaving the second alternative as the tentative explanation. In any case, it seems most straightforward to mark all class 2 and 6a nouns as exceptions to the H-spreading rule.

The above alternations are summarized in the table in (21):

(21)	underlying	in isolation	after L-assoc.	after H-assoc.
a.	H-L-L̥	L-L	L-L	H-L
	H-L-H̥	L-H	L-L°	H-L°
	H-H-L̥	L-H	L-H	H-'H
	H-H-H̥	L-H	L-L°	H-'H
b.	L-L-L̥	L-L	L-L	L-L
	L-L-H̥	L-L°	L-L°	L-L° (but cf. 20)
	L-H-L̥	L-H	L-H	M-H
	(L-H-L̥)	(L-L°)	(L-L°)	(L-L°)

The sequence L-H-H̥ and its derivatives are put in parentheses, since they merge in all cases with L-L-H̥ because of the L-spreading rule mentioned earlier. The tone forms of nouns in N_1 position are the same as those in isolation except for the following: (i) L-L-H̥ is pronounced L-L before both L and H; and (ii) H-L-L̥ is pronounced L-M before H. There appears to be an on-going change in the language whereby the falling pitch or downglide of a L before pause is being generalized to other contexts. Thus, although (10) N and (14) were indicated as having the same tonal shape, there is a potential difference, as seen in (22):

(22) a. kàndɔ̀ŋ ká ñàm [_ ¬ ¯ ¬] 'throat of animal'
b. kàmbò ká ñàm [_ _ ¯ ¬] 'bag of animal'

Compare also the potential differences between màcò 'squirrels' and mànñì° 'knives' in (23):

(23) a. màcò̀ mà ñàm [_ ¬ _ ¬] 'squirrels of animal'
b. mànñì mà ñàm [_ _ _ ¬] 'knives of animal'

If the pre-pausal downglide continues to generalize such that L-L is pronounced [_ ¬] whenever in word-final position, a new statement will be required of the tone system. For the purposes of the rules presented in the following section, we shall not treat this phenomenon except to point out here that it serves to keep L-L and L-L° distinct in utterance-internal position.

4. The Rules

The underlying forms in (21) are quite different from any of their realizations on the surface. In this sense they are abstract. While the preceding discussion has been limited in scope, it has been demonstrated that these underlying forms permit an explanatory account of the tonal alternations found in Babanki. The rules that have been discussed thus far are all plausible and are frequently attested in tone languages. These rules are of four kinds:

(i) tone-grounding: the assignment of a floating tone (T̊) to an adjacent syllable;

(ii) tone-spreading: the spreading of a tone onto a following non-identically toned syllable;

(iii) tone simplification: the conversion of a contour tone into a level tone; and

(iv) tone lowering/raising: affecting only prefixes in Babanki, as when all H tone prefixes become L, or a L tone prefix becomes M between two H's.

Most of the rules required for Babanki were mentioned informally in the preceding section. The purpose of the present section is to formalize these rules and present them in the order in which they apply. It was originally hoped that some general

principle would predict the order in which the above four kinds of rules apply in Babanki, e.g. grounding would precede spreading, which would precede simplification, in a kind of feeding relationship. However the resulting analysis turned out to be unwieldy until it was determined that some of the assimilatory and simplificatory rules had to precede tone grounding, while others had to follow. The result is a set of ordered synchronic rules which recapitulate the historical changes characterizing earlier stages of the tone system. Two pairs of forms which gave considerable trouble are those in (24) and (25):

(24) a. /ká-kɔ̀s̀ ká ñàm̀/ → [kàkɔ̄s ká ñàm] 'slave of animal'
b. /ká-fó̀ ká ñàm̀/ → [kàfó ꜜká ñàm] 'thing of animal'

(25) a. /ká-ší′ ká kàfɑ̀′/ → [kàší ká káfɑ̀°] 'place of medicine'
b. /ká-ší′ ká kàkám′/ → [kàší ká ká'kám] 'place of crab'

The examples in (24) show that if we first apply tone grounding (to the left) and H-spreading (in either order), the N_1 nouns incorrectly merge as intermediate ká-kɔ̂s and ká-fô . The examples in (25) show that if L-spreading occurs too early, the N_2 nouns incorrectly merge as intermediate kàfɑ̀′ and kàkàm′ . The following rules are therefore proposed to apply in the following order:

Rule 1: $\underset{\circ}{L} \rightarrow \text{'}\underset{\circ}{H} \;/\; H \_\_ H$

A floating L tone becomes a downstepped H when both preceded and followed by a H tone.

Rule 2: $H\text{-}L \rightarrow H\text{-}\widehat{HL}$

A H tone spreads onto a following L tone syllable to derive a HL falling tone. This rule cannot be conditioned by or apply to floating tones. Its application is blocked when a L prefix is followed by a NC sequence, or when an N_2 noun belongs to class 2 or 6a.

Rule 3: $\widehat{HL}\text{-}H \rightarrow H\text{-'}H$

A sequence consisting of a HL falling tone (produced by rule 2) followed by a H tone is simplified to a H tone followed by a downstepped H tone.

Rule 4: L-H-$\underset{\circ}{\text{H}}$ → L-L-$\underset{\circ}{\text{H}}$

A L tone spreads into a following H tone syllable when followed by a floating H tone (I have skipped the logically intermediate sequence L-LH-$\underset{\circ}{\text{H}}$). Since this rule is blocked by a word boundary (whether occurring between L and H or between H and $\underset{\circ}{\text{H}}$), the second H will automatically be a floating tone.

Rule 5: L-$\underset{\circ}{\text{H}}$ → L-$\underset{\circ}{\text{L}}^{\circ}$ / ___ //

A floating H tone is lowered to a non-downgliding floating L when preceded by L and followed by pause(//). Some of these L-$\underset{\circ}{\text{H}}$ // sequences derive from rule 4.

Rule 6: TONE GROUNDING (a) $\alpha\underset{\circ}{\text{T}}$ → Ø / αT

(b) H '$\underset{\circ}{\text{H}}$ → $\widehat{\text{H'H}}$

(c) $\underset{\circ}{\text{T}}$ → Ø / //

(d) L $\underset{\circ}{\text{H}}$ L → L-$\widehat{\text{HL}}$

The tone grounding processes are stated as four separate subrules. In (a) a floating tone is deleted whenever it is adjacent to an identical tone (into which it can be said to have been absorbed). In (b) whenever there is a H followed by floating downstepped H, the latter grounds to the left. (The one exception will be the sequence H '$\underset{\circ}{\text{H}}$ H, where the '$\underset{\circ}{\text{H}}$ is absorbed into the following H tone, which is identical by virtue of its being realized on the same pitch level.) In (c) any floating tones left stranded adjacent to a pause boundary are deleted. Finally, (d) represents the one environment I have found that is not covered by one of the preceding subrules. In this case, when a floating H is flanked by L tones on its left and right, it is grounded to the right, creating a HL falling tone.

Rule 7: H_{pref} → L / ___ $[_{\text{stem}}$

All H tone prefixes are lowered to L before a stem (a condition which is required to prevent a H tone associative prefix, which forms a word with the following N_2, from being lowered to L).

Rule 8:

$$\text{HL} \rightarrow \begin{cases} \text{L} \;/\; \text{L} \;\_\_\; \left\{ \begin{matrix} \text{L} \\ // \end{matrix} \right\} & \text{(a)} \\ \text{M} \;/\; \text{L} \;\_\_\; \text{H} & \text{(b)} \\ \text{H} & \text{(c)} \end{cases}$$

In three ordered subrules the following simplifications of a HL falling tone take place: (a) L-HL simplifies as L-L when followed by L or pause; (b) L-HL simplifies to L-M when followed by H; (c) all remaining instances of HL simplify as H. Subrules (a) and (b) have complementary environments, while (c) will mostly simplify H-HL-L to H-H-L.

Rule 9: $\text{L-}\widehat{\text{H'H}} \rightarrow \text{L-H}$

A L-H'H sequence simplifies to L-H. The L is important as a conditioning environment because of such forms as kə̀ší kə́ wá'n' 'place of child' and mú'ú 'water', where H'H does not simplify after H and after a pause or word boundary.

Rule 10: $\text{L}_{\text{pref}} \rightarrow \text{M} \;/\; \text{H} \;\_\_\; \text{H}$

The final rule discussed here raises a L prefix to M when it is both preceded and followed by H.

Sample derivations follow in (26):

(26)	/kə́-fɔ̀' #	kə́ +	kə̀-wʉ̀'/	U.F.	/kə́-kɔ̀s #	kə́ +	kə̀-kə́m'/
	kə́-fɔ̂'	kə́	kə̂-wʉ̀'	r.2	kə́-kɔ̂s`	kə́	kə̂-kə́m'
	kə́-fɔ́''	kə́	kə̂-wʉ̀'	r.3	kə́-kɔ̂s`	kə́	kə́'kə́m'
	kə́-fɔ́''	kə́	kə̂-wʉ̀°	r.5			
	kə́-fɔ́	'kə́	kə̂-wʉ̀°	r.6	kə́-kɔ̂s	kə́	kə́'kə́m
	kə̀-fɔ́	'kə́	kə̂-wʉ̀°	r.7	kə̀-kɔ̂s	kə́	kə́'kə́m
	kə̀-fɔ́	'kə́	kə́-wʉ̀°	r.8	kə̀-kɔ̄s	kə́	kə́'kə́m
	'medicine of foot'				'slave of crab'		

/mə́-ñìn′ # mə̀ + kə̀-kə́m′/			U.F.	/kə́-fó` # kə́ + mə̀-ḅə́ʔ`/		
			r.1	kə́-fó′′	kə́	mə̀-ḅə́ʔ`
mə́-ñîn′	mə̀	kə̀-kə́m′	r.2			
mə́-ñín′′	mə̀	kə̀-kə́m′	r.3			
mə́-ñín′′	mə̀	kə̀-kə̀m′	r.4			
mə́-ñín′′	mə̀	kə̀-kə̀m`°	r.5			
mə́-ñíñ′	mə̀	kə̀-kə̀m°	r.6	kə́-fó	'kə́	mə̀-ḅə́ʔ
mə̀-ñíñ′	mə̀	kə̀-kə̀m°	r.7	kə̀-fó	'kə́	mə̀-ḅə́ʔ
mə̀-ñín	mə̀	kə̀-kə̀m°	r.9			
			r.10	kə̀-fó	'kə́	mə̄-ḅə́ʔ
'birds of crab'				'thing of gorilla'		

5. Conclusion

In the preceding sections an analysis was presented requiring underlying forms of considerable abstractness as well as ten ordered rules. Taken together these rules conspire to minimize the number of ups and downs in the surface tones, especially the number of contour tones, which are very rare in the language. The underlying forms are, in addition, identical with the historical reconstructions of the tone sequences once characterizing Babanki and the other Ring Bantu languages. The synchronic rules can thus be further seen as the stages the language has gone through in developing its current surface tonology. The analysis presented here has only addressed a fragment of the noun tonology of Babanki. Further efforts are underway by H. Jisa and myself to extend this analysis to other parts of the grammar (where we have had success in applying it) and to consider other less abstract alternatives. In addition, a comparative study of tone in the various Ring Bantu languages has begun and has already revealed a number of different systems deriving from the same underlying (=historical) tone forms recognized in the present study. For example, it is known that the western Ring languages and Babanki (of the central Ring group) have similar downstep systems. The remaining languages of

the central group (Kom, Bum, Bafmeng, Oku, Mbizinaku) all have systems with M tone instead of 'H, a system which Grebe and Grebe [1975] have also documented for Lamnsoq of the eastern group. One interesting question, then, will be to trace how the same underlying tones can develop in typologically divergent ways (i.e. into terrace- vs. discrete-level systems). Of particular interest is the relative chronology of tone grounding with respect to the various tonal assimilations and simplifications. It is assumed that the stage in the synchronic derivation where tone grounding takes place is identical to the historical point at which the syllabic support of these tones was lost and the tones had to be shifted elsewhere (or be dropped with their supports). Thus, in seeking to explain the surface alternations in Babanki tone, we have provided (unwittingly, as it were) a study in historical reconstruction and relative chronology as a first-step contribution to the understanding of tonal processes and tonal history.

REFERENCES

Asongwed, Tah and Larry M. Hyman. 1976. "Morphotonology of the Ngamambo noun." In Larry M. Hyman (ed.), *Studies in Bantu Tonology,* 23-56. Southern California Occasional Papers in Linguistics No. 3. Los Angeles: University of Southern California.

Grebe, K. and W. 1975. "Verb tone patterns in Lamsok." *Linguistics* 149:5-23.

Hombert, Jean-Marie. 1976. "Noun classes and tone in Ngie." In Larry M. Hyman (ed.), *Studies in Bantu Tonology,* pp. 3-21. Southern California Occasional Papers in Linguistics No. 3. Los Angeles: University of Southern California.

Hyman, Larry M. 1979. "A reanalysis of tonal downstep." *Journal of African Languages and Linguistics* 1:9-29.

Hyman, Larry M. In press. "Babanki and the Ring group." In Larry M. Hyman and Jan Voorhoeve (eds.), pp. 193-226.

Hyman, Larry M. and Maurice Tadadjeu. 1976. "Floating tones in Mbam-Nkam." In Larry M. Hyman (ed.), *Studies in Bantu Tonology,* pp. 57-111. Southern California Occasional Papers in Linguistics No. 3. Los Angeles: University of Southern California.

Hyman, Larry M. and Jan Voorhoeve (eds.). In press. *Noun Classes in Grassfields Bantu.* Paris: Centre National de la Recherche Scientifique.

Stallcup, Kenneth L. 1978. "Moghamo, Ngie, and Oshie: phonology and noun class...morphology of three languages of the Cameroon Grassfields." Ph.D. dissertation, Stanford University.

Voorhoeve, Jan. 1971. "Tonology of the Bamileke noun." *Journal of African Languages* 10:44-53.

Voorhoeve, Jan. 1978. "Explaining tonal variations in Ngwo." Paper presented at the Annual Colloquium on African Linguistics, Leiden, Sept. 11, 1978.

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DOUBLE NEGATION AND NEGATIVE SHIFT IN KINYARWANDA*

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The negative morpheme in Kinyarwanda can be marked either on the auxiliary verb or on the main verb. It is suggested that this is a case of negative shift from the main verb to the auxiliary rather than the other way around because this shifting is shown to be a raising process. It is claimed that this type of process is more natural and therefore more common in languages than a lowering one. The status of "auxiliary" verbs is also discussed. It is argued that formally they should be treated as main verbs whereas "main" verbs should be analyzed as subordinate verbs. This analysis can be extended to other languages also. In the case of "double negation", it is indicated that the first negative is a "non-existential" marker and the second a subordinate negative. It is observed that these two negatives can only appear in two separate clauses and it is concluded that languages that have negative markers might have got them from existential constructions.

In Kinyarwanda, it is possible to have two negative markers in the same sentence: I refer to this process a "double negation". When the verb has an auxiliary, the negative marker can appear either on the auxiliary or on the main verb. I will argue that this is a case of "negative shift" from the main verb to the auxiliary. Before I start discussing these two processes, I will first show the kinds of negative markers that exist in this language and describe their respective uses.

1. Negative Markers

Kinyarwanda has four distinct negative morphemes, which are ntí-, -ta-, -ii- and nta . The morpheme ntí- is preprefixed to the verb which simply means that it precedes other prefixes such as subject clitics, object clitics, and tense markers. Examples that illustrate

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this are given in (1) and (2) below:

(1) a. ábáana ba-zaa-som-a kîno gitabo
children they-fut-read-asp this book

'the children will read this book'

b. ábáana nti-bá-záa-som-a kîno gitabo
children neg-they-fut-read-asp this book

'the children won't read this book'

(2) a. tw-aa-kú-bóon-ye 'we saw you'
we-pst-you-see-asp

b. nti-tw-aa-ku-boon-ye 'we didn't see you'
neg-we-pst-you-see-asp

Examples in which -ta- appears are given in (3) and (4):

(3) a. n-zi kó ábáana bá-záa-som-a kîno gitabo
I-know that children they-fut-read-asp this book

'I know that the children will read this book'

b. n-zi kó ábáana ba-tá-záa-som-a kîno gitabo
I-know that children they-neg-fut-read-asp this book

'I know that the children won't read this book'

(4) a. kó tw-aa-ku-boôn-ye 'how come we saw you?'
that we-pst-you-see-asp

b. kó tu-ta-aa-ku-boon-ye 'how come we didn't see you?'
that we-neg-pst-you-see-asp

As the examples show, this morpheme appears between the subject clitic and the tense marker. The two morphemes, nti- and -ta- , accomplish the same function except that they are always in complementary distribution. That is, both negate the verb but the former is only used in main clauses and the latter in subordinate clauses. Verbs of main clauses differ syntactically very much from the ones of subordinate clauses. In fact, it has been proposed in Kimenyi [1978] that they are independent of each other. The morpheme -ii- is used to negate imperative sentences, as shown in (5).

(5) a. mw-ii-sóm-a kîno gitabo[1]
you-neg-read-asp this book 'don't read this book'

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[1]The verb oya plus the infinitive form of the main verb is some-

b. b- ii- vúg- a[2] 'they shouldn't talk'
they-neg-talk-asp

The last negative morpheme is nta . It differs from the three mentioned above in two respects. First, it is not prefixed to the verb but rather occurs before a noun and secondly, whereas nti- , -ta- and -ii- are restricted in their uses (-ii- for imperative sentences and the former two occurring in complementary distribution, nti- in main clauses and -ta- in subordinate clauses), nta can occur in any type of sentence except the imperative.

The use of this morpheme is illustrated by the examples in (6):

(6) a. abagóre ba-zaa-ha úmwáana igitabo
women they-fut-give child book
'the women will give the book to the child'

b. ntaa bagóre bá-záá-ha úmwáana igitabo[3]
neg women they-fut-give child book
'no women won't give the book to any child'

---

times used also in imperative constructions and subjunctive forms that express orders:

(i) oya kugeenda 'don't go'
you-not to-go

(ii) babwiire b-oóy-e kugeenda 'tell them not to go'
them-tell-subj they-not-subj to go

Oya also means '*No!*'

[2]The positive imperative form is the verb stem plus the imperfective marker -a. It only refers to the 2nd person singular:

(i) soma 'read'

vuga 'talk'

To express the command on other persons, the verb takes a subjunctive ending -e.

(ii) mu-sóm-e kîno gitabo 'read this book'
you-read-subj this book

ba-vug-e 'they should talk'
they-talk-subj

[3]The last vowel of the morpheme nta is lengthened after the deletion of the initial vowel of the following noun. This phenomenon is discussed in great length in Kimenyi [forthcoming].

c. ntaá mwáana abagóre bá-záá-ha igitabo
neg child women they-fut-give book
'the women won't give the book to any child'

d. ntaa gitabo abagóre bá-záá-ha úmwáana
neg book women they-fut-give child
'the women won't give the child any book'

All nouns, whatever grammatical relation they hold to the verb (subject, direct object, indirect object), can be preceded by this morpheme as seen in the examples provided above. It is important to note that any noun that is preceded by this morpheme has to occur at the beginning of the sentence thus preceding the subject. Not only does the last negative marker differ formally from the other three but it seems to have a different role also. It is used to negate the noun and as we can tell from the translation, it has the meaning of 'no' or 'not any'.

I should also mention that the copula in the main clause, ni 'be', doesn't take a negative marker but rather has a phonetic form different from the positive one. It is realized as si 'not be'. Examples are seen below:

(7) a. uyú mwáana ni mugúfi 'this child is short'
this child be short

b. uyú mwáana si mugúfi 'this child is not short'
this child not be short

(8) a. ni Yohaâni ú-hamaga-ye 'it's John who calls'
be John he-call-asp

b. si Yohaâni ú-hamaga-ye 'it's not John who calls'
be not John he-call-asp

The copula of the subordinate clause is different from that of the main clause: it is ari . This one, however, takes the subordinate negative marker -ta- which appears between a and ri . This a might be interpreted as the subject clitic, but this is not the case:[4]

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[4]Evidence of a- in a-ri and a-ta-ri not being the subject marker is that it doesn't change regardless of which class the subject happens to belong to. Consider the following examples:

(i) a-zi ko aba báana a-tá-ri ibícúucu
he-knows that these children not-be stupid
'he knows that these children are not stupid'

(9) a. ba-azi kó uyú mwáana ári mugúfi
they-know that this child be short

'they know that this child is short'

b. ba-azi kó uyú mwáana atári mugúfi
they-know that this child not be short

'they know that this child is not short'

(10) a. a-zi kó ári Yohaâni ú-hamaga-ye
he-know that be John he-call-asp

'he knows that it is John who calls'

b. a-zi kó átári Yohaâni ú-hamaga-ye
he-know that not be John he-call-asp

'he knows that it is not John who calls'

After this short presentation of different negative markers found in Kinyarwanda, I will discuss cases in which two negative markers (double negation) appear in the same sentence.

2. Double Negation

In the examples that are given below, the (a) sentences are positive, in the (b) sentences only the argument to the verb is negated, and finally (c) sentences present cases in which both the noun and the verb are negated.

(11) a. umugabo y-a-haa-ye ábáana ibitabo
man he-pst-give-asp children books

'the man gave books to the children

b. ntaá báana umugabo y-a-haá -ye ibitabo
neg children man he-pst-give-asp books

'the man didn't give the books to any children'

c. ntaá báana umugabo a-ta-aa-haá-ye ibitabo
neg children man he-neg-pst-give-asp books

'there aren't any children that the man didn't give the books to'

(ii) a-zi ko ibi bitabo a-tá-ri íbye
he-knows that these books not-be his

'he knows that these books are not his'

(iii) a-zi ko ubu bwáato a-tá-ri búshya
he-knows that this boat not-be new

'he knows that this boat is not new'

(12) a. abaantu b-aa-gii-ye 'people went'
people they-pst-go-asp

b. ntaa baantu b-aa-gií-ye 'no people went'
neg people they-pst-go-asp

c. ntaa baantu ba-ta-aa-gií-ye
neg people they-neg-pst-go-asp

'there aren't any people who didn't leave'

We notice that "double negation" produces a positive statement. Another important thing to note is that whenever double negation occurs it is these two morphemes nta and -ta- that mark it, in this particular order. It is not possible to negate two nouns and have a sentence such as 'no one saw nothing'. Thus nti and nta never occur in the same sentence. These cooccurrence restrictions and the fact that when nta and -ta- appear in the same sentence they produce a positive statement have prompted me to treat the morpheme nta as a verb which means 'there is not'.

In the following section I will give arguments that indeed this negative marker is a verb and that it functions as the main verb in the sentence whereas the verb that carries the negative marker -ta- is subordinate. I will start by proving that the "verb" of the sentence is in fact the verb of the embedded sentence.

First, as I mentioned earlier, when there is nta in the sentence, the verb takes -ta- as the negative marker, it never takes nta- . I have argued elsewhere that indeed only verbs of subordinate clauses take this morpheme. Secondly, this verb manifests the relative tone (high tone) which appears on the vowel of the verb stem. Thirdly, it is noted that tenses that occur in main clauses only are not allowed in this construction which shows clearly that verbs that are used with this morpheme have the status of other verbs that appear in subordinate clauses. Thus, like the negative markers nti- and -ta- , some tenses appear in complementary distribution also: they are realized differently according to whether they are in the main clause or subordinate clause. This is discussed in great length in Kimenyi [1977b] and [1978]. Having established that verbs that appear in the nta construction are subordinate, I will show that nta has a verbal status.

This negative morpheme behaves exactly like two other verbs, namely ni/si 'it is/it is not' and hari 'there is'. The first is used in cleft constructions and the second in existential constructions. Like the morpheme nta these two verbs occur at the beginning of the sentence:

(13) a. ni Karoôri n-aa-boón-ye 'it is Charles that I saw'
be Charles I-pst-see-asp

b. si Karoôri n-aa-boón-ye it is not Charles that I saw'
not be Charles I-pst-see-asp

Like these verbs, nta doesn't have subject agreement, which is usually obligatory for Bantu languages. Like verbs in nta construction, verbs that are constructed with these morphemes have the relative clause form. They also take -ta- as their negative marker instead of nti- , which, as I have said, marks verbs of main clauses. Another proof that nta has the same status as ni/si and hari is the fact that it undergoes vowel lengthening like them if the following word begins with a vowel. This rule, which is purely phonetic in other environments, is grammatically motivated in this instance: vowels starting words that appear in the *attribute* position are lengthened, but the final vowel of the verb is deleted:

(14) a. /uyu umwáana ni umugabo/ uyú mwáana n'úumugabo
this child be brave
'this child is brave'

b. /abáana ba-ri aho/ ábáana bar'aaho
children they-be there
'the children are there' or 'the children are fine'

c. /n-ri ikí/ nd'iíki?
I-be what
'what am I?'

d. /si abagabo m-bón-a/ s'aabagabo mbóna
be not men I-see
'it is not the men that I see'

Nta differs from these verbs in only that it is the vowel of the following word that deletes instead of the final vowel of this morpheme:

(15) a. /nta umugabo m-bón-a/ — ntaa mugabo mbóna
neg man I-see-asp
'I don't see any man'

b. /nta cyo m-fíte/ — nta cyo mfíte
neg it I-have
'I don't have it'

c. /nta akamaro/ — ntaa kamaro
neg use
'there is no use'

We have ample evidence, I think, that nta has the same verbal status as ni/si and hari . I want now to prove that it means 'there is not' and that therefore it is the negative counterpart of the existential morpheme hari . It shares with the latter certain formal and syntactic properties.

Hari is only used to introduce indefinite arguments. It is impossible in Kinyarwanda to have indefinite subjects. For instance, to say "a child is crying", one has to use the existential construction (hari) 'there is a child who is crying'. Therefore, unique referents such as proper names and definite descriptions are not allowed with this morpheme:

(16) a. Yohaâni a-zaa-za — 'John will come'
John he-fut-come

b. *hari Yohaâni ú-záa-za
*'There is John who will come'

c. hari umwaana úzáaza
'a child will come'

In this respect, nta behaves differently, however, because it doesn't have any restrictions on what types of nouns appear with it: proper names and indefinite NPs can be used with it.

(17) nta Yohaâni ú-záa-za — 'John won't come'
neg John he-fut-come

(18) ntaá mwáana ú-rir-a — 'no child is crying'
neg child he-cry-asp

(19) ntaá zúuba rí-va — 'the sun is not shining'
neg sun it-shine

The fact that this morpheme can occur with definite NPs is not due to any difference with the existential hari but rather to the general difference of the nature of affirmative and negative sentences. As Givón [1974] has argued, negative sentences are more presuppositional than their positive counterparts. Contrary to hari , which can start a new discourse, nta is like other negative markers used after a question or to correct a misguided belief. Both of them, however, can occur in questions whether the nouns they are introducing are definite or indefinite as the examples below indicate:

(20) a. har'aabaantu w-a-boón-ye? 'did you see any people?'
there be people you-pst-see-asp

b. ntaa baantu w-a-boón-ye? 'didn't you see any people?'
neg people you-pst-see-asp

(21) a. har'aabábyéeyi baa-njye ba-aa-hámaga-ye?
there be parents of-me they-pst-call-asp
'did my parents call?'

b. ntaa abábyéeyi baa-njye ba-aa-hámaga-ye?
neg parents of-me they-pst-call-asp
'didn't my parents call?'

The above sentences show that hari and nta have the same function. Question (21a) can be asked without the existential and (20b) and (21b) can be formulated with the main clause negative marker nti- , thus yielding (22), (23) and (24).

(22) abábyéeyi baa-njye ba-aá-hamaga-ye?
parents of-me they-pst-call-asp
'did my parents call?'

(23) nti-w-a-boon-ye abaantu?
neg-you-pst-see-asp people
'didn't you see people?'

(24) abábyéeyi baa-njye nti-ba-aa-hamaga-ye?
parents of-me neg-they-pst-call-asp
'didn't my parents call?'

There is a difference between the two types of constructions. When the existential hari and the "negative existential" nta are used in

questions with definite nouns, there is less presupposition or expectation on the part of the speaker from the hearer. In fact yes-no questions in Kinyarwanda presuppose most of the time what the hearer holds to be true. Questions with the existential and the non-existential can be translated as "by any chance?...".

If we accept nta as non-existential marker, or "exclusive marker" as it has been rightly called by Meeussen [1959] and Kimenyi [1977] and has been proposed in this paper, a lot of mysteries are solved. First, we understand why nta and -ta- give a positive statement when they occur in the same sentence. A non-existential predicated to a negative sentence would naturally produce a positive statement. Second, we know why two NPs cannot be negated: it is because two existential markers cannot appear in the same sentence. This morpheme is not found in imperative sentences either because existentials never occur in this type of construction.

These findings about the use of negation in Kinyarwanda have implications for other languages. If a language can negate both the verb and the arguments of the verb, there is the chance that the negative marker for nouns will have an existential origin. In English for instance nouns with negative markers can be paraphrased by the existential construction, e.g. 'nobody called' is the same as 'there isn't anybody who called'. The morpheme nta in Kinyarwanda can be used in both cases as either a *contradiction* or a *contrary* to use Lyons' terminology. A contrary is just the opposite of a positive statement. A contradiction is correcting a misguided belief. Suppose somebody asks, "Did you see John?" If the answer is negative such as "I didn't see John", the the negative marker is used as a contrary. But if somebody makes a false positive statement such as "John is rich", and the hearer responds and says, "John is not rich", the negation would be used as a contradiction. Lyons' terminology corresponds to what philosophers have called "external" and "internal" negation. The sentence, "I didn't see John", might mean, "It is not the case that I saw John", (external negation or contradiction) or simply, "I didn't

see John", where only the verb is negated instead of the whole sentence (internal negation or contrary). Nta is ambiguous in this respect, but the nti-/-ta- morpheme is only used as a contrary. This proves that the distinction made by philosophers about external and internal negation has some linguistic validity. As a matter of fact, Turkish happens to confirm this also. It has three types of negative markers, namely -me- , yok , and değil . The first, which undergoes vowel harmony, is suffixed to the verb; yok is a non-existential marker; and finally değil is an external negator that negates the whole sentence.[5] The remaining part of the paper is concerned with the "negative shift".

3. Negative Shift

The negative shift in this langauge is attested by the fact that the negative morpheme can appear either on the auxiliary or on the main verb without affecting the meaning of the sentence. The auxiliary always precedes the main verb. This is illustrated by the examples given below:

(25) a. ábáana ba-zaa-ba bâ-som-a ibitabo
children they-fut-aux they-read-asp books
'the children will be reading books'

b. ábáana nti-bá-záá-ba bâ-som-a ibitabo
children neg-they-fut-aux they-read-asp books
'the children won't be reading books'

c. ábáana ba-zaa-ba ba-da-sóm-a ibitabo
children they-fut-aux they-neg-read-asp books
'the children won't be reading books'

As we see from the examples (25b) and (25c), the auxiliary takes the negative marker, which as we have already noted, goes with verbs of main clauses and the "main verb" takes the subordinate negative marker -ta- .

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[5]I owe this information to Eser Erguvanli.

One might argue that this is not a shift since the two morphemes are different. This is only a spelling process, which says that the negative marker is realized as nti- in main clauses and -ta- in subordinate clauses. We notice in fact that when it is embedded, the negative marker nti- becomes -ta- . Example (26) shows that the negative marker of the auxiliary verb and that of the main verb are neutralized to become -ta- .

(26) a. y-a-vuz-e kó ábáana bá-záa-ba bâ-som-a ibitabo
he-pst-say-asp that children they-fut-aux they-read-asp books
'he said that the children will be reading books'

b. y-a-vuz-e ko ábáana bá-tá-záá-ba bâ-som-a ibital
he-pst-say-asp that children they-neg-fut-aux they-read-asp books
'he said that the children won't be reading books'

c. y-a-vuz-e ko ábáana bá-záa-ba bâ-da-sóm-a ibitabo
he-pst-say-asp that children they-fut-aux they-neg-read-asp books
'he said that the children won't be reading books'

The negative shift and the fact that the auxiliary behaves like a main verb and the main verb as a subordinate raise some questions of great importance to the grammar of this language in particular and to linguistic theory in general. I will be concerned with the following two:

i. What is the status of the auxiliary verbs on the one hand and the status of main verbs, on the other hand? Should their structure be analyzed as a single clause or two clauses? If they are treated as two separate clauses, which is proposed here, are they going to be analyzed as sisters dominated by the same node or does the auxiliary dominate the main verb?

ii. Secondly if indeed negative shift is taking place, in which direction is it moving? Does it shift from the auxiliary verb to the main verb or from the main verb to the auxiliary?

Before I answer these questions, something should be said about auxiliary verbs. In this language, auxiliary verbs don't have any semantic function of their own but rather bring grammatical information to the verb, especially temporal or aspectual. Thus, an auxiliary verb such as

-ri is used with defective and stative verbs to carry past tense markers; -rího is used to show a continuous action; -ba indicates a habitual activity; -sígar- is a new activity; etc. A full discussion on auxiliaries, their use, their syntactic and their semantic features is found in Kimenyi [1977]. When they are not acting as auxiliaries, these verbs have a meaning of their own which they lose once they are auxiliaries. They get their own auxiliaries also. Auxiliary verbs have all the properties of finite main verbs: they have to agree with the subject like other verbs and they carry tense and aspect markers like others. Consider the examples in (27) and (28):

(27) a. ábáana b-aa-hoz-e bâ-kin-a
children they-pst-aux-asp they-play-asp
'the children were playing'

b. ábáana ba-zaa-hor-a bâ-kin-a
children they-fut-aux-asp they-play-asp
'the children will keep playing'

(28) a. ba-rá-ráar-a bâ-vug-a
they-pres-spend the night-asp they-talk-asp
'they are going to spend the night talking'

b. ba-aa-raa-ye bâ-vug-a
they-pst-spend the night-asp they-talk-asp
'they spent the night talking'

The only property of main verbs they don't have is that they cannot cliticize objects or allow extensions such as applicative marker and causative marker. This constraint, however, is only semantic. Only transitive verbs or transitivized verbs can cliticize or extend. No auxiliaries are transitive.

When they are used as auxiliaries, they look exactly the same as when they are independent. Compare the following pairs:

(29) a. u-rího u-ra-som-a 'you are reading'
you-aux you-pres-read-asp

b. u-rího 'you exist'
you-exist

(30) a. ba-ba bâ-kor-a 'they are (habitually) working'
they-aux they-work-asp

b. ba-ba íno 'they live here'
they-aux here

(31) a. mu-siga-ye mú-mu-kuund-a 'you like him now'
you-aux-asp you-him-like-asp

b. mu-siga-ye mw'iishuûri 'you stay in the class'
you-stay-asp in school

All these observations clearly show that at least syntactically auxiliary verbs should be analyzed as main verbs.

The so-called "main verbs" have the status of finite verbs also because they agree with the subject and carry tenses and aspect markers like other finite verbs. They can carry clitic object pronouns also. Examples are provided in (32) and (33).

(32) ábáana b-aa-ri b-aará-gíi-ye 'the children had gone'
children they-pst-aux they-pst-go-asp

(33) mu-zaa-ba mw-áa-gi-som-ye 'you will have read it'
you-fut-aux you-pst-it-read-asp

The problem is to determine the status of the verbs that have auxiliaries. Should they be treated as sister constituents to the auxiliaries or should they be analyzed as being dominated by the auxiliaries. It is the latter analysis that has been adopted here.[6] It has been shown that

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[6]Some auxiliaries, especially the ones that mean to 'start' and to 'continue', allow the main verb to occur in the "main verb form". But this is allowed with the -ra- tense only.

(i) ba-ra-komez-a ba-rá-mu-kubit-a
they-T-continue-asp they-T-him-beat-asp

'they kept beating him'

(ii) ba-ra-komez-a nti-ba-aa-mu-kubit-a
they-T-continue-asp neg-they-T-him-beat-asp

'they kept not beating him'

This sequence of tenses is found in historical present.

The auxiliary -riho allows the main verb to carry the main clause negative marker also:

auxiliary verbs are really main verbs because they take all the tenses of main verbs, carry the negative marker of the main verbs and occur only in three moods, namely indicative, subjunctive, and imperative, which are the only ones the main verb can occur in, as shown in Kimenyi [1978]. Verbs that have auxiliaries are really subordinate, first because they take the subordinate negative marker -ṭa- and always occur in the participial mood which never allows verbs of main clauses. Secondly, these verbs behave exactly as those of sentential complements of sensory verbs, such as feel, see, hear, find and dream. In Kinyarwanda, verbs found in this type of construction appear in the participial mood as shown in (34) and (35). This mood is marked by a high tone on the first vowel of the verb, which falls if the vowel is preceded by a consonant.

(34) n-aa-saanz-e b-áará-gíi-ye
I-pst-find-asp they-pst-go-asp
'I found out that they had left'

(35) n-d-úumv-a n-dwáa-ye
I-pres-fee-asp I-be sick-asp
'I feel sick'

These types of verbs allow negative shift also, because the meaning is not affected whether the negative marker appears on the sensory verb or on the embedded verb, as seen in (35) and (36).

(35) a. si-[7]n-aa-saanz-e b-áará-gíi-ye 'I didn't find them gone'
neg-I-pst-find-asp they-pst-go-asp

b. n-aa-saanz-e ba-ṭa-áara-gíi-ye[8] 'I didn't find them gone'
I-pst-find-asp they-neg-pst-go-asp

(iii) tu-rího tu-rá-kor-a 'we are working'
we-aux we-T-work-asp

nti-tu-rího du-kór-a 'we are not working'
neg-we-aux we-work-asp

tu-rího ntî-du-kór-a 'we are not working'
we-aux neg-we-work-asp

[7]The negative marker for the first person is si- instead of nti- . This is true for many other eastern Bantu languages.

[8]One of the readers of *SAL* asked if there really is a difference

(36) a. ntí-w-a-boon-ye ábáana bâ-som-a
neg-you-pst-see-asp children they-read-asp
'you didn't see the children studying'

b. w-a-boon-ye ábáana bâ-da-sóm-a
you-pst-see-asp children they-neg-read-asp
'you didn't see the children studying'

We have established that main verbs are subordinate. I want to claim now that the shift goes from the main verb to the auxiliary. One argument I am giving is that there exist in Kinyarwanda movement rules such as topicalization and raising, which move one element from one clause to another and all of them go from the lower clause to the one on the top. There are no lowering processes in this language. It would be inappropriate to claim that negative shift is a lowering process when no other transformation of this type is attested.

Negative shift has been reported in other languages also. In English for instance where pairs such as 'I don't think he is here' and 'I think he is not here' are found, the second sentence is supposed to be closer to the underlying structure whereas the former is a transform of the latter. Cases of negative lowering have been cited in English [Stockwell 1977] but no real evidence has been given to support this hypothesis. In English again we notice that the negative marker is either marked on the verb or on the auxiliary, e.g. 'hasn't he read the book?' versus 'has he not read the book?'; aren't you leaving now' versus 'are you not leaving now?' Although nobody else has suggested this, this is a case of negative shift in English from the main verb to the auxiliary. We know that the negative contraction which applies only when the negative marker is on the auxiliary is a late development

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between (a) and (b) since examples such as

'you didn't see the children studying (but they were)' vs.
'you saw the children not studying (but watching TV instead)'

can not be differentiated in Kinyarwanda. The fact is that this type of construction is ambiguous. In Kinyarwanda, to a question such as 'did you find the students studying?' the answer can either be 'I didn't find them studying' or 'I found them not studying'.

in English. We see also that when the subject inversion applies, the negative marker remains at the right side of the subject if it is not contracted.

Another reason why the main verb should be treated as the source of the negative shift is because of its ambiguity. When the negative marker appears on the main verb, the sentence can have two meanings but one interpretation only is possible when the negative morpheme is marked on the auxiliary.

(37) a. ba-zaa-ba bâ-da-kór-a
they-fut-aux they-neg-work-asp
'they won't be working' 'they will not be working'

b. nti-bá-záá-ba bâ-kor-a
'they won't be working'

When the negation is on the main verb, this may be a simple statement or the negation may be used emphatically or contrastively. When the negative marker is on the auxiliary, however, both the emphatic and the contrastive meanings are lost. Another argument that favors my analysis is the fact that the negative marker is the only linguistic element that brings new information in the whole sentence. As I have argued elsewhere, the new information (stress, contrast, surprise, focus, etc.) tends to come last in the sentence whereas the old information (presupposition: information shared by both speaker and hearer) comes earlier.

4. Conclusion

In this paper I have shown that auxiliary verbs are main verbs in Kinyarwanda. A similar analysis has already been proposed by Ross for English. I would tend to believe that it can be generalized to other languages also. In French, for instance, this proposal would be correct since the auxiliary verbs carry tenses and moods whereas the "main" verb appears in the participial form.

If it is true that the negative shift in Kinyarwanda goes from the subordinate verb to the auxiliary and if languages tend to favor raising processes to lowering ones, a principle or an explanation should be

formulated. In French, for instance, we witness the shift to the clitic object position of main verbs of subject pronouns of sentential objects of sensory verbs, e.g. Old French *j'entends le chanter but Modern French je l'entends chanter 'I hear him sing'. Lowering processes are not attested in linguistic change. I think an explanation can be found if we look at the functional roles of movement transformations. Fronting movements and raisings put elements in the prominent position, making them topics whereas backgrounding movements put them in the focus position. Lowering processes don't seem to meet any of these functions.

REFERENCES

Givón, T. 1974. "Negation in language: pragmatics, function and ontology." UCLA, manuscript.

Kimenyi, A. 1977a. "Remarks on focus constructions." Paper read at the 5th Annual Conference of CLAC, Fresno.

Kimenyi, A. 1977b. "A relational grammar of Kinyarwanda." Extended and revised version of UCLA Ph.D. dissertation to appear in the University of California Press.

Kimenyi, A. 1978. "Time concept and tense-aspect-modality systems in Kinyarwanda." Paper read at the 9th African Linguistics Conference, East Lansing, Michigan.

Meeussen, A. 1959. *Essai de grammaire rundi*. Bruxelles.

Ross, J.R. 1975. "Auxiliaries as main verbs." In Bever and Weksel (eds.), *The Structure and Psychology of Language*. New York: Holt, Rinehart and Winston.

Stockwell, R. 1977. *Foundations of Syntactic Theory*. Englewood Cliffs, New Jersey: Prentice-Hall.

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EXPLAINING HAUSA FEMININES*

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The formation of feminine words in Hausa is explained in terms of three distinct processes: (a) Derivation (marked by {-nyàa}), i.e. the change from masculine (male) to feminine (female); (b) Inflection (marked by {-aa}), i.e. the expression of a gender feature provided by concord rules; and (c) Overt Characterization (also marked by {-aa}), i.e. the historical addition of an overt gender marker to inherently feminine nouns. The process of overt characterization (= "hypercharacterization") explains why almost all feminine nouns in Hausa now end in -aa when historically they can be presumed to have occurred with all five final vowels. It also accounts for the presence of an overt feminine suffix on nouns that cannot be considered derived. A clear distinction between the separate suffixes {-nyàa} and {-aa} leads to a straightforward, regular description of feminine forms, in terms of segmentals as well as tones. Finally, it is shown how the analysis of "secondary verbal nouns" (deverbative nouns) can be simplified if seemingly diverse forms are treated as related masculine/feminine pairs.

1. Introduction

It is well known that most feminine nouns in Hausa end in -aa . In some cases the -aa is an integral part of the lexical item, e.g. rìigáa 'gown', táagàa 'window'; in others, it is part of what Parsons [1961] calls a "feminative" suffix, e.g. gàrkúwáa 'shield', záakányàa 'lioness'.[1] Masculine nouns normally end in one of the

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*This paper was stimulated by ideas and observations in a recent paper presented by Russell Schuh [1978], to whom I am most grateful for discussion and constructive criticism (not all of which I have heeded). It is also the outgrowth of a broader comparative study of gender in Chadic and Afroasiatic being carried out with the support of a National Science Foundation grant no. BNS77-16841, awarded to the Center for Applied Linguistics. I would like to thank Claude Gouffé for comments and corrections on an earlier draft of the paper.

[1] For the most extensive study of gender in Hausa, see the series of articles by Parsons [1960-61-63].

other four vowels, e.g. bírìi 'monkey', zóobèe 'ring', ƙúurùu 'pony', kéesòo 'grass mat'. Some masculine nouns also end in -aa , e.g. wátàa 'moon', bàkáa 'bow', but these are generally treated as non-systematic exceptions.

In an important study of West Chadic vowels, Schuh [1978] notes that in Chadic languages, there is normally no fixed correlation between the grammatical gender of words and their phonological shape.[2] He concludes that the association between final -aa and feminine gender now found in Hausa is not an old feature, but rather is the result of a relatively recent innovation.[3] In Proto-Hausa, feminine nouns presumably occurred with all five final vowels (and perhaps with consonant final nouns as well). Without going into the details as to how feminine nouns came to end in -aa Schuh suggests that one contributing factor was the addition of the feminine derivational suffixes.

In this paper, I would like to carry forward the study of Hausa feminines, taking as basic Schuh's assumption of the earlier independence of canonical shape and gender. First, I shall clarify the morpho-syntactic process by which feminine nouns came to have feminine endings. Then I shall account for the present and previous phonological shape of these words.

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[2]Schuh is correct in emphasizing this lack of correlation as a Chadic norm, probably reflecting the original situation in Proto-Chadic. Nevertheless, there are a number of present-day Chadic languages apart from Hausa which independently have established a (partial) correlation between gender and phonological shape, e.g. Gashua Bade [Schuh 1977], Mokulu [J. Lukas 1977], Pa'a [M. Skinner 1977].

[3]This idea was put forward earlier on other grounds in an interesting paper by N. Skinner [1975]. Although I accept Skinner's proposal that the Hausa feminine suffix is ultimately derived from a form containing an element /t/, in light of the shallow time depth treated in the present paper, I shall go ahead and describe the suffix simply as -aa .

2. Morpho-syntactic Processes

Three main processes were involved in the development of Hausa feminine forms: (a) Derivation, (b) Inflection, and (c) Overt Characterization.

2.1. Derivation ($N_{[+m]} \rightarrow N_{[+f]}$). Male and female counterparts of the same animate being can be indicated either by using separate words, e.g. dóokìi/góoɗìyáa 'horse/mare', or by deriving one form from the other, e.g. záakìi/záakányàa 'lion/lioness'. In accordance with universal linguistic principles, Hausa normally derives the word for the female from a word indicating the male, although a few examples of derived male forms can be found. The derivational shift from male to female is automatically accompanied by a corresponding gender shift from masculine to feminine. It should be emphasized that in pairs such as záakìi/záakányàa , the feminine form is conceptually as well as morphologically derivative.

The feminine derivational suffix is {-nyàa} , its two surface manifestations being -nyàa and -nìyáa . This suffix is *not* the same as the feminative endings -(i)yaa and -(u)waa , with which it has always been confused. The derivational suffix {-nyàa} is essentially non-productive in present-day Hausa. The following list is therefore complete (allowing for accidental omissions or unrecorded dialect variants):

(1)	m.		f.
servant	báràa	→	bárányàa
hartebeest	dárìi	→	dárányàa
gazelle	káɓòo	→	káɓányàa
rat	kúusùu	→	kúusányàa
boy	yáaròo	→	yáarínyàa
ring	zóobèe	→	zóobányàa
thief	ɓàráawòo	→	ɓàráunìyáa
goblin	dòodóo	→	dòodánnìyáa
infant	jínjìríi	→	jínjíñnìyáa

(1) cont.	m.		f.
blind person	màkáafòo	→	màkáunìyáa
orphan	màráayàa	→	màráinìyáa
man	mùtûm	→	mùtúunìyáa = mùtúmnìyáa
chief	sárkíi	→	sàráunìyáa
age-mate	zúmùu	→	zúunìyáa = zúmnìyáa
wizard	bóokáa	→	bóokányàa (= bóokáa)
grandchild	jíikàa	→	jíikányàa (= jíikàa)
evil person	múugùu	→	múgúnyàa (= múugùwáa)
fool	wáawáa	→	wáawányàa (= wáawáa)
monkey	bírìi	→	bírínyàa
boar	gyáadóo	→	gyáadányàa
fish	kíifíi	→	kíifányàa
antelope	màazóo	→	máazányàa
lion	záakìi	→	záakányàa

As can be seen, the function of this suffix is to form the female counterpart of animates (humans and animals). There are only a few exceptions: kíifányàa , which denotes a 'large fish' (perhaps originally a female fish), and zóobányàa , which is equivalent in meaning to zóobèe . The pair kádée/kádányàa 'shea-tree' (equivalent in meaning) only appears to be an exception, since the feminine form does not contain the suffix -nyàa , but rather is formed from a now nonexistent root *kadan- plus the suffix -yaa (cf. the pl. kádaanée). It is possible that the pair zóobèe/zóobányàa has a similar explanation. The omission of the pair sâa/sáanìyáa 'bull/cow' from the list is purposeful (see discussion later in section 3.1.3).

2.2. <u>Inflection</u> ($DN_{[\alpha gen]} \rightarrow DN_{[+f]}$). Adjectival nouns—"dependent nominals" in Parsons' terminology—obligatorily agree in number and gender with their head nouns, whether used predicatively or attributively, e.g.

(2) bàkáa$_{[+m]}$ sáabóo$_{[+m]}$ nèe 'the bow is new'
rìigáa$_{[+f]}$ sáabúwáa$_{[+f]}$ cèe 'the gown is new'
móotóocíi$_{[+pl]}$ sàabàbbíi$_{[+pl]}$ nèe 'the cars are new'

Note that the gender agreement is with the specified grammatical gender of the head noun and not its surface manifestation, e.g. kàakáa$_{[+m]}$ tsóofóo nèe 'grandfather is old', vs. kàakáa$_{[+f]}$ tsóofúwáa cèe 'grandmother is old'.[4] As far as the inflectional marking for gender is concerned—plural marking falls outside the scope of this paper—the masculine form has a Ø suffix (i.e. is unmarked) while the feminine form contains a suffix {-aa}, with the surface manifestations -aa , -(i)yaa , and -(u)waa (to be described later in section 3.2). Both the [+m] and [+f] forms are inflected from the same base, e.g.

(3)

sáabóo$_{[\alpha gen]}$ 'new'	sáabóo	+	Ø$_{[+m]}$	/sáabóo/
	sáabóo	+	aa$_{[+f]}$	/sáabúwáa/
fárii$_{[\alpha gen]}$ 'white'	fárii	+	Ø$_{[+m]}$	/fárii/
	fárii	+	aa$_{[+f]}$	/fáráa/

Although the inflected masculine form and the underlying base are (almost always) the same, it is important for the understanding of Hausa gender to keep them apart. The inflected feminine form is not built on the masculine form, as generally asserted, but on an underlyingly genderless base. Adjectival (Dependent Nominal) inflection consists in the overt marking of the feature [+f] added by the grammatical concord rules; it does not involve a change from one gender to another. It is thus an entirely different process from the záakìi/záakányàa derivation, the essence of which is the alteration of a [+m] semantically male form into a [+f] semantically

[4]Syntactically, gender in Hausa is actually considerably more complicated than I make it sound here, cf. Schachter [1966].

female form.[5]

2.3. Overt characterization ($N_{[+f]} \rightarrow N_{[+f]}$ + fem. suffix). Hausa has a large number of words containing a feminative suffix which do not, however, have masculine counterparts, e.g. gàrkúwáa 'shield', túnkìyáa 'ewe, sheep', tóolíyáa 'tuft', mínjíryáa 'electric catfish', kíbíyàa 'arrow', etc. In the standard analyses of Hausa, these are treated as "feminatives", which are derived from masculine words that have since been lost, e.g. gàrkúwáa$_{[f]}$ < *gàrkó$_{[m]}$, túnkìyáa$_{[f]}$ < *túmkì$_{[m]}$ etc. (cf. Parsons [n.d.]). This analysis, however, raises some difficult questions—up to now never faced—namely, what would have been the nature of this derivational process, so often involving words for inanimates, and why should such a large number of the postulated masculine forms have disappeared? The answer is that Hausa feminatives are *not* derived from masculine words. Rather, their explicitly feminine phonological/morphological shape is due to the addition of a feminine suffix to words that were already grammatically feminine! The process was not derivation, but rather "overt characterization" (called "hypercharacterization" by Malkiel [1957-58]). It is true that gàrkúwáa and túnkìyáa are historically derived from *gàrkó and *túmkì ;[6] but these starred forms were already [+f] *before* the

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[5]Although múugùwáa and múgúnyàa now function somewhat interchangeably as feminine forms of múugùu 'evil (psn)', the former would originally have only been the inflected form of the adjective (dependent nominal), while the latter would have only been a derived feminine (female) word corresponding to the male (masculine) form 'evil man'.

[6]All of the reconstructed forms in this paper are given with a short final vowel. Synchronically, the unmarked length of final vowels in Hausa could be said to be long. However, as independently concluded by Greenberg [1977:103] and Schuh [1978], the final vowels of Hausa nouns must originally have been short. They suggest that the long vowels one now finds reflect a former deictic element, identified more specifically by Schuh as a previous reference marker *-i . On the original shortness of the final vowel, I am in agreement; but I would suggest that the explanation for the length will be found in the broader process of gender characterization rather than in a specific deictic morpheme.

feminine suffix was added. The function of the suffix was not to change gender, but rather to provide the word with an overt shape such that it was explicitly characterized as feminine.[7] As argued by Schuh [1978], Hausa formerly should have had feminine nouns ending in vowels other than -a , gender not being explicitly marked. The overtly characterized "feminatives" in present-day Hausa, instead of entailing the former existence of corresponding masculine nouns, provide valuable internal evidence of grammatically feminine nouns with the full range of final vowels postulated on comparative grounds to have been possible, e.g.

(4)	zúucìyáa	<	*zúktì$_{[f]}$	'heart'
	sáafíyáa	<	*sáafé$_{[f]}$	'morning'
	gàrkúwáa	<	*gàrkó$_{[f]}$	'shield'
	rúudúwáa	<	*rúudú$_{[f]}$	'woman's load of utensils'
	cf. kàazáa	<	*kàazá$_{[f]}$	'chicken'

Interestingly, though not surprisingly (cf. Martinet [1956]), the ending adopted by Hausa to characterize its feminine nouns was *not* the derivational suffix {-nyàa}, with its associated semantic properties, but rather the (originally) semantically empty inflectional suffix {-aa}. The historical characterization rule, like the synchronic inflectional rule, probably applied obligatorily to all feminine nouns.[8] Doublets such as tállée$_{[m]}$ = tállíyáa$_{[f]}$ 'soup pot' or léeƙúu$_{[m]}$ = léeƙúwáa$_{[f]}$ 'summit' thus represent dialect or stylistic variation in the underlying gender specification and not optional application of the characterization rule. Before the overt characterization of feminines, *tállé$_{[m]}$ = *tállé$_{[f]}$ would have been comparable

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[7]For examples of overt characterization outside of Chadic, see Malkiel [1957-58] for Romance and Ibrahim [1973] for Semitic.

[8]Feminine words without the feminine ending, with which one must include words with final short -a (!), e.g. gòggó 'paternal aunt', màagé 'cat', ʔùngùlú and jígàl 'vulture', ʔàyàbà 'banana', must have come into the language at a later date. The word màcè 'woman' is an exception. Presumably it was so well marked semantically that it did not have to be overtly characterized for its feminine gender.

to the now-found sàndáa$_{[m]}$ = sàndáa$_{[f]}$ 'stick', the contrast being in the underlying gramatical gender, not in the surface morphological form.

Since there was not a comparable process of characterization affecting masculine nouns, they have remained with all five etymologically inherited final vowels, e.g.

(5) ráamìi$_{[m]}$ 'hole'; géefèe$_{[m]}$ 'edge'; ƙàfóo$_{[m]}$ 'horn'; túurùu$_{[m]}$ 'stocks'; bàkáa$_{[m]}$ 'bow'.

From a historical point of view, masculine words with final -aa in Hausa are entirely normal—an important point emphasized by Schuh [1978]—and synchronically they are more numerous and include more basic words than one is usually led to believe. Nevertheless, an association does now hold in Hausa between final -aa and feminine gender such that aa-final masculine nouns could be said to be "mischaracterized". Because of this, there has been analogical pressure for such nouns to change their gender, e.g. fáatàa 'skin', ʾískàa 'wind', yáatsàa 'finger', all of which were originally masculine but which have switched to feminine in at least some dialects. In the case of ƙíshírwáa$_{[f]}$ 'thirst', presumably derived from ƙíshì(n) rúwáa$_{[m/pl]}$ 'thirst of water', and gíiwáa$_{[f]}$ 'elephant' (< *gíiwán$_{[m]}$),[9] both of which accidentally appear to contain the feminative suffix -waa , the gender change affected all dialects. How many other aa-final words there are that switched from masculine to feminine at an early period without leaving a trace, we cannot know. But in the case of the aa-final masculine words that have not changed, their highly marked nature is good evidence that the gender of these words is an old, conservative trait, dating back to Proto-Hausa and beyond.

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[9]According to my analysis, gíyèe 'male elephant/epithet for a chief' represents a derived masculine form, necessitated by the gender change of gíiwáa from [+m] to [+f], i.e. gíyèe < gíiyèe < gíiwèe$_{[m]}$ < gíiwáa$_{[f]}$. If gíyèe were the unmarked underlying form, as usually claimed, the corresponding feminine should have been ??gíyyàa , not gíiwáa .

2.4. Common gender nouns. A consideration of common gender nouns is important since they illustrate the overlap between overt characterization as a historical phenomenon and derivation as a synchronic process. They are also important for understanding the development of Hausa feminatives since it is possible that overt characterization began with the marking of the feminines of these common gender words before it spread to the inherently feminine words.

Syntactically, Hausa has only two genders, masculine and feminine. Lexically, however, nouns fall into three classes: masculine, feminine, and "common",[10] i.e. animate nouns whose gender is determined by the sex of the referent rather than being an inherent property of the lexeme as such. Examples of common gender nouns are kàakáa$_{[com]}$ 'grandparent', for which one can specify [+m] 'grandfather' or [+f] 'grandmother', and jàakíi$_{[com]}$ 'ass', for which one can specify [+m] jàakíi 'he-ass' or [+f] jàakáa 'she-ass'. Morphologically there are two classes of common gender nouns, those that are epicene, e.g. kàakáa 'grandparent', ʔàutáa 'youngest child', wàadáa 'dwarf', gáuláa 'fool', sáʔàa 'age-mate', and those that have a distinct feminine form. The non-epicene common gender nouns include dependent nominals used as main nouns, e.g. tsóofóo$_{[m]}$/tsóofúwáa$_{[f]}$ 'old man (father)/old woman (mother)' (< tsóofóo$_{[com]}$ 'old person'), as well as various independent nominals, e.g. sáakòo$_{[m]}$/sáakùwáa$_{[f]}$ (< sáakòo$_{[com]}$) 'next younger sibling', shéegèe$_{[m]}$/shéegìyáa$_{[f]}$ 'bastard', ƙúurùu$_{[m]}$/ƙúurùwáa$_{[f]}$ 'pony', jàakíi$_{[m]}$/jàakáa$_{[f]}$ 'ass'. It has been customary to treat forms such as sáakùwáa , shéegìyáa , etc. as derived feminine forms on a par with forms such as báránỳàa 'female servant' (< báràa$_{[m]}$ 'servant'). Historically speaking

[10]The term "common gender" is taken from Parsons [1960:120]. My use of the term differs from his, however, since he limits it to synchronically epicene nouns.

this is wrong. The feminine form sáakùwáa 'younger sister', for example, comes not from the masculine word sáakòo$_{[m]}$ 'younger brother', but from the underlying common gender noun sáakòo$_{[com]}$ 'younger sibling' by semantic specification. The morphological process is not derivation—the suffix {-nyàa} is never added—but overt characterization. At a deeper level, pairs such as sáakòo/ sáakùwáa are thus parallel to pairs such as kàakáa$_{[m]}$/kàakáa$_{[f]}$. Morphologically the pairs look different because of the way in which the -aa suffix is realized, but grammatically there is no difference.[11] At an earlier historical period, moreover, before the overt characterization of feminines, words such as sáakòo would also have been epicene, i.e. *sáakò táa fìtá 'younger sister went out' would have been as normal as kàakáa táa fìtá 'grandmother went out'.

Because of the morphologically unequal nature of most of the common gender m/f pairs (due to the overt characterization of the feminines), the original system of sex-neutral common gender words seems to be giving way to a masculine-unmarked/feminine-marked system. Wtih this change in orientation, the epicene words become "undercharacterized", the response being the creation (still sporadic) of new derived forms using the true feminine derivational suffix, e.g. jíikányàa 'granddaughter', bóokányàa 'female wizard', wáawányàa 'female fool', from the originally epicene, common gender words jíikàa , bóokáa , and wáawáa .

3. <u>The Form of Hausa Feminines</u>

All descriptions of Hausa note that feminines are formed in some way by the addition of -aa , (i)yaa , and (u)waa ; but apart from this, little is said. Taylor [1959:9] states, "beyond

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[11]By eliminating the surface distinction between epicene words such as kàakáa and paired words such as sáakòo/sáakùwáa , we are led to the discovery that almost all kin-terms in Hausa are common gender, sex of the referent not being reflected in the basic terminology.

saying that the feminine endings are -waa and -yaa , no precise rules can be given." Even Parsons, who is seldom at a loss for comprehensive rules, leaves the various forms of the feminine to a great extent unexplained, concluding "the distribution of the various shapes of the feminine suffix is somewhat arbitrary" [Parsons 1963:181]. As far as tone is concerned, the only good attempt to account for the form of feminines is by Leben [1971], a study to which I shall return.

The failure to account for the phonological shape of the feminines in a regular way is directly connected with the failure to distinguish the derivational suffix {-nyàa} from the (originally) inflectional ending {-aa}. The usual assumption has been that the -nìyáa in, for example, màkáunìyáa 'blind woman' and the -ìyáa in, for example, túnkìyáa 'sheep' are allomorphs of the same morpheme. "In addition to the regular shape -(i)yaa/(u)waa, the feminine suffix exhibits two other, less common shapes [-niyaa/ -nuwaa and -nyaa], both containing an additional nasal element" [Parsons 1963:180]. As soon, however, as one separates the two morphemes from each other, the difficulty in explaining their various phonological shapes immediately diminishes, both in terms of segmentals and in terms of tone. This is not to say that exceptions and irregular items do not exist; but the major patterns and rules can be shown to be highly regular, and not in the least arbitrary. It should be emphasized that the formation rules to be described are not specified for time, i.e. they are synchronic rules in the case of the still operative inflection of dependent nominals, for example, while they are historical rules in the case of the overtly characterized feminative independent nominals.

3.1. Derivational suffix {-nyàa}.[12] The feminine derivational suffix {-nyàa} has two allomorphs, -nyàa and -nìyáa .

3.1.1. The short variant -nyàa. This variant is added to nouns of the form CVCV. The addition of the suffix is accompanied by (a) the imposition of a HHL tone pattern on the derived form, regardless of the tone of the simple noun, and (b) the general, but not exceptionless, change in the vowel preceding the suffix to /a/, e.g.

(6)	záakìi (HL)	'lion'	→	záakányàa
	màazóo (LH)	'antelope'	→	máazányàa
	bírìi (HL)	'monkey'	→	bírínyàa

The feminine form múgúnyàa (< múugùu) 'evil woman', is unique in shortening the initial vowel. This is a peculiarity of this word, not this derivational process, as seen from the fact that the shortening also takes place in other derived forms, e.g. mùgùntáa 'wickedness', mùgúntà 'become evil'.

3.1.2. The long variant -nìyáa. This variant, the tones of which result from the application of the general LL tone raising rule [Leben 1971], is added to triconsonantal nouns of the form $C_1VC_2VC_3^V$. The final V is dropped when the suffix is added and the resulting syllable final C_3 weakens in accordance with Klingenheben's laws [1927/28]. The tone pattern is H/L HLH, the initial tone usually preserving the initial tone of the base, e.g.

(7)	ɓàráawòo	'thief'	→	ɓàráunìyáa
	jínjìríi	'infant'	→	jínjíñnìyáa
	màkáafòo	'blind man'	→	màkáunìyáa

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[12]Leben [1971] treats -nyàa as a reduced form of -nìyàa , which he interprets as being composed of a derivational suffix -nì plus the feminine marker -aa . For purposes of this paper I am taking -nyàa as basic and am assuming that the vowel in the longer form is epenthetic. No difficulty in the total analysis, however, would be posed by treating the forms the other way.

In two cases, the feminine form is derived from a base that is different from the now-occurring masculine form:

(8) sárkíi 'chief', sàráunìyáa$_{[f]}$ < *sàràakí[13]
dòodóo 'goblin', dòodánnìyáa$_{[f]}$ < *dòodóonò

The only exception to the formation rules for derived feminines is zúunìyáa = zúmnìyáa 'female friend', where from the masculine form zúmùu , one would have expected *zúmínyàa , a dialectal form that does in fact occur.

3.1.3. Analyzing specific lexical items. The recognition that the surface forms of the derivational suffix {-nyàa} are almost entirely regular, both as concerns the segmentals and the tone, enables us to tell the difference between words that have this suffix and others that only appear to do so. For example, whereas túkúnyàa 'pot' could be analyzed as túkú+nyàa , its variant form túkúnyáa (the older form on which the plural is based) could not, because the tones are wrong. The correct break is túkún-yaa (see Parsons [1963:181n]). Similarly, tàfáñnúwáa 'garlic' must be analyzed as tàfáñn+úwáa since the ending -núwáa cannot qualify as a variant of the derivational suffix, both the tones and the /-uw-/ being wrong. This raises the interesting question of the analysis of the word sáanìyáa 'cow'. While it has generally been assumed that this is composed of sâa 'bull' plus the suffix -nìyáa (cf. Abraham [1959:30], J. Lukas [1968:106]), there are a number of problems with this interpretation. First, it is extremely unusual from a Chadic point of view for the basic word for 'bovine' to be a masculine gender, male referent form. Second, this analysis is inconsistent with the existence of the dialect form sáanùwáa (= sáanìyáa), which contains an ending that cannot be accepted as an allomorph of the derivational suffix. Third, the monosyllabic

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[13]This base is still found in present-day Hausa in the word sàràakíi 'a member of a royal household'.

form sâa with falling tone suggests the former presence of a second consonant in the root. Finally, the plural form sháanúu is difficult to explain if one takes sâa as the underlying singular. As a solution to these problems I would endorse an idea mentioned by Parsons [n.d.], but never developed by him, namely that historically speaking sáanìyáa is not derived from sâa , but rather is built on a common gender base *sáan(è) , the nasal having been preserved in the feminine and plural but lost in the masculine (cf. Schuh [1976]). The processes involved in the formation of the feminine would thus have been sex specification plus overt characterization, not derivation, and the suffix would have been -ìyáa (or -ùwáa , according to the dialect), not -nìyáa .

3.2. Feminine ending {-aa}. The feminine ending {-aa} (with copy tone) is used with nominals that are synchronically inflected or specified as well as with inherently feminine nouns that historically underwent the process of overt characterization. In the former cases, the base upon which the feminative is built is still visible; in the latter case, the base has to be reconstituted on internal or comparative grounds. The surface allomorphs of the ending are -aa , -yaa , -waa , -iyaa , and -uwaa , with various tones (see Parsons [1963]). Both the segmental forms and the tones are fully determined by the phonological shape of the base (apart from a small, problematic class, described in section 3.3.1); exceptions are rare.

The segmental shape of the ending is accounted for by three general rules (the first two of which could be collapsed into one) plus some minor adjustment rules. The first rule specifies whether the -aa is preceded by a transition glide (TG) or not. The second specifies whether the TG is Y or W. The third specifies whether the TG is long or short.

3.2.1. Rule 1. If the base ends in -a(a) or Hi tone -í(i) ,

the suffix is added directly without a transition glide; otherwise, a TG is inserted. The directly added suffix (like the TG + suffix) replaces the final vowel of the base, e.g.

(9) fárii + áa → fáráa$_{[f]}$ 'white'
jàakii + áa → jàakáa$_{[f]}$ 'she-ass'
*gwámí$_{[f]}$ + áa → gwámáa$_{[f]}$ 'cudgel'

With dependent nominals and common gender nouns, the vowel replacement in the feminine is evident because the related form with -íi is still present. With independent nominals of the form ...Cáa , there is usually no way to tell the difference between feminine nouns that originally ended in -í and now end in -áa because of overt characterization, and those in which the final -áa is etymological. The final -áa in gwámáa 'cudgel' is secondary, as shown by the coexisting masculine form gwámíi , as is the -áa in lúgùbáa 'ripe fruit' (< *lúgùbí), cf. the variant lúubìyáa (< *lúgbì). Conversely, the vowel-shifted plural form kàajíi supports the interpretation of the -áa in kàazáa 'chicken' as etymological. In the case of wútáa 'fire' (< *wútí$_{[f]}$ < *wátí$_{[f]}$), comparative evidence for a final -í can be cited, cf. Proto-Bole *wasi [Schuh 1978]. But on the whole, the two classes are indistinguishable synchronically and very difficult to sort out historically.

3.2.1.1. Locational/instrumental nouns. A particularly interesting case of a former *-í now disguised as -áa is that of the locational nouns derived from verbs, e.g. máᵊáunáa 'place where grain is sold' (< ᵊàunáa 'to weigh, measure'), májéemáa 'tannery', máfákáa 'shelter', máᵊáikátáa 'factory, place of work'. These nouns are generally described as being formed by the addition of the morpheme má.́.́.áa (occasionally ...íi) as contrasted with the derived instrumentals formed with the morpheme má.́.́.íi , e.g. máᵊáuníi 'scales, measuring device', mábúudʃíi 'opener', mátséefíi 'comb'. The tacit assumption is that the former are feminine

because they end in -áa , the latter are masculine because they end in -íi . Two related, but separate derivational morphemes are thus assumed for the two types of nouns.

It seems clear to me, however, that there is only one morphological construction for the two semantic groups, this being the construction formed by the addition of *má.̀.í . The ...áa construction of locational nouns is due to overt characterization. The critical difference between *mą́ˀáuní[f] 'weighing place', *májéemí[f] 'tannery' and *máˀáuní[m] 'scales', *mábúudî[m] 'opener', would originally have been one of grammatical gender, not of form, locationals being feminine, instrumentals being masculine. Locational nouns ending in -íi in present-day Hausa, such as másáukíi[m] 'lodging place', máˀájíyíi[m] 'storeroom', and máshígíi[m] 'ford' would thus represent unexplained exceptions in gender assignment rather than in morphology.[14]

The above reconstruction, originally arrived at on internal grounds, completely matches Schuh's interpretation of the synchronic situation in Bade, a somewhat distantly related language in the West Chadic branch. In Bade, derived locational, instrumental, and agential nouns (the latter not treated in this paper) all make use of exactly the same construction, ma- + verb root + vowel ending. There are, however, differences in gender: "Lukas [R. Lukas 1967/68] is probably right that the 'locatives' are always feminine. A better way to say it would be that when used locatively, the ma- derived form has feminine gender.... Most of the instrument nouns do seem to take masculine gender, though there are a few exceptions...." [letter of October 29, 1978]. In the Gashua dialect of Bade, which in certain respects seems to retain older forms, the final vowel ending of ma- derived nouns, including locational nouns, is the high vowel -u , to be compared with the Hausa -í(i) , cf.

[14]Perhaps the mistake is in considering these as locational nouns; a ford, for example, could easily be conceived of as a thing (like a bridge) rather than a place.

Gashua Bade mádàɪtú 'dye-pit' with Hausa márínáa (< *máríní$_{[f]}$) 'dye-pit'.

3.2.1.2. Feminines of a(a)-final words. In the case of a(a)-final bases, it is immaterial from a synchronic point of view whether one describes the feminine ending as having a Ø allomorph, or whether one adds the suffix -aa , which vacuously replaces the stem-final vowel (my preference). In either case, the result is the same: a feminine which on the surface is identical to the base and to the corresponding masculine form, e.g.

(10)	kúrmáa$_{[m]}$	kúrmáa$_{[f]}$	'deaf (psn)'
	ᵊàutáa$_{[m]}$	ᵊàutáa$_{[f]}$	'youngest child'
	kùmáamàa$_{[m]}$	kùmáamàa$_{[f]}$	'feeble (psn)'
	sáᵊàa$_{[m]}$	sáᵊàa$_{[f]}$	'age-mate'

Parsons [1963:179-80] claims that words ending in Lo tone -à(a) also form feminines by adding -iyaa (tone not indicated). Although there are some real examples (e.g. jàkáadàa/jàkáadìyáa 'consul') and some apparent examples (e.g. ʈsákà/ʈsákíyàa 'center'), the claim that -iyaa is a normal, regular allomorph of the feminine marker with à(a)-final nouns cannot be accepted. The word ʈsákíyàa , for example, is an overtly characterized form of *ʈsákì$_{[f]}$ from which the adverbial ʈsákà is derived (cf. jíkà , the adverbial form of jìkíi 'body'). Similarly, ʃáshíyàa 'underneath' is not derived from ʃásà 'down', but from *ʃáshì$_{[f]}$, which is also the source of the adverbial form. In the case of ɗìyáa 'daughter', usually assumed to be derived from ɗáa 'son', the identity of the -ìyáa and the feminine ending is accidental, it really being part of the stem, cf. Ngizim ɗìyì wákà 'fruit' = 'offspring of tree'. The real cases of -ìyáa being added to a-final nouns, almost all of which are recent loanwords (e.g. jàkáadàa 'consul', líkítà 'doctor', ᵊìngáɾ̃màa 'stallion') represent an innovative development whereby the ending -ìyáa (formerly an automatically conditioned allomorph of the inflectional ending -aa) is being upgraded into a

productive derivational suffix.[15]

3.2.2. Rule 2. All feminine words, except those described above require a transitional glide between the base and the suffix -aa . If the base ends in e , or in i with Lo tone, the TG is Y (-y- or -iy-); if it ends in o or u , the TG is W (-w- or -uw-). The Y or W replaces the final vowel of the base, e.g.

(11)	kàrée	+TG +áa	→	kàr-y-áa	'bitch'
	shúuɗìi	+TG +àa	→	shúuɗ-ìy-áa	'blue'
	ɗáatòo	+TG +àa	→	ɗáat-ùw-áa	'huge'
	kútúrúu	+TG +áa	→	kútúr-w-áa	'leper'

Given this rule, we can determine whether the historically earlier final vowel of overtly characterized feminatives was a front vowel (indicated E) or a back vowel (indicated O) although not necessarily which, e.g.

(12) tsárkìyáa 'bow string' < *tsárkɛ̀$_{[f]}$, i.e. *tsárkì or *tsárkè (but not *-u , *-o , or *-a)

shàamúwáa 'stork' < *shàamɔ́$_{[f]}$, i.e. *shàamú or *shàamó (but not *-i , *-e , or *-a)

The presence of a Y or W transition glide in itself gives no information as to whether the original final vowel was i vs. e , or u vs. o (with one exception to be described below). Nevertheless, in a number of cases, it is possible to determine the precise vowel on the basis of comparative or internal evidence, e.g.

(13)	túnkìyáa	'sheep'	<	*túmkì$_{[f]}$,	cf. Proto-Bole *tamki
	zúucìyáa	'heart'	<	*zúktì$_{[f]}$,	cf. adverbial form zúucí
	sáafíyáa	'morning'	<	*sáafé$_{[f]}$,	cf. " " sáafé
	gàskíyáa	'truth'	<	*gàské$_{[f]}$,	cf. " " gàské

[15]Cf. ɗáalíbìyáa 'female student' (< ɗáalìbíi), with the innovative derivational use of the -ìyáa suffix, with the synonymous regularly formed feminative ɗáalìbáa .

(13) cont.

gàrkúwáa 'shield' < *gàrkó$_{[f]}$, cf. plural form gàrkíi
(this pattern not used with úu-final nouns)

múuɗùwáa	'python'	<	*múuɗù$_{[f]}$	Height of final vowel deducible from height of immediately preceding long vowel (see Newman [1979])
tóotùwáa	'pulp'	<	*tóotò$_{[f]}$	
ƙúugìyáa	'hook'	<	*ƙúugì$_{[f]}$	
sóoshìyáa	'stripped corn head'	<	*sóosè$_{[f]}$	

Since final -í(i) nouns with Hi tone form feminines by adding -aa directly without a transition glide, the final vowel of nouns that end in -íyáa can be presumed to have been *-é , not *-í , e.g.

(14) wàlƙíyáa 'lightning' < *wàlƙé$_{[f]}$ (not ??*wàlƙí)
tsáamíyáa 'tamarind' < *tsáamé$_{[f]}$ (not ??*tsáamí)

In considering words such as tsíryáa 'parakeet' vs. ɓárwáa 'quail' , or gábányàa 'a wasting disease' vs. kàtántánwàa 'snail shell', Parsons concludes that "the distribution as between -y- and -w-... appears to be arbitrary" [1963:179]. Synchronically this might be true; but historically, there is no mystery: the choice of -y- vs. -w- is completely determined by the nature of the underlying final vowel, as just described, i.e. tsíryáa , cínyàa 'thigh', etc. all come from words of the form ...CE while ɓárwáa , yúnwàa 'hunger', etc. all come from words of the form ...CO. Viewed this way, even synchronically aberrant pairs such as ƙánèe/ƙánwàa 'younger brother/younger sister' lend themselves to a simple explanation if one assumes that the feminine was formed in a regular manner from a base *ƙánÒ , which underwent a sporadic vowel change in forming the masculine counterpart. Other examples are *gàjéerò 'short' → gàjéerée$_{[m]}$/gàjéerùwáa$_{[f]}$ and *ƙàdángárÒ 'lizard' → ƙàdángárèe$_{[m]}$/ƙàdángárùwáa$_{[f]}$.

3.2.3. <u>Rule 3.</u> If the penultimate syllable of the underlying base is heavy (see Newman [1972]), the transition glide is long, i.e. -iy- or -uw- ; if it is light, the TG is short, i.e. -y- or -w- (there being a few exceptions with longer words), e.g.

(15)	béebée	+	Y	+	áa	→	béeb-íy-áa		'mute'
	kàrée	+	Y	+	áa	→	kàr-y-áa		'bitch'
	húntúu	+	W	+	áa	→	húnt-úw-áa		'naked'
	kútúrúu	+	W	+	áa	→	kútúr-w-áa		'leper'
	máayèe	+	Y	+	áa	→	*máay-ìy-áa	→ mâyyáa	'sorcerer'

The rule equally holds for historically characterized feminatives, e.g.

(16)	*cíibì	+	Y	+	àa	>	cíib-ìy-áa	'navel'
	*tsánÈ	+	Y	+	àa	>	tsán-y-àa	'cricket'
	*káinÓ	+	W	+	áa	>	káin-úw-áa	'floating plant'
	*ɓárÓ	+	W	+	áa	>	ɓár-w-áa	'quail'
	*kúwÒ	+	W	+	àa	>	kúw-w-àa	'shouting'

To properly account for the occurring surface forms, Rule 3 requires the addition of two adjustment rules. (a) If the addition of the short TG results in an abutting sequence of stop + semivowel, an epenthetic vowel with Hi tone (í or ú) is automatically inserted. For purposes of this rule, /f/, which in Hausa fills the /p/ slot, and /s'/ (orthographic ts), which historically comes from *c' , must be counted as stops. Note that the syllable final *T > r̃ rule must apply before the epenthetic vowel insertion rule, i.e. *záT-yáa 'skink' > zár̃yáa , not ??záTíyáa .

(17)	ƙág-wáa	(< *ƙágÓ)	→	ƙágúwáa	'shrub'
	tság-yáa	(< *tságé)	→	tságíyáa	'hematuria'
	dáƙ-wàa	(< *dáƙÒ)	→	dáƙúwàa	'type of candy'
	báts-yàa	(< *bátsÈ)	→	bátsíyàa	'oribi'[16]

(b) If the final consonant of the base is a semivowel, the transition vowel of the long TG elides and shifts its tone to the left, e.g.

---

[16]There are no examples of LH words with the epenthetic vowel. I have no idea whether this is an accidental gap or whether it reflects some kind of restriction in the proto-language.

(18) gáay-ùwáa (< *gáayò) → gáày-wáa /gâiwáa/ 'mudfish'
máay-ìyáa (< *máayè) → máày-yáa /mâyyáa/ 'sorcerer'

The process is carried a step further in the following example, producing what looks to be a simple vowel replacement:

(19) ɗányée + áa → ɗány-íyáa → ɗány-yáa → ɗányáa$_{[f]}$ 'fresh'

There are a couple of examples of the transition vowel also being elided when preceded by a nasal, e.g.

(20) kyáan-ùwáa (< *kyáanò) → kyáàn-wáa /kyânwáa/ 'cat'
ƙáan-ùwáa (< *ƙáanò) → ƙáàn-wáa /ƙânwáa/ 'hunger for meat'

Note that the contrast between ƙânwáa and ƙánwàa 'younger sister', which on the surface is one of tone consists at a deeper level in a contrast in the length of the initial vowel, i.e. *ƙáanò vs. *ƙánò respectively. Similarly, the underlying forms for gâiwáa 'mudfish' and ƭsíiwàa 'insolence' have the same tone pattern but differ in the length of the initial vowel, i.e. *gáayò vs. *ƭsíyò .

3.3. Tone. On the surface, feminatives display a wide array of tone patterns. At a deeper level, the specification requires only two major rules, originally presented by Leben [1971], and adopted here with minor additions and extensions: (a) a morphological rule specifying the suffix -aa (and any preceding transition vowel) as having copy tone, i.e. taking its tone from the tone of the final vowel of the base before that vowel is deleted; and (b) a general phonological rule changing a sequence of final LL to LH if the final vowel is long. The base itself generally remains unchanged. In this respect, the {-aa} ending is different from the {-nyàa} derivational ending, which, like other derivational morphemes in Hausa, has an associated tone pattern that overrides the underlying tone of non-derived forms, e.g.

(21)	húntúu	+	úwáa	→	húntúwáa			'naked'
	bàaƙóo	+	úwáa	→	bàaƙúwáa			'stranger'
	kàrée	+	yáa	→	kàryáa			'bitch'
	*ƙánƊ	+	wàa	→	ƙánwàa			'younger sister'
	fáríi	+	áa	→	fáráa			'white'
	shúuɗìi	+	ìyàa	→	shúuɗìyàa	→	shúuɗìyáa	'blue'
	gúrgùu	+	ùwàa	→	gúrgùwàa	→	gúrgùwáa	'lame'

The same tone rules are presumed to have applied to the overtly characterized feminatives, the form of the base thus being provided by internal reconstruction, e.g.

(22)	*tóolé	+	íyáa	>	tóolíyáa	'tuft'
	*gàrkó	+	úwáa	>	gàrkúwáa	'shield'
	*tsíré	+	yáa	>	tsíryáa	'parakeet'
	*ƙúrƊ	+	wàa	>	ƙúrwàa	'beetle'
	*wútí	+	áa	>	wútáa	'fire'
	*túmkì	+	ìyàa	>	túnkìyàa →	túnkìyáa 'sheep'
	*múuɗù	+	ùwàa	>	múuɗùwàa →	múuɗùwáa 'python'

The HHL feminatives, such as kíbíyàa 'arrow' might at first sight look tonally aberrant. They are, nevertheless, completely regular, given the analysis of the í/ú preceding the semivowel as an epenthetic vowel inserted *after* the copy tone assignment (see section 3.2.3 above), e.g.

(23)	*kíbÈ	+	yàa	>	kíbyàa	→	kíbíyàa 'arrow'
	*gáfÈ	+	yàa	>	gáfyàa	→	gáfíyàa 'bandicoot'
	(cf. *gáafÈ	+	ìyàa	>	gáafìyàa	→	gáafìyáa 'embroidery pattern')
	*tsákƊ	+	wàa	>	tsákwàa	→	tsákúwàa 'gravel'
	*sháƙƊ	+	wàa	>	sháƙwàa	→	sháƙúwàa 'hiccough'

The HHL feminatives of the form CVCVnyàa constitute real exceptions to the tone rules. The plural of the word túkúnyàa 'cooking pot', for example, shows that the tones of the base must be all Hi (i.e. *-túk(ú)nÉ) and thus that the feminine ending

-yáa must also have been Hi, as seen in the common variant túkúnyáa . The explanation for the HHL form is most likely interference from the derivational suffix -nyàa . Note that the variation between HHH and HHL is generally limited to nouns ending in -nyaa but not, for example, -ryaa . One can assume, therefore, that with all CVCVnyaa nouns that allow a HHH variant, it is this tone pattern which is basic and reflects the etymological tone of the base, and that the HHL pattern is secondary, being due to morphological confusion. In some cases, one might want to reconstruct an earlier HHH even when there is no such attested variant, e.g. ƙáwányàa 'small ring' < *ƙáwányáa (?), cf. the plural ƙawàanee .

3.3.1. <u>A problematic tone class</u>. There is one class of feminatives that is not accounted for by the tone rules: the small LHL class, e.g. tsàakíyàa 'agate', tàagíyàa 'cap', kàacíyàa 'circumcision', ƙòoshíyàa 'ladle'. The first syllable is typically heavy and usually with long aa . There is also a class of potential underlying forms for which corresponding feminatives have not been provided, namely LL nouns. Although this is now a rare pattern for Hausa, it may have been quite normal earlier, before the lengthening of final vowels and the subsequent application of the LL tone raising rule (see Schuh [1978], Leben [1971]). It is possible, then, that the LHL nouns represent the overtly characterized forms of LL feminine nouns, a possible derivation being tsàakÈ + àa > tsàakìyàa → tsàakìyáa , and then by a historical tone reversal to tsàakíyàa . But for the moment, this is pure speculation.

Leaving this problem aside, we can now summarize the correspondences between the presumed form of feminine words in early Hausa before overt characterization and the present-day, actually occurring form. See Table 1.

TABLE 1: Overtly Characterized Feminine Nouns

Presumed earlier form of [+f] word			Present-day form	
Tone pattern	-E	-O	Y	W
Hi-Hi				
Heavy	*tóolé 'tuft'	*bóobó 'a fly'	tóolíyáa	bóobúwáa
Light (non-stop C_2)	*ɗíné 'plum tree'	*báró 'quail'	ɗínyáa	bárwáa
Light (stop C_2)	*tságé 'hematuria'	*rákò 'a bee'	tságíyáa	rákúwáa
Lo-Hi				
Heavy	*gùrɓé 'rich soup'	*gàrkó 'shield'	gùrɓíyáa	gàrkúwáa
Light (non-stop C_2)	*fùré 'drumstick'	*kùró 'spirit'	fùryáa	kùrwáa
Light (stop C_2)	---	---	---	---
Hi-Lo				
Heavy	*túmkì 'sheep'	*múuɗù 'python'	túnkìyáa	múuɗùwáa
Light (non-stop C_2)	*tsánÈ 'cricket'	*ƙúrò 'beetle'	tsányàa	ƙúrwàa
Light (stop C_2)	*kíbÈ 'arrow'	*tsákò 'gravel'	kíbíyàa	tsákúwàa
Lo-Lo	?	?	?	?
Final -í with Hi tone (most not identifiable)				
Hi-Hi	*wútí	'fire'	wútáa	
Lo-Hi	*lúgùbí	'ripe fruit'	lúgùbáa	
Final -a with any tone				
Hi-Hi	*gáawá	'corpse'	gáawáa	
Lo-Hi	*kàazá	'chicken'	kàazáa	
Hi-Lo	*kúukà	'baobab'	kúukàa	

Notes:
(a) E = i or e; O = u or o
(b) Tone pattern refers to last two syllables
(c) Heavy/Light refers to weight of penultimate syllable

4. Deverbative Nouns

Hausa has a number of morphological processes by which nouns can be, or have been, derived from verbs. Some of these deverbative nouns (dvn's) function as optional or obligatory replacements for progressive participles or verbs in the continuous tenses, e.g. kòoyóo 'learning, hářbìi 'shooting'. In this function they are generally referred to as "secondary verbal nouns". Other deverbative nouns, e.g. tàaróo 'a meeting', yáaƙìi 'war', are verbal in derivation only, functioning just like ordinary non-deverbative nouns. Some dvn's have both properties, e.g. gínìi 'the action of building' or 'a building', góoyóo 'carrying on the back' or 'an infant (carried on the back)'.

From a morphological point of view, i.e. in terms of accounting for the *form* of dvn's, the difference in function between the various dvn's can be ignored (or, at least, temporarily put aside). The question here is what light can the model of gender developed above throw on the form of dvn's. A full study of dvn's goes beyond the scope of this paper; but I would like to show briefly how the number of presumably independent dvn formations can be reduced by treating some of the forms as overtly characterized feminatives corresponding to more common masculine forms.

4.1. dvn's with final -aa . As with non-verbal nouns, dvn's that are feminine end in -aa but not all dvn's that end in -aa are feminine, e.g.

(24) HH (masc.): gyáaráa 'repairing'; néemáa 'seeking'; yánkáa 'cutting/slaughtering'; háwáa 'mounting'
HH (fem.): ɗáayáa 'stripping (bark)'; tsáagáa 'splitting'; fánsáa 'redeeming'; yántáa 'thatching'
HL (masc.): ɗíibàa 'dipping'; jíifàa 'throwing'; dúukàa 'beating'; súukàa 'stabbing'
HL (fem.): fíiràa 'paring'; jíimàa 'tanning'; kúuɗàa 'sharpening'; súuyàa 'frying'

4.2. dvn's with final -iyaa/-uwaa and HHH tone. There are many HHH dvn's ending in -íyáa and a smaller number in -úwáa , e.g.

(25) táadʃíyáa 'tripping up'; góocíyáa 'swerving'; dátsíyáa 'a dam'; ráamúwáa 'retaliation'; gáisúwáa 'greeting'; tsáiwáa (= Kts. tsáyúwáa) 'standing'

The -iyaa forms have two possible explanations: (a) feminatives of *CV́Cé forms, i.e. táadʃíyáa < *táadʃé$_{[f]}$, or (b) feminatives of *CV́Cì forms, i.e. táadʃíyáa < *táadʃì$_{[f]}$. Solution (a) is the easiest in that the tone rules discussed above (section 3) automatically produce the correct result; but it leaves unexplained why there aren't any corresponding CV́Cée$_{[m]}$ dvn's. (The only masculine dvn of this form that I know of is zúuʃée (= zúuʃíyáa) 'going back on one's word'.) Solution (b) has the drawback of requiring an ad hoc tone rule to produce the occurring HHH instead of the expected HLH, i.e. táadʃíyáa , not ??táadʃìyáa . However, since HLH dvn's with -iyaa do not occur, even though this is generally a common feminine pattern, solution (b) with an added HLH > HHH rule might be the correct one. In this case, dvn's such as táadʃíyáa , etc. would simply be the feminine forms corresponding to the very common CV́Cìi masculine dvn's; and in fact, there are a number of cases where the two forms are variants of one another, e.g.

(26) jéeríyáa = jéerìi 'row'
náaníyáa = náanìi 'repairing by sealing over'
tóoshíyáa = tóoshìi 'bribe'
yáafíyáa = yáafìi 'sowing by scattering'

With the -uwaa forms, on the other hand, a straightforward derivation from *CV́Có bases seems preferable, i.e. ráamúwáa < *ráamó$_{[f]}$. These uncommon forms thus become the natural counterparts to the also relatively uncommon HH masculine forms such as góoyóo 'carrying an infant', ɓóoyóo 'hiding', ʔáróo 'borrowing', etc.

4.3. <u>dvn's with final -uwaa and HLH or HHL tone</u>. The small dvn

class composed of fáaɗùwáa 'falling', háifùwáa 'giving birth', rántsùwáa 'oath', and mútúwàa 'death, dying' corresponds to the masculine HL uu-final class, e.g. búgùu 'beating', sáamùu 'obtaining', dáamùu 'bothering', káamùu 'catching', yáagùu 'tearing the flesh', and (?)gúdùu 'running'. The HHL tone of mútúwàa is due to the light first syllable (cf. ʈsákúwàa 'gravel' with gwáidùwáa 'white of egg').

Although there are no HLH -iyaa dvn's, as mentioned above, there are some HHL words, e.g. rákíyàa 'accompanying', sákíyàa 'puncturing to let out pus', which contrast with HHH words such as káfíyáa 'standing one's ground', lákíyáa 'not sharing meat'. It may be that the analysis adopted in section 4.2 is incorrect for light syllable verbs, and that the source of káfíyáa , e.g., must be *CV́Cé$_{[f]}$, even though no masculine counterpart exists, while rákíyàa, e.g., would correspond to the light syllable CV́Cìi dvn's such as sáɓìi 'measuring a farm'.

4.4. <u>dvn's with final -iyaa and LLH tone</u>. LLH forms such as gòodíyáa 'thanks', kwàncíyáa 'lying down', mòoríyáa 'advantage, benefit', etc. are presumably derived from CV̀Cé bases and thus correspond to the now-occurring masculine dvn's such as sàyée 'buying', yàaɓée 'plastering', hàngée 'espying', etc.

Theoretically, one would expect to find feminine dvn's of the form CV̀Cúwáa corresponding to the LH oo-final words such as zàʈóo 'thinking', ròoƙóo 'begging', etc.; and dàfúwáa 'cooking' might be such a word. But since such words would be identical in shape to inflected progressive participles with -wáa of grade 7 verbs (those with final -ú), their form would not be distinctive. Thus they have either shifted to other forms or else have remained, but are now unidentifiable.

4.5. <u>Two problematic cases</u>. It has always been assumed, I believe, that the words ʈàfíyàa 'travelling' and gàjíyàa 'tiredness' were dvn's formed from the verbs ʈàfí 'go' and gàjí 'to tire'

by the addition of a feminine nominalizing suffix -yàa . But if this were true, the form of the dvn's should have been ??tàfáa and ??gàzáa , the actual forms being wrong both as regards tone and the presence of the transition glide. The explanation—already discovered by Parsons [1971/72:96] but generally overlooked—is that the -yà(a) ending on these words is etymologically a verbal extensional suffix, whose surface resemblance to the feminine gender marker is completely accidental. The forms tàfíyàa and gàjíyàa are normal primary verbal nouns of the trisyllabic grade 3 verbs *tàfíyà and *gàjíyà (cf. tàwáyàa 'shrinking < tàwáyà 'to shrink'), from which the irregular verb forms tàfí and gàjí have been created by apocope or back formation.

5. Summary

This paper provides an introduction to the historical morphology of Hausa feminines. The discussion and analysis center on four themes: (a) the identification of "overt characterization" as the key process in understanding the development of Hausa feminines; (b) the distinctiveness of the derivational suffix {-nyàa} from the inflectional/grammatical ending {-aa}; (c) the regularity and non-arbitrariness of feminine forms in relation to underlying bases; and (d) the interpretation of certain deverbative noun forms as simply the feminine counterparts to common masculine deverbative noun forms.

REFERENCES

Abraham, R.C. 1959. *The Language of the Hausa People.* London: University Press.

Greenberg, J.H. 1977. "Niger-Congo noun class markers: prefixes, suffixes, both or neither." In M. Mould and T.J. Hinnebusch (eds.), *Papers from the Eighth Conference on African Linguistics,* pp. 97-104. *Studies in African Linguistics,* Supplement 7.

Ibrahim, M.H. 1973. *Grammatical Gender.* The Hague: Mouton.

Klingenheben, A. 1927/28. "Die Silbenauslautgesetze des Hausa." *Zeitschrift für Eingeborenen-Sprachen* 18:272-97.

Leben, W.R. 1971. "The morphophonemics of tone in Hausa. In C.-W. Kim and H. Stahlke (eds.), *Papers in African Linguistics,* pp. 201-18. Edmonton: Linguistic Research, Inc.

Lukas, J. 1968. "Nunation in afrikanischen Sprachen." *Anthropos* 63:97-114.

Lukas, J. 1977. "Tschadische Studien I. Beiträge zur Kenntnis des Mukulu (République du Tchad)." *Afrika und Übersee* 60:1-58, 192-229.

Lukas, R. 1967/68. "Das Nomen im Bade (Nordnigerien)." *Afrika und Übersee* 51:91-116, 198-224.

Malkiel, Y. 1957-58. "Diachronic hypercharacterization in Romance." *Archivum Linguisticum* 9:79-113; 10:1-36.

Martinet, A. 1956. "Le genre féminin en indo-européen: examen fonctionnel du problème." *Bulletin de la Société de Linguistique de Paris* 52(1):83-95.

Newman, P. 1972. "Syllable weight as a phonological variable." *Studies in African Linguistics* 3:301-23.

Newman, P. 1979. "The historical development of medial /ee/ and /oo/ in Hausa." *Journal of African Languages and Linguistics* 1 (in press).

Parsons, F.W. 1960-61-63. "The operation of gender in Hausa." *African Language Studies* 1:117-36; 2:100-24; 4:166-207.

Parsons, F.W. 1971/72. "Suppletion and neutralization in the verbal system of Hausa." *Afrika und Übersee* 55:49-97, 188-208.

Parsons, F.W. n.d. "Alphabetical list of all the common disyllabic nouns in Hausa having distinct plural forms in regular use." Unpublished ms. (mimeo).

Schachter, P. 1966. "A generative account of Hausa ne/ce." *Journal of African Languages* 5:34-53.

Schuh, R.G. 1976. "The history of Hausa nasals." In L.M. Hyman et al. (eds.), *Papers in African Linguistics in Honor of Wm. E. Welmers,* pp. 221-32. *Studies in African Linguistics,* Supplement 6.

Schuh, R.G. 1977. "Bade/Ngizim determiner system." *Afroasiatic Linguistics* 4(3):101-74.

Schuh, R.G. 1978. "West Chadic vowel correspondences." Paper presented at the Third International Hamito-Semitic Congress, London. [Citations from this work refer to a typescript of the full text.]

Skinner, M. 1977. "Gender in Pa'a." In P. Newman and R.M. Newman (eds.), *Papers in Chadic Linguistics,* pp. 167-74. Leiden: Afrika-Studiecentrum.

Skinner, N. 1975. "The Hausa genitive morpheme as an exponent of gender: a query." In J. and T. Bynon (eds.), *Hamito-Semitica,* pp. 389-94. The Hague: Mouton.

Taylor, F.W. 1959. *A Practical Hausa Grammar.* 2nd edition. London: Oxford University Press.

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PUBLICATIONS RECEIVED

Bouquiaux, Luc. *Dictionnaire sango-français*/bàkàrí sāngɔ̄-fàránzì - *Lexique français-sango*/kété bàkàrí fàránzì-sāngɔ̄. Langues et Civilisations à Tradition Orale 29. Paris: SELAF, 1978. (no price listed)

(write SELAF, 5, rue de Marseille, 75010 Paris, France)

A Sango-French dictionary of 340 pages and a French-Sango vocabulary of 198 pages, plus an addendum of several pages with further entries. Sango-French entries include numerous examples. All entries and examples are represented in the standard orthographies of the languages followed by a phonetic transcription in brackets. The introduction gives a detailed statement of Sango phonology, problems of Sango practical orthography, and ways in which Sango has been enriched to fill modern needs. Appended to the vocabulary sections are lists of proper names; there is a list of loan words into Sango with the source languages identified.

Clark, Mary. *A Dynamic Treatment of Tone* (with special attention to the tonal system of Igbo). Indiana University Linguistics Club, 1978. (no price listed)

(write IULC, 310 Linley Hall, Bloomington, Indiana 47401)

Starting with a survey of previous work in the analysis of pitch-accent and tone systems, the author develops her own analysis, referred to as the dynamic-tone theory, which includes rules which insert tone markers, delete tone markers, move tone markers, change the feature composition of tone markers, or introduce greater phonetic detail into the feature composition of tone markers. This theory is applied in detail to the noun phrase and verb forms of Igbo.

Herault, G. *Eléments de grammaire adioukrou*. Linguistique et Etudes Africaines 69. Abijan: Institut de Linguistique Appliqué, 1978. 2500 F.

(write Institut de Linguistique Appliqué, 08 B.P. 887, Abijan 08, Ivory Coast)

A descriptive grammar of Adioukrou, a western Kwa language of the Ivory Coast. The major chapter titles are "Phonologie", "Types et structure d'énonces", "Le syntagme nominal", "Morphologie nominale", "Syntagmes postpositionnels et circonstants", "La syntaxe du verbe", "Morphologie verbale", "Le système aspecto-modal et son fonctionne-

ment". The topics are covered in considerable detail, with many examples and tables. Also included is a good-sized text with interlinear and free translations.

Pelletier, Corinne A., and A. Neil Skinner. *Adamawa Fulfulde: an Introductory Course.* Madison, Wisconsin: African Studies Program, 1979. $12.00

(write African Studies Program, University of Wisconsin, 1454 Van Hise Hall, Madison, Wisconsin 53706)

An introductory pedagogical grammar arranged in 41 lessons with appendices showing the noun class and concordial systems, consonant alternations, inverted subject pronouns, and lists of formulaic expressions. There is a Fulfulde-English glossary. Lessons include dialogues, grammatical explanations, and pattern drills. Lessons are well illustrated with many line drawings. Tapes are available.

OTHER RECENT PUBLICATIONS

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